BLUE OCEAN STRATEGIES IN TECHNOLOGY FOR BUSINESS ACQUISITION BY THE LIFE INSURANCE INDUSTRY

A DELPHI STUDY SPONSORED BY THE FUTURISM, TECHNOLOGY, AND MARKETING & DISTRIBUTIONS SECTIONS OF THE SOCIETY OF ACTUARIES

As Reported By
Society of Actuaries Blue Ocean Strategies Working Group

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TABLE OF CONTENTS

I. Executive Summary

Industries evolve over time. In some instances, they evolve very quickly and there are numerous examples where technology has been the cause. Personal music players have changed from the "Walkman" to MP3 players. Slide rules have been displaced by the hand calculator. In life insurance, advances in computer technology have led to the ability to design, price, and administer new and more sophisticated types of insurance such as Universal Life.

When such a shift takes place, a business cannot survive simply by improving what it has always done previously. It must adapt to the new paradigm. An opportunity to remake an industry is one type of "Blue Ocean Strategy".

Our Working Group was formed to gather expert opinions as to whether there were any such "Blue Ocean Strategies" that could foreseeably affect the life insurance industry over the next 10 years. To accomplish this task, the Working Group queried a group of experienced practitioners from the industry for their thoughts on this topic utilizing the Delphi method. In applying this futurism technique, multiple rounds of surveys (consisting of open-ended questions) were conducted. In total, 43 experts participated in the three round Delphi study process and provided responses to the survey questions. Consistent with the Delphi technique, after each round the Working Group analyzed and summarized results so that questions for subsequent rounds were based on the responses from the prior round and prior results were shared with the respondents.

The study asked panelists to look to the future and describe “Blue Ocean” opportunities – and the strategies constructed from their Round One responses were, by-and-large, things that life insurance companies are not doing today.

By far the most common technology cited and used by panelists in suggestions was the internet. The future development of online databases and medical diagnostics were also mentioned. For the most part, the ideas suggested by the panelists (and synthesized by the Working Group) were business innovations based on either current technology or linear extensions of current technology rather than radical technology changes.

Two obstacles were most often mentioned as being in the way of any attempt to adopt a “Blue Ocean” strategy in the life insurance industry. These were the regulation of insurance and resistance to change within the industry itself.

As a result of panelists’ feedback in Round One, ten possible strategies were identified. They were as follows:

- Strategy #1: Earth Friendly Insurance Company – “Paperless Processing”
- Strategy #2: Super Fast Insurance Company – “Quantum leap in time to market”
- Strategy #3: Insurance Without Borders Company – “Global internet sales where regulations allow”

- Strategy #4: Global Insurance Company – "Global data mining, marketing"
- Strategy #5: Your Way Insurance Company – "Prospects custom-design coverage online"
- Strategy #6: Strategic Partners Insurance Company – "For Operational Excellence"
- Strategy #7: Just What You Want Insurance Company – "Micro-policies"
- Strategy #8: Holistic Insurance Company – "Risk 'agents' help mitigate all risks"
- Strategy #9: Big Brother Insurance Company – "Monitor individuals' health, risk profile"
- Strategy #10: Virtually Real Insurance Company – "Virtual World Insurance"

Over the next two rounds, panelists were asked specific questions regarding the viability of each strategy.

Drawing upon a summary from one of our respondents, the 10 strategies can be grouped into three themes:

- Greater efficiency in marketing and underwriting traditional business. These should be pursued, but they are not Blue Ocean strategies.
- Micro approach to insuring [currently] undesirable risks. These are "Blue Ocean" because they create a viable approach to insuring a set of risks others run away from.
- Holistic approach to risk financing and mitigation. These are "Blue Ocean" because they open up a whole set of risks not previously insured and encompass an integrated approach that no one is implementing.

Of the ten strategies, the respondents thought the following three were the most promising:

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse – technologies are frequently required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Strategy #8: Holistic Insurance Company – "Risk agents" help mitigate all risks

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property, and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Detailed commentary on all of the strategies, these three and the other seven, is contained in the subsequent sections of this report and Appendices. The Summary and Additional Considerations (Section X) provides some observations about the effectiveness of the study methodology.

II. Introduction to the Project

In China, the term for actuary is 精算师, or Master of Accurate Calculations. Actuaries are great at calculations. Like the character, ***The Count***, on the children's television show Sesame Street, we like to quantify everything – especially measures of risk. Our profession prides itself in measuring risk and creating products and solutions to mediate it ("Risk is Opportunity"). We develop and employ complex, mathematically sophisticated models that project our best estimates of mortality, morbidity, investment returns, expenses, and dozens of other assumptions, as well as how they are apt to interact with each other in future years. Then, not content with a single set of most likely assumptions, we vary them in many statistically probable ways and create stochastic models that consider CTEs (Conditional Tail Expectations) to any desired degree of precision.

Alas, in some respects it is mathematical self-delusion.

> "No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be." – Isaac Asimov

History has shown repeatedly that the greater opportunity (or loss) comes not from a statistical trend analysis of the known experience; but from the ability (or failure) to recognize and quickly embrace the unexpected impact of an external influence. As a very simple example, think of the Pickett and Post companies. They were giants and rivals in the slide rule market. They could do all of the trend analysis models they wanted (to three significant digits); but they couldn't see the impact of the electronic hand held calculators. Likewise, the Swiss watch industry actually had the first opportunity to embrace the idea of electronic watches, yet declined to act on making them and lost a centuries-old domination of the watch market to Japanese and other watch companies.

There are many more examples of companies failing to foresee and adjust to new ideas and/or external influences. It is easy to reflect upon how blind the established industry was to the innovation that brought about their demise – or at least a major upheaval and realignment of competitive advantages.

The Futurism Section (which has applied to be renamed The Forecasting and Futurism Section) tries to augment actuarial quantitative expertise, as Masters of Accurate Calculations, with qualitative perspectives that look beyond numbers and sometimes lead to more significant insights into the future, and how it might impact our profitability models and, indeed, even our civilization.

A useful tool in the arsenal of futurism techniques is the Delphi study. This is named after the famous Oracle of Delphi, who was said to have had the ability to predict the future. A Delphi study involves multiple rounds of questions to participants who respond directly to the study facilitators. After each round, the participants get to see the responses from other participants on an anonymous basis. The idea here is to encourage collaboration along with creative and candid responses. Rounds are continued until there

is a stabilization of responses. The responses do not have to agree – no consensus opinion is necessary. However, the participants need to have reached a point where their own responses have stopped varying based on their inspection of other participant responses.

The Futurism Section, joined by the Technology Section and the Marketing and Distribution Section, initiated a Delphi study named "Blue Ocean Strategies in Technology for Business Acquisition by the Life Insurance Industry," to identify and debate possible new approaches to acquiring business by life insurers. The Blue Ocean Strategy concept comes from the book, ***Blue Ocean Strategy***, by W. Chan Kim and Renée Mauborgne.

A prime example of a Blue Ocean Strategy in action is the ***Cirque du Soleil***, which reinvented the century-old notion of the circus with a model that included eliminating animal acts and decreasing the expenses associated with named star performers, and turned a stagnant business model into a huge success. In one sense, it was the electronic calculator in competition with the slide rule.

In this study, a panel of life insurance and other financial professionals from across the country were asked to answer questions about "Blue Ocean Strategies", limited to the extent possible to those involving technology for business acquisition, and to the life insurance industry. Responses were summarized, strategies were synthesized and the results were returned to the panelists with follow-up questions. These strategies and questions were designed to stimulate further thought, and to lead towards a possible stabilization of the panelist opinions. Three rounds of panel surveys were performed over a period of about a year. The results are a creative compendium of insightful ideas – the qualitative side of actuarial forecasting.

This report is a summary of the project. A summary of merely the results would be difficult, incomplete, and tunnel-visioned in the very manner that the sponsors/authors were seeking to avoid. Section I provides an executive summary – more a taste of the results than anything approaching a complete listing of the results. Sections III and IV of the report provide additional backgrounds on the meaning of a Blue Ocean Strategy and the process of a Delphi Study, respectively. Section V acknowledges the contributors to the study and defines the use of certain terms. Section VI provides a description of the approach and timetable followed in this Delphi Study of Blue Ocean Strategies.

Brief recaps of the responses to each of the Rounds One, Two, and Three questions are provided in Sections VII, VIII, and IX, respectively, but to get a more complete appreciation for the wealth of information and ideas provided by the participating panel, the reader is advised to review the appendices.

Finally, Section X summarizes some thoughts regarding the study methodology, and highlights some areas of success and some areas where there might be room for improvement.

III. Background on the Blue Ocean Strategy

A "Blue Ocean Strategy" has come to mean a strategy that allows for a vast open blue area of undiscovered and, consequently, unexplored and unoccupied, territory. It means finding a completely new approach to an existing concept, approaching a market from an entirely new direction. The concept is explored in a book, ***Blue Ocean Strategy***, by W. Chan Kim and Renée Mauborgne, which was based on a decade-long study of 150 strategic moves spanning more than 30 industries over 100 years (1880 - 2000). This well-received book has led to a business that includes a research institute and a consulting network working with businesses and governments to create Blue Ocean Strategies. Further details are available at the official web site, www.blueoceanstrategy.com.

Wikipedia contains a summary, analysis, and critique of the Blue Ocean Strategy concept, including the following excerpt:

"Some examples of companies that may have created new market spaces in the opinion of Kim and Mauborgne include:

- Cirque du Soleil: Blending of opera and ballet with circus format while eliminating star performer and animals;
- Netjets: fractional jet ownership;
- Southwest Airlines: offering flexibility of bus travel at the speed of air travel using secondary airports;
- Curves: redefining market boundaries between health clubs and home exercise programs for women;
- Home Depot: offering the prices and range of lumberyard, while offering consumers classes to help them with DIY projects…"

In spite of the fact that the insurance industry has been insuring life, health, property, and commerce (including commerce on the blue oceans) for centuries, finding an example of a Blue Ocean Strategy successfully applied to the insurance industry is not a trivial task. It is not always clear that an innovation is indeed "Blue Ocean". An innovation may be a welcome improvement to a company and/or to a consumer group, it may provide a temporary competitive advantage to the innovator, and it may provide a major boost to a new (or existing) market, but the innovation may still not be truly "Blue Ocean". Examples of innovation from the insurance industry might include welcomed improvements such as targeted and/or broader marketing (*e g.*, worksite marketing, direct response), temporary advantages such as those enjoyed by early entrants to a market (*e g.*, the term life insurance market, the variable market), or new markets (*e g.*, critical illness insurance, pet insurance). However, with the advantage of hindsight, it is clear that these innovations have not remarkably changed the industry, or resulted in anything like the replacement of the technicians' columnar pads with laptop computers.

IV. Background on the Delphi Study

The study of an empty area, an area where little or no information or data is available to study, is an interesting concept. The sponsors of this project suggest that the list of Blue Ocean Strategies that have been successfully introduced into the life insurance industry qualified as one of these empty areas.

A number of approaches have been used to address how to study these areas. One of the most widely used is the Delphi method, described in *Wikipedia* as follows:

> "The **Delphi method** is a systematic, interactive forecasting method which relies on a panel of independent experts. The carefully selected experts answer questionnaires in two or more rounds. After each round, a facilitator provides an anonymous summary of the experts' forecasts from the previous round as well as the reasons they provided for their judgments. Thus, participants are encouraged to revise their earlier answers in light of the replies of other members of the group. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after a pre-defined stop criterion (*e g.*, number of rounds, achievement of consensus, stability of results) and the mean or median scores of the final rounds determine the results."

Note that, by its very definition, a Blue Ocean Strategy is not likely to generate anything even approaching a mean or median score, which makes this a somewhat unusual topic to be subjected to a Delphi Study. Paradoxically, a frequent side benefit of the method is the lack of complete consensus among the responding panelists – even after consultation. In this study panelists retained very different views about which scenarios will play out, and much can be learned from the reasons given for those differing views.

Finally, there is an important consideration for the user of this Report, as described in the Society of Actuaries publication (available at www.soa.org) entitled "*A Study of the Use of the Delphi Method, A Futures Research Technique for Forecasting Selected U.S. Economic Variables and Determining Rationales for Judgments.*"

> "Because the number of participants is usually small, Delphi studies do not (and are not intended to) produce statistically significant results. In other words the results provided by any panel do not predict the response of a larger population or even a different Delphi panel. The estimates and the rationale, techniques and methods for estimating the variables represent the synthesis of opinion of the particular group involved, no more, no less."

V. Acknowledgments and Terminology

The management team for this study is referred to as the Project Oversight Group (the "POG"). It provided overall direction and selected the panel of Delphi participants. The POG also served on the Working Group that reviewed and processed the responses of the panel, as described in Section VI. Research support was provided by the staff of the Society of Actuaries, whose members were also part of the Working Group. No outside researcher was hired for the study.

Serving on the POG and Working Group were six members of the Society of Actuaries: Ben H Wolzenski (Chair), Raza A. Zaidi, David L. Snell, Carl J. Nauman, Jeffrey C. Harper, and Van Beach. Serving on the Working Group and providing research support were Ronora E. Stryker, ASA and Research Actuary; Jan Schuh, Research Administrator; and Claire Bilodeau, ASA and Visiting Research Actuary, all of the Society of Actuaries staff.

Those who were invited to respond to the Delphi study questions are referred to in this report as "panelists", "respondents", and "participants"; all three terms refer to the same group of individuals who agreed to participate and did in fact respond in at least one round of the study. These individuals included actuaries and non-actuaries, individuals employed in the life insurance industry, consultants engaged by the industry, and individuals employed by non-insurance firms involved in technology, marketing and sales. The substance of the study was derived from the thoughtful, diverse and prolific responses of these individuals, whose names are listed in Appendix G and to whom the Working Group offers our sincere thanks and appreciation.

The Delphi study consisted of three rounds, or sets of information and questions sent to panelists together with their responses. These are simply referred to as Round One (or Round 1), Round Two (or Round 2) and Round Three (or Round 3) of the study.

VI. Description of the Approach and Time Line

A Delphi Study can take a surprisingly long time to complete – from twelve months up to twenty-four or even thirty months is not extraordinary. A study generally entails a small number of rounds in which a panel of experts on the topic under study is surveyed – two to four is common. Also, continuity in the participating panel is preferred, if not always possible. This study covered 14 calendar months from the mailing of the Round One questions to the receipt of the Round Three responses, plus nearly 3 months more to compose and publish this report. The study consisted of three rounds of questions, all directed to a group of 46 panelists who expressed interest and 43 of whom did in fact participate in at least one round. The project enjoyed extremely high participation for Round One, high participation for Round Two, and dwindling participation and new material in Round Three.

An advantage to a Delphi Study is that this technique, if used effectively, can be highly efficient and generate new knowledge. On the other hand, this technique is not easy to execute or manage. A frequent complicating situation is the lack of complete consensus – even after consultation. Another situation arises when an area of study has been defined too narrowly, resulting in nothing particularly new; or an area has been defined too broadly, resulting in seemingly incoherent (or at least disjointed) responses, making it too difficult to coalesce them into a single numerical result or even a single theme, let alone a true strategy. Others include the continuation of the study participants from round to round, who are by definition in demand in their own professions and positions; the changing environment (technology, economics, politics, *etc*.); and the inherent lack of a concrete knowledge base.

With these concerns in mind, the POG was organized in the summer of 2007 and proceeded to recruit participants from a variety of professions and business affiliations, realizing that consensus among the panelists was unlikely.

The approach and time line can be briefly described as follows:

- May and June 2007. Interest in participation in a POG that would also become part of the Working Group was sought within the membership of the Society of Actuaries from three practice areas with expertise in the topic: Futurism, Marketing and Distribution, and Technology.

- July 2007. The initial conference among the POG and the Research Support Staff at the Society of Actuaries was convened, the Working Group was activated, and the project was initiated.

- August 2007. Development of initial survey questions and scoping of the project by the Working Group was begun, including addressing such issues as the following:
  - What is this research project about?

- Why is this research project being undertaken?
- What is the research methodology?
- What do participants need to do?
- How and to whom will the results be disseminated?
- What are the questions for the first round of the study?

- September 2007. A list of potential candidates for the Delphi panel was assembled by the POG (resulting in approximately 65 candidates).

- October 2007. Candidates were contacted and accept/decline of interest in participation was noted; a total of 46 individuals expressed willingness to participate, and 43 of the 46 actually did respond in at least one round. Round One survey questions were distributed to the panel.

- October and November 2007. Responses from the panel to Round One survey questions were received and consolidated by Research Support. (Note that one important aspect of a Delphi Study is anonymity – the only indication of the respondent ever relayed to the POG was a respondent number, and then only so that responses to the various questions by an anonymous panelist could be linked if desirable.)

- December 2007. Responses to Round One questions were reviewed by the Working Group (with an element of "divide and conquer", due to the voluminous response: over 70 pages of survey question response from 39 respondents), and various possible approaches to Round Two were discussed.

- January 2008. An approach to Round Two was developed that met the conflicting goals of (i) simplifying the large amount of information into something approachable by the panelists, but (ii) retaining as much as possible of the new ideas generated by the panelists in Round One. The synthesis of the responses into a few discrete strategies was begun by the Working Group, and a status report was sent to the participating panel.

- February 2008. Development of ten strategies for discussion in Round Two was undertaken by the Working Group.

- March 2008. Development of the Round Two survey questions was undertaken by the Working Group.

- April 2008. The Round Two survey questionnaire was distributed to the panel.

- May and June 2008. Responses from the Delphi panel to Round Two were received and consolidated by Research Support.

- July and August 2008. Responses to Round Two were reviewed by the Working Group (again with an element of "divide and conquer, due to the voluminous response: over 62 pages of survey question response from 28 respondents – 4 of whom had not responded in Round One).

- September 2008. Approaches to Round Three were discussed, and a survey question format was developed.

- October 2008. Survey questions were developed for Round Three; the Round Three survey was distributed to the panel.

- November 2008. Responses from the Delphi panel to Round Three were received from 16 panelists and consolidated by Research Support. (Late responses in December and early January were also accepted.)

- December 2008. Responses to Round Three were reviewed by the Working Group, and drafting of this report was begun. (Note that the level and detail of response to the questions proposed in Round Three is much reduced. Most panelists were not sufficiently influenced by the Round Two results to change many of their opinions. This is one manner of closure for a Delphi Study.)

- February 2009. This Report was finalized and issued

The following three sections of this report address the approach and results from Rounds One through Three. Section VII addresses Round One of the Delphi Study in some detail, Section VIII addresses Round Two, and Section IX addresses Round Three. Other aspects of the project are addressed in two sections of this report. The Executive Summary (Section I) provides a stand-alone, brief summary, and Summary and Additional Considerations (Section X) provides commentary on the effectiveness of the methodology. The full text of the Surveys and Responses from all three Rounds are included as Appendices A through F. Finally, the names of the Delphi panelists are included as Appendix G.

VII. Recap of Round One – the Mixing Bowl for the Project

The approach developed by the Working Group for the Round One survey was a series of ten questions oriented to "possible current and future technologies and new strategies in business acquisition for the life insurance industry enabled by these technologies". The questions posed were open-ended, inviting narrative responses. (For example, Question #2: What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" in how it distributes its products and what is the resulting "Blue Ocean Strategy"?**)** Some suggestions and guidance were provided in the survey instructions, but the only constraint was to assume that the technologies and strategies could occur in the next ten years. A copy of the specific questions included in Round One is attached as Appendix A.

Reponses were received from 39 of the 46 selected panelists. The open-ended nature of the questions produced a substantial volume and great variety of responses; no two responses to any question were the same, and the replies covered over 70 pages after consolidation by Research Support. The Working Group constructed a Detailed Summary of Round One Responses, which is included as Appendix B-1. The complete text of all responses is attached as Appendix B-2. While much of the material in these responses is of general interest to the Working Group, and likely of interest as well to the anticipated user of this Report, condensing the material into a few key points is not possible. The reader is advised to peruse the summary in Appendix B-1 and/or the responses in Appendix B-2, perhaps emphasizing areas where the question is an indicator of likely responses of interest (the questions are repeated in Appendices B-1 and B-2 for ease of orientation).

Given the great diversity of responses, the Working Group felt that the best approach to Round Two would be to synthesize the results of the Round One survey into some finite number of "strategies", and submit those strategies to the participating panelists. Ten was selected as a reasonable number of "strategies", and the Working Group then constructed ten "Blue Ocean Strategies", incorporating as much as possible from responses of all of the panelists. The Detailed Summary of Round One Responses and the Round Two Survey containing the ten strategies were presented to the participating panelists, along with a series of questions on each. It was felt that providing the entire responses to the Round One survey to each of the participating panelists would be too much detail, and could result in too great of a demand on the time of many panelists.

VIII. Recap of Round Two – the Ingredients into the Oven

The Round Two Survey strategies were presented to the participating panelists as follows:

> "This Round Two survey contains ten (10) strategies that represent a composite of many of the ideas contained in the Round One responses, and a series of questions about those strategies. Please complete any or all of the questions for which you have ideas; you do not need to respond to every question.
>
> The strategies below were constructed from participants' responses made with the Round One instruction to "assume the technologies and strategies **could occur in the next ten years**." The strategies range from those based on current technology to others that are much more speculative. The list of strategies below has been *approximately* ordered along this range."

As was the case for Round One, the rules were minimal, thereby encouraging imagination. A copy of the complete Round Two Survey is attached as Appendix C.

Results from Round Two were also substantial (63 pages after consolidation). The Working Group prepared a detailed summary (30 pages) of the responses to the questions about each of the 10 strategies; this document is attached as Appendix D-1. The complete consolidated responses to Round Two are attached as Appendix D-2.

Following are the ten strategies and related questions from Round Two, along with a short narrative summary (not the detailed summary in Appendix D-1) of the responses.

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

One company has already adopted a version of "part 1" of this strategy, issuing up to $250,000 of term life coverage to individuals age 18 to 60 "generally within minutes"

based on "just a few health questions" answered online. An immediate decision is provided and, if approved, the applicant can print their in-force policy online.

Questions for Strategy #1:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. What specific methods could be used to expand the concept to larger policies and older applicants in the near future?
3. Do you think "part 2" of the strategy will become feasible in the next 5 years? In the next 10 years?
4. Is there a patentable technological advance that would lead to a solution of legal issues regarding the use of underwriting information collected as described in "part 2" of the strategy?
5. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #1:

By about 2:1 respondents said this was a window of opportunity rather than a "Blue Ocean" strategy, although some said "both" or said only Part 2 was "Blue Ocean." Twenty different ideas (or obstacles) were identified for expanding the concept to larger policies and older ages. Additional information from electronic data bases, such as pharmacy records, was mentioned by 9 respondents; no other idea was mentioned by more than two. "Part 2" of the strategy was deemed achievable in 5 years by about 1/3, partially or possibly achievable by 1/3, and not achievable by 1/3. Over 10 years the vote was 60% yes, 20% no, 20% possibly to likely. The possibility of a patentable solution to legal obstacles drew a mixed response, about evenly divided among "yes," "no," and "possibly/probably" with identification of issues. A variety of other observations were made, with privacy concerns mentioned by 5 respondents.

<u>Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"</u>

As part of its strategic planning, Super Fast Insurance Company has concluded that a significant but affordable investment in increased computing power and speed and other emerging technologies can drastically reduce its time to market compared to its competitors and more than pay for itself in market share. It has dubbed this strategy "Quantum leap in time to market."

Super Fast believes that it can achieve "real time" pricing of policyholder options, even with in-force products, that will enable it to market far greater flexibility and consumer choice. Even with the increased degree of rigor required in analyzing product profitability, including stochastic testing, more powerful processors and faster networks would enable it complete turnaround in minutes that formerly took overnight.

Furthermore, Super Fast believes that Business Process Management (BPM) software will support rapid installation of product variations. This would allow products to be rapidly configured (without special coding) to different markets and a wide range of policyholder options. Recognizing that state regulation will sometimes remain a speed bump in the process, Super Fast believes that the strategy will nonetheless pay off handsomely in many cases.

Questions for Strategy #2:

1. What are the greatest obstacles to adoption of such a strategy over the next 5 years? In the next 10 years?
2. How viable is this strategy, and what other obstacles should Super Fast anticipate?
3. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #2:

By a ratio of 4:1, respondents did not think this strategy was viable. The majority did not believe that reducing "Time to market" was strictly a technological problem but that other factors were equally (or more) important. Factors mentioned included state regulation, bureaucracy (IT, legal, administrative), distribution and/or back end systems. Also, even if the "Time to market" could be vastly reduced, many questioned whether that was of any real value to the customer. And finally, not many thought it was a true "Blue Ocean" strategy.

Strategy #3: Insurance W/O Borders Co. – "Global internet sales where regulations allow"

The Insurance Without Borders Company observes that, across the globe, a wide variation exists in the regulatory environment and the associations that provide risk-related data. It is contemplating a proposed "Blue Ocean" business plan to take advantage of the current situations that are favorable – while other companies wait for world regulatory standardization.

The proposed business plan asserts that internet sales of life insurance could be made from many host countries - not just the United States and Canada. The plan is to choose a set of host countries with laws or regulations that permit (or at least do not prevent) internet sales of life insurance, and that allow the use of technologies currently available from a technical standpoint but not universally allowed from a regulatory standpoint.

The target is the ocean of people to insure in Africa, India, China and other countries relatively untapped by life insurance companies. The population growth of higher income individuals in these regions represents a marketing opportunity beyond the relatively mature domestic markets.

Questions for Strategy #3:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Is this a strategy to bring the benefits of insurance to more people; or to exploit people not yet protected by regulation up to the standards of more mature markets?
3. Considering the claims perspective, how can Insurance Without Borders verify claims in markets that lack open access to information; or where local certification authorities may lack sufficient checks and balances?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #3:

Although most respondents saw this as at least a window of opportunity, if not a Blue Ocean Strategy, there was a majority feeling that this involved elements of exploitation. One representative respondent said "It may start out with altruistic goals and ultimately result in being exploitative".

On the other hand, the majority also felt that the claims handling obstacles posed, as one respondent stated, "a big hurdle". Suggestions for this strategy generally stressed the need for local connections to banks, insurance companies and claims investigators.

One respondent summarized the popular feeling that "the market opportunity should not blind company management to the need for proper financial and underwriting controls".

Strategy #4: Global Insurance Company – "Global data mining, marketing"

Global Insurance Company operates in many countries and is planning the use of internet/cellular/data-mining technology to access and promote its products to the non-insured population across the globe. The technology will need to work in a concerted fashion to result in creating the "Blue Ocean" segments. Internet and cellular technology would be used for educating (and simultaneously advertising), getting feedback (to gauge effectiveness) and collecting premium payments. The data-mining technology would assist in designing advertising and products and locating target markets across the globe.

Global feels it is well positioned to use the Internet as a marketing tool to target "Blue Ocean" segments, especially the younger population, an international client base and non-working, retired adults. It plans to use "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person.

Questions for Strategy #4:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Have the Artificial Intelligence advantages already been tapped out, or is there still opportunity for an inventive AI solution that leapfrogs all the current systems?
3. Is there anything such as intellectual property rights that might be enforced to prevent everyone else from copying the process and lowering the profits for all?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #4:

More than half (15 of 28) respondents feel opportunities exist for significant advances through Artificial Intelligence (AI) improvements. However, a significant portion (one third to one half) did not answer, or said they did not understand, the questions associated with the strategy. Respondents suggesting a Blue Ocean Strategy used "approaching", "possibly", and "More Blue Ocean than early adopter"; while the Window of Opportunity votes were more emphatic. Few felt that intellectual property could be protected internationally for an extend period of time.

Strategy #5: Your Way Insurance Company – "Prospects custom-design coverage online"

A think tank at Your Way Insurance Company has recommended a "Blue Ocean" strategy in which individuals would custom-design their insurance coverage online.

The entry point would be an online process driven model that enables consumers to design their insurance coverage by answering a series of questions. The model would have "click to call" expert advice available on how to use the model as well as for each insurance category, which could be a broad spectrum (life, health, annuities, long term care, auto, and home) or some subset. Only products with relatively simple and transparent pricing would be offered. Consumers would mix and match discrete, simple products to address comparatively complex needs.

Due to state insurance department restrictions, Your Way expects to issue multiple policies through different operating units to provide the overall coverage designed by the consumer. Online underwriting mechanisms and data bases would be used to narrow the price range, define the price subject to certain conditions, or determine the price precisely.

Response activity would be used to systematically refine the process model and coverage building blocks available to consumers.

Questions for Strategy #5:

1. What are the greatest obstacles that Your Way will find if it attempts to adopt this strategy?
2. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
3. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #5:

Consumer education, knowledge, and motivation were most frequently identified as the greatest obstacles to this strategy. Regulatory issues, getting to the right people, simple products versus complex needs, and various insurance company internal issues were also identified by multiple respondents. Responses were about equally divided between those who viewed this as a Blue Ocean Strategy or a window of opportunity, with a few simply stating that it was not Blue Ocean, or neither. One participant provided an expanded description that he or she believed would make the strategy truly Blue Ocean, and that description was included in Round Three for study participants to provide further comments regarding the strategy. Finally, participants gave a great variety of additional comments about the strategy, and these are included in Appendix D-1

Strategy #6: Strategic Partners Insurance Company – "For Operational Excellence"

Like many companies, Strategic Partners Insurance Company is investigating increased use of technology for incremental improvements in operational excellence. It is considering a substantially increased investment in this area to pursue a "Blue Ocean" strategy to find innovative technological breakthroughs that may result in intellectual property rights. It is also considering strategic partnerships with non-insurance entities that could provide leveraging of applicant underwriting or claims information.

Examples might include access to online prescription or medical records, motor vehicle records, court records, shopping records, insurance policy and application records, biological or genetic sources, etc. as well as claims adjudication facilities that would complement internet policy administration.

Among candidates for a strategic partnership are a major pharmacy chain, a forensic laboratory, a supermarket chain, a credit card giant, a GPS (Global Positioning Satellite) device manufacturer, a biofeedback technology firm and even a big name jeweller – to make a medallion that is both a status symbol and a monitor (and transmitter) of basic life parameters – the 'bling' factor.

Questions for Strategy #6:

1. Is there anything such as intellectual property rights that Strategic Partners might enforce to prevent everyone else from copying the process and lowering the profits for all?
2. Is this an ethical strategy? Is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair?
3. Is this a "Blue Ocean" opportunity for players outside of the life insurance industry more than for insurers? For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets?
4. If Artificial Intelligence systems can encapsulate the knowledge necessary for medical underwriting, then does medical underwriting necessarily have to remain the province of traditional insurance companies?
5. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #6:

There were no responses to about 1/3 of the questions. About one third of the responses were skeptical or critical of either the practicality or ethics (or both) of the strategy. Another quarter of the responses evidenced some support for the strategy, but often only under certain conditions. Finally, two respondents felt the description of the strategy was insufficient or the questions unclear. If so, this contributed to the level of non-responses.

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse – technologies are often required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Questions for Strategy #7:

1. What are examples of previously uninsurable risks that could be insured through a micro-policy?
2. What methods of distribution, either existing or potential, could be used to target these risks?
3. Are there other definitions that could lead to micro-policies – geography, ethnicity, *etc*.?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #7:

Niche opportunities were identified to cover hazardous non-work activities (insured is knowingly taking a risk), specific diseases or medical conditions (insured is subject to genetic or non-cosmetic surgical risk), or environmental events that could cause financial loss (but perhaps not death). The spectrum of risks was broad and ranged from commonly described risks such as private plane piloting to highly creative risks associated with an extra-marital affair, or with a political campaign.

The distribution suggestions ranged from traditional (agents and brokers) and electronic (kiosks, internet, cell phones) to third party (event promoters, retail stores) where quick, small, low premium (but high profit margin) niche sales could be an ancillary part of some primarily non-insurance purpose. Examples include an event registration, an immunization for travel, or a retail goods purchase. The respondents felt that the sale had to be fast (minutes or seconds) and cheap to tap into a distribution system for another purpose.

Many respondents stressed the difficulty of pricing without statistically significant data and also the importance of getting the pricing correct, to strike the right balance between profitability and affordability.

Strategy #8: Holistic Insurance Company – "Risk 'agents' help mitigate all risks"

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property, and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Questions for Strategy #8:

1. How viable is this strategy? Could such a service be offered at a price that would be attractive to potential clients?
2. What technological barriers or other obstacles are there to such a strategy?
3. What other observations do you have about this as a "Blue Ocean" strategy?

Summary of Round Two Responses for Strategy #8:

By about 2:1, respondents said this strategy was "viable" but it was not nearly so clear that the respondents thought this was an actual "Blue Ocean" strategy. The responses seemed very polarized in that respondents were either very enthusiastic or very pessimistic towards the idea. The latter group were primarily concerned about overcoming regulatory and pricing obstacles. One respondent provided an example where something similar is already being done.

> "Although not exactly the same as the model, I do have a practical example. ABC Inc. has a long-term care service company that among other things provides underwriting and claims administration for LTC policies. One of the other programs they have is "safe at home", where they do an in person assessment of the insured's home to look for opportunities to make modifications that would reduce falls and identify other ways to improve safety (e.g., remove throw rugs, add banisters or replace steps with incline, add railings in level areas, improve lighting, etc.). Although this is a fee-for-service program, it should also help reduce LTC claims from falls and help preserve the insured's quality of life."

Strategy #9: Big Brother Insurance Company – "Monitor individuals' health, risk profile"

Big Brother Insurance Company seeks to build a "Blue Ocean" strategy around emerging technologies that will allow it to monitor and measure, on an ongoing basis, the risk profile of insured individuals. For example, a device could be installed in an insured's car that measures the distance driven, speed, whether seatbelts were used and even breathalyzer results.

Other technologies possible are:

- Home health monitoring devices that could periodically send information over the web such as heart rate, breath rate, blood pressure and weight.
- Personal/private information, such as some doctors' reports, may be accessed in electronic format.
- A personal electronic database could help with the treatment of an insured in the case of an emergency.

Since these technologies are invasive, clients would need to be provided with significant incentive in order to agree to this level of monitoring.

Questions for Strategy #9:

1. How viable is this approach? That is, could enough cost savings be generated to pass some back to the customer and still make an enhanced profit for Big Brother?
2. How much of a premium discount would be needed to make this strategy viable?

3. Is there any other incentive that could be offered to a potential client for this type of product?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #9:

By about 3:1 respondents said this strategy was not viable. Many thought it was not possible to arrive at a feasible premium discount that would make this style of product attractive to a consumer.

Strategy #10: Virtually Real Insurance Company – "Virtual World Insurance"

Virtually Real Insurance Company is exploring the concept of virtual world insurance. Virtual worlds, like SecondLife, are online experiences where people enter the "world" as an avatar – or electronic representation of themselves. These "worlds" are becoming more and more "real" as they draw more participants – including corporations - and the experience becomes more sophisticated. As this virtual reality expands, opportunities may be created for insurance – possibly distribution, marketing… or even products.

Questions for Strategy #10:

1. What advice would you give Virtually Real regarding the potential for marketing insurance in virtual worlds? For providing insurance products in virtual worlds?
2. How might virtual worlds blend with the real world to create opportunities for insurance companies?
3. What obstacles might a company face in pursuing a strategy that involves an online, virtual world?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #10:

Most respondents struggled to find any value in the virtual world idea, or simply made no comment. Most of those who did see an opportunity described it in terms of educating participants or using the virtual world to motivate real world insurance purchases.

IX. Recap of Round Three – the Icing on the Cake

The approach to Round Three was to provide each of the participating panelists with a summary of the aggregated opinion, and determine if any had any additional input. A copy of the specific questions included in Round Three is attached as Appendix E.

Results from Round Three were less robust. This is not surprising, since the participating panelists were asked merely to re-react, and is one of the indicators that a Delphi Study is complete: the panelists are not changing their stances. A complete consolidated response is attached as Appendix F. Following is a very brief summary of those responses.

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Additional technologies toward paperless processing were identified by two panelists, and the expected availability of electronic patient records were noted by two others.

Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"

Several panelists who were in the minority in Round Two in believing the strategy feasible (most did not) reiterated or expanded their reasons why the strategy could succeed.

Strategy #3: Insurance W/O Borders Co. – "Global internet sales where regulations allow"

Panelists noted additional concerns and opportunities for less developed countries.

Strategy #4: Global Insurance Company – "Global data mining, marketing"

There were few comments here in Round Three; panelists mentioned additional concerns, and the need for and difficulty of implementation were noted.

Strategy #5: Your Way Insurance Company – "Prospects custom-design coverage online"

Several panelists revisited the practical difficulties in making this work, while also sometimes noting that it would be quite worthwhile if it could be accomplished. Some expressed support for the expanded strategy provided by a panelist in Round Two, and one panelist suggested a new variation of the strategy.

Strategy #6: Strategic Partners Insurance Company – "For Operational Excellence"

Two panelists opined that there were two strategies here, one around strategic partnership and another around intellectual property. Another panelist noted that elements of the strategy were already in use in the industry.

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Additional "micro-policy" opportunities were mentioned, and one panelist partially changed to a more positive answer based on other Round Two responses.

Strategy #8: Holistic Insurance Company – "Risk 'agents' help mitigate all risks"

Two reiterated that this was the role of current multi-line insurance agents; others reiterated their support and added details to consider in implementation.

Strategy #9: Big Brother Insurance Company – "Monitor individuals' health, risk profile"

Other than one supportive comment, there were only reiterations of the Round Two prevailing negative view.

Strategy #10: Virtually Real Insurance Company – "Virtual World Insurance"

Limitations of this strategy were generally reiterated; one participant revised his view to support the marketing potential (as opposed to the insuring potential) of this strategy.

X. Summary and Additional Considerations

As described in the Introduction (Section II), our goal was to collect new ideas as opposed to projections of existing ones. In that light, our questions were open-ended to encourage qualitative, rather than quantitative, responses. It worked so well that we got more than we were expecting. In November of 2007, we received over 70 pages of "summarized" Round One responses from the SOA research staff (who had to transcribe all of the individual responses and protect the anonymity of each respondent). This was not a study where we could easily categorize the responses and apply meaningful statistical metrics to summarize them. It took us until April of 2008 to distill the responses into 10 discrete strategies and send out the second round of questions. A few of the participants commented that 10 strategies were still too many for thorough consideration and response.

Round Two resulted in another extensive set of responses (although not as large as Round One); but they were mostly elaborations of, and extensions to, the ideas from Round One. Round Three saw fewer responses and a tendency towards coalescence into a smaller set of strategic ideas. This was consistent with the goals of a Delphi study. Our objective was not to have complete agreement among the respondents. We wanted to surface new ideas; to vet them among a group of insurance, technology, and marketing and distribution professionals across the country; to distill them to a set of strategies deemed by some to have potential; and to elicit perceived obstacles and shortcomings of the strategies. In all these respects, the project was successful.

A further positive indicator of success for this glimpse of the future is that it was not, for the most part, superseded by developments by the time we published the results. Current information, unlike a fine wine, does not age well. The longer the elapsed time of the study, the greater the danger that a study of the future could become a restatement of the past. During the course of the study, a few facets of some strategies, such as electronic signatures for instant approval applications (an integral part of Strategy #1 – "Paperless Processing"), have overcome many regulatory hurdles and become more commonplace, suggesting a window of opportunity or a head start on an inevitable industry trend, rather than a Blue Ocean opportunity. Others, such as the insurance of avatars in a virtual world, may be crossing from the implausible to the plausible as non-insurance cottage industries have since begun large scale sales of accessories and scenarios for these virtual beings. Perhaps even the most *outré* scenario (Strategy #10 – "Virtual World Insurance") is a Blue Ocean opportunity despite our initial intuitive negative reactions to it. Quoting one of our respondents, "consumers are generally more receptive to and are ready for – looking for – paradigm shifts long before industries recognize the need for, envision and embrace them."

Overall though, the year and a half from the mailing of the first set of questions (Round One) and the study conclusion (this document) seems to have been a sufficiently short enough time period to have preserved currency of information.

We have some suggestions for future studies of a similar nature. (Note that "we" here includes not only the POG, but some panelists as well.) Some of the most germane of these suggestions follow:

One suggestion for future qualitative type Delphi studies is to prepare in advance for the incoming responses, and thus shorten the turnaround time to the respondents. Shorter turnaround time tends to keep interest levels higher and also to promote quicker responses from the panel members. We were caught by surprise by the enthusiastic and prolific responses to our first set of questions. This is an excellent reflection on the quality of participation of the panel members; but it resulted in a time delay (almost 6 months) between Round One responses and Round Two feedback and questions. In hindsight, we might have saved turnaround time by pre-allocating the summary assignments (by Strategy number) among the POG and Working Group members. This would have precluded the need to schedule a meeting for volunteers and the subsequent assignments.

Another suggestion, given that the POG and the SOA Research Staff have other ongoing commitments, would be to form a project plan early in the project. A longer term project plan ahead of time might have enabled the POG and Working Group members to better schedule their time. Naturally, the creation of a project plan does not guarantee success. The best of plans can be negatively impacted when unexpected external needs take priority over the volunteer work, as they sometimes did over the course of this project. But often a plan can alert us to potential bottlenecks in time for effective remediation.

In some cases, an outside (paid) facilitator might be appropriate if speed is of the essence, or if the POG members are uncertain of how to proceed or unable to make a very substantial time commitment. However, in this project we chose the learning experience of conducting the study ourselves over the benefits of an outside expert to guide us. Such an expert may have helped us develop our questions and strategies better; even though the ten strategies were constructed from ideas suggested by the panelists, in some cases the majority of panelists did not believe that a strategy was viable or well conceived.

Having said that, the POG was aptly aided by the SOA Research Staff and the mix of talents and personalities seemed appropriate for the project. Additionally, this was a relatively low budget project and the cost of a paid project leader seemed unnecessarily prohibitive. Our volunteer project leader kept the project rolling along without the need for an outside facilitator.

When reflecting back on a newly completed, long term project, we sometimes tend to focus on the obstacles, the wrinkles and the things we wish we had done differently. However, it is equally important to note the things that went well. The mix of POG, Working Group, and SOA Research Staff members turned out to be one where innovation and enthusiasm abounded. All of us contributed more time than we originally planned because we found the interactions stimulating and thought provoking. We also

saw that our efforts were generating higher than expected, ambitious, and enlightening contributions from our panel of respondents.

Likewise, we must credit the panel members for a notable collaborative effort. They responded with enthusiasm to the questions as written – and to rewritings they occasionally added themselves. The anonymity condition seemed to remove inhibitions and open the tap for an outpouring – no, a deluge – of creative ideas.

The final procedure which we followed and would recommend for any future Delphi study was to get as much diversity of backgrounds, positions, and locations as practicable. This should be a goal when choosing panelists, POG members, Working Group members, and Research Staff. Another suggestion, which we followed without any official mandate, was to ignore any hierarchical differences between POG, Working Group, or Research Staff members. Everyone was part of the Working Group … and everyone worked. This too, seemed to help create a more collaborative environment, and we feel it contributed to the quality of the study results.

Appendix A
Round One Survey

This first round survey is composed of 10 questions to identify possible current and future technologies and new strategies in business acquisition for the life insurance industry enabled by these technologies. Please complete any or all of the questions below for which you have ideas, **but you do not need to respond to every question.**

In providing your responses to the questions, please assume the technologies and strategies **could occur in the next ten years**. In addition, you may describe more than one strategy and/or technology per question.

- Question #1. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it markets its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider marketing methods that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

- Question #2. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it distributes its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider distribution methods that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

- Question #3. The internet has increased the penetration of companies in foreign markets where consumers around the globe are purchasing goods from the internet sites of many companies. Is it feasible to build a similar platform for insurance and other financial products where a consumer outside of United States or Canada would be able to purchase products from US or Canadian companies via the internet?

- Question #4. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it underwrites its products** and what is the resulting "Blue Ocean Strategy"? Consider historical criteria, current "state of the art" criteria (e g., genetics, lifestyle), or fantastic criteria ("Ms. Prospect, I am going to ask you to breathe into your speaker phone").

- Question #5. Can artificial intelligence based technology be used effectively for medical underwriting without any human intervention in the process?

- Question #6. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it processes**

Appendix A
Round One Survey

applications for its products and what is the resulting "Blue Ocean Strategy"? Feel free to consider any processing systems that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential mechanical or electronic devices, whether or not they have actually been invented yet.

- Question #7. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it develops its products** or **what products are available** and what is the resulting "Blue Ocean Strategy"? Consider what is insurable, what might bring peace of mind, and what might merely capture a whimsy.

- Question #8. Are there insurance products being marketed outside of US/Canada that are not currently available in US/Canada but are viable with the advancement in technology?

- Question #9. Clients value financial security. Is there some aspect of financial security that the industry does not currently satisfy that could be satisfied with a future innovation? Are you aware of any current industry innovations that are allowing demand for financial security to be met that hasn't in the past?

- Question #10. What emerging technologies do you see on the horizon with the potential to impact our daily lives? How could these impact the design, marketing, sales, and/or processing of insurance?

Appendix B-1
Detailed Summary of Responses to Round One Survey

Question #1. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it markets its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider any processing systems that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

1. How many responded to the question
   - 36 participants responded, identifying one or more technologies
   - The other 3 participants did not describe any technology or strategy.

2. Summary of the ideas presented.
   - Our open answer format enabled participants to name a large number of current or emerging technologies that could improve how products are marketed. The responses generally took the form of how the industry could improve its marketing, rather than detailed strategies.

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
   - 15 participants identified the use of E-mail, the Internet, web portals, interactive online data gathering, Blackberries, and web casts. For example, one participant said: "Any insurer using the Internet as a marketing tool is well positioned to target Blue Ocean segments especially younger population, an international client base and non-working, retired adults."

   - 3 participants mentioned other technology for data collection, such as data mining would help develop targeted/customized marketing. For example: "Use of "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person…"

   - 2 participants commented on the need for Individual Risk Management concept. For example: "Today the financial product seller plays to "you don'ts want to run out of money" and models to that effect. I believe some significant segment of the population will want a broader risk management view of how to mitigate the broad spectrum of risks they and their family face. To obtain financial mitigation, the individual has to go to several sellers and there is little counsel for mitigating other exposures. There is a space for someone to market solutions for all of an individual's risk management needs."

Appendix B-1
Detailed Summary of Responses to Round One Survey

4. Identify outliers and again include sample responses to illustrate the point.
   - Some participants mentioned the need to focus on the under 50 population as they are under-insured and an untapped market. One idea was to look at industries that are successful at targeting this group and adapt similar techniques.
   - A few participants mentioned the use of genetic testing to target healthy clientele or to offer a one-time application. For example, "If a substantially better predict of likelihood of diseases is possible (a present reality and an increasing field) then there will be pressure from those with "good" genes to be identified separately and marketed to separately."
   - A few participants mentioned the use of psychological or emotional selling. Life insurance has always been marketed to fulfill a need and perhaps we need to focus on marketing the emotional aspect. For example, "…admission of one's eventual death is a certainty, with a possibility that the occurrence could happen at any time, regardless of current age, is a possibility, there's a strong emotional component which is often overlooked by marketers who are used to assuming that the 'to purchase' decision is made like any other product. Procrastination is our greatest enemy and the main reason none of the term spreadsheet companies have ever really made money. The same is true to a lesser extent for Disability Income, Long-Term Care Insurance, and the newer Critical Illness products. Therefore, to me, one of the most critical components which new technologies will be bringing to the table are those which can have an impact on the emotions and psyche of the individual in ways which have previously been impossible. Call it the procrastination-minimizer or reducer."

Question #2. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it distributes its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider distribution methods that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

1. How many responded to the question
   - Of the 39 participants, 33 provided responses.

2. Summary of the ideas presented.
   - The great majority of respondents identified some use of the internet for distribution.

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.

Appendix B-1
Detailed Summary of Responses to Round One Survey

- 24 referenced the internet as changing the distribution of products. More specifically,
  - 8 referenced the internet as being a tool for sales – augmenting or replacing the agent, including direct sales.
  - 6 referenced the internet for marketing (demand generation) and education
  - 2 referenced the internet for servicing
  - 6 referenced the internet for requirements gathering and applications

  Of these responses, there are several that stood out as being unique:
  - 2 indicated the potential to utilize internet activity and website history for underwriting.
  - 1 also indicated the potential to use response time and other qualitative aspects of an internet response for underwriting
  - 1 mentioned SecondLife as having potential for internet-based sales and servicing of life insurance.
  - 1 mentioned an industry-sponsored compliance portal to centralize the evaluation of fiduciary responsibility, suitability, etc.
  - 1 noted that the servicing portals, etc. would become more of the product – i.e., the ability to manage the contract would be of greater value than the insurance contract itself.
- 8 highlighted the potential for new/additional distribution outlets including:
  - Employers
  - Supermarkets and pharmacies
  - Car dealerships
  - Affinity groups

  Several identified the importance of consistent multi-channel distribution and branding – managing the entire "customer experience"
- 3 suggested product changes that could evolve with distribution
  - Mandatory insurance
  - "On-the-spot" insurance (e.g., prior to a bungee jump)
- 8 proposed changes in distribution methodology including:
  - Virtual or physical "Targeted Resource Centers" aimed at providing services and products to a particular target group (e.g., small business owners)
  - Moving from product-focused distribution to process-focused
  - Distribution specific to demographic characteristics

4. Identify outliers and again include sample responses to illustrate the point.
   - Other technology improvements were noted including:
     - Standardized APS's
     - Using gaming technology for sales/servicing
     - PDA's and wireless for applications and qualification
     - E-signatures

Appendix B-1
Detailed Summary of Responses to Round One Survey

- Digital clearinghouses for medical information

Question #3. The internet has increased the penetration of companies in foreign markets where consumers around the globe are purchasing goods from the internet sites of many companies. Is it feasible to build a similar platform for insurance and other financial products where a consumer outside of United States or Canada would be able to purchase products from US or Canadian companies via the internet?

1. How many responded to the question
   - Of the 39 participants, 33 provided responses.

2. Summary of the ideas presented.
   - There was no consensus or theme. In fact, very few respondents actually stated Yes or No in their answer; and some were so inclined to add contingencies and qualifications so that one could not figure out which position they were taking (or avoiding). Thus, a summary response of "unsure" has been added.

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
   - Overall, the mode was "yes" (with 20 responses ranging from "Absolutely" to what one would classify as a very weak "yes"), followed by "unsure" (with 7 responses that provided good insights but no decision) and then 6 each for the "no" response and the "no response" response. Checksum: 20+7+6+6=39.
   - The general feeling was that the technology was generally available now; but that legal issues and trust issues (validation of applicant responses, difficulty of claim verifications, etc.) were significant and that a globalization of the regulatory environment and the associations that provide risk-related data would be highly desirable factors for successful utilization of the internet for life insurance sales. A few respondents questioned why the question was limited to sales from U.S. or Canadian companies and suggested that it ought to be expanded to embrace internet sales of insurance from any host country.

4. Identify outliers and again include sample responses to illustrate the point.

- One respondent pointed out that language may no longer be a barrier to international marketing:
  "One additional element which few have factored into the global commerce equation is that within the next 5 years, automatic and simultaneous language translation will become an affordable and commonplace technology, opening doors for U.S. innovators and creatives to enter any global market without the disadvantage of a language barrier."

Appendix B-1
Detailed Summary of Responses to Round One Survey

Question #4. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it underwrites its products** and what is the resulting "Blue Ocean Strategy"? Consider historical criteria, current "state of the art" criteria (*e g*., genetics, lifestyle), or fantastic criteria ("Ms. Prospect, I am going to ask you to breathe into your speaker phone").

1. How many responded to the question
   - 36 of the participants (92%) responded to this question, with only 3 (8%) not responding. The 36 responses ranged from as short as 2 lines to as long as 40 lines, with an average of 12.5 lines.

2. Summary of the ideas presented.
   - Considerable effort was spent by many of the participants on their responses, and responses were quite wide-ranging. There was a fair amount of overlap with other questions in the Round. After some (hopefully minor) interpretation, the key points can be summarized in 18 buckets, in roughly declining frequency order, modified by relatedness, as follows:

- Personal information will be in online "vaults" (13 responses total)
  - Existing databases (6 responses)
  - PBM database, blood pressure (3 responses)
  - Google or similar (1 response)

- Personal information will be carried "on the person" (4 responses total)
  - Small disc, key chain, under skin (2 responses)
  - Personal records (1 response)

- DNA with wide availability; genetics in general (11 responses total)
  - Combination of nanotechnology / laboratory tests (2 responses)
  - Cost of sequencing DNA is dropping (1 response)
  - Morally opposed (1 response)

- Select lives would be happy to share information (3 responses)
  - Perceived need for client incentive (2 responses)
  - Perceived need for defensive underwriting (1 response)

- Social costs are already borne by government / society [*e g*., assigned risks] (3 responses total)
- Anticipated "synthetic" underwriting (11 responses total)
  - Pharmacies become central (6 responses)
  - Pharmacies become somewhat central (2 responses)
  - Data only (2 responses)

Appendix B-1
Detailed Summary of Responses to Round One Survey

- Physicians report the underwriting class to the applicant (1 response)

- A trend to less individual underwriting is likely (8 responses total)
  - Expect more group underwriting (3 responses)
  - Expect larger pooling of homogeneous risks (2 responses)
  - Expect wider distribution / spread of risk and/or assigned risk (2 responses)
  - Expect only underwriting for catastrophic coverage for pandemic / terrorism (1 response)

- The issue is more one of legal limitations than one of technology (7 responses)

- More use of predictive modeling (6 responses total)
  - Rules-based technologies (1 response)
  - Foreign markets (1 response)
  - Quicker turnaround (1 response)
  - Marginalization of smaller companies (1 response)
  - History not as important as prediction (1 response)

- Anticipate a finer slicing of underwriting classes (5 responses total)
  - Emphasis on data collection and analytics is key (1 response)
  - Relevant dialogue with the customer (1 response)

- Advances in diagnostics (4 responses total)
  - A physical presence will always be required (2 responses)
  - Diagnostics built into the body (1 response)
  - Fluids / correlation to lifestyle (1 response)

- Other testing possibilities (7 responses total)
  - Emotional health / sense of control (2 responses)
  - Internet traffic analysis (1 response)
  - Spending habits (1 response)
  - Education (1 response)
  - Income (1 response)
  - Accelerated stress testing on tissue samples (1 response)

- Other underwriting platforms anticipated (3 responses total)
  - Wii (1 response)
  - Touch computer screen (1 response)
  - Kiosk (1 response)

- Anticipate more frailty testing [especially for older ages] (2 responses total)

Appendix B-1
Detailed Summary of Responses to Round One Survey

- A shift from protection coverage to wealth management will reduce underwriting needs [medical underwriting not as important; shift to holistic underwriting] (2 responses)

- The public has a desire to know about risk analysis over which they have no control (1 response)

- A general need for client willingness will lead to incentives (1 response)

- Underwriting access limited to only that which is relevant (1 response)

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
    - If there are recurring themes, they are the use of new and anticipated procedures and histories (or predictions) over interview, and a potential clash among legal issues / willingness of the client / intrusion.

4. Identify outliers and again include sample responses to illustrate the point.
    - The outliers were interesting. Among them were the ongoing monitoring of underwriting status, and a perceived management of the underwriting class by the client, and approaches such as predictive modeling and frailty testing.

Question #5. Can artificial intelligence based technology be used effectively for medical underwriting without any human intervention in the process?

1. How many responded to the question
    - Of the 39 participants, 35 provided responses.

2. Summary of the ideas presented.
    - The responses were optimistic; very few respondents alluded to the “art” of underwriting. Most were satisfied that the “science” could be effectively quantified with AI techniques.

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
    - The tally, somewhat subjective due to a lack of firm answers, was 22 “yes”, 9 “no” (but usually qualified), 4 “not sure” and 4 “no answer”. Checksum: 22+9+4+4=39.

Appendix B-1
Detailed Summary of Responses to Round One Survey

- Most of the "no" responses focused on the phrase "without any human intervention" and pointed out that routine cases could be automated but that there would always be some cases so complex as to require human adjudication. Many of the "yes" respondents acknowledged this in passing but they felt the cost effectiveness of automated underwriting for the vast majority of cases was sufficient to answer "yes". A few respondents pointed out the analogies to credit ratings, loans, P&C insurance, and other financial processes where automation has assumed the overwhelming majority of the daily work.

4. Identify outliers and again include sample responses to illustrate the point.
    - One respondent wrote a powerful plea for automated underwriting: "Regardless of how it is accomplished, automated underwriting is an absolute imperative for the insurance industry. We are so lagging other industries in this regard that it is embarrassing. There is no other consumer product where the consumer is expected to wait an unknown amount of time, from days to weeks to even more than a month, in order to find out if the product will be sold to him, at what price, and what terms."

Question #6. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it processes applications for its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider any processing systems that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential mechanical or electronic devices, whether or not they have actually been invented yet.

1. How many responded to the question
    - 30 participants responded, identifying one or more technologies
    - The other 9 participants did not describe any technology or strategy.

2. Summary of the ideas presented.
    - Our open answer format enabled participants to name a large number of current or emerging technologies that could improve how applications are taken or processed. The responses generally took the form of how the industry could improve its processes. The participants did not describe how these process improvements could be used strategically, other than two participants who used a combined total of six words to do so.

Appendix B-1
Detailed Summary of Responses to Round One Survey

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.

- 19 participants identified electronic transmission of data or applications. Participants identified the use of E-mail, E-signatures, web portals, online apps, interactive online data gathering, Blackberries, online scheduling of paramedical exams, and biometric identification (fingerprint scan, retina scan). For example, one participant said: "Applications can be submitted on line in data format or by phone. Voice recognition is now at an industry standard level, fingerprint technology is increasingly available on home computers and it is common practice to download documents in other industries (even in p and c insurance) so why not for life insurance."
- 6 participants mentioned other technology for data collection, such as scanning apps, voice signatures, automated transcription of verbal information, voice recognition systems, optical character recognition, and touch-screen kiosks. For example: "Voice/Video applications can completely simplify the application process. This will become mainstream with increasing voice/video capabilities on mobile devices include mobile phones and handheld devices as well as increased information storage and access capabilities. Kiosk and touch screen applications are another option to offer application submission at point-of-sale."
- 5 participants commented on the need for the whole industry to simplify or standardize the form of information; universal data standards, ACORD data standards, standardized policy forms, apps with only structured data, and simplified one page apps were mentioned.

There were two areas where the responses to Question #6 spilled over into underwriting, and therefore may also be useful in the analysis of responses to Questions #4 and #5:

- 6 participants identified technology to process information received, such as artificial intelligence, "real time" systems, eForms, synthetic underwriting and predictive modeling.
- 6 participants mentioned alternative sources of data which are or could be enabled by technology. These were identified as a digital data base of medical records, a (company) data "vault", Enterprise Content Management (ECM) technologies, identity and financial information based on the applicant's biometric ID, and an SAP-like order entry system as an industry supply chain .

An example of a response that spanned these last two areas is:
"Suppose that a biometric fingerprint scan or retina scan could be made foolproof. Suppose also that a secure site could be maintained on the internet where personal identity information could be maintained and accessed only by authorized scan. Then

an applicant could simply request a certain kind of policy and authorize the company to access their identity information for purposes of underwriting."

4. Identify outliers and again include sample responses to illustrate the point.
- Several participants also mentioned the possibility of electronic delivery of policies or underwriting decisions or electronic payment methods. One idea described in some detail was "dynamically generated applications" in which only a few questions would be asked, but these would lead to additional questions based on the applicant's responses.

Question #7. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it develops its products** or **what products are available** and what is the resulting "Blue Ocean Strategy"? Consider what is insurable, what might bring peace of mind, and what might merely capture a whimsy.

1. How many responded to the question
- 34 participants responded with product ideas and/or the use of technology enabling products or product development.
- The other 5 participants did not provide a response to this question.

2. Summary of the ideas presented.
- A great variety of product ideas were suggested. Only half of the responders made reference to a use of technology associated with their product idea. Six persons made reference to a strategy (all different); one of those was a strategy he is currently involved in implementing.

3. If there are recurring themes, how many respondents identified the theme/ issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
- 17 participants provided commentary about the state of the products in the industry or suggested one or more product ideas without reference to the use of technology. For example, one participant suggested "green" insurance, Islamic insurance and annuities, deferred no-death benefit annuities, CPI indexed products, and products linked to global warming without any specific link to technology.
- Thirteen participants suggested consumer-driven approaches to product design.
    - 8 participants mentioned the use of surveys or focus groups to drive product design decisions; four of these specifically mentioned online communities, online focus groups, blogs or just the internet. For example: "Blue Ocean Strategy" would incorporate response activity to consistently gauge programmable output for product redesign. New generation

products should focus on cost and capital efficiencies that are client focused, while providing ROI to the provider company with a more cost efficient method of distribution. This would mandate full disclosure and transparency, and the elimination of marketing concepts that sell poorly structured products."

- Four (4) additional participants mentioned letting consumers design their own products. For example: "You can build a car on the internet and have it priced to your tailored requirements. Life Insurance should be no different."
- One participant mentioned the ability to "access incredible demographic information thanks to the internet" for product development.

- 5 participants commented on the potential of more powerful computers and faster networks to improve the product development process, through common calculation engines, better stochastic modeling, "real time" pricing or other actuarial testing.
- 3 participants commented on the power of other technology to improve other aspects of the product development process. For example: "…new product iterations take 12-18 months. There are too many rules, too much complexity and too much coding. There are several new technologies that are emerging to help solve this time to market problem. Primary among them, Business Process Management (BPM) software enables companies to use flexible decision and process rules to support product specialization."

4. Identify outliers and again include sample responses to illustrate the point.
   - Specific product comments are shown below. Six suggest different sorts of combination or lifestyle products. Five participants suggested that current products are too complicated.

1. One could see insurance as a financial commodity, where future values are sold and resold.
2. The life industry in my view still has not developed a sufficient menu of life/annuity/LTC/DI combination products for retiring Baby Boomers.
3. There is nothing stopping some of the variable annuity riders currently being offered from being attached to selected mutual funds. This will lead the industry into selling put protection for retirement assets in equity funds.
4. There are a number of new coverages, however, that could be supported by the Internet, such as personal event weather insurance. There is already personal hole-in-one insurance in Japan.
5. "Green insurance…Islamic insurance and annuities…deferred no-death benefit annuities… CPI indexed products…products linked to global warming"
6. Stage of life cover – Products whose profiles automatically change based on the stage of life of the insured

Appendix B-1
Detailed Summary of Responses to Round One Survey

7. What about insuring for the availability and/or cost of water and fuel?
8. Lifecycle products are needed which could protect against early death or disability throughout an individual's working life and convert into an annuity with long-term care options following retirement.
9. Consider a pre-birth (or even pre-conception) insurance product with benefits associated with various birth defects and benefit payments associated with other non-preventable adverse conditions.
10. Consider a comprehensive life-cycle financial product that combines insurance for basic risks (life, health, property) with a floating balance that can be negative (a loan) in early adulthood and can accumulate a positive balance (cash value) later on, and which can be drawn upon in old age.
11. Insurers should be able to provide automatic increases in coverage, with increasing premiums, for life insurance and other insurance just as casualty insurers do today for homeowner coverage.
12. Combination coverages make a lot of sense: combine insurable needs in one product that costs less than two separate coverages.
13. Having a living product that offers risk/rewards based on the conditions of the consumer that change could be an interesting product.

Question #8. Are there insurance products being marketed outside of US/Canada that are not currently available in US/Canada but are viable with the advancement in technology?

1. How many responded to the question
   - Only 23 of the participants (59%) responded to this question, with 16 (41%) not responding. The 23 responses ranged from as short as 1 line (which occurred 14 times) to as long as 13 lines, with an average of 2.3 lines. Even then, of the 23 responses, 12 were simply down the lines of "I do not know". In short, this question did not get the group too aroused.

2. Summary of the ideas presented.
   - Concentrating on the 11 participants (28%) with a meaningful response, there is little overlap and, actually, little new. The success of Bancassurance receives one mention, Critical Illness receives two, and three dance around annuities (one was actually the hedging of risk, rather than a new product, and the others were individual underwriting and private placement).

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
   - If there is a recurring theme, it is that any limitations are not due to technology, but are due to regulatory issues, or field force interest. Other recurring themes might be cross-lines product combinations (*e g*., term riders on automobile

Appendix B-1
Detailed Summary of Responses to Round One Survey

insurance or Critical Illness coverage), and new approaches to investment/longevity products (*e g.*, private placement or underwriting).

4. Identify outliers and again include sample responses to illustrate the point.
   - One outlier of interest pertained to "micro-insurance", which may not have any immediate applicability to the US/Canadian market, other than as an extension of the middle market.

Question #9. Clients value financial security. Is there some aspect of financial security that the industry does not currently satisfy that could be satisfied with a future innovation? Are you aware of any current industry innovations that are allowing demand for financial security to be met that hasn't in the past?

1. How many responded to the question
   - 34 participants responded.
   - The other 9 participants did not answer.

2. Summary of the ideas presented.
   - Our open answer format enabled participants to list a large number of current or emerging financial security gaps. With few exceptions, respondents focused on the first question and didn't address the second.
   - The main exception mentioned the emergence of the viatical market as an innovation that was meeting untapped demand.

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
   - 11 respondents mentioned longevity protection. For example: People will need products to help satisfy retirement security needs – we have an aging population and currently not enough creative products satisfying longevity needs.
   - 3 respondents mentioned identity theft.
   - 3 respondents mentioned industry/company risk. For example: Today the guaranteed payout in the event of an insurance company defaulting is state dependent and falls between $100,000 and $300,000 – these limits are out of date and of little value to many policyholders.
   - 2 respondents mentioned health insurance options. For example: We have a mosaic system for health insurance. Even if someone endeavors to stay continuously insured, they can fall through cracks, often when they need the insurance the most.
   - 2 respondents mentioned intergenerational risk. For example: … having to care for an elderly relative ….

Appendix B-1
Detailed Summary of Responses to Round One Survey

- 2 respondents mentioned terrorism coverage. For example: **Terrorism Threat products -** Insurance products related to impact (e.g., death, disability, disfigurement, property loss, etc.) due to terrorist attacks, chemical biological warfare in the U.S. and elsewhere.
- 2 respondents mentioned unemployment insurance. For example: Having more people in the work force may outstrip the demand for labor, so unemployment related income replacement coverage may be a need.
- 2 respondents mentioned family care insurance / family dissolution insurance. For example: The legal and emotional integrity of a person's family has a huge impact on financial integrity.

4. Identify outliers and again include sample responses to illustrate the point.
- True inflation indexed coverages
- Currency risk
- Epidemic insurance
- Improving the liquidity of payout annuities
- "… broader risk management view of how to mitigate the broad spectrum of risks they and their family face."
- Products to fund career changes, sabbaticals
- Water risk
- Cryogenics insurance

Question #10. What emerging technologies do you see on the horizon with the potential to impact our daily lives? How could these impact the design, marketing, sales, and/or processing of insurance?

1. How many responded to the question
- 36 participants responded.
- The other 3 participants did not answer.

2. Summary of the ideas presented.
- Three main themes emerged.
    1. Increased productivity/communication
    2. DNA analysis/Genetic treatment
    3. Home/Online monitoring devices

3. If there are recurring themes, how many respondents identified the theme/issue? There may be a particular response from one of the respondents that illustrates the issue and usually is good to include as an example.
- 15 respondents mentioned increased productivity/communication. For example: The cell phone and the computer are going to merge over time and consumers are going to have tremendous amounts of information at their fingertips to assist them

in making decisions, conducting transactions, tracking their finances and choosing business partners. Strap on your seat belts, raise your tray tables and prepare yourself for this eventuality. Companies who embrace this change will be in the forefront of marketing solutions that have real impact and that are targeted to the individual not the group or segment and that have relevant content that is immediate and actionable.

- 10 respondents mentioned DNA analysis/Genetic treatment. For example: The most significant technologies I see that will have the most impact on the insurance industry is the revolution in DNA testing and the revelation of the biological secrets found human genome. In the not too distant future, I see most Americans being able to have their individual DNA mapped which will create much better individualized treatments for all kinds of diseases especially cancer. This should result, over time, with longer and healthier lives for most of the population. Both life and health products could be individually tailored to each person's individual human genome resulting in a much better distribution of risk across the whole population. Unfortunately, this result would go against the philosophy of the socialist movement who would prefer ALL individuals being treated "equally" no matter what their age, sex or health condition is.
- 10 respondents mentioned Home/Online monitoring devices. For example: Electronic life-style and health monitoring. Various forms of electronic monitoring devices may allow all sorts of changes. There are a plethora of such devices and we can expect more. Tracking devices in cars not provide information not only regarding every place that we went, but can also provide information regarding how fast we went and our other driving habits. Our cell phones, which we generally carry on our person, can be used to track our movements. Our credit and debit card history says a lot about our lifestyle. Diabetes, heart monitoring, and other medical devices can "report" readings.
  5 respondents mentioned personal medical databases. For example: Personal history information will be held by people through a personal electronic device. These will be carried/attached to people at all times. Scanning the device under a selected consumer need/want will provide an array of choices to meet that need/want. We can't possible remember all the choices and events that have occurred throughout our life, but they can greatly influence future activity.
- 4 respondents mentioned Nano-technology/Robotics. For example: While there may not be direct correlation to the life insurance industry I believe with the use of nano technology and organic use processes that functionality of computer system and processor speeds will continue to climb to level that will make new innovations quicker and more efficient in terms of cost, functionality, and re-design/modifications for improvement. The iPhone is a great example of the use of new technologies and the rapid transfer of knowledge for new uses and applications.

Appendix B-1
Detailed Summary of Responses to Round One Survey

4. Identify outliers and again include sample responses to illustrate the point.
   - Demographics
   - Identity theft
   - Better search engines
   - Imaging technology
   - Web business
   - Personal web sites
   - International business
   - Fee-based financial planning
   - Banking (2)
   - Analytics
   - Statistics (innovations that do not assume each risk occurs at the same probability)
   - New fuel sources
   - ATM (to collect premiums)
   - Cancer treatments
   - Fragmentation of society
   - Cheap defibrillators (will increase life expectancy)
   - Boomer marketers
   - Brain function enhancement chips

Appendix B-2
Complete Responses to Round One Survey

Question #1. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it markets its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider marketing methods that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

- **Participant 1:** Current television ads seem to be clumsy and non-specific. The challenge will be to specifically target messages to a receptive audience by providing something of value to the recipient. That value could be information tailored to the recipient. Of course, one limiting factor is the pervasive privacy laws.
- **Participant 2:** I still hold to the precept that life insurance is sold and not bought. Moreover, it is called "life insurance" but most people, particularly young people think of it as "death insurance", a subject they would rather not have to think about. I have two sons, one age 37, the other age 35. Both are successful with good careers, six figure incomes and married with 4 children each, big mortgages and a certain amount of assets. Believe it or not, neither son has EVER been approached about life insurance. They both have group life coverage and I did browbeat the oldest son to purchase term coverage when his second child was born.

  How do you sell to this highly desirable demographic who at this stage in their lives, really need life insurance? Life insurance should be perceived as a desirable need just as much as the newest sports car or big plasma flat screen TV. Both boys are very active, work hard, play hard and probably don't feel they have time for an agent to come over and spend an evening with them explaining products. They both are computer savvy. Free time is spent on sports and family. They both "game" a lot with the latest electronic game consoles. I have no magic "out of the box" way to approach people like this except that it seems to me that a much greater emphasis should be put into advertising life insurance with sporting events perhaps followed by some sort of online invitation to complete fact finding questionnaires through email that will have the effect of both soliciting for life coverage and also underwriting the respondent.

  In my opinion life insurance advertising and marketing has to much more humorous and sexy, coupled with a real effort to make contact with the company as technically easy as possible. I would suspect that 75-90% of marketing to this sophisticated demographic could be done on-line with telephone contact and agent contact necessary for the remainder. Let's see who can come up with a Geico "Caveman" series of commercials for life insurance. Most life insurance marketing in my view is still too stodgy and devoid of humor, sophistication or intelligence to appeal to the vast demographic of 18-45 year olds. All of the above is certainly not "Blue Ocean Strategy" just a much better application of process and strategy than I see now.

Appendix B-2
Complete Responses to Round One Survey

- **Participant #3** The Internet could effectively be used to allow people to allocate their insurance dollars via a product cafeteria plan. This could actually include ALL forms of insurance (i.e. life, health, annuity, auto, homeowners, etc.) based on a concept of Individual Risk Management (IRM). The individual would make choices on allocating their insurance dollars based on their own risk tolerances. As these changed they would reallocate their dollars.
- **Participant #4:** Insurance marketing should be integrated into other Internet-based targeted campaigns, directed at individuals with specific interests or conditions. Life insurance marketing should be more closely coupled with health care information (such as Microsoft's recently announced Health Vault) where specific products are directed toward individuals with specific needs and medical conditions.
- **Participant 5:** The new advertising paradigms include responses to Google Search and cell phone messaging text or in the case of iPhone type screens, graphics. In ten years I would expect cell phones to all have good graphic screens and I would suggest push graphic or even video advertising with sound over cell phone and internet as a "Blue Ocean Strategy"
  I've seen elevator door advertising – doesn't appeal to me. You need a format where the client can interact with the ad – hence phone or internet are better than print or Billboard.
- **Participant 6:** In my opinion, new distribution systems (such as the Internet) reduce barriers to entry for new products and services making it easier for competitors to copy successful entrants. Therefore, it is doubtful in my mind that a sustainable uncontested market space ripe for growth exists – at least for long - in an increasingly transparent environment. Especially so with intangible products typically found in financial services. I believe it takes more than distribution and product to insure a sustainable value proposition. Data driven customer relationships and multi-product packaging can play a role in capturing and retaining customers.
- **Participant 7:** There is a plethora of data being collected and saved on individuals. From cookies on computers that trace web-site visits to extensive customer databases, these data sources will allow for potential cross-marketing at many insurers and other financial institutions. Consider how a bank can track through debits and credits to a checking account where the insurance and investments are kept. Legally harvesting that data will allow for extremely targeted marketing. Customers can be cherry picked for financial services offering. Agents will no longer be necessary to do the role of fact finding to find the assets and can be converted to order taking. The centralized customer service operations with highly trained representatives can be unleashed in a push strategy to secure new clients.
- **Participant 8:** Currently, only auto and term insurance are successfully marketed via the internet and other direct media. Using direct response media and simple

low-cost products designed for this channel, life insurers will need to develop streamlined applications (single page, restriction to key underwriting questions to enable consumers to apply over the internet. Advisor-based sales will still be possible, but consumers will be paying for the advice they receive, either fee-based on via higher prices reflecting sales commissions. Examples of companies which have already applied this strategy successfully include Fidelity Investments with their new VA low-cost policy, and Geico and Progressive car insurers.

- **Participant 9:** Related to "how it markets its products" I am addressing the question of finding the customers to market to via direct mail, direct marketing, list mining, etc. I work with several industries (including Insurance providers) related to the marketing of products through Predictive Analytics. Generally these technologies can provide some guidance as to who to market too, etc. At best these methodologies provide only marginal improvements. At worst we see a situation such as the Telecom market where everybody is applying the same technology and working only to steal each other's customers. What changes predictive power (beyond marginal improvement) are not analytical approaches but breakthroughs in data quality that greatly improves predictive power which can convert to new customers. Although I have not worked with it directly, the data I have seen that can change the present paradigm is genetic data. If a substantially better predict of likelihood of diseases is possible (a present reality and an increasing field) then there will be pressure from those with "good" genes to be identified separately and marketed to separately. There is a great deal of attention being applied to personalization engines (think Amazon and Netflix) however genetic data can provide the ultimate personalization engine.
- **Participant 10:** Embed survivor income calculators into more widely used retirement income calculators.
- **Participant 11:** Methods of product distribution generally drive marketing. Consequently, the various forms of marketing are usually structured to drive sales to a product distribution source. This is often true. Examples might be a professional golf tournament advertisement touting to high net worth individuals the benefits of working with advisors affiliated with that specific carrier or a worksite marketing strategy encouraging employees to consider the highlighted product on a worksite marketing poster or in a mailing campaign. Marketing is then geared to highlight the fact that the carrier sells a product that they feel should be considered by the individual. Today individuals are bombarded with these types of marketing messages and it becomes increasingly difficult for many of them to sift through this mass of information to discern where the product offered fits into their life, much less whether it is one that is in their best interest.

  The successful companies of the future will position themselves with technology and channel marketing to deliver more trusted messages that address individual concerns based on where individuals are currently and where they see themselves going. They will increasing rely on advisors (or technology) to help them to

simplify, crystallize, and understand the problems they either face or will face at a pace that is on demand and as needed. This is not that dissimilar to just in time inventory management solutions used in manufacturing processes. One issue is that no accepted process is in place for wealth management. Processes vary depending on the advisor the client is using and by the background the advisor brings to the engagement. A more standardized wealth management platform would aid individuals in accomplishing the above. An additional issue is the lack of trust and understanding of life insurance products.

Marketing can be utilized to inform individuals of the availability and attractiveness of standardized but tailored processes if they existed. Marketing could also inform individuals of their progress through this model and of possible new considerations somewhat like that available through a personal assistant. Life insurance is but one solution that could be identified though this type of marketing approach.

Imagine an individual logging in to a portal, updating personal information, and as prompted, they read an alert that ID's a life insurance need possibly based on goals that they established. People do not mind life insurance; they just don't like paying for it. If the suggested solution (life insurance) was understood, simple to understand, and offered perceived value, more people would buy it.

One solution that is aligned with this type of approach is one that is available through Future System Advisors, LLC. www.futuresystem.com . The full scope of this vision is not in place, but it could dovetail with this framework.

- **Participant 12:** Most products are marketed to cultivate a customer's desire for the product. "I want to possess that product". Life insurance has always been marketed around the customer's need or how life insurance meets a "need". One method plays to emotion and the other to reason/logic. Technology often supports reason/logic and so the normal evolution of marketing life insurance is to throw more technology at developing the need or allowing the customer to reach a reasoned action. Let's try for an emotional response.
- **Participant 13:** New technology could make group life and disability benefits available in new ways. In particular, a multiple-employer plan could make voluntary benefits available through Internet-based enrollment. Product availability could be combined with robust-decision making support tools in an annual enrollment framework.

  Now that mandatory medical insurance has passed in Massachusetts and California, there is a possibility that could be an impetus to make other coverages more broadly available.
- **Participant 14:** A. Gathering of individual and statistical data on the Internet (especially by the social networking sites) now permits micro-marketing, i.e. quite

specific segmenting of the market. This opens up a multitude of possibilities for focusing on narrow demographic groups. A possible example is: Female, 30-34, Hispanic, employed in service industries, married, no children, active in sports, small town resident.

- **Participant 15:** No Answer
- **Participant 16:** internet advertising strategies
  - podcasting
  - wifi blast ads to compliment available internet access (especially in free or corporate sponsored zones)
  - non-traditional ad placements with collaborative marketing efforts tied to non-insurance companies that my compliment the product offering and have high traffic or market penetration (such as the change in market distribution channels when banks entered into the insurance markets and then insurance companies reacted by starting their own banking organizations). Could be allied with consumer branding/products, entertainment, media, technology or other organizations where a correlation in messaging can be provided for product tie-in or complimentary messages to increase brand recognition and thus drive future sales activity.
  - Use of digital technology as an integrated platform from multiple sources – radio (from terrestrial to satellite), television (free vs. cable vs. satellite), internet (through general internet use, tie in with web sites, download sites for web or pod casting, VoIP services, and an expanded array of alternatives and features using the web as a base for multiple launch sites), handheld devices (ones where you can download or access content via a wifi connection)
  - Holographic technology to use variable and interactive advertising to display anything from a static display to a streaming ad in a "virtual" platform.
  - Use of "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person in "real" time for use in direct advertising in a number of mediums from phone solicitations, print, digital wifi blasts, internet ad streaming, email, and other outlets. Use of "smart" vehicles could employ the use of artificial intelligence to build upon "success" rates in product placement and compliment decision making for cross-selling opportunities.
- **Participant 17:** Accident and Health insurance may offer some interesting marketing opportunities to creative insurers. There is an ever increasing number of uninsured workers in the United States because the classic health insurance policies have become too expensive for both employers and employees. In addition, particularly with young professionals, there is an increasing number of employees working for temporary agencies or as roving specialists for staffing firms. Many of these employees are exceptional health risks. Many do not carry classic coverages because they are too expensive. Designing a reduced benefit package that is more affordable to this group may be very appealing. The coverage could be marketed through large staffing companies and/or directly to

the professionals via the internet. Using a variety of browser tools, it may be possible to identify the demographics for exceptional risks. Using the ability to target market through the internet it may be possible to compile a substantial base of insureds that have excellent profit potential.

- **Participant 18:**
  - Access to third party data on a real time basis from current online data bases (such as Rx, MIB, MVR & credit bureau data) combined with additional online data bases such as lab tests and electronic patient records will dramatically speed the underwriting process. Combining this real time data with automated underwriting engines will allow life insurers to issue policies in minutes rather than weeks: increasing customer & agent satisfaction, dramatically reducing not-taken ratios, significantly reducing the cost of new business processing and providing better and more consistent underwriting results.
  - Increased use of web based new business processing systems by agents and applicants to complete applications (including electronic signatures) will also significantly reduce delays in processing applications as well as reducing errors and missing information and ensuring compliance. To accomplish this, carriers will need to make additional investments in hardware for agents as well as remote internet access.
  - Application completion through call centers will also significantly reduce application processing delays and costs while improving the quality and timeliness of the information gathered. This allows the agent to do what they do best which is to sell insurance and lets the carrier collect information and manage the processing.
- **Participant 19:**
  - **The Internet**: Any insurer using the Internet as a marketing tool is well positioned to target Blue Ocean segments especially younger population, an international client base and non-working, retired adults. Pre-scripted and recorded Podcasts can be delivered via the Internet to prospects/agents to provide product knowledge or application instructions. Further, the use of search engine data is a source to identify target prospects. Search Engine Optimization (SEO) techniques can be leveraged very effectively to increase visibility for a younger prospect market.
  - **Mobile Device/Wireless Networks:** The increasing sophistication of handheld devices and increased network bandwidth are allowing all industries to bring their messages straight down to the individual consumer. Yahoo and Google are partnering with device makers and network operators to provide advertising content to mobile devices. A Blue Ocean strategy might have insurers/agents providing advertising with hotlinks to their websites to transact applications online and issue in real time.
  - **Interactive Technologies:** Voice, Video over Internet using VOIP, IPTV technologies. These can include Video phone and interactive webcasts to showcase products, answer questions and give quotations. This will be enabled by

increased bandwidth, sound and video compression technologies. Sophistication in graphics and holograph displays has the potential to provide collaboration with virtual advisors, and send illustrations to a prospect's desktop.

- **Business Intelligence Tools**: Digitization of information and increased sophistication in data mining and analytics techniques are providing improved market intelligence. e.g. An insurance company can use internal customer data as well as get data from external affiliates and agencies to identify the size of their target market and segment focus areas. A simple example could be using family/dependents' data of a policy holder to identify a juvenile or future customer base.

- **Participant 20:** This ties in with question #9. If life settlements are here to stay, I think companies are going to need to recognize the power of a life policy as a financial asset that exists beyond the basic need for the death benefit. Companies will need to develop products that meet needs better to avoid settlements. Companies will then need to market this in a way that fits that profile. The challenge is to do this in a fashion that does not jeopardize the tax advantaged status of life insurance.
- **Participant 21:**
  - Intelligent marketing via the Internet seems like the trend of the future.
  - Marketing content can be tailored using information already known regarding a potential customer.
  - Real-time intelligent analysis of CRM databases can provide the insight to market a specific product to users of a company's web site services. For example, as a customer uses online banking services, the CRM could be referenced to determine customer demographics, bank account information could be used to "estimate" assets, etc.
- **Participant 22:** No Answer
- **Participant 23:** Currently there is a foundational link between marketing and distribution channels (Q. #2). Most production comes from the agent/advisor (intermediary) channel that is driven by commission incentives. Term insurance has had some success through internet marketing as the product is viewed as simplistic. Personal interaction, trust, confidentiality, and a wide variety of options to bring resolve may limit marketing through technology.
  Current marketing restraints are primarily due to multiple regulatory entities that overlap and/or have no consistency in guidance. A "Blue Ocean Strategy" would require one regulatory body, similar to that in Australia, which encompasses a single designation for insurance and equity compliance, with national conformity regarding regulation, facilitation, and functionality.
- **Participant 24: Targeted Resource Centers (virtual and/or physical)**
  Start at situational needs (e.g., life stage and situation of individual / family or industry / organization) to create integrated solutions (insurance and other services) that transcend traditional product and industry boundaries.

Appendix B-2
Complete Responses to Round One Survey

For example, a small business executive office suite firm expands the shared office / virtual office concept to include strategic and financial planning services along with integrated insurance packages that can be tweaked to fit a specific organizations or individual needs.
Concept drives product integration / pricing beyond solution provided by small business insurance specialist. Requires developing network of linked strategic partners or an organization (e.g., insurance company) that creates resource centers as a distribution strategy. Partner, services, products selected and tailored to market segment target.
Arm agents / distribution arm with unobtrusive lead nurturing resources (e.g., newsletters, events, educational resources – online & offline - tailored to the specific needs of the target audience).
Psychographic / needs / skills based profiling and paring or prospects and agent/distribution arm. Eliminate trial and error in match-making - building trust relationship that serves and nurtures client needs.
Use of internet – based anonymous survey; present candidates to prospect for selection.
Use of feedback system to create agent / distribution arm ratings and improve selection process / customer satisfaction.

- **Participant 25:** In a TSA paper entitled "Prices and Profits", Jack Bragg defined life insurance as a three person game with the players being the consumer, the agent and the company. According to game theory, in a three person game coalitions will be made by two of the players to maximize their results at the expense of the third player. We see all of these coalitions in the insurance industry.
  Who is the real target market? I hear repeatedly that companies consider their distributors as the real market rather than the ultimate consumer. In an agent – company coalition you focus on the best products, the least restrictions, the best marketing compensation, the best agency convention locations, etc.
  How do you market to the ultimate consumer? In a company - consumer coalition, Internet, TV, Radio, print, affinity groups, places people go (banks, super markets, health clubs, work, etc.), schools, churches, around the kitchen table, golf courses, etc.
  Companies want to avoid a strategy that would results in an agent – consumer coalition.
- **Participant 26:** I wouldn't say that each of these should be employed but these are methods that could be employed to market products:
  - Text messaging on cell phones or mobile devices like Blackberries
  - "Pop" messaging of local office locations on Tom-Tom and/or GPS units
  - Face to face marketing through electronic means:
    - Web-based (could be one-on-one or targeted to the masses)
    - Visual telephones

Appendix B-2
Complete Responses to Round One Survey

- Interactive Web illustrations allowing individuals to input parameters (within reason) to determine policy value changes with changes in parameters (e.g., interest rates, mortality, morbidity).
- Email newsletters targeted to specific demographic subsets.
- Provide customer desired or "value-added" information with a subtle sales message (e.g., article sponsored by ABC Life company)
- Develop a web-based game or promotion to educate or incent individuals to buy life insurance products
- Set-up a virtual insurance agency in the world of "Second Life"
- Create on-line chat room or social web site where people can go to talk to an expert about insurance or for financial planning.

Blue Ocean Strategy = Shift from product sales to "individual seeks product" (or, in other words, the product sells itself). Result is elimination of broker/agent.

- **Participant 27:** I have two thoughts here:
  - What is marketed: The same trends/regulatory requirements that are forcing corporations to take a broader risk management approach (ERM) to their business will find its way to individuals and how they examine their own lives. Today the financial product seller plays to "you don't want to run out of money" and models to that effect. I believe some significant segment of the population will want a broader risk management view of how to mitigate the broad spectrum of risks they and their family face. To obtain financial mitigation, the individual has to go to several sellers and there is little counsel for mitigating other exposures. There is a space for someone to market solutions for all of an individual's risk management needs. Maybe start with an ERM - like overlay and modeling for the individual to understand their exposures and the mitigation strategies available to him/her.
  - How it is marketed: The traditional approach of get in front of the prospect and "sell" them on your favorite products (i.e. the big commission ones) will be less effective. People want to act more independently and at times of their own selection. The problem with many aggregator sites is the reluctance of people to send off personal information and not get back any immediate results. On the P/C side those sites that provide immediate quotes are more effective than those that say you will get something (maybe) in a few days. With current technology, on-line sessions could be interactive and informative. Walk someone through their ERM profile, find the places that the seller can be helpful and even chat on-line to answer questions and take things to the next level. AI software could be used to build a customized package of products and services to address the exposures that need mitigation.
- **Participant 28:** Use internal company data and external data, such a socio-demographics or household demographics, to identify the most profitable customers or customers most likely to convert to new business. For current customers, use customer data with the external data to identify customers to

whom to sell other products; i.e. cross-selling. Data mining techniques have been successful in other industries. When dominant characteristics are identified a marketing campaign can be launched targeting these customers. Identify life events when people are in needs of the different products. Market in colleges to future buyer of insurance products.

- **Participant 29:** Advances in data gathering and analysis (with predictive modeling-based segmentation and prioritization of prospects), coupled with more sophisticated direct marketing, lead generation and follow-up techniques, will enable insurers to be far more targeted and productive in their marketing efforts. Capitalizing on publicly available information, insurers will identify the clients/prospects with the greatest propensity to purchase or expand coverage by identifying and focusing on life events and risk profiles that change over time (this has been attempted frequently but seldom executed effectively).
  A few, large, nationally branded companies will focus on consumer marketing in support of multiple retail channels (direct-to-consumer plus leads to support tied agents); including far more extensive and active management of in-force customer data to facilitate cross-selling, up-selling and service. E-mail or text solicitations will be sent from reputable carriers targeting specific customers with specific products; cross-sell opportunities will be explored through affinity partners that make sense for the people where the purchasing could occur. (This is differentiated from today's "spam" because people receiving these solicitations will be receiving them because of a need that is occurring in their lives, versus the "spray-and-pray" method which is in vogue today.)
  Some companies with strong independent agency networks may use such marketing capabilities as a core part of their value proposition to targeted agents – e.g., producer-oriented web sites designed to support producer marketing and selling with product demonstration and service capabilities. Otherwise non-insurance company retail distributors (e.g., banks, national and regional broker dealers) will develop their own consumer marketing resources.
  For example, grocery stores and some retail stores are now tracking what customers buy. Life insurance carriers partner with a grocery/retail store in order to solicit business from their customers who buy products indicative of a healthy lifestyle, offering customers incentives with those stores in order to prompt them to get a quote from an agent.
  Concretely, to offer 20% off their next grocery bill up to $50 if they get a life insurance quote to customers of Whole Foods who buy lots of vitamins, or similarly offer a discount based on getting a life insurance quote for a Best Buy purchase from a customer who just bought an apparatus to hold an iPod for jogging.
- **Participant 30:** One could scour immense databases of internet usage information to identify ideal customers by economic status or family status, and then advertise in very targeted ways through internet media portals that sell advertising space.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 31:** In general I see an opportunity for the life insurance industry to move from being "product pushers" to "financial planners". In general, holistic financial planning services are available to only the very wealthy clients, while the rest of us deal with a variety of product providers - a life insurance agent, an investment person, a lawyer, a CPA, etc. Generally we serve as our own financial quarterback by default. I believe that the current and existing technology can be employed to move our marketing approach from a product sale to a holistic financial planning approach. So the Blue Ocean marketing strategy is to offer comprehensive financial planning to the masses.
- **Participant 32: Note:** These questions refer to the "life insurance industry". I have interpreted this to include the full range of products sold by admitted life insurance companies, products which include not only life insurance, but also health, disability, accident, LTC insurance, and annuities. My background is primarily A&H and my responses will be biased toward these products. Whenever there may be ambiguity, I will specify the specific product(s). Because the questions seem consumer focused, I will not, however, discuss group insurance.

  Comment: Overall, I am disappointed that the questions all assume that change requires new, futuristic technology. I believe that the insurance industry can effect significant change using technology that is already under our roofs or at least readily available on today's technology market and already tested in other industries. Our biggest barrier to change is not the required invention of a new electronic gizmo or piece of software, but our own imagination and risk aversion, our failure to look closely at other industries for learning which can be applied to our industry, and regulatory constraints. My comments will reflect these opinions.

  Here is an observation from my kids, our future consumers: fun, interesting ads are better. I then had them categorize all the insurance ads that they could recall. First of all AFLAC was the only non-P&C company whose ads they could recall without prompting. They then divided all ads into fun and/or interesting vs. boring and/or depressing. The P&C companies with on-line and call center distribution were uniformly in the first category (GEICO, Progressive, esurance); the P&C companies relying mostly on traditional agents were uniformly in the second category (Allstate, State Farm). AFLAC was also deemed fun and interesting. When prompted, they "remembered" Blue Cross Blue Shield and promptly assigned a boring rating. The first step in marketing is to get the consumer's attention. And since the younger generation is increasingly adverse to traditional agents (see my responses to the second question), we need market direct with fun and interesting messaging. We also need to get the marketing into the media where our young people hang out – the days of pre-printed brochures are over. It is no coincidence that GEICO, Progressive, and esurance have experienced phenomenal growth rates.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 33**. Any analysis of **marketing products** should begin with a reminder of the psychological nature of our products. Life insurance, in particular, is distinct in that it is an admission of one's own mortality. Therefore the ultimate purpose is purely to aid or benefit those left behind. It is also usually a decision made which, for most of us, means foregoing more 'pleasurable' alternatives – products as well as services. Let's see "Season Tickets or maybe a new car payment, or this NEW life insurance because almost HALF the population admits they are significantly under-insured.
  And since admission of one's eventual death is a certainty, with a possibility that the occurrence could happen at any time, regardless of current age, is a possibility, there's a strong emotional component which is often overlooked by marketers who are used to assuming that the 'to purchase' decision is made like any other product. **Procrastination** is our greatest enemy and the main reason none of the term spreadsheet companies have ever really made money.
  The same is true to a lesser extent for Disability Income, Long-Term Care Insurance, and the newer Critical Illness products.
  Therefore, to me, one of the most critical components which new technologies will be bringing to the table are those which can have an impact on the **emotions** and **psyche** of the individual in ways which have previously been impossible. Call it a procrastination-minimizer or reducer.
  In a futurism talk I made to IHOU back in 1999, I predicted that one day we would look back on the early part of the new millennium and point to a single development as the one having the most profound impact on the entire industry in our history, and I called it, **"When the world goes visual"**. When with every phone call you take, you will decide up front whether to only answer the phone if the person calling is willing to show him or herself visually as they identify themselves. And you would reserve the right to retain your visual anonymity unless you already know and trust the person in which case you could talk face-to-face.
  In marketing, this will create the first 'middle ground' between an 'in-person' sales call and a telephone or 'tele-marketing' call. The persona of the caller will make all the difference in the world and there will be '**super-visa-telemarketers'** who will have a blended persona somehow combining Art Linkletter or Oprah (personal trust), Walter Cronkite or Andy Rooney (information trust), and David Letterman or Jerry Seinfeld (humor and entertainment). Edutainment will become the 'Blue Ocean Strategy' and those companies who are most creative and able to best accomplish this, will be the real winners.
  Advertising dollars will shift from 'feel good about the company ads' to those aimed more at capturing the elements mentioned above.
  I have already seen glimpses of what this world will look like through a company which spun off from IBM and 8 years ago – NovoLogic. The two principals headed the IBM team which pioneered e-learning. They are now involved with applying much of what they learned (including demographic and psychographic

message-matching to select targeted audiences). It will be this demographic and psychographic segmentation with individually designed and directed approaches which will have the greatest impact and will begin to create the 'agent of the future'. (see next question on distribution of products).
For any who like to go back and check on predictions, I'm enclosing the paper I wrote back in 1999 as a follow up to my presentation IHOU and which I think was published in "On the Risk". I think I got most of it right.

- **Participant 34:**
Major advances in genetic testing and overall underwriting techniques and programs may make it possible to offer insurance programs for life with a one-time application.
Individuals buy policies today typically when they need coverages. They may need life insurance when they start a family, they may need disability income insurance when they enter the employment markets, they buy long term care coverage somewhere around retirement in anticipation of needs during "part 2" of their retirement years. Might they be able to buy rights to a coverage program at a young age, without having to be re-underwritten?
For this to work presumably might require some enabling regulation and statutes. Some of these programs may require some premium payment to protect the insurer from anti-selection. (Certainly companies today offer guaranteed purchase options on life insurance, but these are present only with some existing life insurance. Our interest is, for example, in permitting a buyer to purchase, say, LTC, even if none had been present (in force)
Conceivably individuals who do not show genetic markers for specified illnesses might be able to purchase such "one underwriting for life" policies. States will most likely want to exercise extreme care in permitting such policies. Insurers today are working hard to move product via the Internet, in large part because of the lower costs of acquisition. However, companies will not give up on working with agents by any means, as their success in generating business is greater than the success under any other method. But that doesn't that companies won't try to reduce the costs of acquisition. Newer and more effective means of aligning field force and company financially will drive this process.

  I recognize that this discussion has implications for other questions asked in this survey.
- **Participant 35:** No Answer
- **Participant 36:** One thought would be to have access to a database of amount of insurance owned by individuals, cross reference that against a database providing some indication of their need for insurance (annual income, net worth, existence and # of dependents). Then, those individuals who are underinsured would be approached electronically - suggesting they should consider more insurance. Also could use similar concept on retirement income-database of current income vs. needed income.

Appendix B-2
Complete Responses to Round One Survey

Another possibility is the existence of much better product comparison information. This could be done in an electronic database. Should cover multiple companies, various product lines. Consumers could enter their criteria (i.e. protection DB needed for next 20 yrs) and be given a choice of products, along with prices

- **Participant 37:** Perhaps a version of the "winflex" illustration system (www.winflexweb.com) that was designed for the end consumer rather than the producer. This would be a web-based comparison of products/features/prices, that would enable a straightforward comparison of products as currently exists for other industries. .
- **Participant 38:** While it is not a direct answer, the industry must better embrace the impact of the web and wireless technology. We are not marketing to or reaching the under 50 population well and need to look how industries that do market well to them and learn from them.
- **Participant 39:** Technology will allow for customized underwriting to occur against financial/medical information. Access to this data is incumbered today (largely because of legislation) but you can envision detailed personal data existing in the hands of the consumer that they grant access to in order to obtain financial products and protection products.

Question #2. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it distributes its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider distribution methods that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential media.

- **Participant 1:** No surprise here: predict that a majority of insurance sales will be driven by the Internet within 5 years.
- **Participant 2:** I think we have or should be close to having the necessary technology to solicit, explain, negotiate and underwrite 90-95% of all life insurance products entirely through email. This includes medical underwriting with more extensive use of APS reports and para-medical services. The life insurance industry should design and all use a standardized APS form that all doctors can use via email that will cut down on delays and poorly written reports. Today's world lives by email and the companies that utilize this means of communication in all aspects will be the ones that can best sell to the computer savvy public.
- **Participant #3:** The business channels like CNBC, MSNBC, etc. could be used to educate the public on intelligent choices.
- **Participant #4**: New markets exist around "micro policies" which are sold through partnerships with other financial services providers. For example, credit

card reward programs or home mortgage programs could provide paid-up coverage to borrowers based on activity and amount. Other partnerships with brokerage firms and banks could be useful in coupling (levering) assets and life risks.

Agents argue that life insurance isn't bought, it is sold. This is true but the younger generation is increasingly seeing the computer as a trusted advisor. A comprehensive web portal (nothing like today's insurer websites) could become a vehicle for real-time sales.

- **Participant 5:** The industry will need to move away from high cost methods such as tied agents or even brokerage for the majority of its sales. The high end can continue with personal one on one marketing but I see that moving more to the wealth manager – the stockbroker or private banker or tax accountant – than the traditional agent. The middle market may move more towards association or group coverage, with much greater range of products than are now marketed in that way.

  The "Blue Ocean Strategy" is a collection of different strategies for different markets, with the biggest growth opportunity in direct electronic marketing. Each distribution channel will have its own needs for technology. For the one-on-one marketing we need to move towards expert systems that can tap into the products of multiple carriers – so we need to develop a uniform interface across suppliers. For this you need big players (such as IBM) who are willing to work with many players and specialists on a long term project to bring about this common interface.
- **Participant 6:** Again, I see distribution becoming more transparent and easier to copy in the future and in and of itself not a sustainable point of difference. Also, increasingly - customers consume through multiple channels such as the web, mobile phone, line based telephone, interactive TV, kiosks etc plus the traditional channels like that of the classic agent. Channel dependency becomes a barrier to entry for the channel hoppers of the future and could be consider a "game over" for those savvy consumers
- **Participant 7:** Insurance and annuities will be distributed through targeted advertising on web-sites. Television is moving to on-demand offerings over the internet. Specialized infomercials on products will be integrated into financial planning web-sites. Compliance will be simplified as everyone will hear the same push for the products. Electronic signatures will become the norm in the insurance industry.
- **Participant 8:** Companies should be using the internet for direct distribution (see above). Also, companies need to make better use of population demographics in their distribution of insurance products – eg, the population pyramid in CA, NM is much younger than in CT or MA.
- **Participant 9: No Answer**
- **Participant 10: No Answer**

Appendix B-2
Complete Responses to Round One Survey

- **Participant 11:** First, let's review the current approach to distributing products. Next we'll look at what the future may hold.

Current

Channels

1. Distribution is oriented towards product focused wholesalers, banks, financial advisory firms and various forms of financial advisors. Employers, clubs, and associations are sometimes willing entities through which products are sold or marketed.

Delivery Method

1. Personal - advisor to client (1 to 1), advisor to clients via seminar (1 to several),
2. Impersonal – Website offers with online app submission, mailings to individual homes, telemarketing, and worksite marketing

Offerings – profitability driven by Cost of Insurance (COIs)

1. Term (pure mortality cost)
2. Permanent (various forms of addressing risk and funding)

Future

Channels

1. Oriented towards process focused wholesalers, financial advisory firms and their financial advisors, including sponsors like employers, clubs & associations.

Delivery Method

1. Personal – similar to current but with increased accreditation and professional standards among advisors and increased reliance on RIA community for insurance sales.
2. Impersonal

a. More use of internet and video conferencing with modular video delivery of information and need assessment based on more input from individuals. Individual responses may then lead to requests for personal appointments.
b. Better opportunity for individual self discovery and personal education based on a processed oriented method.
c. Mailings to individual homes, telemarketing, and other mass marketing techniques are utilized to compliment the resources outlined and drive individuals to learn more based on the process as outlined to them
d. A holistic client centric process draws individuals to it in contrast to a product focused one where an advisors motivations are suspect, inhibiting the sales process.

Appendix B-2
Complete Responses to Round One Survey

Offerings / Profitability

1. Profitability models should be based on an assets under management model rather than one based on mortality costs.
2. More disclosure from insurance industry on charges, expenses, and cost of insurance.

These changes align the interests of insurers, distribution channels, and insured's. Individual trust of insurance companies, carrier profitability, and new premium volume should then increase.

- **Participant 12:** Life insurance should be distributed to those who choose not to buy for any number of reasons and their kids. Everyone knows what life insurance is but have no idea how it is distributed so they choose not to buy.
- **Participant 13:** My answer to Q1 really addresses most of these other questions, since I see them as being directly related. The biggest impediment to broader coverage of life and disability products is the prohibitive cost of individual distribution, which has been the only effective way of selling individual coverages (including voluntary group products to a large degree).
  Individual distribution handles two aspects of the sale that are critical; i.e., communicating the need for insurance in an effective, credible way and identifying appropriate solutions. The downside is that one-on-one sales are a relatively expensive process that requires high premium products in order to cover the distribution costs. This price hurdle is beyond the discretionary income capacity of many people; often the people who need coverage the most.
  There are a number of ways that mass customization through the Internet could provide affordable distribution. Other incentives to purchase (e.g., some mandatory aspects) could further facilitate solutions.
- **Participant 14:**
  A. TiVo "placement."
  B. Internet micro-market presentations and advertisements, customized on the fly. As simple example, based on a given age by prospect, or by heuristic logic from other known facts, images of people in presentation are age-appropriate to prospect. The technology to do this is existing or close to existing. The production techniques for these can be applied to any non-print media.
  C. Distribute through internet all-in-one phones / super Blackberries.
- **Participant 15:** Distribution
  1. Pharmacies and supermarkets are visited by most adults on a regular basis and they have all the advantages of modern technology to be able to market, distribute and physically issue life insurance policies (see #4 below) – but is currently an under utilized source of sales except for medical insurance coverage. The same approach as outlined in #4 would also work for worksite marketing.
  2. Having been in the market for vehicles recently and obtained quotes for buying and leasing vehicles, I was struck by the fact that the package did not

include some one trying to sell me term life insurance and/or accidental death insurance as an add on.
Car retailers and insurers have several pieces of information available to be able to assess that risk at point of sale a) they have a copy of the driving license with details of any endorsements b) they know the vehicles crash rating c) they know the number of crashes per mile driven d) they know the credit rating of the insured (this will eventually be used as a tool to determine mortality risk as it is in the p and c industry). e) they know the zip code (this will eventually be used as a tool to determine mortality risk as it is in the p and c industry).
A level of basic ADD insurance could be an inertia sale or built into the price as a 'giveaway'. Policy documentation could be provided at point of sale.

- **Participant 16:** One tie in I see in today's use of internet enrollments is to tie product into availability in the marketplace such as through internet enrollment portals and on-line application processes. The internet is a means to cost efficiencies and processing to a higher time/service standard.
  Use of PDA or other wireless devices to conduct application or enrollment processes. This allows a wider range of availability vs. the standard desktop PC or a kiosk unit. Using PDA connectivity, a person can enroll or apply with the maximum of flexibility in their personal schedules.
  To maximize opportunities for those with disabilities using voice recognition software to enable processing of applications / information, ease of use in gaining information in a more digital and free flow world where you can speak to activate an action (such as responding to a question, providing information, etc…) vs. having to type in a response.
  Biometrics and use of this type of data for security and access/authentication to conduct transactions electronically.
  I see distribution in the individual world boiling down to issuing policies direct to consumers without the aid of an agent such as direct through the internet, direct mail, even kiosks in public places such as banks, shopping malls, and aligned retail outlets. Kiosks could even be placed in high traffic areas such as large commercial buildings that house multiple employers. I see the individual agent especially for life insurance an dying breed where the "value" perceived or real is being diminished by homogenization of the products, market competitive forces, simplicity and efficiency and regulatory pressures.
  With the drive to personal health records I can see a use of digital clearing houses for maintenance of certain records and information for access through a high secure portal for consumers. Another aspect of this may be with the use of "smart" cards or other personal media where a person would download documents much like the may do today say with a flash drive in which documents and other information is stored for personal use.
- **Participant 17:** The current technology that offers the most opportunity for creatively marketing all types of insurance is the internet. The industry continues to exploit this media in a myriad of ways.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 18:** The life insurance industry currently uses various sales channels to sell life insurance (i.e. field agents, the internet and call centers). However its efforts are focused on the upper end of the market and high face value policies. There is a significant opportunity in the middle market to use the technology described in the response to Question #1 to develop a "Blue Ocean Strategy" with properly priced products that meet the needs of this market. The life insurance industry needs to emulate the auto insurance industry in how it approaches the middle market. Offering consumers the opportunity to not only quote but to apply online and have a policy issued in minutes, at rates that are closer to standard. Using technology to enhance the purchase the purchase of life insurance by bank and brokerage customers will also provide carriers with a potential "Blue Ocean".
- **Participant 19:** The identified mass market segment is typically price sensitive, requires a low cost distribution model and they may not be responsive to an agent-driven long sales cycle. In emerging markets, building a robust distribution structure is one of the key challenges in tapping the market base. In this scenario, direct selling techniques, self-serve tools and the Internet can be valuable in distributing products and making a sale.
  - Some examples of key technologies for creating a Blue ocean strategy for distribution
  - The Internet and wireless technologies which are already mainstream but have not been adopted as a strategic tool for distribution. Providing more information and access to cross-organizational business processes at the point of sale will close more sales. e.g Blackberry which has just delivered its 20 millionth device could team with Google's Android operating system (in development) to provide agents in the field with access to their CRM systems providing a wealth of customer information in their hands. An issue to consider is that connectivity is not always available and when you disconnected, you may be unable to transact business.
  - Large insurance companies can leverage technologies such as Master Data Management (MDM) and analytics to aid in identifying this target market as well as cross selling, up selling to them.
  - The increase in computing power and interactive technology will aid pro-active selling and distribution. For example, rather than prospecting (via agent, call center), products could be distributed directly at any number of locations such as banks, airports, shopping areas and universities. Interactive Voice/Video/Data software for needs/self planning with tools for reflexive Q&A, scenario computations and simulations which can be handled by prospects/agents can provide both, educational information as well as facilitate the quotation process.
- **Participant 20:** I feel that the Internet never really has taken off as a platform for life insurance. I think the main problem is the need for testing, specifically blood testing, and the inability to generate one-stop sales. On the other hand, simplified issue is increasing so maybe that is the answer for using the Internet. The main

problem there is antiselection and the fact that SI should be linked to something other than just getting the insurance. Maybe a future direction is linking SI sales to peripheral reasons for being on the Internet. Perhaps more connections to sites like Lending Tree.com or sites that tie in to large consumer spending or commitment of funds.

- **Participant 21:** The next generation of buyers will require choices.
  - They are accustomed to shopping for other consumer items via the Internet.
  - They will no doubt shop for insurance in the same manner.
  - In order to conveniently see multiple choices in a single site, consumers will "shop" from their current financial services companies, such as banks and asset management companies, or peer group web sites, where they already have accounts, or insurance distribution sites, but not necessarily insurance manufacturers.
  - It seems reasonable that comparative shopping where product features and pricing is presented much like travel web sites (Expedia, Price Line, etc.) can be accessed 24x7.
- **Participant 22:** Using Financial market industry as a guide they are currently delivering statements, tax documentations, etc electronically in addition to full access to those document on their websites. Certainly the capability of actually being able to make trades online has been functional for several years as well. I see the need to physically produce a policy will diminish as boomers who are use to the Internet become the mainstream customers. Most of the population is already use to banking and managing their financial portfolios online, why not insurance. I make transactions all the down, moving money, paying bills and to me the value and security for those type of transactions have more vulnerability than an insurance contract. Access could be granted to everyone in the hierarchy: client, financial planner or advisor, Wholesalers, etc. Change forms, billings & payments could all be done electronically.
- **Participant 23:** "Blue Ocean Strategy" product distribution has to be transferred from the current transactional compensation motivation to a system that can centralize compliance and fiduciary guidelines through utilization of check points that are data related in regards to suitability and fiduciary filters. Our industry is undergoing a transformation from transactional distribution to advisory placement. A single portal in which all client data can be inserted, then run through a filtering methodology to benchmark all relevant regulatory action would wave red-flag warnings if a product was not suitable for recommendation for that specific client. Once deemed suitable, the advisor would proceed with implementation in a fee-engagement relationship. Product providers would provide the portal at no cost in a universe of cooperative consortium.
- **Participant 24: Targeted Resource Centers (virtual and/or physical)** Start at situational needs (e.g., life stage and situation of individual / family or industry /

organization) to create integrated solutions (insurance and other services) that transcend traditional product and industry boundaries.
For example, a small business executive office suite firm expands the shared office / virtual office concept to include strategic and financial planning services along with integrated insurance packages that can be tweaked to fit a specific organizations or individual needs.
Concept drives product integration / pricing beyond solution provided by small business insurance specialist. Requires developing network of linked strategic partners or an organization (e.g., insurance company) that creates resource centers as a distribution strategy. Partner, services, products selected and tailored to market segment target.
Arm agents / distribution arm with unobtrusive lead nurturing resources (e.g., newsletters, events, educational resources – online & offline - tailored to the specific needs of the target audience).
Psychographic / needs / skills based profiling and paring or prospects and agent/distribution arm. Eliminate trial and error in match-making - building trust relationship that serves and nurtures client needs.
Use of internet – based anonymous survey; present candidates to prospect for selection.
Use of feedback system to create agent / distribution arm ratings and improve selection process / customer satisfaction.
Internet traffic analysis solutions, marketing, underwriting.
Solutions offerings / underwriting criteria based on site visitation analysis… were did visitor come from and go to? What search terms were used? What did they visit while on site? How much time did they spend in total and in each area? First time or returning visitor? What offers / site prompts did they respond to? Build and utilize response database using artificial intelligence.
Use of AI to structure dynamic visit / web content for visitor and to seed search engines. Includes analysis of marketing and advertising messages used on websites, banners and offline media. Create opportunities to visit linked sites of interest using AI. Each visitor could have a unique website experience.
Provide low risk offers (targeted downloads, newsletters, etc.) based on surfing interests. Capture contact information for unobtrusive and/or opt-in follow-up.
Artificial intelligence to structure underwriting based on surfing patterns, u/w question response patterns (responses, time to respond, response changes, etc.).

- **Participant 25:** Urban legend is that the average agent sells about 1 to 2 policies per week. At this level of production, it's no wonder that the agent focuses on the high net worth individual and the older age applicant. Otherwise, it'd be difficult to earn a satisfactory living based on this level on sales.
  I presume you want me to talk about innovative new distribution technologies such as "Insurance Infomercials", but I don't really feel I have anything to add here. One thing that I have noted, however, is that North American companies which have a global presence may use selected markets such as the Asia Pacific

region as a laboratory to experiment with new marketing techniques. This may allow them to minimize channel conflicts as they experiment and to work out administrative issues before they take these distribution methods live in their primary market.

- **Participant 26:** Ability for an individual to complete paperwork on-line (for initial sale or policy changes) to reduce face-to-face interaction with sales agent and to streamline process (similar to what has been done in the mortgage industry).
  Blue Ocean Strategy = reduction in time necessary to complete a sale.
- **Participant 27:** Again the suggestion is in two parts:
  - The distribution of financial products should move from the contractual confirmation of what the prospect bought (today by mail) to an interactive location for the buyer to use and manage the account created by the purchase. Could be a secure web site that not only provides access to account information and contractual reference, but provides tools for reevaluating ones situation, learning about new ways of mitigating risk.
  - The distribution of services could employ on-line training techniques. Could be interactive same-time sessions, or even IA controlled sessions. The latter could be available 24/7 to be used at the buyer's preference.
- **Participant 28:** Offer trip to a golf resort, or other activities, to pre-selected high value potential customers where there would be an information session. ING has a lot of success with their internet café. This is a non-traditional distribution channel for banking and insurance.
- **Participant 29:** As with #1 above, more insightful collection and analysis of distribution partner and producer data will enable far more focused and cost-effective producer targeting in the course of wholesaling products from insurers through producers to consumers. Life insurance products targeting a specific risk at a specific time could be directed on a specific point-of-sale basis to individual consumers. Such more sophisticated distribution will also be used to better leverage affinity marketing partnerships.
  For example, short-term life insurance - similar to travel insurance – could be sold for a short amount of time while people undertake potentially hazardous activity. This could be enabled through better data mining and analysis as indicated in #1, yet the product could be sold on-the-spot in remote locations by anyone with remote internet access (or in areas without this through PDA-style devices enabled with special software). The insured risk, in this example, is then predicated almost solely on the risk incurred during the activity, not on the person's long-term prospects, which would therefore have different underwriting criteria. A 3-day policy before going on a mountain-climbing trip, for example, could be sold at the 'lodge' where the expedition was to depart because of this remote connectivity.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 30:** Industry consortiums could be formed to share in providing supplemental term life insurance to all persons paying OASDI tax. Other partnerships between government programs and supplemental private insurance could be considered.
- **Participant 31:** To implement the strategy discussed in 1. above, you would need to modify the distribution approach. The human touch is still critical to the process, but very few "agents" could be trained across the broad, holistic financial planning spectrum. I would see the agent being trained to gather data which could be submitted electronically to the home office expert staff. They would work with the agent to develop a plan for the customer. The plan could be delivered to the client in person by the agent with the appropriate experts available via video conferencing.
- **Participant 32:** Our industry needs to get serious about multi-channel distribution. There are only two industries that are still trying channel nearly every transaction through a commissioned agent: insurance, automobiles, and real estate. Over the last couple of decades, the central, default role of the commissioned agent has dissipated and changed dramatically in every other industry. In those industries the agent is just one channel among many. Remember the days when a stock purchase required a stock broker with a minimum 2% commission? Remember when travel required a travel agent with a 10% commission? Agents still exist in these industries, but they competitively co-exist with other channels.

  The reason that the role of insurance, automobiles, and real estate agents have not evolved as much is due to the combination of strong regulation (automobile dealer franchise regulation is very protective) and strong agent lobbies. But for our industry, it is becoming an imperative. Even today there is a large segment of our potential market that simply will not deal with traditional life and health agents. They will not deal with them because they do not like and trust them – insurance agents rank very low in professional respect polls. They do not deal with them because they are not available the late hours and weekends that people want to transact insurance. Furthermore, GEICO, Progressive, and other P&C companies have demonstrated to people that there is another model for insurance. We think that P&C is dramatically different than life and health insurance, but the consumer sees as all as simply “insurance”.

  The segment of the market who will not deal with traditional agents is growing. It is also disproportionately young – the consumers we want not only now but for coming decades. We need multi-channel distribution: internet, call center, salaried agents, commissioned agents, and hybrid models that will deliver products via the channel that the consumer is most comfortable at the hour the consumer wants to transact business. This will definitely change the role of independent, commissioned agent. Agents will resist. Someone will figure this out, perhaps a little, scrappy company that does not have an established agent base. They will sweep the market, particularly if they can similarly deliver quick,

automated underwriting as part of the total sales experience. (Much more on that in my responses to later questions.)
Finally "On the Spot" insurance distribution would seem to have interesting potential. On the spot insurance is not a new concept – airports have long had travel insurance kiosks. But new technological devices can deliver it in a truly instant fashion. For example, why can't I have competitive auto rental insurance quotes delivered to my Blackberry the moment that my credit card is hit by Avis? Why can't a few keystrokes delivery me accident protection just before I bungie jump? The release of liability at the bungie jumping shack could say "We are not liable, but if you would like some protection, send a text message from your cell phone to #1234. The owner of the phone will be covered for the next hour." There would be no question of someone having signed up after the fact.

- **Participant 33:** The whole area of Customer Relationship Management (CRM) has expanded and in some ways has morphed more into "Customer **Experience** Management" (CEM) since it's the **'experience'** which often is what creates customer 'loyalty', rather than just customer 'satisfaction', which can be very fleeting and is amazingly fickle.
  New technologies will allow these 'experiences' not only to be totally unique and even remarkable, but even more importantly, technology will allow companies to provide these experiences with unparalleled '**consistency**', both regarding the quality of the selling process through traditional distribution forces (technologically-aided), as well as by online direct 'B-to-C".
  One company who has long stood out in this area of CRM, and now CEM, is USAA out of San Antonio. And it's both their technology and cross-training of their CSR's which has allowed them to provide unparalleled 'consistency' in service and in cross-selling and new sales.
  The traditional 30 – 45 year old targeted age markets have largely been abandoned by the traditional field forces within the industry due to inability to profitably serve them in the traditional 'momma & pop' across the kitchen table manner. Additionally, with over 50% of the population now in non-traditional family settings (i.e. single parent; divorced – no kids at home; no-children, etc.), the effectiveness of the old approach and many of the traditional messages just don't work anymore.
  And yet this same 'technologically-savvy" group will be more than open to approaches that engage them in ways which they are now pioneering – blogs, podcasts, social net-working chat groups, virtual reality persona creation, etc.
  The strategy will be to recruit 'visually-pleasing and convincing' discussion leaders who can either lay the groundwork for why our products need to play a necessary part in their lives or actually becoming a 'virtual agent' to assist them all the way through the process (i.e. www.secondlife.com). You build your own ideal insurance agent with looks, personality qualities and styles which are most suited to maximize your own desired customer experience.

Appendix B-2
Complete Responses to Round One Survey

Also, 'gaming' technologies have become so commonplace within the next generations who will soon become life insurance purchasers, that the most successful companies will employ these in very creative ways in both sales and servicing.
Sites like www.gameforcharity.com is a current example of raising monies for charities by appealing to these groups of younger age consumers. They pay $25 to choose from among 22 different games and they get to post their top score to make them eligible for prizes provided by sponsors. 80% of the monies goes to a charity who uses the site as a fund-raiser, with the company keeping 20%.
Engaging 'dream-makers' within this age group who also are willing to buy into the 'purpose' and need behind our products, will be the ones best able to help us create this new 'distribution system' of the future. We 'old farts' won't have a clue although our 'wisdom' will be useful in the longer run after the 'first wave' experimentation proves a number of successful new directions.
This transformation of our somewhat stodgy and staid industry will be difficult if not impossible for many traditional carriers, and as with 'life brokerage's difficult acceptance during the late 60's and 70's, being first embraced first by smaller companies, so may this have to be the case with acceptance of this massive paradigm shift in attitudes and behavioral styles.
Finally, coming up with new technologies to support the company's STARS who often account for a fairly high portion of the company's overall new business can best be accomplished by 'following them around'. A company's star agents (typically the top 15-20%) are not good about self-evaluating why they are so much more successful than the 'core' producers. By far, the best way to isolate concepts, ideas, and other ways the stars excel (some which could be automated through technology), is by having a knowledgeable 3rd-party actually follow them around and observe what they are doing. Sadly, some companies have been somewhat reluctant to do this for fear of finding out exactly what some of their big producers are doing and saying, often until it's too late. Doing this with a brokerage sales force would be even more difficult without somehow compensating them for their time or treating them almost like consultants

- **Participant 34:** No Answer
- **Participant 35:** No Answer
- **Participant 36:** Could tie in with first idea above in Q1. Individuals who are underinsured, would be approached by an electronic agent.
- **Participant 37:** The idea mention above touches both on marketing and distribution
- **Participant 38:** We need to better reach clients in their business environment. One way is to better partner w/ employers. We also need to distribute over the web better w/ interactive web strategies
- **Participant 39:** The industry has completely outsourced its distribution. Online consumption will almost certainly take over as the generation changes and as the

products become simple to understand. Expect employer sponsored distribution (but more consultative) to occur.

Question #3. The internet has increased the penetration of companies in foreign markets where consumers around the globe are purchasing goods from the internet sites of many companies. Is it feasible to build a similar platform for insurance and other financial products where a consumer outside of United States or Canada would be able to purchase products from US or Canadian companies via the internet?

- **Participant 1:** My understanding is that this is widely occurring now. U.S. insurers are positioning subsidiaries in off-shore jurisdictions in order to take advantage of sales to foreign nationals. This consideration is bound up in discussions in Congress on the jurisdiction of Internet sales and the taxing thereof.
- **Participant 2:** See answer to question # 2.
- **Participant 3:** YES! The Internet is everywhere and the cafeteria plan could plug in a spreadsheet of product options for the consumer to choose from.
- **Participant 4**: Ten years may not be long enough to bring equilibrium in life expectancies and healthcare to operate a single global market.
- **Participant 5:** Consumer protection would argue against this. Regulators would do their best to protect their domestic markets and consumers from unregulated and unlicensed intruders. I think this is therefore a less likely scenario.
- **Participant 6** Sure, why not. Some consumers in countries who have a less predictable body of law for their protection might wish to enjoy the security they could get from U.S. or Canadian based companies.
- **Participant 7:** The question seems too US centric. The question is could US or Canadian residents purchase insurance overseas. Bermuda already has in-place a law that states that a contract negotiated entirely over the internet with a Bermudian company is a valid contract in Bermuda. There is nothing stopping such a company from selling insurance on US or Canadian residents. Any jurisdictional disputes would probably resolve against the US under World Trade Organization rules concerning protectionism.
- **Participant 8:** Absolutely – companies like Amazon and others have already successfully developed this strategy. Each country website should reflect the local social security characteristics for how the products need to be developed. There is huge potential for internet distribution in large, undeveloped markets like China and India where a lot of the young people are internet-savvy.
- **Participant 9: No Answer**
- **Participant 10:** Yes. There are regulatory hurdles but it is feasible
- **Participant 11:** Theoretically, yes (although I am not qualified to assess the legality of this.) This assumes the US carrier understands:
  3. the tax environment of the country to which it markets.

Appendix B-2
Complete Responses to Round One Survey

4. How to communicate effectively in that country.
5. How to create and manage distribution.
6. How to do the above in a fashion that is cost effective & profitable.

For some countries, it might be more successful if its offering appears to be country specific. The carrier in that country could license technology/resources and apply them to meet the demands within their country. This would be similar to the brown bag approach in this country. Within this context, it may prove to be feasible. The process outlined in questions 1 & 2 may prove to be too large of a challenge to apply it worldwide in the next several years. A more product focused approach might be more profitable using the methods outlined in this question to address the country specific potential issues.

- **Participant 12:** It does not seem feasible to sell products outside the US or Canada via the internet, unless the products are on non US companies.

- **Participant 13:** The technology to support a multi-national insurance platform is the easy part. I believe that in order to have effective multi-national insurance platforms, a strong multi-national regulatory framework would be required. Basically, insurance is a long-term promise of future benefits, and public confidence is only as strong as the regulatory environment that supports those promises.
- **Participant 14:** I will set aside the legal and regulatory issues in countries of the company and the client. The answer then is clearly yes, though challenges of language and terminology, culture, and underwriting across cultures remain.
- **Participant 15:** Internet Technology is not the barrier to purchasing policies from anywhere in the world.- the internet is agnostic to geography.
  To illustrate the point consider leisure travel and entertainment industry where you can buy plane tickets, make hotel reservations and book theatre tickets in far away places yet print of your tickets instantly in the US or elsewhere
  The issues here are the various tax laws in different countries, individual insurer attitude and ability to be able to underwrite and investigate claims on foreign nationals in foreign countries which is possible but expensive.
- **Participant 16:** I believe it will be in the future as there will be more drive toward globalization than exists today through more product markets such as the insurance and financial services sectors. A key issue will be insurers taking the necessary steps to market and write policies in each market based on the laws that govern the various countries in which they choose to do business.
- **Participant 17:** It is very feasible to adopt a global approach to marketing via the internet. US and Canadian products may be very attractive to a wide array of individuals who have traditionally sought US dollar coverages from countries where currencies were less stable. Investment related products may have less risk when sold around the world. Products that require health underwriting may be very difficult to market in some geographies.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 18:** The technology is available to accomplish the international sale of insurance & financial products by North American companies but significant regulatory issues probably make this difficult
- **Participant 19:** Current technology will allow for the application and issuance of fairly simple products from remote locations via secure Internet connections. To offer products with higher face amounts, it will not be possible to collect physical evidence to underwrite a risk so the use of "smart underwriting" (underwriting rules engines and electronic data sources) will be required for risk assessment and issue. This becomes problematic in some jurisdictions as access to personal health information is either restricted or unavailable in digital format.
  Beyond the technology challenges Blue Ocean may be possible:
  - If the insurance industry can price globally or, create a family of products with local variations
  - There is a growing client segment consisting US or Canadian citizens who travel or retire in other countries. An exchange platform of a shopping/exchange site which allows exchange of policy taken for a product in one country/region to another applicable product in another country is a possibility.
  - A global insurance exchange between insurance companies and affiliates in other countries may be possible. The architecture can be implemented using technology available today provided underlying data is integrated accordingly.
  - Regulation as always is an issue to consider
- **Participant 20:** Technologically, I don't think it would be a challenge. The Internet is a true global platform. I think price wise it could be a big problem though. Insurance policies are routinely priced for their market using the mortality and morbidity data from those areas. To complicate, the US is far ahead of the world in the use of preferred rates. I think residents and citizens of other countries would love to get US policies if those doors were opened wider. I'm just not sure that the US prices would support the long term profitability. There is also the matter of compliance and such. It is already complicated enough in the US with fifty states regulating things. How would a major influx of foreign business affect things?
- **Participant 21:** Since I am not familiar with insurance sales licensing laws outside the U.S., some of these comments may be impractical.
  -There is an underlying assumption that a "local" licensed authority would need to be involved in finalizing a foreign insurance sale.
  - A logical source of the selling authority is a bank or financial service company in the buyer's country.
  -There is also an underlying assumption that the insurance company authority would need to be in one or more financial hubs, like Bermuda, Dhubi, Hong Kong, etc., not in every country.

Appendix B-2
Complete Responses to Round One Survey

-It seems that accumulation products would be more practical than pure protection products.
-Currency conversion may be a prime motivation of the buyer.
-Multi-currency products (i.e. products that offer funds in more than one denomination) would seem to offer the most attraction foreign buyers. This would allow them to move between currencies within a single financial product.
-This type of product could be quoted, closed and delivered over the Internet.
-Collection of premiums would likely have to be performed by the local distributor (financial service organization) in accordance with local laws.

- **Participant 22:** No Answer
- **Participant 23:** Technology may be able to provide the venue, but not until international continuity in product, underwriting and taxation has been established.
- **Participant 24:** No Answer
- **Participant 25**: Life insurance exists in a highly regulated environment. Even without the use of the internet there are often questions regarding the purchase of life insurance from US or Canadian companies by residents in other countries. There are often legal restrictions dealing with such topics as currency controls. Sending currency to other countries may well violate laws. Similarly, there are legal controls dealing with policy provisions and of course there are tax issues. As a result of legal issues, it may be necessary for a US/Canadian company to establish operations in other countries and issue policies in accordance with local laws and conditions. Another option might be establishing a company in an essentially neutral country and issuing international policies in accordance with the laws of that country. There would still be legal issues such as the product being determined to be an abusive tax shelter.
  There are other issues which affect global life policies. For instance, to the extent information is needed for underwriting, there may be difficulties in obtaining reliable information in an appropriate language. There may be difficulties in international claim settlement such as cases where the insured was eaten by a lion or buried in a lime pit. There may be difficulties in getting valid legal proofs of death, which may create an environment prone to fraud.
- **Participant 26:**
  Potentially yes, but the business rules would be very complicated due to differences in the regulatory environments between countries. How to handle the differences would need to be addressed.
- **Participant 27:** Yes, but issues of underwriting criteria need to be addressed. See below
  - Proof of death for life based products could be overcome by establishing an international database of deceased. Local governments put death certificate info into the database and underwriter systems tap into it in the same way that auto carriers get MVRs

Appendix B-2
Complete Responses to Round One Survey

- **Participant 28:** When the data to underwrite life insurance, annuities or health insurance customer will be available online (e.g. Motor Vehicle Record are available online for auto insurance), then it will be possible to sell insurance through the internet. There are already examples of life insurance sold through phone marketing campaign.
- **Participant 29:** Direct marketing techniques will improve gradually, as will the consumer market's acceptance of actually purchasing comparatively simple insurance products through such channels. This will occur as today's consumers in their 20's & 30's continue to purchase products over the internet.
  More complex products – i.e., more complex consumer needs/wants – will continue to depend on face-to-face advisor-led sales, but the advisor's role will narrow as the people who purchase these products (the previously mentioned 20-39 year old consumers) continue to expect less personal interaction in buying these products. The advisors will become more focused on relationship building and counseling for complex products, as consumers research options and handle more of their service needs on the web.
  For example, initial proposals/illustrations may be delivered via the web (subject to consumer preferences) instead of the currently archaic approach whereby the producer delivers printed illustrations.
  However, insurance regulations will remain a major factor: individual country regulations are likely to continue to impede the globalization of products.
- **Participant 30:** Absolutely this is possible.
- **Participant 31**: The holistic planning strategy should work in foreign markets, with appropriate adjustments for regulations.
- **Participant 32:** Insurance is not "a good". Diapers, books, food, drugs, automobiles, etc. are goods. Insurance is also not a service. IT programmers and R&D are services. Insurance is a mid to long-term financial risk contract between a consumer and an insurance company. The contract is based on mutual trust: the insurance company has trust that the consumer has and will supply accurate information, both at the time of underwriting and at the time of claim, and the consumer has trust that the insurance company will pay up upon future dates and/or events. I see two broadly defined barriers to taking insurance global: legal and trust.
  Legal: Local governing bodies around the world take much more interest in regulating consumer insurance products that they do business-to-business or non-financial "goods". The local governing bodies (state and national) regulate what can be sold to whom and often at what price. This makes building a global platform difficult. Also, because insurance products are complex mid to long-term contracts, the enforcement of the local court system at the time of claim is also critical.
  Trust: Even if the legal hurdles vanished, trust would still be an issue. The insurance company needs to rely on the information that the insured provides,

information which is often difficult enough to verify here in the US, but can be literally impossible in other places. Likewise the insured needs to be able to trust the insurance company to pay according to the insured's expectations. The anonymity of the internet does not facilitate trust in high value financial transactions. It will be a major technological breakthrough for the internet, which will benefit the insurance industry, when we are able to do a better job verifying identities of all parties to insurance internet transaction (insured, insurance company, its representatives, agent, beneficiaries, etc.). One of the reasons that established agents continue to be valued is that they are the trusted middle-man. As a result of legal and trust barriers I do not foresee a truly global consumer insurance market emerging in the mid-term horizon.

Finally, it is worth noting that both issues also exist in the domestic US market. The domestic analog to this question is "*Is it feasible to build a platform for insurance products where consumers in any US state can buy the same product via the internet?*" The answer is no. Thanks to 50-state regulation, it is not possible today. The 50-state burden exists for all life products, but is particularly high with respect to health insurance. States have vastly different opinions as to what health insurance products can and must be offered to their residents. No one today is selling insurance on a truly national basis. Furthermore, we have not yet conquered the issue of trust, particularly with respect to internet sales. Regardless of sales channel, the absence of unified medical records means that medical underwriting of any sort is fraught with trust issues. The nature of the trust issues are changed when an agent who is being incented to make a sale is replaced by the impersonal nature of the internet. I am not sure which environment has more trust issues, just that they are different issues.

- **Participant 33:** There are several factors playing in our favor. First in some ways, the U.S. is viewed by those in other countries as the Dallas Cowboys are viewed by non-Texans. Maybe it's the Cowboy Cheerleaders, or maybe it's the historic Texan bravado which makes them America's favorite team to hate, and yet there's also a peculiar fascination with, and attraction to, them which is difficult to explain.
  Regardless of the many different factors that would tend to make up the world's love-hate relationship with the U.S., there are definite advantages upon which could be capitalized with the right "Blue Ocean Strategy".
  Those answers to Questions 1 and 2 would in the same ways for building a successful U.S. global online financial services platform.
  One additional element which few have factored into the global commerce equation is that within the next 5 years, automatic and simultaneous language translation will become an affordable and commonplace technology, opening doors for U.S. innovators and creatives to enter any global market without the disadvantage of a language barrier.

Appendix B-2
Complete Responses to Round One Survey

Even before this world of 'universal language translation' becomes a reality, we must remember that English is the 'world's' second language. Since I launched my own "NetWeaving International Community" on Xing (www.xing.com), Europe's largest online business and social network – in excess of 2 million members – my community is already about 800 from over 20 different countries and with almost every one of them communicating in English in addition to their own and often several other languages.
Combine these elements with my earlier comments about **'when the world goes visual'** and you have a new world ripe with opportunities for U.S. Financial Services.

- **Participant 34:** No Answer
- **Participant 35:** This seems more plausible for annuities and products with less insurance risk. The risk profile of people who actively come seeking insurance on their own is likely different from what companies are used to in a paradigm where insurance is sold by agents.
- **Participant 36:** I suppose it would be possible for non US residents to purchase US products via internet. They are effectively already purchasing US products outside US. Would have to overcome regulatory issues to allow them to purchase via internet.
- **Participant 37:** No Answer
- **Participant 38:** No Answer
- **Participant 39:** Multi-national companies already have decided that this is not a practical. The secondary market and securitization will move the risk around.

Question #4. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it underwrites its products** and what is the resulting "Blue Ocean Strategy"? Consider historical criteria, current "state of the art" criteria (e g., genetics, lifestyle), or fantastic criteria ("Ms. Prospect, I am going to ask you to breathe into your speaker phone").

- **Participant 1:** The limiting factor here, in my opinion, will not be technology but legal limitations on the use of genetic testing and DNA in underwriting risks. Also impacting future underwriting will be the public's desire to know the insurance industry's risk analysis of a set of proclivities over which they have no control. Individual underwriting may give way to more group underwriting and catastrophic coverage for pandemics and terrorist attacks.
- **Participant 2:** At some point in the not too distant future people will have the capability to carry their entire medical history in a small disc on a key chain or embedded under their skin. This information can be updated on a frequent basis and with proper authorization and privacy safeguards can easily be transmitted to

insurance underwriting departments. This vast amount of medical history may have the effect of slicing premium categories into even more preferred and select underwriting classes than exist today. Again the life industry needs to do a better job of working with the medical establishment to create useful systems of collecting medical data that can be utilized by both the medical establishment and the insurance industry with the common goal of improving health and proper selection of risk.

- **Participant 3:** Given the limitations on privacy, an underwriter should be able to tap into whatever data is pertinent to the choices the individual is making. For example, if the individual wants a low deductible auto policy the underwriter would be able to check their driving record before allowing this choice to be made. The same would go for medical information.
- **Participant 4:** Partnerships with online health vaults (and financial services) could provide an incredible amount of data on the insured. The indexing of vast amounts of public personal information by Google and other search engines makes the Internet valuable in the present.
- **Participant 5:** Genetic testing is one possibility. Privacy rights will militate against insurance companies being able to require such testing, but potential preferred risks may be happy to provide such evidence if they thought they could get better rates. I see this as a major area of development. The Blue Ocean Strategy may involve seeking out those who have had such tests already or are willing to undergo them as potential clients.
  I see that with increased prosperity there will be less need for protection cover and more for wealth management, where medical underwriting may not be so stringent. There may be more guaranteed issue or simplified underwriting for wealth type products, reducing the cost and increasing the speed of underwriting. I think the area of instant issue, over the internet, will be a rapidly growing one and the industry will need to develop its ability to plug into Driving license databases, national claims databases and financial references in real time will be key to expanding this sector.
- **Participant 6:** Again, an uncontested market space ripe for growth is hard to fathom but I do believe those companies who invest in data collection and sophisticated analytics to drive interaction with their customers will come out on top. If, from the customer point of view, each transaction with the company is rich in relevance, efficient and cost effective and serves their needs why would they search elsewhere? A competitor would not have the ability to enter in a relevant discourse with the customer since they wouldn't have the actionable body of knowledge the incumbent enjoyed.
- **Participant 7:** An example of a sales push strategy that could follow from the centralization of medical records and further computerization of underwriting would be to allow primary care doctors to use available information to tell patients their underwriting category. This would allow prospects to be offered a

Appendix B-2
Complete Responses to Round One Survey

guaranteed quote subject to financial underwriting, eliminating a concern in underwriting over whether they would get preferred rates.

- **Participant 8:** Use of simplified U/W strategy, eg, 3 key questions on a one-page application, and/or reference to data on centralized U/W websites.
- **Participant 9: No Answer**
- **Participant 10:** Advances in diagnostics from blood, urine, saliva are likely in this time frame. Correlations to lifestyle must be studied among insured lives but there is opportunity there
- **Participant 11:** NA
- **Participant 12:** One needs to give the applicant the incentive to provide all relevant underwriting information beyond offering the lowest price. Hair follicles, blood, urine, saliva, Rx history, etc. can be collected more easily but client willingness goes a long way.
- **Participant 13**: I think that the most important breakthroughs would involve doing less medical underwriting, not more. Less underwriting would extend coverage to more people with less distribution and administrative expense per dollar of coverage provided. By making smaller coverage amounts practical to sell, you can expand the pool of covered lives dramatically. The improved spread of risk and smaller covered amounts will in turn make medical underwriting less critical.

  There may be opportunities to have an assigned risk pool or government subsidies similar to those embedded in the current medical plans in Massachusetts and California. The social cost of not having insurance is, to a significant degree, already borne by governments directly and indirectly. Those costs far outweigh the modest additional costs that would be required to support more comprehensive insurance coverage systems.
- **Participant 14:**

A. Genetic underwriting may or may not be allowed in the future, but in any course of events, it will be important to become more intensive in underwriting, mostly in ways that are more computing intensive.

1. If allowed, then immediately, intensive use of genetic information will be a survival issue for companies.
2. If not allowed, intensive use of existing, or new allowable information sources, will be needed to defend against selection by applicants in possession of negative genetic information.
3. It is quite possible that both tracks may be allowed, if the inability to use genetic information restricts the availability of coverage, or threatens the future of companies.

B. The cost of sequencing of an individual's DNA is rapidly dropping and may soon be feasible on a cost basis for large life cases. Computer programming technology plus biological knowledge should emerge in a few years to effectively analyze this information for major items of interest for life or health underwriting.

Appendix B-2
Complete Responses to Round One Survey

This probably needs to be combined with a human review by experts, facilitated by Internet or other electronic communication.

C. We will enter an era of comprehensive, standardized health records, either on a chip carried by patients and/or entered in a central database. Authorized downloading for underwriting purposes will be straightforward. A company could get a leg up by devising the interface into its own underwriting system, or devise a system that avoided a translation or decoding, and partial use of artificial Intelligence to deal with the added flood of information.

D. The Wii game machine, as it evolves, could be used for some aspects of physical underwriting, as it gains more sensors aimed at biofeedback capabilities. Right now it could detect tremors, balance problems, lack of vigor or mobility, etc., and could evolve into a lie detector.

- **Participant 15:** Underwriting Products

  Approx 85% of policies in-force today have face values less than $500,000 with the vast majority of these under $250,000.

  The most under-served market (and largest in number of lives terms) is the middle to lower income ranges.

  The larger the pool of homogenous insured lives the lower the risk of mortality experience deviating from the norm.

  Some of the most serious causes of early mortality are Heart related diseases, Diabetes and Cancer.

  The key (apart from Distribution) is to be able to economically and efficiently evaluate cases, without the need for Paramedical Screening and Lab work.

  Supermarkets with Pharmacies and Pharmacies themselves have all the ingredients (or can easily acquire the ingredients) to be able to reduce the risk of anti-selection and to provide insurance coverage at point of sale.

Consider the following.

1. Pharmacies know or have access to a PBM database of approx 70% of prescriptions written and for what purpose (on and off label) – it is an instant database and a hit for certain drugs could disqualify an applicant at POS
2. Most facilities have the equipment and ability to take blood pressure readings.
3. Blood sugar testing equipment is now very cheap and reliable and available on site – unacceptable reading = no jet issue.
4. All retail facilities have the ability to capture electronic signatures and to use touchscreen technology to answer questions.
5. Fingerprint capture technology is now widely available on laptops and is for example used by immigration.
6. The MIB index can be run real time to find out if any other applications and disqualify coverage against certain codes.
7. The MVR database in certain states can also provide instant feedback but can be expensive.
8. An intelligent rules based engine (web based) could determine risk profile based on answers to a few questions and the above readings

Appendix B-2
Complete Responses to Round One Survey

9. First and subsequent premium collection can be taken from the debit or credit card inserted at point of sale
10. A cover note or the policy can be issued at point of sale and all disclosures could follow
11. Contestability would still apply but for low face values the exposure for noin disclosure with scale is reduced
12. This strategy would also work in worksite marketing sales where the salesperson has the same equipment available at point of sale and premiums could be taken by payroll deduction.

- **Participant 16**
  - Use of predictive modeling is helping medical underwriters understand price risk based on a number of factors and I believe the same could be said for the life insurance industry as well. Use of data gathering and inhouse information to construct a predictive model could give insights into a particular market but also could be used to price in foreign markets as well based on in-market data that could be gathered.
  - While I believe genetics could play a role in life underwriting process I am morally opposed to using such techniques to price policies.
  - Use of lifestyle/socio-economic criteria to base actuarial and pricing assumptions have been around for a number of years and this may go further from a standpoint of verification as well as how the world changes in regards to behaviors and trends on lifestyles.
- **Participant 17:** The availability of incredibly detailed demographic information continues to explode. Adroit statistical analysis of information that is available in an ever increasing number of data marts will, undoubtedly, provide some excellent marketing opportunities for actuaries who are able to evaluate the data.
- **Participant 18:** The availability of data bases which can be accessed in real time are already impacting underwriting (i.e. Rx, MIB, MVR & credit). However in the future the biggest technology change that will provide a "Blue Ocean Strategy" will be the availability of clinical and pathological tests and computerized patient records electronically on an immediate basis.
- **Participant 19:** The Blue Ocean segment we have identified requires "smart underwriting" technologies that simplify the underwriting process or provide underwriting decisions based on limited physical evidence.
  There are a growing number of sources of data in the public domain, available in digital format that can be accessed and analyzed in real time to provide validation of applicant supplied answers and mortality risk assessment.
  Advances in genetics research will enable better and faster assessment of health risks. Simpler, single tests may provide faster results, including lifestyle assessment and predictive health analysis for risk assessment.
  Rules-based technologies will become more powerful and advance to provide risk assessment and decisioning over a number of underwriting scenarios. It is

possible to implement integrated underwriting requirements and decisioning engine solutions (similar to cockpit dashboards) that provide immediate feedback and assessment.
Increased data digitization and analytics will make it possible to identify more risk classes based on genetics, lifestyle, occupation and avocation. With paradigm shifts in occupation, flexibility in working hours, making occupation shifts and combining avocation and occupation, the increased classification will enable better risk assessment.

- **Participant 20:** There are so many things going in this area. At the same time many companies are experimenting with new testing regimens, the right to underwrite is under siege by many regulatory bodies. Challenges to the veracity of underwriting of foreign travel and residency are a prime example. The key to a strong future of underwriting lies in developing and perfecting tools that allow us to fairly differentiate risks by non-controversial means. People accept our current criteria for preferred right now and they are defensible and largely non-discriminatory. We need to branch out from here however. A largely untapped area is that of more applicable preferred criteria by age. Standard preferred criteria that work well at age 40 don't work as well at age 80. You can have higher build and BP and Cholesterol and still be preferred. Things like frailty testing and cognitive testing are much more applicable in selecting the better risks out. If you really want to blue sky things you might consider a future where HIV testing is not paramount because people just are not having as adverse mortality as we thought for death resulting from AIDS because of treatment protocols now available. The current concept of preferred underwriting now exists because of the need for blood for HIV testing. It continues now because of preferred rates and reliance on blood. Without a strong need for HIV someday, perhaps the industry will return to products without preferred that can truly and finally be issued on the spot. I think there are people that are willing to pay $500 instantly for a $250,000 policy with no testing and a quick set of questions rather than wait 45 days for that same $250,000 policy at a rate of $425. Things that will make that possible are what we call 'synthetic underwriting' where non-invasive instantaneous information is gathered instantly (MVR, Credit information pharmacy databases, MIB are just a few pieces of a growing puzzle). As to the last point, underwriting by genetics or special testing, the problem has always been in identifying risks that exist but are not defined for the proposed insured. In other words, you can tell a person he will die in 12 years but you can't say exactly how or when. It poses some hard to overcome issues and makes the test difficult to use.
- **Participant 21:**
  Medical Underwriting
  --It is hard to imagine a method of medical underwriting that does not include some form of personal interview.
  --Would video interviews ever be acceptable?
  DNA Testing

Appendix B-2
Complete Responses to Round One Survey

--DNA testing may be feasible method of identifying health tendencies.
--Collection of samples can be done remotely.
--Cost of the testing is getting less expensive.
--Current databases are too small to be completely accurate.
Blood Testing
--Will always require a physical act to gather a sample.
--The results could obviously be transmitted via the Internet, but it does not seem likely that any technology that could gather blood or DNA samples would be available in the home.

- **Participant 22:** Certainly there are health conditions in long term care insurance with an addition to medication and other variables that insurance carriers have determined their underwriting tolerance for. How they view the risk classification that will need to be assigned could be mapped out accordingly.
  A lot of carriers do Phone Health Interviews. With all of the profiling tests available there has to be series of questions that could be developed online that provides the carrier with the same type of risk analysis on an individual as a telephone interview.
  The medical industry is currently migrating towards electronic records through out the country. A collaborative effort could be made to develop the health and insurance industry's data so that it can be electronically passed when the appropriate authority has been granted. Rating systems could be implemented for health conditions as to their seriousness. Noted would medications prescribed, the multiple conditions that may exist and any other pertinent information. With the information cross-referencing between systems a decision could be rendered accordingly. If the information was inconclusive the protocol could then be to have an underwriting physically review the file.
- **Participant 23:** Blue Ocean Strategy" would be a "Touch the Screen" system in which the client would touch the computer/lap top screen – finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions – which would be fed through the computer at the same time as the one-touch activity.
- **Participant 24: Internet traffic analysis solutions, marketing, underwriting.** Solutions offerings / underwriting criteria based on site visitation analysis… were did visitor come from and go to? What search terms were used? What did they visit while on site? How much time did they spend in total and in each area? First time or returning visitor? What offers / site prompts did they respond to? Build and utilize response database using artificial intelligence.
  Use of AI to structure dynamic visit / web content for visitor and to seed search engines. Includes analysis of marketing and advertising messages used on websites, banners and offline media. Create opportunities to visit linked sites of interest using AI. Each visitor could have a unique website experience.

Appendix B-2
Complete Responses to Round One Survey

Provide low risk offers (targeted downloads, newsletters, etc.) based on surfing interests. Capture contact information for unobtrusive and/or opt-in follow-up. Artificial intelligence to structure underwriting based on surfing patterns, u/w question response patterns (responses, time to respond, response changes, etc.).
Underwriting gene and/or tissue testing
Use advancing technology to conduct accelerated stress testing on gene and/or tissue samples. Similar to accelerated stress testing used in manufacturing and design process.

- **Participant 25:** Scenario 1: Underwriting Outlawed - The Nov. 6 issue of the Wall Street Journal contains an article entitled "Is There a Heart Attack In Your Future? Genetic Tests Promise to Map Your Personal Health Risks, But Some Question Usefulness," The article states:
"Legislation aimed at making it illegal to discriminate against patients based on genetic information is pending in Congress, but many people are worried that health insurance and even job opportunities could be jeopardized if evidence of genetic risk of disease became part of their medical record."
Under Scenario 1, it may become impossible for underwriters to use "genetic information" which may include items such as family history and cholesterol readings as well as genetic tests. In this case, there would be limited opportunities for underwriting.
Scenario 2: Unlevel Playing Field – Applicants for large amounts (say $50 million) may find it worthwhile to have their own genetic tests done even though the cost is a few thousand dollars. This would result in an imbalance of information between the applicant and the insurer.
Scenario 3: Technology Reigns - The October 29 issue of Forbes has an article (p. 88) which identifies Abaxis as the Entrepreneur of the Year for 2007. Abaxis has developed a small machine that can perform standard blood tests in 12.5 minutes from a few drops of blood. Just speculating but the machines will undoubtedly become faster, cheaper and more portable allowing for blood collection and testing by parameds. Other collection tools will be developed such as a "lollipop" which will allow the collection of saliva that can be analyzed by future versions of this technology. Cognitive mental skills tests will be available for older applicants. This information combined with MIB information and an online pharmaceutical database which has a complete history of all prescriptions used by the applicant. This type of information can allow for on site accept or reject decisions on the majority of applicants. Similarly, these techniques could be used on the platform at a bank (new car dealer?). This would not only speed up the application problem, but it would also reduce the high not taken ratio which results when there is a long time between application and policy delivery.
- **Participant 26:** Obtain access to electronic medical records
  - Face to face interaction through electronic means to visually assess health status (supplemented with completed application)
  - Analyze individual's spending habits

Appendix B-2
Complete Responses to Round One Survey

Blue Ocean Strategy = Definitive acceptance or denial

- **Participant 27:** Leverage the original insurance concept of the losses of a few are covered by the premiums from many. Underwrite life products without medical examination. Model the premium needs for a hypothetical book that includes a cross-section of the population life expectancy. Could limit downside by no payout in the immediate years from issuance and a reduced payout in the next few years. The more volume the more the book starts to mirror the modeled book
  -If medical history is seen as essential – create a database exchange of personal history files that is security controlled by the individual. The individual would load a standardized set of data and provide access to other data such as medical provider records. Medical providers would need to have records on-line. The individual would grant access for specific transactions
- **Participant 28:** Without regard to issue created by discovering an unknown disease, DNA test could be performed to uncover genetic diseases. Note that the DNA information could be included with other with other data to construct an underwriting score. Non traditional underwriting data, such as driving record, could be used in the underwriting score. Riskier driving behavior can identify customer that are more likely to be injured, or die, in a car accident. This is also an indication of more risky behavior or lifestyle. Text mining of the application can be performed for underwriting.
- **Participant 29:** As has occurred in a number of property casualty lines of business, predictive modeling will be used far more extensively in the underwriting process. This will enable quicker turn-around in underwriting, faster policy issuance, significant increases in "jet issue" at lower cost and marginally improved not-taken rates. It will also enable far more focused underwriting and thus possibly expand insurers' risk appetites, as they gain confidence in their ability to pick and price specific risks.
  Another possibility may be that there is significant advantage in underwriters seeing very large volumes of insurance applications and, over time, experience. This may reinforce scale requirements and accelerate the marginalization of small companies and/or strengthen the role of reinsurers.
  Single-point data gathering techniques for specific consumers based on technology available today could also be utilized; having a consumer prick their finger at a kiosk for an immediate wellness screening or, in the future, DNA analysis. Upon passing the wellness check & DNA analysis, along with positive personal identification, a credit card could be used for initial payment.
  Future technology could enable a carrier to provide discounts to people who will take as an implant a type of heart-rate/temperature/blood pressure monitor to monitor their health and send a signal out if there are warning signs of issues. This technique could also provide further discounts to people who exercise regularly, i.e. those who will keep their heart-rates above, say, 70% of max rate for 20 minutes twice a week.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 30:** A device could be constructed using nanotechnology to enable a very small amount of tissue containing DNA to be quickly sequenced and analyzed for genetic indicators of health risk. Another device could be constructed to perform a full body scan – from a unit the size and shape of a flashlight. With these devices, underwriting could be done on the spot.
- **Participant 31:** The company could underwrite multiple products under the holistic planning approach. For example, the same information could be used to underwrite life insurance, health insurance and immediate annuities.
- **Participant 32:** Medical underwriting, especially with respect to health insurance, but even with respect to other life insurance industry products, is overly reliant on eliciting and then evaluating a medical diagnostic history. In the process of evaluating diagnostic history there are important variables which are ignored. I am closest to medical underwriting for health insurance, so the remainder of my discussion will focus on individual health insurance underwriting.

  There many more drivers of future health risk than prior diagnostic history, especially for the applicant who does not have any "dread diseases" and has an otherwise limited medical history. Every large scale epidemiological study shows that the number one driver of future health is education. Where is education in our underwriting? Is there something non-equalitarian about using education? Well, we use lots of other factors that are probably correlated to education, such as occupation and industry. Furthermore, education level is less ambiguous and more verifiable than many other variables. Other salient health indicators are income, emotional health, and sense of control.

  Another variable that we ignore in health insurance which is potentially very valuable is the applicant's propensity to use healthcare, independent of diagnostic history. Someone who has a close relationship with the medical community will generate future claims. If a person routinely sees a doctor for trivial reasons, some doctor will eventually order expensive testing and/or suggest surgery. The person who is quite willing to have surgery for cosmetic reasons (not covered by insurance and ignored in medical underwriting) is quite willing to have surgery which is paid for by an insurance company for a problem that other people would be willing to live with.

  I could, actually I have, write dozens of pages on this topic. We have not seriously questioned the assumptions underlying medical underwriting in decades. We are asking too many questions in our applications, most of them ambiguous, and in the process forcing even healthy people to decide for themselves what is relevant in order to get through the application in a timely manner. We are not asking the questions with the most potential value. The drill down questions used for teleunderwriting are a farce, pulling in information which we have no solid way to evaluate and creating an impression of certainty which we should not have. We are not pulling in and properly using all the information that we could independently gather on the applicant. Even though we are actuaries we do not

properly differentiate between the mean and variance of the various risk components (something that is likely to generate $1,000 a year of claims with relatively little variance is fundamentally different than something that has a 1% chance per year of producing a $100,000 claim). We look at individual diagnoses on a stand alone basis and overlook the signaling effect with respect to overall health and health care utilization. We are applying deterministic judgment rather than the complex predictive modeling techniques that are standard in other industries.

Interestingly, our normal excuses do not apply. As compared to other aspects of insurance, in most states there are relatively few regulatory restrictions on underwriting -- we have a fair amount of latitude. We are, however, hampered by a lack of data. We cannot have the data until we collect it. But we also are not using the data that we have collected – much of our historical underwriting data has not been put systematically entered into databases. We could do so much more. We could do it now. No gizmos required, just a lot of questioning of accepted practices, analysis, and willingness to take risk.

- **Participant 33:** The most significant element which is finally positioned to become reality - overcoming the 'privacy' issues - is automation of the medical records and their online transferability. Although probably still a decade away from universal acceptance and the capture of historic medical records, the ever-escalating costs of health insurance, especially among aging populations worldwide, and the obvious savings across-the-board once the system is in place, will make this a foregone conclusion as part of inevitable new world of health insurance coverage.

  Savings to the insurance industry would run in the billions and with such a system in place, "Blue Ocean Strategies" could become commonplace. That would include everything from enabling true instant approval and issue, to marketing strategies which could make a life insurance purchase much more like other consumer transactions – with the usual reservations which were pointed out above about the 'emotional nature' of the product.

  The most controversial issue of course will be the genetic predictors which will become available and which the industry will most likely be prevented from use in risk assessment in one form or another.

  Nevertheless, with non or minimally-invasive laboratory tests able to more accurately and instantaneously screen for impairments, better assessments will be possible without having to include the genetic component. That could include saliva tests - 'lick the stick', new blood test findings, breath-a-lizers, and better urine screens.

- **Participant 34:**
  - I answered this question in part in question 1, so this discussion is in addition.
  - I do see universal medical insurance coverage ultimately being realized with in the United States. This may have positive implications for insurance. One of the challenges with underwriting approaches other than what is referred to as regular

underwriting, in my view, is their reliance on answers by the client-applicant. If universal medical insurance is a reality, then prescription data bases, which record prescription histories of insureds, will be universal as well. The use of simplified underwriting processes will therefore be much more effective in capturing true expected mortality experience (and morbidity) experience.

- For the use of PDB's to be more effective, greater reliance on automated programs that analyze and interpret the PDB data will be essential.

- **Participant 35:** No Answer
- **Participant 36:** This is a key issue for the sale of life insurance. In order to get attractive premium rates, insurers must do rigorous underwriting, including medical underwriting. Several experiments have been tried over time using the internet and better technology- generally not successful so far. Primary reason in my opinion is that insurers could not get enough data (including bodily fluids) to allow them to offer lower rates. If medical information could be digitalized then that would speed up process, help in making process faster. Avoiding paper files would help- record all information electronically. Obviously some magic tool that would allow insurers to perform underwriting via phone/internet would be fabulous, but I don't think that is within the realm of possibility in the next 10 yrs.
- **Participant 37**: Lifestyle factors appear to have a huge potential that companies have not yet adopted. We can learn a lot about a person's health by using data that is available from Experian and similar databases. Ideally, we could develop an underwriting systems (at least for some types of products) that made a quick decision based on these lifestyle facts such as what magazines people subscribe to, how often the play golf, run, go the gym, how they view their diet, etc.
- **Participant 38**: The underwriting process has to be simplified. It has to be more scientific than carriers are making it. With some key factors, an underwriting decision should be made that then allows a client to select product and features that work for them.
- **Participant 39**: Technology will allow for customized underwriting to occur against financial/medical information. Access to this data is incumbered today (largely because of legislation) but you can envision detailed personal data existing in the hands of the consumer that they grant access to in order to obtain financial products and protection products.

Question #5. Can artificial intelligence based technology be used effectively for medical underwriting without any human intervention in the process?

- **Participant 1:** Certainly possible, but absolutely reliable without any checks and balances?

Appendix B-2
Complete Responses to Round One Survey

- **Participant 2:** As AIl programs get more sophisticated they would be able to underwrite without human intervention more and more levels of underwriting classes. The Home Office underwriter will become as much educated, knowledgeable, professional and highly paid as FSA actuaries. (And as rarer).
- **Participant 3:** Probably, but I'm not sure A.I. can connect all of the dots in looking at the choices being made.
- **Participant 4**: AI will absolutely be used to underwrite without human intervention, and trends toward micro policies, online marketing, and vast sources of information will make AI mandatory in handling the jet issue of many small policies.
- **Participant 5:** I think that provides a good opportunity for fraud. What I would see is a move in this direction but the software should alert human supervisors when it sees certain red flags being raised. The relentless push for lower costs and faster issue will propel the industry in this direction. It may work just as the credit card industry works today. Most transactions go through automatically but larger or more suspicious ones may need a call to or from the credit card company. They also use AI software to make this call.
- **Participant 6** Yes, if the necessary data was available.
- **Participant 7:** Yes and will be the future. Current underwriting is an attempt to apply rules and a computer does a better job of applying rules. There is always human intervention as the buyer has the ultimate say. This is not much different than a FICO credit score that is used to automatically determine eligibility for a loan.
- **Participant 8:** Does not exist yet, but we should be investing in such development
- **Participant 9:** Likely no. However, most ask this question incorrectly; which I believe may be the case here. One area of study related to AI is Fuzzy Logic. I mention this to frame the question as a fuzzy logic question. Instead of thinking of black and white binary questions: "without <u>any</u> human intervention", think of a fuzzy concept with degrees of truthfulness. If the question was, "Can artificial intelligence based technology remove a significant amount of human intervention…", then the answer would be yes. Thinking in shades of gray instead of black and white I believe is a more appropriate frame for this question.
- **Participant 10:** For evaluation of lab results yes. Less certain for complete medical review.
- **Participant 11:** NA
- **Participant 12:** Absolutely
- **Participant 13:** I think so, for many levels of medical underwriting. However, my other answers stress that more intensive or ubiquitous medical underwriting would probably be counterproductive to the main goals of insurance.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 14:**
  - I believe elimination of human intervention will not be cost effective for some years yet. I am not bullish on artificial intelligence progress on problems that are semi-structured. They seem to do much better with well-structured or with very ill-structured problems)neural networks).
  - AI should have application to fraud detection patterns as it improves, likely using neural networks.
  - Googling (internet search engines) are already being used by employers, detectives, etc. effectively. Some modest additional AI technology should emerge that would make this of practical value to a human underwriter (i.e. screening out the 1,000's of irrelevant hits).
- **Participant 15:** Artificial Intelligence
  To a degree some existing 'straight through processing' already uses artificial intelligence. The key is in defining the rules base, the data sources, the acceptance criteria and making sure that the cost of automation and the cost of the data does not exceed the cost of the human. In other words the solution must be practical and not just possible.

  Existing databases tend to look at:
  - Prescription History
  - MVR
  - MIB codes
  - Lab testing results outside tolerance levels
  - Telephone interview answers
  - Potential databases
  - Credit rating – is there an establishable link between credit rating and mortality experience at certain ages?
  - Zip Codes – is there a database which indicates over time that mortality is higher in certain regions or zip codes and how long does that underwriting remain valid (people move)
- **Participant 16:** I believe there is a very real possibility that you could be able to construct an AI application/system to process medical underwriting and would be directly linked into what I referenced above for predictive modeling and use in projecting mortality and morbidity trends. I believe the future will bear out this technology where the entire process is interactive, automated and without use of human intervention (other than perhaps a check and balance or quality assurance process). I believe with the use of this technology, advent of digital medical records, further use of clearinghouses for medical information or such use of transferable secure medical technology that there will be a time where not only can you provide this information in an interactive forum but also it will be able to produce real time results.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 17:** Absolutely. Existing artificial intelligence capabilities may work very well for a broad spectrum of supplemental, defined benefit medical coverages. Artificial intelligence may also be more effective than traditional underwriting for much of the medical underwriting performed by major accident and health carriers. More important than eliminating human intervention, AI can help eliminate obvious cases and leave a residual of discretionary cases for the underwriters. Such an operation will greatly increase the effectiveness of talented underwriting professionals.
- **Participant 18:** This is already being done and with additional experience and online data sources in the future you will see improved pricing to the consumer. However, there will probably always be some cases which will require human intervention.
- **Participant 19:** One of the restrictions to the widespread distribution of insurance products in the target market is the need to provide some physical underwriting evidence (Body fluids, APS etc.). Gathering this evidence is a manual intensive, time consuming and expensive process which reduces the affect of anti-selection but also leads to a reduction in the taken rates of sold business. The advent of sophisticated rules engines technology and the ability to access mortality-related data (Rx profiles, MIB, MVR, Credit, Behavioral Analytics) through Web Services is beginning to pave the road for substituting software agents as underwriters resulting in a reduction or elimination of human intervention and the creation of a real-time underwriting process.
  Further, using these kinds of technologies we are today able to deduce "are you really you?" by comparing applicant–supplied answers against third party sources that reveal personal information about you that may not be readily available. This is especially critical in a Blue Ocean strategy when approaching new markets through direct selling via the Internet where positively identifying the applicant is critical. Banks and credit card companies use these kinds of databases to authenticate their users.
  We also beginning to be able to programmatically make inferences about mortality by comparing applicant supplied answers and third party data to determine impairments that may exist but are not admitted on an application. A simple example might be where an applicant may respond that they have not seen a physician in 5 years and/or are not taking any prescription medications. After receiving the applicant's authorization, a check of the prescription history might reveal that the applicant has been taking Lipitor which would probably suggest high cholesterol and also brings the veracity of the applicant into question. Reflexive questions could be asked to "jog" the memory or have the applicant withdraw from the process.
  In the application process, speech recognition where the system is the agent/proxy for the agent/underwriter can be used to convert the spoken word to digital data by use of an algorithm implemented in the computer program and in turn be used to populate an application. In a Blue Ocean strategy, this could be combined with

wireless technologies to allow for application direct from a mobile telephone without human intervention. A further use might be the use of speech recognition in the creation of medical records whereby a physician might create an APS by speaking into a system that would convert it to digital data rather than voluminous paper files. This data could then be more easily manipulated for use in the underwriting process.

Finally, as the databases of these systems become more robust through the storage of application AND claims experience data, the system becomes "smarter" and through effective data mining is able to perform processes like statistical estimation and process optimization. This capability would allow for real-time dynamic underwriting and pricing for specific markets with very accurate mortality rates being predicted.

- **Participant 20:** The industry has traditionally been moving away from this idea oddly enough over the last 20 years. I think there was a day when many thought this would ultimately be the case. Smart or intelligent underwriting systems were all the rage at one time. The thinking was that rules based criteria could be used to handle all scenarios. I think though that the underwriting communality discovered that there is and always will be a subset of cases that need 'human' underwriting' aspect. Underwriting is too mutifactorial at some times to be ultimately programmed. Alternatively, companies are and will continue to develop systems to let automation handle vanilla cases. I think promising areas of AI intervention will include the handling of electronically captured information: teleunderwriting, blood profiles, test results, MVRs.
- **Participant 21:**
  --Based on only minor exposure to this functionality, it seemed possible and feasible to use AI software to perform medical underwriting.
  --What needs to be overcome:
  - Getting underwriting data into a standard *digital* format.
  - The historic investment in business rule engine software has tended to be carrier-centric and has not yet produced results that totally eliminate human intervention.
  - Lack of standardization of underwriting processes has deterred third party vendors from building generic systems that could be widely implemented.
- **Participant 22:** I believe there will always be a need for some human intervention. Well maybe if we all had chips implanted in our systems that were read at any given time we could move away from underwriters but that probably won't happen in my life time. A realistic view would be the old 80/20 rule. I think it's feasible that 80% of the cases could be underwritten based upon electronic information, while 20% would need the manual process.
- **Participant 23:** "Blue Ocean Strategy" would require an in-depth methodology of clinical underwriting with consistent updates on all matters under consideration – something much deeper than text or point system.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 24: Internet traffic analysis solutions, marketing, underwriting.** Solutions offerings / underwriting criteria based on site visitation analysis… were did visitor come from and go to? What search terms were used? What did they visit while on site? How much time did they spend in total and in each area? First time or returning visitor? What offers / site prompts did they respond to? Build and utilize response database using artificial intelligence.
  Use of AI to structure dynamic visit / web content for visitor and to seed search engines. Includes analysis of marketing and advertising messages used on websites, banners and offline media. Create opportunities to visit linked sites of interest using AI. Each visitor could have a unique website experience.
  Provide low risk offers (targeted downloads, newsletters, etc.) based on surfing interests. Capture contact information for unobtrusive and/or opt-in follow-up.
  Artificial intelligence to structure underwriting based on surfing patterns, u/w question response patterns (responses, time to respond, response changes, etc.).
- **Participant 25:** No. AI systems can be developed which can do medical underwriting for the vast majority of cases for smaller cases and for simpler medical situations. However, human intervention is necessary for complex medical situations and for large amount cases.
- **Participant 26:** With enough information, yes, but does not seem feasible
  - Would need access to medical records, family history, information on purchases (e.g., tobacco, liquor, food), information on lifestyle, etc.
  - Medical record technology needs to improve before this is feasible (e.g., complete information on prescription drug use, improved accuracy of diagnosis coding) and would need to create medical record history for an individual which means timing could be delayed for several years.
  - Privacy legislation would not allow.
- **Participant 27:** Yes. Auto carriers underwrite 95+% of new business without any human intervention. Software controls gathering of needed underwriting information such as MVRs and CLUE reports (claim history), analyzes multiple variables and rates/prices a policy. With on-line access to medical records (as described above), AI should be able to do the same thing for life products
- **Participant 28**: Yes. An artificial intelligence underwriting system would be able to look at complex interactions between the medical data provided to the system that a human underwriter cannot analyze. A human underwriter will most likely produce a binary response (i.e. accept or decline). A AI system can produce a less discrete answer with an answer represented by a continuous score.
- **Participant 29**: Yes. Checks and balances will remain as a spot check and to handle marginal, unusual or very large risks. A significant factor will be what regulators will allow – e.g., pharmaceutical data bases, genetic testing or life style-based underwriting. However, the technology enabling this type of AI-based risk evaluation may have its development slowed due to the influx of lower-priced labor markets being able to capably do the same thing for a much,

much lower cost than higher-priced labor markets. The high price is the driver for AI, and the driver for offshore work in this sector. At this time, the offshore work is easier to quantify and justify an investment in than the AI technology. In order for AI to be widely-used in the vast majority of cases, flaws in the methods used today (in either onshore or offshore labor markets) would need to be eliminated, or else the lower-priced offshore labor markets will continue to take on this kind of work, and therefore the money needed to fund this research area will likewise not be routed to it.

- **Participant 30:** Of course it can be used – the key part of the question is the degree of effectiveness. I believe this can be done "effectively", but probably not as effectively as by humans. However, the difference will decline (but not disappear) over time.
- **Participant 31:** It would seem that we could get rid of paper. With various ways to provide secure personal information, I see a world where we each have an electronic record of our financial position, our health records, our will, etc. By giving the insurance company selective access to our data, it seems they could underwrite and process business through a data exchange.
- **Participant 32:** I think that this question should have been posed without reference to artificial intelligence and instead read "*Can technology be used effectively for medical underwriting without any human intervention in the process?*" Artificial intelligence, a subset of statistical analysis techniques used for predictive modeling, is only one technology tool among many that can be applied to automated underwriting.

  Furthermore, AI can be applied both directly and indirectly. Direct means taking application responses and feeding them through an algorithm. Indirect requires taking historical data; subjecting it to advanced statistical analysis, which may include AI techniques; from the result of the analysis building decision rules that are put into a rules engine; and then evaluating applications via the rules engine. Rules engines do not, however, have to rely upon statistical analysis. Instead rules engine can simply proceduralize judgments that underwriters are already making today or they can rely on a combination of statistically informed learning and underwriting judgments.

  Regardless of how it is accomplished, automated underwriting is an absolute imperative for the insurance industry. We are so lagging other industries in this regard that it is embarrassing. There is no other consumer product where the consumer is expected to wait an unknown amount of time, from days to weeks to even more than a month, in order to find out if the product will be sold to him, at what price, and what terms. The credit and mortgage industries, which are writing long-term, risk-based, high-value contracts, automated underwriting years ago. (Granted the mortgage industry got overly exuberant with respect to impaired risks.)

  Automated underwriting may ultimately include, but does not require any new to the world, technological gadgets. The rest of the financial world makes

automated decisions everyday based on complex risk analysis models. It does, however, require us to substantially re-think our underwriting decision making. Of course, there will always be situations that fall outside the norm. We will always therefore need underwriters to both examine these situations and also refine the automated rules. The goal should not be a process "without any human intervention". It should be a process for which "most applications are processed without human intervention".

- **Participant 33:** AI technologies will continue to improve, especially as more data is captured and analyzed, and as assessments are retroactively reviewed to see where the system missed something which could then be fine-tuned. Nevertheless, due to the nature of the under-writing process and the almost infinite number of variables which can enter into the risk assessment process, it will still be years before these systems are able to do much more than 'clean case' underwriting, and for some limited face amounts. Someday, super-computer's analytic and judgment capabilities will surpass those of most humans and I'm glad I won't be around to experience that.
- **Participant 34:** No Answer
- **Participant 35:** This isn't really AI, but it seems very likely that elaborate interviews could be done (if a consumer was willing to take the time) with layers of drill-down questions depending on how the consumer answered items previously.
- **Participant 36:** I don't really know enough about artificial intelligence capabilities to comment. However, I think this may be option for certain situations.
- **Participant 37:** No Answer
- **Participant 38:** No Answer
- **Participant 39:** Yes, the technology exists today but the financial/medical information is not digitized enough (but 10 years, yes).

Question #6. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it processes applications for its products** and what is the resulting "Blue Ocean Strategy"? Feel free to consider any processing systems that are currently employed by the insurance industry, that are currently employed by any other industry, or that, in your opinion, could and should be employed. Consider any existing or potential mechanical or electronic devices, whether or not they have actually been invented yet.

- **Participant 1:** No Answer
- **Participant 2:** Not looking too far out it should be possible to do all processing and policy delivery entirely through email. (This may already is being done.)

Appendix B-2
Complete Responses to Round One Survey

- **Participant 3:** The industry needs to establish universal data standards and possibly a central data analysis system. The current method of everybody doing their own thing is adding a tremendous amount of overhead to the system. Could this be an opportunity for the emergence of another Ross Perot type EDS?
- **Participant 4:** So much to do, so little time….
- **Participant 5:** This is a stretch for me! I have no experience in this area. I'll pass on this round.
- **Participant 6:** Targeting high potential prospects can most efficiently come from the friends and associates of highly satisfied customers
- **Participant 7:** Field entry of applications. Electronic signatures
- **Participant 8:** Scanning of simplified 1-page apps into centralized U/W system should be possible
- **Participant 9: No Answer**
- **Participant 10:** Yes. Voice signatures or authorizations. Widespread digital storage of medical records. Artificial intelligence systems can help prioritize taking into account probability of placing case based on distribution source, plan applied for, amount applied for, age, likely rating, etc.
- **Participant 11:** NA
- **Participant 12:** Applications could be verbal (actual recordings) and then transcribed electronically
- **Participant 13:** I think my "more comprehensive coverage" view of progress for the insurance industry could easily be supported by on-line, real-time application processing.
- **Participant 14:**
  - Input through all-in-one communication devices (super Blackberries), TiVo, Internet, etc., including much of it direct from applicant.
  - Direct output back by similar routes.
  - Market niche is: "Do it all on-line!"
- **Participant 15:** Today most policies are still issued by insurance companies by mail and most applications are still received by fax or electronic image of a paper application. Most initial premiums are still paid by check. Most statements are still issued by mail and rarely does a facility exist for them to be emailed to you. While certain segments of the market will not wish to 'move with the times' many already have – just look at the use of debit and credit cards instead of checks and the initial resistance to the same.
  Applications can be submitted on line in data format or by phone. Voice recognition is now at an industry standard level, fingerprint technology is increasingly available on home computers and it is common practice to download documents (with the usual tick here to accept the terms and conditions) in other industries (even in p and c insurance) so why not for life insurance. Statements could be sent by email or you could access your account – just as the banking and

credit card industry has moved to. If a paramedical screening is required it can link you to a scheduling center.
Payment of premiums can be by debit and credit card and the US could adopt the European approach of issuing the policy on the basis of a promise to pay premiums and not expect a check in advance.

- **Participant 16:** Use of interactive processes – voice recognition systems, optical character recognition systems and the like will make processing of insurance applications very efficient and reduce the error rate to 6 sigma standards. Through the evolution of new technologies and exponential improvements to current technology should allow processes where turnaround time can be either "real time" or within 23-48 hours even on most cases, perhaps with the exception of the truly complex or ones in which significant reinsurance may be required (including facultative placements).
- **Participant 17:** The current technologies make it possible to be very efficient in processing applications. Web portals with AI can assist in gathering information and evaluating risk. Output of the process which is completely performed by the applicant or agent may be a fully completed application or even an issued policy. The continuing extension of the internet and aging of high skilled will continue to expand the utilization of web tools in the application process. I believe that the current tools are underutilized. I cannot think of any future tools that may any more helpful.
- **Participant 18:** Using electronic applications and e-signatures is already commonplace in the life insurance industry. The significant change which needs to occur is providing agents with the technology to be able to be connected to the internet in the field so applications can be completed on a real time basis. The technology already exists to allow laptops to be connected to the internet via a cell phone but this requires a significant investment by the insurance carrier (laptop, cell phone and monthly fees).
- **Participant 19:** Technologies and processes that do away with paper applications get only information that is necessary for quotation and issue, enable pre-population of already available information about the applicant from internal or external sources can enable a Blue Ocean strategy. A few examples of innovations in application processing
  - ECM technologies which include eforms that have the same appearance as physical forms can be entered digitally. eForms themselves can trigger workflows for application processing as soon as they are submitted by agents or even prospects eliminating steps such as mailroom processing, scanning, application entry and data validation. eForms can also enable partial application processing with information not required for underwriting such as billing information which could be submitted at later stage.
  - Voice/Video applications can completely simplify the application process. This will become mainstream with increasing voice/video capabilities on mobile

devices include mobile phones and handheld devices as well as increased information storage and access capabilities.

- Kiosk and touch screen applications are another option to offer application submission at point-of-sale. Interactive kiosks with audio questions and guidance through application entry steps will provide clients with convenient options to apply for insurance.
- Banks now take applications for account opening online. They can look-up key information such as SSN to pre-populate information for clients who were active with them in the past or are applying for other products. Digital entry with such features to look-up applications as past policy holders or holders of other products will greatly simplify application processing in the minds of customers and agents.
- The above technologies in combination with E-signatures, voice signatures or bio-metric IDs to replace wet signatures will greatly simplify disclosure authorizations and application processing as well as reduce costs for insurers.

- **Participant 20:** As noted in question # 4, a very promising avenue is the area of this synthetic underwriting. Non-invasive tests that don't need the insured time or effort but reveal usable date about them.
- **Participant 21:** Baseline assumption: Virtually all future insurance sales will be initiated via the Internet.

  -Several companies have successfully deployed Internet-based application processing, including:
    - Quotation & Illustration
    - Suitability Review
    - Electronic signing of application & replacement forms
    - Automatic underwriting to filter out applications that would not be issued
    - Collection of initial premium via electronic means
    - Electronic delivery of policy contract and associated materials

  -Technology improvements in electronic signatures could make this approach more widely acceptable.

  -In the future, electronic signature pads may be a common accessory on home computers.

  -The only real barrier to a process virtually free of human intervention is medical underwriting.
- **Participant 22:** Currently I am involved in the ACORD Long Term Care Working Forms Group. This group is working on creating standardizations inside the long term care industry. The application is a critical piece, not just for the paper but because it starts us down the path of data standardizations.

  I think it's critical to minimize the redundancy this industry sees. We have 2-4 parties data entering the same information. We need to get to the point where it is entered one time, then uploaded to the other parties. Data feeds in and out to carriers' systems will reduce NIGO (Not In Good Order) applications and reduce

Appendix B-2
Complete Responses to Round One Survey

cycle time. Our industry can not afford to have companies "doing their own thing" and expect to move forward being profitable. Again credit card companies, banking institutes and financial security companies are doing this. Their information has a higher sense of needing to be protected, the insurance industry needs to get on board.
Contracting and appointment processes have began to become automated, but certainly taking this to another level would be beneficial. NIPR (National Insurance Producer Registry) was created to collect and store information regarding insurance agents from all states. Reciprocity is allowing continuing education to be valid for many states. Still specific CE that some states require is not available on the site. In addition new licensing procedures are being determined for many states as we speak and that information needs to be shared. This would allow for the appointment process to happen more efficiently and effectively. Gone should be the days of advisors filling out numerous contracting packages for each carrier they wish to represent. This should be a click of a button with credit card payment securing any fees applicable.

- **Participant 23:** "Blue Ocean Strategy" would require a synchronized automatic centralized process in which client data can be inputted one time and kept in a "vault" from which all applications for any product could be systemized into the application, coordinated with underwriting from the stored data from questions #4 and #5, from which the policy is generated and forwarded electronically.
- **Participant 24:** No Answer
- **Participant 25:** Electronic collection of application, underwriting information and signatures could expedite processing. True standardization of policy forms across all states could lead to electronic delivery of documents to the policyholder.
- **Participant 26:** The question is - how much personal interaction is required to process an application. Seems like much of the processing could be electronic (see response to question 2) with human intervention to verify responses. Potential for definite "deny" to be processed automatically.
  Blue Ocean Strategy = paperless processing
- **Participant 27:** See item two in answer to question #1
- **Participant 28:** Applications contains structured data (i.e. yes/no or number of years) but also is rich with unstructured data (text). Structured data can be used to develop a predictive model using advanced analytics or data mining techniques. Text mining can be used on the unstructured data to find relevant pattern to include in the predictive model.
- **Participant 29:** For pure life insurance policies, far more efficient, quicker, on-line, end-to-end application processing with wireless, web-based devices will be used. Also, data will be captured only once (a "once and done" philosophy) so that the application process is less burdensome on both the consumer and the producer; and the data collected can be used beyond the underwriting process –

e.g., to tailor service levels, facilitate cross-selling, etc. (subject to data privacy constraints and possibly the consumer opting in)
However, the industry has moved, and is moving even further, beyond just the life risk itself. The products will continue this trend in the future of being hybrid in design - protecting against death when in the early/mid earning years, and change focus in the mid/later earning years, and morph again to income generation/payment in the post retirement years until death. Companies that learn to successfully link these products to post-retirement medical, catastrophic medical and long-term care will be the trend-setters. The application processing for these hybrid products will follow the trend of more efficient, quicker, end-to-end application processing as well, but will lag behind more death-risk-based life-insurance products.

- **Participant 30:** Suppose that a biometric fingerprint scan or retina scan could be made foolproof. Suppose also that a secure site could be maintained on the internet where personal identity information could be maintained and accessed only by authorized scan. Then an applicant could simply request a certain kind of policy and authorize the company to access their identity information for purposes of underwriting.
- **Participant 31:** It would seem that we could get rid of paper. With various ways to provide secure personal information, I see a world where we each have an electronic record of our financial position, our health records , our will, etc. By giving the insurance company selective access to our data, it seems they could underwrite and process business through a data exchange.
- **Participant 32:** We absolutely need to move away from the paper application and the paper application which has been "put on-line". Applications, other than the cleanest and most impaired, can not be processed via automated systems until we have application question responses in structured formats – formats not contemplated when the paper applications were designed.
  Most on-line applications are simply the traditional paper applications with validations. The validations make it practically impossible to complete the on-line application. For example I recently looked at an on-line application which insisted on knowing the mm-dd-yyyy, full physician name, and full physician contact information for a hernia operation of a 25 year old, who had the surgery when he was 8. But even when the applicant makes it through the validations, the application cannot be processed electronically thanks to numerous "Please describe" free-text boxes. Systems still cannot reliably process free text.
  Also, as the above example illustrates, many paper applications, if interpreted literally by the applicant ask for much more history than they actually need and rely upon a human underwriter to quickly discern what is important and what is not. It is much more efficient to create rules which dynamically generate questions for only potentially useful information, than to grossly over-collect information and write rules to sort the useful information from the "chatter". A classic example which is often found at the end of the application is along the

Appendix B-2
Complete Responses to Round One Survey

lines of "*In the last 10 years have you ever been diagnosed with anything not listed above*?" Is it really relevant that I had 5 days of flu 9.5 years ago? For sure, applicants appreciate a shorter rather than longer application, which in turn generates a competitive advantage.

Creating new, on-line, dynamically generated applications is not a technology challenge, the technologies are established in other industries, but the application will be very disruptive to insurance business processes. The underwriters will need to rethink and redesign every question. The questions will need to elicit discrete responses that can be expressed in drop-down boxes, radio buttons, etc. The responses will need to drive subsequent questions. The new applications will need to be filed and approved by the states. And agents will need to move off the paper applications. This may require equipping agents with technological devices which provide electronic applications even without an active internet connection (for example via a self-contained application module, that self updates each time the agent signs onto the internet).

- **Participant 33:** Having been outside the actual workings of insurance companies for a number of years, other than what end-products I see, I'm not in position to assess how well companies are embracing the breakthrough's which have occurred over the last couple of decades in the areas of 'just-in-time' and 'lean' manufacturing, as well as self-directed work teams, but having not seen or read a lot about the utilization of these in financial service publications, my guess is that our industry has not done all that it can in this area.

  This is especially important in creating teamwork internally that results in true processing innovations and breakthroughs.

  I'll leave this area to others to answer the question whether or not the industry has truly capitalized on the work done in other industries to streamline processing.
- **Participant 34:**
  - I expect technology to proceed to the point where no point or person on earth is inaccessible to the Internet (or Intranet) and conversely.
  - Consequently, agents using laptops or similar technology (Hertz type hand helds) will be able to take an application anywhere, and then transmit them immediately into company application and underwriting processing systems. This will enable a virtually paperless process that is much less error-prone and less expensive to administer. The application will include automated on-line signatures, enabling validation using other services (e.g., PDB's or MIB.)
- **Participant 35:** I think companies already have the ability to have agents fill out apps online that require less handling at the home office. It seems likely that consumers will be able (if they can't already) to fill out an application all by themselves online.
- **Participant 36:** I think the concept of using technology to improve application taking technology has been out there for a while (I wrote an article on it at least 5 yrs ago). Making all applications be done electronically would be a good start.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 37:** Straight through processing will continue to grow and become more refined over time.
- **Participant 38:** Carriers need to somehow reward agents who process their business electronically. Having just gone through purchasing some insurance from different carriers, there has to be a way to supply the information one time and applications get populated accordingly.
- **Participant 39:** nbAccelerator acts like SAP (order entry systems) as a supply chain infrastructure for the Life insurance industry. I believe that with enough adoption and penetration it can become the supply chain technology that the industry lacks today.

Question #7. What possible current or future technology could enable the life insurance industry to adopt a "Blue Ocean Strategy" **in how it develops its products** or **what products are available** and what is the resulting "Blue Ocean Strategy"? Consider what is insurable, what might bring peace of mind, and what might merely capture a whimsy.

- **Participant 1**: Because of the impact of life settlements and the inroads made into the insurance industry by other financial institutions, there is a real issue as to what role "insurable interest" will play in developing and sales of products over the next 10 years. One could see insurance as a financial commodity, where future values are sold and resold. Certainly, insurers will have to face the prospect of buying back their own policies at a discount (but greater than cash surrender value) and perhaps in setting up subsidiaries for buying policies underwritten by other companies. Many think the lines will become more blurred between an insurer issuing a standard insurance contract and a financial institution securitizing the risk of loss of a pool of lives.
- **Participant 2:** The life industry in my view still has not developed a sufficient menu of life/annuity/LTC/DI combination products for retiring Baby Boomers. Retiring Boomers with sizable retirement accounts will be flooding the market in the coming years and most, if not all of them will be seeking products that can guarantee principal, steady, if not growing yearly payouts, DI for their new careers, and LTC for their later years. Congress must act to provide better tax advantages to insurance products that provide for retirement. Since most of the Western developed world is facing this same issue, best products should be copied from whatever the source. Customized annuities may be able to be developed based on the policyholder's personal assets resulting in greater risk but the chance for greater reward.
- **Participant 3:** How about within a certain universe we let the consumer design his/her own products. Life and annuity products today are WAY to complicated. Even distribution has problems explaining what it is they are selling. Selling on a dollar allocation basis would allow reduction in the cost of the sale since every

product wouldn't have to carry the high front end commission to encourage distribution to play a part in making the sale.

- **Participant 4**: Products can/should address specific life situation needs. Communities are developing online for every affinity group imaginable and many in these groups have similar needs and outlooks which make them candidates for life/health products. Products tailored to individuals with conditions from Aarskog Syndrome to Xeroderma Pigmentosum can be developed and targeted to specific individuals.
- **Participant 5:** The strategy must be to move from our push to client pull. Why not allow the potential clients to tell us what they are looking for, by putting a feedback form on paper and web apps asking users to let us know what they were looking for but couldn't find. For high income individuals, can we tailor make products to suit the client? We have to look at all the risks a potential client might look to cover – we are moving this way with all the guarantees under Variable Annuities, but on line focus groups could be asked what they worry about and we should see if we can cover it. This will mean breaking down the walls between P&C and Life, and offering financial products that do not qualify as insurance. Products that appeal to clients but don't give them real value will not be viable long term. We can also set up blogs to elicit client feedback, or even sponsored call in shows.
- **Participant 6:** Removing complexity and ambiguity from the product offering would reduce barriers to entry
- **Participant 7:** The insurance industry will unbundle the protection from the investments. There is nothing stopping some of the variable annuity riders currently being offered from being attached to selected mutual funds. This will lead the industry into selling put protection for retirement assets in equity funds. These riders will contribute to a lack of sales in fixed immediate annuities as variable payout schemes with downside protection become the norm.
- **Participant 8:** Use of stochastic modeling to capture future "what if" scenarios in the pricing of the products. Should be reflective of possible pandemics and old-age mortality effects.
- **Participant 9: No Answer**
- **Participant 10: No Answer**
- **Participant 11:** Use of a process driven model would lend itself to product development as the process improves or drives the need for product changes based on individual feedback. Much like surveys done by ESPN on its homepage, clients / advisors could respond to periodic surveys. Responses can indicate interest levels. A more common delivery system allows for this type of feedback. The results in more targeted product design with less guessing by the insurance company.
  Carrier marketing today is often based on too little professional market research. Carriers often rely on its distribution channels to tell them what they want rather

then also embracing the needs of the client based on professional research, ie focus groups as one example. The industry should seek out a cost effective methods to better discover individual needs rather than get the information through a filtered source. Products are often created based on what distribution wants to sell rather than on what individuals want to buy. As long as products are built with the client, advisor and carrier on different sides of the table, trust will continue to be an impediment to the sale of life insurance in this country. Once carriers align themselves with the interests of clients, increased levels of trust will favorably impact sales.
Specifically, products developed based on a carrier AUM profitability model make more sense and could be favorably developed and marketed.
When individuals buy a car or other retail products, they are accustomed to seeing a sticker or description that tells them how it's made or what is in it. This is not the case with today's life insurance product. There is no way for an individual to see inside. More than ever, should the industry move towards full disclosure with no hidden charges or fees, policyholders and the carrier will be winners?
Most Registered Investment Advisors that will not advise clients on Life Insurance do so because of the lack of carrier disclosure and inherent problems in understanding life insurance product design both of which impede their desire to act in an advisory capacity on life insurance products. Since advisors cannot fully understand today's life insurance products, how can we expect individuals to do so?
The Blue Ocean strategy for this solution is available through the FutureSystem Life Model actuarial model marketed by Reinsurance Group of America and Future System Advisors.

- **Participant 12:** Personal risks that insureds wish to mitigate are captured and priced. Insured selects from a cafeteria of offerings. Risks are packaged then spread among companies willing to take risks at offered price.
- **Participant 13:** For basic insurance needs, little new product work needs to be done; in fact, most product work today is intended to make the products unnecessarily complex to avoid direct price comparisons and help justify high distribution costs.
  There are a number of new coverages, however, that could be supported by the Internet, such as personal event weather insurance. There is already personal hole-in-one insurance in Japan. The obstacle has always been bringing together enough interested buyers and sellers to support a viable market. The Internet could make the administrative costs of doing so much lower. (These examples are intended to imply that other, less frivolous types of personal insurance are also practical.)
- **Participant 14:**
  --Green Insurance -- offered by a company or subsidiary that commits to Green operation and investments, carbon neutrality or negative, etc. Modest technology needed.

--Islamic insurance and annuities. Offered by very few entities throughout the globe, and very little if any in US or with US backing. Religious practice requires more substantial mutuality of risk taking by all parties to a contract than common in most Western society. Requires some modest technology in product development and administration.
--With aging population, the field of deferred no-death benefit annuities, reversionary annuities, tontines, etc. should have a market. Reversionary annuities could satisfy many real needs. One example would be meeting the needs of a retired person who can depend on the support of children during advanced age, but only if they are surviving. Modern computer power makes it easy to calculate an annuity that kicks in only if 2 or more of 3 children have pre-deceased.
--Modern derivatives mathematics and related techniques for creating market palaces for various indexes creates some new openings:
1. Nearly no CPI inflation indexed products exist in the US. Finance theory says that since there are US government bonds which price this risk in, one could devise a hedging system to price this into an annuity (albeit with some risks related to the term structure of anticipated inflation). An alternative way is the creation of inflation futures or options, inviting speculation on both sides to price the benefit.
2. More germane to casualty coverages, global warming / climate destabilization problems can be priced, a la hurricane catastrophe bonds. This could give rise to some interesting products, such as an annuity that kicks up with the temperature. Life will not be quite as easy in a hot world.

- **Participant 15:** You can build a car on the internet and have it priced to your tailored requirements
  Life Insurance should be no different
  There is a base chassis
  There are the additional extras
  It is modular product design
  You should be able to remove extras at any time to get an ongoing reduction in premium with no human intervention
  You should be able to add or increase benefits in the same manner on defined events (e.g. birth or marriage)
  The back end system would have to be flexible enough to support the same in real time
  Where there are periodic benefits payable (e.g. a life annuity or to a lesser extent an ongoing disability payment) it should be an option to issue them with an ATM or Debit card (insurer retains benefit of funds in the process) and pay interest on the balance.
  Access would be by internet including wireless phones.
  All activity would be on line unless paper requested.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 16:** Within the life insurance sector specifically I believe that a majority of the policies sold will be commodity based with high homogenized provisions/features. In today's world the foremost factor in the ability to sell is pure cost considerations. Price is driving the industry in the term market and in the permanent insurance market. With changes in the law I foresee at some time with a overhaul of the current tax system a dramatic and perhaps very dynamic shift in how life insurance is sold. With a major overhaul I see permanent insurance as losing much of its appeal based on today's marketing spin and propositions. I see the reasons of estate planning and preservation of funds in the future financial markets as a basic bullet to kill the needs of permanent life insurance funding and this will also have a profound affect on the COLI and BOLI markets as well as IRC provision could make the use or advantages of having this products basically obsolete. I see the U.S. market going to a primarily driven term market where company's will not compete specifically on provisions but pure price. Concepts such as return of premium and the like will only put pressure on driving the cost of insurance to a lower level where even these provisions will be irrelevant regarding a buying decision.
- **Participant 17:** As noted in #1 above, there is probably an opportunity to develop some new and unique Accident & Health products. Some companies are offering diminished premiums and diminished coverages to healthy insureds with an option to retroactively pay full premiums for more robust coverage if an unfortunate event occurs. The market for uninsured A&H users continues to expand. In terms of the ability to research unique offerings, any product development professional can now access incredible demographic information thanks to the internet and various data services. A scientific review of options and perils may offer some unique product opportunities
- **Participant 18:** Current new business processing software allows for the collection of significantly more data which can be used to provide "peace of mind" through improved underwriting guidelines and product pricing. The availability of online data sources and artificial intelligence allows for the creation of products which can be issued in real time with pricing which approaches standard rates.
- **Participant 19:** A significant problem in the development and deployment of insurance products is the translation of ideas from Marketing and product development actuaries into an operable production ready system. This generally involves a long requirements study, work flow analysis and system customization (writing new code) which makes new product iterations take 12-18 months. There are too many rules, too much complexity and too much coding.
  - There are several new technologies that are emerging to help solve this time to market problem. Primary among them, Business Process Management (BPM) software enables companies to use flexible decision and process rules to support product specialization. With rules-based BPM technology, companies can allow

entire, highly specific business processes to be defined, modeled, executed, monitored – and easily modified by business users (Business analysts and actuaries). Rules-based BPM does not "hard-code" business logic and points of integration, but instead uses flexible decision and process rules. As such, organizations can reuse common business processes across the enterprise, while specializing as desired for each product, geography, customer or channel. For a Blue Ocean strategy this will allow products to be easily configured (not customized, no coding) for a particular market or geography. e.g. credit card providers quickly design a promotion to customers under 40 who use on-line banking and have a qualifying account balance. A health insurance provider can streamline the online enrollment process for Medicare applicants who are also retired members of the teachers union.

- Some of the product options that we believe will be attractive to the Blue Ocean segments might be:
- Integrated systems for dynamically increasing/decreasing risk cover e.g. rather than fixed cover a customer may specify for insurance in proportion to income earned in a year.
- Stage of life cover – Products whose profiles automatically change based on the stage of life of the insured
- Segmented/grouped pricing using analytics and grid computing
- Analytics for simulation, scenario structuring for stronger actuarial assumptions

- **Participant 20:** See my thoughts on question #9. As an industry we must act to develop products that allow insureds to take out significant value before death but keep the policy intact. Accelerated death benefits or advance payouts while keeping the policy intact and under the control of the original insurer.
- **Participant 21:**
  Product Innovations
  - Secondary Guarantees – This falls into the category of product innovations that may eventually outstrip the current technology. Most companies have enhanced their policy administration software to support annuity and universal life products with secondary guarantee features. The processing requirements of these products can be exponentially larger than traditional products. One hopes that the hardware will continue to stay ahead of the need, but there may come a time when the underlying technology of the administration software will need to be changed.
  - What about insuring for the availability and/or cost of water and fuel?

  Product Development Process
  - There has been a long standing dream to use common calculation modules that could be used in the pricing, illustrations and for policy administration.
  - Because of time to market requirements, pricing software typically is developed in high level languages that are easy to change and test, but not necessarily efficient to operate in a high volume transaction environment.

Appendix B-2
Complete Responses to Round One Survey

- Even though some administration systems have purported to support common calculation modules, typically the processing efficiencies required by policy administration software requires more efficient software than can be used for pricing and illustration.
- Pricing and illustration software also tend to focus on theoretical events, where administration software has to deal with real world events that require the calculations to deal with exceptions.
- Service Oriented Architecture (SOA) coupled with increasing processing power of computers should eventually make common calculation engines feasible.
- SOA would provide the framework to access the common calculations in a standard method.
- More powerful processors and faster networks will be required to achieve the same level of through put that is currently available in policy administration software.

- **Participant 22:** No Answer
- **Participant 23:** "Blue Ocean Strategy" would incorporate response activity from response #2 to consistently gauge programmable output for product redesign. New generation products should focus on cost and capital efficiencies that are client focused, while providing ROI to the provider company with a more cost efficient method of distribution. This would mandate full disclosure and transparency, and the elimination of marketing concepts that sell poorly structured products. Increased flexibility with multi-level choices for risk management and/or capital accumulation that could be transferable from generation to generation.
- **Participant 24: No Answer**
- **Participant 25:** Lifecycle products are needed which could protect against early death or disability throughout an individual's working life and convert into an annuity with long-term care options following retirement.
- **Participant 26:** Web through inviting feedback on what types of products should be offered – similar to an on-line focus group.
  Gather information on lifestyle, hobbies, pets, (buy lists from vendors) and create databases to analyze and build correlations between personal interest and products.
  Blue Ocean Strategy = Let individuals design the products versus insurance company design.
- **Participant 27:** Consider systematic surveys of satisfaction and preference to understand "buyer" needs and ways to reach them. J. D. Power conducts rotating surveys on a quarterly basis to determine satisfaction and rating of insurance carriers (as well as lots of other products/services). Use same approach to identify needs, preferences for marketing, price points, etc.
- **Participant 28:** Use more internal and external data to develop a more complex pricing model. A more complex pricing model would allow customers to have

more options, i.e. less discrete. Mutual fund companies have a set of questions to identify the product for the customer. The questions asked by the mutual funs companies are related to risk aversion. For example, in life insurance, questions could be related to level of insurance they would like to obtain at different point in time (e.g. 1,000,000 at 45, 500,000 at 65). The product could be customized based on the answer from the customer.

- **Participant 29:** Perhaps "real time" pricing of policy-holder options, even with in-force products that may afford ongoing flexibility. Thus even complex products (with some menu of guarantees) could be offered as with a flexible benefits program – e.g., as prompted by changes in life stage, the policyholder might redirect his/her regular annual premium and any built-up cash value out of a death benefit insurance policy into a qualified savings vehicle; or change fairly seamlessly from a qualified savings vehicle (like an IRA) to a payout product. However, in addition to the technology advancements required, regulatory modifications would have to march in-step in this heavily regulated industry.
  In addition, technology advances may enable dramatic simplification of products, which may also expand the applicability of potentially less expensive direct distribution techniques. It may be possible for consumers to mix and match discrete, simple products to address comparatively complex needs.
  The impact of regulations with respect to technology should not be disregarded in deep discussion on this topic, as any investment in the technology needs a certain amount of confidence that if the technological advancement is realized that it will be useful, and to what extent. Regulations can prevent full-scale use of a technology, but it still may be able to be applied in a limited fashion. For example, DNA analysis could be used for the entire population to determine certain patterns and identify certain risks (or inevitabilities) for specific individuals. Privacy laws will prevent this for the foreseeable future. Consider, though, that one day an individual who willingly consents to a DNA analysis may be subject to discounts if their DNA analysis comes up 'clean'.
- **Participant 30:** Consider a pre-birth (or even pre-conception) insurance product with benefits associated with various birth defects and benefit payments associated with other non-preventable adverse conditions.
  Consider a comprehensive life-cycle financial product that combines insurance for basic risks (life, health, property) with a floating balance that can be negative (a loan) in early adulthood and can accumulate a positive balance (cash value) later on, and which can be drawn upon in old age.
- **Participant 31:** A wide range of products will be needed to support holistic financial planning. These would include investment products, life insurance, property/casualty insurance, wills, estate plans, etc. The idea would be to offer a wide range of product (open architecture). The result would be a product platform from which the planners could craft the best solution for the client.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 32:** Regulation is a huge barrier to product innovation with the insurance industry. Regulation presents two hurdles. First, every insurance product must be approved, and in order to be approved it has to fit within defined regulatory parameters. The result is that some potential innovation simply cannot be approved in the existing regulatory framework. Second, there are 50 different sets of parameters. The resulting high costs of getting through the regulatory environments of all 50 states (if even possible), including accommodating the product variations required by the differential regulations, greatly diminishes the economic value of niche products. In every industry, the internet has been an effective device for marketing and sales of niche products. But, because of the costs of regulatory compliance, the insurance industry is not posed to take advantage of the niche marketing power of the internet. An insurance company needs to sell 50,000 policies in one state, not 1,000 policies in each of 50 states. If the industry wants to be serious about innovation, then the first step is decidedly non-technology dependent: lobby for national regulatory framework which does not micro-manage insurance product design.
- **Participant 33:** This would include forming better 'brain-storming' and self-directed work teams internally, as well as externally by utilizing for brainstorming sessions some of their most creative resources – their agents and brokers – as well as their customers.

  Over my years in the industry, I've been involved on a number of Company Advisory Boards for new product ideation, as well as focus groups to just run proposed product ideas and concepts by groups of agents, brokers, and consumers. I have yet to see a company focus on helping the brainstorming group learn how to be better brainstormers.

  The "Blue Ocean Strategy" would involve doing a much better job spending some time coaching and training persons within these various groups about the techniques and strategies for making the brainstorming and innovation process most effective and productive. There are now many companies and software technologies that just focus on improving these brainstorming and creativity sessions, regardless of industry.
- **Participant 34:** The concept of one-time insurance purchase can be broader than today even if it doesn't apply to all potential purchases.

1. Insurers should be able to provide automatic increases in coverage, with increasing premiums, for life insurance and other insurances just as casualty insurers do today for homeowner coverages. Material changes in financial position would require a limited underwriting application including a new financial statement.

   Insurers today get very little feedback from actual insurance purchasers. Because most insurers view their customers as agents/representatives, the purchaser has not been used effectively as a source of information. This should change, and communications with purchasers should regularly solicit information, just as other financial companies such as American Express do on a regular basis.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 35:** Combination coverages make a lot of sense: combine insurable needs in one product that costs less than two separate coverages
- **Participant 36:** Given the increasing degree of rigor involved in analyzing product profitability, including stochastic testing, just having faster computers would make a big difference. When we do financial analysis involving stochastic testing on big models, we set off computers and they run overnight. If mistake occurs, takes another 12 hrs to rerun.
- **Participant 37:** Refining the Product Development process to be more like a production line environment from other industries – where the PD process itself is predictable, repeatable, expandable, reliable, etc would be ideal. The role that technology would play is not totally clear, but would probably play a similar role as it does in production-related industries.
- **Participant 38:** No Answer
- **Participant 39:** Continued access to data (not just at issue but throughout the life of the product). For example, if a consumer belongs to a fitness center they may be continually being examined for vital info or a consumer simply has regular examinations. Having a living product that offers risk/rewards based on the conditions of the consumer that change could be an interesting product. The underlying risk profile can change with the consumers changes.

Question #8. Are there insurance products being marketed outside of US/Canada that are not currently available in US/Canada but are viable with the advancement in technology?

- **Participant 1:** No Answer
- **Participant 2:** ??
- **Participant 3:** Not currently aware of anything that is a showstopper.
- **Participant 4:** No Answer
- **Participant 5:** I'm not sure, except that Banc assurance is more successful in Europe than here. I see fewer differences between products in various markets over time.
- **Participant 6:** No Answer
- **Participant 7:** The insurance industry will need to get more diligent about underwriting immediate annuities as precisely as life insurance. This is necessary for equity and to reduce anti-selection in this market.
- **Participant 8:** Yes, I am aware of a VUL product sold via direct marketing channels in Germany (print media, internet) – I helped develop this product in the mid-90s
- **Participant 9:** No Answer
- **Participant 10:** No Answer
- **Participant 11:** N/A
- **Participant 12:** N/A

Appendix B-2
Complete Responses to Round One Survey

- **Participant 13:** Personal hole-in-one insurance?
- **Participant 14:** Do not know of.
- **Participant 15:** No Answer
- **Participant 16:** Not to my knowledge
- **Participant 17:** I don't know.
- **Participant 18:** I am not aware of any.
- **Participant 19:** Most of the insurance products offered internationally exist in some form or fashion in the US/Canada. There are however certain products or combinations of products that are available internationally that are either not sold or are insignificant in volume. For example, unlike the US where Term or more traditional permanent insurance products (Whole Life, UL etc.) are most commonly offered, in the UK, Critical Illness ("CI") Insurance is the major base product sold. It often has term insurance and/or disability riders. For the Blue Ocean segment it is more valuable in terms of cost and cover than other permanent insurance products. In the US, CI accounts for less than 5% of insurance sales. Another interesting example is that in Germany, automobile insurance is often sold with a term insurance rider. Technology enablement is not really the restriction but rather it is a combination of the regulatory environment both from a product approval and licensing perspective.
- **Participant 20:** I think I tend to think of NA as being ahead of the curve here.
- **Participant 21:** I am not aware of any
- **Participant 22:** No Answer
- **Participant 23:** Private Placement annuities and life insurance – individually designed, could be implemented to be available within the U.S. and Canada without requirement of being "off-shore".
- **Participant 24:** No Answer
- **Participant 25:** Yes, probably.
  Micro-insurance is being sold in emerging markets, and while the U. S. and Canada are beyond micro-insurance, the biggest opportunity to me seems to be the underserved middle and lower income markets. Producers have focused for some time on the high net worth individual and pursued strategies of wealth management rather than pure insurance. The challenge is to deliver product to the masses at an efficient cost.
- **Participant 26:** Universal health (could be provided through private insurers similar to Medicare Advantage).
- **Participant 27:** Do not know
- **Participant 28:** No Answer
- **Participant 29:** No, not to a meaningful extent. Certain critical illness products are marketed outside the US, but this seems partly to be due more to the structure of the healthcare systems in other countries rather than just due to technology.
- **Participant 30:** Don't know of any
- **Participant 31:** No Answer

Appendix B-2
Complete Responses to Round One Survey

- **Participant 32:** Am not aware of any, but that likely reflects my ignorance.
- **Participant 33:** I'm not a good source for answering this question
- **Participant 34:** No Answer
- **Participant 35:** This isn't really an insurance product, but it's interesting that longevity risk is starting to be hedged in financial markets outside the US (UK maybe?)
- **Participant 36:** Not immediately aware of any
- **Participant 37:** No Answer
- **Participant 38**: No Answer
- **Participant 39**: Regulatory problems exist that trump technology.

Question #9. Clients value financial security. Is there some aspect of financial security that the industry does not currently satisfy that could be satisfied with a future innovation? Are you aware of any current industry innovations that are allowing demand for financial security to be met that hasn't in the past?

- **Participant 1:** Although a fairly near-term phenomenon, insurers have historically provided products for amassing wealth and managing wealth, not for using or distributing wealth. Perhaps more products could be useful in this area.
- **Participant 2:** See answer to question # 4.
- **Participant 3:** If you look at possibly parsing certain risks from individual consumers, you could have the equivalent of a Lloyd's of London online taking risk segments. You could possibly do away with individual reinsurance companies by parsing the risk out via the Internet.
- **Participant 4:** No Answer
- **Participant 5:** Certainly. Unemployment, having to care for an elderly relative, career changes, sabbaticals, loss of driver's license, changes in electricity or gas prices, affect of inflation on spending power etc
- **Participant 6:** There are many consumers who need financial security and have not or choose not to prepare for financial security but the task of solving it seems daunting without some fundamental shift in the individual's willingness to take some responsibility in the process. Governments are struggling with this question as baby boomers enter retirement age without the means to support themselves
- **Participant 7:** The industry should rediscover future insurability products to be issued to young people who cannot justify large amounts of insurance but who have great earning potential. This product could be written on a stand-alone basis.
- **Participant 8:** People will need products to help satisfy retirement security needs – we have an aging population and currently not enough creative products

Appendix B-2
Complete Responses to Round One Survey

satisfying longevity needs. We are starting to see a few longevity products, but more alternatives are needed here

- **Participant 9:** No Answer
- **Participant 10:** Our solutions to address longevity are currently sub optimal and the need is growing. We are also light on pure inflation protection
- **Participant 11:** This begs the question of how should financial security be defined? Is it based on how much one needs to live on today? Or is it based on how much one's heirs might need? Whose answer matters –the individual? The spouse? Their heirs? The partner? Other stockholders? The bank?
  All of these responses are in relation to some standard the person in question has in mind. The issue then is how that standard is set. This gets back to the need for a more standardized process. When each advisor or company has its own sales method, clients get confused and their definition of financial security can become harder for them to define.
  In the investment arena, one aid that is used by individuals are the Morningstar 5 star reports. One can look at a fund and gauge to at least some level how a fund has done. There is a consistent methodology as to how to evaluate that fund. It is well publicized and used by many organizations. It is a standard. Individuals have no standard as to how they should approach an analysis of their financial security. Which one should they use? Which company's? Which advisor? If they choose one, how do they feel when one comes along later that contradicts what they've decided?
  This issue is further complicated by the lack of standards outlined in the financial services industry for what is planning, how it should be accomplished, and who is capable of providing it. The easy long term answer is to drive innovation so that standards emerge which can drive product development based on a more standardized process. Perhaps another answer is to accept that this solution is far in the future, and work towards more efficient product development processes that lend themselves to aligning product development with product delivery models that are congruent with distribution channels that align themselves with client centric planning systems outlined in Questions 1 & 2.
  An innovator in this area is the FutureSystem Planning Strategies offered through Future System Advisors, LLC.
- **Participant 12:** The average Joe wants job security and job growth opportunities. Financial security means nothing more. People are not educated on risk, economics and trade-offs. Debt is the legacy being passed along to future generations. How can we change this environment?
- **Participant 13:** I think that recent trends in regulatory environment have tended to emphasize protecting the insurance companies' rights over the rights of customers. This may be short-sighted in that consumers' trust that insurers will pay promised benefits far in the future is the cornerstone of the viability of the insurance industry.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 14:**
  -True inflation indexed coverages. See answer 7D.
  -Complex reversionary annuities and its cousins, to meet complex family or business situations. See 7C.
  -Cryogenics insurance – to pay for it? To pay off if it fails? Or even more so, if it works, probably creating a huge financial problem for the defrozen survivor and his/her surprised descendants.
  -College-cost indexed accumulation products or life insurance. Currently one can only get guarantees of cost by locking in to a specific college or state system.
  -Epidemic insurance (influenza, SARS, next thing to come along), made possible by derivatives, options, catastrophe bonds technology already in existence. This could have applications not only to individuals, but to employers, insurers, other institutions, especially for health coverages. Possible buyers include all types of sponsors of public events.
  -"Back pay" annuity, with immediate annuity, and a future premium collateralized, possibly by a house. This is a reverse mortgage in annuity format, but would have more flexibility in design.
  -Equity guarantee options and features can move forward with computing advances through grid computing (well-underway) or quantum computing (less likely in this timeframe). "Stochastic on stochastic" projections can be made, enabling this are to be put on a firmer mathematical footing, and enabling the projection of more kinds of benefits, or more flexible designs.
- **Participant 15:** Today the guaranteed payout in the event of an insurance company defaulting is state dependent and falls between $100,000 and $300,000 – these limits are out of date and of little value to many policyholders. Increasing these amounts and advertising that fact would help – not innovative but practical. Alternatively maybe there this should be regulated and funded federally. Hedging strategies are not understood by the general public and carrier credit ratings and credit ratings in general have taken a knock due to recent sub prime mortgage debacle.
- **Participant 16:** The products I've seen are actually more destabilizing overall to the financial markets vs. creating stability or financial security. The complexity of some of the current financial models and products are not easily understandable, leave a lot of variability regarding risk and pricing and appears more about driving up masked or hidden fees that the clients are unaware of vs. producing a valuable product or vehicle that produces stability and financial security
- **Participant 17:** The global nature of commerce and economies may have an impact on how insurance clients view investment related insurance products. The most financially secure environment is not uniquely the United States. Investment related products that offer a hedge against US dollar performance and

Appendix B-2
Complete Responses to Round One Survey

take advantage of more favorable and more secure returns in Europe, Asia and other geographies may become much more popular.

- **Participant 18:** Through the input of health, lifestyle and genetic data into predictive models consumers should be able to better assess the risks they face and enhance their financial security.
- **Participant 19:** The Life Insurance business has concentrated on mortality risk and less not longevity risk. However, people are living longer and outliving their financial resources. The pooling of longevity risk is a hot topic and products are being created to address this issue. The Blue Ocean strategies described above would have similar application to address the issue providing financial security by ensuring that the consumer does not outlive the assets available. The interesting difference is that in a Life Insurance case, the applicant is very willing to tell you all the reasons for them having a long life, in a newly designed longevity product, the complete opposite would be the case.
  This represents a case for the use of many of the emerging technologies. Data mining could determine a past relationship with the applicant who pled his case for long life, access to third party underwriting sources to validate applicant responses and the use of BPM tools to quickly modify and get new products to market.
- **Participant 20:** Yes. And we are seeing it emerge significantly at this time in our industry to the consternation of everyone. The adoption of the philosophy that a life insurance policy has an intrinsic physical value other than its cash value or its death benefit. I'm referring to the life settlement trend. This is turning our industry on its head right now. Beyond the obvious issues with stranger or investor owned life insurance, I'm referring to the base ability to turn a life policy into cash. Targets are insured with small life expectancies so investors don't need to wait forever to reap their benefits. The trouble is that right now all of this is happening outside the auspices of the insurance company who loses control of the policy.
- **Participant 21:** I can't think of any insurance gaps that would specifically benefit future innovation. Although it is not clear whether the insurance industry could provide effective products, some of the future needs may be:
  - It is clear that most people are not well-positioned financially and will likely have to work longer than previous generations. Having more people in the work force may outstrip the demand for labor, so unemployment related income replacement coverage may be a need.
  - With the continued migration to the southern states, It is clear that water will become an increasing issue. Is there an insurance product opportunity?
- **Participant 22:** No Answer
- **Participant 23:** It does not appear that technology has become sophisticated enough to prevent hackers from stealing personal data or identities.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 24:**
  New financial & health security issues: Terrorism Threat products
  Insurance products related to impact (e.g., death, disability, disfigurement, property loss, etc.) due to terrorist attacks, chemical biological warfare in the U.S. and elsewhere.
  Privatized Social Security products and services
- **Participant 25:** Longevity risk one of the key emerging issues. Although companies issue annuities and other wealth management products, the companies themselves face the accumulation of risk that cannot be diversified away by the law of large numbers.
- **Participant 26:** "Could be" innovations or insurance products:
  - Identity theft
  - Protection against changes in a volatile investment market
  - Divorce
  - Dowry
  - Stock market crash
  - Enterprise corruption

  "Current" innovations:
  - Reverse mortgages
- **Participant 27:** See part one of the answer to Question 1.
- **Participant 28:** No Answer
- **Participant 29:** Far more tailored and sophisticated approaches to structuring in-retirement solutions to a range of needs (LTD, LTC, retirement income, etc.) will become possible, within the context of more holistic and comprehensive retirement planning with the help of a properly qualified advisor. More attention will be paid (education, effective communication) such that the risk dimension will be called-out and addressed more effectively with consumers, who will better comprehend the risks that they face as they become more educated over time and see the effects of people living longer and longer past their normal retirement age. Thus, guarantees will be better appreciated (subject to how cost-effectively they can be priced) and included as an essential element of a retiree's plan. Insurance products may be more narrowly focused as to their role in a retiree's portfolio, thus enhancing the importance of effective retirement planning.
  Existing industry credit enhancement mechanisms may also be better exploited.
- **Participant 30:** Long term care insurance is generally not offered below age 50. However, there are situations where, through illness or injury, there is a need for long term care by persons at younger ages. This coverage should be available for everyone, not just the old
- **Participant 31:** No Answer
- **Participant 32:** Here are my ideas.

1. Family care insurance. The legal and emotional integrity of a person's family has a huge impact on financial integrity. Yet, as of now, there are no associated

insurance products. Risk-sharing starts at the family level. Families take care of each other. This includes spouses, grandparents-children, and extended families. The costs to those doing the caring, both in terms of direct financial costs and opportunity costs, can be huge. Examples of products that may be possible:

a. Long-term child disability. A consumer can buy disability insurance to protect her if she becomes disabled, but she cannot buy insurance to protect her if she needs to stop work to take care of a disabled child or to raise grandchildren that her adult child is unable to raise due to addiction or other problems.
b. Short-term family leave insurance, corresponding to the 12 week unpaid family leave period.

2. Family dissolution insurance. The financial cost of legally dissolving a marriage can also be huge to parties on both sides of the dissolution. Examples of products may include:

a. Financial guarantee for a prenuptial agreement. Why couldn't a pre-nuptial agreement be back by an insurance contract?
b. Disability and/or health insurance that becomes effective only after divorce. Health insurance is often obtained via a spouse and while in the marriage the lower/no income spouse may not need disability insurance.

3. Health insurance options. We have a mosaic system for health insurance. Even if someone endeavors to stay continuously insured, they can fall through cracks, often when they need the insurance the most. It would be good to be able to buy the right to buy (guaranteed issue) health insurance whenever needed in the future. This would be somewhat analogous to guaranteed purchase options on life insurance.
4. Umbrella coverage. P&C has the concept of umbrella coverage, why can't life and health? Why does every risk need to be narrowly defined? Why can't I buy a policy that will protect me and my family from multiple big ticket risks, perhaps even including P&C risks? As a disincentive for filing frivolous claims, it could be a use it and lose it policy. The upfront benefit could be very modest, growing to a substantial value only over time. Yet if I submit a claim for say 50% of the then current value, I am only entitled to 50% of the future value.

- **Participant 33: Identity theft** – since the industry will be very involved in security and privacy of medical records and whether it's through fingerprint or retinal ID, this is one area in which the industry could take a leadership role, especially in collaborating with companies on the leading edge in this field.
  Insuring Reverse Mortgages – combining the Reverse Mortgage Concept with an annuity so the person who lives too long and expends their resources from the reverse mortgage would have insured him or herself against this risk.
  Unforeseen Developments Rider for LTC – it wasn't what we COULD see which did so much damage (and still is doing it) to the non-can DI field. It was what we COULDN'T see at the time – the impact that 'Managed Care' would have on Specialist Physician's incomes, making attractive the temptation to use

Appendix B-2
Complete Responses to Round One Survey

their DI coverage as an early 'retirement plan' for some with real or imagined disability-causing afflictions.

I fear the same could happen with Long-Term Care coverage. For example, assume that the somewhat spoiled aging baby boomers decide that they will only stand for an RN caring for them and not an LPN. We're incapable of foreseeing all the things that could change the whole cost structure somewhere down the line. Offering a rider that would assure premium stability, even while those policies without the rider would face premium increases, might be attractive.

Protection again financial catastrophes – just as indexed products are designed to protect the downside, and yet still offer appreciation on the upside, there are bound to be other creative ways to offer products that do just this in new and creative ways. The key is to make them much easier to understand for both distributors and consumers.

Terrorism Riders – with international travel expected to do nothing but keep rising at an ever-escalating rate (especially when automatic simultaneous language translation gets here), the risk of death from a terrorist attack will probably be much greater but also insurable from a catastrophic standpoint – barring a nuclear attack wiping out a large part of the population of a city.

- **Participant 34:**
  - There is a premise underlying the survey that might warrant some further discussion. That is, are there certain kinds of insurances to which the industry is limited? I have taken a broad view, which is not to limit the coverages.
  - With that I mind, I believe the insurance industry is actually in its infancy in providing insurances that protect individuals from outliving their assets. Immediate annuities have been largely rejected by consumers, if that means parting with assets upon death, as it usually does. A more sophisticated response, that of longevity insurance, which covers "tail risks" has for whatever reason not been embraced as of yet by consumers. Yet longevity insurance is on the right track. Insuring dedicated portfolios, even if the portfolios are administered by mutual fund companies, against running out of cash, assuming certain flows of distributions, may be feasible.
- **Participant 35:**
  Guarantees in VAs and mutual funds are providing a backstop that has not existed in the past. Also, longevity protection exists but the industry hasn't found an adequate means for getting the products in front of consumers. Part of the issue seems to be the disincentive for agents to place a client in a terminal sale like a SPIA.
- **Participant 36:** I think that having tools for individuals to manage their overall financial picture, including both assets and insurance needs would be a big benefit. Key issue is being able to bring information together from a variety of financial service providers on a real time basis.

Appendix B-2
Complete Responses to Round One Survey

- **Participant 37:** Improving the liquidity of payout annuities or other income streams (GLWB riders) has a very strong potential in my opinion.
- **Participant 38:** Not sure that the industry is properly addressing the financial security need most folks have which is to live comfortably in retirement and not to outlive their money. There has to be a product innovation that satisfies this need. I think NLGUL made permanent insurance much more affordable to serve a broader population and premium financing is allowing for more estate planning in the HNW market.
- **Participant 39:** imply, two primary constraints to financial security in the U.S. remain the ability to access affordable healthcare and the potential to outlive your savings. Social Security and Medicare are pushed out to age 67 for the next generation of buyers. For a consumer to buy into longevity insurance that provides access to healthcare and provides a lifetime annuity in an understandable framework would be useful to consumers.

Question #10. What emerging technologies do you see on the horizon with the potential to impact our daily lives? How could these impact the design, marketing, sales, and/or processing of insurance?

- **Participant 1**: Certainly, the rapid developments of DNA analysis and resulting healthcare "fixes" comes to mind. Surely insurers can construct future products which provide benefits much beyond the current "face value" concept.
- **Participant 2:** The most significant technologies I see that will have the most impact on the insurance industry is the revolution in DNA testing and the revelation of the biological secrets found human genome. In the not too distant future, I see most Americans being able to have their individual DNA mapped which will create much better individualized treatments for all kinds of diseases especially cancer. This should result, over time, with longer and healthier lives for most of the population. Both life and health products could be individually tailored to each person's individual human genome resulting in a much better distribution of risk across the whole population. Unfortunately, this result would go against the philosophy of the socialist movement who would prefer ALL individuals being treated "equally" no matter what their age, sex or health condition is.
- **Participant 3:** The use of the ATM to access and allocate insurance dollars is a real possibility.
- **Participant 4:** The internet and home computer are increasing the possibility, availability and applicability of home health measurement devices. New products have been announced include a health vest which can monitor the heart and blood pressure as well as measure chemical levels in an individual's perspiration. Other less comprehensive products abound. These devices could be used against

insurance companies through anti-selection but will more broadly assist individuals in making healthcare decisions and promoting better health. Personal use of health information will increase with the move to make treatment records property of the individual rather than the medical provider (ala Microsoft Health Vault). The compilation of of individual health records in a database will lead to better health decisions in treatment and should be used to promote health lifestyle choices. These databases will also be used to market products to specific individuals based on their health condition. Undoubtedly DNA will provide a roadmap for each individual's health journey though it will take quite a while for scientists to understand the complexities that create exceptions to the general principles. This latter point will make DNA less useful to insurers but the industry will still benefit from improved healthcare.

- **Participant 5:** I see more people working from home, telecommuting, working shorter hours, taking sabbaticals, retiring earlier, taking time off to study or raise kids. We need therefore to make each hour more productive and find more comfortable ways to communicate at a distance. Combining web advertising and applications with a button to call up a real person whose face appears on screen next to or in place of the ad/app seems like a way to do things. Various companies do something like that now (e.g. IBM) although I don't see them adding the face – that would be very effective I believe. Universal high-bandwidth WiFi will make all this easier, together with improvements in Voice over IP for improved sound quality.
- **Participant 6:** The cell phone and the computer are going to merge over time and consumers are going to have tremendous amounts of information at their fingertips to assist them in making decisions, conducting transactions, tracking their finances and choosing business partners. Strap on your seat belts, raise your tray tables and prepare yourself for this eventuality. Companies who embrace this change will be in the forefront of marketing solutions that have real impact and that are targeted to the individual not the group or segment and that have relevant content that is immediate and actionable
- **Participant 7:** Cheap defibrillators will make them as popular as microwave ovens for those who need them. This will significantly improve longevity. Search engines will get more refined and will directly price availability of coverage for all insurance.
- **Participant 8:** (1) Use of population demographics to develop systematic distribution approaches (varying by state) (2) Image technology – scanning simplified apps into the system, with automatic U/W (3) Fee-based financial planning for other financial services products, for people with more sophisticated needs
- **Participant 9:** On-line monitoring of health seems to have a great deal of potential

Appendix B-2
Complete Responses to Round One Survey

- **Participant 10:** Managing wellness will incorporate low cost diagnostics or predictors. This will help with early detection. Transacting business via web, will be important. Also, ability to deal internationally will be important.
- **Participant 11:** The acceptance and increased use of PDA's and mobile devices like IPOD's or IPhones could lead to use as a medium to take tests for underwriting alerts or brief messaging could be sent giving individuals access to information, values, presentations, video messages, etc. of these in connection with IM capabilities to communicate with advisors (compliance aside …) individuals could establish standards / values / financial events where a financial institution could push information to the device based on selections established by the individual.
- **Participant 12:** Personal history information will be held by people through a personal electronic device. These will be carried/attached to people at all times. Scanning the device under a selected consumer need/want will provide an array of choices to meet that need/want. We can't possible remember all the choices and events that have occurred throughout our life, but they can greatly influence future activity.
- **Participant 13:** I think the fact that differences from person-to-person have a material influence on individual outcomes will have a large impact on statistical analyses in the future. Many statistical studies, such as for drug efficacy and side effects, implicitly assume that the underlying units (i.e., people) are essentially equivalent. I think that, as analyses become more sophisticated, this assumption will become less tenable, and that building tests around new premises will have a material effect on what future statistical analyses will look like.
- **Participant 14:**
  - Pervasive medical chips or medical records access codes carried by individuals.
  - More and more advanced home game-playing devices with multiple sensors may lead to in-home capabilities for health evaluation, diagnosis and communications with medical experts.
  - Wide-spread personal DNA sequencing and genetic counseling.
  - Standardized flow of health information.
  - Explosion of useful, accessible, reasonable cost genetic knowledge.
  - Fragmentation of society and decline or segmentation in socialization due to advances in Internet services and offerings.
- **Participant 15:** Self testing has increased over the years through a series of technology innovations and there are many similarities with the auto industry. Blood Pressure monitoring, Blood Sugar Testing, Heart rate monitors, Weighing machines – the level of sophistication continues and no doubt the range of products will widen with time e.g. genetic testing.
  Today each of the above tend to be discreet tests utilizing separate apparatus – just as a mechanic used to test each piece of the car components separately.

Appendix B-2
Complete Responses to Round One Survey

However, over time it is my expectation is that just as the auto industry now uses computer based diagnostic testing, the human tests with be integrated and with such integration it will be possible to identify co-mortality factors more easily and be able to predict life expectancy more accurately (medically controlled and uncontrolled).
This could be marketed as a 'free health check' and for acceptable candidates the offer of preferred life insurance rates. This type of equipment and marketing may lend itself to reputable gyms, supermarkets and pharmacies – and doctors surgeries for that matter.

- **Participant 16:**
  - Further enhancement of digital technology, wireless transactions, and use of secure technology through the use of bio-metrics and other single-user, specific designed encryption.
  - I see the use of holographic technology as a huge innovation in marketing , product placement, education, entertainment, and a number of other functions/uses.
  - While there may not be direct correlation to the life insurance industry I believe with the use of nano technology and organic use processes that functionality of computer system and processor speeds will continue to climb to level that will make new innovations quicker and more efficient in terms of cost, functionality, and re-design/modifications for improvement. The iPhone is a great example of the use of new technologies and the rapid transfer of knowledge for new uses and applications.
- **Participant 17:** Utilization and the capability of internet processing will continue to grow. Personal computers will support many of the recurring daily functions of everyone, including driving our cars. Insurance that is truly a commodity will be sold through on line tools, not through independent agents. For the commodity coverages (term life), we will go to Acme Insuromatic.com. After answering a few questions, it will provide a full evaluation of the optimal alternatives, perhaps, on a world wide basis. It will explore all of the possibilities as they exist at that moment and provide more comprehensive analysis than any single person could accumulate in a month. When we click "accept" we're covered and we probably paid the first premium. We will use this venue because we will get far better answers with very little investment of time and effort. Hopefully, we won't be as addicted to these web based computers (as so many of us are to Blackberries). But we will use them because they are effective and we will be accustomed to using the technology for so many other processes.
- **Participant 18:** No response.
- **Participant 19:** Some of these technologies and the application of the these technologies will have an impact on daily lives of people

Appendix B-2
Complete Responses to Round One Survey

  - Nanotechnology, laser and optical technology advances will enable better quality of life, aid in medical diagnosis and non-intrusive treatments and increase usage of compact, digital and mobile devices.
  - Aided by Internet, mobile and wireless technologies will become more mainstream and accepted for use in B2B and B2C.
  - Voice/Video will become mainstream input/output technologies allowing more interaction and information to be digitized and shared.
  - Computing will advance to provide analytics at desktop.

  The insurance industry can use these advances for innovation in product design to address all market segments that need risk cover, provide better pricing and getting customer mind share to provide financial security.
- **Participant 20:** Cell phone technology seems to be an avenue that is developing rapidly. New features are surfacing all the time. There seems to be a lot of creativity in this area. Younger people are developing a whole new subset of communication that older generations are oblivious to – texting. Sending quick messages vie cell phone but not by voice. Not sure how our industry could tie in there but it is growing and adapting rapidly. Maybe tying in from a marketing aspect. Right now I think only cell phone companies tend to use it for marketing. I think largely untapped are areas that are not yet perfected. Integration with devices that is key board independent. Perhaps voice activation software. Blackberry's are great but I don't think our future lies in typing notes on to miniature keyboards.
- **Participant 21:** Although not specifically a technology, the wide spread use of personal web sites, like MySpace.com, by the next generation is a clear indication that future marketing, sales and delivery of insurance will be via the Internet. Companies that design products and distribution systems that take full advantage of this trend will win the lion's share of future business.
- **Participant 22:** No Answer
- **Participant 23:** Paperless offices, virtual offices, and immediate access to information and events could be incorporated into a "Hub and Spoke" environment that allows each advisor to be on-site with the provider company and/or client.
- **Participant 24: Product offerings / pricing incentives and adjustments** for individuals using electronic wireless internet self-testing and reporting devices and taking preventive action and /or demonstrating enhanced mortality / decreased morbidity based on the results of life-style changes, gene replacement or gene therapy.
- **Participant 25:** From a positive perspective, the most promising development is the development of genetic treatment for certain diseases that are now wide spread. We are at the point where genetic information can be developed but the hope for the future is the development of treatments based on genetic information.

Appendix B-2
Complete Responses to Round One Survey

For example; a genetic tool that could be used to treat or eliminate diabetes or improve the treatment for cancer or heart disease could have a tremendous impact on many people.
From a negative perspective, possible problems include increasing mortality from the obesity epidemic, a possible avian flu pandemic, increasing violence from terrorism.
Environmental changes could result from a significant increase in the estate tax exemption or the repeal of estate taxes.
Improved hedging tools could result in more efficient asset management which in turn could lead to better products for the consumer in term of protection against market risk and more profit potential for the insurance companies.

- **Participant 26:** Increasing use of surveillance (e.g., cameras, GPS, wire taps, RFID chips)
  - Faster and more compact computer technology
  - Increase in identity theft
  - Increasing ability for individuals to "screen" calls, computer hackers, etc.
  - Gene mapping leading to assessment of an individuals future potential
  - Genetic engineering
  - DNA testing
  - New fuel sources
  - Robotics/Nano technology
  - Voice recognition
  - Automatic language translation
- **Participant 27:** The next "big order of magnitude" innovation will be brain function enhancement chips. These chips will greatly increase memory capacity and access as well as turbo charge analytical ability/info processing. The enhanced ability of the buyer will enable carriers to upgrade the analytical content of their marketing methods. Selling an ERM – like risk mitigation plan would feasible to more individuals.
- **Participant 28:** Standardized medical records.
- **Participant 29:** Nothing truly revolutionary in emerging technologies, such as nanotechnology, stands out as having an impact on our daily lives in the near term, relative to the insurance space.
  However, the technology trend to having increasingly responsive, user friendly web access with more sophisticated search and application capabilities will continue. This will encourage and enable consumers to educate themselves, play what-if scenarios, research alternative solutions, self-serve to an increasing extent and manage the flexibility of insurance products that they have purchased. As consumers get closer and closer to the definition of the products, there will be far more transparency in product costs relative to the make-up of the products, resulting in greater competition and an ongoing commoditization of products. The advisors role will similarly evolve, much as the practice of medicine today is

challenged a bit by consumer's web-based research, the proliferation of social (or disease-based) networks and consumer-oriented advertising (by pharmaceutical companies). The consumer will be more demanding and retail brands will become more important in an increasingly competitive marketplace.

- **Participant 30:** Underwriting will be significantly affected by genetic testing and genome sequencing technology. In the nearer term, nanotechnology may provide portable accurate blood testing without need for a lab.
  Wireless communications technology and biometric scanning may combine to allow quick and easy authorization for all kinds of insurance transactions from application to policy change to claims.
- **Participant 31:** I see emerging technologies in the banking arena that organize a client's cash flow and automatically create quicken type reporting as well as daily asset value aggregation. For examples, see "yodlee.com" and "mint.com". I see platforms that combine asset aggregation with electronic storage of important legal documents, e.g. wills. See " E-money' software. I also see comprehensive financial planning packages available in the market. In support of the holistic planning approach, I could foresee linking all of these technologies together. The client would establish his plan and month by month he would be able to track his actual results versus his plan. In fact, he could probably look day by day if that were necessary. At any point in time the client could look at his balance sheet and also check on how his spending was tracking relative to plan. Obviously, security would be of the utmost importance in this type of environment.
- **Participant 32:** The emerging technology that gets a lot of press is genetics. Every SOA member is aware of it. So I will not discuss it here. But realistically speaking, although we have made progress with identifying the genetic markers for a handful of diseases, we are probably a long way off from determining the combination of genes and environment that trigger most health conditions. There are other emerging technologies that could have a more immediate impact:
  1. Unified electronic medical records. If we get unified electronic medical records, it will have a huge impact on underwriting. Much of the traditional information asymmetry and cat and mouse game between underwriter and applicant will vanish.
  2. Electronic life-style and health monitoring. Various forms of electronic monitoring devices may allow all sorts of changes. There are a plethora of such devices and we can expect more. Tracking devices in cars not provide information not only regarding every place that we went, but can also provide information regarding how fast we went and our other driving habits. Our cell phones, which we generally carry on our person, can be used to track our movements. Our credit and debit card history says a lot about our lifestyle. Diabetes, heart monitoring, and other medical devices can "report" readings.
     a. Underwriting: monitoring devices could provide concrete data for risk assessment based on lifestyle.

Appendix B-2
Complete Responses to Round One Survey

b. Benefits: benefits could be reduced or eliminated for non-compliance. For example, don't expect your life insurance to pay if you were speeding 120 mph down the road or became non-compliant with your diabetes diet and treatments.
c. Variable pricing: this is already being pioneered abroad in auto insurance – the insurance premium depends on the miles and location where the car was driven. Therefore your life insurance might still be valid if you drive 120 mph down the road, but there would be a premium surcharge.

- **Participant 33:**
  - Automatic simultaneous language translation – already covered.
  - Swallowable or insertable microchips, capable not only of detecting diseases at very early stages, but of curing many of them will have a positive impact on mortality experience.
  - Eventually – robots 'with personalities' designed to match or be effective with that of an elder-care individual will have a positive impact on the cost structure of long-term care.
  - Breakthroughs in cancer treatments to simply arrest tumor growth rather than eradicating the tumor will become commonplace, once again having a positive impact on mortality.
  - Mobile technologies of all varieties will allow for distribution variations.
  - With the increasing number of aging boomers who have not saved enough for retirement, some among this group, armed with new technologies as technical sales assistants, can become a new distribution arm, especially in marketing Long-Term Care.
- **Participant 34:**
  - Implantable chips that measure key metrics (pulse, enzyme and hormone levels, release of body chemicals indicating disease or other body breakdown (e.g., heart attack.)
  - Potentially, their use might lower insurance costs, even if the insurer had not access to results other than through usual underwriting processes.
- **Participant 35:** More tools will be available to help people monitor their own health (like blood tests?) which might have a positive effect on mortality. It will be interesting to see if companies find a way to leverage this ability to allow underwriting without a paramed being present.
- **Participant 36:** Feed financial information into an overall personal mgmt system, bringing together information on our daily needs(ie what is weather tomorrow), travel opportunities, current house energy consumption, financial spending rate, and calendering to name a few.
- **Participant 37:** No Answer
- **Participant 38:** Some of the genome and DNA work as well as bio chips have to at some point have an impact on our daily lives and the underwriting of insurance.

Appendix B-2
Complete Responses to Round One Survey

The wireless technology will have an impact on how we conduct business and how insurance business is processed.

- **Participant 39:** Mostly around data. Pharadata on medications. Genetic breakthroughs mostly.

Appendix C
Round Two Survey

This Round Two survey contains ten (10) strategies that represent a composite of many of the ideas contained in the Round One responses, and a series of questions about those strategies. Please complete any or all of the questions for which you have ideas; you do not need to respond to every question.

The strategies below were constructed from participants responses made with the Round One instruction to "assume the technologies and strategies **could occur in the next ten years**." The strategies range from those based on current technology to others that are much more speculative. The list of strategies below has been *approximately* ordered along this range.

Strategy #1

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

One company has already adopted a version of "part 1" of this strategy, issuing up to $250,000 of term life coverage to individuals age 18 to 60 "generally within minutes" based on "just a few health questions" answered online. An immediate decision is provided and, if approved, the applicant can print their in-force policy online.

Questions for Strategy #1:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. What specific methods could be used to expand the concept to larger policies and older applicants in the near future?
3. Do you think "part 2" of the strategy will become feasible in the next 5 years? In the next 10 years?
4. Is there a patentable technological advance that would lead to a solution of legal issues regarding the use of underwriting information collected as described in "part 2" of the strategy?
5. What other observations do you have about this strategy?

Appendix C
Round Two Survey

Strategy #2

As part of its strategic planning, Super Fast Insurance Company has concluded that a significant but affordable investment in increased computing power and speed and other emerging technologies can drastically reduce its time to market compared to its competitors and more than pay for itself in market share. It has dubbed this strategy "Quantum leap in time to market."

Super Fast believes that it can achieve "real time" pricing of policyholder options, even with in-force products, that will enable it to market far greater flexibility and consumer choice. Even with the increased degree of rigor required in analyzing product profitability, including stochastic testing, more powerful processors and faster networks would enable it complete turnaround in minutes that formerly took overnight.

Furthermore, Super Fast believes that Business Process Management (BPM) software will support rapid installation of product variations. This would allow products to be rapidly configured (without special coding) to different markets and a wide range of policyholder options. Recognizing that state regulation will sometimes remain a speed bump in the process, Super Fast believes that the strategy will nonetheless pay off handsomely in many cases.

Questions for Strategy #2:

1. What are the greatest obstacles to adoption of such a strategy over the next 5 years? In the next 10 years?
2. How viable is this strategy, and what other obstacles should Super Fast anticipate?
3. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
4. What other observations do you have about this strategy?

Strategy #3

The Insurance Without Borders Company observes that, across the globe, a wide variation exists in the regulatory environment and the associations that provide risk-related data. It is contemplating a proposed "Blue Ocean" business plan to take advantage of the current situations that are favorable - while other companies wait for world regulatory standardization.

The proposed business plan asserts that internet sales of life insurance could be made from many host countries - not just the United States and Canada. The plan is to choose a set of host countries with laws or regulations that permit (or at least do not prevent) internet sales of life insurance, and that allow the use of technologies currently available from a technical standpoint but not universally allowed from a regulatory standpoint.

Appendix C
Round Two Survey

The target is the ocean of people to insure in Africa, India, China and other countries relatively untapped by life insurance companies. The population growth of higher income individuals in these regions represents a marketing opportunity beyond the relatively mature domestic markets.

Questions for Strategy #3:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Is this a strategy to bring the benefits of insurance to more people; or to exploit people not yet protected by regulation up to the standards of more mature markets?
3. Considering the claims perspective, how can Insurance Without Borders verify claims in markets that lack open access to information; or where local certification authorities may lack sufficient checks and balances?
4. What other observations do you have about this strategy?

Strategy #4

Global Insurance Company operates in many countries and is planning the use of internet/cellular/data-mining technology to access and promote its products to the non-insured population across the globe. The technology will need to work in a concerted fashion to result in creating the "Blue Ocean" segments. Internet and cellular technology would be used for educating (and simultaneously advertising), getting feedback (to gauge effectiveness) and collecting premium payments. The data-mining technology would assist in designing advertising and products and locating target markets across the globe.

Global feels it is well positioned to use the Internet as a marketing tool to target "Blue Ocean" segments, especially the younger population, an international client base and non-working, retired adults. It plans to use "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person.

Questions for Strategy #4:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Have the Artificial Intelligence advantages already been tapped out, or is there still opportunity for an inventive AI solution that leapfrogs all the current systems?
3. Is there anything such as intellectual property rights that might be enforced to prevent everyone else from copying the process and lowering the profits for all?
4. What other observations do you have about this strategy?

Appendix C
Round Two Survey

Strategy #5

A think tank at Your Way Insurance Company has recommended a "Blue Ocean" strategy in which individuals would custom-design their insurance coverage online.

The entry point would be an online process driven model that enables consumers to design their insurance coverage by answering a series of questions. The model would have "click to call" expert advice available on how to use the model as well as for each insurance category, which could be a broad spectrum (life, health, annuities, long term care, auto and home) or some subset. Only products with relatively simple and transparent pricing would be offered. Consumers would mix and match discrete, simple products to address comparatively complex needs.

Due to state insurance department restrictions, Your Way expects to issue multiple policies through different operating units to provide the overall coverage designed by the consumer. Online underwriting mechanisms and data bases would be used to narrow the price range, define the price subject to certain conditions, or determine the price precisely.

Response activity would be used to systematically refine the process model and coverage building blocks available to consumers.

Questions for Strategy #5:

1. What are the greatest obstacles that Your Way will find if it attempts to adopt this strategy?
2. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
3. What other observations do you have about this strategy?

Strategy #6

Like many companies, Strategic Partners Insurance Company is investigating increased use of technology for incremental improvements in operational excellence. It is considering a substantially increased investment in this area to pursue a "Blue Ocean" strategy to find innovative technological breakthroughs that may result in intellectual property rights. It is also considering strategic partnerships with non-insurance entities that could provide leveraging of applicant underwriting or claims information.

Examples might include access to online prescription or medical records, motor vehicle records, court records, shopping records, insurance policy and application records, biological or genetic sources, etc. as well as claims adjudication facilities that would complement internet policy administration.

Appendix C
Round Two Survey

Among candidates for a strategic partnership are a major pharmacy chain, a forensic laboratory, a supermarket chain, a credit card giant, a GPS (Global Positioning Satellite) device manufacturer, a biofeedback technology firm and even a big name jeweller - to make a medallion that is both a status symbol and a monitor (and transmitter) of basic life parameters – the 'bling' factor.

Questions for Strategy #6:

1. Is there anything such as intellectual property rights that Strategic Partners might enforce to prevent everyone else from copying the process and lowering the profits for all?
2. Is this an ethical strategy? Is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair?
3. Is this a "Blue Ocean" opportunity for players outside of the life insurance industry more than for insurers? For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets?
4. If Artificial Intelligence systems can encapsulate the knowledge necessary for medical underwriting, then does medical underwriting necessarily have to remain the province of traditional insurance companies?
5. What other observations do you have about this strategy?

Strategy #7

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse - technologies are often required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Questions for Strategy #7:

1. What are examples of previously uninsurable risks that could be insured through a micro-policy?
2. What methods of distribution, either existing or potential, could be used to target these risks?
3. Are there other definitions that could lead to micro-policies – geography, ethnicity, etc.?
4. What other observations do you have about this strategy?

Appendix C
Round Two Survey

Strategy #8:

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Questions for Strategy #8:

1. How viable is this strategy? Could such a service be offered at a price that would be attractive to potential clients?
2. What technological barriers or other obstacles are there to such a strategy?
3. What other observations do you have about this as a "Blue Ocean" strategy?

Strategy #9:

Big Brother Insurance Company seeks to build a "Blue Ocean" strategy around emerging technologies that will allow it to monitor and measure, on an ongoing basis, the risk profile of insured individuals. For example, a device could be installed in an insured's car that measures the distance driven, speed, whether seatbelts were used and even breathalyzer results.

Other technologies possible are:

- Home health monitoring devices that could periodically send information over the web such as heart rate, breath rate, blood pressure and weight.
- Personal/private information, such as some doctors' reports, may be accessed in electronic format.
- A personal electronic database could help with the treatment of an insured in the case of an emergency.

Since these technologies are invasive, clients would need to be provided with significant incentive in order to agree to this level of monitoring.

Questions for Strategy #9:

1. How viable is this approach? That is, could enough cost savings be generated to pass some back to the customer and still make an enhanced profit for Big Brother?

Appendix C
Round Two Survey

2. How much of a premium discount would be needed to make this strategy viable?
3. Is there any other incentive that could be offered to a potential client for this type of product?
4. What other observations do you have about this strategy?

Strategy #10

Virtually Real Insurance Company is exploring the concept of virtual world insurance. Virtual worlds, like SecondLife, are online experiences where people enter the "world" as an avatar – or electronic representation of themselves. These "worlds" are becoming more and more "real" as they draw more participants – including corporations - and the experience becomes more sophisticated. As this virtual reality expands, opportunities may be created for insurance – possibly distribution, marketing… or even products.

Questions for Strategy #10:

1. What advice would you give Virtually Real regarding the potential for marketing insurance in virtual worlds? For providing insurance products in virtual worlds?
2. How might virtual worlds blend with the real world to create opportunities for insurance companies?
3. What obstacles might a company face in pursuing a strategy that involves an online, virtual world?
4. What other observations do you have about this strategy?

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

One company has already adopted a version of "part 1" of this strategy, issuing up to $250,000 of term life coverage to individuals age 18 to 60 "generally within minutes" based on "just a few health questions" answered online. An immediate decision is provided and, if approved, the applicant can print their in-force policy online.

Questions for Strategy #1:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. What specific methods could be used to expand the concept to larger policies and older applicants in the near future?
3. Do you think "part 2" of the strategy will become feasible in the next 5 years? In the next 10 years?
4. Is there a patentable technological advance that would lead to a solution of legal issues regarding the use of underwriting information collected as described in "part 2" of the strategy?
5. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #1

By about 2:1 respondents said this was a window of opportunity rather than a "Blue Ocean" strategy, although some said "both" or said only Part 2 was "Blue Ocean." Twenty different ideas (or obstacles) were identified for expanding the concept to larger polices and older ages. Additional information from electronic data bases, such as pharmacy records, was mentioned by 9 respondents; no other idea was mentioned by more than two. "Part 2" of the strategy was deemed achievable in 5 years by about 1/3, partially or possibly achievable by 1/3, and not achievable by 1/3. Over 10 years the vote was 60% yes, 20% no, 20% possibly to likely. The possibility of a patentable solution to

Appendix D-1
Detailed Summary of Responses to Round Two Survey

legal obstacles drew a mixed response, about evenly divided among "yes," "no," and "possibly/probably" with identification of issues. A variety of other observations were made, with privacy concerns mentioned by 5 respondents.

Tabulation of Answers to Questions for Strategy #1:

1. *Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?*

Window of opportunity: 15 responses
Blue Ocean: 7 responses
Part 1= window, Part 2=Blue Ocean: 3 responses
"Yes" (both): 2 responses

Notable comment:" Part 1 of this is a window of opportunity using existing technologies and the current evolution of those technologies. Part 2 is a "blue ocean" strategy, well beyond the current use of data/technology; in conjunction with the current wave of use of electronic health records, this could offer profound changes in how information is gathered, analysed, and health information verified through the use of technology…"

2. *What specific methods could be used to expand the concept to larger policies and older applicants in the near future?*

Additional information available from data bases / pharmacy records: 9 responses
More underwriting criteria: 2 responses
Anti-selection controls: 2 responses
Touch screen process: 2 responses
Remote blood test with finger prick: 2 responses
Verifiable information: 2 responses
Reinsurer acceptance: 1 response
Computer entry accuracy: 1 response
Field station visit: 1 response
Improved, remote medical testing devices: 1 response
Genetic testing: 1 response
Signature, internet search for financial information: 1 response
Additional questions: 1 response
Don't know, need experience with current state first: 1 response
Attending physician opinion: 1 response
More attractive product features, packaging: 1 response
Combine with Strategies #5 & #8: 1 response
Tell applicants that responses will be checked against electronic databases, in order to improve reliability: 1 response
Improve wording of questions: 1 response
Privacy concerns will block progress (Congress, AARP): 1 response

Appendix D-1
Detailed Summary of Responses to Round Two Survey

3. Do you think "part 2" of the strategy will become feasible in the next 5 years? In the next 10 years?

5 years
No: 9 responses
Yes: 7 responses
Partially: 4 responses
50% chance: 3 responses
Possibly: 3 responses
Already feasible: 1 response

10 years
Yes: 15 responses
No: 5 responses
Possibly: 4 responses
90% chance/"likely": 2 responses

Notable comment:" Although the technology exists today, it seems unlikely that a commercially accessible database of digital finger prints will be available in the next 10 years."

4. Is there a patentable technological advance that would lead to a solution of legal issues regarding the use of underwriting information collected as described in "part 2" of the strategy?

Yes/probably: 4 responses
Possibly/could be: 4 responses
Not aware of any: 3 responses
Yes if with computer algorithm: 2 responses
No, need conventional tests: 2 responses
Yes, with encryption methodology: 1 response
Yes, handheld fingerprint collection device: 1 response
Solution, but not patentable: 1 response
Need several tech advances: 1 response

Notable comment:" Process patents are difficult to obtain nowadays but that does not mean that it is not a worthwhile strategy for those who have the financial means to execute upon it properly – very few probably."

5. What other observations do you have about this strategy?

Privacy concerns a big issue: 5 responses

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Logistics need solutions (e.g. touch screen location): 2 responses
Good strategy/feasible: 2 responses
Individuals may fear loss of privacy: 1 response
Large company strategy, may alienate field: 1 response
Getting data from numerous sources a major challenge: 1 response
Even greater medical technologies than described will become available: 1 response
Not compelling case/not a market mover: 1 response
Price shoppers will limit success: 1 response
Needs financial planning process integration: 1 response
Part 2 unlikely: 1 response
Good execution, not strategy, will determine success: 1 response
Part 2 may take a different form: 1 response
Legal and data issues will limit ability: 1 response

Notable comment:"… the privacy hurdle is going to be daunting."

Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"

As part of its strategic planning, Super Fast Insurance Company has concluded that a significant but affordable investment in increased computing power and speed and other emerging technologies can drastically reduce its time to market compared to its competitors and more than pay for itself in market share. It has dubbed this strategy "Quantum leap in time to market."

Super Fast believes that it can achieve "real time" pricing of policyholder options, even with in-force products, that will enable it to market far greater flexibility and consumer choice. Even with the increased degree of rigor required in analyzing product profitability, including stochastic testing, more powerful processors and faster networks would enable it complete turnaround in minutes that formerly took overnight.

Furthermore, Super Fast believes that Business Process Management (BPM) software will support rapid installation of product variations. This would allow products to be rapidly configured (without special coding) to different markets and a wide range of policyholder options. Recognizing that state regulation will sometimes remain a speed bump in the process, Super Fast believes that the strategy will nonetheless pay off handsomely in many cases.

Questions for Strategy #2:
1. What are the greatest obstacles to adoption of such a strategy over the next 5 years? In the next 10 years?
2. How viable is this strategy, and what other obstacles should Super Fast anticipate?

Appendix D-1
Detailed Summary of Responses to Round Two Survey

3. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #2

By a ratio of 4:1, respondents did not think this strategy was viable. The majority did not believe that reducing "Time to market" was strictly a technological problem but that other factors were equally (or more) important. Factors such as state regulation, bureaucracy (IT, legal, administrative), distribution and/or back end systems. Also, even if the "Time to market" could be vastly increased, many questioned whether that was of any real value to the customer. And finally, not many thought it was a true "Blue Ocean" strategy.

Tabulation of Answers to Questions for Strategy #2:

1. What are the greatest obstacles to adoption of such a strategy over the next 5 years? In the next 10 years?

- State regulation (7)
  - "State Law is comfortable with categories (i.e., plans) of insurance coverage that it can regulate. States may feel this goes excessively beyond such categories."
  - "Filing is more than a speed bump."
  - "[Within] 10 years - states will no longer regulate insurance,"
- This is not a good strategy. (6)
  - "This is not a product which is an impulse buy, nor is it variably priced."
  - "The industry needs to simplify its products, not make them more complicated. Most of the public (and distribution) does not understand what they are buying even today."
  - "Getting a confusing product to market faster does not increase sales."
  - "Speed is not the breakthrough, perhaps customization (a product for the individual)."
  - "Speed to market also suggests that the creation and molding process of new concepts can be speeded up, which may be counter-productive."
- Complexity (4)
- Organizational workings/culture of insurance companies (4)
  - "Trying to convert a long-standing traditional insurance company to this mode would be very difficult."
  - "Adversity of big companies to do anything 'super fast'."
  - "Competing internal priorities"
- Other required systems will change more slowly (4)
  - "Administration and valuation systems"

Appendix D-1
Detailed Summary of Responses to Round Two Survey

    - "Financial reporting and projection of in-force business"
    - "[In]flexibility of legacy systems"
    - "BPM does not reduce the implementation and validation time required for automation of more complex administration functions such as tax compliance, complex calculations, etc."
- Cost/ROI. (3)
- Education/training of distributors and consumers (3)
- "Ease of use and the security of information"
- "Financial engineer arbitrage of the pricing"
- "The need for blood results for preferred and the need to request medical records"
- "Developing application software that will perform the needed artificial intelligence."
- No answer (3)

2. *How viable is this strategy, and what other obstacles should Super Fast anticipate?*
    - This strategy is not likely to be successful. (14)
        - "There are major hurdles - the bureaucracy that IT developers have to go through to implement change; we do not have a good track record for fast-tracking; our business is long-term and highly regulated."
        - "The plan amounts to a claim that the company will finally solve the pervasive IT and product development problems of the insurance industry."
        - "Speed of product to market suggests everyone doing it and lots of churning and unprofitable business."
        - "Legal issues, administration headaches, cost to develop and maintain variations at the individual policy level"
        - "Human factor on analysis and assumptions cannot fit in a box."
        - "Other companies will adopt the technology mitigating the competitive advantage."
        - "The views of traditional actuarial and insurance personnel"
        - "It's not possible to jump to warp speed like this."
        - "A medium or large policy takes 46 to 60 days to turn around; this process may cut 2 or 3 days off but that still leaves a lot of time to get an issue."
        - "Our product array is already overly complex. This strategy expands that problem. We need more transparency rather than more complexity."
        - "Unless they can teach their distribution and consumers "super fast" on the value of their offerings this strategy will go nowhere."
        - "Speed also creates danger...inadequate development of logic, inadequate contemplation of the range of possible outcomes, too much risk that "what you don't know you don't know" will have negative impact."

Appendix D-1
Detailed Summary of Responses to Round Two Survey

- ”In the design phase of products, it is the people-centered thinking, planning, and negotiations that consume most of the time, not the computing time.
- “BPM software is no panacea for implementation. [It] is only as powerful as its configuration and is not going to be pre-configured for the truly innovative ideas.”

- Other obstacles (4)
  - "Pricing of hardware – prices will increase with greater demand.”
  - “Finding sufficient insurance product subject matter experts who can work effectively within the methodologies of the new strategy.”
  - “With any technology dependent strategy, Super Fast must be willing to risk being the “Beta recorder” and others following quickly with more acceptable technology.”
  - “We have to ensure that products can and will sell.”
  - “Underwriting dynamics in the use of technology.
- The strategy is viable. (4)
  - “It is viable but much more likely in Canada for example than the hideously over-regulated US. A third party software company may be the one to perfect the technology before direct writers – they can spread the costs over multiple clients.”
  - “There may be a multiple phase approach to rolling out complete functionality but technology exists to day to do processing in a real time environment.”
  - “NET technology (in isolation or as a thin layer sitting above a legacy system) can already do most if not all of the requirements of this strategy.”
  - “The key will be developing and maintaining software to perform the functionality. Super Fast will need one of the most outstanding in house application support groups in the industry.”
- No answer (7)

3. *Is this a “Blue Ocean” strategy or simply a window of opportunity for the early players?*
   - Window of opportunity (10)
     - “Once the legal objections are out of the way, many players will jump in very quickly.”
     - “Others could use different technological particulars to avoid intellectual property and patent problems.”
   - Neither (9)
     - “Some companies (like Cisco) have operated this way for years; ultimately, it comes back to product, quality and continued innovation.
   - Blue Ocean with conditions (3)
     - “…if it can truly be developed”

Appendix D-1
Detailed Summary of Responses to Round Two Survey

  - "It will not be easy for others to replicate the [required] world class IT development department."
  - "Although I disagree with the speed aspect of the strategy, the ability to examine policy options more broadly because of computer power, if accompanied by intelligent oversight, does allow for creative growth of new concepts and would be Blue Ocean."
- Some of both (1)
  - "Short term opportunity if just based on speed. Innovative system design providing unique documented customer advantages (e.g. pricing, custom suitability, convenience, flexibility, etc) coupled with the ability to translate these advantages into compelling marketing messages move it toward a longer term blue ocean strategy."
- No answer (4)

4. What other observations do you have about this strategy?

- "Too actuarial. Product loads and other expenses will eat up pricing advantage. Perhaps can be an outgrowth of reserve requirements."
- "Even if you can get products to market faster, it might only give your brokers a short-term competitive advantage."
- "Expenses will rise – valuation systems and admin systems will need to be replaced with more flexible software and therefore the price of insurance may actually rise. "
- "Due to the changes in customer expectations, use of improved technologies, use of "smart" technologies, improved decision making and expense management, this type of strategy is a given. Just a matter of time in when companies adopt such an approach to business. I see companies currently developing this approach to business and "real time" processing fairly standard among the largest writers within the next 5 years."
- "Develop good and lasting basic products that don't need bell-and-whistling as a means of marketing."
- "It seems more brute force. It also seems to add to product complexity that already exists. Product complexity needs to lessen, not increase."
- "There doesn't seem to be a compelling case per items above.
- "Believe in Keep it Simple. ROI may be too low."
- "An interesting differentiator, but is unlikely to move the market."
- "I'm a little skeptical about the value of the fundamental business model used here. That much focus on speed to market may have value in some niches but I don't think it has broad enough value to be worthy of the investment."
- "I don't see speed alone being a differentiator; information produced on the fly will be helpful but it comes back to having the right products and the right market."
- "This is already being practiced by some market participants."

Appendix D-1
Detailed Summary of Responses to Round Two Survey

- "Nothing to stop this happening right now with existing technology."
- "I don't intuitively feel that processing time is a major hold up in the process and zeroing in too heavily here just does not do that much."
- "These suggestions seem to have been made based on an actuarial, rather than holistic perspective of product design and implementation. If the goal is either a Blue Ocean approach to product design and implementation (or a substantial change in product design and implementation in order to support Blue Ocean product innovation), then companies need to critically examine their entire design and implementation process and find where the road blocks are. One obstacle that is common is that there is very poor capture of learning from one design cycle to the next – documentation of processes is spotty at best and each new team reinvents the wheel. Another obstacle is the difficulty in balancing the demands of day-to-day management with the demands of forward looking design and implementation. It can take weeks to organize a key management meeting. No piece of software solves this problem."
- "Very risky and not sure that first to market gains will offset the risk."
- "For many, many years, the life Insurance industry has limped along on old systems that have very complex logic to support products that were developed and sold decades ago. No software vendors have come close to offering this kind of technology to the industry. We have seen similar successes on the P&C side, but the common denominator has been unbelievably effective IT departments. The norm for most life insurers is IT departments that are low cost operations with only resources to maintain existing applications. If Super Fast can create such a progressive IT development environment, they will have a substantial advantage."
- "Front-end speed is nice, but what about the admin. issues on the back-end?"
- "Educating and assisting state regulators in first understanding and second engineering a process for testing and approving dynamic product models would make this an effective strategy. This is in contrast to a micro-component based amalgamation of individually approved/priced coverages to form the customized solutions. The dynamic product model would bring together the various components to address the comprehensive need and price the resulting customer-unique product incorporating "amalgamation" discounts and risk premiums. This could allow for a comprehensive insurance program/product that can dynamically adjust for life stage /life style changes. Also, posses a bit of a marketing challenge to educate customer on the product and the unique benefits this approach provides. Not insurmountable."
- No answer (9)

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Strategy #3: Insurance W/O Borders Co. – Global internet sales where regs allow

The Insurance Without Borders Company observes that, across the globe, a wide variation exists in the regulatory environment and the associations that provide risk-related data. It is contemplating a proposed "Blue Ocean" business plan to take advantage of the current situations that are favorable - while other companies wait for world regulatory standardization.

The proposed business plan asserts that internet sales of life insurance could be made from many host countries - not just the United States and Canada. The plan is to choose a set of host countries with laws or regulations that permit (or at least do not prevent) internet sales of life insurance, and that allow the use of technologies currently available from a technical standpoint but not universally allowed from a regulatory standpoint.

The target is the ocean of people to insure in Africa, India, China and other countries relatively untapped by life insurance companies. The population growth of higher income individuals in these regions represents a marketing opportunity beyond the relatively mature domestic markets.

Questions for Strategy #3:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Is this a strategy to bring the benefits of insurance to more people; or to exploit people not yet protected by regulation up to the standards of more mature markets?
3. Considering the claims perspective, how can Insurance Without Borders verify claims in markets that lack open access to information; or where local certification authorities may lack sufficient checks and balances?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #3

Although most respondents saw this as at least a window of opportunity, if not a Blue Ocean strategy, there was a majority feeling that this involved elements of exploitation. One representative respondent said "It may start out with altruistic goals and ultimately result in being exploitative".

On the other hand, the majority also felt that the claims handling obstacles posed, as one respondent stated, "a big hurdle". Suggestions generally stressed the need for local connections to banks, insurance companies and claims investigators

One respondent summarized the popular feeling that "the market opportunity should not blind company management to the need for proper financial and underwriting controls".

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Tabulation of Answers to Questions for Strategy #3:

1. *Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?*

Blue Ocean:	13
Window of Opportunity:	10
Neither:	2
No Answer:	3
Total	28

Notable Comments:

- ***Blue Ocean*** -"This is a new market. The technology and products to execute this strategy are easy. Full scale pursuit of this strategy will require a sophisticated network of partners in marketing and claims; the company that successfully solves these two problems will have a tremendous advantage over latecomers."
- ***Window of Opportunity*** – "I view this as a window of opportunity and in my view companies are already working to tap these markets using current technology, partnerships, affiliations, and current country market data"

2. *Is this a strategy to bring the benefits of insurance to more people; or to exploit people not yet protected by regulation up to the standards of more mature markets?*

Bring Benefits:	6
Exploit:	8
Elements of Both:	9
Danger – too many obstacles:	2
No Answer:	3
Total	28

Notable Comment: "It could be either, depending on the ethics and business approach of the company."

3. *Considering the claims perspective, how can Insurance Without Borders verify claims in markets that lack open access to information; or where local certification authorities may lack sufficient checks and balances?*

Big hurdle (local help needed):	16
Pricing/Underwriting solutions (perhaps using High tech/DNA/International data):	4

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Response seemed off topic:	2
No Answer:	6
Total	28

Notable Comments: "This is a big hurdle."; "This will be a significant cost of doing business in these areas."

4. What other observations do you have about this strategy?

The responses included several observations. Note that these add to more than 28 since some respondents listed more than 1 item.

Observation/response	***frequency***
No answer:	6
The strategy is too difficult to do in practice	4
Insurance fraud is a major issue	4
It's already being done in some developing countries	2
Life insurance is sold, not purchased … need local models	2
Money laundering regulations apply	2
Underwriting issues abound	1
Marketing and product niche is key	1
Why would customer deal with non-local company?	1
Life Insurance internet sales are an unproven concept	1
More likely to be done to avoid regulations	1
Questionable which country's regulations apply	1
Likely to work best for small face amount policies	1
Much research is needed	1
Investment and tax issues	1
Medical and financial issues	1
Intellectual rights issues	1
Analogy to cellular phone sales in developing countries (Iridium example)	1
In poor countries, food and medical care are a greater need than insurance	1

Strategy #4: Global Insurance Company – Global data mining, marketing

Global Insurance Company operates in many countries and is planning the use of internet/cellular/data-mining technology to access and promote its products to the non-insured population across the globe. The technology will need to work in a concerted fashion to result in creating the "Blue Ocean" segments. Internet and cellular technology would be used for educating (and simultaneously advertising), getting feedback (to gauge effectiveness) and collecting premium payments. The data-mining technology would assist in designing advertising and products and locating target markets across the globe.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Global feels it is well positioned to use the Internet as a marketing tool to target "Blue Ocean" segments, especially the younger population, an international client base and non-working, retired adults. It plans to use "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person.

Questions for Strategy #4:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
2. Have the Artificial Intelligence advantages already been tapped out, or is there still opportunity for an inventive AI solution that leapfrogs all the current systems?
3. Is there anything such as intellectual property rights that might be enforced to prevent everyone else from copying the process and lowering the profits for all?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #4

More than half (15 of 28) respondents feel opportunities exist for significant advances through Artificial Intelligence (AI) improvements. However, a significant portion (one third to one half) did not answer, or said they did not understand, the questions associated with the strategy. Respondents suggesting a Blue Ocean strategy used "approaching", "possibly", and "More Blue Ocean than early adopter"; while the Window of Opportunity votes were more emphatic. Few felt that intellectual property could be protected internationally for an extend period of time.

Tabulation of Answers to Questions for Strategy #4:

1. *Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?*

Blue Ocean:	9
Window of Opportunity:	7
Neither:	3
No Answer:	6
Didn't understand question:	3
Total	28

Notable Comments:

Blue Ocean –"I believe it would be a blue ocean strategy. Success often comes from execution of an idea rather than the idea itself. "

Window of Opportunity - "Unless you can come up with a product that is completely new and it's something you can patent, it's very hard to say that it's a Blue Ocean strategy. This is just a marketing concept that will be copied quickly if it works."

Appendix D-1
Detailed Summary of Responses to Round Two Survey

2. Have the Artificial Intelligence advantages already been tapped out, or is there still opportunity for an inventive AI solution that leapfrogs all the current systems?

Still opportunities for significant AI advances:	15
Not sure, or do not understand question:	4
No Answer:	9
Total	28

Notable Comment: "There is unlimited potential in AI and we have only scratched the surface."

3. Is there anything such as intellectual property rights that might be enforced to prevent everyone else from copying the process and lowering the profits for all?

Yes (includes patents, copyrights, etc.):	4
Maybe (or varies by country):	5
No (not likely to provide protection):	9
Not sure of question:	2
No Answer:	8
Total	28

Notable Comment: "At the very best, intellectual property protection simply slows down competitors."

4. What other observations do you have about this strategy?

The responses included several observations (but half the respondents did not provide observations or did not feel they were applicable). Note that these add to more than 28 since some of the remaining 14 (half) respondents listed more than 1 item.

Observation/response	***frequency***
No Answer, no other observations, or did not understand question/strategy:	14
Not optimistic about prospects for this strategy:	6
Optimistic about prospects for this strategy:	5
Similar to 1990s e-Business, or already in place in some form:	3
Data intensive - perhaps beneficial to partner with technology partner (Google, Amazon):	3
Predictive modelling or life based analytic potential:	2
Cultural, economic, legal, privacy barriers:	2
Cell phones have had penetration success in similar situations:	2
Potential to develop product and brand awareness:	2
Market among young people who participate in role playing games – virtual death:	1
Might exploit human nature and tendencies to want to gamble:	1

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Strategy #5: Your Way Insurance Company – Prospects custom-design coverage online

A think tank at Your Way Insurance Company has recommended a "Blue Ocean" strategy in which individuals would custom-design their insurance coverage online.

The entry point would be an online process driven model that enables consumers to design their insurance coverage by answering a series of questions. The model would have "click to call" expert advice available on how to use the model as well as for each insurance category, which could be a broad spectrum (life, health, annuities, long term care, auto and home) or some subset. Only products with relatively simple and transparent pricing would be offered. Consumers would mix and match discrete, simple products to address comparatively complex needs.

Due to state insurance department restrictions, Your Way expects to issue multiple policies through different operating units to provide the overall coverage designed by the consumer. Online underwriting mechanisms and data bases would be used to narrow the price range, define the price subject to certain conditions, or determine the price precisely.

Response activity would be used to systematically refine the process model and coverage building blocks available to consumers.

Questions for Strategy #5:

1. What are the greatest obstacles that Your Way will find if it attempts to adopt this strategy?
2. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
3. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #5

Consumer education, knowledge, and motivation were most frequently identified as the greatest obstacles to this strategy. Regulatory issues, getting to the right people, simple products versus complex needs, and various insurance company internal issues were also identified by multiple respondents. Responses were about equally divided between those who viewed this as a Blue Ocean strategy or a window of opportunity, with a few simply stating that it was not Blue Ocean, or neither. One participant provided an expanded description that he or she believed would make the strategy truly Blue Ocean, and that description is provided with a request for your further comments in Round Three. Finally, participants gave a great variety of additional comments about the strategy, and these are shown below as responses to question #3.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Tabulation of Answers to Questions for Strategy #5:

1. *What are the greatest obstacles that Your Way will find if it attempts to adopt this strategy?*
   - Consumers are not knowledgeable or motivated enough to make this work. (12)
     - "People won't know how to do it. Do you know what all the auto options at Progressive mean?"
     - "How would you get the target clients to understand what it is that you're trying to sell them? As with "cafeteria plans" for employee benefits, sometimes too many options can be more confusing than helpful for the customer. These types of plans require a lot of education."
     - "Customer education so they can make legitimate decisions based on the product. For example, there are so many parts of health insurance that most consumers don't have the ability to weigh the pros and cons in a "real time" environment to make good choices."
     - "Each line is complicated enough for consumers to understand and deal with. What is the significant to the consumer offer that is to the advantage of the customer to go this painstaking approach?"
     - "A key component in a regulated marketplace is consumer education or awareness. There is certainly an opportunity to have lawsuits filed due to products being sold to customers where the product is inappropriate based on the actual needs of the customer."
     - "Does it look any simpler to the consumer than having an agent sit down and explain different coverages to them?"
     - "Consumer may not be willing to spend the time to figure what they need. Education built in to it is important. Sometimes the decision tree can get to complex that consumer loses sight of original objective. Suitability decisions may be difficult if variable products are used."
     - "Applicants assuming they know more than they do. Applicants skipping through instructions or educational material. Incorrect input resulting in a policy that does not fit their needs."
     - "They must get consumer "buy in" to a different way to secure insurance."
     - "…buyer confusion with the end process could kill the goose! Having multiple provider entities will only serve to dampen the buyers interest in future purchases."
     - "consumer inertia – few people will use this"
     - "If the product customization is truly available the biggest obstacle will be an informed and educated buyer. Perhaps a profile of the buyer will determine the product and leave no choice to the buyer."
   - Other issues at insurance companies (8)
     - "The only real obstacle to this strategy is the flexibility of legacy systems and competing internal priorities. There is nothing in this strategy which requires a quantum leap in technology as the capability already exists.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

.NET technology (in isolation or as a thin layer sitting above a legacy system) can already do most if not all of the requirements of this strategy. .NET solutions are entirely compatible with web based distribution strategies and enable matrix driven product design, pricing engines, document output. With the correct upfront design of suitable product chassis and pricing alternatives new product launches do not even need the use of IT resources. The skill is in the product design and product pricing which live outside of the technology environment."

  - "Conflicts with current distribution"
  - "Tying together the worlds of P&C and Life/Health insurance. Even in companies that offer both, their communication is normally small and limited to offering a token life policy with a P&C policy."
  - "Assuming that it is more than "a cool web tool" (see below), the biggest obstacles faced by Your Way will be its own people! The vast majority of people in the insurance industry cannot think beyond business as usual. This will require a massive restructuring of insurance company business practices and management structures."
  - "The system challenges will be significant."
  - "It is not clear whether online underwriting will be adequate. Some human intervention may be desirable, but that may involve today anyway people with different areas of discipline and expertise. That starts to be costly. The issue is the possible wide disparity in offerings."
  - "Designing the product system requires understanding what the consumer is looking for – not what the provider thinks they need."
  - "Possible increase in lapse ratio if policyholders find out later they could have purchased something that was less expensive. This might be avoided if there was some type of policy comparison mechanism."

- The U.S. regulatory environment would make this difficult to execute. (6)
  - "This strategy can best be implemented outside the United States in a more progressive regulatory environment. At present, state regulation would be a deterrent in building personally unique products."
  - "They will still have legal and regulatory issues, but issuing multiple policies should help overcome objections."
  - "Current insurance regulations"
  - "Trying to get the state filings done with enough flexibility to allow the customized choices"
  - "Underwriting multiple coverages from one "application" could create regulatory resistance."
  - "Designing the optimal mix of products and licensing them in the appropriate locations will also be a challenge."
- Finding the right people for this, and getting them to the website to try it (5)
  - "Focused advertising – how would you be able to target the right people with your products as opposed to blanket advertising?"

Appendix D-1
Detailed Summary of Responses to Round Two Survey

  - "This could work in some situations of insurance and not in others, for example very young couples who have a new baby and a mortgage; they want some form of life insurance protection and that might be a simple enough product that you could use this strategy."
  - "I think getting people to use the site will be difficult. People don't usually go shopping for a whole list of insurance products so they may not be attracted to the site...Perhaps a lot of advertising will be needed to entice people to the site, and if you give them a great experience they may remember and come back next time they need some coverage."
  - "I do not see why consumers would be attracted to this model."
  - "Keeping the marketing to the right audience – those who regularly use computers, etc., relatively younger, etc."
- Simple products won't address complex needs. (4)
  - "Devising simple products that can be piled up to really address complex problems."
  - "…the strategy talks about addressing "comparatively complex needs" – do you really expect the customer to find all of the simple products that will address their needs in an effective manner? Complex needs are probably better addressed through integrated products that require someone who has a lot of knowledge – like an insurance agent or a broker – to be able to answer questions and explain products in detail."
  - "Products are too complicated and most of the time insureds need assistance in explaining what they are purchasing. If you make it simple enough for them to understand, is the coverage worth having? Not sure this has much merit."
  - "Identifying the right number of choices allowed – simplicity vs. complexity of the choices"
- There are no unusual obstacles. (1)
  - "I don't see any unusual obstacles with this strategy. I think the technology already exists today and to a certain extent is in use."
- No answer (3)

2. *Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?*
   - Blue Ocean strategy (8)
     - "There is not room in the market for many companies adopting this strategy – you need scale**.**"
     - "Blue Ocean, if it is feasible and works, otherwise a Blue Ocean waste of time and effort and expenditure."
     - "It will not be easy for others to replicate the effort."
     - "…if regulation hurdles are removed**."**
   - Window of opportunity (7)

Appendix D-1
Detailed Summary of Responses to Round Two Survey

  - "Online sales of insurance products are commonplace and the further advancement of this sales technique will only evolve."
  - "I don't see this as being dramatically different than several existing insurance quotation web sites."
  - "Good execution of the strategy rather than the strategy itself is likely to be the key differentiator."
  - "Combination products" that are focused are likely to become more popular as they reduce the number of products that insureds-owners need to manage and maintain."
- Not a Blue Ocean strategy (3)
  - "It's a strategy to make this a commodity type product, so that price would become the only distinguishing feature."
  - "Without something being done to affect demand, this type of strategy most likely would not have a material effect on sales."
- Neither
  - "I don't think this is a feasible idea, so it's neither."
- If expanded, could be a Blue Ocean strategy
  - *Please see the expanded strategy description in the Round 3 questions.*
- No answer (5)

3. *What other observations do you have about this strategy?*
   - This could get a positive "buzz" on the net and take off. I'd pitch it to consumer financial columnists."
   - This would be expensive for the insurance company since, instead of one integrated policy that suits all of their needs they're going to be issuing multiple policies from different operating units.
     - There is also complexity arising from the issuing of multiple policies. When claim time comes around, if a person has purchased a number of policies, would the operators all share claims information or would the claimant be required to submit multiple sets of documentation to multiple operators?
   - It will likely be most successful coming from a name they recognize and trust. Maybe Amazon, Visa or IBM, and issuing on different paper make it harder to establish the brand name.
   - Products, pricing, educational material and every aspect of these types of sales must be targeted to the lowest common denominator (IQ, reading level, comprehension, etc…) and there will only be so far you can go with products that will be effective using this type of platform. In using this type of platform the market environment will be a commodity / lowest cost driven model where "value added" benefits will go out the window on a direct basis. In my opinion some products can not be "simplified" enough to abdicate the use of agents or producers in our current markets.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

- Test it well in the marketplace before trying to implement it.
- This idea seems cumbersome.
- There doesn't seem to be a compelling case per general items A-D above. I don't see that many people would be excited by the opportunity to design their own insurance policy with the exception of very complicated estate tax issues for high net worth individuals.
- With the aging of producers, this could be the 'next generation'. Leads to holistic planning which is lacking in our industry.
- This is a good one to explore! I think it has strong potential.
- Nothing to stop this being executed now.
- I would limit this to true insurance products, as opposed to investment products, e.g. deferred annuities. This strategy might combine well with Strategy #8.
- Great area for a big Life/Heath / P& casualty provider to look into. Maybe they have.
- Because it will be extremely difficult for an existing company to dramatically change entrenched insurance business practices and management structures, it is probably an insurance newcomer that will be most likely to execute this strategy. It will then be a long time, if ever, before existing companies can compete.
- Need some requirement mechanism that forces the buyer to make a decision. If buyer does not take customization then social product is required.
- I believe that it has real merit. It fits nicely with the current trend in using on line capabilities. A lot of intelligent customers would love to be able to fine tune their insurance portfolios to best address their current needs.
- This WILL work but the devil is definitely in the details!!
- The model / process needs to be designed so that the typical prospect does not need to call the expert to use it. Like the learning aspect of the concept – improvements and refinements based on use. Again, it's not the technology; it's the effective, innovative use of technology. The competence of the design team.
- What this question suggests to me is the use of on-line to develop a customer account. One should not expect customers to buy a whole range of insurance products at one time, but adding products to one's account sounds attractive in the insurance context as it does elsewhere.

Strategy #6: Strategic Partners Insurance Company – for Operational Excellence

Like many companies, Strategic Partners Insurance Company is investigating increased use of technology for incremental improvements in operational excellence. It is considering a substantially increased investment in this area to pursue a "Blue Ocean" strategy to find innovative technological breakthroughs that may result in intellectual property rights. It is also considering strategic partnerships with non-insurance entities that could provide leveraging of applicant underwriting or claims information.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Examples might include access to online prescription or medical records, motor vehicle records, court records, shopping records, insurance policy and application records, biological or genetic sources, etc. as well as claims adjudication facilities that would complement internet policy administration.

Among candidates for a strategic partnership are a major pharmacy chain, a forensic laboratory, a supermarket chain, a credit card giant, a GPS (Global Positioning Satellite) device manufacturer, a biofeedback technology firm and even a big name jeweller - to make a medallion that is both a status symbol and a monitor (and transmitter) of basic life parameters – the 'bling' factor.

Questions for Strategy #6:

1. Is there anything such as intellectual property rights that Strategic Partners might enforce to prevent everyone else from copying the process and lowering the profits for all?
2. Is this an ethical strategy? Is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair?
3. Is this a "Blue Ocean" opportunity for players outside of the life insurance industry more than for insurers? For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets?
4. If Artificial Intelligence systems can encapsulate the knowledge necessary for medical underwriting, then does medical underwriting necessarily have to remain the province of traditional insurance companies?
5. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #6

There were no responses to about 1/3 of the questions. About one third of the responses were sceptical or critical or either the practicality or ethics (or both) of the strategy. Another quarter of the responses evidenced some support for the strategy, but often only under certain conditions. Finally, two respondents felt the description of the strategy was insufficient or the questions unclear; if so, this contributed to the level of non-responses.

Tabulation of Answers to Questions for Strategy #6:

1. *Is there anything such as intellectual property rights that Strategic Partners might enforce to prevent everyone else from copying the process and lowering the profits for all?*

   No response, not sure, or not important: 12 responses
   Yes, if very narrowly defined (e.g., for a specific process using technology): 7 responses

Appendix D-1
Detailed Summary of Responses to Round Two Survey

No, unlikely, too complex or difficult, could backfire: 6 responses
Pursue exclusive or limited partnerships and/or non-disclosure: 3 responses

Notable comment:" This strategy mixes products in a highly regulated industry with products which might be in industries which are not regulated. The problem with mixing products with insurance products is a potential violation of unfair trade practices…regulators are very keen to prohibit linking the sale of insurance with another product. All in all, it is complicated and probably not worth the effort."

2. *Is this an ethical strategy? Is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair?*

No response, not sure, not relevant: 9 responses
Not ethical: 6 responses
Ethical, not unfair if fully disclosed/understood: 5 responses
Consumer reaction or (lack of) understanding more important: 4 responses
Some aspects ethical, others are not: 2 responses
Use information for marketing, not underwriting: 2 responses

Notable comment:" No, this is not an ethical strategy; it is horrifying…I can think of few things our industry could do that would cause a greater crisis of confidence among our clients than this."

3. *Is this a "Blue Ocean" opportunity for players outside of the life insurance industry more than for insurers? For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets?*

No or probably not: 11 responses
No response: 8 responses
Yes: 5 responses
Maybe: 4 responses

4. *If Artificial Intelligence systems can encapsulate the knowledge necessary for medical underwriting, then does medical underwriting necessarily have to remain the province of traditional insurance companies?*

No, already not, probably not: 14 responses
No response: 8 responses
Yes for large/complex cases: 3 responses
Carrier will make ultimate decision/be responsible for privacy: 3 responses

Notable comment:" Medical underwriting is an evolving field and requires professional attention and focus. If AI provides a point-in-time capability, there will be anti-selection processes and algorithms that develop around the AI solution. Professional people must continue to be involved."

5. *What other observations do you have about this strategy?*

No response: 13 responses
Strategy problematic/unethical due to complexity and privacy issues: 6 responses
Strategy is poorly defined: 2 responses
Better opportunity is data collection/mining for marketing: 2 responses
Consider a medical records company: 1 response
Consider a watch maker: 1 response
Opportunity for General Electric: 1 response
Not likely outside China, perhaps not there: 1 response
Industry needs better inspection reports and financial reports: 1 response

Notable comment:" There is no strategy discernable from this description. "*We will use technology to do something with someone outside the insurance industry*" is not a strategy! Furthermore, has the author ever heard of HIPAA? The use of any information that is health related is extremely limited by HIPAA."

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse - technologies are often required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Questions for Strategy #7:

1. What are examples of previously uninsurable risks that could be insured through a micro-policy?
2. What methods of distribution, either existing or potential, could be used to target these risks?
3. Are there other definitions that could lead to micro-policies – geography, ethnicity, etc.?
4. What other observations do you have about this strategy?

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Summary of Round Two Responses for Strategy #7:

Niche opportunities were identified to cover hazardous non-work activities (insured is knowingly taking a risk), specific diseases or medical conditions (insured is subject to genetic or non-cosmetic surgical risk), or environmental events that could cause financial loss (but perhaps not death). The spectrum of risks was broad and ranged from commonly described risks such as private plane piloting to highly creative risks associated with an extra-marital affair, or with a political campaign.

The distribution suggestions ranged from traditional (agents and brokers) and electronic (kiosks, internet, cell phones) to third party (event promoters, retail stores) where quick, small, low premium (but high profit margin) niche sales could be an ancillary part of some primarily non-insurance purpose. Examples include an event registration, an immunization for travel, or a retail goods purchase. The respondents felt that the sale had to be fast (minutes or seconds) and cheap to tap into a distribution system for another purpose.

Many respondents stressed the difficulty of pricing without statistically significant data and also the importance of getting the pricing correct, to strike the right balance between profitability and affordability.

Tabulation of Answers to Questions for Strategy #7:

1. *What are examples of previously uninsurable risks that could be insured through a micro-policy?*

The majority of responses suggested niche opportunities to cover hazardous non-work activities (insured is knowingly taking a risk), specific diseases or medical conditions (insured is subject to genetic or non-cosmetic surgical risk), or environmental events that could cause financial loss (but perhaps not death). The spectrum of risks was broad and ranged from commonly described risks such as private plane piloting to highly creative risks associated with an extra-marital affair, or with a political campaign.

Summary	Responses
Hazardous sports and activities (bungee jumping, extreme sports, rock climbing, private plane piloting, space travel etc.)	8
Specific diseases, medical conditions or procedures (HIV positive, heart surgery, LASIK, terminal illness, experimental surgery, etc.)	7
Very specific event, not necessarily resulting in death (travel delay for executives, hostage, key witness, roadside bomb, specific body part for famous person, complications from surgery)	6
Lifestyle choices (public speaking, extra-marital affair, political campaign)	3
Foreign travel related activities in hazardous countries (vacations, humanitarian aid workers, missionaries, journalists, soldiers, etc.)	3

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Animals (race horses, pets)	2

Notable Comments:

- "Risks are everywhere—from riding the subway to work to an overseas trip—and its just a matter of culling out the more widely shared risks, quantifying them and marketing the product."
- "While many events can be "priced" for in the marketplace the ability to price for risk that also is "affordable" is another consideration."
- "If you insure these people at the right stage of their disease, it's quite conceivable that they could have a limited-term policy for five or even ten years. So I actually see micro-policies as a real possibility. Medicine is constantly changing and we're getting better at treating many different diseases."

2. *What methods of distribution, either existing or potential, could be used to target these risks?*

Again, we have received a lot of specific ideas. Some have been in use for a long time (agents and brokers) and others suggested quick, small, low premium but high profit margin niche sales as an ancillary part of some primarily non-insurance purpose such as an event registration, an immunization for travel, or a retail goods purchase. The majority felt that the sale should be fast (minutes or seconds) and cheap to tap into a distribution system for another purpose.

Summary	Responses
Incorporate fee into event charges, or sell onsite at event registration or event organizers	7
Advocacy groups, worksite, direct response, agents, specialized websites, credit card websites/offices, airport booths, kiosks	6
Travel agents, immunization doctor's offices, outfitters for extreme sports, cashier at checkout (for warranties) – businesses for which this is incidental sale	4
Magazines that appeal to target market, 1-900 numbers – cost directly charged to phone bill, cellular phone with text confirmation, PDAs	4

Notable Comments:

- "Definitely niche markets and not mass distribution."
- "Micro-policies have to be highly automated to be profitable. Distribution, payment and administration must be electronic."
- "The distribution method would follow, not precede the identification of the opportunity… commissions will be small – enough to compensate the agent for a quick, automated sale which involves no administrative work…sale may be incidental to their non-insurance role (like the Best Buy check-out clerk selling warranties)."

Appendix D-1
Detailed Summary of Responses to Round Two Survey

3. Are there other definitions that could lead to micro-policies – geography, ethnicity, etc.?

This question yielded few responses. The respondents may have felt they had already answered this in question number 1 (and one respondent wrote that).

Summary	Responses
No answer (this question did not get nearly the responses as the others)	15
Certain ethnic groups or countries disproportionably susceptible to certain diseases or violence (Tay-sachs, Celiac, also families with a genetic predisposition)	4
Age or income related groups (high net worth, traveling seniors – snowbirds)	2
Worldwide organizations (Shriners) or certain workplaces	2
Environmental-related (pollution coverage, climate coverage, flood)	1

Notable Comments:

- "perhaps micro-add-ons to cover additional risks on top of a given traditional coverage"
- "anything where there are valid statistics could be created technically."

4. What other observations do you have about this strategy?

Respondents stressed the difficulty of pricing without statistically significant data and also the importance of getting the pricing correct, to strike the right balance between profitability and affordability.

Summary	Responses
Price is a real issue –must be both profitable and affordable	5
Data with statistical significance is difficult to obtain	5
Potential likely to increase over time as growth increases niche opportunities for small premium, high profit percentage policies	5
Administrative costs must be minimal – cannot be done with 19th century paperwork	3
Possible legal or unfair discrimination obstacles	2

Notable comments:

- "You've really got to get your prices right, not only to make it profitable for the company but to ensure that it's something the consumer feels they can afford."
- "If you start segmenting unlikely events that happen a lot less frequently, the variance in claims will be problematic. However, segmentation leads to greater profit overall."
- "complete the insurance sale very quickly, for example in the minute or two before a bungee jump … when someone buys something as small as a $20 electronic device, they are asked "*Would you like an extended warranty?*" If they respond "Yes", the warranty price is added to their purchase and the warranty document prints out as part

of the receipt. Everything is done in seconds. Until a few years ago, this delivery method did not exist. The sale is viable for warranties with a one-time premium of only a few dollars."

Strategy #8: Holistic Insurance Company – "Risk agents" help mitigate all risks

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Questions for Strategy #8:
1. How viable is this strategy? Could such a service be offered at a price that would be attractive to potential clients?
2. What technological barriers or other obstacles are there to such a strategy?
3. What other observations do you have about this as a "Blue Ocean" strategy?

Summary of Round Two Responses for Strategy #8
By about 2:1, respondents said this strategy was "viable" but it was not nearly so clear that the respondents thought this was an actual "Blue Ocean" strategy. The responses seemed very polarized in that respondents were either very enthusiastic or very pessimistic towards the idea. The latter group were primarily concerned about overcoming regulatory and pricing obstacles. One respondent provided an example where something similar is already being done.

> "Although not exactly the same as the model, I do have a practical example. ABC Inc. has a long-term care service company that among other things provides underwriting and claims administration for LTC policies. One of the other programs they have is "safe at home", where they do an in person assessment of the insured's home to look for opportunities to make modifications that would reduce falls and identify other ways to improve safety (e.g., remove throw rugs, add banisters or replace steps with incline, add railings in level areas, improve

Appendix D-1
Detailed Summary of Responses to Round Two Survey

lighting, etc.). Although this is a fee-for-service program, it should also help reduce LTC claims from falls and help preserve the insured's quality of life."

Tabulation of Answers to Questions for Strategy #8:

1. *How viable is this strategy? Could such a service be offered at a price that would be attractive to potential clients?*

   Viable: 12 responses
   Not viable: 6 responses
   Other: 10 responses

   - There certainly is a need for linkage of insurance to more types of events
   - This is my favorite strategy.
   - However, with AI and an interactive program that produces a correlation of risk across product lines, this could be a breakthrough.
   - Rolling the cost of all those policies into one is going to add up to a fairly large sum of money which I think consumers will have a reluctance to pay.
   - It is a high cost service so is likely to be successful only with high net worth clients.
   - This type of model would be better service by say a partnership with a wealth management firm where you could gain synergies in dealing with risk
   - Great idea with no distribution strategy.
   - Holistic Insurance Company would have difficulty responding to claims from agents/financial planners selling products from large, well-known companies and claiming "I/We already do this for our clients as a part of the fundamental needs analysis."
   - The only way to attract and retain "risk agents" is financial incentives, which would restrict the market.
   - My general comment about this strategy is that the low volumes of diverse risks would make it very difficult to justify the spend required to make this work
   - How would data be consistently collected and interpreted?
   - A new more efficient distribution system should be able to generate a significant price advantage.
   - I think this is more regulatory than any thing and the factors that would limit it are in that domain.
   - I like it. Some section of the population would like it.
   - "Risk agents" could be today's financial planners but with better tools.
   - Best way to find out is to outline the service, the benefits, price it and ask the prospects if they're willing to pay for it.

2. *What technological barriers or other obstacles are there to such a strategy?*

   None: 4 responses

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Legal and regulatory issues: 3 responses
Data may be very expensive to gather and analyze: 2 responses
CRM information and well-integrated admin systems: 2 responses
Pricing problems: 2 responses
Commission issues: 2 responses
Training salespeople: 1 response
Modeling software is critical: 1 response
Good infrastructure: 1 response
Policy will be about an inch thick: 1 response

3. *What other observations do you have about this as a "Blue Ocean" strategy?*

Optimistic: (4)

- Seems like there's something to this.
- I think this is possible.
- This strategy could be combined with Strategy #5.
- This should be doable in the next 5 years if somebody just gets on it!!

Pessimistic: (7)

- the current sales force could not suddenly expand their knowledge to that extent
- Up-front across the board selling sounds too tough
- Very hard to take a holistic approach if we cannot deliver each component piece first.
- It is not unique enough to be "Blue Ocean".
- This is most likely to appeal to high net worth customers and it is notoriously difficult to make money out of these individuals as they tend to have multiple professional advisers.
- Just would seem to be off limits in today's world.
- Until we arm agents with new concepts of risk and/or new products, there is no Blue Ocean strategy.

Other: (5)

- It will likely take a very long time to become pervasive
- I see this as a strategy to benefit the customer from a wealth management situation and an insurance company that works in conjunction with financial services or partners
- Holistic planning is lacking in our industry today.
- The success would seem to depend upon the caliber of the risk agents.
- Seems limited but it is based very much on the client need or behavior which may just fit a Blue Ocean strategy.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Strategy #9: Big Brother Insurance Company – Monitor individuals' health, risk profile

Big Brother Insurance Company seeks to build a "Blue Ocean" strategy around emerging technologies that will allow it to monitor and measure, on an ongoing basis, the risk profile of insured individuals. For example, a device could be installed in an insured's car that measures the distance driven, speed, whether seatbelts were used and even breathalyzer results.

Other technologies possible are:

- Home health monitoring devices that could periodically send information over the web such as heart rate, breath rate, blood pressure and weight.
- Personal/private information, such as some doctors' reports, may be accessed in electronic format.
- A personal electronic database could help with the treatment of an insured in the case of an emergency.

Since these technologies are invasive, clients would need to be provided with significant incentive in order to agree to this level of monitoring.

Questions for Strategy #9:

1. How viable is this approach? That is, could enough cost savings be generated to pass some back to the customer and still make an enhanced profit for Big Brother?
2. How much of a premium discount would be needed to make this strategy viable?
3. Is there any other incentive that could be offered to a potential client for this type of product?
4. What other observations do you have about this strategy?

Summary of Round Two Responses for Strategy #9

By about 3:1 respondents said this strategy was not viable. Many thought it was not possible to arrive at feasible premium discount that would make this style of product attractive to a consumer.

Tabulation of Answers to Questions for Strategy #9:

1. *How viable is this approach? That is, could enough cost savings be generated to pass some back to the customer and still make an enhanced profit for Big Brother?*

   Not Viable: 16 responses
   Viable: 5 responses
   Other: 4

   - Technically yes, legally no.

Appendix D-1
Detailed Summary of Responses to Round Two Survey

- I think people would pay a premium to buy a product which would include such a personal "locker". (Many have been motivated to build personal medical information "lock boxes" for individuals and families. So far, I know of no success.)
- Speaking as a consumer, my first response would be that it's way too invasive.
- Yes I believe it could, since not everyone is paranoid about privacy rights.
- In realty I don't ever view the cost savings to get to a point of someone willfully giving up control to allow this type of invasive monitoring of their life
- Sounds like a possibility
- Where is the cost savings?
- What do you do if the monitor says the car was speeding and the policyholder says that he loaned it to a neighbor or his son was driving or he was taking someone to the hospital? Do you revoke the policy? Increase the premium? Can you take action after the contestability period?
- Seems too invasive to be viable.
- The approach is not at all viable.
- Yes, the savings could benefit both parties
- It would seem very difficult.
- Most people would not want the insurance company to be collecting this real-time information on them.
- New, more sophisticated devices are being developed and these devices are being built with PC interface so that individuals can track health stats in their personal health record.
- I think this would need to be offered on a voluntary basis, rather than mandatory
- The cost of monitoring devices and the related monitoring and analysis software would be extremely high. That coupled with the low acceptance rate of customer would seem to make this unviable.
- The technology is available now but this approach is likely to increase and not decrease costs.
- If clients felt the technology might save their life or if the company simply made it a voluntary option, some segment of clients would opt for it.
- Would the information be used to change premiums over time? Perhaps a benefit of this strategy could be "wellness consulting".
- The proposed insured who benefit would like it but the ones who don't – the other side of the coin, would not like it and would object to over monitoring.
- For example, I may be tempted to send driving information only when my ultra conservative wife is driving. I don't know how much data you would have to gather to determine if there are really statistical differences.
- The customer benefit would have to be huge – both financial and non-financial. The non-financial would have to be stressed to get this near the tipping point.
- NOT FOR ME, AND PROBABLY NOT FOR THE VAST MAJORITY OF MOST PEOPLE, AMERICANS ANYWAY, TODAY AND IN THE NEAR FUTURE. GOVERNMENT AND BUSINESS HAVE BECOME TOO

Appendix D-1
Detailed Summary of Responses to Round Two Survey

INTRUSIVE IN PEOPLE'S LIVES. THE POTENTIAL FOR INTENDED OR UNINTENDED ABUSE IS TOO GREAT.

2. *How much of a premium discount would be needed to make this strategy viable?*

Cannot quantify: 6 responses

< 10%: 1 response
< 20%: 4 responses
< 30%: 1 response
< 40%: 0 responses
< 50%: 1 response
< 60%: 1 response

Significant: 3 responses

> $500: 1 response

3. *Is there any other incentive that could be offered to a potential client for this type of product?*

There is nothing that could be offered that would provide an incentive: 3 responses

- Health / accident monitoring
- Air miles, money donated to charity on their behalf, free internet access, cheap cell phone packages
- Bundle a life and auto policy
- Service that continuously monitored the parent's condition
- Pair the device to an iPod
- Some kind of family benefits
- Could be sold as a free health check every X period in addition to the reduced premiums
- Safety and life saving
- Wellness programs, quality of life
- Offer faster service. More coverage.
- Early warning of potential health problems.
- Longer life expectancy
- Second opinion of doctors' reports.
- Better information for emergency care providers
- Avoidance of DUI fines, DUI related accidents
- Rapid notice of health emergency

4. *What other observations do you have about this strategy?*

Appendix D-1
Detailed Summary of Responses to Round Two Survey

- It would be better to position this as a health monitoring/counseling system offered by a company specializing in this, with a deal for life and health insurance, taking advantage of the information.
- I can see an application of this strategy in the auto insurance industry
- There are lots of people who would be willing to trade privacy for cash – those concerned about privacy will just go elsewhere.
- We may need independent watchdogs to ensure the data is not misused
- Within the U.S. market I believe the protections we have as a society will not allow this type of approach or technology to be used in the marketplace
- A long-term effort, with much technological breakthrough could be required, but the approach could be attempted a piece at a time.
- I would think that any information garnered will be used as a basis to raise the rate because the actuaries can no longer be flexible on the impact of unknown information.
- I don't think this has much value.
- Seems plausible.
- There is no strategy discernable from this description. "*We will use technology tools to monitor and measure, on an ongoing basis, the risk profile of insured individuals*" is not a strategy.
- Some of this seems to be happening today. Car insurance.
- I don't really see today's population being of a state of mind to want this type of "service".

More viable with health and safety conscious market segment.

<u>Strategy #10: Virtually Real Insurance Company – Virtual World Insurance</u>

Virtually Real Insurance Company is exploring the concept of virtual world insurance. Virtual worlds, like SecondLife, are online experiences where people enter the "world" as an avatar – or electronic representation of themselves. These "worlds" are becoming more and more "real" as they draw more participants – including corporations - and the experience becomes more sophisticated. As this virtual reality expands, opportunities may be created for insurance – possibly distribution, marketing… or even products.

Questions for Strategy #10:

1. What advice would you give Virtually Real regarding the potential for marketing insurance in virtual worlds? For providing insurance products in virtual worlds?
2. How might virtual worlds blend with the real world to create opportunities for insurance companies?
3. What obstacles might a company face in pursuing a strategy that involves an online, virtual world?
4. What other observations do you have about this strategy?

Appendix D-1
Detailed Summary of Responses to Round Two Survey

Summary of Round Two Responses for Strategy #10

Most respondents struggled to find any value in the virtual world idea, or simply made no comment. Most of those who did see an opportunity described it in terms of educating participants or using the virtual world to motivate real world insurance purchases.

Tabulation of Answers to Questions for Strategy #4:

1. *What advice would you give Virtually Real regarding the potential for marketing insurance in virtual worlds? For providing insurance products in virtual worlds?*

Decline to answer – 12
See little or no opportunity / don't go there (4)
Proceed with caution - data may contain high level of errors or fraud (3)
Use virtual world environment for education about insurance needs, offer simulated (not real) insurance, use for promotion of real products in the real world (3)
May require substantial research
Use as a marketing tool with product advertising – participants can see what happens when a virtual family member dies
Virtual experience can not substitute the benefits of personal relationship with the client

2. *How might virtual worlds blend with the real world to create opportunities for insurance companies?*

Decline to answer – 15
Use as an interactive tool to save costs and educate the buyers; information tool, not a sales office (2)
May allow more effective cross selling, effective decision making and a good place to test products free of regulatory constraints (2)
Could allow people to simulate real world risks in a virtual world

3. *What obstacles might a company face in pursuing a strategy that involves an online, virtual world?*

Decline to answer – 15
Fraud, lack of security/privacy and anti-selection (5)
Unrealistic avatars (2)
Rules of the virtual world (2)
Lack of interest in real world problems/needs (2)
Brand building in virtual may not translate to real world

4. *What other observations do you have about this strategy?*

Decline to answer – 14
Do not understand this or see this as a viable tool for selling insurance (6)
Intriguing/interesting/plausible/"just goofy enough to have merit" (4)
"Suicide is much less painful in a virtual world."

Appendix D-1
Detailed Summary of Responses to Round Two Survey

"I wish these kinds of products were available in the sixties when many of my associates lived in altered realities."

Appendix D-2
Complete Responses to Round Two Survey

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

One company has already adopted a version of "part 1" of this strategy, issuing up to $250,000 of term life coverage to individuals age 18 to 60 "generally within minutes" based on "just a few health questions" answered online. An immediate decision is provided and, if approved, the applicant can print their in-force policy online.

Questions for Strategy #1:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
   - **Participant 1:** Part 1 is not Blue Ocean, as the technology is widely available (though not as easy to implement as it might seem). Part 2 is Blue Ocean as it involves substantial technological development, which could be patentable.
   - **Participant 2:** Yes
   - **Participant 3:** This seems to be a viable "Blue Ocean" strategy. Certainly, this strategy could be extended to larger policies simply by expanding the underwriting criteria. As far as older applicants, generally the older the applicant, the more uncomfortable the applicant feels with sharing personal history and medical history over the internet. I have had much experience in seeking business process patents in the insurance area. From my experience, the underwriting process must have associated with it some form of automatic algorithm to produce results for the process to be patentable. But certainly, a patent should be sought and the term "Patent Pending" should be associated with the process.
     Until the sophisticated buying public believes that their information is secure and will not be disseminated, they will be hesitant to put sensitive underwriting data, including electronic fingerprints and blood, on the internet. Their thought is that electronic data can be more easily stolen and otherwise disseminated.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4:** Of all the strategies put forward in this survey, this is probably the one that can go the furthest. As much as we can, we try to work in a paperless environment, so I see very real potential for this strategy to be developed. I also think that, going forward, young people will embrace this technology.
- **Participant 5:** I see this as Blue Ocean, especially as we move to part 2. Prefilling in the app with information the company already knows may be a frightening experience for the applicant – "they know that!". I don't see the one drop of blood instant analysis coming in the next ten years. However, it will come eventually – I'd say most likely 25 years out.
- **Participant 6:** I think Part I of this is more a window of opportunity using existing technologies that exist and the current evolution of those technologies. Part 2 is more of a "blue ocean" strategy that this is well beyond the current use of data/technology and in conjunction with the current wave of use of electronic health records this could offer profound changes in how information is gathered, analysed, and health information verified through the use of technology (vs. human directed laboratory work, assuming the "pin prick" can be taken and worked with without human intervention).
- **Participant 7:** Seems like it is something many companies are moving towards, but of itself, is just moving with the times, and may only be marginally useful
- **Participant 8:** It's Blue Ocean because it doesn't seem quite all the technology is available for the home computer user today.
- **Participant 9:** This seems to me to be a window of opportunity rather than a BOS. There doesn't seem to be a significant barrier to entry for competitors. Maybe if they could get a major "Green" group to endorse the product they could have a slight advantage as long as the endorsement lasted. There may be some cost benefit but I'm doubtful that it would have a major price advantage.
- **Participant 10:** Window in a niche market which is computer astute, middle market
- **Participant 11:** "Jet issue" is a window of opportunity for as yet undefined market segments. There is little evidence that buying would increase significantly for the market as a whole as a result of instant issue. Most buyers feel that insurance is a significant purchase and that a reasonable delay means the transaction is being taken seriously. If jet issue turns out to be a significant opportunity, it also appears to be one where competitors could duplicate the technology fairly quickly.
- **Participant 12:** No answer.
- **Participant 13:** This appears to be one where early players have the advantage, and would then become a requirement to compete in the market.
- **Participant 14:** This is probably not a "Blue Ocean" strategy because the product largely still competes with traditional sources of distribution. The "Green" component contributes to the uniqueness and has value to some customers but is likely not enough to be considered "uncontested market space ripe for growth". It

Appendix D-2
Complete Responses to Round Two Survey

feels worthy of exploration as several companies are trying to do aspects of this (Transamerica's Velogica, etc.).

- **Participant 15:** I believe that this may be both. Certainly if a concept is original and has merit, others in the industry will follow. I believe the Blue Ocean here is that technology would open up the ease of doing business and intrigue consumers that would not otherwise be reached.
- **Participant 16:** Done right, this is a blue ocean because it changes the landscape like Google did search engines right which led to their dominance in online advertising and subsequently other forms of searching.
- **Participant 17:** Is this a "Blue Ocean" Strategy? YES
- **Participant 18:** It would seem "part 1" is a strategy. The market place for lower face term life policies will always be young buyers who easily embrace new technologies.
- **Participant 19:** This is an opportunity for early movers. While diabetics will usually have equipment for blood sugar testing the majority of the population will not and it is unlikely that it will be cost effective to get it into their hands at home – alternative walk in clinics or pharmacies. It is very difficult nowadays to get a 'process patent' which is not substantially technology driven and most of the technology here is not new – but the integration of it may be! Differentiation would come through best execution of the strategy.
- **Participant 20:** If the standard is "does it create new markets or new applicants?" I think the answer depends. For term insurance, it could, but in my opinion not by large factors. To materially impact term sales, perhaps availability through a TV or touch screen computer interface as a start would help. Sales could be geometrically increased If combined with easy cost summaries, instantaneous and painless method to obtain medical information, and immediate feedback on the underwriting result. Further, if this service was combined with TV or computer marketing to appeal to emotional purchases additional sales might be generated. This approach leverages an individuals desire to do what's important but tied to a method that completes the process while the individual is motivated. I'm not sure this approach would be effective for anything other than term. Life insurance is a black hole that people do not understand. Easy access does not fix that problem. They must understand what they are purchasing and be favourably inclined to the value proposition and perceive that it is a "good" deal, especially when larger premiums are involved.
- **Participant 21:** This is more a window of opportunity.
- **Participant 22:** I don't see it as hugely blue sky as it just builds on the current ways of doing things, just uses existing or newly expected technology.
- **Participant 23:** Paperless is NOT a Blue Ocean strategy. It is already being done and it confers no sustainable competitive advantage. Those who don't do it may be hurt; those who do it are not going to pull substantially ahead. All survivors will go paperless for most of their business. Although paperless is not a Blue

Appendix D-2
Complete Responses to Round Two Survey

Ocean strategy, going paperless can facilitate other Blue Ocean strategies. For example, paperless applications can be truly customized to the risk profile of the applicant rather than one size fits all approach of today's paper applications. Such customization could be part of a Blue Ocean strategy for risk selection.

- **Participant 24:** Seems to be more of a early adopter strategy.
- **Participant 25:** I believe that it is a window of opportunity, it is a creative and effective way of using new technologies but it may be easily replicated by others. It may be an Ocean of Opportunity for Accenture.
- **Participant 26:** It does not appear to be a "Blue Ocean" strategy to me, but simply a refinement of current processes. Additionally it does not address the current problem of accessing the middle market which is not prone to keying into technology. It still requires insurance to be sold to the populace when there is still a great amount of under-insurance occurring.
- **Participant 27:** Opportunity for early players
- **Participant 28:** It's not clear this is a new paradigm. This kind of approach has existed for several years. What might expand the strategy to be more of a breakthrough would occur if physicians computerize their patient records and insurers can get permission to access them. Even for smaller policies such as those in the example, insurers may want to periodically get such information as a post-issue quality control check, and possibly allow for early claims investigations.

2. What specific methods could be used to expand the concept to larger policies and older applicants in the near future?
   - **Participant 1:** One is almost tempted to say the answer is "just do it." The hurdles are:
     a. Dealing with added testing and requirements for older individuals and larger amounts. The company would want to think creatively about the requirements and how they could be restructured to work with this program.
     b. Reinsurer's attitudes for automatic cessions, and procedures and time response for facultative. Limiting this to automatic cession levels would be a good way to start.
     c. Concerns about anti-selection in the process. One method to deal with this is to institute random (or artificial intelligence generated) fraud checks. Due to the directness of dealings applicant to company, fraud ought to be somewhat reduced.
     d. Concerns about price / underwriting classification shopping, if it becomes easier for persons to apply easily to many companies.
   - **Participant 2:** Pharmacy records, timing and accuracy on computer entry on applications
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Paperless underwriting is the way to go for certain age groups and insured amounts, however to extend beyond those groups you would require this

touch-screen type of information gathering. I can see that happening, although it's probably going to require more than one slight prick of blood to get the information you require. If you're going to get blood, you're going to want to test for multiple impairments.

- **Participant 5**: For cases outside of reasonable age/size limits I see either a longer time horizon involved or a supplementary step – perhaps a visit to a field station or a nurse/doctor. These cases would be assisted but not automated by the technology, and the technology can be used to indicate exactly which items need in depth checking based on the information already submitted.
- **Participant 6:** Similar to how the advances in home testing devices have produced more viable and accurate results the same use in medical testing devices can be developed to either send to applicants or accompany the current paramedical screeners to provide a real time assessment of a persons medical conditioned that can be compared to their current health information (via use of electronic health record) to provide complete underwriting in a virtual real time environment. This would save in the expense of laboratory testing, time/delay of decision making as the information is routed through various sources before a final decision is made, allow information to be sent electronically helping to produce higher accuracy of data and results allowing a more efficient way of providing services to clients. Once the information has been uploaded into the carriers automated underwriting system then policy information can be sent to the insured within hours of finalizing results. This could expand the face amount of policies up to the point of financial underwriting. Conditions under which underwriting takes place may be relaxed also saving in the human intervention of the underwriting process. I would estimate that under these conditions that up to 75% of policies applied for could be taken, tested and issued in an almost virtual environment. Combined with the use of electronic health records, advances in medical screening devices and a combination of biometrics and advanced screening protocols (both as a tool in the underwriting process as well as providing security for the insured) the issuance of life insurance can be done to provide further access and affordability to insure a higher percentage of customers.
- **Participant 7:** Genetic testing certainly seems a key future device
- **Participant 8:** It depends how much health information you can get from the prick of blood. Also, how is build/BMI information to be obtained in this process? Perhaps it's more a question of whether the life insurance industry will move toward pricing its products to conform to the information that can be gathered this way. If you can't get verifiable build information, for instance, perhaps build should be taken out of the underwriting and out of the projected mortality assumptions.
- **Participant 9:** The information would have to be beyond questionability and such that it could be used in a denial for fraud.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** Expanding may require signature for any amendments to the policy via voice or website. Would need some internet searches for public records to justify financial underwriting.
- **Participant 11:** Expansion to older ages could easily be done through a more detailed questionnaire with conditional binding. There is evidence that immediate binding is important.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** We need experience right now more than we need new methods. This is very new, in early stages and we have to see how it goes, then react accordingly.
- **Participant 15:** Not being in the life insurance industry, I'm unsure of how to answer for them. HIPAA guidelines are very different for the LTCI industry. In LTCI, I could see this being a possibility for certain younger age categories where medical requirements aren't ordered. For older applicants I don't be this is in the immediate future. Certainly Medical Facilities are migrating towards electronic storage of information. As long as data standards are developed this should be feasible and be very valuable to the industry.
- **Participant 16:** Expanding the concept is about information—tapping into external sources will provide a complete picture to allow real-time electronic underwriting.
- **Participant 17:** Delay approval / refer back to doctor's opinion.
- **Participant 18:** No answer.
- **Participant 19:** There is no real reason why this approach is limited to smaller policies other than risk mitigation and anti-selection. Verification of medical records and use of other databases such as pharmacy benefit managers databases and MIB, MVR and Credit Reports etc can help to mitigate some of that exposure.
- **Participant 20:** Use the above approach but definitively define all costs such as current and guaranteed COIs and expenses, agree to notify them prior to any changes, price the products similarly to other financial products where the costs are asset based, and provide high value to the applicant in relation to other products competing for the same dollars. This "choice" should be tied in same fashion to a message that is both logic and emotionally based. If it could have the look and feel of other alternative investments and provide value with immediate feedback in the application process, buyers would respond very favorably. The applicant would respond more favorably if they did not perceive they were on the bleeding edge. This multiple companies should be offering this.
- **Participant 21:** This could be used in conjunction with Strategies #5 and #8 to expand it to a package of insurance products customized to the individual customer.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 22:** With some initiatives underway to create central clearing houses for medical records, it may become more feasible.
- **Participant 23:** Smaller policies and younger applicants are the natural place to start. As industries transform processes, they always start "with the easy stuff" – but they don't stop there and neither will insurance companies. One persistent fear is that paperless applications do not elicit the same level of complete and truthful disclosure. Perhaps, perhaps not. For sure, the comparison is only relative, as our traditional methods have never elicited complete and truthful disclosure. There is, in fact, substantial reason to believe that teleinterviews, which are a method of paperless risk assessment, do a better job at getting at complete and truthful disclosure than paper applications. The concern is more with on-line, applicant completed, applications.

  Without the social pressure of an agent or a teleinterviewer and the leisure to take the time to answer the questions strategically, there is a tendency for applicants to be less forthcoming on on-line applications. But this can be mitigated. Here are a couple of ways:
  - Forthrightly tell the applicants that the information that they provide will be checked against various electronic databases and that deviations may cause their application to be automatically rejected. Applicants are fuzzy on what we can check and cannot check and many will assume that we can check more than we can – they will then have incentive to tell the truth. Since we can, however, check more information than ever, we need to be sure to do so. We should prefer third party information over self-reported information.
  - Redesign our questions to elicit better responses. This is an area that insurance companies have given surprisingly little thought, yet cognitive psychologists have known for years that how you ask the question impacts the response that you get. Our questions suck! Once freed of the need to fit a one-size-fits-all application on a couple of printed pages, we should take the opportunity to dramatically redesign our questions.
- **Participant 24:** There are a lot of life based analytics in the marketplace that are generally free (demographics, living activity, buying habits, etc) that could give a pre underwriting profile that companies could qualify applicants.
- **Participant 25:** No answer.
- **Participant 26:** I believe significant privacy issues will block expansion of programs like this, especially to the older ages where Congress and AARP are VERY sensitive to marketing issues.
- **Participant 27:** No answer.
- **Participant 28:** Use prescription data base hits (which show acceptable insurability) as a condition of coverage for larger policies and older ages.

Appendix D-2
Complete Responses to Round Two Survey

3. Do you think "part 2" of the strategy will become feasible in the next 5 years? In the next 10 years?
   - **Participant 1:** For individual administered, comprehensive, real-time, affordable blood analysis to be ready, I guess 50% chance in 5 years, 90% chance in 10 years.
   - **Participant 2:** Part 2 is a 10-year strategy
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I think it's feasible within the next 10 years. Not every company is pushing the technology boundary – it's a limited number, so I think you could get one or two companies doing something like this within 10 years.
   - **Participant 5:** In the next 10 years? No – I see it taking over twenty years to get there.
   - **Participant 6:** If a company were to adopt the focus for the approach and were to make the necessary investment to launch advanced technologies many of the advances could be accomplished within the next 5 years and I believe fully developed within 10 years (and perhaps expanded upon in the marketplace due to a higher level of competition).
   - **Participant 7:** Sure.
   - **Participant 8:** Next 5 years
   - **Participant 9:** I doubt if the average home computer would have the exact technology needed, but in general, the technology for Part 2 should be feasible within 10 years and quite possibly available within 5 years.
   - **Participant 10:** Possibly. Need to clearly define issue date vs. paid date and what is bound when.
   - **Participant 11:** It is already feasible.
   - **Participant 12:** No answer.
   - **Participant 13:** Possibly, but administering and addressing, e.g. privacy issues, may push out implementation.
   - **Participant 14:** Components of it will be feasible in 5 years, but it will be 10 years before it is fully operational as described.
   - **Participant 15:** 5 years – Maybe; 10 years - Definitely. Really depends on the skill level of the producer and how soon the 30-40's take over the distribution chain.
   - **Participant 16:** The technology will be available for this in 5 years but won't be generally accepted; it will be feasible within 10 years.
   - **Participant 17:** Yes (in 10 years).
   - **Participant 18:** Although the technology exists today, it seems unlikely that a commercially accessible database of digital finger prints will be available in the next 10 years.
   - **Participant 19:** Yes but dependent on medical facilities following the same approach as some Kaisers who are now making medical records available to their patients on-line.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:** Yes, but towards the end of the 5 year period. 10 years, yes.
- **Participant 21:** My guess is that "part 2" is possible in 5 years and likely in 10 years.
- **Participant 22:** No, I think more time will be needed.
- **Participant 23:** It is not clear if Part 2 is suggesting that records be looked up via fingerprints or that a fingerprint could be an acceptable "signature" which then allows records to be looked up via traditional identity parameters.
  A fingerprint as a signature is feasible. It is far more reliable than today's electronic and even paper and ink signatures. I suspect that fingerprint signatures are already even legal. Paper and ink fingerprint signatures have long been used in countries with low literacy. Electronic signatures require a "unique mark" which this provides. The only difficulty with the fingerprint signature is that most computers today are not touch screens capable of collecting the fingerprint. But the paramedics who collect the blood, could have a small fingerprint device.
  Using a fingerprint as the basis for linking a person to their records is not feasible. Fingerprints would either have to be embedded into the innumerable databases which track us or there would need to be a national registry, accessible to insurance companies, relating our fingerprints to the other elements of our identity -- with those other elements then being the keys to the other databases. I don't see political will or the technology to allow either to happen. Beyond the problems that the civil libertarians would have, the technological component is also important. Although fingerprints are unique there is no accepted standard as to how to define a unique fingerprint via database technology. My understanding is that the best technology of the FBI is slow and only short-lists fingerprint matches.
  Although it is unlikely to get down to one drop of blood in the next ten years, there is more promise via the ability of blood tests to provide risk assessment information. For sure, the amount/kind of information available via blood tests will continue to increase. The risks associated with our lives, however, are only partially captured via the biochemistry of our blood. Another major category of risks relate to our lifestyles. The insurance industry has been slow to reflect lifestyle considerations in underwriting.
- **Participant 24:** Next 5 years-Yes. Next 10 years-Absolutely.
- **Participant 25:** No. HIPAA and the disarray of health provider and insurance company data won't be this organized in 5-10 years, if ever.
- **Participant 26:** Maybe in 5, but more likely in 10+.
- **Participant 27:** Fingerprint technology available. Fingerprint access to company files – yes; MIB files – yes; broader databases (e.g. gov't, etc). – No in 5 yrs; Maybe in 10 yrs. Legal issues to resolve.
  Blood analysis 5 yrs no; 10 yrs possible along with other metric sensors.
  Advanced analysis capabilities of retina scanners, fingerprint scanners, cell phone (all in one communication device) sensors, etc.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 28:** Absolutely likely within 5 years. Changes are already occurring at this time.

4. Is there a patentable technological advance that would lead to a solution of legal issues regarding the use of underwriting information collected as described in "part 2" of the strategy?
   - **Participant 1:** Definitely yes. You would need an alliance with a medical equipment company to do this.
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I'm not aware of one.
   - **Participant 5:** There might be, but it is probably similar to developments we will be seeing for on line banking, online doctors, on line lawyers.
   - **Participant 6:** I would say that most of the information used in a "part 2" situation would become part of a persons electronic health record in the same way that medical information from providers (and carriers) would be made a part of someone's electronic health record. Currently this is in the evolutionary process but within the next 5 years there will be standards, security established and a way to access, share, and use this information in such as way that a persons rights are protected and the information secure from unauthorized access. I am sure that through the use of digital or electronic health records there will be a number of patentable technologies put into the market for use. Much the same as the use of electronic prescription fulfillment, the use of electronic health records is the next evolutionary step in further use of technology within the health care sector (and this will have a direct affect on all insurance that uses any type of medical information in the evaluation of risk…life, disability, accident, etc…). There are currently a number of competing organizations that are developing electronic health records and this is considered in the infancy of this technology use, I see exponential growth in the use, functionality, and robustness of electronic health records not only within the U.S. market but on a worldwide basis. Eventually there will be a international strategy to create standards and use of information much the same with other technology forms (from software to interoperability of hardware).
   - **Participant 7:** Depends on the uniqueness of the technology. What other observations do you have about this To me, the bigger blue ocean potential here goes beyond the application to full digital recordkeeping and its potential for CRM.
   - **Participant 8:** If a user chooses to subject him/her to the information gathering devices, what legal issues would there be?
   - **Participant 9:** The collection technology should be patentable, but I'm not sure it would lead to a resolution of legal issues. Perhaps a patentable DNA marker could be used for identification that would meet legal requirements.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** Not that I am aware of.
- **Participant 11:** No.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** Sure, predictive modeling could be used to develop an algorithm for underwriting decision-making for "part 2". That algorithm could be patented but others would be developed as well and the patent itself might not be particularly valuable.
- **Participant 15:** Not sure, don't believe it's been part of the past.
- **Participant 16:** No answer.
- **Participant 17:** Use affiliated doctor's offices or laboratories to administer the tests.
- **Participant 18:** Since the technology already exists to "read" a blood sample and perform limited tests (blood sugar). It is reasonable to assume expanded testing could be done. However, if all the requisite testing has be performed on the actual blood, then it would have to occur in the remote device, which would then upload the test results electronically. This seems like an every expensive piece of hardware, so would it ever be feasible to locate them in enough convenient places to make it consumer friendly. It seems like going to a medical facility to give a blood sample would be just as easy on the consumer. One approach could be to ship a blood gathering device to the applicant, which could then be forwarded to a test facility. That still seems expensive and overly complicated.
- **Participant 19:** Process patents are difficult to obtain nowadays but that does not mean that it is not a worthwhile strategy for those who have the financial means to execute upon it properly – very few probably. Most of the legal issues relate to obtaining data with the insured's consent (only where non public data) and disclosing to the insured if an adverse decision has been made as a consequence of the information and electronic signatures (whether fingerprint or voice) are already accepted by the courts to be as valid as a wet signature. Releases can be handled by electronic means by signing on-line and declines due to data can be handled through normal existing practices required under the Fair Credit Reporting Act.
- **Participant 20:** N/A.
- **Participant 21:** Possibly some sort of encryption methodology that would be used to protect the privacy of information.
- **Participant 22:** No I think existing systems could handle that piece.
- **Participant 23:** Yes, the handheld fingerprint collection devise carried by paramedics.
- **Participant 24:** Not sure.
- **Participant 25:** No answer.
- **Participant 26:** I don't see a single patentable tech advance here. I think there will need to be several.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 27:** Yes, possible. On-line exam / diagnosis of acute and chronic trauma.
- **Participant 28:** Not sure.

5. What other observations do you have about this strategy?
   - **Participant 1:** How does the testing instrument get to the applicant? For agent initiated contact, you have a ready answer. For more direct means, by mail or express? At a kiosk? Roaming practical nurse? Some of the answers will depend on costs, and for example, how much of cost is with the machine, and how much with the expendables (reagents, vials, etc.).
   - **Participant 2:** Large company strategy not available to many companies. At the same time you need a company willing to alienate their field force.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I think that the concerns over privacy and how we handle information are bigger issues today than they were five years ago, and quite rightly. So I think that there may be some confidence issues with customers. However, I can see that at some point in the future it will become possible to have blood drawn and to get analyses and tests done fairly quickly.
   - **Participant 5:** We are so appallingly bad right now at securing the limited information floating around in public and commercial databases. It is hard to see how we are going to secure all these sources of online information adequately, and I foresee the rise of a massive legal industry in breach of confidentiality and identity theft. This, and not just the technical issues, will cause this strategy to take much longer than expected to achieve success.
   - **Participant 6:** I see this type of strategy evolving beyond the current way of thinking from the "pin prick" use for blood analysis to a higher advanced form of obtaining medical information such as use of laser technology, radio wave length technology, and other means to "peer" into a person to obtain health information, history, and diagnostic information. I can see technology advancing to the point of the use of a monitoring kit that has various instruments that can be plugged into a laptop device with USB ports that can gather various data such as blood pressure, oxygen levels, heart rate, blood (through a drop less route), bone density, and a vast number of other data elements that are currently gathered in a classic clinical or medical facility.
   - **Participant 7:** No answer.
   - **Participant 8:** Good strategy
   - **Participant 9:** There doesn't seem to be a compelling case per general items A-D above.
   - **Participant 10:** Truly savvy computer shoppers will be very price driven and make it difficult for company to be profitable as compared to traditional distribution. Is price that discounted compared to filling out a normal app
   - **Participant 11:** It is not a market mover.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** The core of this idea is the nearly immediate decision on underwriting using simplified methods. Extending this to be fully marketed as paperless is a good marketing concept, but I don't see it is being as innovative or having as much potential some other "Blue Ocean" ideas.
- **Participant 15:** No answer.
- **Participant 16:** It needs to be integrated into other financial aspects of the applicant—changes in retirement saving, outlay for a home, birth of a child, marriage, etc.
- **Participant 17:** I think it is feasible.
- **Participant 18:** All in all, "part 2" seems unlikely to happen.
- **Participant 19:** Good execution of the strategy rather than the strategy itself is likely to be the key differentiator. Much of the technology and process capability already exists but is disparate unconnected places. May need to be an iterative process as certain technology gets into the hands of the end consumer on a large scale.
- **Participant 20:** N/A.
- **Participant 21:** My biggest concerns would be privacy/security of data.
- **Participant 22:** A key problem here is the touch screen and where does it originate. If POS maybe, but insurance in the US is not sold that way to a large extent. From an agent's laptop? Don't see that, as agents are getting less involved due to teleunderwriting. Maybe the paramedical contact is the source. Go to a paramed station, take your blood, record your answers and order your medical records all in one move.
- **Participant 23:** Moving the same information and same information and processes from paper to electronic form is not Blue Ocean. Figuring out how to do business better once no longer constrained by paper has the potential to be Blue Ocean.
- **Participant 24:** Part one of the strategy will occur. Part two may be in a different form. Blood profiles will go out of style due to many evolving factors in underwriting.
- **Participant 25:** There are substantial operating and customer service advantages to minimizing manual effort and timing for enrolment and underwriting. However, there are real limits from both a legal and data perspective that will limit a life insurer's ability to do these things.
- **Participant 26:** Again, I think the privacy hurdle is going to be daunting. I significant cost/benefit paradigm needs to emerge to get society over this barrier.
- **Participant 27:** No answer.
- **Participant 28:** Need individual security protections. There're enough problems today with financial identity theft, and now to add on exposure to disseminating one's health information.

Appendix D-2
Complete Responses to Round Two Survey

Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"

As part of its strategic planning, Super Fast Insurance Company has concluded that a significant but affordable investment in increased computing power and speed and other emerging technologies can drastically reduce its time to market compared to its competitors and more than pay for itself in market share. It has dubbed this strategy "Quantum leap in time to market."

Super Fast believes that it can achieve "real time" pricing of policyholder options, even with in-force products, that will enable it to market far greater flexibility and consumer choice. Even with the increased degree of rigor required in analyzing product profitability, including stochastic testing, more powerful processors and faster networks would enable it complete turnaround in minutes that formerly took overnight.

Furthermore, Super Fast believes that Business Process Management (BPM) software will support rapid installation of product variations. This would allow products to be rapidly configured (without special coding) to different markets and a wide range of policyholder options. Recognizing that state regulation will sometimes remain a speed bump in the process, Super Fast believes that the strategy will nonetheless pay off handsomely in many cases.

Questions for Strategy #2:
1. What are the greatest obstacles to adoption of such a strategy over the next 5 years? In the next 10 years?

- **Participant 1:** The biggest hurdle is as stated, state regulation.
- **Participant 2:** Financial engineer arbitrage of the pricing
- **Participant 3:** I'm not sure I understand the true benefit of Super Fast underwriting. This is not a product which is generally an impulse buy, nor is it variably priced. That is to say, a quicker response does not give the buyer a better price. Conversely, a buyer's prospective may be that if an insurer is pricing too rapidly, the price must be higher than a company which thinks through its offer more slowly. All in all, I'm not impressed with this strategy.
- **Participant 4:** From a pure IT standpoint, increasing computer power and speed is a simple thing to do. Any obstacles would likely arise from the internal workings of an organization – how fast the internals can work. I think the greatest obstacle is always going to be how reactive or proactive the organization can be in making use of technology.
- **Participant 5**: I believe this is achievable today. One of the biggest problems is where to find the computing power in a secure and efficient manner – the answer to that may be in cloud computing or dedicated servers – computing power is

Appendix D-2
Complete Responses to Round Two Survey

becoming cheaper by the day. The difficulties must centre around regulation and administration and valuation systems, which are much slower to change than pricing or quotation software.

- **Participant 6**: Within the next 5 years one of the most difficult challenges is adoption by consumers (or whoever will shepherd the process to the marketplace). There will be some that will be early adaptors and embrace the use of this technology but many will bypass this use of technology for more fundamental and archaic processes. Education is a key factor in working the use of new technology into the marketplace. Education and communication of the benefits, ease of use and the security of information will be critical to get buy-in from the mainstream marketplace. Privacy of information, identity theft and other security issues are high priority issues that need to be addressed as the advances in the use of this model unfolds to the market. I see the adoption rate taking a longer approach and 5 years may be too soon to declare success and may be closer to 10 years before it is accepted as a mainstream way of doing business.
- **Participant 7**: Training or cutting out salespeople who won't be able to handle the variations. Also, speed to market also suggests that the creation and molding process of new concepts can be speeded up, which may be counter-productive
- **Participant 8:** Over either time frame, the backend financial reporting and projection of inforce business with such customized products could be complicated.
- **Participant 9:** Regulation
- **Participant 10:** Discrimination, filing is more than a speed bump, what is the ROI on upfront investment
- **Participant 11:** Cost.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** The biggest obstacle is that this would be a big change in culture for insurance companies. It's really has to start with the strategic intent of the company and the whole company has to be designed around this concept. The best chance of making this work would be to have a Gen Y or Gen X person start a brand new insurance company with young employees utilizing technology. Trying to convert a long-standing traditional insurance company to this mode would be very difficult.
- **Participant 15:** I come from the Wholesalers side of the equation and not sure I have reference points to make valuable statements.
- **Participant 16:** Adversity of big companies to do anything "super fast"
- **Participant 17:** Complexity!
- **Participant 18:** Response: It is entirely feasible that increased turnaround time for product pricing could improve speed to market. However, it has not proven feasible that BPM software significantly improves installation of product variations. BPM software has improved the implementation of processes and

workflows associated with policy service activities like policy updates, producing notices, reacting to messages from external services (banks, credit card processors, underwriting information vendors, etc.). However, BPM does not reduce the implementation and validation time required for automation of more complex administration functions such as tax compliance, complex calculations, etc.

- **Participant 19:** The only real obstacle to this strategy is the flexibility of legacy systems and competing internal priorities. There is nothing in this strategy which requires a quantum leap in technology as the capability already exists.
- **Participant 20:** The issues here are similar to those addressed in the answer to #1. Getting a confusing product to market faster does not increase sales. Sales may increase, but not at a "Blue Ocean" level. Speed helps when there is unmet demand and there are opportunities for buyer's remorse. I do not believe speed increases in delivery will drive demand for non-term policies. It may impact term sales to a limited degree if speed was the only factor involved.
- **Participant 21:** Greatest obstacle would be education/training of the distribution force, along with customers. Another obstacle would be required regulatory approvals.
- **Participant 22:** The need for blood results for preferred and the need to request medical records. Speed processing up all you want. These will be the slow down.
- **Participant 23:** There are no barriers beyond time and money. "Everyone" is already in this evolutionary process of installing faster hardware and easier to maintain interfaces (whether the interfaces are part of BPM software or not).
- **Participant 24:** Next 5 years-Not sure fast is the breakthrough, perhaps customization (a product for the individual). Next 10 years-States will no longer regulate insurance,
- **Participant 25:** Developing application software that will perform the needed artificial intelligence.
- **Participant 26:** Regulation, regulation & regulation! Also, I believe the industry needs to simplify its products, not make them more complicated. Most of the public (and distribution) does not understand what they are buying even today.
- **Participant 27:** State regulations.
- **Participant 28:** State Law is comfortable with categories (i.e., plans) of insurance coverage that it can regulate. States may feel this goes excessively beyond such categories.

2. How viable is this strategy, and what other obstacles should Super Fast anticipate?
   - **Participant 1:** Corresponding advances in developing marketing and sales material and training will be needed. This part seems to have more people-intensive requirements by it nature. While this accomplishment would be of great value to a company, quick pricing of options will not necessarily flow through to improved marketing results. It's just a part of the situation. The biggest benefit

Appendix D-2
Complete Responses to Round Two Survey

would be in avoiding mispricing of options. The next biggest would be reduced marginal costs for product development. My other skepticism is that the plan amounts to a claim that the company will finally solve the pervasive IT and product development problems of the insurance industry.

- **Participant 2:** No answer:
- **Participant 3:** One strategy general answer under Question #1
- **Participant 4:** I think there are some major hurdles in terms of the bureaucracy that IT developers have to go through in order to implement change. We do not have a good track record for fast-tracking; our business is long-term and highly regulated; and we have to ensure that products can and will sell.
- **Participant 5:** I believe it is viable but much more likely in Canada for example than the hideously over-regulated US. The costs of setting up the user interface and illustrations will be considerable, and it is possible that a third party software company will be the one to perfect the technology before direct writers – they can spread the costs over multiple clients.
- **Participant 6:** I believe the strategy is very viable and the only real obstacle to implementation is adoption by consumers and use of technology to integrate at the customer level. Given the evolution of technology there may be a multiple phase approach to rolling out complete functionality but believe technology exists to day to do processing in a real time environment. Perhaps another obstacle could be the "underwriting" dynamics in the use of technology. Are the assumptions used accurate? Is the pricing based on medical difference accurate and allow for the degree of variance based on various medical conditions? Is there a way to boil down decision making based on standard questions or standardized results from current lab results (no special lab work will be needed or the provider community can provided all needed medical testing without any new use of technology).
- **Participant 7:** See above. Also, speed of product to market suggests everyone doing it and lots of churning and unprofitable business
- **Participant 8:** No answer.
- **Participant 9:** Legal issues, administration headaches, cost to develop and maintain variations at the individual policy level
- **Participant 10:** Not convinced it would work. Human factor on analysis and assumptions sometimes cannot fit in a box.
- **Participant 11:** I do not believe the basic premise is correct.
- **Participant 12:** No answer.
- **Participant 13:** Unless the technology is proprietary, presumably other companies will adopt the technology mitigating the competitive advantage.
- **Participant 14:** This is addressed in my previous answer. An obstacle would be using too much of the views of more experienced traditional actuarial and insurance personnel!

Appendix D-2
Complete Responses to Round Two Survey

Participant 15: I come from the Wholesalers side of the equation and not sure I have reference points to make valuable statements.

- **Participant 16: I**t's not possible to jump to warp speed like this; the company should be architected to perform this way but start slowly and ramp up.
- **Participant 17:** Pricing of hardware – prices will increase with greater demand.
- **Participant 18:** One obstacle Super Fast may face is finding sufficient insurance product subject matter experts who can work effectively within the methodologies of the new strategy.
- **Participant 19:** .NET technology (in isolation or as a thin layer sitting above a legacy system) can already do most if not all of the requirements of this strategy. .NET solutions are entirely compatible with web based distribution strategies and enable matrix driven product design, pricing engines, document output. With the correct upfront design of suitable product chassis and pricing alternatives new product launches do not even need the use of IT resources. The skill is in the product design and product pricing which live outside of the technology environment.
- **Participant 20:** N/A.
- **Participant 21:** Our product array is already overly complex. This strategy would expand that problem. We need to move to more transparency rather than more complexity.
- **Participant 22:** If an average medium or large policy takes 46 to 60 days to turn around, faster process may cut 2 or 3 days off but that still leaves a lot of time to get an issue.
- **Participant 23:** Without a doubt, product design and implementation take much too long. But is the problem really a function of processing and network speed? My guess is that if we carefully examine the product development and implementation cycle of even the most computationally complicated product that total computation time is only a fraction of the total time and that that time often runs in parallel with other important design processes. Product design and implementation is much bigger than computations and when we look at the computations themselves, it is the selection of the assumptions and developing a strategy from the output that takes more time than the actual running of the calculations. How much time would be saved from the total design and implementation process even if computations were instantaneous? In the design phase of product design and implementation, it is the people-centered thinking, planning, and negotiations that consume most of the time, not the computing time. Business process management software has potential for substantially shortening the implementation portion of product design and implementation. Even once all key decisions are made, it often takes "forever" to get the product onto the system. Although other activities happen during this time period, such as production of marketing materials and training, it is often system implementation which takes the longest. But BPM software is no panacea for implementation.

Appendix D-2
Complete Responses to Round Two Survey

BPA will make routine changes much easier. BPA will often, however, not be much help for truly innovative products. BPA software is only as powerful as its configuration and it is not going to be pre-configured for the truly innovative ideas.

- **Participant 24:** With any technology dependent strategy, Super Fast must be willing to risk being the "Beta recorder" and others following quickly with more acceptable technology.
- **Participant 25:** The strategy is very viable. Again the key will be developing and maintaining software to perform the functionality. Super Fast will need one of the most outstanding in house application support groups in the industry.
- **Participant 26:** One of the biggest shortfalls today is consumer education. Unless they can teach their distribution and consumers "super fast" on the value of their offerings this strategy will go no where.
- **Participant 27:** No answer.
- **Participant 28:** Speed is your friend, I'll buy that, but speed also creates danger. The danger involves inadequate development of logic, inadequate contemplation of the range of possible outcomes, too much risk that "what you don't know you don't know" will have negative financial impact. As we have seen in the incredible hubris and financial disasters of other financial players, this is a huge risk. As one who has always seemed to push for "faster", in reaction to the environment I have worked in at some places, there is the need to make sure we can control the vehicle we are driving.

3. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
   - **Participant 1:** No, but it is an opportunity for early and late players. I don't see why others could not follow, and could use different technological particulars to avoid intellectual property and patent problems. There will be a significant capital development cost that would preclude smaller companies from following, unless renting out a third-party solution.
   - **Participant 2:** Window of opportunity
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I don't think that this is a Blue Ocean strategy; everybody is trying to get there. Also, in terms of internet business, once a company is doing something there will be others that enter the market to do the same thing.
   - **Participant 5:** I think this is more a window of opportunity than a Blue Ocean strategy because, once the legal objections are out of the way, many players will jump in very quickly.
   - **Participant 6:** I view this approach as a window of opportunity vs. blue ocean strategy. In using "smart" processes, transfer of medical information, prescription drug data, etc…the use of predictive modeling can do many of the things that are

Appendix D-2
Complete Responses to Round Two Survey

asked of within the context of the scenario described but instead of being on a group basis or large affinity group this is taken to the individual level.

- **Participant 7:** Strategy that companies have been using as an excuse for years
- **Participant 8:** Window of opportunity for early players
- **Participant 9:** This seems to me to be a window of opportunity rather than a BOS.
- **Participant 10:** Blue Ocean if it can truly be developed
- **Participant 11:** Neither.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** This is mostly a window of opportunity for early players. It could be fairly easily copied rather quickly.
- **Participant 15:** I come from the Wholesalers side of the equation and not sure I have reference points to make valuable statements.
- **Participant 16:** Some companies (like Cisco) have operated this way for years; ultimately, it comes back to product, quality and continued innovation.
- **Participant 17:** Neither.
- **Participant 18:** If only the product pricing part of "speed to market" can be accelerated, it does not appear to be a true "Blue Ocean" strategy.
- **Participant 19:** Early player advantage.
- **Participant 20:** My estimate is the later.
- **Participant 21:** Window of opportunity.
- **Participant 22:** Not blue sky really. Does not focus enough on the big problems slowing down issue.
- **Participant 23:** This is not a Blue Ocean strategy. Using powerful processers, network speed, and BPA to do the same stuff faster, do not constitute a Blue Ocean strategy.
- **Participant 24:** If the technology is truly revolutionary then it can open a Blue Ocean.
- **Participant 25:** Probably a "Blue Ocean" strategy because it will not be easy for others to replicate the world class IT development department.
- **Participant 26:** I believe this is not a "Blue Ocean" strategy, but simply an incremental change.
- **Participant 27:** Short term opportunity if just based on speed. Innovative system design providing unique documentable customer advantages (e.g. pricing, custom suitability, convenience, flexibility, etc) coupled with the ability to translate these advantages into compelling marketing messages move it toward a longer term blue ocean strategy.
- **Participant 28:** Although I disagree with the speed aspect of the strategy, the ability to examine policy options more broadly because of computer power,

Appendix D-2
Complete Responses to Round Two Survey

assuming it is accompanied by intelligent oversight, does allow for creative growth of new concepts and would be Blue Ocean…

4. What other observations do you have about this strategy?
- **Participant 1:** No answer.
- **Participant 2:** Too actuarial. Product loads and other expenses will eat up pricing advantage. Perhaps can be an outgrowth of reserve requirements.
- **Participant 3:** One strategy general answer under Question #1
- **Participant 4:** Even if you can get products to market faster, it might only give your brokers a short-term competitive advantage.
- **Participant 5:** Expenses will rise – valuation systems and admin systems will need to be replaced with more flexible software and therefore the price of insurance may actually rise.
- **Participant 6:** I think due to the changes in customer expectations, use of improved technologies, use of "smart" technologies, improved decision making, expense management this type of strategy is a given. Just a matter of time in when companies adopt such an approach to business. I see companies currently developing this approach to business and "real time" processing fairly standard among the largest writers within the next 5 years.
- **Participant 7:** Develop good and lasting basic products that don't need bell-and-whistling as a means of marketing
- **Participant 8:** It seems more brute force. It also seems to add to product complexity that already exists. Product complexity needs to lessen, not increase.
- **Participant 9:** There doesn't seem to be a compelling case per general items A-D above.
- **Participant 10:** Believe in Keep it Simple. ROI may be too low.
- **Participant 11:** I think it would be an interesting differentiator, but is unlikely to move the market.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** I'm a little skeptical about the value of the fundamental business model used here. That much focus on speed to market may have value in some niches but I don't think it has broad enough value to be worthy of the investment.
- **Participant 15:** I come from the Wholesalers side of the equation and not sure I have reference points to make valuable statements.
- **Participant 16:** I don't see speed alone being a differentiator; information produced on the fly will be helpful but it comes back to having the right products and the right market
- **Participant 17:** This is already being practiced by some market participants.
- **Participant 18:** None.
- **Participant 19:** Nothing to stop this happening right now with existing technology.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:** N/A.
- **Participant 21:** None.
- **Participant 22:** I don't intuitively feel that processing time is a major hold up in the process and zeroing in too heavily here just does not do that much.
- **Participant 23:** These suggestions seem to have been made based on an actuarial, rather than holistic perspective of product design and implementation. If the goal is either a Blue Ocean approach to product design and implementation (or a substantial change in product design and implementation in order to support Blue Ocean product innovation), then companies need to critically examine their entire design and implementation process and find where the road blocks are. One obstacle that is common is that there is very poor capture of learning from one design cycle to the next – documentation of processes is spotty at best and each new team reinvents the wheel. Another obstacle is the difficulty in balancing the demands of day-to-day management with the demands of forward looking design and implementation. It can take weeks to organize a key management meeting. No piece of software solves this problem.
- **Participant 24:** Very risky and not sure that first to market gains will offset the risk.
- **Participant 25:** For many, many years, the life Insurance industry has limped along on old systems that have very complex logic to support products that were developed and sold decades ago. No software vendors have come close to offering this kind of technology to the industry. We have seen similar successes on the P&C side, but the common denominator has been unbelievably effective IT departments. The norm for most life insurers is IT departments that are low cost operations with only resources to maintain existing applications. If Super Fast can create such a progressive IT development environment, they will have a substantial advantage.
- **Participant 26:** Front-end speed is nice, but what about the admin. issues on the back-end?
- **Participant 27:** Educating and assisting state regulators in first understanding and second engineering a process for testing and approving dynamic product models would make this an effective strategy. This is in contrast to a micro-component based amalgamation of individually approved/priced coverages to form the customized solutions. The dynamic product model would bring together the various components to address the comprehensive need and price the resulting customer-unique product incorporating "amalgamation" discounts and risk premiums. This could allow for a comprehensive insurance program/product that can dynamically adjust for life stage /life style changes. Also, posses a bit of a marketing challenge to educate customer on the product and the unique benefits this approach provides. Not insurmountable.
- **Participant 28:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

Strategy #3: Insurance W/O Borders Co. – Global internet sales where regs allow

The Insurance Without Borders Company observes that, across the globe, a wide variation exists in the regulatory environment and the associations that provide risk-related data. It is contemplating a proposed "Blue Ocean" business plan to take advantage of the current situations that are favorable - while other companies wait for world regulatory standardization.

The proposed business plan asserts that internet sales of life insurance could be made from many host countries - not just the United States and Canada. The plan is to choose a set of host countries with laws or regulations that permit (or at least do not prevent) internet sales of life insurance, and that allow the use of technologies currently available from a technical standpoint but not universally allowed from a regulatory standpoint.

The target is the ocean of people to insure in Africa, India, China and other countries relatively untapped by life insurance companies. The population growth of higher income individuals in these regions represents a marketing opportunity beyond the relatively mature domestic markets.

Questions for Strategy #3:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
    - **Participant 1:** Internet strategies are almost always imitatable, but a big player with name recognition and reputation frequently has predominant market share at any one point in time. Yes, it could be a Blue Ocean.
    - **Participant 2:** Blue Ocean.
    - **Participant 3:** But for replacement sales and sales to the elderly, the instances of fraud in the sale of life insurance are limited. This seems to be an excellent strategy except for the underwriting data and the payment verification. How does an insurer in a developing country verify personal underwriting information, especially when soliciting over the internet? As mentioned, the claim process could be tricky. My suggestion would be to set up verifiable standards for payment of a claim on the front end and then simply pay the claim only when those standards have been met.
    - **Participant 4:** The survey lists Africa, India and China as potential insurance targets. While all are really under-served areas of the world at the moment in terms of insurance sales, I'm not sure whether the people of those countries would actually embrace buying insurance through the internet. For example, among life insurance agents in India, one of the groups they sell to is their extended families, and that's not uncommon in some of the developing countries and the developing markets. In the short-term I can't see the customers in these countries embracing buying insurance over the internet.

Appendix D-2
Complete Responses to Round Two Survey

  - I think there could possibly be a lot of fraud and money laundering issues.
  - At best this is a window of opportunity for early players. If in fact there is a market, there will be competitors. Particularly in India and China, I don't see how you could become market dominant so quickly that no competition would arise.
- **Participant 5:** I see this as a Blue Ocean strategy.
- **Participant 6:** I view this as a window of opportunity and in my view companies are already working to tap these markets using current technology, partnerships, affiliations, and current country market data. Given the overseas populations, growth prospects and income levels most companies view these markets as a relative risk to the lack of data to engage statistical analysis that may exist in the U.S. and Canadian markets. The face amounts are generally more conservative due to the cost constraints and overall needs analysis. The risks are more in being too aggressive on mortality data and currency risk.
- **Participant 7:** Blue Ocean, though it would need to be selective.
- **Participant 8:** Early players.
- **Participant 9:** This may be a BOS rather than simply a window of opportunity. However, it seems like a combination of two strategies. One strategy is to find a friendly host country that would allow you to set up a global virtual insurance company. Another strategy is to approach the people of Africa, India, China, etc.
- **Participant 10:** Blue Ocean.
- **Participant 11:** Window.
- **Participant 12:** No answer.
- **Participant 13:** This sounds like a window of opportunity for the early players.
- **Participant 14:** No answer.
- **Participant 15:** I think more a window of opportunity for new players versus Blue Ocean, but again it's a fine line between the two.
- **Participant 16:** This is a new market. The technology and products to execute this strategy are easy. Full scale pursuit of this strategy will require a sophisticated network of partners in marketing and claims; the company that successfully solves these two problems will have a tremendous advantage over latecomers.
- **Participant 17:** Window of opportunity.
- **Participant 18:** This is a "Blue Ocean" strategy. The growth in life insurance is clearly in those unserved populations.
- **Participant 19:** Not a viable strategy in my estimation.
- **Participant 20:** I am not familiar with the sales per household in these countries compared to the US. If one can make the assumption that it is significantly less than in the US, then there may be real opportunity here. Again however, the basic US based non term product still makes for a complex and confusion purchase. A good start would be for term sales only, especially if coupled with some or all of

Appendix D-2
Complete Responses to Round Two Survey

the ideas outlined in Question 1. For term sales, this could be a blue ocean strategy.

- **Participant 21:** Window of opportunity.
- **Participant 22:** I see this as less blue sky and more trying to take advantage of regulatory loopholes.
- **Participant 23:** I am not convinced that it is either a Blue Ocean strategy or a window of opportunity. I think that it may be a window for failure. Assuming that it can be built, who is going to buy it? Is there a significant, unsatisfied need for insurance among the upper classes of these countries? If there is, why would they want to buy a long-term contract of trust from an entity that they have had no previous contact with, via the anonymity of the internet? If demand has to be built and hands held during the sales process, how is that going to be accomplished outside the control of national regulation? Has is premium going to be paid? (The countries with light insurance markets often have heavy currency control regulations.) And finally, if success is found in a particular market, what is to stop local companies from stepping in?
- **Participant 24:** Blue Ocean.
- **Participant 25:** No comment.
- **Participant 26:** This could be a "window of opportunity" if well thought out. Again, simple products would be the key as well as a uniform currency for transactions. The other big hurdle is going to be developing products that have cultural traction and appeal.
- **Participant 27:** Possible opportunity for early sub-standard players exploiting less regulated, less sophisticated market space. At first blush, seems like a tougher market for real value providers.
- **Participant 28:** This does seem like a Blue Ocean strategy. Operate and grow where others do not or have not yet.

2. Is this a strategy to bring the benefits of insurance to more people; or to exploit people not yet protected by regulation up to the standards of more mature markets?
    - **Participant 1:** It could be either, depending on the ethics and business approach of the company.
    - **Participant 2:** Bring benefits to more people.
    - **Participant 3:** One strategy general answer under Question #1
    - **Participant 4:** There is not enough information in the summary to answer this question, but it sure sounds underhanded to me.
    - **Participant 5:** Insurance is always sold, not bought – the same transaction can be viewed as exploitation or offering a service according to your politics.
    - **Participant 6:** The moralistic answer is to bring the benefits of insurance to more people as a way to provide the same protections that exist in the U.S. market however that being said you can never eliminate elements where profit is concerned that some companies will indeed exploit the market just as a way to

Appendix D-2
Complete Responses to Round Two Survey

generate revenue and in the end drive overall profitability and the expense of the insured population in these countries. While many countries may not have the same type of regulatory environment that exists in the North American market as more of a push is made into foreign countries by U.S. and "Western" companies those foreign markets will begin to devise and strengthen its regulatory oversight of these markets. One impediment is direct market access, such as in China by foreign companies.

- **Participant 7:** The latter in too many cases
- **Participant 8:** It would be all about the money.
- **Participant 9:** It may start out with altruistic goals and ultimately result in being exploitive.
- **Participant 10:** If it stays focused on HNW market who usually have advisors or a better than average education, then it is a benefit and not exploiting.
- **Participant 11:** More people.
- **Participant 12:** No answer.
- **Participant 13:** It could be either depending upon the ethics of the company and whether the market impediments represent those of a totalitarian regime (vs. consumer protection focus).
- **Participant 14:** No answer.
- **Participant 15:** Certainly the countries mentioned have existing insurance products. Bringing in Western products is just an expansion of capitalism and who said their products are inferior to ours? Maybe we, especially in LTCI, can learn from them.
- **Participant 16:** By targeting the more successful and sophisticated people in emerging markets, these savvy people have less need for regulatory protection. (It's not like selling Yak insurance to a peasant farmer.)
- **Participant 17:** The latter!
- **Participant 18:** Since the sales will be made via the Internet, it is safe to assume the buyers will be able to compare the cost of insurance locally to the cost of similar products in other parts of the world. As a result, the pricing will not be exploitive.
- **Participant 19:** The existing life insurance market in Africa (and India) is rife with fraud and requires significant local investigation of claims. Insurance Companies are likely to be on the losing end of things.
- **Participant 20:** Good question. Either could be the outcome. This question is not my area of expertise.
- **Participant 21:** I think that the perception would be "exploitation".
- **Participant 22:** Definitely the latter. Regulations often exist for a reason to protect proposed insured's rights.
- **Participant 23:** I think that it is arrogance.
- **Participant 24:** Could be either situation. Need to have both sides (host country and insured country participants) benefiting.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 25:** No comment.
- **Participant 26:** Hopefully not the later! The concern from an insurance company perspective would be the very likely possibility of market anti-selection. Most insurance, especially life, needs to be sold and I would be concerned about fraud and buyer selection.
- **Participant 27:** Depends on intent and ethics – could be either.
- **Participant 28:** The question presents harsh choices, but while I am most assuredly not a radical nut, there are aspects here of financial imperialism. The market definition will have to made far more precise than just citizens of certain unregulated or third world nations.

3. Considering the claims perspective, how can Insurance Without Borders verify claims in markets that lack open access to information; or where local certification authorities may lack sufficient checks and balances?
   - **Participant 1:** This is a big hurdle.
   - **Participant 2:** Through local banks who will be needed to process funds.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Even for policies sold through regular routes, getting the death certificates in countries such as India – where they have different ways of doing burials – getting confirmation that people have actually died could be very problematic. There are a limited number of professional claims investigators and I would think you'd have to get a lot more if you started pushing more of those internet sales through. There is already an increasing fraud problem with sales that have gone through more traditional routes, so I see this avenue as being fraught with problems.
   - **Participant 5:** As with all insurance, there will be a level of fraud, varying by product, policy size and territory and that will presumably be priced into the product. It may not be possible to actually achieve reasonable access or proper checks and balances, especially in China where the rule of law is so different from western experience. But why should this be more of a problem for a remote Insurance company than one operating locally. One can easily setup local claims offices without having local sales offices.
   - **Participant 6:** This is a risk of doing business and they will need to try to set up a system or process to try to validate claims in each market. They may hire vendors to do investigation work for the companies to validate claims and put in place specific requirements to file claims so each claim can be verified and authenticated perhaps by a disinterested third party. As in entering any market this type of information and infrastructure is always a challenge in operations and a significant risk in doing business. However this can be priced for and protections put in place to mitigate a portion if not all of this risk. Partnerships with in country life companies is one way to overcome this business risk and

work to enhance the ability to expand products beyond where they exist in any given market.

- **Participant 7:** Product design/benefits offered, might help in this area
- **Participant 8:** This will be a significant cost of doing business in these areas.
- **Participant 9:** Good questions.
- **Participant 10:** Seems like there could be some DNA gathered at issue that is then used to verity death w/ some video technology or given the HNW market it could be worth it for company to send someone independent to verify.
- **Participant 11:** Cannot do effectively without local networks and cooperation from local authorities.
- **Participant 12:** No answer.
- **Participant 13:** This would be a major impediment to the on-going business.
- **Participant 14:** No answer.
- **Participant 15:** This of course is a real issue and partnership with a local market would be essential.
- **Participant 16:** This will require local partnerships to verify claims; combining with a DNA sample at issue should close the fraud loop.
- **Participant 17:** Use of international data sources, like World Bank or United Nations.
- **Participant 18:** Validating claims would most likely need to be performed on a direct basis, similar to disability claims in the U.S. The cost would need to be included in the pricing and would have to vary by country or region depending on the government infrastructure available.
- **Participant 19:** As a practical matter I don't think they can cost effectively.
- **Participant 20:** N/A.
- **Participant 21:** No comment.
- **Participant 22:** Very difficult.
- **Participant 23:** This is a classic problem in insurance. Insurance is a contract based on trust. The lack of trust is one of the reasons why insurance markets are undeveloped in many countries. I read an article in the last week that pointed out there is a strong correlation between national trust economic development.
- **Participant 24:** DNA samples from all births or insured lives will be matched to DNA samples with each death.
- **Participant 25:** No comment.
- **Participant 26:** The only way I would see this ultimately being addressed would be through government endorsed programs. Other than that, this issue will remain for the foreseeable future.
- **Participant 27:** Use of advancing smart technology devices (e.g. see #1, Q3 response).
- Use of on the ground trusted partner networks (local knowledge, local access).

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 28:** It may need to license its own doctors, forensic establishments, and the like.

4. What other observations do you have about this strategy?
   - **Participant 1:** Several companies for years have sold in Latin America without local licensing. Success has been mixed. The companies offer the solidity and financial regulation of a stable country (the US usually), and contracts denominated in a sound currency (a big benefit). They also offer more advanced products, often than those locally available. On the other hand, they typically do not offer full consumer protection as a US state -- not all the US required provisions may be in place. It would appear all this would be also in place in this scheme, but substituting direct marketing for agent marketing. The legal consequences have been few. Fraud has been uncomfortably common.
   - **Participant 2:** Probably more likely to be done as a want to avoid regulation in developed countries.
   - **Participant 3:** One strategy general answer under Question #1.
   - **Participant 4:**
     - I question what laws the policies would be subject to? The laws of the actual country where the consumer lives, or where the internet site is located? Particularly in places like parts of Africa, where the insurance industry is not yet well-developed, I can foresee a lot of problems.
     - Life insurance internet sales are an unproven concept at best, and my experience has been that, as the saying goes, life insurance is sold and not purchased. Even if there is a group of high-income individuals who would buy this (which I very much doubt), there are enormous challenges.
     - Underwriting – how would this be done? Clearly, you would need some form of APS or paramedical exam from a reliable source, which would require licensing and someone on the ground in each of those countries whose regulations you were trying to avoid.
     - Anti-money laundering – the FATF standards do apply pretty much universally and require the company to know its customer – how would the company do that remotely?
     - Why would a customer deal with a company like this that is not local?
   - **Participant 5:** I see this working best with small face amount policies sold to large numbers of people rather than seeking out the high earners who will be looking for something more sophisticated and may respond better to a knowledgeable agent or broker representing multiple companies and products.
   - **Participant 6:** As with the previous question insurance fraud is the #1 issues regarding this type of strategy and combating abuses for financial gain. In my opinion one issue is the basic tenet of insurable risk. Currently a growing market product is Stranger Owned Life Insurance (SOLI) which is being used more as an investment instrument than a true life insurance policy. I don't believe SOLI is a

positive contributor to the life market and puts into place financial gain to disinterested third parties that are against the basic reasons for life insurance. I see this same type of abuse being perpetrated in foreign markets as well. Another aspect of doing business in foreign markets at issue is not only the regulatory environment but the peace officer force (law enforcement) as many countries have a lack of strong national police presence as well as a lack of investigative powers that are above influence so these markets could be ripe for criminal activity.

- **Participant 7:** Marketing and product niche would be key
- **Participant 8:** Great idea that requires significant research into multiple local environments to see how to best implement the idea.
- **Participant 9:** Some countries tax people on the basis of global income and while the company may not be subject to national regulation, the individual policyholder may be subject to local tax issues applied to global income. There are currency issues including countries that have currency export restrictions. This may present problems avoiding money laundering. There may be investment issues regarding how the insured's funds are invested (which markets and exchanges?). There would likely be issues regarding insolvency of the virtual company and lack of guaranty funds or other backing. Mortality and morbidity can vary considerably from country to country, and this would have to be considered in product pricing.
- **Participant 10:** Medical and financial justification could have same issues as claims. Data available to price products appropriately for lifestyle impact on mortality.
- **Participant 11:** I think non-US citizens can already buy insurance in the US. This would be an extension, but not a serious one, in that the internet is not an effective distribution vehicle.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** Too difficult to actually do in practice. Maybe I'm too narrow minded, but I'd want to see more demonstrated success of internet sales of life insurance in the U.S. before attempting to expand to other countries.
- **Participant 15:** No answer.
- **Participant 16:** Traction for this strategy will take longer but it could explode as economies emerge into first-world status.
- **Participant 17:** Not very feasible, in my view.
- **Participant 18:** Based on the perceived large amount of Internet scams emanating from these countries, Without Borders should assume a high percentage of fraud.
- **Participant 19:** No technology barrier but risks outweigh the benefits in my opinion.
- **Participant 20:** N/A.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 21:** In poor countries, it would seem that there are much greater needs than insurance, e.g. food, medical care, etc.
- **Participant 22:** Insurance is best sold and regulated by local markets. It is priced specifically for them.
- **Participant 23:** Read the case studies/histories of Iridium, the global satellite phone company. There are definite parallels. This proposal does not have the high-cost technological elements of Iridium, which is an advantage. But Iridium provided an immediate and tangible service, while insurance is a long term contract providing "security" – making it a more difficult sale.
- **Participant 24:** Very far reaching.
- **Participant 25:** No comment.
- **Participant 26:** I see something like this working in the long-term, but today's hurdles are VERY daunting.
- **Participant 27:**
    - Intellectual property rights (of distributor) and fraud (by distributor and consumer) are major concerns.
    - Selecting, training, compensating trusted partner networks is critical component for not only validating claims, but also for establishing a viable risk appraisal process.
    - Need marketing that exposes unethical providers and motivates prospect to provide verifiable personal financial / medical / lifestyle information.
    - Need marketing (and product) that touches the pain and provides the cure. Well structured market research and data-mining a vital to not only understanding consumer needs and desires, but also crafting compelling marketing messages and delivery tactics. Campaigns design based on unique market / consumer attributes of the target market.
- **Participant 28:** Modernistic underwriting techniques may need to be employed to insure validity of risk at time of issue. Perhaps middle class validation will be essential. If tax returns are files in the country, maybe the buyer might need to present them. Finally, the market opportunity should not blind company management to the need for proper financial and underwriting controls.

<u>Strategy #4: Global Insurance Company – Global data mining, marketing</u>

Global Insurance Company operates in many countries and is planning the use of internet/cellular/data-mining technology to access and promote its products to the non-insured population across the globe. The technology will need to work in a concerted fashion to result in creating the "Blue Ocean" segments. Internet and cellular technology would be used for educating (and simultaneously advertising), getting feedback (to gauge effectiveness) and collecting premium payments. The data-mining technology would assist in designing advertising and products and locating target markets across the globe.

Appendix D-2
Complete Responses to Round Two Survey

Global feels it is well positioned to use the Internet as a marketing tool to target "Blue Ocean" segments, especially the younger population, an international client base and non-working, retired adults. It plans to use "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person.

Questions for Strategy #4:

1. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
   - **Participant 1:** Possibly either.
   - **Participant 2:** Window of opportunities.
   - **Participant 3:** Artificial Intelligence ("AI") can be used in a host of ways, including complicated underwriting as suggested by Strategy #8. More on that later. In this Strategy #4, AI can better be used in the prospecting arena than in the underwriting arena. Again, patents are difficult to obtain, see my response to Strategy #1. The best way to protect intellectual property is by patent, copyright, or any other internationally recognized protection processes, by tight contracts, by ownership of the process and the data, and by contract penalties and incentives which encourage loyalty.
   - **Participant 4:** Unless you can come up with a product that is completely new and it's something you can patent, it's very hard to say that it's a Blue Ocean strategy. This is just a marketing concept that will be copied quickly if it works.
   - **Participant 5:** This seems like a Blue Ocean Strategy to me – it will not be easy to pull all the technical aspects together so there will be few players capable of success
   - **Participant 6:** Use of certain technologies may be "blue ocean" strategies in how information is gathered, how media pieces are targeted based on current purchasing or viewing behaviours and collection of premium (i.e. use of cellular technology to effect financial transactions). Marketing to me is just an extension of current trends or a window of opportunity as these methods are already in place in terms of education, ad placement and streaming of information to customers.
   - **Participant 7:** Blue Ocean – few insurers are doing good Internet marketing
   - **Participant 8:** Early players
   - **Participant 9:** If the strategy boils down to using internet/cellular/data-mining technology, then it seems like a window of opportunity rather than a BOS.
   - **Participant 10:** No answer.
   - **Participant 11:** Niche window.
   - **Participant 12:** No answer.
   - **Participant 13:** No answer.
   - **Participant 14:** This is approaching a "Blue Ocean" Strategy.
   - **Participant 15:** I don't really get this one.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 16:** No answer.
- **Participant 17:** No answer.
- **Participant 18:** I did not understand the use of internet/cellular/data mining technology.
- **Participant 19:** Early players but limited appeal.
- **Participant 20:** I believe it would be a blue ocean strategy. Success often comes from execution of an idea rather than the idea itself. My experience tells my life insurance companies still have a lot to learn when it comes to marketing. They do not have the staff or expertise to craft effective messages or effectively interpret the data. Even if they were able to accomplish this, they would still need to produce a content rich production piece to communicate the message itself. This combination of skill sets is beyond the ability of most insurance companies today. These types of messages require focused decision making with control of the budget in someone who has the skill sets to create, manage and oversee production of the finished product and message. Consequently, I do believe this would be a blue ocean strategy if a company could overcome these issues.
- **Participant 21:** Window of opportunity.
- **Participant 22:** Yes, I see this as more Blue sky.
- **Participant 23:** This is not a strategy, let alone a Blue Ocean strategy. A strategy is an interconnected plan which starts with a goal and a value proposition. This is simply a list of "cool tools".
- **Participant 24:** More Blue Ocean than early adopter.
- **Participant 25:** This is a window of opportunity.
- **Participant 26:** This COULD be a Blue Ocean strategy depending on the uniqueness of the marketing and placement processes. Consumer education and ease of purchase will be important. There will need to be discernible "hooks" to the advertising to pique the buyer's interest.
- **Participant 27:** Neither. The opportunity lies in the competence of the organization in understanding and using the data collected to develop and execute marketing strategies and tactics, measure the results and refine the message and tactics to maximize their marketing ROI.
- **Participant 28:** No answer.

2. Have the Artificial Intelligence advantages already been tapped out, or is there still opportunity for an inventive AI solution that leapfrogs all the current systems?
   - **Participant 1:** Yes, there is room, if for no other reason than that the opportunities as to technology in communications and data base linking is advancing.
   - **Participant 2:** All AI will never be tapped out by definition as true AI will generate new AI and so on.
   - **Participant 3:** One strategy general answer under Question #1

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4:** Merging all this data together and personalizing the sale has its benefits, and the technology is there, but it must be weighed against marketing concerns such as the tolerance of the consumers that you are targeting. It needs to be recognized that people in different age groups use technology differently. For instance, if a person makes constant use of the internet and their cellular phone, authorized suppliers can track trends and advertise to their personal needs. Although that approach may have a certain appeal to the younger demographic, an older person who is bombarded with advertisements will most likely turn off their cell phone. The challenge is in keeping the potential customer interested but not annoyed. Tolerance for this type of sales tool may be greater among younger people, who are more accustomed to media intrusion and also to buying on whim and fancy, while older groups tend to more selective and cautious and espouse greater privacy concerns.
    - There's also an issue with the type of product that you're trying to sell and the price range into which it falls. I see this sales avenue as more suited to short-term, highly specialized products than traditional life insurance products.
    - I don't think we have even begun to see the implications of AI, for good or ill.
- **Participant 5:** There is unlimited potential in AI and we have only scratched the surface. The more the area expands, the more possibilities proliferate in combining the multiple strands of this technology. I suspect that cell-phone based solutions will be key here as they are becoming universal, will have internet connectivity and the ability to photograph and send images. Only today I heard of restaurants displaying barcodes so that cell phone users can take a picture and software built into each phone can then send a web based query to provide menus, revues etc. This same technology can lead to huge connectivity and data gathering breakthroughs.
- **Participant 6:** The use of A.I. is really on in it's infancy for the use of product placement and understanding consumer habits. More information is needed but like using medical information (treatments, prescription drugs, etc…) for predictive modelling in medical cost the use of A.I. will allow for predictive placement of media content to target and create greater efficiencies for day to day consumers. More information needs to come from a more varied number of sources and that information correlated to get to enhanced purchasing behaviours based on life events, age, health status, etc….With this type of behaviour analysis not only can you direct ad placement but also specific product placement where from a regulatory standpoint you may help justify marketing material based on consumer buying patters via actuarial-market analysis. This will help ensure that consumer laws are protected and companies meeting the needs of its customers vs. taking advantage of uneducated consumers.
- **Participant 7:** It has not been used much at all

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 8:** It seems the stodgy insurance market is always a bit behind the latest technology, so it would be likely that AI solutions could still exist.
- **Participant 9:** I think AI solutions beyond what is done today are possible.
- **Participant 10:** No answer.
- **Participant 11:** I do not think "AI" will help here.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** I'm not sure I understand what the question is getting at, but I think using predictive modelling with publically available date provides enough information to make an underwriting decision for simplified insurance products with limited face amounts.
- **Participant 15:** I don't really get this one.
- **Participant 16:** a) AI is a misnomer; intelligence gathering tools feed data to rules-based engines that identify opportunity. These rules to identify opportunity will evolve and become more complex and sophisticated; this will become a competitive advantage to the first movers if they retain intellectual property rights.
  b) Technology continues to evolve (from pre-Internet, early-Internet, WWW, to web services) and tomorrow's information sources will overflow our ability to process them if we don't start planning today. Envision a world where data is accessible, consistently interpreted, linked, multi faceted—and your only limitation is how you process the input.
- **Participant 17:** No answer.
- **Participant 18:** AI would definitely be a requirement to develop on the fly, tailored messages.
- **Participant 19:** Advances in technology are continuous so unlikely to be tapped out either now or in the future.
- **Participant 20:** N/A.
- **Participant 21:** No opinion.
- **Participant 22:** I think they are still quite untapped in NA. Use of database information for insurance in NA sounds promising. Tie into specific demographic segments to target their needs.
- **Participant 23:** AI has definitely not been tapped out, especially in the life insurance industry where it has not even started. But none of these things are necessarily AI. AI refers to decision making capabilities based on automated learning. Data mining in and of itself is not AI. Use of cell phones to deliver product or receive feedback is definitely not AI. Better decision making in general, with or without AI, can benefit insurance companies. Because the basis for decisions is largely hidden from public view, better decision making is one of the most sustainable advantages a company can have.
- **Participant 24:** Always an opportunity but seems to need more concrete thoughts.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 25:** No answer.
- **Participant 26:** I believe we have only just begun to see the development of AI. There is a tremendous amount of opportunity still out there for new products and processes.
- **Participant 27:** It's not the technology, but the use of the technology. See above.
- **Participant 28:** No answer.

3. Is there anything such as intellectual property rights that might be enforced to prevent everyone else from copying the process and lowering the profits for all?
   - **Participant 1:** More likely than intellectual property rights would be a patent on the computer processing and communications
   - **Participant 2:** There still are international copyright conventions.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** It depends on what it is that you are talking about here – you cannot protect an idea or a concept, but you can protect technology and the expression of an idea. The fact is that there are several ways to approach this and if it is a good idea someone else will figure out a way to copy it. For example, one bank came up with internet banking and developed the software to make it work. The others quickly followed. Each has copyright protection on its source code, proving that there are several ways to approach the same challenge.
   - **Participant 5:** I don't think so technically. However momentum may play a big part – in the same way that anyone can provide a search engine but Google has momentum and scale on its side. In fact I expect Google or Microsoft to partner with insurance companies to go after this market.
   - **Participant 6:** You could with the hardware and software used to develop A.I. applications but a factor in enforcement is with each individual country. Some countries today do little to enforce intellectual property rights if even acknowledging them at all. China is one such company where intellectual property rights are loosely enforced (if at all) and the government basically takes a blind eye at how it hurts foreign companies if it will provide advantages to home country companies.
   - **Participant 7:** Most IP protection is by country, and there have been many marketing efforts already used to sell through technology, but it is still such a new area that there is no reason to believe innovation is even close to being tapped yet
   - **Participant 8:** No answer.
   - **Participant 9:** Maybe
   - **Participant 10:** No answer.
   - **Participant 11:** If there turns out to be any substance, it would be enforceable.
   - **Participant 12:** No answer.
   - **Participant 13:** No answer.
   - **Participant 14:** No, there is nothing to prevent that. But that's reality in just about any market.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 15:** I don't really get this one.
- **Participant 16:** See #2.
- **Participant 17:** No answer.
- **Participant 18:** I don't know that much about patent law, but some very widely used product techniques have been successfully patented. Even if Global was able to patent its technology, it is obviously very difficult to enforce anything on the Internet.
- **Participant 19:** There does not appear to be anything in this strategy which is unique so IPR unlikely to be capable of protecting.
- **Participant 20:** N/A.
- **Participant 21:** I see no obvious barriers to copying.
- **Participant 22:** I think it depends on how unique the potential idea or concept is.
- **Participant 23:** At the very best, intellectual property protection simply slows down competitors. And it not clear what in the insurance industry can be defended on intellectual property grounds. Therefore a wise strategy will assume that eventually others will attempt to copy anything that works. A wise strategy then differentiates between those elements of the strategy that are highly visible and therefore quickly copied and those that are "behind the scenes" and/or hard to reverse engineer. Although the former may enable up-front success, the former will only have a transient role as a differentiator; longer term success is built on the latter. Therefore the latter has to be guarded via obsessive secrecy. Cell phone technology, whether hardware or software, is in the former category. Advanced data analysis and decision making are in the latter category.
- **Participant 24:** Not sure.
- **Participant 25:** No answer.
- **Participant 26:** Competition is good at pushing innovation and fortunately, or unfortunately depending on your perspective, driving down the price. A patented process could protect the developer for a period of time, but ultimately someone will build the better mouse trap.
- **Participant 27:** Probably not, but generally the first to say it and say it most convincingly is the favoured player.
- **Participant 28:** No answer.

4. What other observations do you have about this strategy?
   - **Participant 1:** No mention is made of the vast cultural, economic and legal situations across the globe. I think this plus the intensive data operation make prospects less than rosy. On the other side, there already are widespread formal and informal money transfer procedures by cell phones in many third-world countries. The name for this in one locale is "sende."
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4:** Privacy laws might present obstacles to be overcome in the use of information to personalize sales pitches.
- **Participant 5:** I see this as one of the most likely of the strategies included here and coming fairly quickly.
- **Participant 6:** No other observations.
- **Participant 7:** Insurers or other mfg with experience marketing through this media would seem well positioned to work this market, perhaps with Google or other technological advertising leaders
- **Participant 8:** Not a big fan.
- **Participant 9:** There doesn't seem to be a compelling case per general items B-D above, but it may provide a response to item A regarding marketing.
- **Participant 10:** No answer.
- **Participant 11:** This appears to be little different from the E-business strategies of the 1990s.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** Worthy of further exploration. I like the idea of using predictive modelling to develop the underwriting algorithm/decision and focusing on internet sales – can we sell simplified underwriting insurance on www.amazon.com ?
- **Participant 15:** I don't really get this one**.**
- **Participant 16:** Young people enjoy online role-playing games and virtual worlds (such as SecondLife). Increasingly, companies (like Adidas) are using these virtual worlds to test and market products. Virtual death is an experience for many in these worlds and seeing life after death is possible here; what better place to raise awareness of needs and position products?
- **Participant 17:** Not feasible!
- **Participant 18:** None.
- **Participant 19:** Insurance is still sold and not bought and usually occurs around some life changing event. Use of the proposed technology to generate product and brand awareness and to drive sales to you rather than anyone else may be a valuable strategy but not for product fulfilment or premium payments in my view.
- **Participant 20:** N/A.
- **Participant 21:** None.
- **Participant 22:** This might have more appeal globally because the cell phone has even more penetration in the rest of the world than NA. I read there are more cell phones than people in Europe.
- **Participant 23:** No answer.
- **Participant 24:** May be a lot in place already again around life based analytics.
- **Participant 25:** None.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 26:** I think the real motivator for getting people to buy insurance is playing to their tendencies to want to gamble. How you "exploit" this quirk of human nature is the key!
- **Participant 27:** No answer.
- **Participant 28:** No answer.

Strategy #5: Your Way Insurance Company – Prospects custom-design coverage online

A think tank at Your Way Insurance Company has recommended a "Blue Ocean" strategy in which individuals would custom-design their insurance coverage online.

The entry point would be an online process driven model that enables consumers to design their insurance coverage by answering a series of questions. The model would have "click to call" expert advice available on how to use the model as well as for each insurance category, which could be a broad spectrum (life, health, annuities, long term care, auto and home) or some subset. Only products with relatively simple and transparent pricing would be offered. Consumers would mix and match discrete, simple products to address comparatively complex needs.

Due to state insurance department restrictions, Your Way expects to issue multiple policies through different operating units to provide the overall coverage designed by the consumer. Online underwriting mechanisms and data bases would be used to narrow the price range, define the price subject to certain conditions, or determine the price precisely.

Response activity would be used to systematically refine the process model and coverage building blocks available to consumers.

Questions for Strategy #5:

1. What are the greatest obstacles that Your Way will find if it attempts to adopt this strategy?
   - **Participant 1:** Devising simple products that can be piled up to really address complex problems.
   - **Participant 2:** People won't know how to do it. Do you know what all the auto options at Progressive mean?
   - **Participant 3:** This strategy can best be implemented outside the United States. It is suggested that the benefits of this strategy be proven in a more progressive regulatory environment and then encourage the U.S. regulatory system, perhaps with the urging of the ACLI, to adopt greater flexibility in order to accommodate.

Appendix D-2
Complete Responses to Round Two Survey

At present, state regulation would be a deterrent in building personally unique products.

- **Participant 4:** Focused advertising – how would you be able to target the right people with your products as opposed to blanket advertising?
    - The second concern would be education. How would you get the target clients to understand what it is that you're trying to sell them? As with "cafeteria plans" for employee benefits and RRSP packages, sometimes too many options can be more confusing than helpful for the customer. These types of plans require a lot of education and some really strong communication to the employees so they know exactly what is being offered to them and how to construct packages that best suit their need.
    - I can see how this type of strategy could work in some types of insurance and not in others, for example in segments such as very young couples who have a new baby and a mortgage; they want some form of life insurance protection and that might be a simple enough product that you could use this strategy. But the strategy talks about addressing "comparatively complex needs" – do you really expect the customer to find all of the simple products that will address their needs in an effective manner? wouldn't think so. Complex needs are probably better addressed through integrated products that require someone who has a lot of knowledge – like an insurance agent or a broker – to be able to answer questions and explain products in detail.
- **Participant 5:** I think getting people to use the site will be difficult. People don't usually go shopping for a whole list of insurance products so they may not be attracted to the site. I can see the attraction of a website if it is well known for having the best rates or most flexibility, but for the average Joe who only buys one type of coverage at a time, I doubt that this will be able to compete with specialist insurers who do one thing and do it well. Technically it doesn't seem too difficult. Perhaps a lot of advertising will be needed to entice people to the site, and if you give them a great experience they may remember and come back next time they need some coverage.
- **Participant 6:** Depending on the product, customer education to where they can make legitimate decisions based on the product. An example would be medical insurance. There are so many parts of health insurance that most consumers really don't have a solid understanding what is covered, how the product works and the ability to weigh the pro's and con's between competing products in a "real time" environment to make good choices. This is one factor to me that solidifies the agent or advisor role in the marketplace. In many ways there are products currently offering online and can be taken out but the products are very "bare" and are driven by pure cost factors (commodity products) vs. value enhanced factors beyond price. A key component in a regulated marketplace is consumer education or awareness. There is certainly an opportunity to have lawsuits filed

Appendix D-2
Complete Responses to Round Two Survey

due to products being sold to customers where the product is inappropriate based on the actual needs of the customer.

- **Participant 7:** Each line is complicated enough for consumers to understand and deal with. What is the significant to the consumer offer that is to the advantage of the customer to go this painstaking approach?
- **Participant 8:** Does it look any simpler to the consumer than having an agent sit down and explain different coverages to them?
- **Participant 9:** They will still have legal and regulatory issues, but issuing multiple policies should help overcome objections.
- **Participant 10:** Consumer may not be willing to spend the time to figure what they need. Education built in to it is important. Sometimes the decision tree can get to complex that consumer loses sight of original objective. Suitability decisions may be difficult if variable products are used.
- **Participant 11:** I do not see why consumers would be attracted to this model.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:**
    - Identifying the right number of choices allowed – simplicity vs. complexity of the choices
    - Trying to get the state filings done with enough flexibility to allow the customized choices
    - Keeping the marketing to the right audience – those who regularly uses Computers, etc, relatively younger, etc.
- **Participant 15:** Products are too complicated and most of the time insured's need assistance in explaining what they are purchasing. If you make it simple enough for them to understand, is the coverage worth having? Not sure this has much merit.
- **Participant 16:** No answer.
- **Participant 17:** Current insurance regulations; consumer inertia – few people will use this.
- **Participant 18:** I don't see any unusual obstacles with this strategy. I think the technology already exists today and to a certain extent is in use.
- **Participant 19:** The only real obstacle to this strategy is the flexibility of legacy systems and competing internal priorities. There is nothing in this strategy which requires a quantum leap in technology as the capability already exists. .NET technology (in isolation or as a thin layer sitting above a legacy system) can already do most if not all of the requirements of this strategy. .NET solutions are entirely compatible with web based distribution strategies and enable matrix driven product design, pricing engines, document output. With the correct upfront design of suitable product chassis and pricing alternatives new product launches do not even need the use of IT resources. The skill is in the product design and product pricing which live outside of the technology environment.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:**
  - Applicants assuming they know more than they do.
  - Applicants skipping through instructions or educational material
  - Incorrect input resulting in a policy that does not fit their needs
  - Possible increase in lapse ratio if policyowner finds out later they could have purchased something that was less expensive. This might be avoided if there was some type of policy comparison mechanism.
- **Participant 21:** Conflicts with current distribution. Underwriting multiple coverages from one "application" could create regulatory resistance.
- **Participant 22:** Tying together the worlds of P&C and Life/Health insurance. Even in companies that offer both, their communication is normally small and limited to offering a token life policy with a P&C policy.
- **Participant 23:** Assuming that it is more than "a cool web tool" (see below), the biggest obstacles faced by Your Way will be its own people! The vast majority of people in the insurance industry cannot think beyond business as usual. This will require a massive restructuring of insurance company business practices and management structures.
- **Participant 24:** If the product customization is truly available the biggest obstacle will be an informed and educated buyer. Perhaps a profile of the buyer will determine the product and leave no choice to the buyer.
- **Participant 25:** As noted in #4 above, the system challenges will be significant. Designing the optimal mix of products and licensing them in the appropriate locations will also be a challenge. Finally, they must get consumer "buy in" to a different way to secure insurance.
- **Participant 26:** Regulation and buyer confusion with the end process could kill the goose! Having multiple provider entities will only serve to dampen the buyers interest in future purchases. I think the key to making this work is a risk model that the buyer provides input into that determines their risk profile. Once that is determined they look at how they want to allocate their total insurance dollars for the different risks. The system would then allow them to periodically update their risk profile and they redistribute their dollars.
- **Participant 27:** Elements of this are addressed in several prior responses. Designing the product system requires understanding what the consumer is looking for – not what the provider thinks they need. Then give it to them. Of course, you must educate and convince them, in their terms, that you have a cure for their pain and that you provide the best value solution in the marketplace – not the cheapest; the best value. Most insurance today is sold on price. That's a mistake.
- **Participant 28:** It is not clear whether online underwriting will be adequate. Some human intervention may be desirable, but that may involve today anyway people with different areas of discipline and expertise. That starts to be costly. The issue is the possible wide disparity in offerings.

Appendix D-2
Complete Responses to Round Two Survey

2. Is this a "Blue Ocean" strategy or simply a window of opportunity for the early players?
   - **Participant 1:** The products are simple. The consumer-driven software is not all that difficult. I think it's a window of opportunity only.
   - **Participant 2:** Window of opportunities
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I don't think this is a Blue Ocean strategy, that is, a strategy to differentiate an insurer and open up a whole new avenue for business. It's a strategy that has the potential to really make this a commodity type product, so that price would become the only distinguishing feature.
   - **Participant 5:** I don't think there is room in the market for many companies adopting this strategy – you need scale – so I think it is a Blue Ocean strategy
   - **Participant 6:** Window of opportunity. Online sales of insurance products is commonplace and the further advancement of this sales technique will only evolve but is certainly not what I would consider a "Blue Ocean" strategy.
   - **Participant 7:** Blue Ocean, if it is feasible and works, otherwise a Blue Ocean waste of time and effort and expenditure
   - **Participant 8:** I don't think this is a feasible idea, so it's neither.
   - **Participant 9:** It still seems to be a window of opportunity rather than a BOS.
   - **Participant 10:** Blue Ocean
   - **Participant 11:** No answer.
   - **Participant 12:** No answer.
   - **Participant 13:** No answer.
   - **Participant 14:** This is approaching a "Blue Ocean" Strategy.
   - **Participant 15:** Is this a "Blue Ocean Strategy? I doubt it.
   - **Participant 16:** No answer.
   - **Participant 17:** Is this a "Blue Ocean" strategy? YES.
   - **Participant 18:** I don't see this as being dramatically different than several existing insurance quotation web sites. It seems more like a window of opportunity than a "Blue Ocean" strategy.
   - **Participant 19:** Good execution of the strategy rather than the strategy itself is likely to be the key differentiator. Much of the technology and process capability already exists and, for example, is already used in the auto and leisure industry when you order a new car on-line or a vacation with various optional packages.
   - **Participant 20:** Not convinced this would be a blue ocean strategy. If something else was driving demand, this might be an effective approach. Without something being done to affect demand, this type of strategy most likely would not have a material effect on sales.
   - **Participant 21:** Blue Ocean Strategy.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 22:** Window of opportunity for companies that can pull it all together.
- **Participant 23:** This is the beginnings of a Blue Ocean strategy. To replace the currently fragmented approach to insurance acquisition would be revolutionary. And, yes, if done properly, it is more than simply a window of opportunity. Simply building a "cool web tool", however, that presents insurance as a series of integrated offerings is only a window of opportunity. Anything put out on the web is relatively easy to copy. And unfortunately the description focuses on the cool web tool. The Blue Ocean strategy will involve selling, underwriting, billing, and administering multi-line insurance on a truly integrated basis. This will involve a massive change in how the insurance company operates and computer system design.
  We do a horrible job of this today. If someone wants to buy health, life, disability, and LTC policies, they need to go through 4 different underwriting processes, all of which ask essentially the same information and require the same medical records. We could have unified applications and underwriting. We don't. And there is no apparent will in the industry to change this – which creates a great opportunity for the company that does!
  The P&C business is better, but not great. Within Allstate (the P&C company where I have my insurance) and other companies, the underwriting information is shared and integrated, but I still get separate different bills, on separate billing cycles. But when I called GEICO for a quote, I was told that I needed to talk to a separate person for each of my auto, motorcycle, renters', and umbrella policy. Furthermore there was no information transfer – I had to start with the basic name, address, and social security number with each.
  As a consumer, separate policies don't bother me. Who reads them anyways? But separate sales, underwriting, billing, and administration bother me. Someone will figure this out and reap success. The will have more than a momentary advantage as it will be hard for entrenched companies to make the fundamental business practice and management structure changes required to replicate the success.
- **Participant 24:** Blue Ocean if regulation hurdles are removed.
- **Participant 25:** I believe that it is a "Blue Ocean" strategy. It will not be easy for others to replicate the effort.
- **Participant 26:** This is truly a "Blue Ocean" approach in my way of thinking.
- **Participant 27:** No answer.
- **Participant 28:** "Combination products" that are focused are likely to become more popular as they reduce the number of products that insureds-owners need to manage and maintain.

Appendix D-2
Complete Responses to Round Two Survey

3. What other observations do you have about this strategy?
   - **Participant 1:** This could get a positive "buzz" on the net and take off. I'd pitch it to consumer financial columnists.
   - **Participant 2:** No answer
   - **Participant 3**: One strategy general answer under Question #1
   - **Participant 4:** I think this would be expensive for the insurance company since, instead of one integrated policy that suits all of their needs they're going to be issuing multiple policies from different operating units.
     - There is also complexity arising from the issuing of multiple policies. When claim time comes around, if a person has purchased a number of policies, would the operators all share claims information or would the claimant be required to submit multiple sets of documentation to multiple operators?
   - **Participant 5:** I think it will likely be most successful coming from a name they recognize and trust. Maybe Amazon, Visa or IBM, and issuing on different paper make it harder to establish the brand name.
   - **Participant 6:** Products, pricing, educational material and every aspect of these types of sales must be targeted to the lowest common denominator (IQ, reading level, comprehension, etc…) and there will only be so far you can go with products that will be effective using this type of platform. In using this type of platform the market environment will be a commodity / lowest cost driven model where "value added" benefits will go out the window on a direct basis. In my opinion some products can not be "simplified" enough to abdicate the use of agents or producers in our current markets.
   - **Participant 7:** Test it well in the marketplace before trying to implement it.
   - **Participant 8:** This idea seems cumbersome.
   - **Participant 9:** There doesn't seem to be a compelling case per general items A-D above. I don't see that many people would be excited by the opportunity to design their own insurance policy with the exception of very complicated estate tax issues for high net worth individuals.
   - **Participant 10:** With the aging of producers, this could be the 'next generation'. Leads to holistic planning which is lacking in our industry.
   - **Participant 11:** No answer.
   - **Participant 12:** No answer.
   - **Participant 13:** No answer.
   - **Participant 14:** This is a good one to explore! I think it has strong potential.
   - **Participant 15:** No answer.
   - **Participant 16:** No answer.
   - **Participant 17:** It has possibilities…
   - **Participant 18:** None.
   - **Participant 19:** Nothing to stop this being executed now.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:** N/A
- **Participant 21:** I would limit this to true insurance products, as opposed to investment products, e.g. deferred annuities. This strategy might combine well with Strategy #8.
- **Participant 22:** Great area for a big Life/Heath / P& casualty provider to look into. Maybe they have.
- **Participant 23:** Because it will be extremely difficult for an existing company to dramatically change entrenched insurance business practices and management structures, it is probably an insurance newcomer that will be most likely to execute this strategy. It will then be a long time, if ever, before existing companies can compete.
- **Participant 24:** Need some requirement mechanism that forces the buyer to make a decision. If buyer does not take customization then social product is required.
- **Participant 25:** I believe that it has real merit. It fits nicely with the current trend in using on line capabilities. A lot of intelligent customers would love to be able to fine tune their insurance portfolios to best address their current needs.
- **Participant 26:** This WILL work but the devil is definitely in the details!!
- **Participant 27:** The model / process needs to be designed so that the typical prospect does not need to call the expert to use it. Like the learning aspect of the concept – improvements and refinements based on use. Again, it's not the technology; it's the effective, innovative use of technology. The competence of the design team.
- **Participant 28:** What this question suggests to me is the use of on-line to develop a customer account. One should not expect customers to buy a whole range of insurance products at one time, but adding products to one's account sounds attractive in the insurance context as it does elsewhere.

Strategy #6: Strategic Partners Insurance Company – for Operational Excellence

Like many companies, Strategic Partners Insurance Company is investigating increased use of technology for incremental improvements in operational excellence. It is considering a substantially increased investment in this area to pursue a "Blue Ocean" strategy to find innovative technological breakthroughs that may result in intellectual property rights. It is also considering strategic partnerships with non-insurance entities that could provide leveraging of applicant underwriting or claims information.

Examples might include access to online prescription or medical records, motor vehicle records, court records, shopping records, insurance policy and application records, biological or genetic sources, etc. as well as claims adjudication facilities that would complement internet policy administration.

Appendix D-2
Complete Responses to Round Two Survey

Among candidates for a strategic partnership are a major pharmacy chain, a forensic laboratory, a supermarket chain, a credit card giant, a GPS (Global Positioning Satellite) device manufacturer, a biofeedback technology firm and even a big name jeweller - to make a medallion that is both a status symbol and a monitor (and transmitter) of basic life parameters – the 'bling' factor.

Questions for Strategy #6:

1. Is there anything such as intellectual property rights that Strategic Partners might enforce to prevent everyone else from copying the process and lowering the profits for all?
   - **Participant 1:** No Answer
   - **Participant 2:** Exclusive contracts with vendors.
   - **Participant 3:** This strategy mixes products in a highly regulated industry with products which might be in industries which are not regulated. The problem with mixing products with insurance products is a potential violation of unfair trade practices, in that it is difficult to separate income earned, which might be commissionable and thus subject to licensing, from income earned otherwise. Moreover, regulators are very keen to prohibit "tying", that is linking the sale of insurance with another product. All in all, it is complicated and probably not worth the effort. That is not to say that an insurance holding company couldn't have several divisions. Each division would be offering separate product lines.
   - **Participant 4:** For the reasons set out in Strategy 4 (Q3), this seems unlikely.
   - **Participant 5:** This has the potential to backfire enormously. Asserting intellectual property rights gets people very upset unless it is clearly a breakthrough idea. Even if successful in one country you are unlikely to succeed internationally, and politicians get a lot of publicity from breaking down this sort of barrier to entry.
   - **Participant 6:** Yes in terms of creation of the products consumers can use related to technology or collection of data via very specific parameters.
   - **Participant 7:** IP is the minor issue here.
   - **Participant 8:** Not sure
   - **Participant 9:** Yes, it does seem that there could be opportunities to take actions to protect technological innovations.
   - **Participant 10:** Intellectual property rights are very hard to enforce.
   - **Participant 11:** No answer.
   - **Participant 12:** Absolutely. Make more on the infringements than on the idea.
   - **Participant 13:** No answer.
   - **Participant 14:** No answer.
   - **Participant 15:** These questions are worded strange.
   - **Participant 16:** a) The number of strategic partners in each vertical is limited; there are typically <5 in each and this will limit the number of competitors.

b) Google is already working to align these kinds of entities—they have GPS, targeted marking, social networking, web search and have announced health record information on individuals. They will also connect prescription and other health product info to individuals. Partnering with Google would accelerate this strategy.
c) Mobile phones are become essential appendages starting in grade school. Phone functionality is extending with text messages, web surfing, GPS info. The phone will become an electronic audit trail of activity for individuals. Governments are using this info for public good; certainly it will be used for economic advantage in the future.

- **Participant 17:** No.
- **Participant 18:** I am aware of at least one company that has filed for a patent on its "unique" electronic underwriting process. So it seems reasonable that Strategy Partners could do the same.
- **Participant 19:** Yes if a process patent can be obtained but that is open to debate.
  Participant 20: N/A.
- **Participant 21:** I see no barriers to entry.
- **Participant 22:** I doubt you could patent the collection of data but some of the pieces like the 'medallion' that holds the data, that would seem to be a protectable innovation.
- **Participant 23:** No answer.
- **Participant 24:** Not sue.
- **Participant 25:** No answer.
- **Participant 26:** Again, patenting the process may work short-term, but other than that I don't see it.
- **Participant 27:** Not sure about IP rights. Non-disclosure and exclusivity agreements among the partners provides some protection. The blue ocean aspect is the ability to select the right partners, then integrate and use the data effectively.
- **Participant 28:** No answer.

2. Is this an ethical strategy? Is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair?
   - **Participant 1:** It's ethical only if fully disclosed. The advantage of added information could be very valuable, and could result in big discounts for some, and an incentive for allowing the information to be gathered.
   - **Participant 2:** To some degree an extension of MIB's function. *Is more affordable life insurance availability…unfair?* "No".
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** No, this is not an ethical strategy; it is horrifying. George Orwell is laughing from his grave… I can think of few things our industry could do that would cause a greater crisis of confidence among our clients than this.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 5:** Totally unethical and likely to upset privacy rights groups everywhere.
- **Participant 6:** The question of ethics is dependent upon what information is collected and how it may be used. One current issue that poses ethical or moral dilemmas' is the use of DNA or genetic testing for use in insurance policy decisions. A number of states have passed legislation curbing or banning the use of genetic testing in evaluations of a potential insured's status (decision to approve or deny) for coverage. There may be other areas where from a consumer standpoint items may be used in a manner that is considered discriminatory and not in the best public interest. Factors could include use of credit scores, financial records, and other items collected as part of data mining.
- **Participant 7:** Just consumer reaction to such is as important as any potential benefits, but I would hope the marketer wouldn't get to the point of ethical questions
- **Participant 8:** Probably not
- **Participant 9:** I can see times when agreeing to constant monitoring would be advantageous to the insured as well as the insurer. For instance, constant monitoring could be very beneficial to a long-term care policyholder in an assisted living environment.
- **Participant 10:** Ethical but may not be politically correct. If people understand what they are "signing up for" than its ok.
- **Participant 11:** No answer.
- **Participant 12:** I do not see anyone garnering insurance information to produce cheaper insurance. They will all use it as a means to capture or exploit a particular segment. I.e. produce and keep value of information received.
- **Participant 13:** No answer.
- **Participant 14:** No answer.
- **Participant 15:** These questions are worded strange.
- **Participant 16:** Yes, this is an assessment of life choices an individual makes for the purpose of accurately pricing insurance.
- **Participant 17:** It feels more like an invasion of privacy to me.
- **Participant 18:** I doubt if the promise of more affordable insurance would be accepted on face value. I believe this practice would be considered discriminatory, at least in most countries.
- **Participant 19:** Nothing unethical with client's permission and nothing unethical if only public data is obtained. It would unethical and illegal to obtain certain data without permission of the individual.
- **Participant 20:** It should be if the individual is made aware of it. If not, could be trouble.
- **Participant 21:** I have a problem with the expanded use of underwriting data beyond insurance products. This relates to invasion of privacy.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 22:** They do more of this in Europe. The key is to target people that fit the demographic and offer it to them specifically rather than offering it to all and having to turn some down. In other words, the ones that get offered coverage are the ones you want. Those you don't want nerve receive the offer.
- **Participant 23:** No answer.
- **Participant 24:** Maybe is more affordable life insurance availability a rationale for invasion of privacy or for discrimination for reasons perceived by many to be unfair? Perceptions and beliefs change.
- **Participant 25:** No answer.
- **Participant 26:** Ethical? "yes", doable? – I'm not too sure given the rising concerns with privacy.
- **Participant 27:** Some of the partners mentioned suggest privacy problems. However, it appears that the internet and other technology advances are making this data increasingly available to sophisticated users.
  More affordable insurance for whom? Discriminatory pricing will always be challenged by individuals / groups that would fair better in a different risk pool. Most favoured individuals / groups do not complain or perceive a problem.
- **Participant 28:** Presumably (!) under this approach a consumer might give a one-time permission to allow his information to be spread across entities. That presumes consumers are fully aware of the upsides and, alas, downsides of their actions. Our recent history with respect to the current financial debacle in financial institutions and the housing industry strongly suggest otherwise. The financial institutions offered vehicles that were too good to be true, and most assuredly they knew it. Mortgage applicants didn't (certainly didn't to a great degree) and consequently took unjustified risks and actions.

3. Is this a "Blue Ocean" opportunity for players outside of the life insurance industry more than for insurers? For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets?
   - **Participant 1:** Yes, this could be a big Blue Ocean (or at least a Blue Gulf) for such alliances. It would be good for both parties. This will be good for insurers if the insurer can negotiate exclusive relationships with large chains. For drugstores, there are perhaps 6 or 7 major chains that have huge market shares. What would make this go is a strong, creative alliance. Taking competitive bids to do traditional direct marketing will do little in the way of making money for anyone. Because of the oligarchy of the drugstore industry, you would never have many competitors. I think much less of the idea of groceries. Most of the rest of the list could be valuable partners for the technology side of this.
   - **Participant 2:** Yes
   - **Participant 3:** One strategy general answer under Question #1

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4**: I think it would be a Blue Ocean opportunity for companies not currently in the life insurance industry, but for life insurance companies? I think it's more just a way to increase sales.
- **Participant 5:** For example, is it a "Blue Ocean" opportunity for a major pharmacy chain, for a credit card company, for a grocery chain, for an exercise club or for a manufacturer of smart toilets? I don't see any prospect of success so I would not call it Blue Ocean.
- **Participant 6:** I think the collaboration of outside entities could be seen as a "blue ocean" opportunity and also a direct risk to traditional insurance companies. Use of information and controlling intellectual content could be taken and used against traditional insurers in a competing manner much like bankers entering into the insurance market and traditional insurers entering into the banking market. Cross pollination of consumer markets can both be advantageous as well as ruinous for the insurance sector as large multi-national companies and large capitalized companies view insurance as another profit center that they can enter with little downside risk based on available information, talent and wherewithal to address current market regulatory conditions.
- **Participant 7**: This has been tried many times before, eg Citibank, American Express, and so many others, so blue ocean would require making it happen more than who might benefit
- **Participant 8:** To gather data on customers? Doesn't seem Blue Ocean-like.
- **Participant 9:** It could be a BOS for the insurers and other partners as well.
- **Participant 10:** It is a partnership and not sure it is a Blue Ocean for either group.
- **Participant 11:** Yes.
- **Participant 12:** Carriers have made historical failures trying to capture distribution. They should just supply product and focus on that core business.
- **Participant 13:** No answer.
- **Participant 14:** No answer.
- **Participant 15:** These questions are worded strange.
- **Participant 16:** This strategy creates marketing/distribution opportunities for companies like Google, but insurance will ultimately flow into major companies who provide product, administration, etc.
- **Participant 17:** Nothing new really…
- **Participant 18:** I think both have an opportunity to expand their market.
- **Participant 19:** Most likely a partnership between an entity (e.g. pharmacy or a credit card company) and an insurer due to licensing requirements.
- **Participant 20:** The basic costs of life insurance are already often bloated. Adding more expense and complexity to a product that is already to complex and expense seems to be the wrong direction. If the product was more transparent, and if demand could be stimulated with new more interesting and attractive offerings, then this type of solution might be better positioned to be more interesting.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 21:** I can see this strategy working better with different types of consumer goods. It is problematic mixing insurance and consumer goods.
- **Participant 22:** If done on a yes no, SI basis then you don't need an insurer. An insurer comes into play with those that don't fit the profile and need individual underwriting.
- **Participant 23:** No answer.
- **Participant 24:** Not really-Lots of partners, lots of needs, maybe not enough benefits.
- **Participant 25:** No answer.
- **Participant 26:** Pieces of this are already being done, but pretty much off the consumer's radar screen. Life insurers have a harder time putting this together given the increased regulatory scrutiny.
- **Participant 27:** ???
- **Participant 28:** No answer.

4. If Artificial Intelligence systems can encapsulate the knowledge necessary for medical underwriting, then does medical underwriting necessarily have to remain the province of traditional insurance companies?
   - **Participant 1:** We already have underwriting companies. We already have extensive AI impact on underwriting. I would ask the questions, can underwriting be outsourced satisfactorily? Yes, but will caution. Will AI eliminate the job of underwriter? More so, but never entirely. Are these two things connected? Not much.
   - **Participant 2:** No
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** At the moment we are using Artificial Intelligence to get medical underwriting, but it is for people who are looking for limited amounts of insurance and for certain ages. So as long as the boxes and the questions are answered appropriately, you can issue a policy automatically. However, once the questions get answered "no" instead of "yes" and you've got to ask further questions, you can't continue to use the system. That's when you need underwriters, and I really cannot see the difficult underwriting or a large-case underwriting ever being moved away from the traditional area.
     What I do see is more types of standard policies being pushed through, but the underwriters will always remain. I think that will probably make underwriters more important because they're going to have to handle more of these difficult cases in the future.
   - **Participant 5:** Traditional insurance companies of today may not be the major players of tomorrow. I see banks and mutual fund companies taking an increasing slice of this market.
   - **Participant 6**: Not at all. What could happen is with A.I, and the ability to gain further insight into forecasting and predicting trends, advancements in diagnosis

and treatment options and the pure cost of insurance other companies will view this market as an opportunity to participate in the largest growing sector in the U.S. economy. The concept of large pooling mechanisms will begin to give way to non-insurance related companies entering the market to compete against traditional insurers. For affordability and access to adequately work and to solve the uninsured population issue products will have to become more direct/simplified, less robust in coverage (perhaps instead of 1st dollar insurance medical will evolve back into a catastrophic protection vehicle it once was in the early stages of the medical insurance marketplace) and easy to understand from a layman's perspective (including cost transparency, knowledge, ability to make choices and wellness opportunities to help create a healthier population which in turn help drive down medical costs.

- **Participant 7:** No – witness the viatical companies
- **Participant 8:** Probably not
- **Participant 9:** The ultimate decision to accept a risk has to remain with the company assuming the risk. On the other hand, it could be possible for a broker to shop a case based on information controlled by the broker.
- **Participant 10:** I don't think underwriting is now. Settlement and finance companies use underwriting now.
- **Participant 11:** No.
- **Participant 12:** Scoring Models becoming more sophisticated should give birth to specialty firms that can build models that add proven value. I do not see Insurance companies going after this non-core intellectual market. For example, how many insurance companies use an in-house admin system? Why would they when they can all pay less and at the same time let the admin system company make more.
- **Participant 13:** No answer.
- **Participant 14:** No answer.
- **Participant 15:** These questions are worded strange.
- **Participant 16:** Medical underwriting is an evolving field and requires professional attention and focus. If AI provides a point-in-time capability, there will be anti-selection processes and algorithms that develop around the AI solution. Professional people must continue to be involved.
- **Participant 17:** No answer.
- **Participant 18:** I think no, but do other industries have sufficient financial risk in their consumers to go to the expense. Of course, if the data and technology is available, it might not be cost prohibitive.
- **Participant 19:** Delegated underwriting authority to brokers/MGA'S or rules based underwriting without the benefit of medical underwriting already exists today so the answer is NO.
- **Participant 20:** N/A.
- **Participant 21:** Privacy issues/security of personal data.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 22:** The AI can sort out the Yes, Nos. If more complex or not in the profile, then underwriting is necessary.
- **Participant 23:** No answer.
- **Participant 24:** NO.
- **Participant 25:** No answer.
- **Participant 26:** No.
- **Participant 27:** No.
- **Participant 28:** Insurers would need to monitor any underwriting approach or technology, wherever developed. However, certain underwriting aspects can be performed by other entities under contract, as long as there are management and measurement tools to assess their performance.

5. What other observations do you have about this strategy?

- **Participant 1:** A medical records company could well be added to the alliance. I am unclear as to the advantage of post-issue information in life insurance, without a major departure from the traditional (and regulatorily locked in) guaranteed death benefit. For auto insurance, this could be very useful as premiums are reset often.
- **Participant 2:** No answer.
- **Participant 3:** One strategy general answer under Question #1
- **Participant 4:** Whenever you go into anything with an outside partner, you've got to choose your partners well. You've got to have the same objectives and understand what each of you wants to get out of the relationship, and for an insurance company this is especially important. I see this strategy as being fraught with problems.
    - I'm not even sure this makes sense – once the policy is issued what difference would ongoing health information make? Is the proposal to have a policy by which premiums could be increased or coverage terminated after issue? We already get all that information upon application, which is fine, but to get anything afterwards is just an invasion of privacy that would be damaging to our industry's reputation.
- **Participant 5:** No answer.
- **Participant 6**: Data collection will be taken to the extreme and positions will be created just to mine and analyse this data. Companies are already employing economist, statisticians, and others to use this data as a market multiplier.
- **Participant 7:** Diversified marketing by manufacturers needs careful synergistic analyses and implementation
- **Participant 8:** Is it more about intellectual property rights or data collection?
- **Participant 9:** This seems like it could have the potential to become a BOS; however, whether or not it will be successful in terms of items A., B. and D. above is still unknown. It may have some advantage in terms of item C. above.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** Inspection reports and financial reports are dated and need some updating.
- **Participant 11:** This appears to be a combination of data mining and the home shopping network.
- **Participant 12:** No answer.
- **Participant 13:** No answer.
- **Participant 14:** I don't really get this one.
- **Participant 15:** These questions are worded strange.
- **Participant 16:** This seems to be a natural path for GE to follow.
- **Participant 17:** No answer.
- **Participant 18:** It seems unlikely that the necessary type of personal information on individuals would ever be available in the Americas, Europe and India, but who knows about China.
- **Participant 19:** None.
- **Participant 20:** It would seem that life insurance companies should focus on designing policies that are more transparent and consumer friendly and ones that are more efficient. The next step would be mastery of technology to understand consumer behavior and to produce communication messages that leverage commercial standards for modern movie, video, and internet mediums. The last step would be more effective methods for processing applications derived from higher demand.
- **Participant 21:** None.
- **Participant 22:** I think it sounds promising.
- **Participant 23:** There is no strategy discernable from this description. "*We will use technology to do something with someone outside the insurance industry*" is not a strategy! Furthermore, has the author ever heard of HIPAA? The use of any information that is health related is extremely limited by HIPAA. I cannot attempt to answer the questions without more information.
- **Participant 24:** Underwriting will change greatly in the future. Some of the partners may contribute while others will be passed by for yet unknown partners. Very complicated strategy but like the "out of box" thinking
- **Participant 25:** No answer.
- **Participant 26:** None, really.
- **Participant 27:** Scratch the jeweller. Make it a watch maker than builds in the technology on watches ranging from economical to astronomical. Watchmakers are already on a path to this technology.
  The major hurdle appears to be the legal and ethical issues. I can't address the legal. From an ethical standpoint, I personally dislike the privacy implications, but like the pricing implications.
- **Participant 28:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse - technologies are often required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Questions for Strategy #7:

1. What are examples of previously uninsurable risks that could be insured through a micro-policy?
   - **Participant 1**: We can expand the bungee jumping example to all sorts of sports and activities, for starters, and include accident coverages. Substandard annuities or short term health benefits for acutely or terminally ill would benefit by this approach. Also, short term life coverage to cover key employees or parties to transactions or expected transactions --
     Real life example -- term insurance on John McCain when his campaign was floundering a year ago. Key witnesses, principals in a business combination, etc.
   - **Participant 2:** No answer
   - **Participant 3:** This strategy seems problematic to me. Here, underwriting is being driven by subjective intention, not objective criteria. That is, activity based underwriting is highly susceptible to anti-selection. In fact, it is based on anti-selection. The question would be: could a company insure enough bungee jumpers to spread the risk among that highly risky business? This is not the same as AFLAC insuring only cancer losses. That loss is widespread, somewhat predictable, and not subject to a subjective intention to commit an activity.
   - **Participant 4:** One area that is under discussion is insuring people who are HIV positive because, with the medication people are getting now, life expectancy can be 20 years or more. If you insure these people at the right stage of their disease, it's quite conceivable that they could have a limited-term policy for five or even ten years. So I actually see micro-policies as a real possibility. Medicine is constantly changing and we're getting better at treating many different diseases.
   - **Participant 5:** Aid workers visiting disaster sites, Missionaries going to dangerous counties like Afghanistan, Specialized travel delay insurance for executives, hostage insurance in Iraq, roadside bomb insurance for journalists, soldiers and diplomats, insurance for space flight.
   - **Participant 6:** Anything that can be calculated for any reasonable predictable risk can be priced for and micro-policies can be used as a way to bridge needs that may not be currently met or underinsured due to a broader policy application.

Appendix D-2
Complete Responses to Round Two Survey

The basic fundamental aspect of risk is how far do you push the bounds of predictability and variance to say that something can be priced for appropriately. While many events can be "priced" for in the marketplace the ability to price for risk that also is "affordable" is another consideration. Affordability may not be attainable regardless of the ability to "price" for any risk. If you whittle a policy down enough and create a micro policy that is affordable given the risk, does the policy meet the specific need or have enough value to make the purchase worthwhile.

- **Participant 7:** Cancer and CI are already being done. LTCI is also being tested in the marketplace. Old age may be one
- **Participant 8:** Private plane piloting, extreme sports (rock climbing, mountain climbing), travel to some foreign countries
- **Participant 9:** There are a number of possible coverages: Travel to hazardous country, activities that may be excluded from normal coverages (hang gliding, hot air ballooning, flying as private pilot, etc.), experimental surgery benefit, infertility coverage, etc.
- **Participant 10:** Foreign travel, professional athletes, hunters
- **Participant 11:** No answer.
- **Participant 12:** There is no end to the number of potential ideas. How about Surgery insurance? You could have insurance for affairs with married individuals, just in case someone takes exception. This is like a risk slot machine you feed the entire day and receive periodic payouts.
- **Participant 13:** No answer.
- **Participant 14:** Deaths / Injuries from vacations (downhill skiing/snowboarding, trips to exotic countries, mountain climbing, bicycle riding, etc.)
    - Professional or semi-professional athletes in competition
    - Horse racing (life insurance policy on the horse Big Brown)
    - Iron Man triathlon participants
- **Participant 15:** Pet insurance; insuring famous people's body parts;
- **Participant 16:** a) Risks are everywhere—from riding the subway to work to an overseas trip—and its just a matter of culling out the more widely shared risks, quantifying them and marketing the product.
  b) Surviving heart surgery or another life-threatening disease
  c) Public speaking
- **Participant 17:** Paragliding, bungee jumping.
- **Participant 18:** No comment.
- **Participant 19:** No answer.
- **Participant 20:** Automotive / Motorcycle racing, Skydiving, Basejumping, and other dangerous single event hobbies or single events as in your example.
- **Participant 21:** None.
- **Participant 22:** Anything that is not insurable traditionally. More than uninsurable is insurance with a rating or surcharge that may not be appealing to

the proposed insured. Example: if a person bungee jumps occasionally and is offered a policy for a million dollars, he may be better off just insuring himself for each event. A charge for coverage per event based purely on mathematical statistics on odds of a problem. Might be cheaper to get an 'event' policy for each jump or for a period of jumps to cover the event. Like the insurance you used to be able to purchase when boarding a plane.

- **Participant 23:** Read response #4 first. I would search for definitions by enumerating risks that have traditionally been considered uninsurable because of distribution costs, delivery method, and/or time required to complete the sale. One example that comes to my mind is outcome insurance for health events. For example, insurance could be offered for the complications of LASIK eye surgery.
- **Participant 24:** No answer.
- **Participant 25:** All types of adventure leisure activities may be candidates. It may be possible to design an array of short term and limited benefit long term accident and health coverages.
- **Participant 26:** No answer.
- **Participant 27:** ??? can't answer the others without this.
- **Participant 28:** No answer.

2. What methods of distribution, either existing or potential, could be used to target these risks?
   - **Participant 1:** No answer.
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Dealing with advocacy groups would be a good way of targeting certain risk groups.
   - **Participant 5:** Through travel agents, immunization doctor's offices, high risk insurance specialized web sites, airport booths, American Express offices, Visa/Mastercard websites or call in numbers
   - **Participant 6**: You can incorporate insurance products into the risk/activity/products of non-insurance companies where the micro policy can create value and help entice further expansion of business. Such as bungee jumping. The policy and cost could be a part of the actual fee to jump and incorporated into any paperwork or sales ticket when the transition takes place. Ease of use, simple, easy to validate coverage, affordable (as the cost has to be low enough to not create a hindrance in purchasing the activity or product), and create a new more dynamic market.
   - **Participant 7:** Internet, voluntary, and direct response mktg
   - **Participant 8:** Internet, agent, worksite, travel-agency, airport, outfitters (for extreme sports)
   - **Participant 9:** Agent, broker, Internet, etc.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** "Direct marketing" with the hunting lodge or other avocation place where person signs up at time of event. On line seems effective.
- **Participant 11:** I am sure bungee jumping coverage is already available for the right price; it is a distribution economics issue.
- **Participant 12:** How about 1-900 #'s for guaranteed issue risks charged directly to your phone bill.
- **Participant 13:** No answer.
- **Participant 14:**
    1. In magazines that these people read
    2. On site at day of event using simplified policies
- **Participant 15:** Definitely niche markets and not mass distribution.
- **Participant 16:** Micro-policies have to be highly automated to be profitable. Distribution, payment and administration must be electronic.
- **Participant 17:** Event marketing.
- **Participant 18:** You could buy this type of insurance via cell phone, and receive a text confirmation of approval.
- **Participant 19:** No answer.
- **Participant 20:** Kiosk on location, live computer connection similar to kiosk but connected to live company personnel at other end. Internet application to be completed before event via questionnaire.
- **Participant 21:** No comment.
- **Participant 22:** No distribution. Just tied to the event.
- **Participant 23:** The distribution method would follow, not precede the identification of the opportunity. Role of agents: Distribution, like all other aspects of these products, has to be automated in order to keep costs low in relation and sales quick and easy. This does not necessarily mean that no agent will be involved or nor commissions will be paid, but the commissions will be small – enough to compensate the agent for a quick, automated sale which involves no administrative work. Think the small fixed-amount fee that travel agents get today vs. the 10% commission that they used to get. The fixed-fee agent may not be a traditional multi-line insurance agent – the agent may sell only one micro-insurance product and that sale may be incidental to their non-insurance role. (Like the Best Buy check-out clerk selling warranties). The sale almost has to be electronic in order to keep the distribution costs low enough and the speed fast enough. Therefore once the opportunity is identified, then the next question is to identify the most convenient electronic device or devices to facilitate the sale. Cash registers? Phones? PDA's? Internet and conventional computer?
- **Participant 24:** No answer.
- **Participant 25:** The products may be offered through travel agencies and excursion companies.
- **Participant 26:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 27:** No answer.
- **Participant 28:** The example given of a micro-policy may suggest offering insurance in advance to people when they sign up to participate in a particular event. For risk reduction, insurers may wish to deal with say the organizer of the event so that the event fee covers the insurance cost of all participants. Distributors I suspect would emerge to handle such situations.

3. Are there other definitions that could lead to micro-policies – geography, ethnicity, etc.?
   - **Participant 1:** No answer
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Worldwide organizations like the Shriners offer possibilities. I think if you can get the right kind of target groups for micro-policies, this could be a successful strategy.
   - **Participant 5:** Insurance for certain ethnic groups for diseases that hit that group disproportionately like Tay-sachs or Celiac. Also war zones or countries particularly susceptible to certain diseases, hostage taking or terrorism. Also high net worth individuals who may be targeted for ransom. Travel health insurance for old people – especially snowbirds – who have some medical impairment already. Pollution coverage for individuals and for potential polluters. Climate coverage – for example – the guy who clears snow from my driveway might need to take out insurance to cover a heavy winter, as might a city that provides municipal snow clearing.
   - **Participant 6:** geography, income levels, and other factors certainly could lead to use of micro-policies and actually benefit the consumer in providing a benefit as well as help a company foster loyalty and cross marketing and up-selling activities as a person's situations changes.
   - **Participant 7:** Certain workplaces; flood etc insurance; violent crime protection
   - **Participant 8:** Theoretically, yes… Or perhaps micro-addons to cover additional risks on top of a given traditional coverage
   - **Participant 9:** A special "family" policy covering anyone with a specific genetic condition or whose family has a hereditary condition.
   - **Participant 10:** Possibly medical exclusions?
   - **Participant 11:** No answer.
   - **Participant 12:** See #1.
   - **Participant 13:** No answer.
   - **Participant 14:** Vacation sites
   - **Participant 15:** Not sure
   - **Participant 16:** No answer.
   - **Participant 17:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 18:** It seems like the policy would have to cover a situation, which could be limited b geography, but not ethnicity.
- **Participant 19:** No answer.
- **Participant 20:** Mission or volunteer travel to dangerous countries. Adventure travel. Policies to people that perceive they live in an area they perceive to have an unusually high incidence of cancer. Areas prone to specific natural disasters – hurricanes, tornados, earthquakes, tsunamis, etc.
- **Participant 21:** No comment.
- **Participant 22:** I would think that anything where there are valid statistics could be created technically.
- **Participant 23:** Yes. But micro-policies (a policy with a small premium, covering a unique risk) do not necessarily have to be niche policies (policies sold to only a small, defined set of people) – they could conceivably be mass marketed products.
- **Participant 24:** No answer.
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** No answer.
- **Participant 28:** Needs a small coherent management team to identify new risks and assess the quality of the risks being offered.

4. What other observations do you have about this strategy?
   - **Participant 1:** Not clear that the bungee jumping insurance could not be done with simple 19th century paperwork on line of travel insurance.
   - **Participant 2:** Administrative costs need to be a minimum. Similar to single flight airline cover which is no longer sold.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I think price is going to be a real issue because the people being targeted do have specific health issues and their policies are not going to be at standard rates. You've really got to get your prices right, not only to make it profitable for the company but to ensure that it's something the consumer feels they can afford.
   - **Participant 5:** I expect this to be a field that gradually extends over time as population, wealth, terrorism, global warming, pollution increase.
   - **Participant 6**: None
   - **Participant 7:** Small net premiums potentially afford significant % of premium profit potential
   - **Participant 8:** Seems less Blue-Ocean….more doable today than some other ideas

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 9:** This seems like a BOS rather than a window of opportunity. Collecting data, pricing and reserving for such a coverage will be a challenge. There may also be legal issues.
- **Participant 10:** No answer.
- **Participant 11:** No answer.
- **Participant 12:** It will be next to impossible to forecast a P&L or do a claim study. If you have life insurance, without segmenting cause of death, that is easily done. If you start segmenting unlikely events that happen a lot less frequently, the variance in claims will be problematic. However, segmentation leads to greater profit overall. The underwriting guidelines for each specificity will be next to impossible to administer.
- **Participant 13:** No answer.
- **Participant 14:** One of the early challenges would be to get a large enough block of business accurately underwritten to be able to survive the claims.
- **Participant 15:** No answer.
- **Participant 16:** Micro-policies could be a series of tiny coverages much like credit card miles. People who need insurance but don't want to make a major decision to buy a policy might be inclined to use a "protector" card that spins off a series of coverages.
- **Participant 17:** Could imply a racial bias; also, general lack of data for such differentiations.
- **Participant 18:** Advertising for the micro-policy would have to be at the location of the event or situation, like flight insurance. There would have to be some form of financial inducement for the "owner" of the situation.
- **Participant 19:** My general comment about this strategy is that the low volumes of diverse risks would make it very difficult to justify the spend required to make this work.
- **Participant 20:** N/A.
- **Participant 21:** If you divide the risk into categories that are too "micro", it seems you would destroy the insurance risk pooling concept.
- **Participant 22:** This seems like more a re-visitation of an existing process and branching it out then something strikingly new.
- **Participant 23:** Although the emphasis is on the first strategy, it seems to me that there are three overlapping potential strategies here. One is to use technology to dramatically lower distribution costs and therefore enable the offering of niche products that traditionally have had distribution costs which were too high in relationship to the risk premium. The other strategy is to use technology to deliver the insurance purchase opportunity to the insurance consumer with respect to place, time, and channel. The third opportunity is to complete the insurance sale very quickly, for example in the minute or two before a bungee jump. The extended product warranties sold at Best Buy are an example of a (P&C) micro-policy which incorporates all three elements. The technology component is the

cash register! When someone buys something as small as a $20 electronic device, they are asked "*Would you like an extended warranty?*" If they respond "Yes", the warranty price is added to their purchase and the warranty document prints out as part of the receipt. Everything is done in seconds. Until a few years ago, this delivery method did not exist. The sale is viable for warranties with a one-time premium of only a few dollars.

- **Participant 24:** Risk is not well understood by the general population and they tend to value risk improperly. Lottery versus savings account for accumulating funds as an example. This phenomenon will make pricing and selecting risk difficult for this strategy.
- **Participant 25:** I believe that there may be a bigger market for well designed A&H policies that are carefully targeted to healthy individuals.
- **Participant 26:** I'll pass on this one since I don't see a big demand for this type of approach
- **Participant 27:** No answer.
- **Participant 28:** Could such a service be offered at a price that would be attractive to potential clients? For wealthier clients, perhaps.

Strategy #8: Holistic Insurance Company – "Risk agents" help mitigate all risks

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Questions for Strategy #8:

1. How viable is this strategy? Could such a service be offered at a price that would be attractive to potential clients?
    - **Participant 1**: There certainly is a need for linkage of insurance to more types of events -- several are mentioned above. One has to be careful that the coverages

offered are insurable. I think there is much to be gained by insurance companies in linking coverages or coverage options to more life events.

- **Participant 2:** Yes
- **Participant 3:** This is my favorite strategy. Companies have long sought multiple underwriting of risk by the use of well-trained agents. More often than not, agents lacked the capacity and the interest to effectively sell multiple lines. However, with AI and an interactive program that produces a correlation of risk across product lines, this could be a breakthrough. There is no question that an individual's overall habits and circumstances drive his risk profile in all lines: life, health, property/casualty, and retirement. Individuals and families seldom have the required capital to cover all risks at an optimum level. Accordingly, a reasonable prioritization of risk and an explanation thereof would be helpful to most applicants.
- **Participant 4:** I don't know whether this would work. One of the reasons why people say they don't buy life insurance is because it's too expensive, and one of the reasons Critical Illness hasn't taken off as well as anticipated in North America is because of its expense. Rolling the cost of all those policies into one is going to add up to a fairly large sum of money which I think consumers will have a reluctance to pay.
- **Participant 5:** To an extent some sophisticated agents are moving this way already, but it is a high cost service so is likely to be successful only with high net worth clients. It is a natural extension of wealth management services.
- **Participant 6:** For high end customers, where this type of strategy would work from an expense standing, I think this service model can be offered at a price that would be very attractive given the needs of this market segment. Mainstream consumers I don't believe would see as much benefit. I don't believe you could make it an affordable option given the high level of "concierge" service that would be needed to address a "holistic" approach to risk. This type of model would be better service by say a partnership with a wealth management firm where you could gain synergies in dealing with risk (personal, financial, property, etc…) and having more insight into that individuals data and situation whereby you could do a better job at serving their current needs and looking to anticipate future needs based on goals, planning and on-going customer interaction.
- **Participant 7:** Seems tough
- **Participant 8:** To determine the price, you would have to determine the policy benefit and the likelihood of collecting the benefit.
- **Participant 9:** The approach is viable, but I am not sure whether or not it would be viable from a pricing point of view. Although not exactly the same as the model, I do have a practical example. MARC has a long-term care service company that among other things provides underwriting and claims administration for LTC policies. One of the other programs they have is "safe at home", where they do an in person assessment of the insured's home to look for

opportunities to make modifications that would reduce falls and identify other ways to improve safety (e.g., remove throw rugs, add banisters or replace steps with incline, add railings in level areas, improve lighting, etc.). Although this is a fee-for-service program, it should also help reduce LTC claims from falls and help preserve the insured's quality of life.

- **Participant 10:** Very viable and perfect for actuaries!! Fee for service w/ a small commission could help keep the price attractive.
- **Participant 11:** It already exists/No.
- **Participant 12:** Every family gets their own risk officer… Nice! Clients tend to seek expertise in specific segments. There will not be product expertise available in a holistic manner. Great idea with no distribution strategy.
- **Participant 13:** This would be very much a personalized approach – a variation on the more automated computerized versions.
- **Participant 14:** I don't think this one is particularly viable because I see this as part of the role of a good financial planner in today's paradigm. Holistic Insurance Company would have difficulty responding to claims from agents/financial planners selling products from large, well-known companies and claiming "I/We already do this for our clients as a part of the fundamental needs analysis."
- **Participant 15:** Not sure; and it appears to be a higher priced product with most likely needing some type of subsidy for middle to lower income family needs.
- **Participant 16:** No answer.
- **Participant 17:** Seems feasible.
- **Participant 18:** I don't see how. Today, only the wealthy individuals receive this type of attention and only because of their buying power. The only way to attract and retain "risk agents" is financial incentives, which would restrict the market.
- **Participant 19:** My general comment about this strategy is that the low volumes of diverse risks would make it very difficult to justify the spend required to make this work and there is nothing to stop the prospective insured taking the risk information and shopping for the best products afterwards – so unpopular fee based structure would have to exist upfront to mitigate that risk (offset against any commissions may sweeten the pill).
- **Participant 20:** Interesting idea. May be difficult to implement. How would data be consistently collected and interpreted. How would do this? How much would it cost? Who would pay it? How would this be factored into premiums? Would there be enough data to price it? How would you pay for distribution to sell it? Could the company make this a profitable initiative? Would a company be willing to pay for these costs to develop a product on the chance they could make it a profitable undertaking? Would the client feel the data needed for collection is intrusive? Would they be willing to take the time to provide the data? Would they perceive the time necessary to complete it is worth it?

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 21:** It is viable but it would be a new type of distribution system, so it would be difficult to implement. Current life insurance distribution systems are expensive and inefficient. A new more efficient distribution system should be able to generate a significant price advantage.
- **Participant 22:** I think this is more regulatory than any thing and the factors that would limit it are in that domain. There are many factors that can be linked to mortality potentially but insurers hold back due to regulation and public policy. Here are some examples. Where you live, zip code (Redlining), your race or ethnicity (public policy), your credit score (Not used by a life insurers). Probably many more.
- **Participant 23:** No answer.
- **Participant 24:** Perhaps. I like it. Some section of the population would like it.
- **Participant 25:** No comment.
- **Participant 26:** Based on my comments above, I believe this is truly viable. "Risk agents" could be today's financial planners but with better tools. You need, however, a broader approach to the overall market that can easily get to the masses. Therefore, an easy to use risk appraisal package is need on the Internet, or at Walmart! And, "yes" it should be VERY affordable given that you are packaging products.
- **Participant 27:** ??? Best why to find out is to outline the service, the benefits, price it and ask the prospects if they're willing to pay for it.
- **Participant 28:** For wealthier clients, perhaps.

2. What technological barriers or other obstacles are there to such a strategy?
   - **Participant 1**: Probably big regulatory problems with cross linkages. Knotty pricing problems of the option costs.
   - **Participant 2**: Commission Splitting
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** If you throw everything in together – life, health, property, car – and get this one policy, it sounds great but you're going to get a policy about an inch thick. Most people don't even read their life insurance policy document, so if they've got five or six all coming together, I doubt they would read it.
   - **Participant 5:** The data may be very expensive to gather and analyze – there are so many variables and the opportunities for anti selection are so great, as are the chances of errors in judgment.
   - **Participant 6:** I don't believe there is really any technology barrier that would exist given the direct access to the customer you would need to employ this type of service model.
   - **Participant 7:** Training salespeople
   - **Participant 8:** No answer.
   - **Participant 9:** The technological issues have to be worked out, but it seems the bigger problem would be legal and regulatory issues.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** Modeling software is critical
- **Participant 11:** No answer.
- **Participant 12:** Carriers do not have good infrastructure to take a global approach to their customers.
- **Participant 13:** Holistic Ins. Would have to have excellent CRM information and well-integrated admin systems to make this cost effective.
- **Participant 14:** I don't see any significant technological barriers.
- **Participant 15:** No answer.
- **Participant 16:** No answer.
- **Participant 17:** No answer.
- **Participant 18:** I don't see technology obstacles as much as profitability obstacles.
- **Participant 19:** Not really sure that this is a technology based strategy.
- **Participant 20:** The issue seems to be more data related than technology related. The technology to collect, analyze, and report on the data would seem to be available.
- **Participant 21:** Administrative systems for multiple product types would need to be linked up. This could be a significant challenge. In addition, there would be significant conflict with the current commission-based distribution systems.
- **Participant 22:** Obstacles are regulatory in nature, public policy and special interest groups.
- **Participant 23:** No answer.
- **Participant 24:** No answer.
- **Participant 25:** No comment.
- **Participant 26:** There should not be any technological barriers given today's computing power. Software will be the key.
- **Participant 27:** How does the direct risk mitigation differ from family counseling services?
- **Participant 28:** Product customization entails a cost that cannot always be recouped. Perhaps the use if smaller admin systems easier to manage and modify might eliminate bottlenecks because other products are "in the queue".

3. What other observations do you have about this as a "Blue Ocean" strategy?
   - **Participant 1:** No answer.
   - **Participant 2:** No answer.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Life insurance is very different to health, auto, home insurance etc. One of the problems consumers have with life insurance agents is that they say they are not knowledgeable, and now you're expecting this individual to know about five different types of insurance. I just don't see that happening, that the current sales force could suddenly expand their knowledge to that extent.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 5:** It will likely take a very long time to become pervasive and in many less developed counties it may never arrive.
- **Participant 6:** I see this as a strategy to benefit the customer from a wealth management situation and an insurance company that works in conjunction with financial services or partners on these products will be positioned to really exploit this market. I see insurance companies that do not have these links will have a tougher time making inroads than do other financial service companies who will be crossing over into the insurance sector.
- **Participant 7**: Up-front across the board selling sounds too tough
- **Participant 8:** Seems like there's something to this.
- **Participant 9:** This approach could meet the general requirement for item C. above, but I'm not sure that it would be compelling in terms of items A., B., and D.
- **Participant 10:** Holistic planning is lacking in our industry today.
- **Participant 11:** No answer.
- **Participant 12:** Very hard to take an holistic approach if we cannot deliver each component piece first.
- **Participant 13:** The success would seem to depend upon the caliber of the risk agents.
- **Participant 14:** It is not unique enough to be "Blue Ocean".
- **Participant 15:** No answer.
- **Participant 16:** No answer.
- **Participant 17:** I think this is possible.
- **Participant 18:** None.
- **Participant 19:** This is most likely to appeal to high net worth customers and it is notoriously difficult to make money out of these individuals as they tend to have multiple professional advisers.
- **Participant 20:** N/A.
- **Participant 21:** This strategy could be combined with Strategy #5.
- **Participant 22:** Just would seem to be off limits in today's world.
- **Participant 23:** This is what "Financial Planning" agents claim to do today – including non-insurance financial strategies. Until we arm agents with new concepts of risk and/or new products, there is no Blue Ocean strategy. The opening paragraph describes some opportunities for new products, but the subsequent paragraphs focus on agent training, not new concepts of risk or new products. Furthermore, a new approach to holistic selling is very replicable by competitors.
- **Participant 24:** Seems limited but it is based very much on the client need or behavior which may just fit a Blue Ocean strategy.
- **Participant 25:** No comment.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 26:** This should be doable in the next 5 years if somebody just gets on it!!
- **Participant 27:** Is euthanasia a valid risk mitigation strategy? (just kidding)
- **Participant 28:** No answer.

Strategy #9: Big Brother Insurance Company – Monitor individuals' health, risk profile

Big Brother Insurance Company seeks to build a "Blue Ocean" strategy around emerging technologies that will allow it to monitor and measure, on an ongoing basis, the risk profile of insured individuals. For example, a device could be installed in an insured's car that measures the distance driven, speed, whether seatbelts were used and even breathalyzer results.

Other technologies possible are:

- Home health monitoring devices that could periodically send information over the web such as heart rate, breath rate, blood pressure and weight.
- Personal/private information, such as some doctors' reports, may be accessed in electronic format.
- A personal electronic database could help with the treatment of an insured in the case of an emergency.

Since these technologies are invasive, clients would need to be provided with significant incentive in order to agree to this level of monitoring.

Questions for Strategy #9:

1. How viable is this approach? That is, could enough cost savings be generated to pass some back to the customer and still make an enhanced profit for Big Brother?
    - **Participant 1**: For a guaranteed life benefit, no savings, other than some feedback for proper reserving and future pricing and perhaps dividends to a block as a whole. For auto insurance that re-prices frequently, it could be a big discount.
    - **Participant 2:** Technically yes, legally no.
    - **Participant 3:** It seems to be that this strategy doesn't turn so much on pricing as it does on availability. Many have been motivated to build personal medical information "lock boxes" for individuals and families. So far, I know of no success. The reason is the interaction necessary between the medical community and the data gatherers, the awesome privacy regulations, and the never-ending liability for mistakes. If such a locker were built, which could include other personal information as well, I don't think a discount would be needed for the sale. I think people would pay a premium to buy a product which would include such a personal "locker".

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4:** Speaking as a consumer, my first response would be that it's way too invasive. It's one thing to save some money, but do I want to have health information relayed back to an organization when I don't know what they're going to do with that information?
    - I would think that there's an expense issue here. Are insurance companies really prepared to provide this expensive monitoring equipment – would it be worth their while? Then, what happens in terms of fixing the monitoring devices if they're broken or require maintenance checks? Cost would likely outweigh the benefits of such a strategy.
    - These types of monitoring devices have been discussed before and although it sounds great as a theory, the devices have to be simple, tamper-proof and non-invasive, and the insurer would have to be certain that they were measuring the correct person. So it's a very complex strategy that's subject to a lot of problems, and I don't think it's very viable at all.
- **Participant 5:** Yes I believe it could, since not everyone is paranoid about privacy rights. It may work much better in some cultures than others.
- **Participant 6:** While there is always a level of viability I see the overall adoption of this type of invasive approach to be more "generational" and thus could take several decades to really become accepted and implemented for real gain as a "blue ocean" strategy. In realty I don't ever view the cost savings to get to a point of someone willfully giving up control to allow this type of invasive monitoring of their life (not on a day to day basis by the average customer without special needs).
- **Participant 7:** Sounds like a possibility
- **Participant 8:** Where is the cost savings? Once a policy is issued, how would changes in health or behavior help mitigate the financial risk to the writing company? I suppose behavior modification strategies could help increase health and longevity prospects.
- **Participant 9:** It doesn't seem like a viable strategy to me. What do you do if the monitor says the car was speeding and the policyholder says that he loaned it to a neighbor or his son was driving or he was taking someone to the hospital? Do you revoke the policy? Increase the premium? Can you take action after the contestability period?
- **Participant 10:** Seems too envasive to be viable. Seems like downside risk is much bigger than upside savings.
- **Participant 11:** The approach is not at all viable.
- **Participant 12:** Yes, the savings could benefit both parties
- **Participant 13:** It would seem very difficult.
- **Participant 14:** Most people would not want the insurance company to be collecting this real-time information on them. I realized the description

acknowledges the need to provide significant incentive but those would have to very specific, objective, benefits such as:

  - If your weight stays under x pounds for the year, your premium next year will decrease by y%.

And then I'd worry about insureds gaming the device to provide inaccurate information.

- **Participant 15:** No answer.
- **Participant 16:** People have been doing home health diagnostics for years-from weighing themselves to blood-sugar tests, checking blood pressure, etc. New, more sophisticated devices are being developed and these devices are being built with PC interface so that individuals can track health stats in their personal health record.
- **Participant 17:** I think this would need to be offered on a voluntary basis, rather than mandatory (ie, only those people participating have the chance to receive a prem discount – see below)
- **Participant 18:** I don't see it as viable. The cost of monitoring devices and the related monitoring and analysis software would be extremely high. That coupled with the low acceptance rate of customer would seem to make this unviable.
- **Participant 19:** The technology is available now but this approach is likely to increase and not decrease costs. It may reduce claims experience but those that sign up for this program are more likely to be those with the lowest risk of mortality or morbidity anyway so not sure that much is gained.
- **Participant 20:** Another hard to answer question. It would be hard to quantify without a controlled research study. In the open market, I doubt many people would willingly open themselves up to scrutiny, unless it was health related. If clients felt the technology might save their life or if the company simply made it a voluntary option, some segment of clients would opt for it. This program would most likely grow slowly as data was collected and the company ascertained how profitable or how accepted the programs might be.
- **Participant 21:** I am not sure it is viable. Would the information be used to change premiums over time? Perhaps a benefit of this strategy could be "wellness consulting".
- **Participant 22:** I don't know. Seems the name notes the potential problem. "Big Brother'. The proposed insured who benefit would like it but the ones who don't – the other side of the coin, would not like it and would object to over monitoring.
- **Participant 23:** No answer.
- **Participant 24:** Somewhat. Perhaps.
- **Participant 25:** It is difficult for me to see this as a viable offering. I don't know how you can ensure accurate data. For example, I may be tempted to send driving information only when my ultra conservative wife is driving. I don't know how much data you would have to gather to determine if there are really statistical differences. As noted, the data gathering could inherently be jaundiced.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 26:** No answer.
- **Participant 27:** The customer benefit would have to be huge – both financial and non-financial. The non-financial would have to be stressed to get this near the tipping point.
- **Participant 28:** NOT FOR ME, AND PROBABLY NOT FOR THE VAST MAJORITY OF MOST PEOPLE, AMERICANS ANYWAY, TODAY AND IN THE NEAR FUTURE. GOVERNMENT AND BUSINESS HAVE BECOME TOO INTRUSIVE IN PEOPLE'S LIVES. THE POTENTIAL FOR INTENDED OR UNINTENDED ABUSE IS TOO GREAT.

2. How much of a premium discount would be needed to make this strategy viable?
   - **Participant 1:** 10% or more.
   - **Participant 2:** 20%
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** I can only give an opinion, not a number. It would have to be significant to warrant the invasion into consumers' lives, and what would be considered significant would likely vary from client to client.
   - **Participant 5:** I think you would need to offer at least a 10% discount.
   - **Participant 6**: I personally don't feel you could ever get to a price point to make it viable and still have the product profitable or worth the investment.
   - **Participant 7:** Not too much, especially since customers could see the benefit of health improvement.
   - **Participant 8:** Not sure any premium discount makes sense
   - **Participant 9:** I think the cost of monitoring would outweigh any potential discount.
   - **Participant 10:** 25%
   - **Participant 11:** 50%.
   - **Participant 12:** This depends on the product line. It will be next to impossible to allocate back the expenses to figure out the true savings.
   - **Participant 13:** It would have to be substantial.
   - **Participant 14:** Quite a bit. 40%? I think the discount demanded by the market to make this work is probably higher than we can achieve in pricing with this additional information.
   - **Participant 15:** No answer.
   - **Participant 16:** Each younger generation will have higher tolerance for this kind of insight. More information will produce better decisions which should provide adequate pricing incentives.
   - **Participant 17:** At least 10%.
   - **Participant 18:** It would have to be significant to get anyone to agree.
   - **Participant 19:** Absolute dollars rather than a percentage likely to be more of a motivator. Minimum $500.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:** It could be sold as a safety or life saving device also. But if the motivation was simply premium savings, my guess is in the 10-20% range. It may depend on how much the person felt they had to hide and how far from the "norm" they felt they were.
- **Participant 21:** Cannot quantify.
- **Participant 22:** The more the discount, the more the ones who don't qualify will object. And there might be significant anti-selection to qualify for the discount. Asking a friend to 'help drive' and such.
- **Participant 23:** No answer.
- **Participant 24:** Not sure it is a discount that will drive this. Perhaps it is clients understanding that they are not paying for the failures of others' behavior but are paying for their own.
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** No answer.
- **Participant 28:** 100% (JUST KIDDING, BUT YOU UNDERSTAND THE POINT.)

3. Is there any other incentive that could be offered to a potential client for this type of product?
   - **Participant 1:** Health / accident monitoring -- individual, police or medical providers notified as appropriate in situations. Also, counseling to individual, and provide information to doctors.
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** Not really. What I interpreted was that they're using this to gain data so that they could do a better job of pricing future policies – using the information for subsequent product development/pricing as opposed to trying to re-price an existing policy. When you buy these products you're buying protection for a dollar cost, so I imagine that consumers would expect a dollar-based incentive.
   - **Participant 5**: Airmiles, money donated to charity on their behalf, free internet access, cheap cell phone packages
   - **Participant 6:** I see this type of invasive monitoring techniques as useful for special needs or extreme situations where the benefits far outweigh the intrusive collection of data and the persons giving up many of their civil liberties. Such circumstances may be in relation to life altering or life saving situations.
   - **Participant 7:** See my answer to 2
   - **Participant 8:** What about a payment of % of policy coverage (without reducing the ultimate benefit) for ongoing recording of the information. Like a certain number of bps of policy face for a life insurance product, or a certain number of bps of lifetime max coverage for a health policy.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 9:** Maybe you could bundle a life and auto policy. There may be a time where this kind of monitoring could be of paramount importance. For example, someone may want to buy long-term care insurance on a parent living alone if it came with a service that continuously monitored the parent's condition. (e.g.,see the services described at http://www.quietcaresystems.com).
- **Participant 10:** Something that is offered at check in point like a jump in CV or premium offset.
- **Participant 11:** No.
- **Participant 12:** Pair the device to an iPod.
- **Participant 13:** No answer.
- **Participant 14:** If more than one family member elects coverage, we could save underwriting costs by using the same device (scale for example) which would translate to additional savings for those families with more than one insured member.
- **Participant 15:** No answer.
- **Participant 16:** Some kind of family benefits?
- **Participant 17:** Additional features, like guaranteed insurability.
- **Participant 18:** I don't see any.
- **Participant 19:** Packaging is always important. Could be sold as a free health check every X period in addition to the reduced premiums.
- **Participant 20:** As noted before, safety and life saving.
- **Participant 21:** Wellness programs, quality of life.
- **Participant 22:** Maybe stay away from lower cost. Offer faster service. More coverage.
- **Participant 23:** No answer.
- **Participant 24:** If you can change behavior in a favorable manner for the insured.
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** Non-financial: early warning of potential health problems. Longer life expectancy. Second opinion of doctors reports. Better information for emergency care providers – increased chance of survival. Avoidance of dui fines, dui related accidents
- **Participant 28:** Rapid notice of health emergency, but this is likely to emerge in a patient doctor type relationship not one involving an insurer.

4. What other observations do you have about this strategy?
   - **Participant 1:** It would be better to position this as a health monitoring/counseling system offered by a company specializing in this, with a deal for life and health insurance, taking advantage of the information.
   - **Participant 2:** No answer
   - **Participant 3:** One strategy general answer under Question #1

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 4:** I can see an application of this strategy in the auto insurance industry, although they have a lot of obstacles to overcome. For instance, they're measuring the car, not the person – so how do they verify who's driving the car? Also, all devices are subject to tampering.
- **Participant 5:** You will have to make clear what use will be made of the data – will it be sold, available to police etc. There are lots of people who would be willing to trade privacy for cash – those concerned about privacy will just go elsewhere. We may need independent watchdogs to ensure the data is not misused and to give people assurance of that and someone to call if there is a misuse.
- **Participant 6:** Within the U.S. market I believe the protections we have as a society will not allow this type of approach or technology to be used in the marketplace with the exception or rare circumstances. Regarding the statement about automobile use one item I see that could happen without consumers knowledge is the programming of software to collect data such as driving habits, speed and other data. This data could be collected via a connection that ties data together such as a VIN number to automobile data sent using blue tooth or wireless type technology.
- **Participant 7:** A long-term effort, with much technological breakthrough could be required, but the approach could be attempted a piece at a time.
- **Participant 8:** No answer.
- **Participant 9:** This approach could meet the general requirement for item C. above, but I'm not sure that it would be compelling in terms of items A., B., and D.
- **Participant 10:** No answer.
- **Participant 11:** No answer.
- **Participant 12:** If the product line is perceived by the carrier as being marginalized in price, there will be a push to simply keep the efficiencies in order to protect the 15% ROI. If the market is currently providing a customer with a price that does not completely reflect the risk, the client will not want to give additional info. I would think that any information garnered will be used as a basis to raise the rate because the actuaries can no longer be flexible on the impact of unknown information.
- **Participant 13:** No answer.
- **Participant 14:** See my response to #2 – I don't think this has much value.
- **Participant 15:** No answer.
- **Participant 16:** No answer.
- **Participant 17:** Seems plausible.
- **Participant 18:** None.
- **Participant 19:** None.
- **Participant 20:** N/A.
- **Participant 21:** None.
- **Participant 22:** None

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 23:** There is no strategy discernable from this description. "*We will use technology tools to monitor and measure, on an ongoing basis, the risk profile of insured individuals*" is not a strategy. How will the tools be integrated into current or new products? How will the resulting risk profile information add value to the insurance value proposition from both the consumer and insurance company perspective? Furthermore, what prevents other companies from quickly replicating the use of the same tools? Finally, there are significant regulatory hurdles. Insurance companies generally cannot reprice or modify benefits for individual health and life insurance based on the risk profile of the insured after the initial sale.
- **Participant 24:** Some of this seems to be happening today. Car insurance.
- **Participant 25:** No answer.
- **Participant 26:** I don't really see today's population, with the possible exception of the Japanese, being of a state of mind to want this type of "service".
- **Participant 27:** More viable with health and safety conscious market segment.
- **Participant 28:** No answer.

Strategy #10: Virtually Real Insurance Company – Virtual World Insurance

Virtually Real Insurance Company is exploring the concept of virtual world insurance. Virtual worlds, like SecondLife, are online experiences where people enter the "world" as an avatar – or electronic representation of themselves. These "worlds" are becoming more and more "real" as they draw more participants – including corporations - and the experience becomes more sophisticated. As this virtual reality expands, opportunities may be created for insurance – possibly distribution, marketing… or even products.

Questions for Strategy #10:

1. What advice would you give Virtually Real regarding the potential for marketing insurance in virtual worlds? For providing insurance products in virtual worlds?
   - **Participant 1:** People have an investment of time and sometimes money in the avatar. If the avatar can be killed or robbed within the world (I guess they can?) then there is some small insurance market.
   - **Participant 2:** Follow the banks.
   - **Participant 3:** At present, I don't see any real benefit to the use of virtual reality in the sales of insurance. It might make it more fun and it might be a "gimmick" to get people into the site and making selections such as suggested in Strategy #8, but I don't think it is required nor would it add much.
   - **Participant 4:** If you were trying to use this as your main method of marketing, there'd need to be a lot of research done on what types of avatars people would respond to best, what type of voice or accent they would need to have. It almost

seems like it increases the level of difficulty of marketing and of the technology required to make it work.

- **Participant 5:** For providing insurance products in virtual worlds? The possibility of abuse or deception is high. You need to develop authentication so that the user knows when they are in a fully secure zone and when not, and the company may have to validate the advertisers individually to avoid scams. It is easy to post something in a virtual world but hard to draw the right people to your lemonade stand – you tend to get cruisers rather than motivated buyers.
- **Participant 6:** Focus on products that have specific applications and can not be easily manipulated or "rigged" for fraud or criminal activity. One product that I could see that folks may target as valuable would be a form of title insurance for passing "deeds" or transactions of virtual property or rights within the system. Other forms of insurance could deal with other specific risk issues such as identity theft, loss of use, hacking, etc…where similar to micro or target policies they have a niche coverage type that is very well defined and the risk can be determined from a "pure risk" standpoint vs. a "speculative risk" standpoint.
- **Participant 7:** Might serve to begin as an educational tool, with Google-like ads for fulfillment
- **Participant 8:** Sorry, I choose not to answer this question.
- **Participant 9:** Although I have visited SecondLife, I don't know enough to comment on this BOS.
- **Participant 10:** No answer.
- **Participant 11:** No answer.
- **Participant 12:** I would fight for prominent product placement. These worlds could have blimps that promote necessary branding. The advantage of a virtual world is to speed up the causal relationship. In real life, you will never see the impact of many financial decisions on the well-being of a family after you are gone. In this environment, such as a SIMs game, one can see what happens to the family once a family member is gone.
- **Participant 13:** No answer.
- **Participant 14:** No answer.
- **Participant 15:** No answer.
- **Participant 16:** See Strategy #4 for thoughts on this.
- **Participant 17:** Watch out for data errors (errors in date entry and consumers lying about basic info to get a better deal).
- **Participant 18:** I know very little about virtual worlds, but there does appear to be an opportunity.
- **Participant 19:** Don't.
- **Participant 20:** No answer.
- **Participant 21:** I think that insurance marketing requires a personal relationship. The virtual world could be used to support that personal relationship, but not as a total substitute.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 22:** So far this is fun for 'game players' but they usually have avatars that are different then their real selves to tying it to the real world is the trick.
- **Participant 23:** Think hard, very hard about how to make money. Virtual worlds are fun and cool, but they are unproven as a commercial money making environment. The argument that simply building brand in virtual worlds will help with build brand in the real world will be even harder to justify than traditional real world brand building costs (already difficult to justify).
- **Participant 24:** Potential for marketing insurance in virtual worlds: Try new stuff. Providing insurance products in virtual worlds: Have the right to all experience data as it evolves.
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** Utilize the VR environment to educate and inform prospects of risks, needs and solutions.
- **Participant 28:** No answer.

2. How might virtual worlds blend with the real world to create opportunities for insurance companies?
   - **Participant 1:** I don't see it blending.
   - **Participant 2:** No answer.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** From a marketing sense you can use it as an interactive tool and save costs, save time, like insurers do with tele-underwriting now. Maybe by using visuals or online characters, as opposed to the customer providing this information to a representative over the phone, it could help individuals to feel more comfortable with the process. If the avatars were targeted to appeal to specific client types or market segments, clients might be made to feel as though they're talking to someone like themselves.
   - If you remove the human beings – the underwriters – from this process it could reduce costs and it could also extend hours of operation and thus improve service.
   - **Participant 5**: I see the virtual world as more of an information vehicle than a sales office – you maybe need a secure website for those willing to buy online and bricks and mortar or telephone call centres for those who are not.
   - **Participant 6:** Loyalty programs can be a way to gain market share / insured's while allowing cross selling opportunities from a real world perspective as well as a virtual world perspective. Looking at opportunities for cross promotion, cross over of insurance risk, and how a company approach long term customer relationships could be a very good way of building growth opportunities as well as increase profit margins.
   - **Participant 7**: See answer to 1
   - **Participant 8:** No answer.
   - **Participant 9:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 10:** No answer.
- **Participant 11:** No answer.
- **Participant 12:** Assuming one has the flexibility to create a model after oneself, the data from the modeling can be used to create real solutions. Allowing a view of one's life from above is an opportunity to change your model based on decisions in real life.
- **Participant 13:** If virtual world closely describes potential risks that should be insured.
- **Participant 14:** No answer.
- **Participant 15:** No answer.
- **Participant 16:** No answer.
- **Participant 17:** Better access to data sources.
- **Participant 18:** Assuming there are millions of people participating in virtual world web sites, and assuming that if someone is gullible enough to buy virtual real estate, they would buy virtual insurance as well, then an insurance company could sell virtual insurance. The web site owners would get the premiums, but would allow the insurance company to "advertise" real insurance to the real people.
- **Participant 19:** Doubt it can.
- **Participant 20:** No answer.
- **Participant 21:** They could be used to enhance the communications between the agent and customer.
- **Participant 22:** That's the trick. Making the avatar simulate the real person/ But why have an avatar than?
- **Participant 23:** Virtual worlds might be a great opportunity to test new products for the real world – free from regulatory constraints! If information gathered from virtual worlds, whether regarding product viability or otherwise, can be directly used in the real world, then the net cost of operating in the virtual world may justifiable.
- **Participant 24:** Testing ground for new ideas.
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** See above.
- **Participant 28:** Virtual worlds sound like beta test sites for product concepts. Rather than agonize as to which design is best, put the designs out there. (Conceptually I'm okay with this observation. After all, I wrote it! But I wonder how difficult it will be to implement for real.)

3. What obstacles might a company face in pursuing a strategy that involves an online, virtual world?

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 1:** Small dollar amounts, identification of the entity insured, fraud, anti-selection.
- **Participant 2:** The selection/anti-selection process.
- **Participant 3:** One strategy general answer under Question #1
- **Participant 4:** I think security would be a big issue. The insurer would need to make sure that the users were very confident that their information would remain private. Also, consumers want to know how the information will be used. As time goes on and more people become used to doing business online, maybe this won't be such an issue; for instance, younger people may already be more comfortable doing business through their cell phones. However, when you're conveying health information and social security numbers -- highly personal and confidential information -- I would think that consumers would have a concern for the security of that information.
- **Participant 5:** Griefers – people out to ambush visitors – can make these worlds unpleasant and frustrating to explore. Such a place will also attract a very specific part of the population – young, tech savvy, games players etc – it may be a good way to market to these people but you may leave other potential markets untapped. Money transactions are currently tokenized – not dealing with real money.
- **Participant 6:** Risk in terms of customer service and dealing with the issues of full risk that will allow for insurability without a high degree of fraudulent activity. I see customer service and perceptions which can hurt a company as well as help them gain market share as key risk factors as the word of mouth marketing is almost instantaneous in a virtual environment.
- **Participant 7:** Developing technology; getting player to see their own reality
- **Participant 8:** No answer.
- **Participant 9:** No answer.
- **Participant 10:** No answer.
- **Participant 11:** No answer.
- **Participant 12:** Peoples view of themselves is seldom objective. Circumstances are seldom what they seem. You could model yourself with a skill set that exists only in your own mind.
- **Participant 13:** Potentially only a narrow audience would be interested.
- **Participant 14:** No answer.
- **Participant 15:** No answer.
- **Participant 16:** No answer.
- **Participant 17:** Privacy rules and regulations.
- **Participant 18:** It seems the actual opportunity is selling real insurance to the virtual world participants, and the site owners may not allow commercial activities.
- **Participant 19:** Lack of interest.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 20:** No answer.
- **Participant 21:** The customers for their products might not be active participants in the virtual world.
- **Participant 22:** As noted above.
- **Participant 23:** Each virtual world has its own self-regulation. Although the regulations are not as onerous as the state regulations that we are used to operating under, these regulations are far less familiar. Therefore we may unwittingly violate the written or unwritten expectations of the virtual world. And making mistakes can be costly. Although brand building in a virtual world will not necessarily translate well to the real world, "brand burning" (anything that goes wrong) will translate well, particularly if the electronic or print media picks up the event.
- **Participant 24:** No experience. What drives behavior? Is there self preservation
- **Participant 25:** No answer.
- **Participant 26:** No answer.
- **Participant 27:** Negative impact / reduced euphoria of VR experience in having to confront serious real world issues.
- **Participant 28:** If you "virtually insure" representations of real people, you'll need to e awfully sure they know what they haven't bought.

4. What other observations do you have about this strategy?
   - **Participant 1:** Suicide is much less painful in a virtual world.
   - **Participant 2:** No answer.
   - **Participant 3:** One strategy general answer under Question #1
   - **Participant 4:** No answer.
   - **Participant 5:** It's interesting – a iche market worth exploring for some simple products perhaps but never likely to have the impact of a more traditional website.
   - **Participant 6:** None
   - **Participant 7:** Google ads seem to work with searches. Wonder how other product sales are working off of game sites
   - **Participant 8:** No answer.
   - **Participant 9:** No answer.
   - **Participant 10:** No answer.
   - **Participant 11:** I do not understand it.
   - **Participant 12:** Call me old school, but I have no desire to participate in a proxy for my own life. I would rather ignore it and hope for the best.
   - **Participant 13:** No answer.
   - **Participant 14:** I really don't understand this one. I don't see the value of a life insurance policy in a virtual world. I don't see the real financial implications to insure.
   - **Participant 15:** No answer.

Appendix D-2
Complete Responses to Round Two Survey

- **Participant 16:** No answer.
- **Participant 17:** Parts of it seem plausible, but probably at least 10-20 years off.
- **Participant 18:** It seems just goofy enough to have merit.
- **Participant 19:** Insurance is still sold and not bought and usually occurs around some life changing event. Use of the proposed technology to generate product and brand awareness and to drive sales to you rather than anyone else may be a valuable strategy but not for product fulfilment or premium payments in my view.
- **Participant 20:** I am not sure I grasped the concept of how a virtual world need's insurance in a way that is of any real consequence.
- **Participant 21:** Security of financial and underwriting information would be a concern in the virtual world.
- **Participant 22:** Sounds futuristic but until there is a way to link real with avatar, don't see it a working.
- **Participant 23:** None.
- **Participant 24:** No answer.
- **Participant 25:** I wish these kinds of products were available in the sixties when many of my associates lived in altered realities.
- **Participant 26:** Maybe I'm a little dense, but this one escapes me entirely. Sorry!
- **Participant 27:** No answer.
- **Participant 28:** This concept is very intriguing. It's like maintaining your own test financial portfolio to determine what if.

GENERAL COMMENTS

1. Of all the issues and scenarios touched upon, the one which in my opinion is not only predictable but is actually happening, is the one I called, "When the world goes visual". That's when a true middle ground will be created between a telephone call and conversation, and an 'in-person' meeting, you will be interacting via 'picture phone' with a real human being. It's been my prediction for the last 15 years, that this will have the biggest impact of anything in the history of financial services and I feel stronger about this today than I did at the beginning. Second Life is down the road and may or may not materialize in any major way, but this one involving 'personalized'. . .'demographically and psychographically' targeted marketing offerings and products, delivered in creative, fun, and user-friendly ways - by demographically and psychographically 'matched' agent/customer service rep's, etc., is just around the corner and to some extent, is already here. I'm actually working with a company that is on the very cutting edge of this new e-learning, e-marketing, and e-training world - Novo Logic - and I've introduced them to ING, Pru, and John Hancock and I believe that all three have now initiated projects.

Appendix E
Round Three Survey

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Earth Friendly Insurance Company plans to adopt a "Blue Ocean" strategy called: "Paperless processing: do it all on-line!" "Part 1" of this strategy is to use technologies and processes that do away with paper applications, which may include the pre-population of some information about the applicant from internal or external sources. Information will be obtained through the internet or all-in-one communication devices either directly from the applicant or a field agent. Policy approval and an option to print coverage verification will be directed back by similar routes.

Earth Friendly also foresees a "part 2" of this strategy: the use of a "Touch the Screen" system in which the applicant would touch the computer/lap top screen and the finger print would automatically pull all medical files and other life style data. One slight prick of blood, similar to that used by diabetics for blood sugar testing, would provide immediate analysis of all physical conditions, which would be fed through the computer at the same time as the one-touch activity.

One company has already adopted a version of "part 1" of this strategy, issuing up to $250,000 of term life coverage to individuals age 18 to 60 "generally within minutes" based on "just a few health questions" answered online. An immediate decision is provided and, if approved, the applicant can print their in-force policy online.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"

As part of its strategic planning, Super Fast Insurance Company has concluded that a significant but affordable investment in increased computing power and speed and other emerging technologies can drastically reduce its time to market compared to its competitors and more than pay for itself in market share. It has dubbed this strategy "Quantum leap in time to market."

Super Fast believes that it can achieve "real time" pricing of policyholder options, even with in-force products, that will enable it to market far greater flexibility and consumer choice. Even with the increased degree of rigor required in analyzing product profitability, including stochastic testing, more powerful processors and faster networks would enable it complete turnaround in minutes that formerly took overnight.

Appendix E
Round Three Survey

Furthermore, Super Fast believes that Business Process Management (BPM) software will support rapid installation of product variations. This would allow products to be rapidly configured (without special coding) to different markets and a wide range of policyholder options. Recognizing that state regulation will sometimes remain a speed bump in the process, Super Fast believes that the strategy will nonetheless pay off handsomely in many cases.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Strategy #3: Insurance W/O Borders Co. – Global internet sales where regs allow

The Insurance Without Borders Company observes that, across the globe, a wide variation exists in the regulatory environment and the associations that provide risk-related data. It is contemplating a proposed "Blue Ocean" business plan to take advantage of the current situations that are favorable - while other companies wait for world regulatory standardization.

The proposed business plan asserts that internet sales of life insurance could be made from many host countries - not just the United States and Canada. The plan is to choose a set of host countries with laws or regulations that permit (or at least do not prevent) internet sales of life insurance, and that allow the use of technologies currently available from a technical standpoint but not universally allowed from a regulatory standpoint.

The target is the ocean of people to insure in Africa, India, China and other countries relatively untapped by life insurance companies. The population growth of higher income individuals in these regions represents a marketing opportunity beyond the relatively mature domestic markets.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Strategy #4: Global Insurance Company – Global data mining, marketing

Global Insurance Company operates in many countries and is planning the use of internet/cellular/data-mining technology to access and promote its products to the non-

insured population across the globe. The technology will need to work in a concerted fashion to result in creating the "Blue Ocean" segments. Internet and cellular technology would be used for educating (and simultaneously advertising), getting feedback (to gauge effectiveness) and collecting premium payments. The data-mining technology would assist in designing advertising and products and locating target markets across the globe.

Global feels it is well positioned to use the Internet as a marketing tool to target "Blue Ocean" segments, especially the younger population, an international client base and non-working, retired adults. It plans to use "smart" vehicles to take data from customer behavior, buying patterns, demographics, and other relevant information to piece together messages that are tailored to a specific person.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Strategy #5: Your Way Insurance Company – Prospects custom-design coverage online

A think tank at Your Way Insurance Company has recommended a "Blue Ocean" strategy in which individuals would custom-design their insurance coverage online.

The entry point would be an online process driven model that enables consumers to design their insurance coverage by answering a series of questions. The model would have "click to call" expert advice available on how to use the model as well as for each insurance category, which could be a broad spectrum (life, health, annuities, long term care, auto and home) or some subset. Only products with relatively simple and transparent pricing would be offered. Consumers would mix and match discrete, simple products to address comparatively complex needs.

Due to state insurance department restrictions, Your Way expects to issue multiple policies through different operating units to provide the overall coverage designed by the consumer. Online underwriting mechanisms and data bases would be used to narrow the price range, define the price subject to certain conditions, or determine the price precisely.

Response activity would be used to systematically refine the process model and coverage building blocks available to consumers.

Appendix E
Round Three Survey

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Please comment on the following expanded description of the strategy submitted by a participant in Round Two.

"This is the beginnings of a Blue Ocean strategy. To replace the currently fragmented approach to insurance acquisition would be revolutionary. And, yes, if done properly, it is more than simply a window of opportunity.

Simply building a "cool web tool", however, that presents insurance as a series of integrated offerings is only a window of opportunity. Anything put out on the web is relatively easy to copy. And unfortunately the description focuses on the cool web tool. The Blue Ocean strategy will involve selling, underwriting, billing, and administering multi-line insurance on a truly integrated basis. This will involve a massive change in how the insurance company operates and computer system design.

We do a horrible job of this today. If someone wants to buy health, life, disability, and LTC policies, they need to go through 4 different underwriting processes, all of which ask essentially the same information and require the same medical records. We could have unified applications and underwriting. We don't. And there is no apparent will in the industry to change this – which creates a great opportunity for the company that does!

The P&C business is better, but not great. Within Allstate (the P&C company where I have my insurance) and other companies, the underwriting information is shared and integrated, but I still get separate different bills, on separate billing cycles. But when I called GEICO for a quote, I was told that I needed to talk to a separate person for each of my auto, motorcycle, renters', and umbrella policy. Furthermore there was no information transfer – I had to start with the basic name, address, and social security number with each.

As a consumer, separate policies don't bother me. Who reads them anyway? But separate sales, underwriting, billing, and administration bother me. Someone will figure this out and reap success. They will have more than a momentary advantage as it will be hard for entrenched companies to make the fundamental business practice and management structure changes required to replicate the success."

Appendix E
Round Three Survey

Strategy #6: Strategic Partners Insurance Company – for Operational Excellence

Like many companies, Strategic Partners Insurance Company is investigating increased use of technology for incremental improvements in operational excellence. It is considering a substantially increased investment in this area to pursue a "Blue Ocean" strategy to find innovative technological breakthroughs that may result in intellectual property rights. It is also considering strategic partnerships with non-insurance entities that could provide leveraging of applicant underwriting or claims information.

Examples might include access to online prescription or medical records, motor vehicle records, court records, shopping records, insurance policy and application records, biological or genetic sources, etc. as well as claims adjudication facilities that would complement internet policy administration.

Among candidates for a strategic partnership are a major pharmacy chain, a forensic laboratory, a supermarket chain, a credit card giant, a GPS (Global Positioning Satellite) device manufacturer, a biofeedback technology firm and even a big name jeweller - to make a medallion that is both a status symbol and a monitor (and transmitter) of basic life parameters – the 'bling' factor.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Just What You Want Insurance Company believes that there may be an emerging opportunity for a "Blue Ocean" strategy around offering "micro-policies." These products cover narrow risks, at targeted periods, for specific consumers, at highly specialized prices. Sophisticated – often diverse - technologies are often required to enable distribution, segment markets, price risk, and issue coverage. Although these policies have the potential to replace broader "blanket" coverages, the greater potential is to open markets for risks otherwise uninsurable. For example, life insurance for a bungee jumper could be sold to cover the specific event.

Round Three Questions:

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Appendix E
Round Three Survey

Strategy #8: Holistic Insurance Company – "Risk agents" help mitigate all risks

Its market research leads Holistic Insurance Company to believe that there is a need for customers to have their risks analyzed and mitigated "holistically". It recognizes that there may be interactions between life, health, property and other risks that affect the underwriting, amount, and type of insurance needed to cover those risks. It has also identified certain risks that are not typically covered well, such as parents living longer or children needing to be supported longer than anticipated, and family dissolution.

The chief distribution officer has recommended that the company recruit and train special "risk agents" who would work closely with customers to analyze their entire risk profile and customize products accordingly.

Besides tailoring the insurance products to their overall situation, the "risk agent" could offer the additional service of direct risk mitigation and not just mitigation of the financial consequences of those risks.

Round Three Question:

After reviewing the Round Two responses from all participants, do you have any additional comments, or are there any changes that you would like to make to your Round Two responses?

Strategy #9: Big Brother Insurance Company – Monitor individuals' health, risk profile

Big Brother Insurance Company seeks to build a "Blue Ocean" strategy around emerging technologies that will allow it to monitor and measure, on an ongoing basis, the risk profile of insured individuals. For example, a device could be installed in an insured's car that measures the distance driven, speed, whether seatbelts were used and even breathalyzer results.

Other technologies possible are:

- Home health monitoring devices that could periodically send information over the web such as heart rate, breath rate, blood pressure and weight.
- Personal/private information, such as some doctors' reports, may be accessed in electronic format.
- A personal electronic database could help with the treatment of an insured in the case of an emergency.

Appendix E
Round Three Survey

Since these technologies are invasive, clients would need to be provided with significant incentive in order to agree to this level of monitoring.

Round Three Question:

After reviewing the Round Two responses from all participants, do see any way to improve this strategy to make it more viable?

Strategy #10: Virtually Real Insurance Company – Virtual World Insurance

Virtually Real Insurance Company is exploring the concept of virtual world insurance. Virtual worlds, like SecondLife, are online experiences where people enter the "world" as an avatar – or electronic representation of themselves. These "worlds" are becoming more and more "real" as they draw more participants – including corporations - and the experience becomes more sophisticated. As this virtual reality expands, opportunities may be created for insurance – possibly distribution, marketing… or even products.

Round Three Questions:
Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Appendix F
Complete Responses to Round Three Survey

Participant responses are presented in the same order as the Round Two summary. Participant 30 participated in Round One but not Round Two.

Strategy #1: Earth Friendly Insurance Company – "Paperless Processing"

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** In part 4, I would second the comment "yes with encryption methodology." One could construct a way to highly restrict health information in a form that allows identification of the individual involved. This can be done with existing technology.
- **Participant 2:** Pieces of paperless processing will be adopted by most companies in the next 10 years. The personal lines casualty industry is ahead of the life industry in this regard with instant access to motor vehicle records.
- **Participant 5:** I'm comfortable with my round two response.
- **Participant 6:** I think the use of USB or even wireless medical devices that would connect through or be an integral part of a laptop or PDA device would help alter the intake of screening information. You could use the pin drop to gain valuable information similar to how blood is tested today but with more efficiency and with a narrow defined parameter. I don't see the total testing that was alluded to in the paragraph but certainly you could develop technologies that can compliment the validation of medical information pulled from other sources (electronic medical records, prescription drug data, other lab or diagnostic test results). Given the acceleration of technology and the innovations in medical devices I can see strong advances that would help deliver real time results from field paramedical exams and provide further information from the use of additional testing devices. (finger pricks, finger sensors (much like the oxygen sensors they use in hospitals today, optical scans, hair analysis, skin and dermal analysis, use of monitoring sensors, and further advances in x-ray or similar technology to gain further insight the body and its organs/tissues.
- **Participant 7:** Surprised less isn't made of the marketing potential here. And I think the compactness of the process might result in more online sales rather than research.
- **Participant 9:** Answer from Round 2 unchanged.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** No additional comments and the summarized feedback from Round Two has not materially changed my perspective.
- **Participant 20:** I do not have any additional comments beyond the comments provided by the respondents.
- **Participant 21:** Answer from Round 2 unchanged.

Appendix F
Complete Responses to Round Three Survey

- **Participant 26:** In addition to the privacy issues (that will likely be sanctioned by Government), I think medical industry reporting standardization is also going to be key to a successful effort. The efficiency of the risk assessment process will be driven by the collection of homogeneous data from the applicants.
- **Participant 30:** Agree with most respondents that this is a window of opportunity. Part 1 should be a priority for all insurers that want to be in a viable market position over the next 10 years. Get in sync with how people want to do business; the mature consumers of tomorrow are the texting generations of today. Part 2 seems aimed at using technology to more efficiently gather data that is subjected to the standard underwriting approach used today. This is okay as an efficiency gain, and would give the early adopters a leg up in capturing market share. Worth pursuing and working on ways to overcome privacy concerns, etc. But to be true Blue Ocean you need to use these gathering techniques to feed a different approach to writing business.
- **Participant 31:** Privacy concerns should not be an issue since this is no different than what is currently done, except that it is done electronically and immediately. As long as an applicant opts in to the process there should be no privacy issues. It is also important to note that additional electronic data (patient records) is coming which will also enhance this strategy.

Strategy #2: Super Fast Insurance Company – "Quantum leap in time to market"

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** What is not mentioned is fast marketing feedback and response to that feedback. The synergy of a rapid complete marketing-product development cycle could be powerful. Throwing a lot of diverse complex products on the market quickly by itself will be helpful but not revolutionary.
- **Participant 2:** Mass customization of life insurance products will occur. Speed to market is not the issue – consider the time it takes to bring a car or a drug to market. Even a toy requires almost a year lead-time. Federal regulation when it occurs will have uncertain impact on speed to market.
- **Participant 5:** I'm happy with these responses.
- **Participant 6:** I see the responses and find it somewhat interesting that most are very negative about how this strategy can be implemented, the obstacles and the issues surrounding a movement that is currently taking place in today's insurance marketplace but not at the pace that we will see within the next 5 years…today's current concepts are more in the "crawl" stage of a "crawl, walk, run" development cycle. Based on feedback I don't believe many are forward thinkers who really are looking to push the envelope and this is concerning. Given the strategy as it was written with the proper planning, execution and culture of a driven organization there

is certainly no reason to believe that for a company that wishes to implement this type of technology that it can not be done within the next 5 years. Cost may be a factor but for those in a innovator/leadership role in which they believe they can capture significant market share and reduce expenses to a fraction of today's current model this could be the difference between a company that is the new market place vs. a company out of business or acquired by a market mover.

- **Participant 7:** Even clearer this isn't worth it.
- **Participant 9:** No additional comments. Earlier evaluation was just fine.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** I believe to be successful, companies will have to be "superfast" – this will need to include the use of replicating portfolios and representative scenarios to facilitate the ever increasing need for stochastic projections of capital and financials.
- **Participant 19:** Wow. Couldn't disagree more with most of the responses. Didn't think this was a Blue Ocean strategy before but now I do because clearly most individuals and organizations are only able to see the obstacles and not the opportunities. A modular design approach is the way forward and will come-and actually does exist on the p+c side of the house which is also regulated and has the same IT constraints (negative paradigms).
- **Participant 20:** Answer from Round 2 unchanged.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** Answer from Round 2 unchanged.
- **Participant 30:** The premise of this strategy is that a quantum leap in speed to market creates market opportunity that is sufficient to offset the technology investments. Putting aside the implementation obstacles, this premise does not hold up given a market that is bought mostly on price. People will wait a few days to get quote or policy if they can get a better price. Does it make sense to be more efficient to market? Yes, but that is Part 1 of Strategy # 1.

Strategy #3: Insurance W/O Borders Co. – Global internet sales where regs allow

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** A typical 3rd world country is composed of a large 3rd world society and a smaller, urban, more prosperous 1st or 2nd world society. What is described will not be a way to work with the 3rd world, mostly urban situation. That is beginning to be dealt with by village "clubs" or mutuals, along the lines of micro-credit solutions to employment. The opportunity for strategy 3 lies with the 1st/2nd world population.

Appendix F
Complete Responses to Round Three Survey

- **Participant 2:** Less an issue for US consumers since US is provincial but will be important for foreigners as financial stability will be important. Also the Argentinean government takeover of private pension plans will help sell the need to immunize your investments from local country risk.
- **Participant 5:** No additional comments. Improved by adding local service centres for claims and support.
- **Participant 6:** Answer from Round 2 unchanged.
- **Participant 7:** Seems like there is potential to do this in one country first and then, if successful, spread it elsewhere as appropriate.
- **Participant 9:** Answer from Round 2 unchanged.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** No change in my opinion and seems to be mirrored in the overall summary.
- **Participant 20:** Answer from Round 2 unchanged.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** No real change in my perspective for this concept, but there would be more than one devil in the details of going after this as a marketing/revenue approach!!
- **Participant 30:** While using distribution to reach untapped markets is a viable strategy, this is more window of opportunity than Blue Ocean. You are tapping new markets with the same products using standard underwriting and claim practices. Just like Coca Cola expanded their business by going internationally. Same formula but new markets. It is a good idea and worth pursuing. Can also be an important ingredient to the new approach to writing business mentioned above.

Strategy #4: Global Insurance Company – Global data mining, marketing

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** Answer from Round 2 unchanged.
- **Participant 2:** I believe this will be a hard to implement strategy as marketing is very localized. I like the old line think globally but act locally.
- **Participant 5:** Answer from Round 2 unchanged.
- **Participant 6:** Answer from Round 2 unchanged.
- **Participant 7:** Again, I'd recommend 1 country "test" first.
- **Participant 9:** Answer from Round 2 unchanged.
- **Participant 11:** Answer from Round 2 unchanged.

Appendix F
Complete Responses to Round Three Survey

- **Participant 14:** The use of predictive modeling techniques for underwriting can produce very quick and effective underwriting decisions. When that decision is combined with a well-established internet distribution such as www.amazon.com, we have a very unique model with strong potential. I agree with the majority of the comments indicating that there is nothing preventing this strategy from being copied by others, but so are all current methods of insurance products and distribution. The hurdle here is in the planning and implementation, which are significant challenges.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** No changes to initial response. Limited appeal and practical application in my opinion. Agree IPR only if you can get a patent is of only short term value. Maybe a useful marketing tool to generate product interest on a targeted basis but unlikely to close a sale.
- **Participant 20:** Answer from Round 2 unchanged.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** I think this concept has a lot more promise for an insuring entity that is linked to a major bank. Again, if you can gather homogenous data (a BIG IF), AND you can get the potential buyers to pay attention, this data would be useful in helping consumers do Individual Risk Management (IRM) and financial planning. Consumer education and the right product fits will be important.
- **Participant 30:** This strategy doesn't feel a lot different than # 3. It is a technology driven distribution strategy. Using data mining technology to identify target markets is proven and a good idea, but more window of opportunity than Blue Ocean.
- **Participant 31:** The lack of good quality data to mine and access to the internet outside of the US and other industrialized nations severely limits the viability of this strategy.

Strategy #5: Your Way Insurance Company – Prospects custom-design coverage online

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

Please comment on the following expanded description of the strategy submitted by a participant in Round Two.

"This is the beginnings of a Blue Ocean strategy. To replace the currently fragmented approach to insurance acquisition would be revolutionary. And, yes, if done properly, it is more than simply a window of opportunity.

Simply building a "cool web tool", however, that presents insurance as a series of integrated offerings is only a window of opportunity. Anything put out on the web is

relatively easy to copy. And unfortunately the description focuses on the cool web tool. The Blue Ocean strategy will involve selling, underwriting, billing, and administering multi-line insurance on a truly integrated basis. This will involve a massive change in how the insurance company operates and computer system design.

We do a horrible job of this today. If someone wants to buy health, life, disability, and LTC policies, they need to go through 4 different underwriting processes, all of which ask essentially the same information and require the same medical records. We could have unified applications and underwriting. We don't. And there is no apparent will in the industry to change this – which creates a great opportunity for the company that does!

The P&C business is better, but not great. Within Allstate (the P&C company where I have my insurance) and other companies, the underwriting information is shared and integrated, but I still get separate different bills, on separate billing cycles. But when I called GEICO for a quote, I was told that I needed to talk to a separate person for each of my auto, motorcycle, renters', and umbrella policy. Furthermore there was no information transfer – I had to start with the basic name, address, and social security number with each.

As a consumer, separate policies don't bother me. Who reads them anyway? But separate sales, underwriting, billing, and administration bother me. Someone will figure this out and reap success. They will have more than a momentary advantage as it will be hard for entrenched companies to make the fundamental business practice and management structure changes required to replicate the success."

- **Participant 1:** The thinking in the multiple policies discussion leads to a more radical thought. Apparently the idea as it developed is to have prospects custom design a broad range of benefits and features, but ones that belong in different buckets in regulation. Hence separate policies. Hence the coverages are independent of each other. There should be many life situations where the needs are not independent. We have tiny hints of this in unemployment and disability waivers of surrender charges on annuities, and combo LTC /annuity policies where policy funds can be disbursed for more than one reason and at different rates. If I die, my minor children will need health insurance. A life policy can provide enough money if they are insurable, but a true combo policy could provide health coverage, regardless, on death of a parent. There should be P&C - Life cross-overs, too. This is Strategy 8.
- **Participant 2:** Items like common underwriting would be great. The product selection would have to be unbiased without an attempt to steer to high commission/profit products. Determination of allocations if client cannot fund 100% of the solutions would be tricky.
- **Participant 5:** No change. This is more problematic – what happens if you want to lapse one part, cash in another and keep the rest going. If it is all one policy it is an administrative nightmare. If it is multiple policies it should be trivial. Your way should unify the billing and the collection of medical info but not make it one policy.

Appendix F
Complete Responses to Round Three Survey

- **Participant 6:** Risk is different from product to product and while there are a number of commonalities the pricing dynamics and underwriting in each product is somewhat unique. You could use the same data to do a fair amount of underwriting for each coverage but you may need additional information based on specific risk questions/issues. I see the industry looking for ways to manage this type of risk and I see different types of organizations using approaches to further enhance their position. Group benefit companies use data across coverage types better than individual or worksite companies that had stand alone policies. The way each process information will be broken down and the "best solutions" will be put into place to help drive this strategy. Simplicity and knowledge about product are the key to success in this type of marketing/sales process and some of the products mentioned to not lend themselves to easy understanding (medical, disability, long term care). While there coverage's have some element of commodity pricing they are still influenced by plan provisions, limitations, and exclusions.
- **Participant 7:** I still don't see it. Based on this, I can see the possibility for some risk-hedging or universal underwriting potential.
- **Participant 9:** The point made here is worth noting. However, I still have a hard seeing that this approach would make this into a blue ocean strategy. The author mentions health, life, disability and LTC; I would take health out of the list. Health insurance seems to be dominated by large specialty companies, and there are questions about the future of health care delivery systems.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** The original description mentions an online distribution. I think the online site should be a existing, well established internet shopping site such as www.amazon.com; not a unique site marketed as Your Way Insurance company, selling only insurance products. Your way should focus exclusively on manufacturing the product as described, and not attempt to establish its own insurance-only website for distribution.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** I would add (because I concur with the view) to my answer that the web technology would have to have an education piece included but it is not insurmountable or even that difficult and there is nothing to stop an agent using the technology anyway as a fulfillment activity. I would absolutely endorse the sentiments expressed above to the effect that people's attitude to change is a bigger barrier than any technology concern.
  I endorse the sentiments. This is not a technology issue. It is a mindset and a strategy issue. Most likely to have a "long" first mover advantage, as it will take time, resources and a strong champion to get this implemented.
- **Participant 20:** In a perfect world, yes this would be a Blue Ocean strategy. This assumes the applicant had a clear understanding of their needs, what they could afford, the benefits of the product, and the affect medical conditions would have on their application. That is asking a lot. Technology offers great opportunity where it

simplifies the product purchase and the user has a firm grasp on what they are purchasing, why they are purchasing it, and the value offered through the use of technology. Carriers would also need to be careful how this product was bundled. If the product purchase was bundled in such a way that it became difficult for the client to clearly identify the cost for each product, clients might resist using this technology. Would you purchase something if you could not tell where costs were being hidden? The concept of sharing responses across multiple databases is a great idea. From a simplicity standpoint the aspect of sharing this information to minimize current and future input should be well received by consumers if they fell their privacy is being maintained and continually guarded to avoid the unintended release of this to individuals or companies. I'd put this last part of my answer and the "it would be nice" category. I'm not sure this would translate into a decided advantage or Blue Ocean strategy. Certainly it's a direction the industry should pursue.

- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** If I was just starting my career (with my current industry knowledge) I would take this on myself! This is going to happen, it's just going to take a Steven Jobs or Bill Gates of insurance to **make** it happen!
- **Participant 30:** An integrated approach to selling insurance products makes sense. The naysayers who cite the complexity of the approach as an obstacle should not underestimated the intelligence of consumers. People who seek insurance already are high in the gene pool. Designing your own insurance coverage (if it is an integrated product life, P/C, health) is Blue Ocean as the expanded description suggests. Good ideas here, but I believe this is a component of the better Strategy # 8: Holistic Insurance Company.
- **Participant 31:** I did not believe the original strategy was going to be successful but this strategy [expanded strategy provided in Round 2 by another participant], if done correctly, could really enhance the consumer's insurance buying experience and result in something that can be a Blue Ocean Strategy. This strategy should not have consumers designing their coverages but instead it should help them determine what insurance they need and simplify the buying, billing and administration of their policies. This would allow a consumer to shop and administer their insurance in one location. This should include both P & C and Life products. Therefore a multiline company would be best to implement this strategy. Most consumers don't understand why all insurance can't be bought from the same agent/site. This strategy would provide an excellent opportunity for cross selling products to current customers. This strategy will take a significant effort and expense but the technology capabilities are already available to make it work.

Appendix F
Complete Responses to Round Three Survey

Strategy #6: Strategic Partners Insurance Company – for Operational Excellence

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** This really is two strategies. One is intellectual property development. Two is strategic partnerships. Conceivably, good strategic partnerships could lead to intellectual or other patentable property. I like the strategic partnerships as possibly very innovative and Blue Ocean. An intellectual property strategy by itself is insufficient driving force for dramatic success. There is a smaller, ethically gray strategy -- developing intellectual property patents as money-makers on their own through demanding royalties, etc.
- **Participant 2:** The insurance industry must study the marketing used by other industries to stay relevant and to lower cost. Some of these techniques are used in other industries and will need to be understood by our industry.
- **Participant 5:** Answer from Round 2 unchanged.
- **Participant 6:** Answer from Round 2 unchanged.
- **Participant 7:** Funeral insurance and bank overlays have worked to an extent, so perhaps this is opportunistic if the right fits are found.
- **Participant 9:** No additional comments. Agree with general consensus on this one.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** No changes to my original entry. I agree with what appears to be the overall view that this is not a strategy worth pursuing in totality (although on a scaled back, consumer authorized basis, I believe it does have some value).
- **Participant 20:** This is not my area of expertise. I can see where technology could aid in the underwriting process but I do not see that in the near term that it could replace human involvement. Many things could be a Blue Ocean Strategy if there was a revolutionary change in available technology. Excepting some unknown sequence of events, this is not an area that appears to offer the opportunities as presented.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** Answer from Round 2 unchanged.
- **Participant 30:** There appear to be two parts of this strategy. The development of intellectual property rights could lead to Blue Ocean revenue generating opportunities if others were required to lease the IP in order to participate in the new methods of doing business. No amplification of these ideas in the write-up. Part 2 talks about partnering to gain access to underwriting and claim data. There may be some exclusivity here that could give you a competitive advantage, but it may be that the main advantage is operational effectiveness/efficiency which is really Part 2 of Strategy # 1.

Appendix F
Complete Responses to Round Three Survey

- **Participant 31:** A lot of what has been described here is already in use or has been investigated by the insurance industry (i.e. online prescriptions, pharmacies, grocery store chains. Motor vehicle records, etc). The use of this data for marketing is not unethical or illegal (based on FCRA & HIPPA). The use of online data bases for underwriting, as long as the consumer opts in and it is transparent, also is not unethical or illegal and is no different than what is done currently, just on a real time basis. The development and use of online medical records could provide significant enhancements, cost efficiencies and speed to an underwriting process that is antiquated and expensive.

Strategy #7: Just What You Want Insurance Company – "Micro-policies"

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** I like the suggestions of HIV positive, terminal illness, LASIK, complications from surgery suggestions. As to part 4 of the discussion, I would not worry about statistically significant data going in -- start small on a project, learn how it works out, and modify as you go. This can work well with short-tail programs.
- **Participant 2:** I worry that the costs involved would lead to low benefit ratios. This strategy would need to be combined with some of these other strategies to keep costs down.
- **Participant 5:** I would add travel agents and event fees to my responses in 2.
- **Participant 6:** Answer from Round 2 unchanged.
- **Participant 7:** I don't see much new here, except those risks that might be deemed internet-centric like identity theft, privacy.
- **Participant 9:** Answer from Round 2 unchanged.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** Yes I would change my answer. I still do not believe that this is a viable strategy in niche markets which do not have sufficient volumes or potential premium base to make this worthwhile. However, the answers did prompt a different perspective for mass market opportunities. How about x cents or x dollars (depending on assessed risk) of every ticket price at an event or an attraction (Disney, Nascar, sky/bungee jumping school, etc) goes towards purchasing life or disability insurance for that day. Very limited (if any) anti-selection risk, simple to implement, a fixed face value/benefit and an ability to calculate the probability of loss based on publicly available data. Not only potentially very profitable but also good PR when something does go wrong.

Appendix F
Complete Responses to Round Three Survey

- **Participant 20:** The concept is intriguing. Certainly the opportunity has precedence with the warranty example provided. This approach could be profitable. The question to answer is whether this is a Blue Ocean Strategy or not. As a consumer, I look at this scenario and question whether I'd want to go through life with constant questions about each life event as to whether I want to buy the add on micro policy. I wonder if people would get hardened to this question. Using warranties as the example, I know I feel that these are overly priced and that I am better off self insuring for the event. Hence I never buy these. If the price was so cheap that it was an easy decision to buy this, I wonder if any insurance company would actually start at this level. If this does develop into a Blue Ocean strategy, my belief is that it would develop over a long period of time.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** I see the pricing and anti-selection issues as primary here. You'll need a point-of-sale that is essentially an environment of a "yes" or "no" answer. For example, if an individual signs up for parachuting the company asks "for another $10 dollars would you like to have a $10,000 accidental death cover for your program?" It has to be quick and dirty.
- **Participant 30:** This is definitely a Blue Ocean strategy with potential. It combines market opportunity and exposure management. Where there are pockets of risks that most carriers are unwilling to insure, there are market opportunities. Typically they lend themselves to higher levels of pricing. Combine the opportunity with the feature of limiting exposure to a single event or a short, defined time period there is real potential. Risks tied to specific events should be definable and using historical data you can model the probabilities. Could use technology in the same way that property catastrophe reinsurers model wind event probabilities and use portfolio management techniques to offset risks. Leads to some of the best ROI's in the industry. Use data mining and Monte Carlo modeling to do your underwriting. Another attractive feature is the elimination of the standard underwriting process, no need for medical history, etc. Only question is what is the probability of the bungee cord breaking. Just like flight insurance is highly profitable. This is a winner.

<u>Strategy #8: Holistic Insurance Company – "Risk agents" help mitigate all risks</u>

After reviewing the Round Two responses from all participants, do you have any additional comments, or are there any changes that you would like to make to your Round Two responses?

- **Participant 1:** See comment under strategy 5. This Strategy 8 is an update on the old "life-cycle financial planning" concept.
- **Participant 2:** Funny, I always thought multi-line insurance agents were these risk agents. I think the problem we have is our products do not coordinate well.
- **Participant 5:** Answer from Round 2 unchanged.
- **Participant 6:** Answer from Round 2 unchanged.

Appendix F
Complete Responses to Round Three Survey

- **Participant 7:** I still can't see anyone other than Personal actuaries being able to deal with it as advisors, unless AI was highly developed, buy even there, would need to much info from prospect.
- **Participant 9:** It seems that something could be done with this strategy. Another way it could be implemented would be to have a "Get Fit" rider, which would be available to overweight and obese applicants providing they have a doctor's authorization to engage in a fitness program. Every quarter, the insured could go for a weigh-in at a proscribed fitness club. There would be a premium refund based on the difference between initial weight and "ideal" weight with a significant refund for someone maintained ideal body weight for one full year. The quarterly premium refund could be a percentage of a health club fee (25%, 50%, 75% or 100%) with a "mini-endowment" as the significant refund for maintaining ideal body weight for a year. There is still the question as to whether or not this is a true "Blue Ocean Strategy" and it probably could be copied. If there were an exclusive arrangement between the insurer and the health club maybe it would make it more difficult to replicate.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** I think this strategy is worth pursuing further, and seems within reach of current technological/risk mgmt capabilities. A viable Blue Ocean strategy, in my view.
- **Participant 19:** No additional comments. Remain pessimistic about prospect of success on any meaningful scale.
- **Participant 20:** The concept most definitely seems to fit higher net worth clients or clients who place extreme trust in their advisor. Most clients do not like being on the cutting edge. With this product, they would be unable to compare this to other solutions provided by other advisors. That could be an advantage or disadvantage. Holistic planning is generally a good thing, but this approach does not fit all clients. Some clients like the product approach because they feel more in control and do not want to reveal too much to any one advisor. For this to be a Blue Ocean Strategy, I believe it would need to be clear to the client that this was clearly in their best interest and was decidedly a better alternative. Most clients would struggle to come to this conclusion without a great deal of trust in their advisor.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** The one thing that is missing from the discussion is that everybody spends something on insuring risk. They either pay a premium or self insure (be it consciously or unconsciously). What this strategy would address is how best to allocate the premiums or the possible out of pocket payments. This could be done with an Internet risk assessment tool while the industry educates the public on this way of thinking. Right now all of this is done on a de facto basis. Bring it together and you've got a winner!

Appendix F
Complete Responses to Round Three Survey

- **Participant 30:** Given the uncertainty of today's world, this has great appeal. May have more acceptance among wealthier clients, but streamlined approaches could reach the "middle class" that are getting so much attention these days. Companies are expected to have an Enterprise Risk Management plan in place, why not individuals. Insurance companies now offer a financial solution for a portion of an individual's risk, why not go further. I believe consumers will embrace it. There are some examples of movement to providing services for risk mitigation as well as just financing risks. Identity theft insurance didn't catch on until companies said they will provide the services to help repair your credit not just pay some of your costs. In Europe property insurers provide a network of home repair contractors to fix your damage, not just pay for it. The challenge is to define the scope of the risks to be insured and supported. Lends itself to classic market research. The multi-line insurers would have an advantage but would need to learn how to integrate the coverage. Maybe a market opportunity for a new league of "risk brokers" that would analyze your risk profile and develop your risk mitigation plan and then broker the players to provide the coverage and services.
  Strategy # 5 fits as part of this strategy. A winner in the longer term.

Strategy #9: Big Brother Insurance Company – Monitor individuals' health, risk profile

After reviewing the Round Two responses from all participants, do see any way to improve this strategy to make it more viable?

- **Participant 1:** No one wants to buy (or should buy) life insurance where your premium goes up if you are in bad shape! This is workable and ethical only with regard to personally controllable life-style decisions. I could see a voluntary program where a client benefits from a) a modest discount and b) health monitoring services, in return for providing on-going health or behavior data for the insurer to improve its underwriting, reserving and product designs for the future.
- **Participant 2:** This could be the future of insurance – charge based upon individualized risk characteristics. For example, auto insurance charged based upon a GPS signal showing the average speed in relation to the speed limit. Health insurance where a diabetic tested their sugar 4 times a day on a machine that reported it to an insurance company. To some degree the health insurers are using this today by looking at prescriptions written on an insured and getting in touch with the doctor to prescribe additional or alternate prescriptions that might work better.
- **Participant 5:** I see few opportunities to make it more viable except using the info gathered for stated purposes only.
- **Participant 6:** Answer from Round 2 unchanged.
- **Participant 7:** I still like it b/c I think some people will welcome ongoing help.
- **Participant 9:** Answer from Round 2 unchanged.

Appendix F
Complete Responses to Round Three Survey

- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Does not seem viable to me. I don't think we could created devices smart enough to detect all danger – eg, what about a speeding car hitting you when it's not your fault?
- **Participant 19:** No not really. Concur with the consensus.
- **Participant 20:** The only additional comment I have is that the company might consider doing this in a test market with a defined focus group within different demographics. See who would be open and what discounts it would take to get them to try. The only fly in the ointment is not knowing in advance how much it might cost to develop the technology and administrative capabilities before knowing how interested the market might be.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** No.
- **Participant 30:** Not viable as a stand alone strategy, but elements of the strategy are supportive of other strategies. Accessing personal information and creating a personal electronic medical database are approaches for executing Part 2 of Strategy # 1.

Strategy #10: Virtually Real Insurance Company – Virtual World Insurance

Do you have any additional comments, or are there any changes that you would like to make to your Round Two responses? Do you have any suggestions as to how this strategy could be improved?

- **Participant 1:** The possible market is based on a virtual world user's investment of time, emotion and personal engagement, and where there is a risk of losing this through the actions of other virtual characters or the workings of the virtual world. I see this as a small market. Moral hazard issues are immense -- its one thing to physically commit suicide, another to do it on-line "virtually." One suggestion for a small scale operation: Most of these worlds have some form of "currency" either explicitly, or through the possibility of accumulating "strength", "lives", "courage", etc. points. So, you could have a premium payable in virtual currency, paying off in virtual, which could finance a restart if virtual disaster strikes. This might be a very cool idea to a virtual world hacker, or as an occupation for one's virtual avatar. Unlikely to attract insurance industry giants!
- **Participant 2:** I rethink and do not see a major implication although I could see something like putting insurance sales into Sims or on billboards in Madden '09. If President Obama could advertise his campaign on video games, why not insurance?
- **Participant 5:** No change.
- **Participant 6:** I had some comments on strategy 10 but none were used as part of the round 2 survey so further comment wasn't warranted.

Appendix F
Complete Responses to Round Three Survey

- **Participant 7:** Word of mouth advertising seems to be an "in" thing. Certainly people have looked to what is my peer doing in deciding things. Despite apprehensions of actuaries, this is reality in the U.S. today.
- **Participant 9:** Answer from Round 2 unchanged.
- **Participant 11:** Answer from Round 2 unchanged.
- **Participant 14:** Answer from Round 2 unchanged.
- **Participant 17:** Answer from Round 2 unchanged.
- **Participant 19:** No changes. Agree with consensus that this is not a viable strategy beyond creating brand and product awareness.
- **Participant 20:** Answer from Round 2 unchanged.
- **Participant 21:** Answer from Round 2 unchanged.
- **Participant 26:** Unfortunately not!
- **Participant 30:** This is not viable as a stand alone strategy, but could be an interesting marketing tool for other strategies like the Holistic Insurance Company. Could be used for risk education and how various risk mitigation techniques work.
- **Participant 31:** I initially thought this was a crazy idea but the use of this strategy to educate and inform is very creative and could be used to create real life marketing opportunities for insurance.

General Comments:

Participant 9: I don't think I'd be keen on investing in these strategies if you want my true feelings.

Participant 27: To create blue oceans of uncontested market space in the insurance industry, these three elements of success will be necessary:

1. Changing current thinking
2. Defining a strategy within the new paradigm
3. Execution excellence, extreme effort and perseverance

1. Change Current Thinking

Cirque du Soleil also had to master all three elements to succeed in creating uncontested market space. The concept of a circus and a stage show was not entirely new, nor was or is it something that can not be copied. What it is, is an approach that required a different vision coupled with the willingness to accept the risk and the challenge of putting the time, money and effort into creating a new world experience for the consumer. It is a devotion and commitment to excellence beyond the norm.

In strategy #5 (Your Way) a comment was made that identifies one of the industry's problems, "the biggest obstacles faced by Your Way will be its own people! The vast majority of people in the insurance industry cannot think beyond business a usual."

Appendix F
Complete Responses to Round Three Survey

I believe this is true in most industries. I also believe that consumers are generally more receptive to and are ready for – looking for – paradigm shifts long before industries recognize the need for, envision and embrace them.

In the insurance industry, paradigm shifts are also obstructed by the slow moving bureaucratic regulatory environment. As indicated by the comments, some of the strategies not only present regulatory concerns, but also push the envelope on individual's privacy concerns – another hurdle.

Looking at all the models, all the pros and cons presented, it seems that the real challenge is facilitating a paradigm shift among regulatory and insurance company personnel (in every functional discipline).

So, the organization that breaks thru to successfully define and implement a blue ocean strategy will need to confront and overcome these issues. They will not do this by focusing on why something can't be achieved, but by recognizing the obstacles and then focusing on how it can be achieved.

Most importantly, this organization will focus on the consumer.

2. Define a Strategy

Reviewing the strategies brought me to the conclusion that the most likely opportunity for a truly blue ocean strategy would come from combining ("cherry picking") the best elements of several strategies. Five (Your Way) and eight (Holistic) are a natural fit. Some of the less provocative elements of six (strategic partners) and nine (Big Brother) could be added – to the extent privacy/regulatory issues can be mitigated. Emphasizing the holistic approach, certain other strategic partners may be brought in – health clubs, personal fitness counseling. Pricing and incentives could incorporate:

a. Positive rewards for improved wellness.
b. Periodic (e.g. quarterly financial and health planning/review).
c. Strategic partners for financial wellness including discount buyers programs (major retailers, transportation, healthcare, etc.)
d. Strategic partners for mental and physical wellness / lifestyle

3. Execution Excellence

The massive change required suggests that key systems and organizational structures will need to be built from the ground up with the new paradigms end game in mind. Aspects of other strategies that incorporate new technologies to gain efficiency – paperless, super fast and data mining – can be utilized to further differentiate and advantage the new industry model.

Appendix F
Complete Responses to Round Three Survey

Most of all, a commitment to excellence along with a commitment to delivering a world class consumer product, service and experience, that far exceeds any existing levels of commitment, will be required.

Cirque du Soleil makes the amazing look effortless. Masters always do. But it begins with fundamentals that are honed to perfection through long years of dedicated practice to achieve this execution excellence.

Coupling the above three elements of success with visionary leadership and a concerted effort, I believer a blue ocean of uncontested market space ripe for growth could be created in the insurance industry within 10 years.

The expanded description of Your Way says it best – "They will have more than a momentary advantage as it will be hard for entrenched companies to make the fundamental business practice and management structure changes required to replicate the success."

Participant 30: These 10 strategies seem to fall into three themes.
Theme 1: Greater efficiency in marketing and underwriting traditional business. These strategies make it more effective and efficient to tap new markets and gather/process data necessary to conduct business. They are not true Blue Ocean because they are better ways to market and underwrite current products. While not Blue Ocean, they (or elements of the strategies) should be pursued to reduce business costs, stay in touch with consumer needs, and capitalize on untapped markets. Strategies 1, 2, 3, 4, and 6 fall into this category.
Theme 2: Micro approach to insuring undesirable risks. True Blue Ocean because it creates a viable approach to a set of risks others run away from. Technology makes it possible to model the risk and effectively price it. Strategy # 7 makes up this category.
Theme 3: Holistic approach to risk financing and mitigation. Blue Ocean because it opens up a whole set of risks not previously insured and encompasses an integrated approach that no-one is implementing. Strategy # 8 falls into this category and # 5 is support of # 8.

My advice to Forward Thinking Insurance Company would be to take the following actions:
Analyze and prioritize the technology-driven opportunities identified in the Greater Efficiency Strategies and develop a year-by-year plan for incorporating them into our operations over the next 10 years. Identify those market segments with the greatest potential to capitalize on micro products. Develop a marketing blitz strategy to "run the table" when we go live. This is short term priority
Flesh out a holistic risk approach and demonstrate feasibility. Roll out target in 3 to 5 years.

Appendix F
Complete Responses to Round Three Survey

Another Strategy Idea
No Underwriting Insurance Company
This computer modeling oriented company looks for ways to sell life insurance without underwriting individual policyholders. Their approach is to intimately understand the risks and life expectancy of individual demographic groups and then build a portfolio that is the right balance of the groups to return an overall profit. No individual would be asked for underwriting info nor denied coverage, but there could be a no payment if death occurs within a certain time period after policy issuance. Might want a few non-exam questions like smoker.
Analyze historical data to see the accuracy of standard underwriting predictors. Look for other predictors of life expectancy that can be gleaned from historical patterns. Develop pricing by group based on expectancy. Could tinker with where to set pricing. Could be higher than average if you believe that the no underwriting approach will bring adverse selection. Model the business case and look for best operating model. Global internet sales approach might fit this model best.
This is an interesting and ambitious project that has resulted in some interesting ideas. By design the project looked at new acquisition strategies that are enabled by technology. I agree that technology is usually an enabler or an accelerator to make something work more effectively or efficiently. It makes a strategy more effective (See Good to Great, Jim Collins). Because of the design you may have not gotten more pure strategy responses that aren't necessarily tied to technology. Another observation is that there are a lot of responses that are aimed at the obstacles to implementation of a strategy rather than judging the merit of the strategic idea. Would have liked to see more comments such as "this is a good idea and has merit if we can find ways to overcome some of the implementation hurdles." While the technology requirement may have limited the "strategic" responses, there are three general themes that have promise. Couple of which are more pure strategy plays. More on the themes after a quick review of the 10 strategies:

Appendix G
Panel of Participants

Blue Ocean Study Participants

Craig Baldwin
Richard Berry
Philip Bieluch
Rodney Brown
Bill Campbell
Dennis Carr
Janet Carstens
Scott Cass
Steve Cooperstein
Thomas Corcoran
Mark Daley
Janet Deskins
Mark Farrell
John Fenton
Andy Ferris
Phil Gold
Anne Higgins
David Holland
Brent Jackson
Darren Klauser
Cary Lakenbach
Sandra Latham
Jon Lee
Robert Littell
Joseph W. Maczuga
Tom McCarthy
Craig Metz
G. Thomas Mitchell
Hubert Mueller
Rick Nolle
Mike O'Brien
Thomas Player
Philip Polkinghorn
Robert Sanche
Tia Goss Sawhney
Robert Shalack
Mike Sinelli
Wayne K. Smith
Robert Stone
Stephen Strommen
Sam Thomas
Richard Veed
Jeff Zeanah