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Session 60PD World-Class Product Development

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Summary: In the future, companies will need to improve their product development processes. They will need to build structures that facilitate development of products that better meet customer needs on a basis that is both faster and cheaper than current processes. This session explores some of the current "best practices" and provides insights on improving the process.

Mr. Mark A. Milton: Improving the product development process is a very important topic, and we are fortunate to have an outstanding panel to share their thoughts and to stimulate ideas. Roger Heath is a principal at Tillinghast-Towers Perrin. He specializes in distribution effectiveness, corporate strategy, marketing strategy, competitive and financial analysis in the life, health, and annuity markets. He is also a frequent author of articles and a very popular speaker. Roger will focus on both the strategic and implementation aspects of product development.

Jeannemarie Caris-McManus is chief executive officer (CEO) of Western Reserve Collaborative Inc., a multimedia and information technology collaborative with special expertise in the creation and implementation of growth strategies for companies. She has helped many companies through the process of creating a vision and developing consistent marketing strategies. She is the author of a book titled *The New Product Development Planner*, which contains over 800 questions that are structured to systematically work through the creativity and professional

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discipline necessary to successfully introduce new products. Jeannemarie will identify the aspects of product development.

I am vice president and associate actuary with Kansas City Life Insurance Company and have responsibility for the product development process there. I will serve as moderator for this session and will also share some results from a recent industry survey.

In the current environment of fast-paced technological and regulatory change, nimble competitors, and ever-changing consumers, companies must discover more effective ways to consistently create successful new products. To do this, most companies will need to rethink their product development process. Most people view the product development process as a giant funnel. Ideas come in from several sources and are screened. Concepts are developed and assessed. They go through formal development and implementation, and the end result is products designed to be on target with market needs, on time and successful. Of course, in the real world, it's more difficult than that. Oftentimes, there is not enough screening of projects, or if there is, the screens have several holes in them. Projects may move slowly through the process, bouncing from department to department like a ball in a pinball machine. Fires are started; fingers are pointed; and finally the product is introduced, somewhat off target, a little late and well over budget. While it appears that all is going well because the company is generating many new products, there is a tremendous cost to a process like this. There is the emotional capital spent by various departments and individuals beating each other up and the missed opportunities that you're not working on. Our keynote speaker indicated that everyone should take one hour a week and think about the future. How can you find one hour a week when you are busy putting out fires?

There are several reasons why companies are striving to improve their product development process. First, it can be a competitive advantage. Obviously if you are first to market with a particular design or you have a superior design, you have an advantage. It can reinforce strategic change in a company. This is the most exciting and underrated aspect of product development. Product development can help you better understand your environment and can help you develop strengths for the future. Product development can also enhance corporate image and it can help utilize company resources and provide jobs for people.

Why haven't companies already achieved these benefits? First of all, they have not viewed product development as a process. However, it is a very complex process involving almost everyone in the company. Since many departments are involved, cross-functional changes are usually necessary to make more than just simplistic changes in the product development process. These are difficult. Significant

changes in the process may also require a cultural change. Aside from being difficult, that can also be quite painful for the person actually trying to implement the change in their company.

I would like to share some results from a product development survey I worked on this spring. The survey was sent to 460 chief actuaries who were members of the Product Development Section. We received 106 valid responses. One of the questions asked was, when was the last time you made significant changes to your product development process? Almost half of the respondents indicated they made significant changes within the last two years, and about 40% said they have made changes within the last year. Now this survey was done in April 1996 and I have a feeling that, with so many changes going on, it's probably already out of date. These numbers are startling. If your company is not making changes to the product development process, your competitors have probably passed you by. You're further behind than you think.

Implementation teams were the most frequently mentioned improvement to the product development process. Isn't that the fad of the day? I'm a big supporter of implementation teams, but have found, through personal experience and other experience, that it's more difficult than just putting a bunch of people in a room and having a meeting. It's not as easy as it looks to work together with other people.

Other responses included improvements to administrative systems, the use of computer networks to communicate, using product champions, having one person in charge of the process, improved pricing software, project management training and project management software, as well as having a formal, idea-generation process.

Next we asked, how often have you made significant introductions of new life insurance products? The survey focused on life insurance as opposed to health insurance or annuities. Most companies indicated that they had made significant new introductions about every two years. But, there is a desire to introduce products more often.

The average length of time it takes to introduce a new life insurance product, from idea to selling, is currently in the 6–12 month range for most companies, but the overwhelming majority of companies feel that they would like to be able to do it in fewer than six months. There is a strong desire to introduce more products and to do it better, faster, and cheaper.

We next looked at what drives product development. We focused our attention on agents and buyers. Most companies felt that their current development process was

driven by agents. The answer most often given was that agents alone drive the product development process followed by agents and buyers equally, then buyers with agent input, and finally, six companies actually said buyers drive their process. However, respondents indicated a strong desire to shift the driver of product development dramatically to buyers with agent input. This may require a fundamental change in the way we do our product development.

Another question asked, what is the level of satisfaction with the current strategic and product planning? More people were dissatisfied than satisfied. Roger and Jeannemarie will discuss this later.

A related question asked about satisfaction levels with market intelligence and competitive analysis. Few companies were satisfied with market intelligence; however, respondents were more satisfied with their competitive analysis. Again, this is in line with their current product development practices. We are simply better at evaluating and perhaps imitating competitors than we are at focusing on market needs. I must admit, my personal opinion on this is that we are probably better at product design to meet market needs than we give ourselves credit for. I wonder if this isn't really a marketing issue or promotion issue, as opposed to a product design issue. It might be something worthy of further discussion later.

The respondents felt satisfied overall with the level of senior management commitment to product development. That may have something to do with the fact that it was chief actuaries who are a part of the senior management team that was surveyed. It's interesting that, given their satisfaction with senior management commitment, they were fairly dissatisfied that compensation plans did not provide sufficient rewards for taking risks and trying innovative new approaches.

The survey also asked a couple of questions dealing with prototyping, one of which dealt with marketing materials. Twenty-nine percent of the respondents indicated that marketing materials were not completed until immediately before product introduction. Thirty-three percent had materials done well before product introduction. Thirty-four percent had materials done before products were filed, and 4% of the respondents drafted materials before specifications were finalized. It seems to me that having marketing materials done early in the process could greatly aid communication between departments and keep people focused on what is important in product design and positioning strategy. I would encourage, and in fact challenge, product development actuaries to draft simple marketing materials early in the process as a test to see if they fully understand the positioning of the product. Then use that to communicate with others throughout the development process. They don't have to be fancy. They don't have to be in color. They just need to be in a document that outlines the need you are trying to fulfill, the uniqueness of the

product, and the position the product will have among other products within the company and within the industry. I think you will find that's very helpful to the process.

Another question asked, when are prototype illustration systems available? Illustration systems seem to be done earlier than marketing materials. About 34% of the respondents develop those illustration systems immediately before introduction, while 33% said they were well before introduction, 26% before filings, and 10% before specifications were done. Again, this is an easy way to improve your product development process. Get those things done early in the process, so that people can have a touch and feel of your product design.

One interesting question we asked is, who is responsible for the product development process? Again this answer may be somewhat influenced by the fact that chief actuaries were filling out the survey, but an overwhelming number of respondents indicated that either the chief actuary or a committee was responsible for the product development process. Only 8% indicated that the chief marketing officer (CMO) was responsible for the process. This doesn't mean that the chief actuary is making the decisions. It means they are the process owner and are responsible for the process of getting new products developed. I think this result needs some follow-up.

As far as summary conclusions from this presentation, I think it's clear that many companies are making improvements to their product development process and many of them are your competitors. Most companies perceive a need for improving their strategic planning and their strategic platform. Many chief actuaries perceive the need for a new model for product development, one that's more customer oriented and one that would support quicker development times. There is also a desire for more rewards for taking risks.

I will also share with you some interesting things about companies that indicated that they were able to introduce products within six months. There are about 15 companies that indicated that they could do that. First of all, there is a very strong belief that ongoing product development is the best way for them to compete in the future. These are the product-driven companies. They had very strong senior management support for product development (stronger than the typical survey respondent). They typically had a formal implementation plan where marketing materials and illustrations were done early in the process, and there was better-than-average communication between the departments. Most of the product development efforts were spent on line extensions and price revisions. For the most part, they were a little more satisfied than the typical respondent with their strategic planning process, and it appears that they have a clear vision of where they are

going. Perhaps being product driven is a strategy that is simpler to get a handle on and communicate to others.

Finally, I would like to leave you with six key elements for world-class product development. First, there are core capabilities or strengths and weaknesses. I think it's critical that you understand the strengths and weaknesses you have. I think it's also important that you understand the strengths that you are going to need tomorrow and that may be even more important. You will probably need to challenge some of your existing strengths—challenge whether they will be appropriate for the future to help build and position yourself more appropriately. You've all heard the expression "stick to the knitting?" I don't think that necessarily applies in today's world.

Guiding visions are also important. These visions provide a picture of the future, and they provide the link between the strategic plans and the product specifications. They link the highest levels in the company to the operational levels. Every time a person makes a decision about a product, you are either moving closer to or farther away from the ideal product concept that you started out with. Visions are important to keep everyone on track to make consistent decisions. Visions are most useful if they are applied in operational terms. For instance, you could have a vision that stated you want to earn a certain return on equity (ROE). That might not mean much to the person who is developing marketing materials or involved in the implementation process. If you said, "Our vision is to have a certain competitive position," or it is based on functional capabilities, that's a little easier to get a handle on through the process.

There are different types of guiding visions; we're probably all thinking of high-level strategic vision, but there is also the product concept that just talks about the product need; that's a part of a guiding vision statement.

There's also the product development and implementation plan. Are you going to take three months to get this product introduced? If you are, communicate that and have that be a part of the vision so the people who do the testing of your mainframe know that they probably do not have their desired two to three months to test for this particular product. Spend time up-front to develop and communicate the plan and everything else will go much smoother.

Next is project organization and leadership. To be effective, the process obviously needs a leader. It's my opinion you really need one person in charge of the process. And again, this person should not make all the decisions, but it should be one person who shepherds the product development process. That leader will in turn need a structure and process that supports and encourages initiative, focus,

vision, and teamwork. There are various types of teams that can be used for various types of projects.

Ownership and commitment are also important. Studies have indicated that the degree of success on product development projects is often tied to the degree of ownership that people throughout the entire process feel. Remember that 60–70% of your company is involved in product development. Everyone at all levels needs to feel ownership in the process.

The next point is to develop relatively complete prototypes early in the development process. By prototype I mean product specifications, a statement of desired positioning, marketing materials, and illustration software. Have these things done early in the process and the risk of making an error will be greatly reduced. They help clarify the concept. They help improve the learning in the company and increase the commitment at all levels.

Finally, you need to integrate people and tasks and visions within the product development project, and that's really a process in itself. Doing this integration requires new skills. As I mentioned before, you cannot just put people in a room and think you have a team. You need to understand how teams need to work and function. I think that there are many things that will help drive this integration. I think having visions, having leadership, and having prototypes are all tools that will provide the integration necessary for world-class product development.

Today, and in the future, perhaps the only strategy for corporate success is to learn more rapidly than your competitors and to convert that learning into new products, new processes, and new services. Through this, you can help continually redirect your company to redefine its focus. I'd say that no one is in a better position to help the company understand the environment than the product development actuary who senses these things on a daily basis.

Mr. Roger R. Heath: My job is to put some detail around Mark's excellent summary of product development. Product development is critical for success and provides a major opportunity for improvement. The following scenario is all too common in companies that I help with product development: the top agent comes in and says, "My business is sunk without survivorship whole life"; the CEO says, "it's an intriguing idea"; the Chief Marketing Officer says, "That's great, you're our key customer." After 4,000 man hours, many dollars to actuarial consultants to help develop the product, and even more dollars to help develop the administrative systems, the product's results are reviewed only to find that only three of these policies have been written in the last three years. The agent says, "The market

changed, what can I tell you? Can we develop a variable universal life (VUL) product?"

The subtitle to my speech is, think before you leap, repeatedly. In this speech, I will talk about the context in which to view product development and provide a framework for thinking about product development. Hopefully, that will be more valuable to you than just raw facts about product development. As Dan Burrus indicated, maybe this will be a way to turn some data into information and knowledge and allow you to do more than one thing at a time and change the rules.

First, let's go over the business context. Be clear about what your business is about. That is, product development is a means to an end. First of all, what business are we in? In the life insurance business, we are an intermediary providing intangible products. For us to be successful, we have to satisfy the needs of our customers as expressed by protection of their income, assets, or health. In our changing world, consumers are demanding and changing. One strike and you're out. Competition is varied and increasing. We are now feeling pressure from mutual funds and other forms of competition. Schwab is now selling life insurance. Adding value is the bottom line, for both your customers and your owners.

Our product has many ingredients. By this, I mean that customers are seeking security, prestige, and protection. They don't know a thing about policy benefits, premiums and so forth. Another product component is the agents. They are an integral part of what we do. They are an integral part of the problem-solving process. Therefore, distribution is also an integral part of the product.

We should also keep in mind, when developing products, that there are many customers, not just the ultimate consumer. There are also, as many of you would probably point out, the agents and general agents. There are third-party influencers to our customers, such as accountants and attorneys, who help in estate planning. In some cases, such as in payroll deduction marketing, the employer has an influence over what the customer will think.

Your strategic orientation matters. By this I mean, is your organization focused on products like Kodak? Is it focused on marketing like Hewlett-Packard? Is it focused on the marketplace? How you think about these issues will determine in large part how your product development works. Consumers buy what they value. Learning what they value is a vital part of product development. This is where marketing counts.

So before we start, we should consider some imperatives for successful product development. First, the consumer is in the driver's seat; he or she is determining

what is bought. When I work with companies, the agents will often suggest they do not experience much competition, so you can design a product with almost any price, as long as it has a high commission. But one of the things that they are not seeing is the many customers who do not sign up at all. They may buy with Northwestern Mutual instead of your company, but they may not buy at all. If there was no competition, we wouldn't have seen absolutely flat premiums for the last 25 years. So there is some competition out there, and agents do not always recognize it.

Strategic focus means knowing what you're not about. I have a friend who said that strategy is being able to limit yourself and to determine what you will not be willing to do.

In what we do, value must be added, both to our employers and to the ultimate customers. As Dan Burrus said in the keynote speech, as circumstances change, we must revisit and actively manage the products. Hopefully that's a quick overview of the business context of product development.

I would like to offer some background that will help in focusing what drives product development and what kind of results we can achieve from it. To summarize, product development and its management is a process by which management answers critical questions. We have some questions that have to be answered on a pretty regular basis. What products are we going to develop and change? How should they be developed and changed? What kinds of resources should be committed? How should we coordinate them? When should that happen? Who should be accountable? Where do those products fit overall? Table 1 shows that your strategic orientation matters. Marketing, selling or product concepts require different approaches and score cards.

TABLE 1
IMPORTANCE OF STRATEGIC ORIENTATION MATTERS

Concept			
	Marketing	Selling	Product
Focus	Buyers' Needs	Seller's Needs	Product
Approach	Integrated Marketing	Selling & Promotion	Features
Score-Card	Customer Satisfaction	Sales Volume	"Best" Product
Product View	Broad, All Encompassing	Narrow, Vehicle	Narrow; Technical

The answers to those questions are not in some ivory tower. They are taken from the context of management's focus, both its strategic focus (what target market you're involved in; what your customers need and want; and how they buy) and the financial requirements for you as an organization.

What also matters is the distribution, the market dynamics, your customers' desires, and the competitive forces. I think I would challenge Mark's suggestion that chief actuaries know a great deal about what either the market or the competitive forces are. Do you really know what the competitive forces are? How they make decisions? What drives their expenses? What drives their competitive nature? You must understand the external forces. All of this obviously is driven by what products and services you try to sell to customers with your distribution approach.

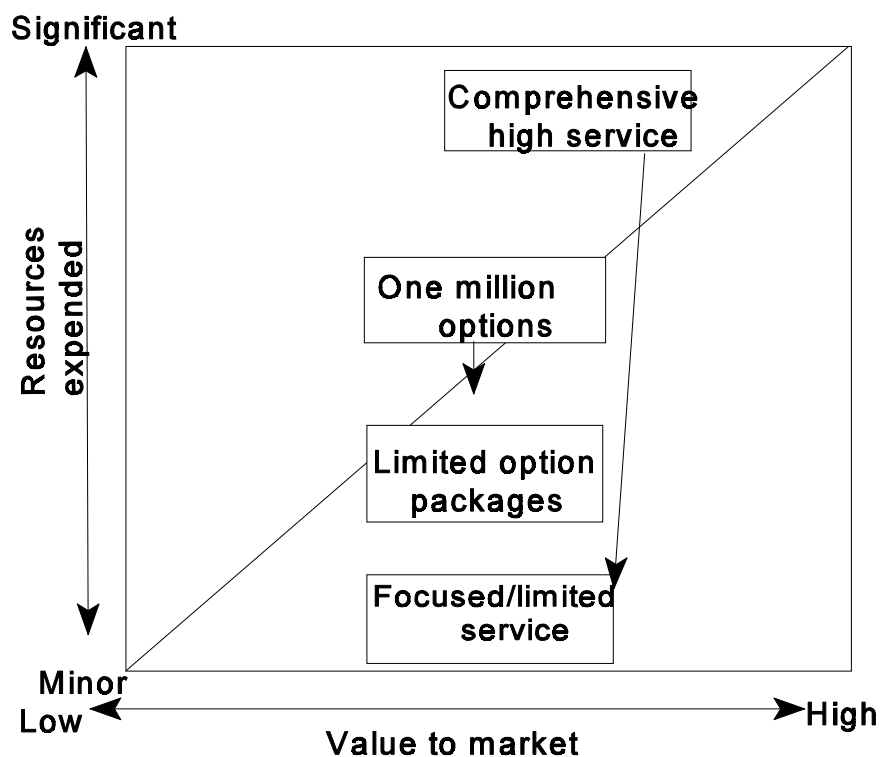
The product development process commands considerable resources. Over time, the amount of resources used grows exponentially as the number of ideas get whinnied down towards the end of time in developing a product, until you have very few ideas on which you are spending much of your time and effort. The aim of product development is to maximize return by allocating resources to available opportunities. I was just talking to someone before this session, and he said, "I had a product that was ready to go last October, but the administrative area is still not ready to put it on line and won't be until sometime this fall." So all these things have to be coordinated, but maybe the most important one, based upon what Mark indicated, is management's time. Getting it wrong is expensive.

Chart 1 is a graph taken from an experience that we had with a company from a slightly different industry—the Chrysler Corporation. It graphs how the consumers value what it is you offer, compared to how much it costs you to provide it. For everything above *the diagonal line*, it costs too much for the value that was provided. Chrysler was, in essence, allowing people to build their own cars. They were having millions of options available to them, and it was costing lots of money. They finally realized that they could provide 98% of everything everybody wanted with just 15 options. The costs were dramatically reduced, but the consumers still

valued it. So the idea here is that you need to understand not only how big the marketplace is, but you need to manage your resources so that you are spending it in proportion to that which the customers value.

Finally, the product development and management process casts management in many roles. It's similar to building a house. The organization needs to be not just a builder or architect or financier, but needs to act in all of those roles if you're going to get a house built.

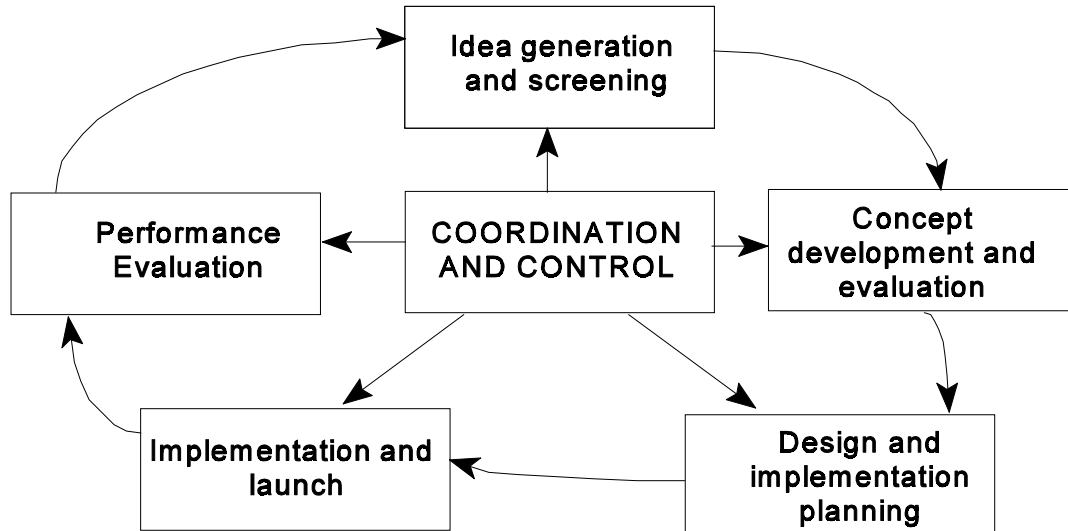
CHART 1
RECOGNIZING THE RESOURCE VALUE RELATIONSHIP



What does a product development model resemble? It's not a straight line and it's not sequential (see Chart 2). There are five tasks that are essential to product development and management. Idea generation and screening is the first step.

There's also concept development and evaluation, design and implementation planning, implementation and launch, and performance evaluation, which then feeds back to idea generation and screening. All the time this occurs with much coordination and control. This product development process that I have just identified, and as Jeannemarie will testify to from doing work in other industries, isn't new; it isn't rocket science, yet many companies fail in its execution.

CHART 2
PRODUCT DEVELOPMENT MODEL



What we are going to talk about next is what a colleague of mine calls, “refined common sense.” My first recommendation is to go slowly at first, so you can move quickly later. In that regard, I am going to spend much of my time detailing the tasks that I think have the most leverage for success in product development. It’s in the idea generation and screening, concept development and evaluation, coordination and control areas. If you get those right, implementation and launch should be not much of a problem, and performance evaluation, hopefully, will all be just counting your money.

A clearly defined strategy and understanding of reality should help focus your effort. There is much leverage in understanding your strategic plan and developing ideas and in screening them. So your strategic plan, customer requests, agent requests, and management requests all need to be involved in your idea generation and screening. It needs to be an instituted, organized process, as opposed to reacting to ideas that agents bring across. There should be a clear no go or go decision made at this point. In other words, an idea should either be scrapped or moved on, not just sort of incrementally approved as time goes on. It’s fine to keep it on the back burner, but it should be clear that you are no longer working on it and that there is no champion trying to move it to concept development and evaluation. As Dan Burrus said the day before yesterday, if we must fail, let’s try to fail quickly.

Idea generation and screening require a balance between reactive and proactive. Listening to your customers, reading in the media, and listening to your agents and

your managers are passive reactions. On the other hand, there should be some proactive effort, such as market research into what consumers and customers want and what agents need to be successful. What does the agency management think about it? There should be competitor analysis and some re-engineering of the product use and product performance.

Idea generation requires a different kind of balance as well. It's a combination of peering into the wild blue yonder at the one end and looking through a microscope at amoebas at the other. Both are important, but if you use either end exclusively, you will find that you missed the total picture in terms of finding good ideas and having a background to be able to screen those ideas.

Effective screening depends upon clear evaluation criteria and an explicit decision. In other words, people need to spend time actually understanding on what basis you are going to screen out ideas. What are the financial requirements? Who is the target customer? Does this product meet our target customers' needs? Is it applicable to them? What kind of sales potential will this have? What kind of opportunity cost will we go through to be able to sell this policy versus doing something else? All of our resources are limited and we have to make choices that will be most effective. Will this particular product give us a competitive advantage? Making clear-cut decisions about each of these items and making each of the ideas pass through these screens before it gets to an approved product is an absolute essential item in effective product control.

The next item on our list is concept development and evaluation, which should be an integrated reality check. That is, does this product fit with our markets? Is it something that our customers need? Is it something that we'll be able to use to get a competitive advantage in dealing with our competitors? Does it meet our company requirements? Does it fit our resources and abilities? Is it a priority for our strategy? This provides an overview of the product or concept we are trying to develop. In essence, the idea here is to put together a straw person for the product.

Development and evaluation require disciplined research, additional screening and another explicit decision. What you are trying to develop, in the development and evaluation stage, is very specific product benefits and mechanics. That is, what is the value proposition? We want to know not only what are the premium rates, cost-of-insurance rates, death benefits and cash values, but what is the proposition? What is it that your customers are going to value? How is it you're going to sell? What is it you bring to them? What are the policy elements? How is it you're going to communicate this to customers and agents? What are functional equivalents, both yours and the competitors, so you can get some sense of what kind of competition you're going to get and some sense of how you are going to rob your own

products by introducing this particular product. Get the details about the market potential and its requirements by doing focus groups with non-customers—people who aren't customers yet, but might be someday. Also talk with recent customers that you have. Do some competitor benchmarking as to how successful your competitors are at similar designs. Understand the distribution potential and its requirements. All of these areas need to be explored and defined in significant detail at this point.

Get some sense of the financial reality based on a simple model of the financial projections. At this point, we're not talking about a model showing quinquennial ages, or male and female, or all five bands that are going to be sold. We're talking about a simple model. Start understanding some critical sensitivities, some price/volume trade-offs and the broader economics of this particular product and product concept. Start understanding the compliance issues. Don't assume the product is ready, and then end up waiting six or eight months for the systems area or discover that it doesn't meet your market conduct or compliance issues. Be disciplined and decisive in what you are doing. Stylistically, what we are trying to develop is a racehorse. In putting together our resources, we don't want to input so much that we become too fat to run, but we don't want to give it too little because it will starve to death. We must recognize our opportunity costs because resources are limited.

At this point, we need to reapply refined evaluation criteria and deliver clear specifications as a part of a go decision. If you can't deliver an approved product concept with clear specifications, with the resources that are required to make this product hit the streets, with a timetable and an expectation in terms of sales and profitability for the organization, then it should be a clear no go.

This is where design and implementation planning should be integrated to incorporate the whole product. Now is when to ask the product development manager to turn us loose, to develop all of the financial aspects, to begin putting together detailed promotional activities, to communicate to our various stakeholders, agents, and consumers, to start putting together the details concerning marketing materials and distribution specifics, and to start doing detailed implementation planning as to the filings.

Get compensation and customer service in order. How are you going to answer the first customer who calls and says, "I have applied for this policy, where is it?" The illustration system, along with training of the agents and customer service should be in place. All these things go into the implementation planning piece. They are the things that we get bottled up in and that take up a good portion of our time. These issues will take a great deal of your time. I have tried to spend most of my time,

however, in the areas that have the greatest possibility of making this part successful. Implementation and launch should be straightforward from here, providing that everything you have done up to this point is adequate.

As for performance evaluation, people always talk about it and, although I don't use *never* very often, never use it. The feedback loop is a key source for new ideas. Hewlett-Packard's greatest competitive advantage is that no idea is ever thrown away entirely, and the previous results are constantly utilized to bring up new ideas. Dan Burrus, the keynote speaker, commented that Hewlett-Packard has to turn things over in 18 months. This is one of the ways they do it.

The performance evaluation should look at things such as financials and expenses and other parts of the economics, but it should also track the marketplace. How has it been growing for this product or this service that we have just introduced? What is our penetration? What is our market share versus the competition? How are our customer satisfaction levels, and how can we use that to develop further? Are we being disciplined in tracking specific items? How are our agents doing with this? How is the administration going? Are we in compliance with all market conduct issues? What is our scorecard in terms of cannibalizing our own in-force policies, and are we using that information to modify and develop alternatives and to generate new ideas?

Coordination and control are the glue that integrate and drive product development tasks. As Mark indicated, someone has to be in control and accountable for the entire process. Someone has to make sure that there are clear go/no go decisions and that the process continues through the entire organization in a nonsequential way. In product development, execution is everything. Management's approach to coordination and control is the key to success or failure. My point here is that the linear and sequential approach has drawbacks. That is, if you go from door to door, passing this from research to design to legal to systems to sales, you foster no ownership or accountability. You end up with intense turf battles from functional organizations fighting over it. It's slow and expensive. The lessons that come from a sequential order to things are not as clear as if feedback is constantly in your face.

You need flexible, ad hoc, cross-functional teams, because they work. It allows business planning, marketing, sales management, sales, information systems, actuarial and investment management to work together. However, it requires that it be done in a nonroutine way, and it almost demands your organization become less hierarchical and less control oriented. But these groups, working as a cross-functional team, will cut development time and costs. It may not be noticeable as you are moving through the process, but will appear in improved productivity and quality.

Performance and project management discipline will either make or break the effort. You need to establish clear expectations. If you've heard me speak before you have heard me say, "you can't manage what you don't measure," and that applies whether we are talking about financials, accountability, or product development. You need to have clear tasks with clear accountability, required resources and dependencies. When can we put this together? When can I do my job? Who does it depend on to get it done? What are the deliverables and what are the deadlines? Finally, you should look at other industries for useful lessons. If you really want product development to be an active part of what you do, look to 3-M or Hewlett-Packard or other companies to help in that process.

Ms. Jeannemarie Caris-McManus: My job is to talk about improving the process that already exists in your business. Because I know from brain research that you are only using about 5% of your brain to listen to what I have to say, I have to give you an assignment for the other 95% of your brain. I prepared my remarks, in terms of what I consider to be the three most important things to know about new product development, but I don't know everything. You do. Your assignment is to take a moment and ask yourself, "What is the most important thing about new product development?" Think. Because in a few moments, I am going to ask you what you think the most important thing is about new product development.

I am here with you because I have a great deal of experience in new product development in industries other than yours. Five years ago, I published a book that Mark found and used. The claim to fame on this book is that it literally goes through the process of new product development in the most basic, fundamental way, and it identifies the important questions to ask as you go through the process. So its claim to fame was putting a foundation underneath the product development process.

I would like to say something to you, from an outsider's perspective. I would like to say that this new product development process is one of the most important processes that you will have to master to continue to create wealth in your organizations through the next century. This process is being driven by two macro forces in the world, and they are affecting your industry, as well as every other industry that's out there. Those two factors are hypercompetition and shortening product life cycles. Competition is coming from a global marketplace where industries are merging with each other, so the financial services industry is merging into your business. In March, I was in Orlando speaking to bankers on the topic of strategic alliances between banks and mutual funds. Many industries are consolidating right now and that means that they are competing in areas that used to be sacrosanct. That's happening all over the world.

The other thing is that during the 1960s and the 1970s, we had product life cycles in this country that lasted for 30 years. That meant that from the introduction of an idea for a new product, through the investment age, through the growth stage of that product, the maturity stage and then the decline, the time frame was 30 years. Thirty years was enough time for people to have careers in an industry, so they could really understand a product. Today, the average product life cycle is five years. In many industries, some of the industries that I work in all the time, like computer-based industries or computer telephony, the average product life cycle is 18 months. In 18 months, that means somebody has a concept for a new idea, they marshal the investment in that idea, and they go find the customers. All the competitors come in and imitate. They cash flow the product, and they're out the door.

If you have 30 years, you have a great deal of time to be very polite. You can have meetings to plan meetings. If you have 18 months, you yell a lot. If you have read anything about the dynamics inside the Microsoft Corporation, you know they don't even sit down for many of their meetings. They don't have time to sit down. They have 18 months to get something new out the door. Peter Drucker is an absolutely wonderful writer who tells about the things that we really need to pay attention to in American business. He recently described an approach that the Japanese have created that I think we can learn a lot from. On the very first day a developing product is discussed, they decide the last day that the product will be sold. Then they put a team together and they say, "We are only going to sell this product for 30 months. We don't care how much money it's making, it's going to stop being sold in 30 months." Then they put a team together and they say, "All right you guys, you have 30 months to take 25% out of the cost of producing this product and add a couple of value components that our customers really want." Then they take another team and they say, "You guys have 30 months to leap frog this product, in terms of value creation, for the customer." Then they take another team and they say, "You guys have to figure out what our organization is learning by virtue of being in this product in the first place, and in 30 months we want a totally innovative product out there."

You guys are mathematicians. You figure it out. It's exponential. On the first day of the thirty-first month, they have three new products out there. One that's cheaper and better, a second that's innovative, and a third that leap frogs, and they keep doing it. That is the systematic discipline of managing an innovation process.

I really would like to know in a few minutes what you think the most important things are about new product development. My experience tells me that there is probably a tremendous wealth of knowledge and experience right here in this room

and you need to hear that from one another. But before I do that, I would like to tell you what I think the three most important things are about new product development.

Three years ago, I invested in an Internet company because I'm the kind of person that needs to learn things by doing them. I have never been good at theoretical knowledge. I'm a strategist. I know how to make money. You have to figure out what this Internet is. It's going to have a profound effect on your business.

What are the three most important things about new product development? I am speaking from the perspective of effectiveness or making the process work better. I'm really thrilled to be able to wind up what Mark Milton and Roger Heath have done, because I agree with everything they said. There's a lot of meat there and you will learn a great deal by reviewing their comments. What I would like to do is say, "OK, we have looked at new product development as a process. We have been learning about it for years. It's a central process in our organization. What is the most important thing about it? What do you really need to know so that if you don't screw these things up, it's going to work?"

The Product Development and Management Association keeps statistics on how successful new products are. Their most current statistics, based on several industries, say seven out of eight new products fail. Now I know that's not the experience in your industry. You have a very attractive industry. It's a unique industry. You are making revenues today on things that were sold a while back. You have this incredibly attractive asset called revenue that comes in year after year, without having to go out and get it on a transaction base every time. But get ready, because not very many other industries have that luxury and they are going to want what you have.

Seven out of eight new products fail. Fail what? Fail to achieve the financial performance that was set by the organization that spawned them. That means that some of them may actually have succeeded, but for a different company. It is possible in new product development to reduce the value of your business. You don't want to do that. Your business has a certain economics, a certain way that it makes money. If the new products have economic characteristics that are less attractive than the average characteristics of the products that you have right now, you can work like heck and you can end up with a company that's less valuable.

So what are the three most important things to know about new product development? I'd like to do this in three categories. I would like to look at the big picture of this process from 30,000 feet. What do you see when you look at this process from 30,000 feet? Then I'd like to go down a little bit toward detail and I'd like to

look at it from 10,000 feet. Then I'd like to be right in your face and I'd like to look at it from ten feet. From each of these perspectives, I would like to identify the most important things about new product development. What are the secrets? What makes it work?

From 30,000 feet, when you look at the whole picture, what is most important? From 30,000 feet, the most important thing to know about new product development is you have to get the best people working on teams. You can't have people that didn't make it in other areas of the organization that might as well do new product development. That's very common, by the way. It may not be in your industry, of course, because you have to get the very best and they have to work on teams. Mark talked about this, so I am just going to reinforce the observations of somebody that has been working in this process in your industry.

Teams are not a natural function. These teams also have to be able to learn and they have to be able to think. You have to teach them how to think. You have to teach them how to learn, and there are people who know how to do that. So you don't have to make it up from scratch. The most important thing in terms of increasing the effectiveness of product development from a 30,000-foot level is get the best people and put them on teams.

Second, from a 30,000-foot level, you have to understand your game, meaning you must understand the economics of your particular business. How do you make money today? Your new product development effort must help you make more money given the economic characteristics of your business. This is called strategy. If you do not understand your strategies, if you do not understand how you make money today, do not do this, because you could really mess it up.

The second thing from the internal perspective is you must have a process for doing product development. You cannot make this up as it goes along. Roger outlined a process that I think is wonderful, and I endorse it. In my book I outline a simple new product development process where you take every single one of the ideas that you have for new product development and you put them through a feasibility study. Then you say, yes or no. There is no idea in the business that doesn't go through that process.

I have a very good friend at American Greetings, who is in charge of new products. She was telling me the other day that a vice president's spouse had this idea for a Mother's Day card for somebody who had recently lost their mother. The card was laminated so they could leave it at the cemetery on a little stake. She asked, "What am I going to do with this idea Jeannemarie? I think it's terrible." I said, "Put it

through your feasibility study process like all the other ideas that you get and if it doesn't make it through the screen, it doesn't make it through the screen."

You have to have a process. Don't reinvent the wheel. Take good processes that are out there, fine tune them, make them better, but be sure you have a process. The process has to have go/no go points that tell you, yes, we're going to do this, or no, we're not going to do this. You have to time it. So you say to yourself, all right, so how long does it take our business to do a feasibility study? Three weeks? Six weeks? What does it take and what do we mean? Every product idea goes through that process. You have a cross-functional meeting. You figure out how the voting on it will go. You listen to the presentation on the idea, up or down; in or out. Then you go through a business case and a business plan, up or down, all the way through to the end. From an internal perspective, you have to have a clear process, and you have to understand how the business makes money. This is, as Roger said, "advanced common sense."

The third thing you must do from the 30,000-foot level is focus on your customer. It's extremely expensive to find new customers. I'm probably preaching to the choir. The cheapest way to be successful in new product development is to sell more things to the customers you already have. What we are finding in American business right now is that the customer relationship is one of the major assets of the company. So build on it. Most of your new product development effort should build on that customer asset and that customer relationship. Now everybody has to have a couple of home runs. If you go for a home run, then you're looking for something that is a new product to a new market. That's very risky. Only do a few of those, unless you become hypercompetitive. If you do, then you need to do it all at once. But I do not sense that this industry is hyper-competitive yet.

So that's the 30,000-foot level. The right people, on the right teams, understand how the business makes money, and has a clear process and focuses on the customer.

Now I want to go to the 10,000-foot level. From the 10,000-foot level, do not even start, unless the company knows what it's getting into. What I mean by that is, understand the process that you are going to use in your business and get a buy-in. Get the people's heads nodding that have the resources that are needed in this process. They must understand what they are committing to as a process, and they must understand the outcomes that the process is going to create. Your job, if you are in charge of this process, is to do this. Do not start the process until it's sold, because if you start the process without it being sold, you cannot even possibly plug all the holes in the dike that are bound to happen due to misalignment within the organization, in terms of the process.

The second thing to do at 10,000 feet is work a competitive advantage checklist. Michael Porter told us in 1984 about low-cost producers and differentiators. Richard Devaney talked to us in 1994 about speed, about know-how, about deep pockets, about timing, cost and quality. There are competitive advantage checklists. We don't have to make them up, but your new product development process should understand the sources of competitive advantage that you are delivering to your business.

Let me get specific. How fast are you coming after an opportunity in the marketplace? A competitive advantage of speed can be delivered by a new product development process that consistently delivers to the market what the customers are asking for just exactly when the market is most ripe. In many industries there is something called the advantage of "first in." New product development just makes it even more so. Look to see where you could gain the advantage of "first in" in your business and get there first with your process.

The last thing from 10,000 feet is, you have to have a patron in the organization for a new product development process to work. The new product development process is cross functional; it does not live in any one organization. That means a very senior player has to buy into this process and has to understand the wealth creation process in terms of the value of the total business. This player has to shelter the process, so that it gets the resources that it needs in order to go forward. So I am saying, don't start until you have the process sold through the organization and you need to have a sponsor in the organization, at a very senior level, who understands why you are doing this process.

I'm going to drop down to ten feet and I'm going to ask, "What are the three most important things you need to know when it absolutely is at the level of your everyday life?" The first one is, engage the task. This is not theoretical. Ask yourself the question, what would you do on Monday, if you really believed what you just heard? How would your behavior change? Let it sink in. AT&T gets well over 50% of its revenues from products that it did not have ten years ago. It's more than a \$60-billion company. This is real. Engage the task. It's good for your business, and it's good for your career.

The second thing from ten feet is that good management makes this process work. So there must be accountability, measurement, teams, and rewards. Research says that the people who are good at developing new products may not be the right people to commercialize those products. In many industries there is a point where you say thank you to the people who got it to that point and then the organization in the field takes over.

If you want the product development process to work for your company, that team that got you into the playoffs has got to be rewarded. It's serious stuff. Some companies figure out phantom stock options based on the performance of the new product. People get very creative about this, but the team that brings you these new products that make you better and faster, must be rewarded.

The last thing from ten feet is you must push really hard. Today new product development is about speed. So what you want to do is say to yourself, I have to do this very well and very fast. How do I do that? I work with manufacturers. We used to talk about just in time. We are now talking about on-demand manufacturing, where a business's products are not bought. Its manufacturing capability is reserved. We have to get this very fast.

Encourage conscious learning. There's a process called action-reflection learning, which you need to learn about. You need to learn how to laterally think or come up with new ideas. Finally, if you are in the position of running one of these processes, go to coaching school. It doesn't matter what sport, go to coaching school. In many major sports, there is equal talent in the major leagues. The difference is having the players on the team play the part of the game that they play the best, and having a good coach. You cannot do this by yourself. This is a team sport. It cannot be autocratically managed. It must be collaboratively managed. Go to coaching school. I'm serious.

You have heard me discuss looking at things from 30,000 feet, 10,000 feet, and ten feet. I now ask you, what is the most important thing to know about new product development?

From the Floor: The most important thing I put down is commitment by the team players.

Ms. Caris-McManus: All right, so the most important thing is commitment by the team players. What else? What is the most important thing about new product development?

From the Floor: You must have accountability.

Ms. Caris-McManus: Accountability.

From the Floor: And roles must be clearly understood.

Ms. Caris-McManus: Roles must be clearly understood. Can you imagine playing a major league sport and having the players make it up as they go along? Let's see, should we give him five outs this time or three outs?

Mr. Armand M. de Palo: The most important thing from my point of view in product development is to first define what your current competitive advantage is. Second, define what your competitive advantage is going to be in the future. Third, make sure the product you develop is enhanced by your company's competitive advantage, and if you cannot define a competitive advantage, get out of the product because you are not going to make a profit at it.

Ms. Caris-McManus: I absolutely agree with that. What is the most important thing? What is the one thing that if you get it wrong, nothing else works?

From the Floor: I would say it's getting the best people.

Ms. Caris-McManus: Yes, but how do you know? How do you know whether somebody's going to be good at this? You say you must get the best people, but how can you tell from the outside? Who in here is really good at picking people? Mark, what do you look for as far as people characteristics in new product development?

Mr. Milton: I look for people who are open and innovative, good listeners, and team players who enjoy a good argument and a good discussion. I like debate. I would hope that others do that and I think that if you can have a good debate and walk away and gain commitment for the process, that's what is important.

Ms. Caris-McManus: I come from Cleveland and I try not to pay any attention to baseball, which is a problem in my marriage, but I hear a great deal about Albert Belle around the dinner table. Now Albert Belle is not the first person that comes to mind when you think of a team player. Here's an idea I want to plant for you. You have to make room for the superstars. You have to have some superstars. That means, somewhere in this process, you will have to manage people who are enormously energetic, enthusiastic, aggressive, and maybe a little difficult to manage or get along with (unless you can send them off for counseling). There has to be room for superstars in new product development. You cannot get there through mediocrity. Then managing the superstars is the key. Go to coaching school.

From the Floor: You have to define where the decision making is going to be done.

Ms. Caris-McManus: All right, so we have a vote for decision making. A clear process with clear go/no-go points will do a great deal for decision making. Maybe rules that say you can't leave the room, even to go to bathroom, unless you vote on this one.

Mr. Kevin J. Howard: Jeannemarie, you mentioned reward systems. I think reward systems on cross-functional teams need to be aligned where there are no silos, so that the team is rewarded for consistent behavior.

Ms. Caris-McManus: Yes, what we are finding out is new product development is actually a function. God did not say that we have to have a marketing department and an accounting department and an organizational department. DuPont said it in the 1920s. That's how we figured out how to organize ourselves and it isn't right anymore. We don't know the next step, but we do know one thing—this process called new product development, which is pivotal to our organizations, does not work functionally. If you don't have representatives on this process from all the major areas in your organization, it won't work. I agree with rewards being important. You must crack that nut. It can't be some kind of bonus at the end of the year that says, everybody did it. Albert won't play if you do that and you need Albert Belle.

By the way, another thing many industries are finding is that the sources of innovative ideas, once they get this process going, come from outside their business. Innovation happens many times in small skunk work-like places that grow up to be larger opportunities. Look at pharmaceuticals. Look at how those things get started. Look at software. Look at how that gets started. Down the road, once you get this well-oiled process going for new products inside your business, you have to figure out a way to have a productive relationship with the Fruit Loops. There are people who can help you do that, who are half Fruit Loop. I won't mention names.