



2019 **ANNUAL
MEETING**
& EXHIBIT

October 27-30
Toronto, Canada

Session 183: Customer Engagement Through Wellness Platforms

[SOA Antitrust Compliance Guidelines](#)

[SOA Presentation Disclaimer](#)

Customer Engagement through Wellness

Moderator: Jonathan Polon, FSA

Presenters: Dr. James Meschino, DC, MS, ROHP, RAP
Blake A. Hill, FSA, FCIA
Jane Wang, HBS, MBA

Oct 30, 2019



SOA Antitrust Compliance Guidelines

Active participation in the Society of Actuaries is an important aspect of membership. While the positive contributions of professional societies and associations are well-recognized and encouraged, association activities are vulnerable to close antitrust scrutiny. By their very nature, associations bring together industry competitors and other market participants.

The United States antitrust laws aim to protect consumers by preserving the free economy and prohibiting anti-competitive business practices; they promote competition. There are both state and federal antitrust laws, although state antitrust laws closely follow federal law. The Sherman Act, is the primary U.S. antitrust law pertaining to association activities. The Sherman Act prohibits every contract, combination or conspiracy that places an unreasonable restraint on trade. There are, however, some activities that are illegal under all circumstances, such as price fixing, market allocation and collusive bidding.

There is no safe harbor under the antitrust law for professional association activities. Therefore, association meeting participants should refrain from discussing any activity that could potentially be construed as having an anti-competitive effect. Discussions relating to product or service pricing, market allocations, membership restrictions, product standardization or other conditions on trade could arguably be perceived as a restraint on trade and may expose the SOA and its members to antitrust enforcement procedures.

While participating in all SOA in person meetings, webinars, teleconferences or side discussions, you should avoid discussing competitively sensitive information with competitors and follow these guidelines:

- **-Do not** discuss prices for services or products or anything else that might affect prices
- **-Do not** discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- **-Do not** speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
- **-Do** leave a meeting where any anticompetitive pricing or market allocation discussion occurs.
- **-Do** alert SOA staff and/or legal counsel to any concerning discussions
- **-Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

Adherence to these guidelines involves not only avoidance of antitrust violations, but avoidance of behavior which might be so construed. These guidelines only provide an overview of prohibited activities. SOA legal counsel reviews meeting agenda and materials as deemed appropriate and any discussion that departs from the formal agenda should be scrutinized carefully. Antitrust compliance is everyone's responsibility; however, please seek legal counsel if you have any questions or concerns.

Presentation Disclaimer

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Agenda

- Wellness
- Why wellness for Insurers
- Strategic value for Insurers

Wellness



What is Wellness?

THE DEFINITION OF WELLNESS

Wellness is defined as “the daily active pursuit of an improved state of health or maintaining an optimal state of health and well being.”



Why Wellness Platforms Exist

Why Wellness (Programs)?

Rob Hollingsworth (vice president and head of insurance sales for Manulife) told a recent advisor briefing, “ **that while infectious diseases were the big risk factors 20 years ago, the biggest risks these days are lifestyle choices**”

<https://insurance-journal.ca/article/manulife-launches-vitality-in-canada/> (sept 27, 2016)

Compelling evidence has prompted insurance companies and US group benefit plan sponsors to reward consumers and employees/plan members, respectively, who actively engage in wellness behaviours to improve their health profile.

Why Wellness (Programs)?

- Traditional Medicine alone not sufficient to achieve optimal health outcomes
- Evidence-based proactive, health-promoting behaviours (wellness) complement traditional medical care, regarding disease prevention and management

Modern Disease Are Lifestyle Diseases

Cancer – 70-90% preventable via diet and lifestyle (Breast, Prostate, Colon, Lung, Skin)

Heart Disease, Stroke & Related Vascular Disease – most risk factors diet & lifestyle

Alzheimer's Disease – only 2% genetic. Caused primarily by how we allow the brain to age and atrophy – preventable

Diabetes – 80% of adult onset diabetes caused by overweight and lack of fitness – and can be reversed via diet and exercise

Osteoporosis – 1:4 women; 1:8 men over the age of 50 develop this condition- mostly due to faulty diet and sedentary lifestyle

Cancer

Journal of National Cancer Institute 1996

**(Willett, W. Estimates of cancer deaths avoidable by dietary change. J National Cancer Instit.1996; 86,14:948)*

In Total – 70-90% of cancer shown to be preventable

Type of Cancer	Percent avoidable		
	Doll-Peto (1981)	Willett (1994)	Range (1994)
Lung	20	20	10-30
Colon/Rectum	90	70	50-80
Breast	50	50	20-80
Prostate	<i>(with other)</i>	75	20-80
Pancreas	50	50	10-50
Stomach	35	35	30-70
Endometrium	50	50	50-80
Gall bladder	50	50	50-80
Larynx, bladder, cervix, mouth, pharynx, esophagus	20	20	10-30
Other	10	10	-
Overall estimate	35	32	20-42

Type 2 Diabetes In Canada

- More than 9 million Canadians live with diabetes or prediabetes
- Approximately 90% diabetics have type 2 diabetes. In 80% of cases the individual is over weight at time of diagnosis
- Incidence of type 2 diabetes is increasing dramatically due to a various factors:
 - The population is aging
 - Obesity rates are rising
 - Canadian lifestyles are increasingly sedentary
- Almost 80% of new Canadians come from populations that are at higher risk for type 2 diabetes. These include people of Aboriginal, Hispanic, Asian, South Asian or African descent

Health Complications From Diabetes

- Heart attack – 80% die from heart attack or stroke. Blood sugar lowering drugs do not prevent heart attacks and strokes (Medscape, Oct 5, 2016 (Big Fat Fix Challenges Mediterranean Diet))
- Kidney failure
- Vision loss – macular degeneration
- Increased Cancer Risk (and poor prognosis if cancer develops)
- Compromised immunity (infections and cancer)
- Amputation due to gangrene (from reduced blood flow)

Lifestyle is Key Type 2 Diabetes Prevention and Reversal

- In a large study, people at risk of type 2 diabetes were able to reduce their risk by 58% by exercising moderately for 30 minutes a day and by losing 5 to 7% of their body weight
- In people age 60 and older, the risk was cut by almost 71%. Other large studies have shown similar results in reducing risk

Reference: Canadian Diabetes Association (<http://www.diabetes.ca/diabetes-and-you/what/prevalence/>)

- Drugs and Standard Medical Care don't prevent diabetes, nor are they sufficient by themselves to reduce morbidity and mortality related to diabetes
- Nathan Pritikin was first researcher to show (in the 1970's) that many cases of type 2 diabetes could be reversed through diet and lifestyle alone, including reductions in lipid, glucose and blood pressure

Wellness Program Results

For every \$1.00 spent on wellness programs: Medical costs fall by about \$3.27

Absenteeism costs fall by about \$2.73

Harvard University - Health
Affairs, February 2010 USD

Wellness programs save about 1.5 to 1.7 days in absenteeism per worker over 12 months, or an estimated \$251 per employee per year in savings.

Sun Life-Ivey Canadian
Wellness ROI study meta-
analysis, 2012

Features of Effective Wellness Programs

Some Features of Effective Wellness Platforms

1. High Level Engagement and Motivation
2. Personalized Health and Lifestyle Management Platform
3. Increased Health Literacy
4. Aggregate Reporting for C-suite or Plan Sponsor
5. Communication Platform

Typical Wellness Platform Workflow

1. **Health Risk Assessment** (including Mental Health Check-Up)
2. **Feedback Report** – personalized wellness strategies to help lower disease risk factors and complement disease management of existing health conditions (**and Aggregate Report for Sponsor**)
3. **Goal Setting** (weight, cholesterol, blood pressure, smoking etc.)
4. **Tracking and Monitoring** – tools and API synch with wearables and apps
5. **On-going Engagement** via in-app, email and push notifications, based on user activity and participation
6. **Other Features of Importance**

1. Health Risk Assessment

The screenshot displays the 'My Wellness Wallet' interface for the Eschino Health & Wellness program. The user, Jim Meschino, has 14855 points and is participating in the 'OPTIMAL LIVING Program' which offers a 'Free eBook'. The interface includes a navigation menu on the left with options like 'My Wellness Wallet', 'MW Recognition Badges', and 'About Dr. Meschino'. The main content area is titled 'My Wellness Wallet' and shows the user's 'Bio Age' as 60 and 'MHR Score' as 87. The 'My HRA' section is active, displaying a 'Health Risk Assessment (HRA)' form. The form includes a sidebar with categories such as 'Body Metrics', 'Dietary Assessment', 'Exercise Participation', 'Nutrient Deficiency', 'Cardiovascular', 'Cancer', 'Gastrointestinal', 'Skin Conditions', 'Systemic Health', 'Men's Health', 'Stress', 'Medication Adherence', 'General Considerations', 'Family Health', and 'Additional Screening'. The 'Additional Screening' section contains three questions (202, 203, 204, 205) with radio button options for 'Yes' and 'No'. A 'Questions?' chat bubble is visible in the bottom right corner, and 'Back' and 'Finish' buttons are at the bottom of the form area.

ESCHINO Health & Wellness

OPTIMAL LIVING Program
Free eBook

Jim Meschino
14855 points

My Wellness Wallet

BACK

Bio Age 60 MHR Score 87

NEXT

Dashboard My HRA My Wellness Report Create My Wellness Plan My Wellness Planner Trackers & Resources Dr. Meschino's Research Reviews

Health Risk Assessment (HRA)

You can pause and return to complete the HRA, however, you must complete the entire HRA before it can be processed

Additional Screening

Based on your current responses, there are no questions applicable to you in this section.

202: Have you ever had an allergic reaction to a vitamin supplement in the past?

Yes
 No

203: Do you suffer from a hemolytic anemia due to glucose-6 phosphate dehydrogenase deficiency?

Yes
 No

204: Do you suffer from kidney failure or are you currently receiving dialysis treatment?

Yes
 No

205: Do you have Wilson's disease?

Questions?
Please leave a message and we will

Back Finish

2. Feedback Report

The screenshot displays the 'My Wellness Wallet' interface. At the top right, it identifies the user as 'Jim Meschino' with '14855 points' and an 'OPTIMAL LIVING Program Free eBook' badge. The main header shows 'My Wellness Wallet' with 'Bio Age 60' and 'MHR Score 87'. A navigation bar includes 'Dashboard', 'My HRA', 'My Wellness Report' (highlighted), 'Create My Wellness Plan', 'My Wellness Planner', 'Trackers & Resources', and 'Dr. Meschino's Research Reviews'. A 'BACK' button is on the left and a 'NEXT' button is on the right. The report completion date is 'Aug 30, 2019'. A congratulatory message for 'Jim' states: 'You have completed your HRA. Based on the answers you have provided we have generated a comprehensive personal report. You can Review your report by selecting any of the following categories.' Below this are two columns of report categories: 'My Health Risk Considerations / Risk Factors' and 'My Health Issues'. A 'Questions?' chat box is in the bottom right corner.

OPTIMAL LIVING Program
Free eBook

Jim Meschino
14855 points

My Wellness Wallet

Bio Age 60 MHR Score 87

BACK NEXT

Dashboard My HRA **My Wellness Report** Create My Wellness Plan My Wellness Planner Trackers & Resources Dr. Meschino's Research Reviews

Your Report Completed: Aug 30, 2019

60
Bio Age

87
MHR Score

Congratulations Jim,

You have completed your HRA. Based on the answers you have provided we have generated a comprehensive personal report. You can Review your report by selecting any of the following categories.

My Health Risk Considerations / Risk Factors

- Dietary Assessment
- Body Composition
- Physical Activity
- Basic Supplement Considerations
- Nutrient Deficiencies and Depletion of Nutrients
- Drug-Nutrient Interactions and Precautions
- Healthy Aging Supplement Considerations and Early Detection
- Basic Blood Tests of Significance

My Health Issues

- Diverticular Disease
- High Cholesterol
- High LDL-Cholesterol
- Osteoporosis/Osteopenia
- Restless Leg Syndrome
- Vaccinations
- Mental Wellbeing: Anxiety
- Mental Wellbeing: Depression
- Mental Wellbeing: Stress
- Family History of Alzheimers Disease

Questions?
Please leave a message and we will...

3. Goal Setting Based on Risk Factor Assessment

OPTIMAL LIVING Program
Free eBook

Jim Meschino
14855 points

BACK

My Wellness Wallet

Bio Age 60 MHR Score 87


NEXT

Dashboard My HRA My Wellness Report **Create My Wellness Plan** My Wellness Planner Trackers & Resources Dr. Meschino's Research Reviews

Major Health Risks

- Physical Activity
- Overweight
- Blood Pressure
- Cholesterol
- Blood Glucose
- Blood Glucose Level Unknown
- Blood Pressure Level Unknown
- Cholesterol Level Unknown
- P3 Genetic Testing
- Stress
- Diabetes Type 2
- Smoking
- Alcohol Consumption
- Medication Adherence


Endurance Exercise



You indicated that you perform endurance/aerobic exercise for 119 minutes or less per week, on average. This is somewhat below the amount of endurance/aerobic exercise required for reducing risk of m... [See More](#)

HRA
8/12/2019 10:41:55 AM


Resistance Exercise



You indicated that you regularly perform resistance or strength training 3 times a week. This is a very effective way to maintain and improve your muscle tone, raise your resting metabolic rate, keep... [See More](#)

HRA
8/12/2019 10:41:55 AM

Recommended Goals

 Increase Aerobic Activity

[Set Goal](#)

Questions?

Please leave a message and we will

4. Track and Monitor Goals

OPTIMAL LIVING Program
Free eBook

Jim Meschino
14855 points

BACK

My Wellness Wallet

Bio Age 60 MHR Score 87







NEXT

Dashboard My HRA My Wellness Report Create My Wellness Plan My Wellness Planner Trackers & Resources Dr. Meschino's Research Reviews

My Recommended Goals

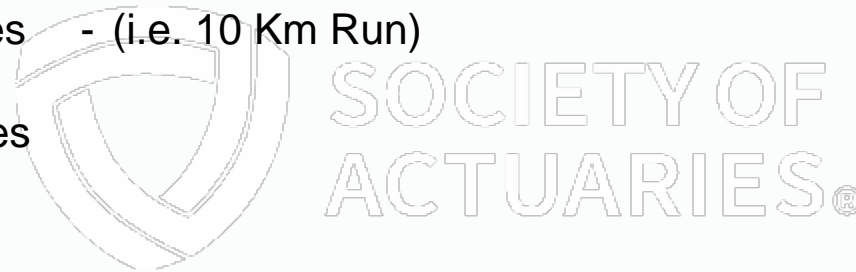
My Set Goals

My Achieved Goals

Goals	Current Status	Goal	Days Left	Goal Date	Points	Actions
 Lower your Cholesterol level			90	12/23/2019	300	VIEW Delete
 Lower your Blood Glucose level			90	12/23/2019	300	VIEW Delete

Engagement: Gamification and Community

- Leaderboard - For Various Challenges
- Add Groups
- Create Teams
- Personal challenges - (i.e. 10 Km Run)
- News feed / updates
- Track progress
- Share Insights (Recipes, Personal Trainer at local gym etc.)



My Community

[Dashboard](#) [Leaderboards](#) [Groups](#) [Teams](#) [Challenges](#)

Leaderboards



Earn Points and Get ahead of your Colleagues!

1st		Keira Knightley 10000
2nd		Jack Sparrow 9000
3rd		Harry Potter 8000

Profile

Trophies Earned



1st Place



100+ Likes



Superstar



Health Diploma



10K Champ



Team Player

Group

Not Part of a Group

[Join a Group](#)

Team



Accounting
43 Members

[view](#)



My Team
43 Members

[view](#)

Personal Challenges

Run 10 km this Week
1000 Bonus Points for Completing

100%

Log Food 5 days in a row
1000 Bonus Points for Completing

60%

Sleep 7+ hours 5 day this Week
1000 Bonus Points for Completing

45%

Team Challenges

Collectively Run 100 km this Week

News Feed

Popular

Today

Ryan C. vs. Brad W. (10k dash)
Ryan C. defeated Brad W. in a 10k jogging challenge. 23 likes

Ryan C. Climbs 1 spot
Ryan C. passes Harry P. on the top 10 chart. 23 likes

Keira K. Takes 1st Place!
RKeira K.zooms by the competition. Can anyone Catch her? 23 likes

This Week

Ryan C. vs. Brad W. (10k dash)
Ryan C. defeated Brad W. in a 10k jogging challenge. 23 likes

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Ryan C. Climbs 1 spot
Ryan C. passes Harry P. on the top 10 chart. 23 likes

6. Other Features: Access From Wellness Dashboard

The screenshot displays the 'My Wellness Wallet' dashboard for a user named Jim Meschino. The dashboard is organized into several sections:

- Header:** Includes the ESCHINO Health & Wellness logo, the user's name 'Jim Meschino' with a dropdown arrow, and '14855 points'. A banner for the 'OPTIMAL LIVING Program' with a 'Free eBook' is also present.
- Navigation:** A sidebar on the left lists various menu items such as 'My Wellness Wallet', 'MW Recognition Badges', 'About Dr. Meschino', 'Learn & Earn', 'Dr. Meschino's Research Reviews', 'Calendar', 'Site Administration', 'Reports', 'Content Management', 'Privacy Statement', and 'Engagement'. The top navigation bar includes 'Dashboard', 'My HRA', 'My Wellness Report', 'Create My Wellness Plan', 'My Wellness Planner', 'Trackers & Resources', and 'Dr. Meschino's Research Reviews'.
- Profile Summary:** A central profile card shows a silhouette of a person, 'Bio Age 80', and 'MHR Score 87'. Below this are four tiles: 'Daily Wellness Checklist' (0%), 'Diet & Activity Manager', 'Nutrition Manager', and 'Mental Wellbeing'.
- My Trackers:** A table listing active trackers with their end dates and progress indicators.
- My Calories:** A summary of calorie intake and goals, including 'Daily Calorie Goal 934', 'Food', 'Exercise', and 'Calories Remaining 934'. An 'ADD FOOD' button is available.
- My Step Challenge:** A section for a '900,000 Steps in 90 Days' challenge. It shows the start date 'Aug 08, 2019', the end date 'Nov 05, 2019', '898,600 Steps Remaining', and a progress gauge at '0%'. A 'LOG STEPS' button is present.
- Notifications:** A section indicating 'No Notification' with a 'SEE ALL' button.
- Recent Activities:** A section indicating 'No recent activities' with a 'SEE ALL' button.

Tracker Name	Last Update	Progress
Bp Tracker Detail	May, 31 2018	60
Nutrition Manager	Jan, 17 2017	00
Sleep Tracker	Sep, 10 2015	05
Step Tracker	Sep, 10 2015	05

Health Reminders/ Calendar Features

Prompt individuals who meet inclusion criteria for specific early detection tests to schedule appointments:

- Colonoscopy
- PSA Test
- Bone Mineral Density Test
- Mammograms etc.

Also Medication Adherence (Schedule Reminder)

Weekly Wellness Update – Health Literacy and Motivation

Lifestyle Medicine Update No 140 (August 20, 2019)

with Dr. James Meschino

Topic: Higher Daily Choline Intake Linked to 28% Decrease in Dementia Risk

Source: American Journal of Clinical Nutrition (July 2019)



It may interest you to know that the brain makes the memory chemical "acetylcholine" from choline and phosphatidylcholine found in various foods. Lower brain levels of choline are known to result in lower brain acetylcholine levels and a decline in memory function. A study published in the 2019 issue of the American Journal of Clinical Nutrition was the first to observe that adequate dietary intake of phosphatidylcholine from day to day is associated with a reduced risk of dementia as we age. And, higher intake of phosphatidylcholine was also linked to enhanced cognitive performance.

In this study, researchers analyzed approximately 2,500 Finnish men aged 42 - 60 years of age for their dietary and lifestyle habits, and health in general. These data were combined with their hospital records, cause of death records and medication reimbursement records after an average follow-up period of 22 years.

In addition, four years after the study onset, approximately 900 men completed tests measuring their memory and cognitive processing. During the follow-up, 337 men developed dementia. The study showed that the risk of dementia was 28% lower in men who had the highest intake of dietary phosphatidylcholine when compared to men with the lowest intake. Men with the highest intake of dietary phosphatidylcholine also excelled in tests measuring their memory and linguistic abilities. In this study, men with the highest intake ingested 325 - 430 mg of choline per day on average.

Choline intake was the key finding linked to memory preservation and higher cognitive function, as the study extensively accounted for other established lifestyle and nutrition-related factors that affect the risk of dementia. Even a genetic test for the APOE4 gene, which predisposes to individuals to Alzheimer's disease was accounted for, and it showed no significant impact on the findings. The researchers conclude, "Higher phosphatidylcholine intake was associated with lower incident dementia and better cognitive performance in men in Eastern Finland."

So, it may interest you to know that US studies show that most adults consume less than the adequate intake of choline, as set out by the US Food and Nutrition Board. The recommended amount of daily choline for men is 550 mg and 425 mg for women. In the US, the average daily choline intake from foods and beverages in adults are 407 mg in men and 278 mg in women. Evidence is accumulating that getting adequate choline each day may be one more important strategy to prevent dementia, and possibly Alzheimer's disease as we age. As such, I have included a chart below showing the amount of choline found in many common healthy foods.

You will see that beef, egg yolk, and beef liver contain significant amounts of choline, but I suggest you refrain from eating these foods or greatly limit their intake due to their negative impact on causing other important health problems that I have reviewed in other video update newsletters. As a quick overview, here are some healthier foods with respectable amounts of choline: soybeans and soy products, chicken breast, Atlantic cod, Shiitake mushrooms, potatoes, kidney beans, quinoa, 1% milk, non-fat yogurt, brussels sprouts, broccoli, cottage cheese, canned tuna, peanuts, cauliflower, green peas, sunflower seeds, brown rice, whole-wheat bread or pita bread, cabbage, tangerines and mandarin oranges. See the chart below for exact details.

I personally take 1-2, lecithin capsules (1200 mg) each day to top up my phosphatidylcholine and choline intake. There is approximately 180 mg of phosphatidylcholine in each 1200 mg lecithin capsule.

I've included the references for this information in the text below.

Amount of Choline per Serving



What is Possible with Wellness

Objective Parameters Attainable via Wellness Practices

Ideal Blood Parameters Goals for Longevity - Largely Influenced by **Diet and Lifestyle**

1. **Total Cholesterol** – at or below 3.9 mmol/L
2. **LDL cholesterol** – at or below 2.0mmol/L
3. **Low HDL cholesterol** – Men: at or above 1.17 mmol/L; Women: at or above 1.42 mmol/L
4. **TC:HDL Ratio** – at or less than 3:1 (upper limit of 3.9:1)
5. **Fasting Glucose** - ideally under 5.0 mmol/L and **HbA1c** – at or below 5.0
6. **Triglycerides** - at or below 1.5 mmol/L
7. **Homocysteine** - at or below 6.3 umol/L
8. **C-Reactive Protein** - less than 0.24 mg/dL (2.4 mg/L)
9. **Uric Acid** - Men: 140 – 440 umol/L; Women: 80 – 350 umol/L
10. **Fructosamine** - 205 – 285 umol/L
11. **Liver Function Tests** (ALT, GGT, etc.) – within standard normal range
12. **Kidney Function Tests:**
 - **Blood Creatinine** - 60-110 μ mol/L in adult males and 45-90 μ mol/L in adult females
 - **eGFR** - at or above 60 mL/min

Other Key Parameters:

- **Blood Pressure:** under 130/80 mmHg or more ideally 120/70
- **Waist Circumference** – Men at or below 36 inches and women at or below 33 inches
- **Aerobic Fitness, Strength and Flexibility**

Why Wellness for Insurers





Digital Customer Engagement centered around Wellness

Blake Hill, FSA, FCIA, VP Life Insurance, dacadoo

Tangible benefits of Digital Life & Health Insurance

		Digital Advantage & Improvements	Example of evidence points
Premium Growth	1	New Business	<ul style="list-style-type: none"> ~10-20% net new customers switching to digital p.a. ~40-50% reduction in lapse rates ~5-15% increase in cross-selling Nearly daily touchpoints with end users Improved customer sentiments / NPS
		Retention	
		Cross-Sell	
Underwriting & Claims Efficiency	2	Reduced Claim Volumes	<ul style="list-style-type: none"> ~15-20% reduced claims events due to healthier users Live customer data sourced through digital which is enabling insurers to more accurately price risk
		Improved Risk Assessment	
Data Monetization	3	Access to Customer platform	<ul style="list-style-type: none"> Net new revenues from the sale of aggregated, anonymized customer health & wellbeing data Net new revenues from profit sharing with entities leveraging data and insights
		Value Share through Strategic Data Partnerships	
Adjacent Products / Services	4	Individualized Products	<ul style="list-style-type: none"> ~5-10% net new revenue from development and distribution of targeted, adjacent solutions ~10-15% net new revenue from solutions developed via partnership to leverage customer base, IP or capability
		Strategic Partnering and Ecosystem Convergence	

Sources: Mck / EY / Vitality Life / Netflix / Kroger

Tangible benefits of Digital Life & Health Insurance

The case for engagement in Insurance



By Blake Hill, FSA, FCIA

Why engagement? Why Now?

Companies have greater access to interact with and engage potential and existing clients using the tools in the digital world. A primary reason for organizations to engage their customers is to

**White paper available from dacadoo,
Blake Hill, FSA FCIA, VP Life Insurance dacadoo,
former Head of Vitality, Manulife Canada**

THE MANUFACTURERS LIFE INSURANCE COMPANY

By: Blake Hill

Name: Blake Hill

Title: Head of Manulife Vitality

Dated: 2018-02-27

Tangible benefits of Digital Life & Health Insurance - Growth

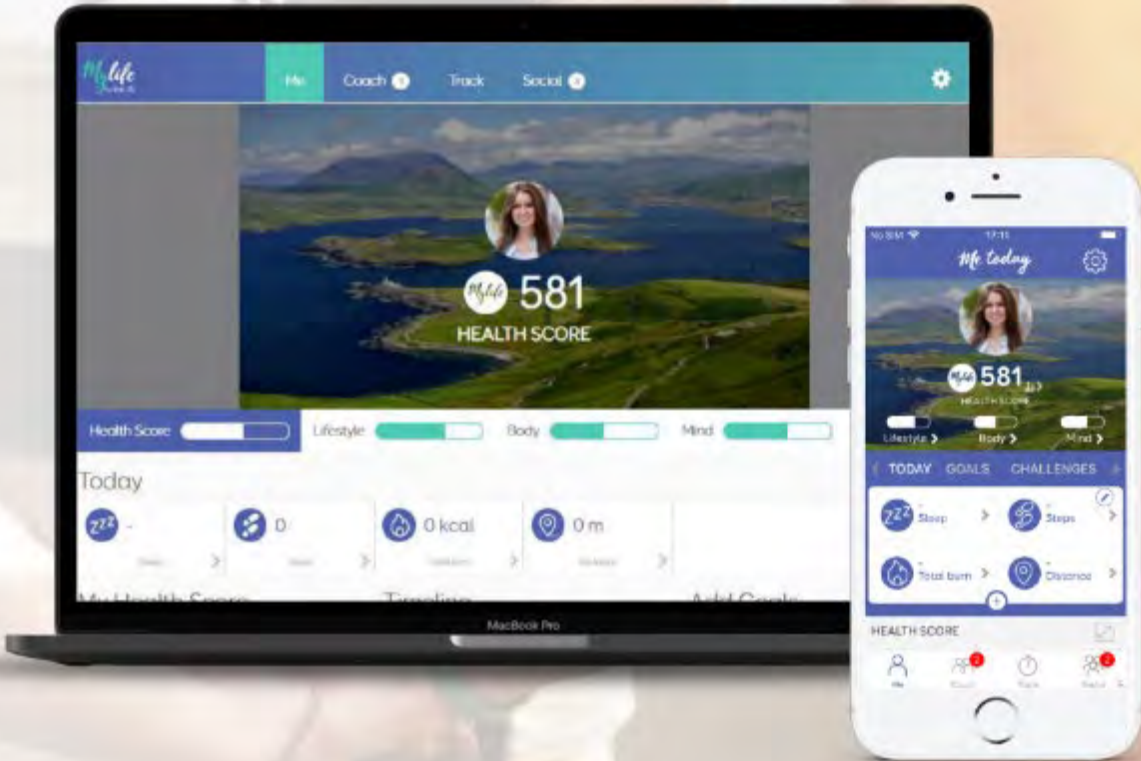
- Differentiation in marketing
- Differentiation for advisor
- Improved NPS
- False tiers & Upsell
- Upsell, future sales, cross sell

Exponential Growth => 10x

Irish Life *My Life* implementation in Ireland



No.1 in AppStore Health & Fitness in Ireland for weeks

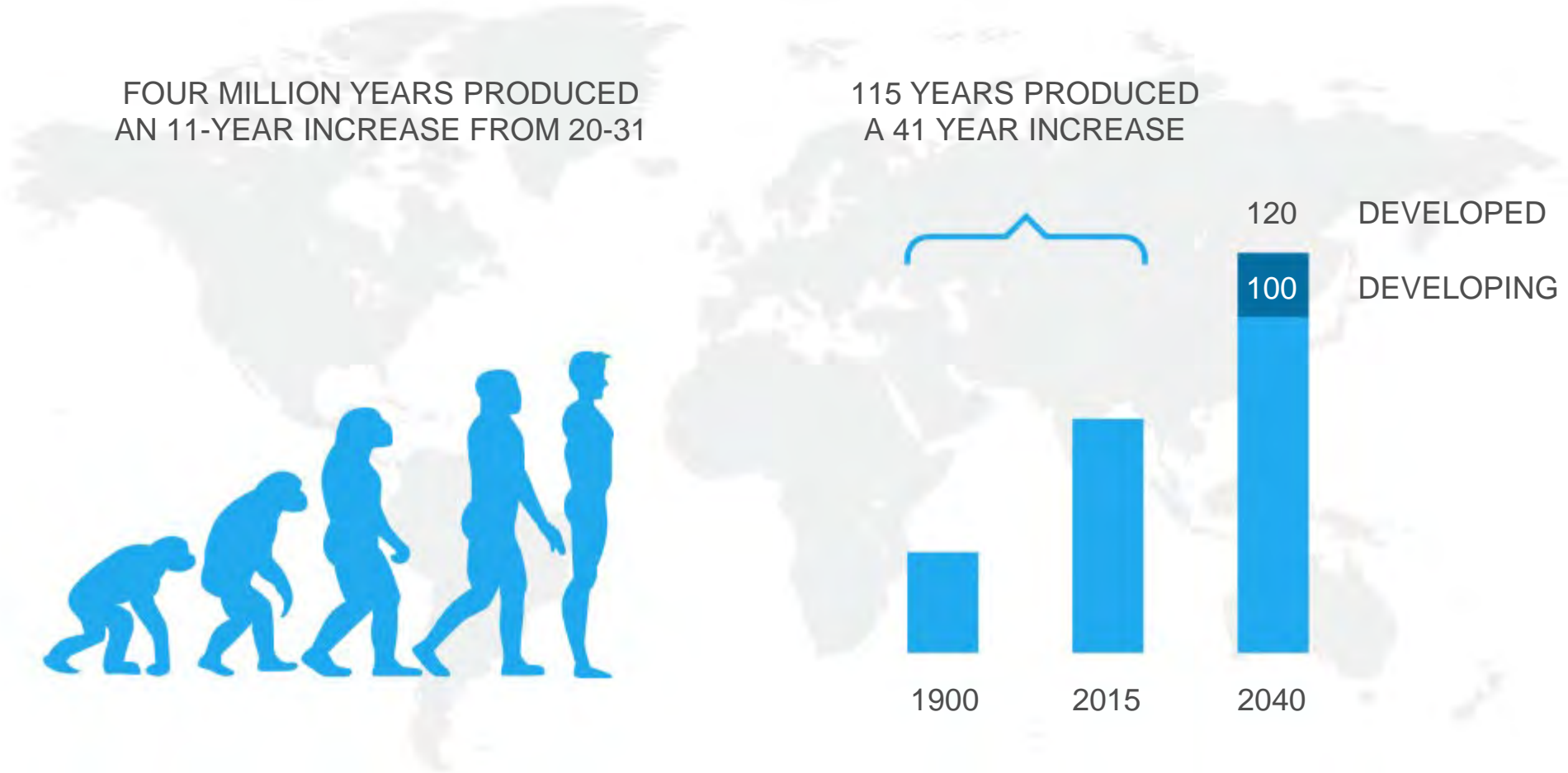


Tangible benefits of Digital Life & Health Insurance - Actuarial

- Positive Selection bias
- Positive Selective Lapses
- Improvement in Mortality & Morbidity

Don't be last to change

Worldwide life expectancy – new insurance models are needed

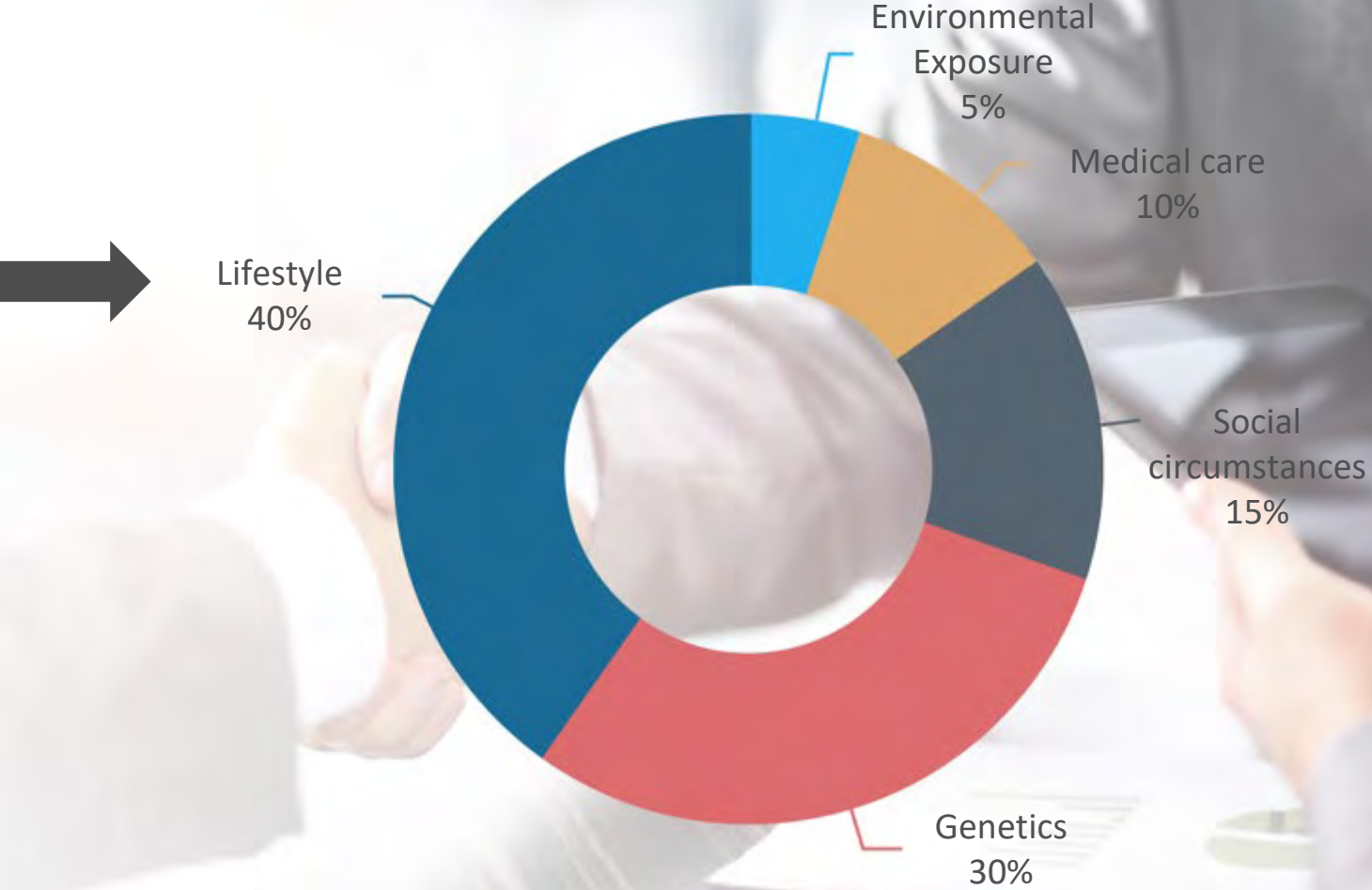


Source: UN Population Division, World Bank World Health Organisation

The evolution of mankind



Why lifestyle is important for your health outcome



Source: Mcinnis et al (2002). The Case For More Active Policy Attention To Health Promotion. Health Affairs, 21 (2): 78-93

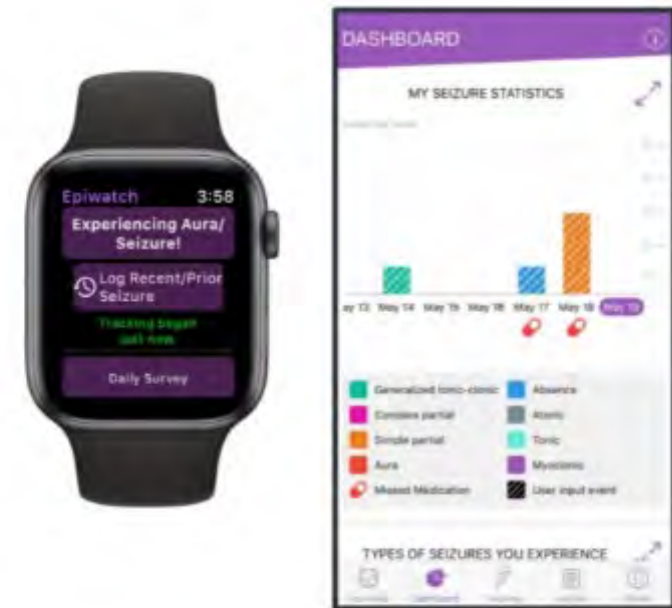
Trends – Meeker Report 2019

Healthcare Innovation = Apple...
Hardware + App Store Leveraging Research For Consumers

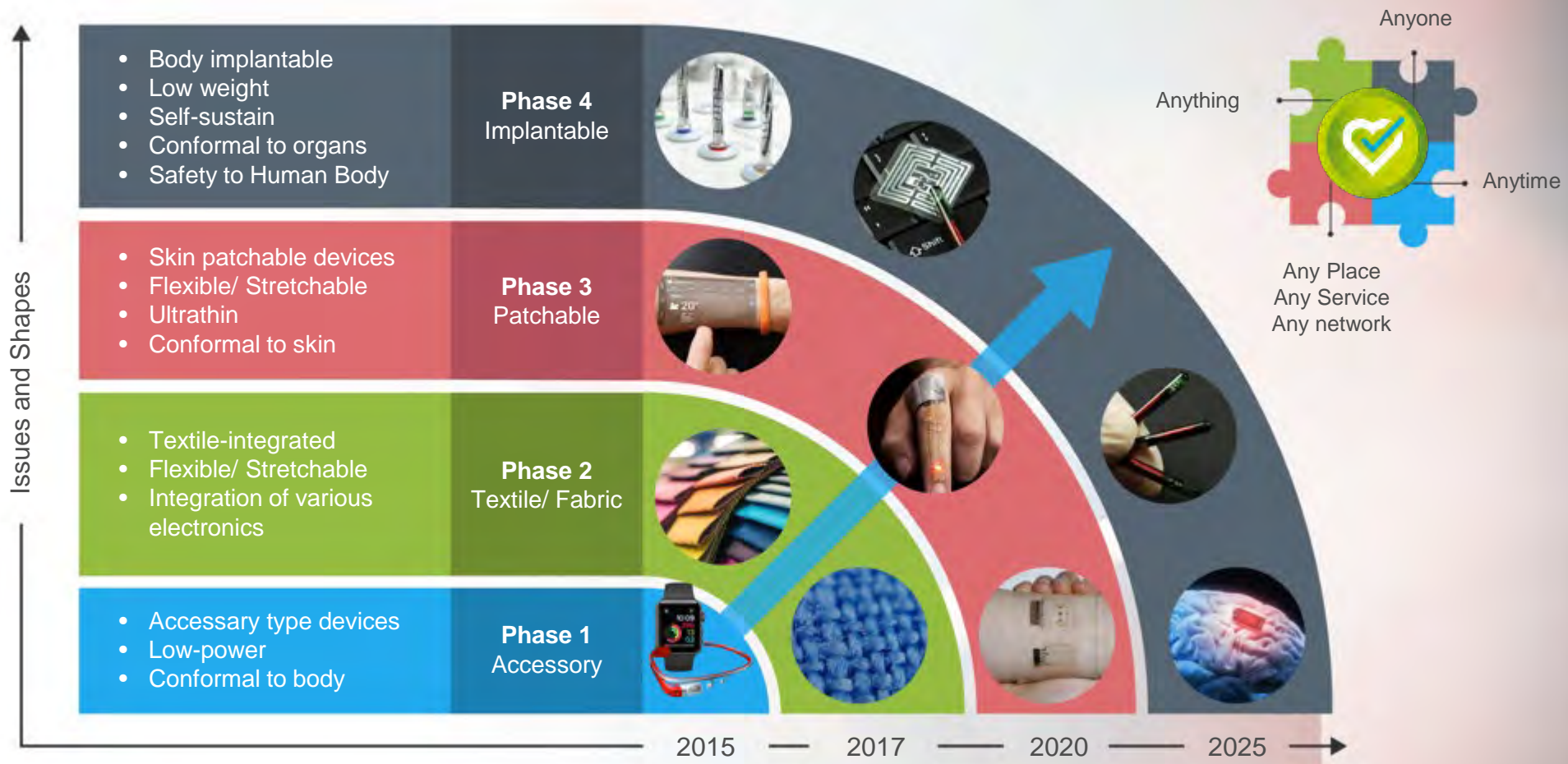
If you zoom out into the future & you look back, & you ask the question, 'What was Apple's greatest contribution to mankind,' it will be about health.

Tim Cook – CEO, Apple, 1/19

Apple ResearchKit = Medical Research Technology for Consumers



IoT is more than Step Counters



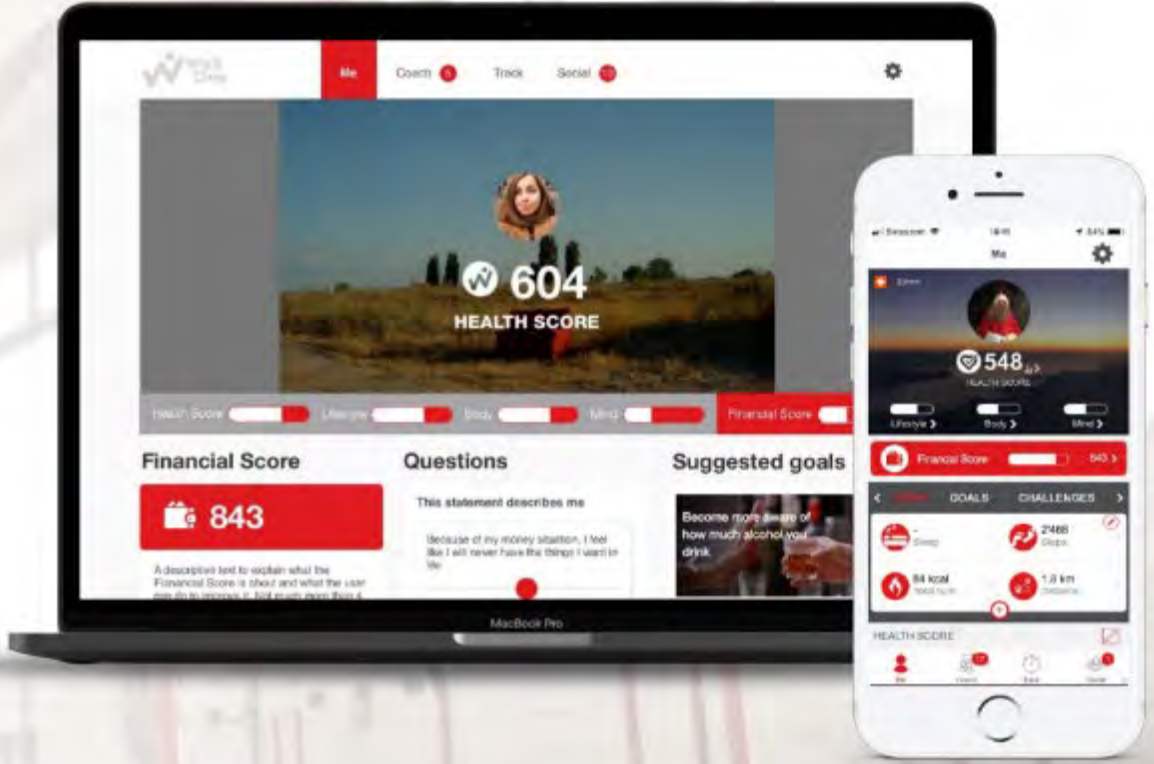
Source: dacadoo/Wearables architecture, Credit: Korean Ministry of Trade, Industry and Energy

Tangible benefits of Digital Life & Health Insurance - Data

- Monetization of platform, access fee for partnerships
- Monetization of data insights
 - Anonymized

Data is the new currency

Aon – Corporate Wellness – Well One



Trends – Meeker Report 2019

...2000s

Winning Businesses =

Build / Use

Data Plumbing Tools

To Use Digital Data / Insights

To Improve Customer Experiences

Retail Customer Satisfaction = Can Rise With Data + Personalization

Survey of Retail Customers

91%
Prefer Brands that Provide Personalized Offers / Recommendations

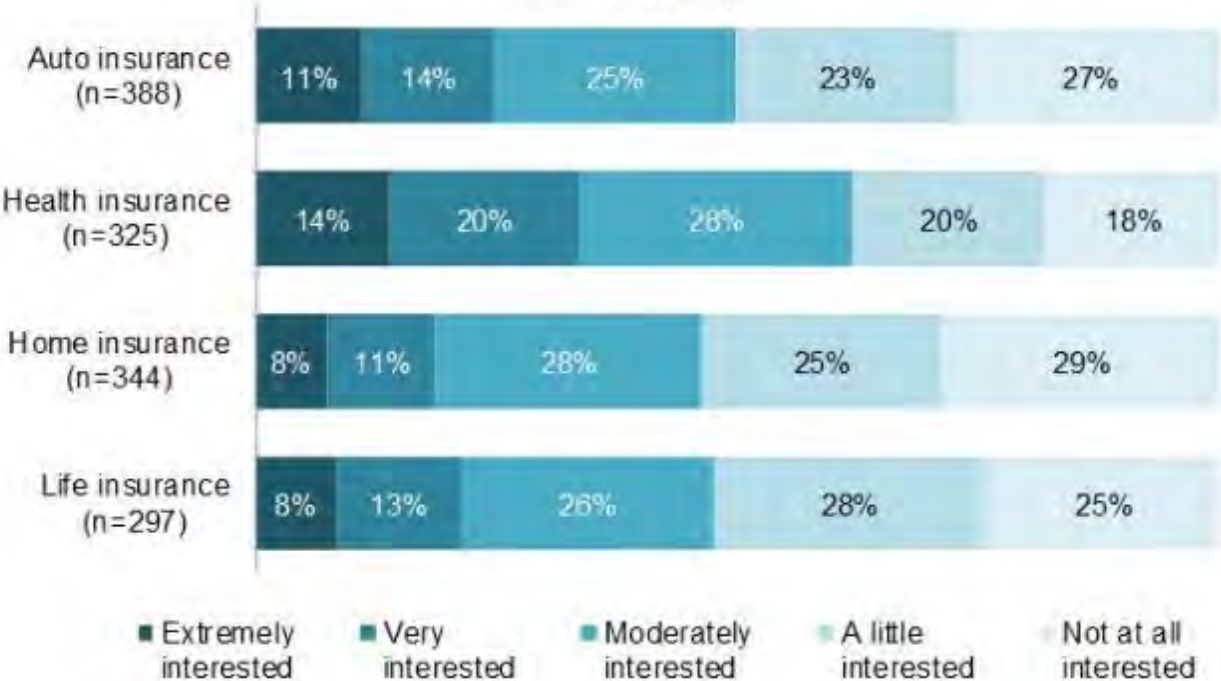
83%
Willing to *Passively* Share Data in Exchange for Personalized Experiences

74%
Willing to *Actively* Share Data in Exchange for Personalized Experiences

Accenture (2019)

Q. How interested would you be in an insurance rewards program based on information collected from your devices connected to the internet?

Source: Aite Group



Tangible benefits of Digital Life & Health Insurance - Adjacent

- Owning and integration in a platform
- Manufacture new types of products and services
- Offering access to platform to traditional competitors

Manufacturers => Commoditized

Technology is eating the world

THE LARGERST COMPANIES BY MARKET CAP

The oil barons have been replaced by the whiz kids of Silicon Valley

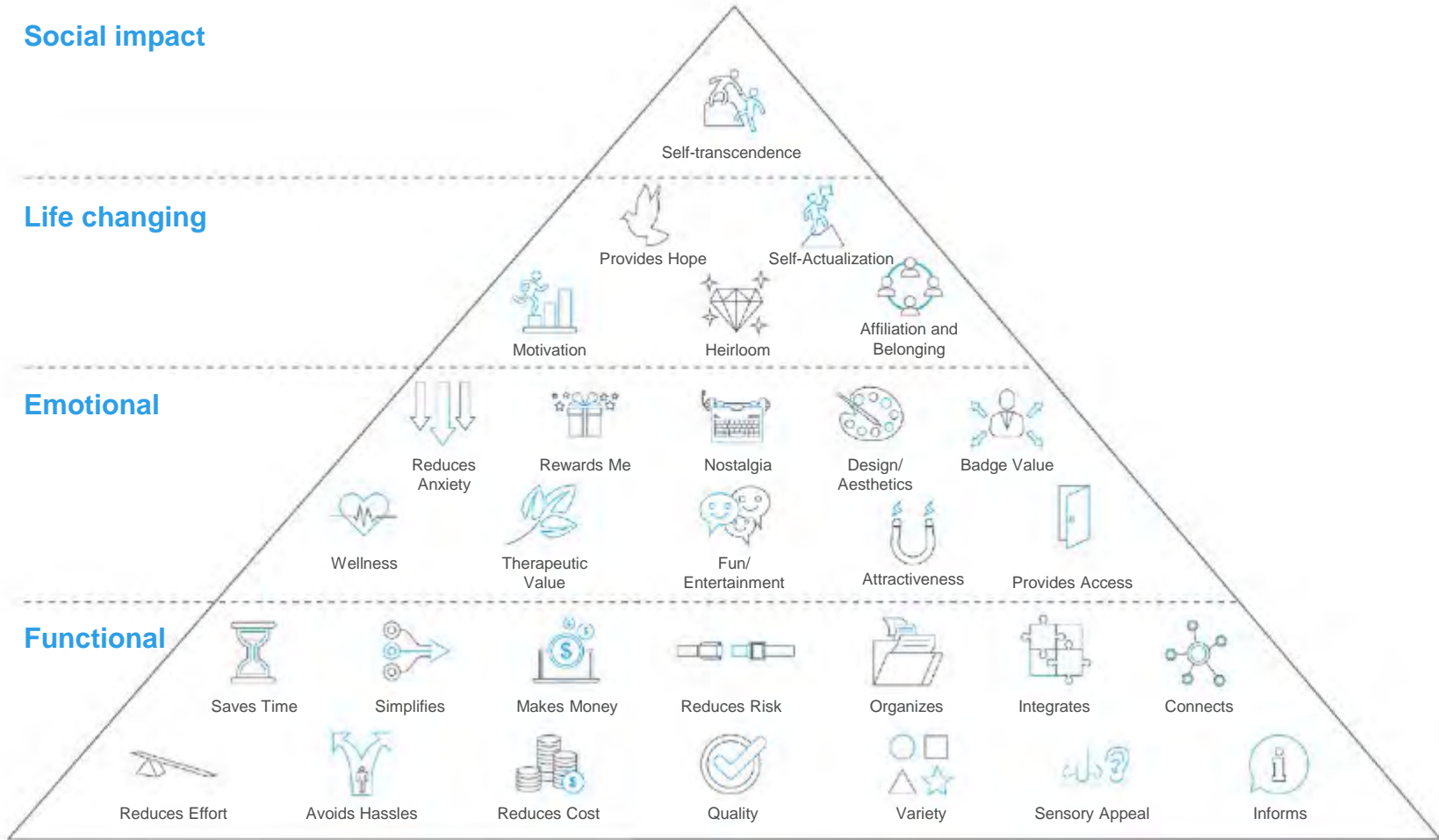


Source: Silverpeak

Platform business

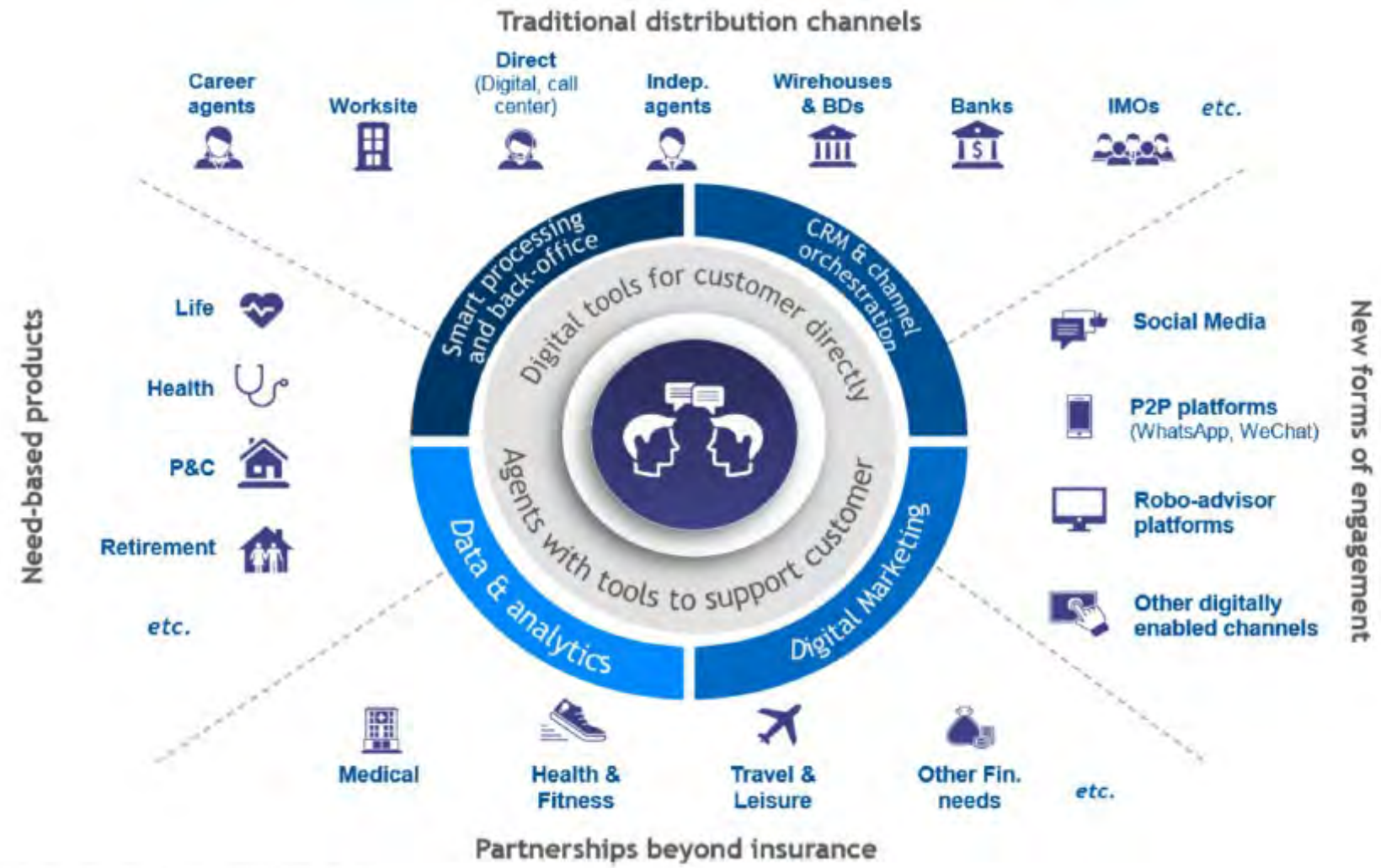
Social	=>	Facebook, Instagram	{Connection}
E-commerce	=>	Amazon, eBay, Alibaba	{Convenience}
Apps	=>	Apple, Google Play	{Access}
Entertainment	=>	Netflix, Disney	{Entertainment}
Information	=>	Google	{Reliability}
Health	=> why is that?	{Trust}

How insurers can meet customer needs



Source: Bain & Company

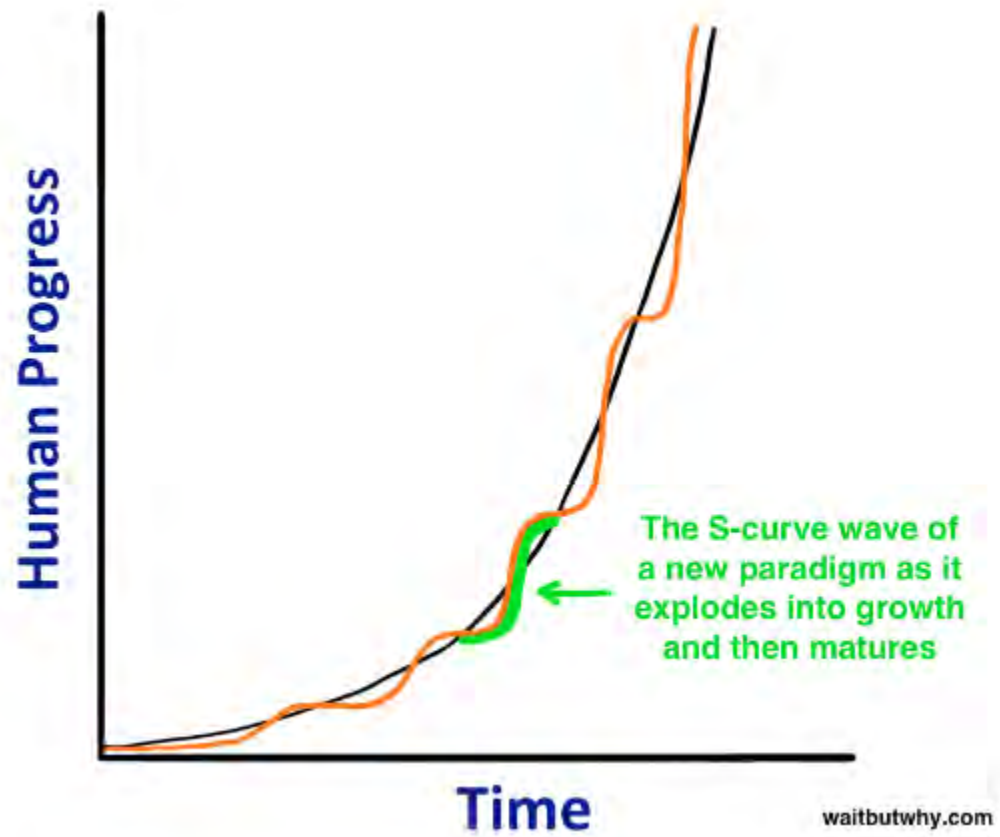
Insurance business revolution



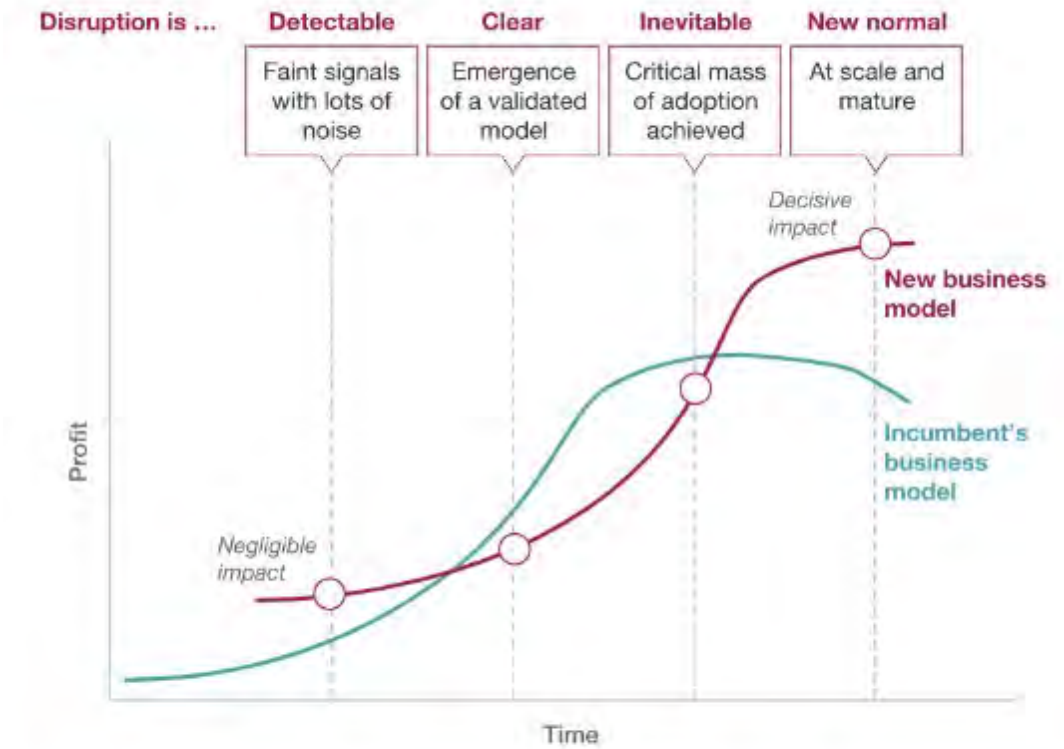
Source: Morgan Stanley Research, Boston Consulting Group

Accelerating pace of change

Source:
McKinsey



Disruption introduces an incumbent to a new journey.



Incumbent's move	Acuity	Action	Acceleration	Adaptation
Common barrier	Myopia	Avoidance of pain	Inertia	Fit

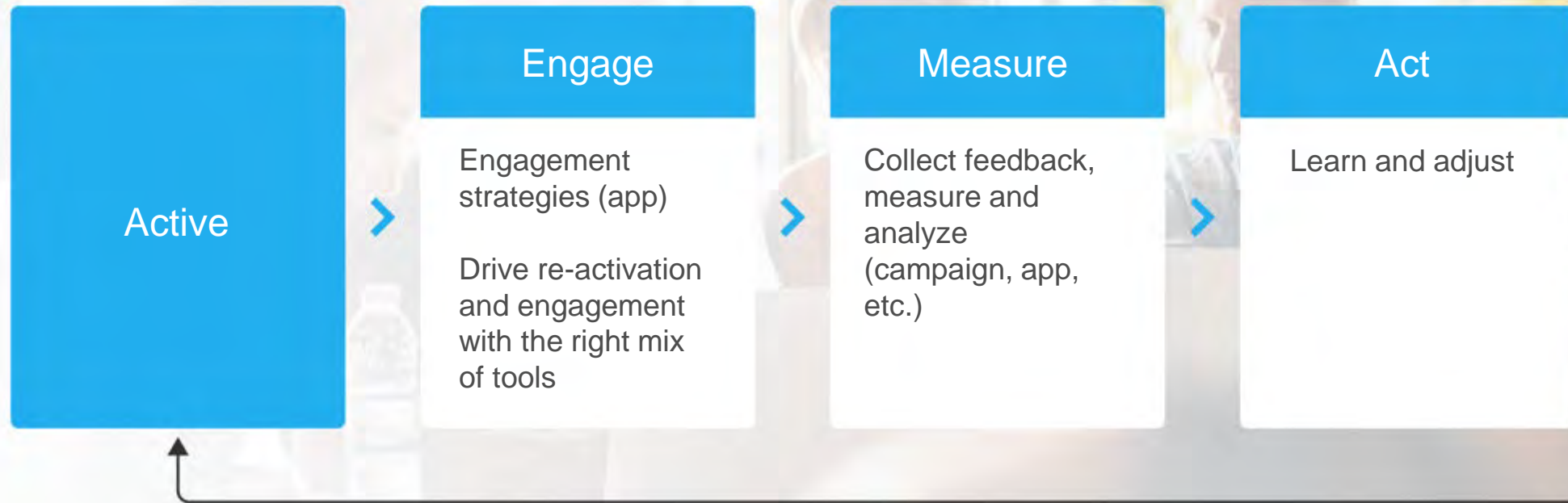
dacadoo Insurance platform



built on over
300 Million Life years of Clinical Medical Research

Engagement is a process and needs our focus

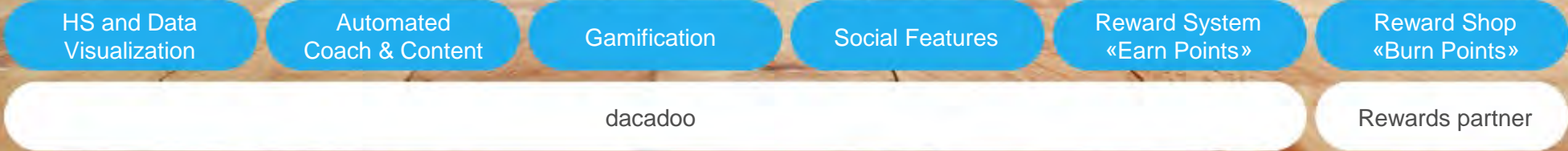
Engagement is the output of engagement strategies, campaign design, etc.
› Engagement is a process.



dacadoo provides support throughout the process

Engagement features overview

Package	
Standard Package	<ul style="list-style-type: none"> • Health Score and data visualization: Health Score and visualization of all data • Automated Coach & Content: rule-/AI-based, lifestyle content, goals, etc. • Gamification: challenges, achievements, etc. • Social features: friends, groups, commenting, sharing, etc.
Optional add-on	<ul style="list-style-type: none"> • Reward system: earn points for healthy behavior, burn points in rewards sh



Offering in engagement and health risk quantification

Engagement Value Proposition



dacadoo Health Engagement Platform



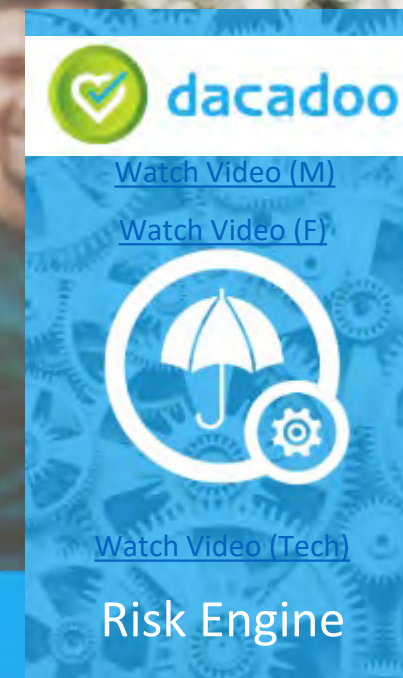
Technology Access for 3rd Party Development



Walking Game
dacadoo GO

dacadoo platform RESTful API

Risk Value Proposition



Health Risk Quantification (HRQ)
dacadoo Risk Engine
dacadoo instant Health Score

Models API

Thank you and please connect with me to learn more



Thank you for your interest!



Contact:

Blake Hill, FSA FCIA, VP Life Insurance

Cell: +1-519-897-3628

Email: blake.hill@dacadoo.com





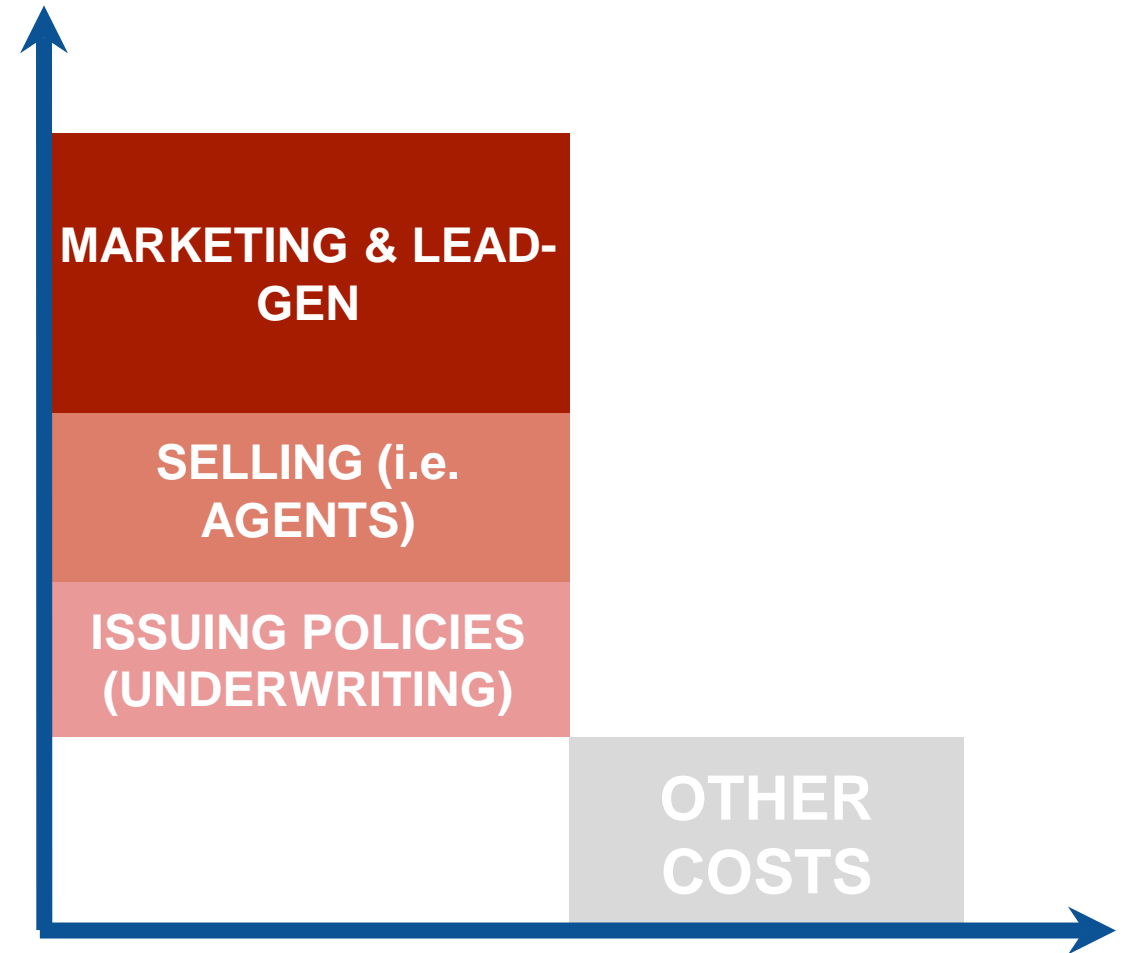
Engagement is a Human-centric Topic



Selling Insurance is Very Expensive

**~70% of total cost
of life insurance
is spent on acquisition**

An Economic Analysis of Life Insurance Expenses



Billions of \$ Spent on Fatigued Marketing Channels



94%
skip TV ads



63%
ignore internet ads



50%
are on do-not-call lists
(over 200M)

It's All About the Human Connection

Carriers & Agents



- Keep people healthy
- Protect families
- Improve profits
- Leverage new tech
- Acquire customers

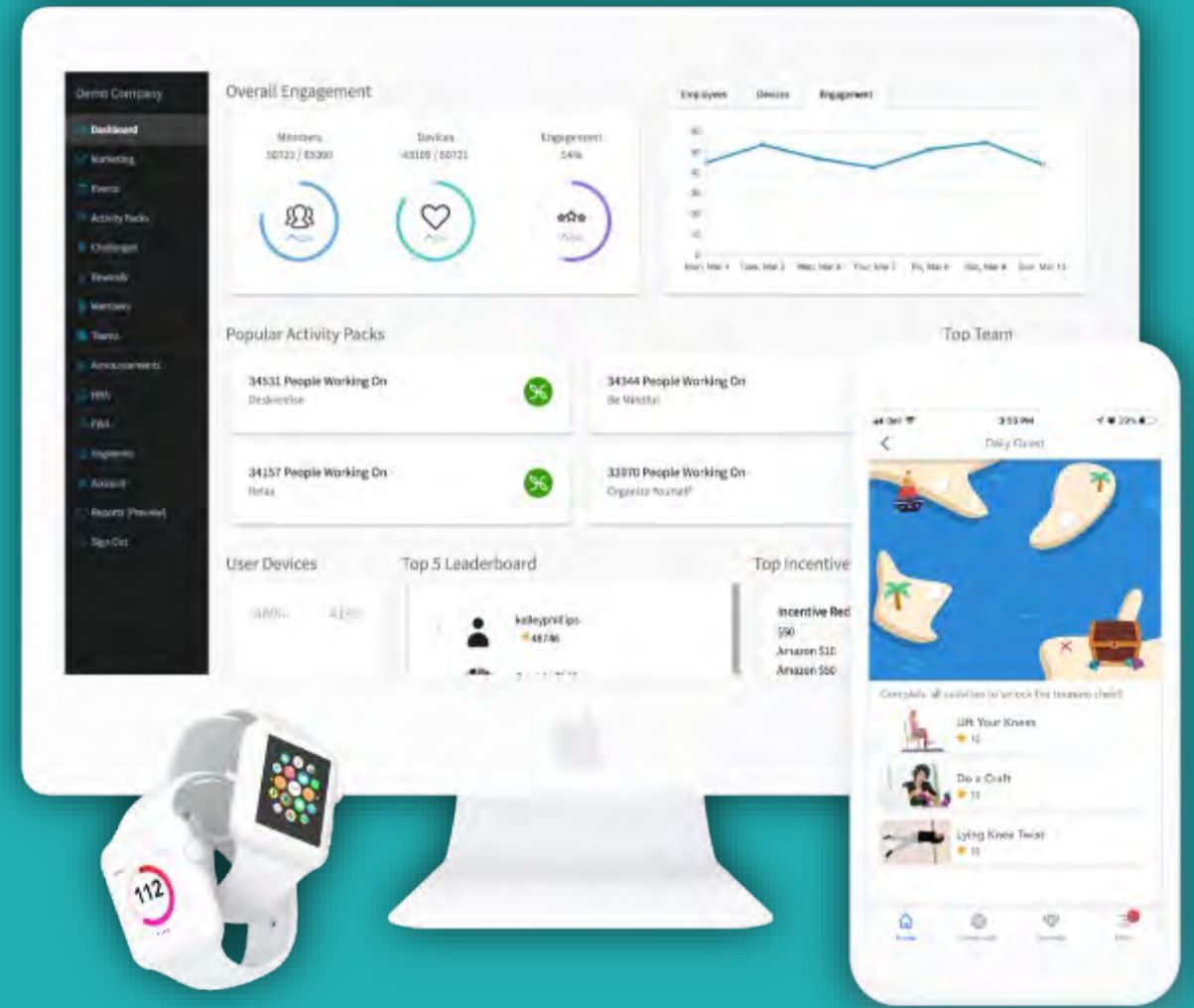


Ideal Consumers



- Health-conscious
- Have families
- Live well & smartly
- Use mobile apps
- Strong social networks

Insurtech Challenge: Human-centric Tech





Starting with Radical Customer-Centricity

Trust. Value. Ease.

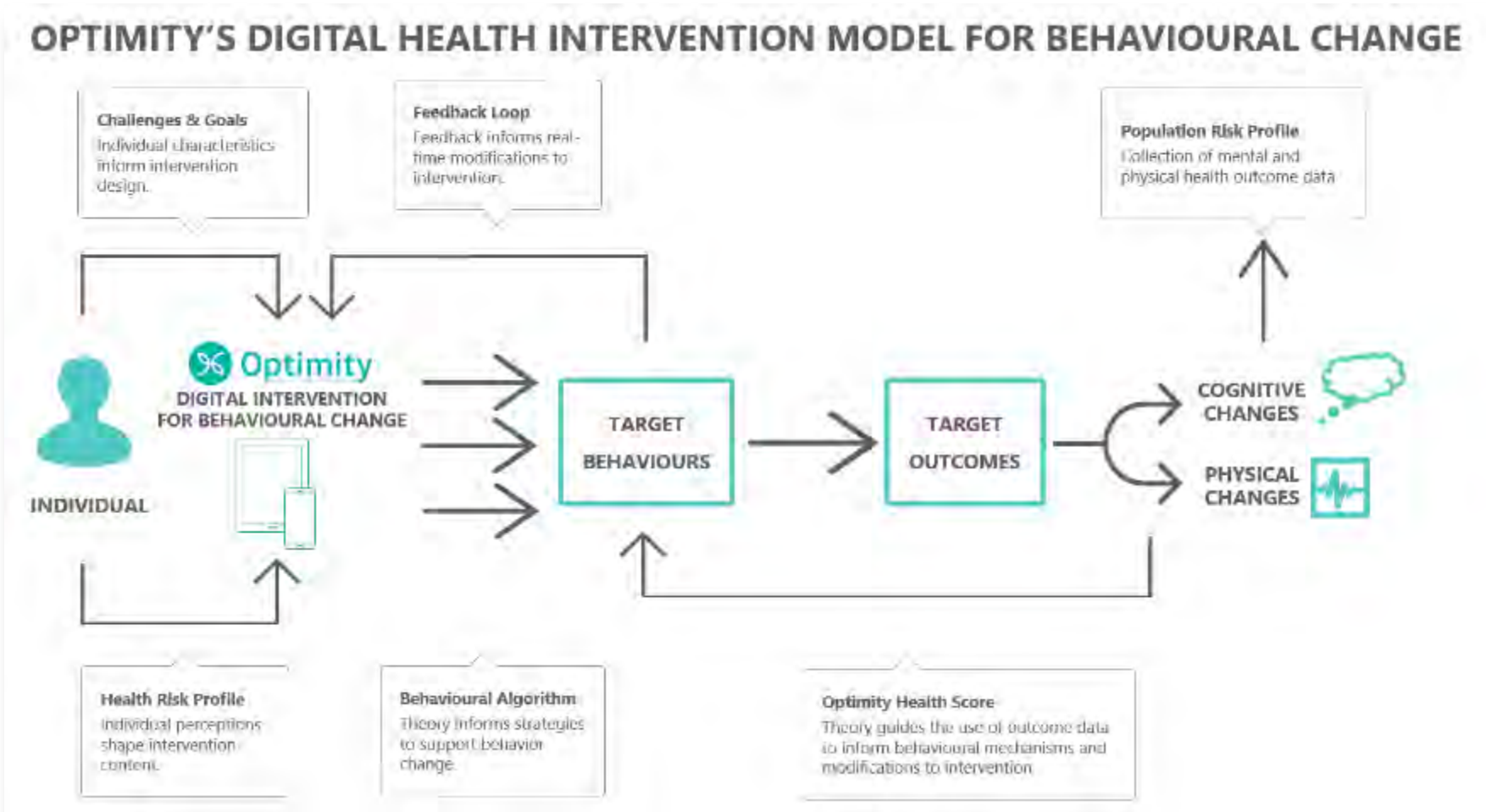
- Help people trust you (don't be evil, avoid punishments, don't adjust price up)
- Bring value-add services and insights
- Ease-of-use
 - Human-centric engagement design

Human-centric Engagement

1. Motivation science
 - Gamification
 - Goal-setting
 - Cognitive & Physical Changes
2. In-Real-Life (IRL) triggers
3. Community & network effect



1. Motivation: Coaching & Behaviour Change Strategies



Theoretical Models Influencing Optimoty's Program Design

Transtheoretical Model of Behaviour Change influences tailored interventions to specific stages of readiness and supports Optimoty's techniques to promote self-efficacy. Use of prompts and motivation strategies are key interventions outlined by the Theory of Planned Behaviour. Various elements of Social Cognitive Theory and the Health Belief Model inform specific strategies Optimoty uses in the design of its programming.

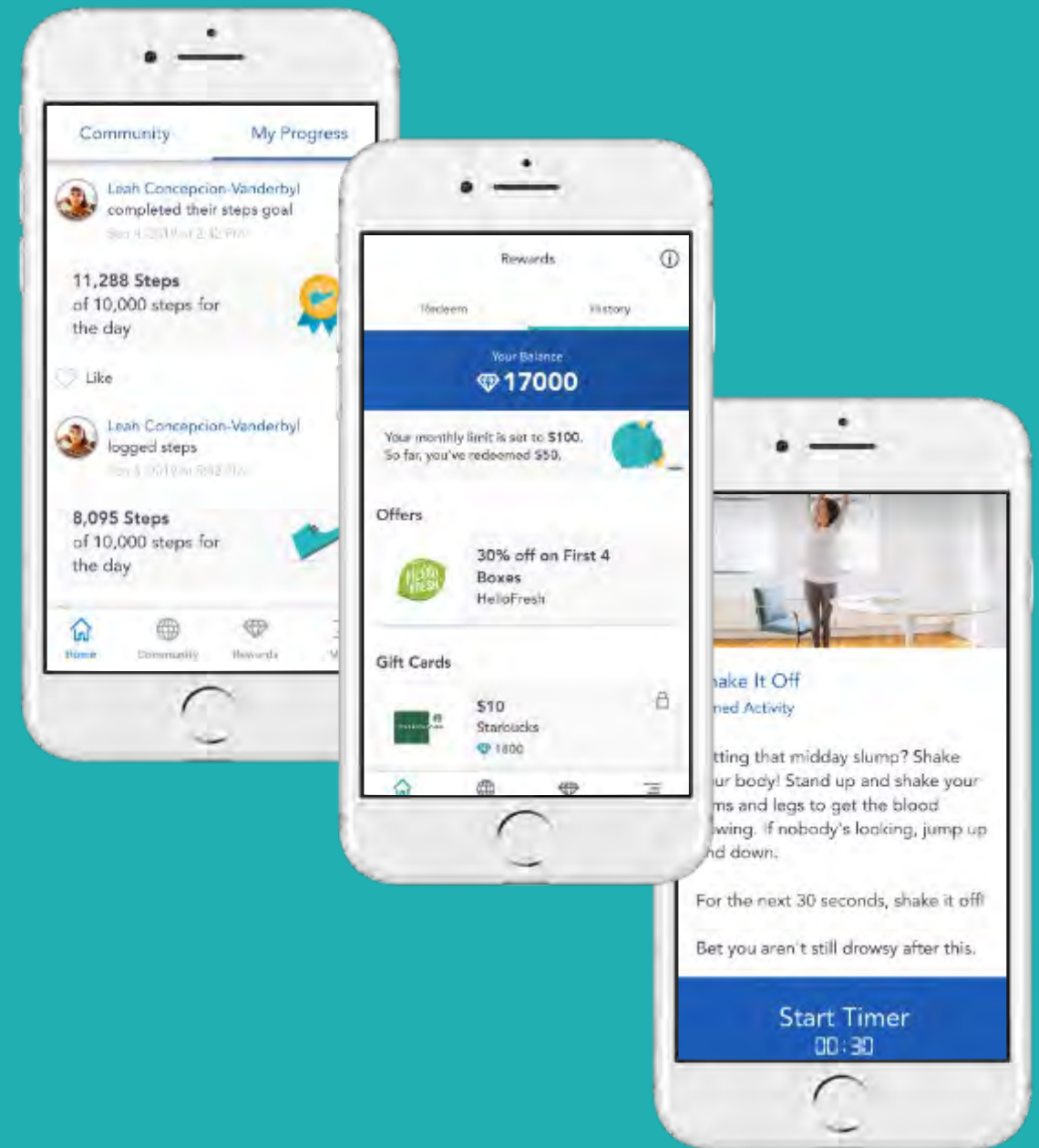
Trust = Habit Loops

App Features:

- Micro-activities
- Rewards and perks
- Workout and nutrition logging
- Goal setting

Benefits to Carriers:

- Builds trusted connection with customers
- Boosts brand loyalty and persistency
- Improves policyholder health



2. IRL Triggers

Designed for micro-moments

Ideal Users

- Health-Conscious
- Use Mobile Apps
- Active Lifestyle
- Interested in Family/Home Building
- Strong Social Networks



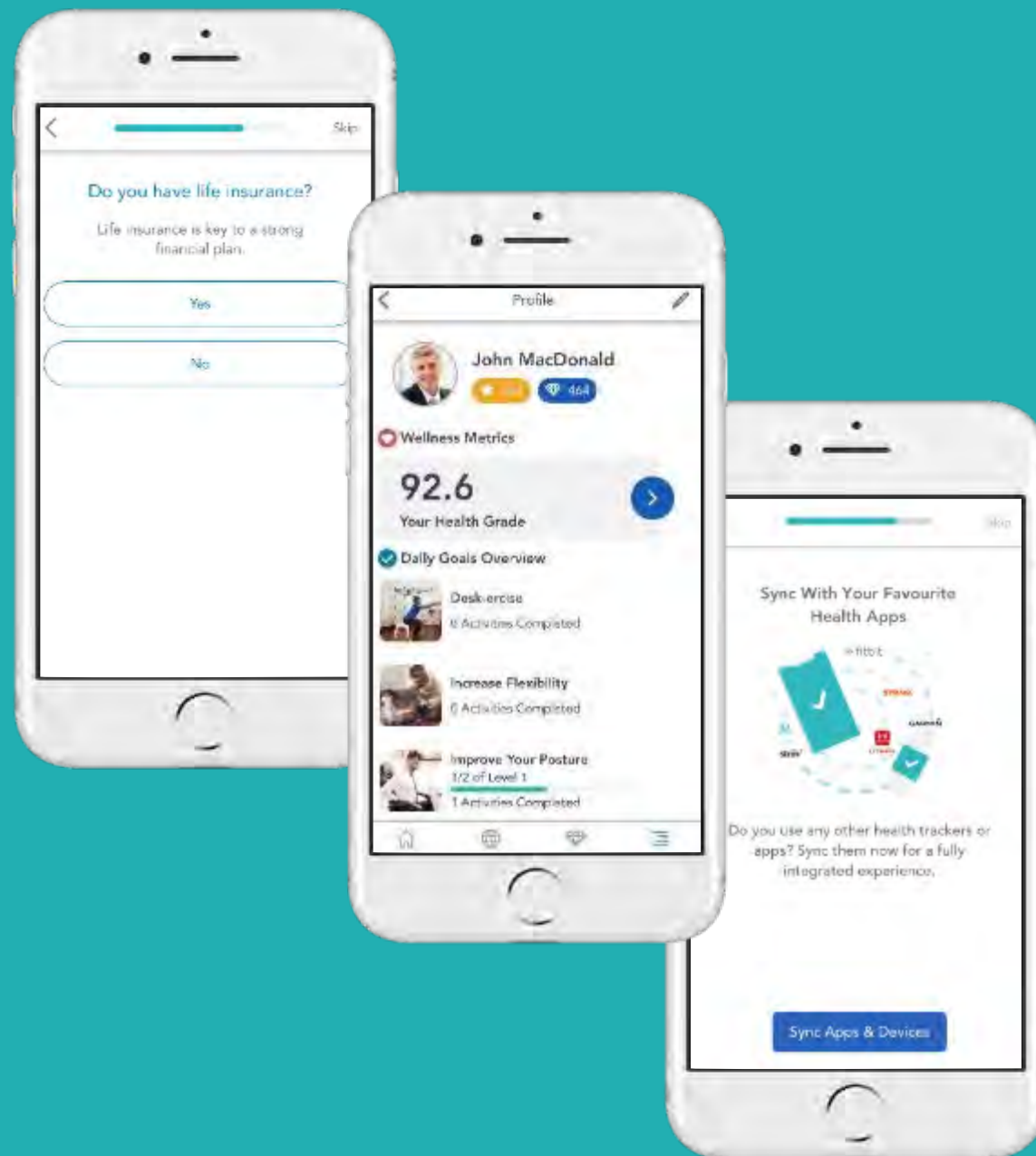
Enriched Data

App Features:

- Health Risk Assessment (HRA)
- Dynamic gamified health grade
- Financial Wellness Assessment (FWA)
- Additional lifestyle assessments
- Compatibility with 400+ health apps & wearables

Benefits to Carriers:

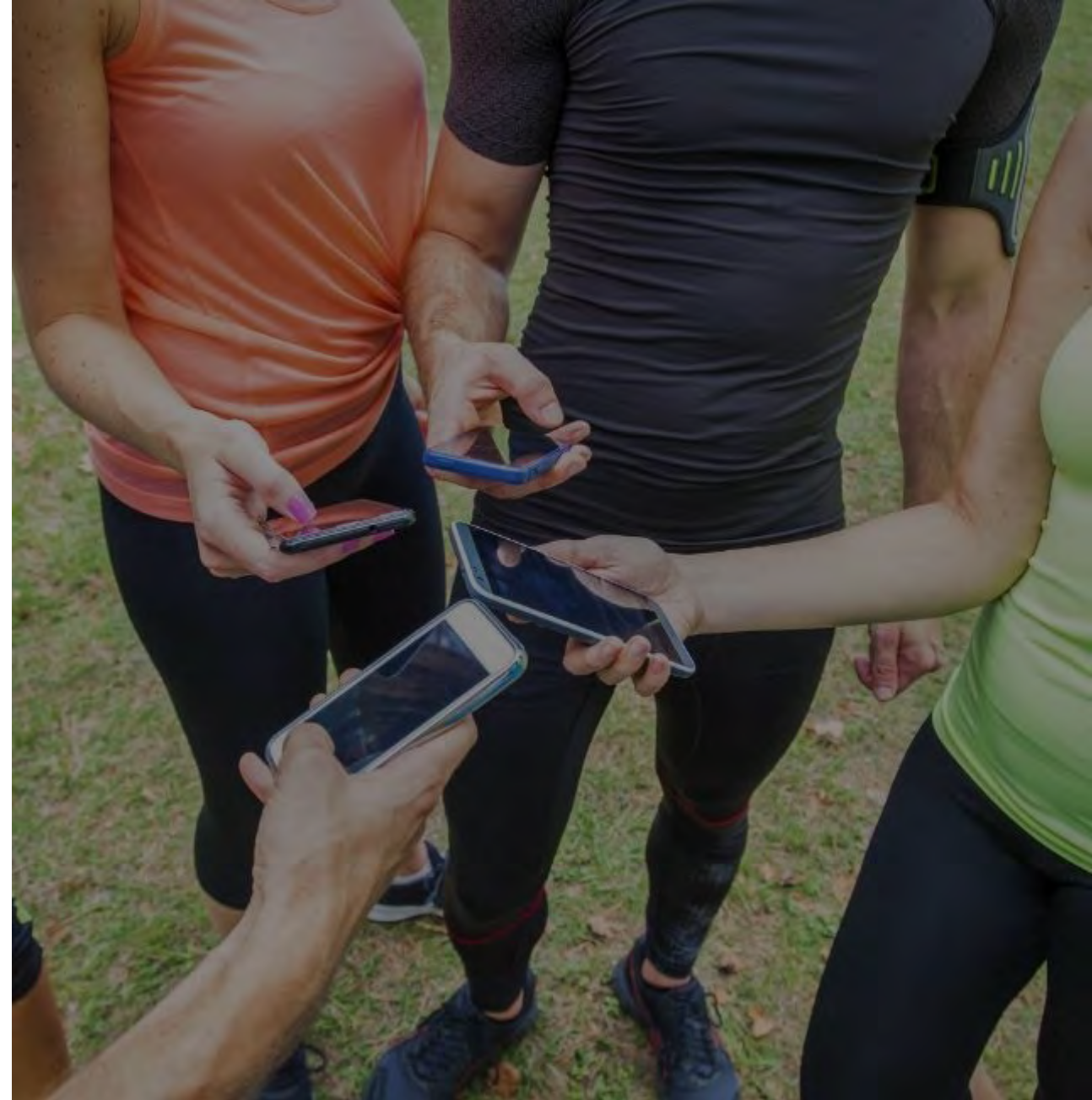
- Class risk categorization + continuous underwriting & risk mitigation
- Personalized product recommendations
- Event-triggered flows



3. Community & Network-effect

Grow your community

- Members bring in more people like them
 - Add friends, be more accountable!
 - Add friends, do activities together!
 - Add friends, get more rewards!



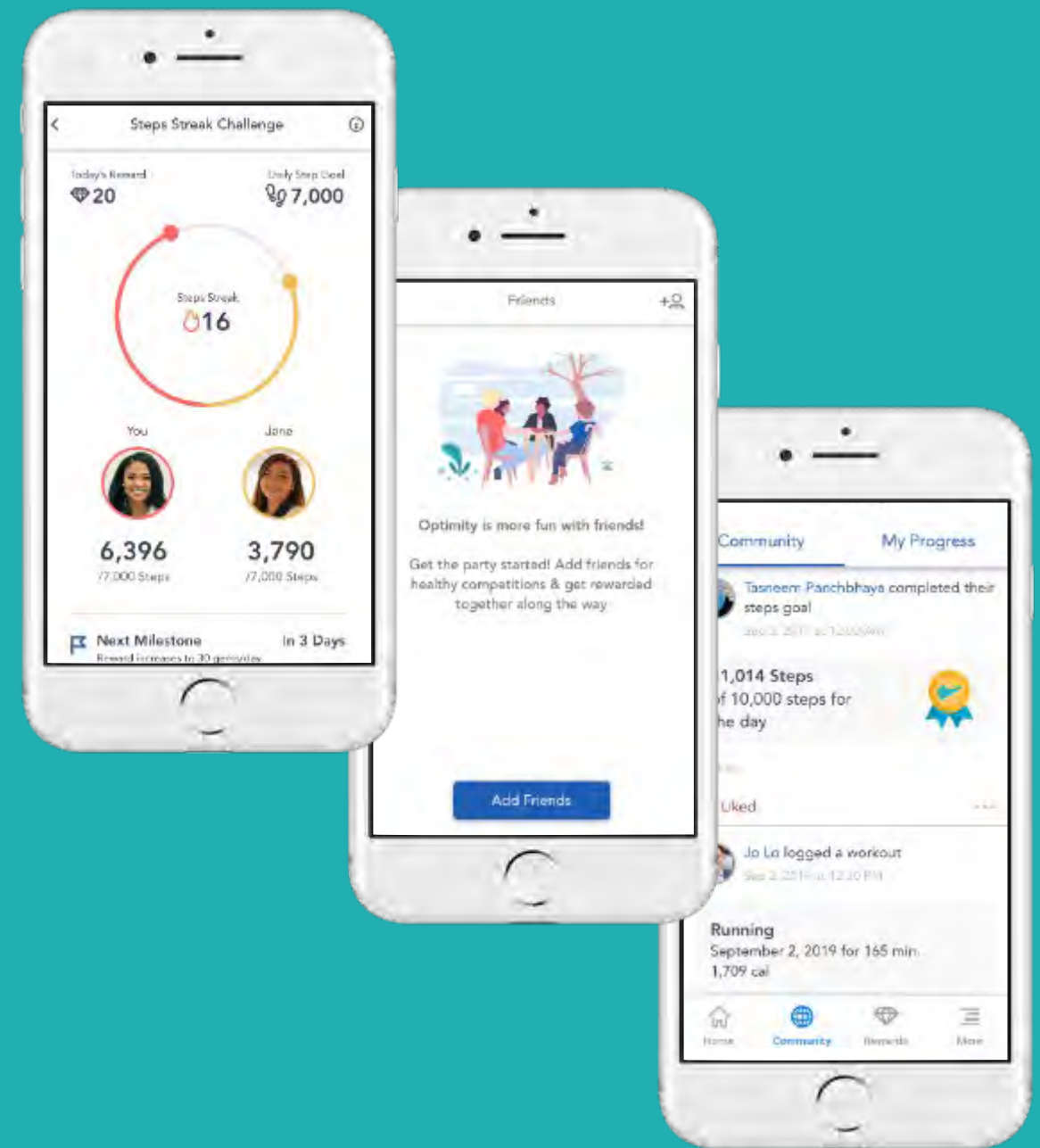
Viral Growth

App Features:

- Invite friends
- Collaborative challenges
- Community feed

Benefits to Carriers:

- Ultra-low cost lead gen
- Virally building a drip marketing pool
- Access to ideal lookalike audience

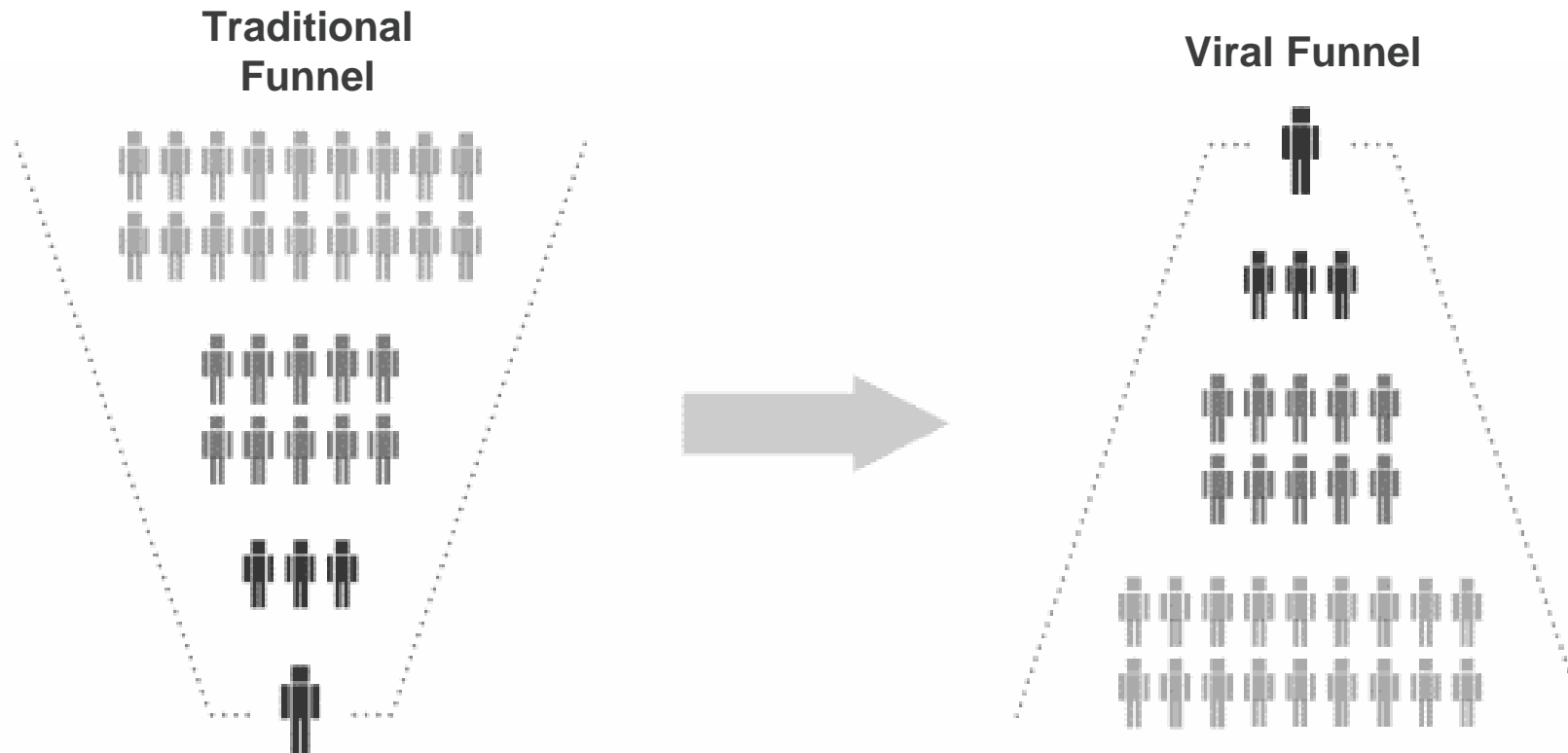




Radical, Customer-driven Growth

Mobilizing Policy Holders for Highly-qualified Referrals

Establishing a loyal, captive policy-holder & referral community to drip-market & sell into.





Ameritas  +  Optiminity

Case study: How Ameritas is rethinking marketing



Case Study:

How Ameritas is leveraging Optimity as the new breed of loyalty programs: wellness rewards for policy holders & referrals.

Leading the field on changing full cost-of-acquisition, persistency, and high-quality lead-gen from inforce policyholders. This is especially interesting for incumbent carriers facing consumer expectations of value-add and engagement.

How to leverage health risk assessment data pipeline that is organic and authentic (vs creepy)?

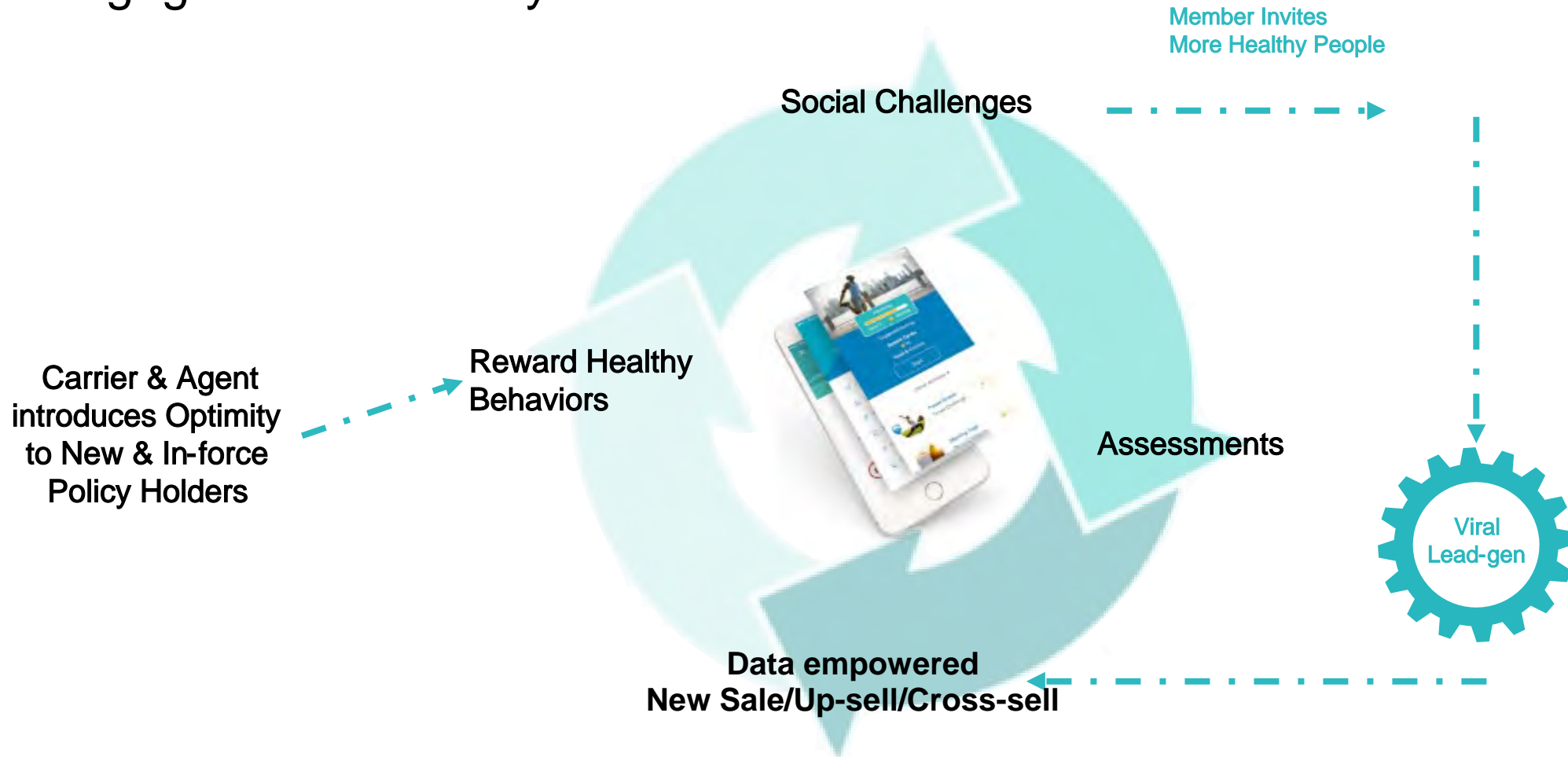
How to engage with the modern consumer to close the protection gap?

How to build trust & habit-loops to stay engaged?



Radical Customer-Centricity

Engage In-force Policyholders



AMERITAS POLICYHOLDERS Customer Journey Map

● Email ● In App ● Print



EMOTIONAL RESPONSE



PRE-LAUNCH WEEK 1 WEEK 2 WEEK 3 WEEK 4 WEEK 5 WEEK 6

ENGAGEMENT

	● Push to invite friends ● Leaderboard challenge	● Push to invite friends ● Get health score (HRA & FWA)	● New reward ● User feedback survey prompt	● Push to invite friends ● Leaderboard challenge	● New reward ● New content pack ● Ameritas product offer	● Feedback survey
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COMMUNICATION

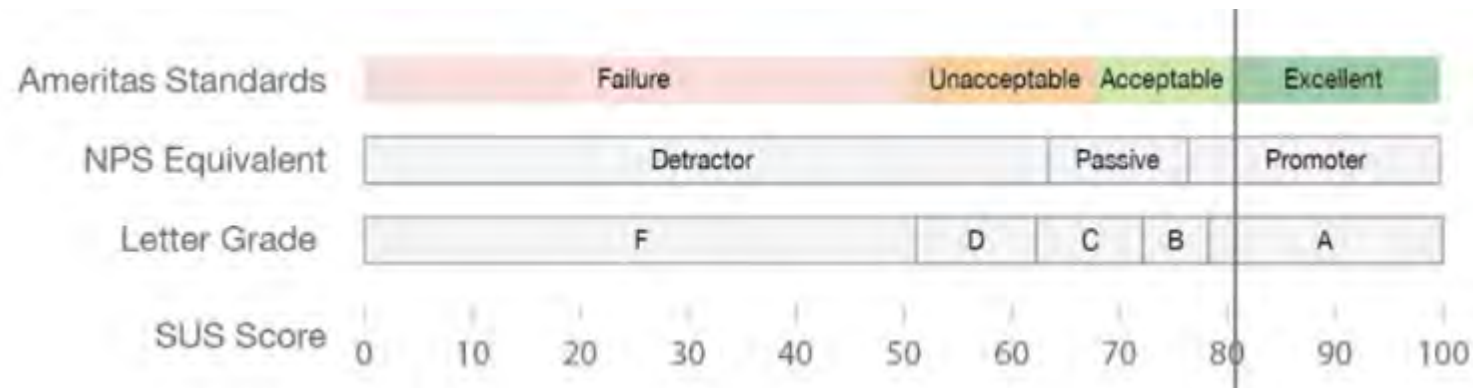
● Flyer ● Introduction email	● Onboarding email	● Non-registered users campaign	● User feedback survey email	● Non-registered users campaign ● Ameritas promotion announcement ● Leaderboard challenge email	● Ameritas product offer	● Feedback survey
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- Agile Approach
- Customer Empathy
- Fast Learning Cycles



Radical Customer-Centricity

NPS: 81!

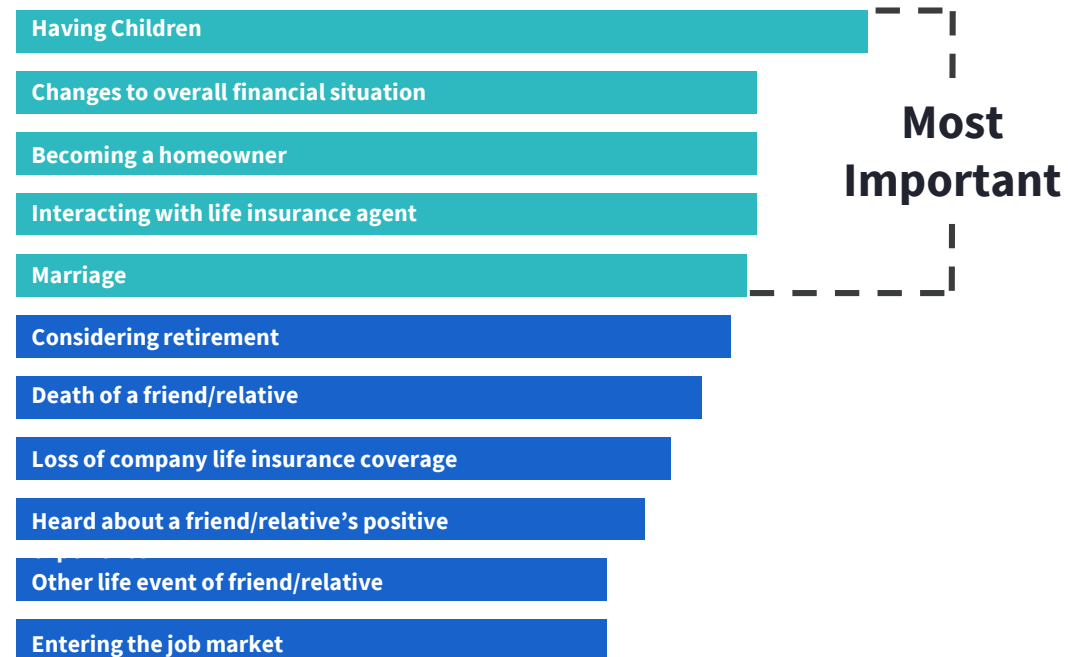


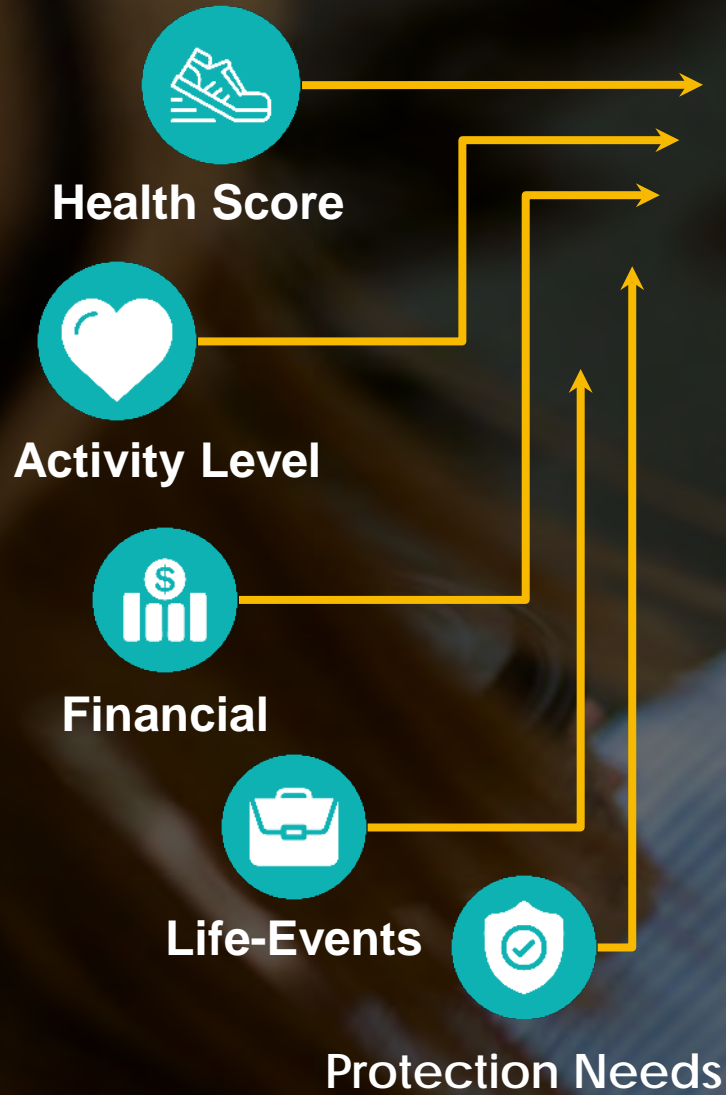


Life-events: Human Topics

Enriched Data

Find the most important and valuable data used for lead gen and pre-qualification.

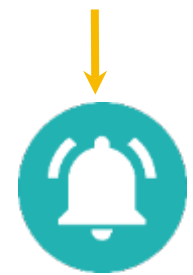




Segmentation Engine



Qualified Lead Identification



Push Offers & Set Appointments

More Human: Agent <=> Client Interactions

Directly syncing with agents' calendars to book in 30-min calls with clients, who already indicated interest in a particular product or specified their needs.





Where do we go from here?

What's next...



We've seen this before: in Banking



1920s

Brick & Mortar



1980s

IT Infrastructure
Data
Credit Score



2000s

Longitudinal IoT Data
Loyalty
Credit Score 2.0



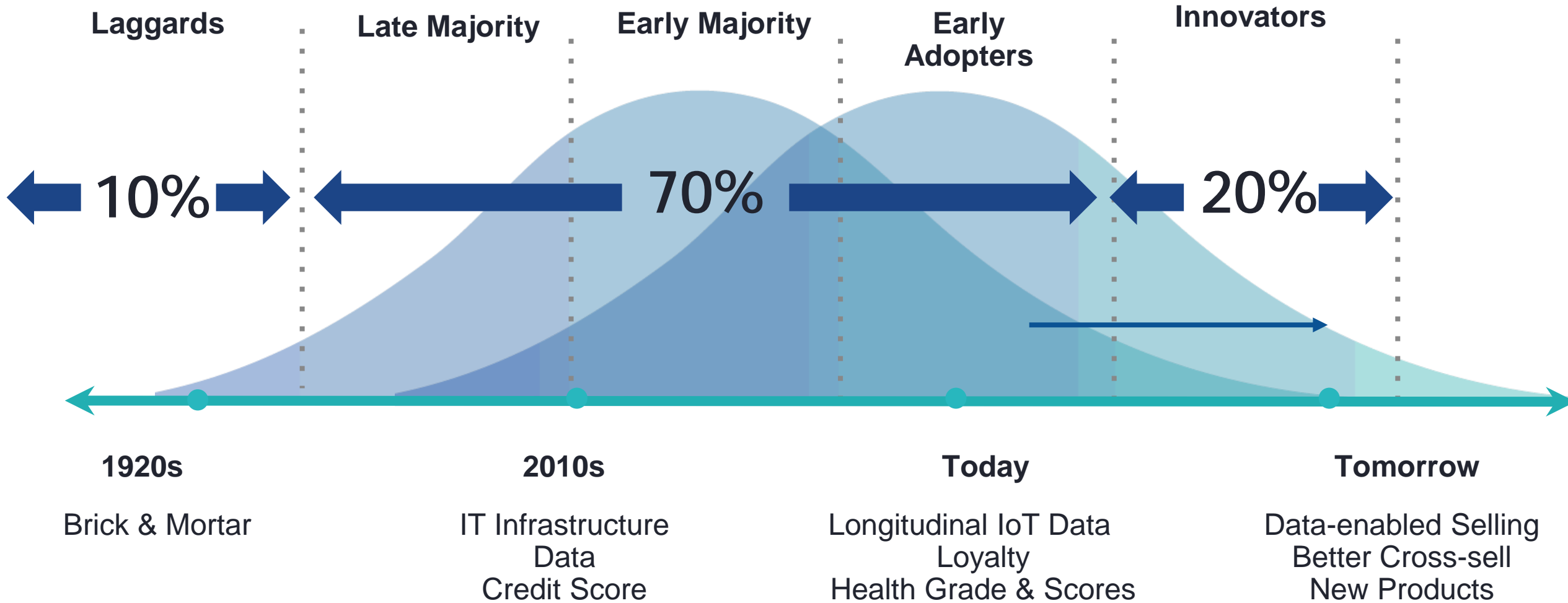
venmo

Send money and make purchases.

Today

Data-enabled Selling
Better Cross-sell
Smart Bundling


Evolution in Insurance





A semi-transparent background image of an office setting. In the foreground, a woman in a red patterned top is smiling and talking to a man in a blue shirt who is holding a large sheet of paper. In the background, an older man in a white shirt and tie is sitting and smiling, and another woman is sitting next to him holding a red mug. A man in a suit is standing in the far background.

Thank you!

 Optimium

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Questions

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