

THE RISK OF LIVING LONGER

Thank you for joining us –
the webinar will start shortly



Erik Douglas and Uli ask the ultimate question of human longevity for financial institutions:

How long can we go?



Season 2 program

Session 1 Sept 10th, 2024	<i>Longevity Science – Advancing from Cure to Prevention</i>	<ul style="list-style-type: none"> Dominik Thor, Geneva College of Longevity Science 	Recording available here
Session 2 Oct 22, 2024	<i>Quantifying the effects of gero-science</i>	<ul style="list-style-type: none"> Chris Martin & Nicky Draper Crystallise 	Recording available here
Session 3 Nov 14 th , 2024	<i>Behavio(u)ral change</i>	<ul style="list-style-type: none"> Francois Millard (Vitality) Tina Woods (Business for Health) 	Today!
Session 4 Dec 3 rd , 2024	<i>Preventing dementia</i>	<ul style="list-style-type: none"> Baroness Professor Susan Greenfield Neuro-Bio Ltd 	Register here

For full details and registration for the series,
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Watch the replays of season 1 here: www.clubvita.net/us/events/event-recording

THE RISK OF LIVING LONGER

Behavio(u)ral change



Erik Pickett
(Chair)

Club Vita



Ulrich Stengele
(Chair)

Nationwide Financial



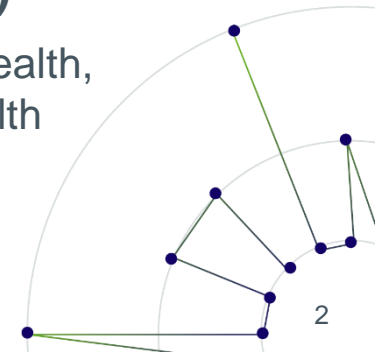
Francois Millard
(Panelist)

Vitality Global



Tina Woods
(Panelist)

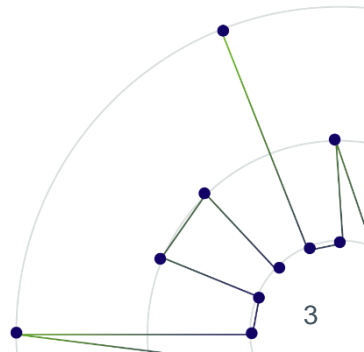
Business for Health,
Collider Health



Poll question

“How do you think behavioral change will affect life expectancy at 60 over the next 20 years?”

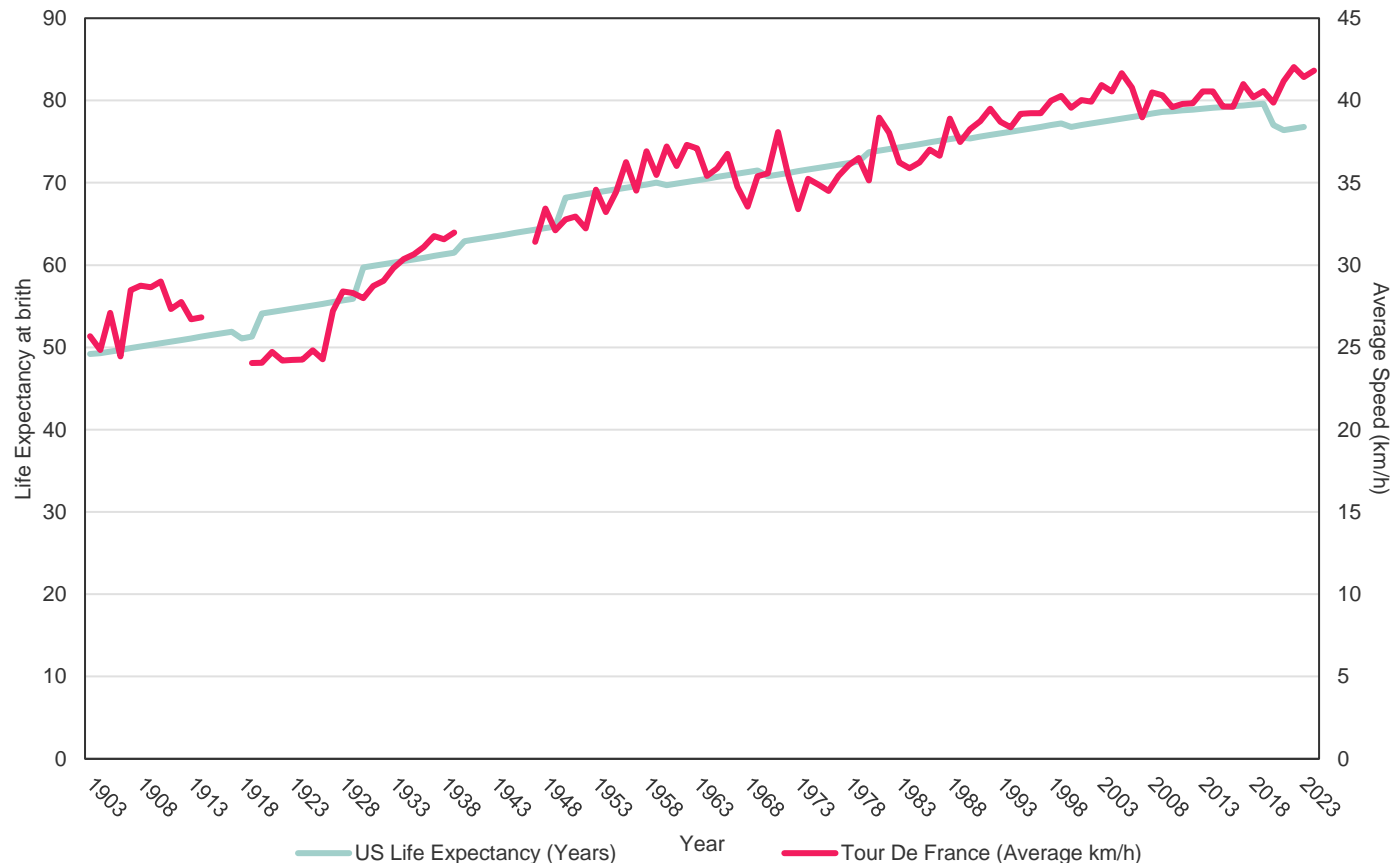
- *Reduce by over 2 years*
- *Reduce by 0-2 years*
- *No significant change*
- *Increase by 0-2 years*
- *Increase by over 2 years*



What impacts behavio(u)ral change?

How do you think behavior change will impact the average speed at the Tour de France over the next 20 years?

Life Expectancy & Average Speed at the Tour de France
Improvement since 1903



Individual Behavior: from scientific training and conditioning, nutrition, etc.

Technology: advanced bike design, sports science, data analytics, wearables, road conditions, etc.

Team Dynamics and Support: Team managers, support staff, and positive team dynamics

Policy: Race rules, anti-doping regulations, and course standards

Funding: Financial backing allows teams to access top-tier people, equipment, support staff, technology, etc

Is Life Expectancy (Lifespan) the right measure?

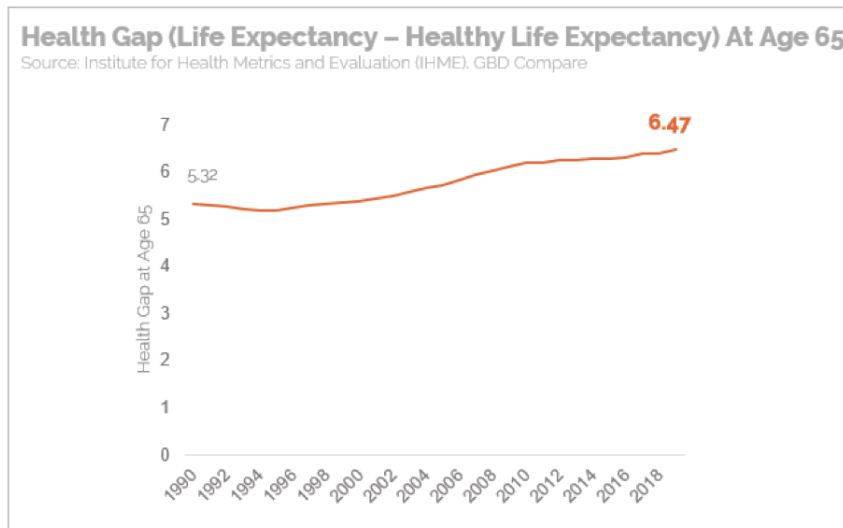


Maximizing Health Span: A Literature Review on the Impact of a Healthy Lifestyle on Retirement

September 2021

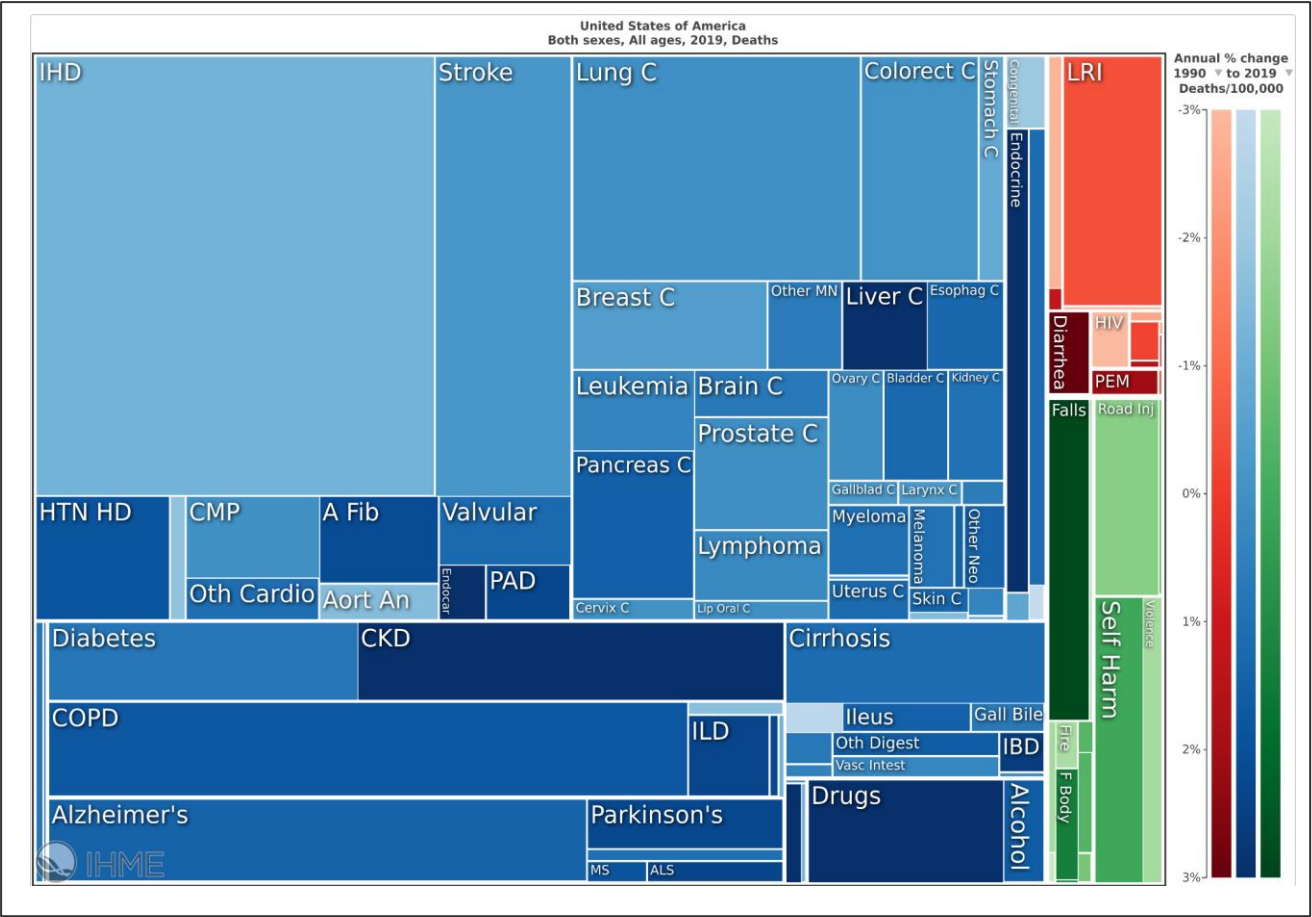
People are living longer with more disease.
This directly impacts the work of actuaries
involved in health, long-term-care and
related risk.

Figure 1
U.S. HEALTH SPAN



How much could lifespan / healthspan
increase from behavioural change?

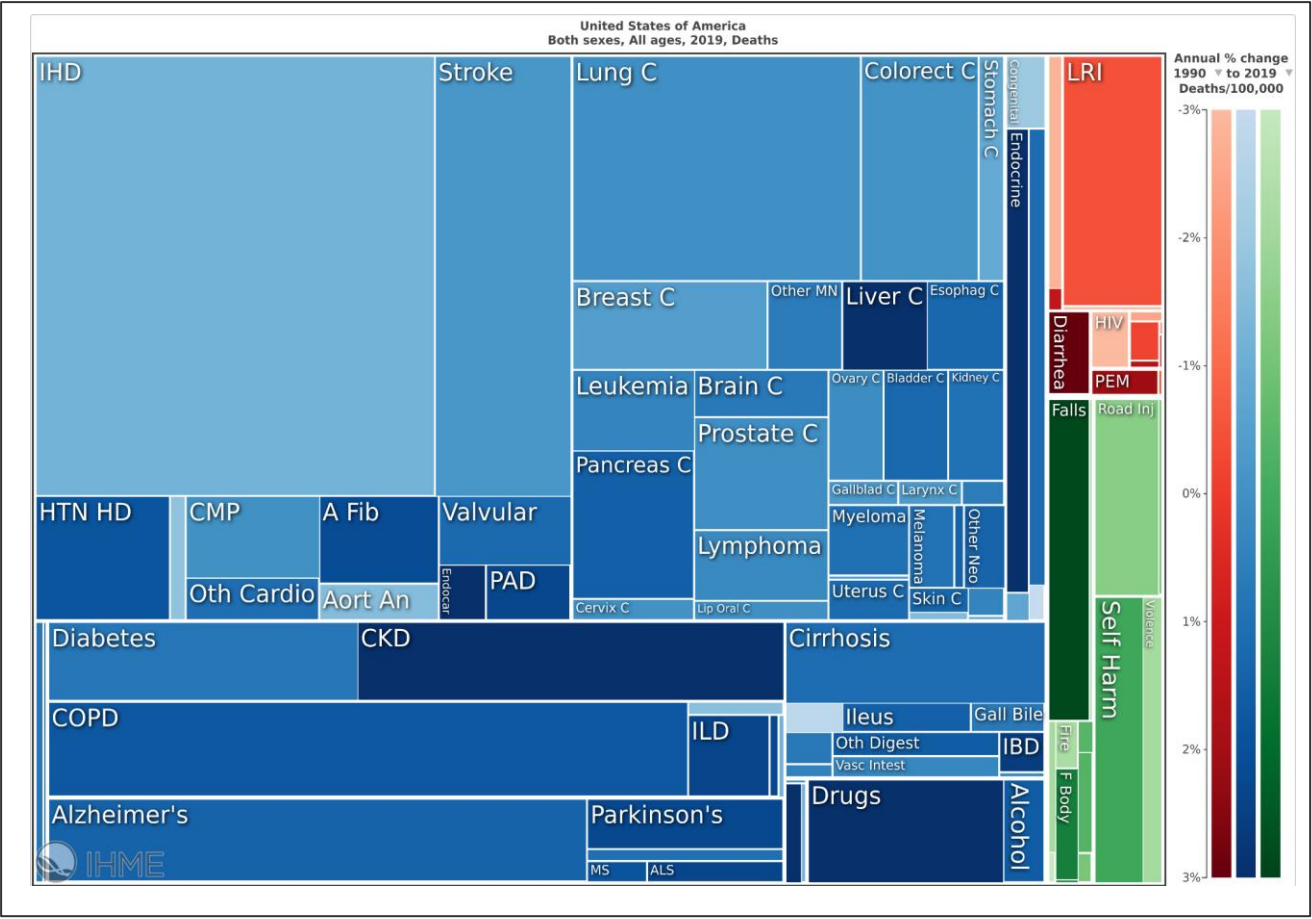
What we die of?



Connecting what we die of with what we die from

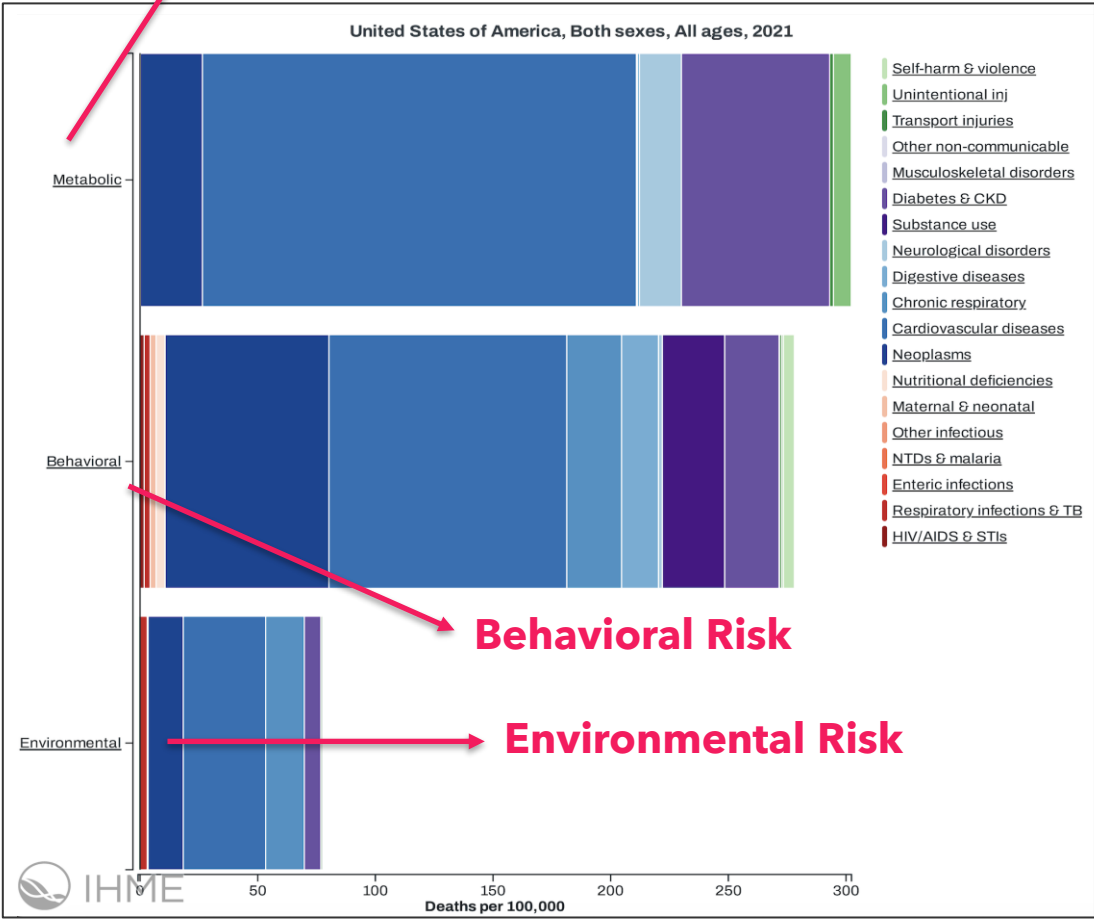


“Die of”

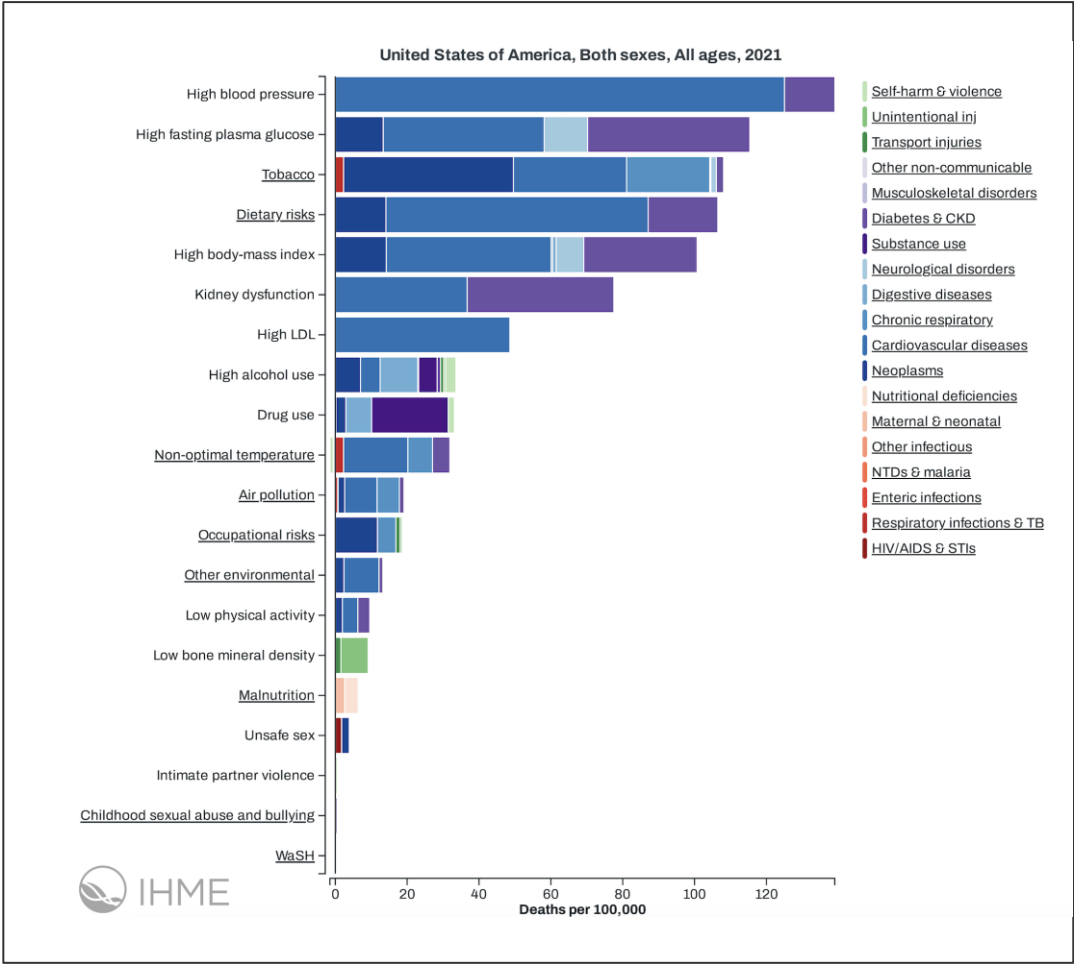
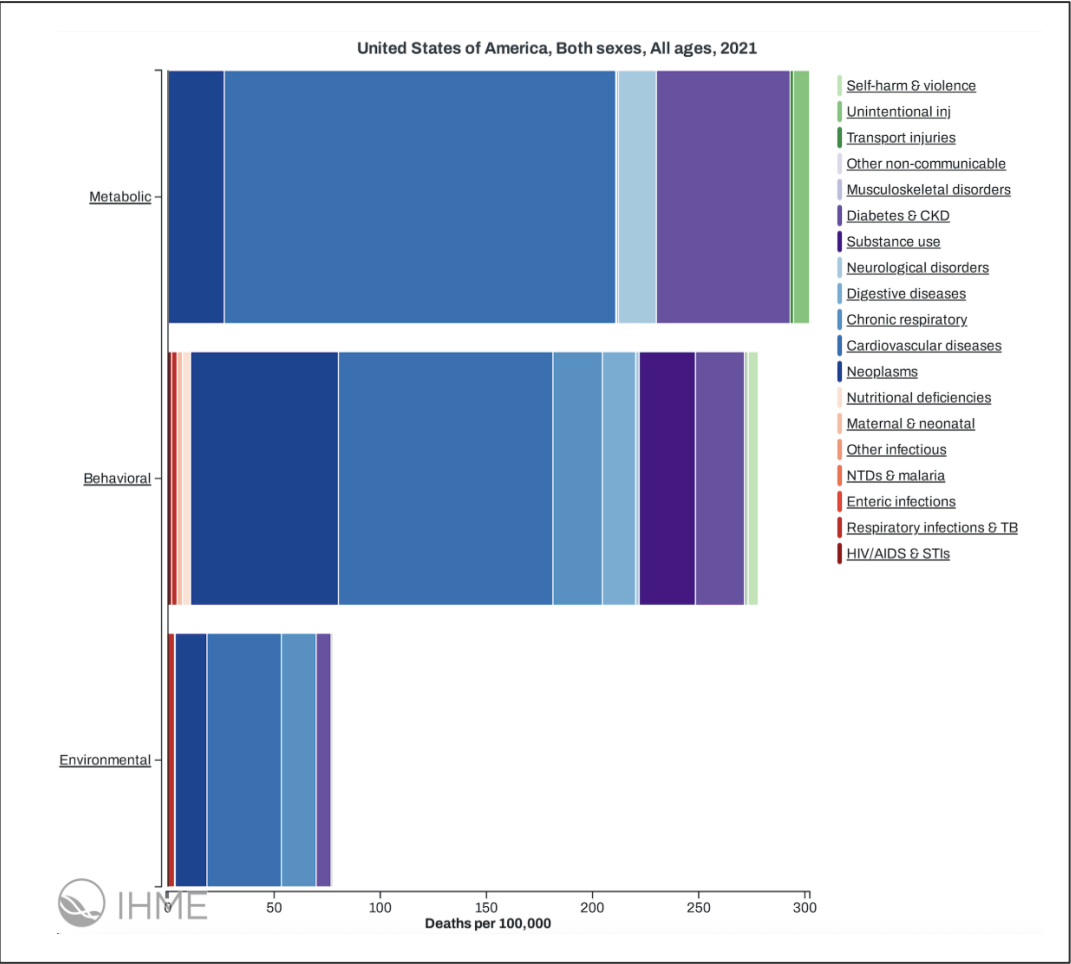


Metabolic Risk

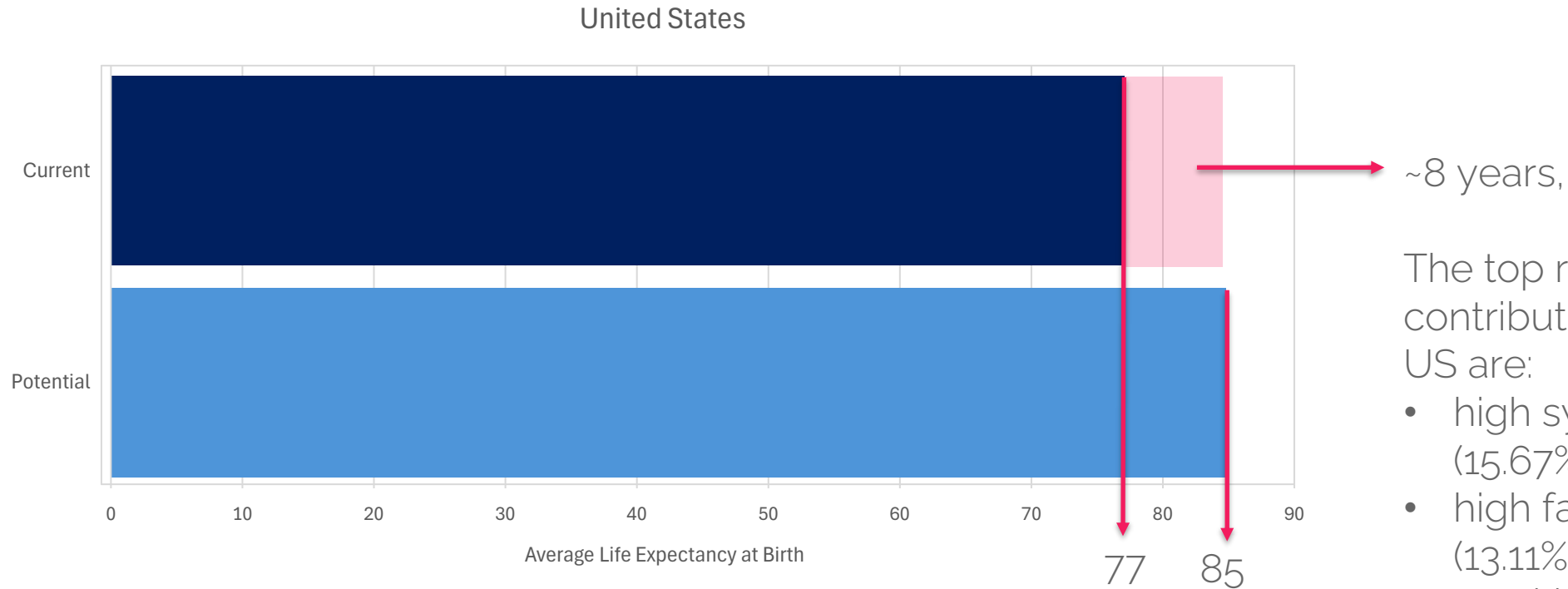
“Die from”



Connecting what we die of with what we die from



Quantifying the Impact

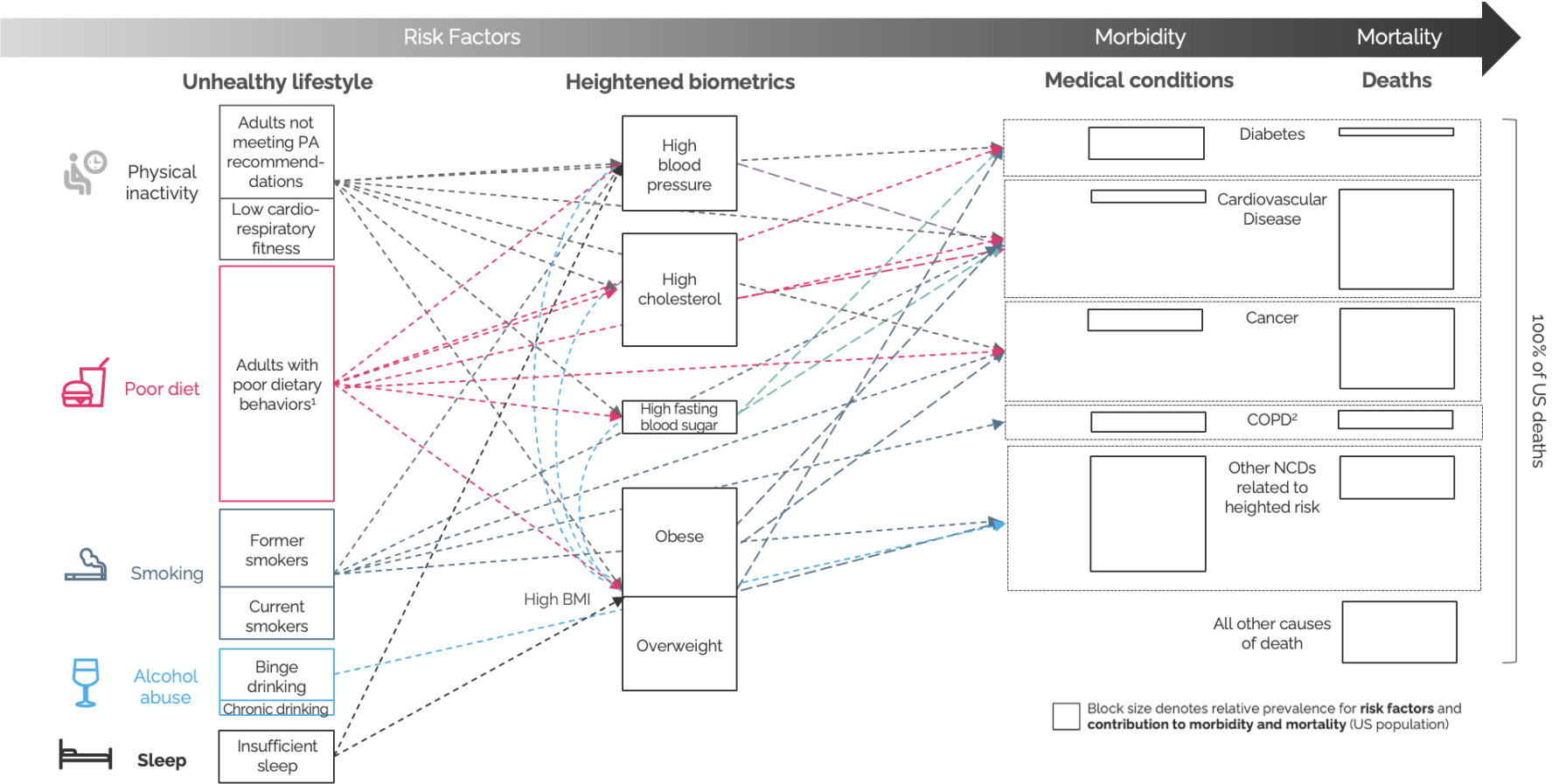
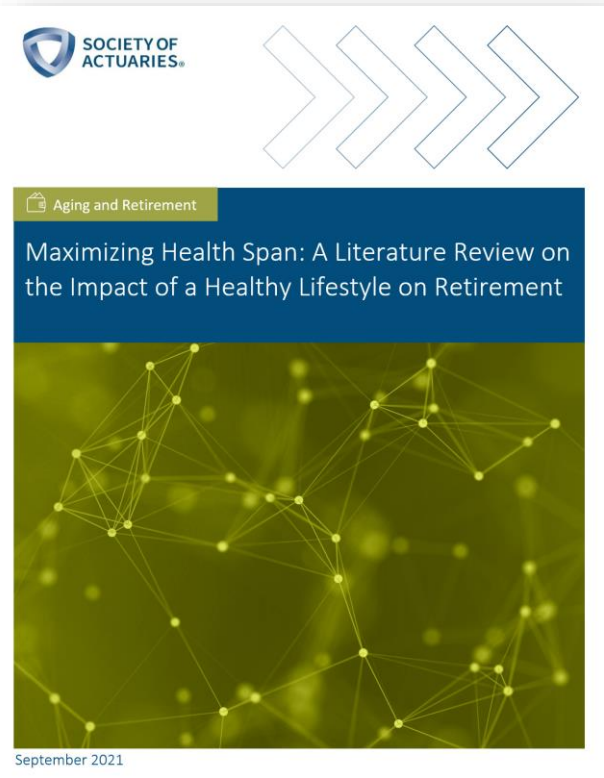


The top risk factors contributing to this gap in the US are:

- high systolic blood pressure (15.67%),
- high fasting plasma glucose (13.11%),
- smoking (11.63%).

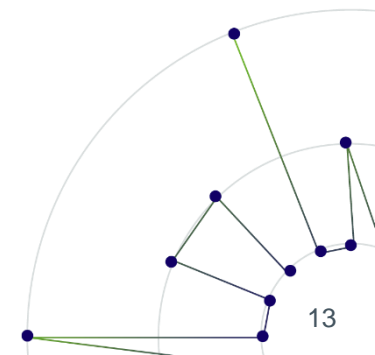
Source: Huge thanks to our friends at IHME for compiling these stats for the discussion today. For more information, please contact Nicole Bond Edwards at: nbe4@uw.edu.

However, the Causal Relationships Among Risk Factors and Health Outcomes are Complex but Important to Understand for Healthy Aging



Impact of Lifestyle behavio(u)rs on employees

Business Framework for Health



How can better behavio(u)rs be encouraged?



Exercise makes people healthier

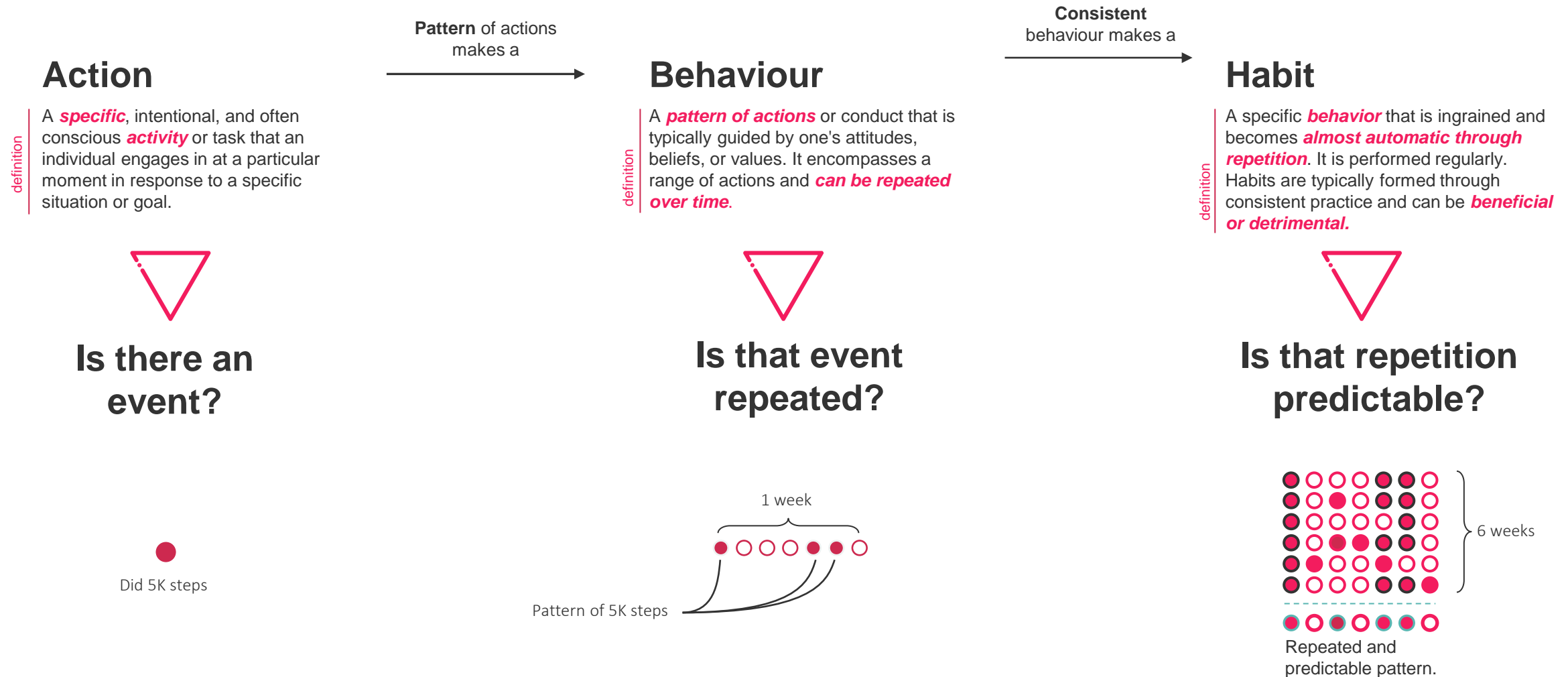


Can we make people exercise

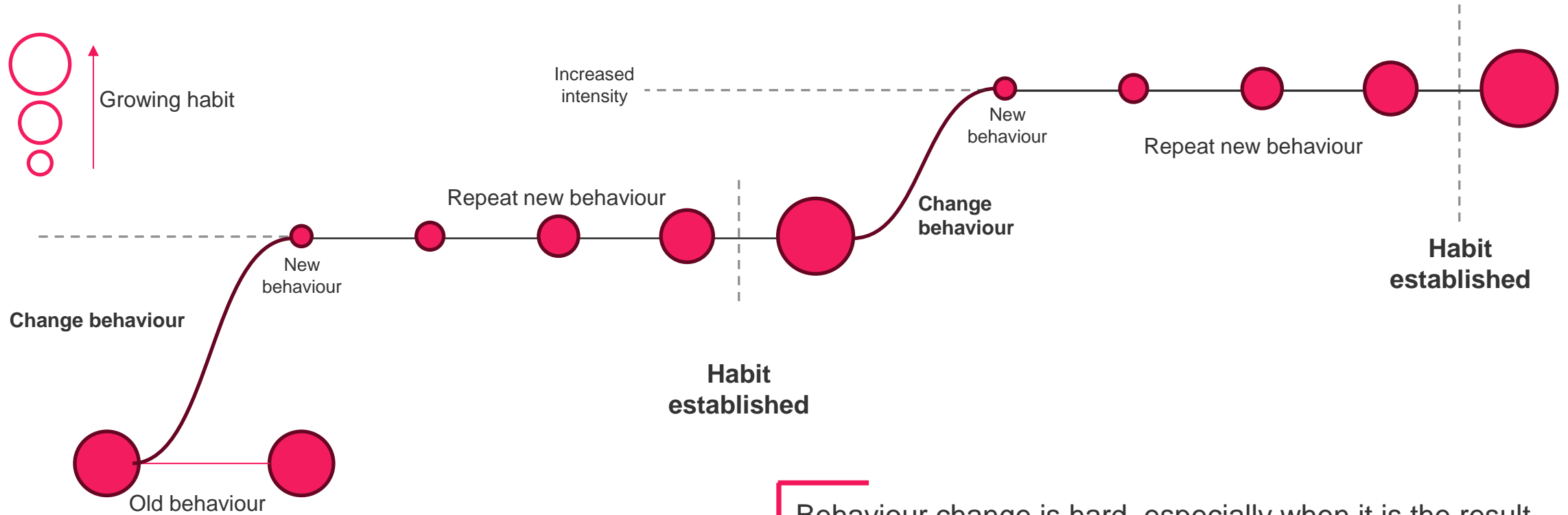


Then we make people healthier

What is a habit?



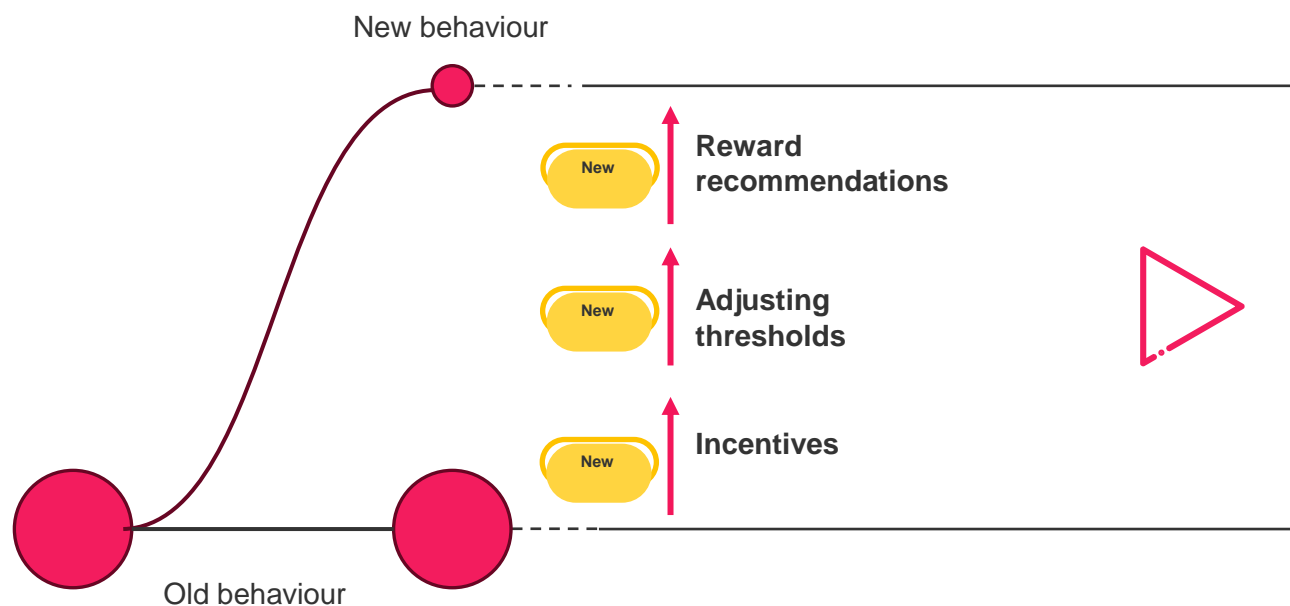
Process of habit laddering



Behaviour change is hard, especially when it is the result of a bad habit.

Hyper-personalisation and habit laddering makes it possible to change behaviour and to build habits that will last.

Personalisation gap



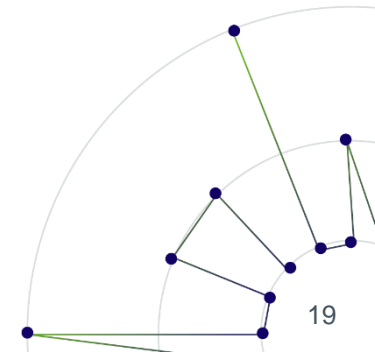
Hyper-personalisation gap

Inertia can be **reduced** with the **combined effect** of **incentives**, **threshold adjustments** and **reward recommendations**.

Tailoring each dimension means we can help people start the process of building and the sustaining the new behaviours.

Influencing lifestyle behavior(u)rs of employed population

Business Framework for Health



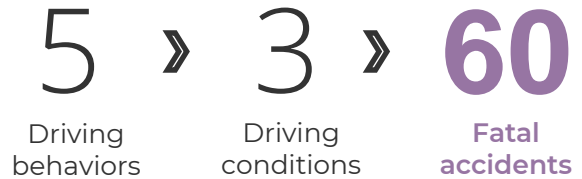
What is actually happening to encourage better behavio(u)rs?

Understand the link between the 'from' and 'of' equations specific to your portfolio of products

Mortality and morbidity



Motor insurance



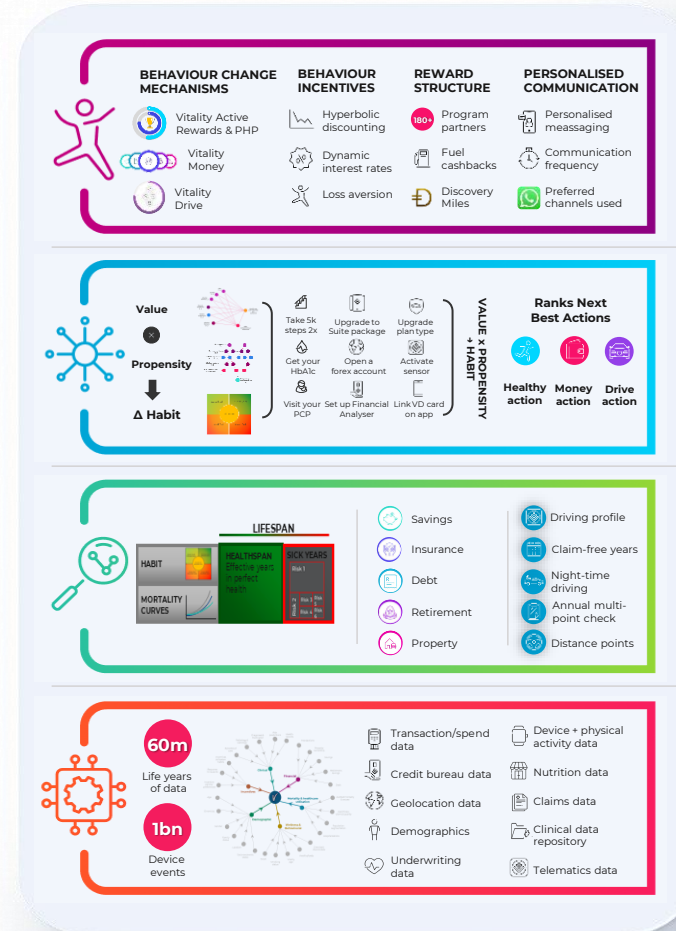
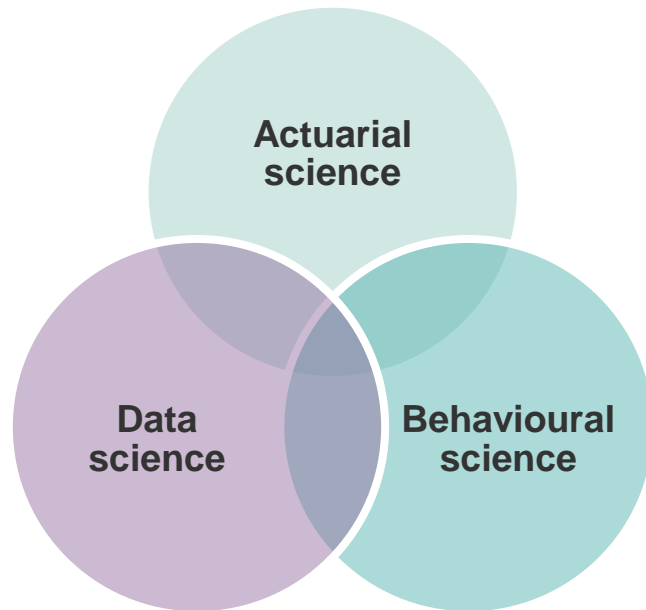
Long-term savings



Banking



We have established a digital health platform combining data, actuarial and behavioural science to engage members in a personalised program that drives members towards healthier habits



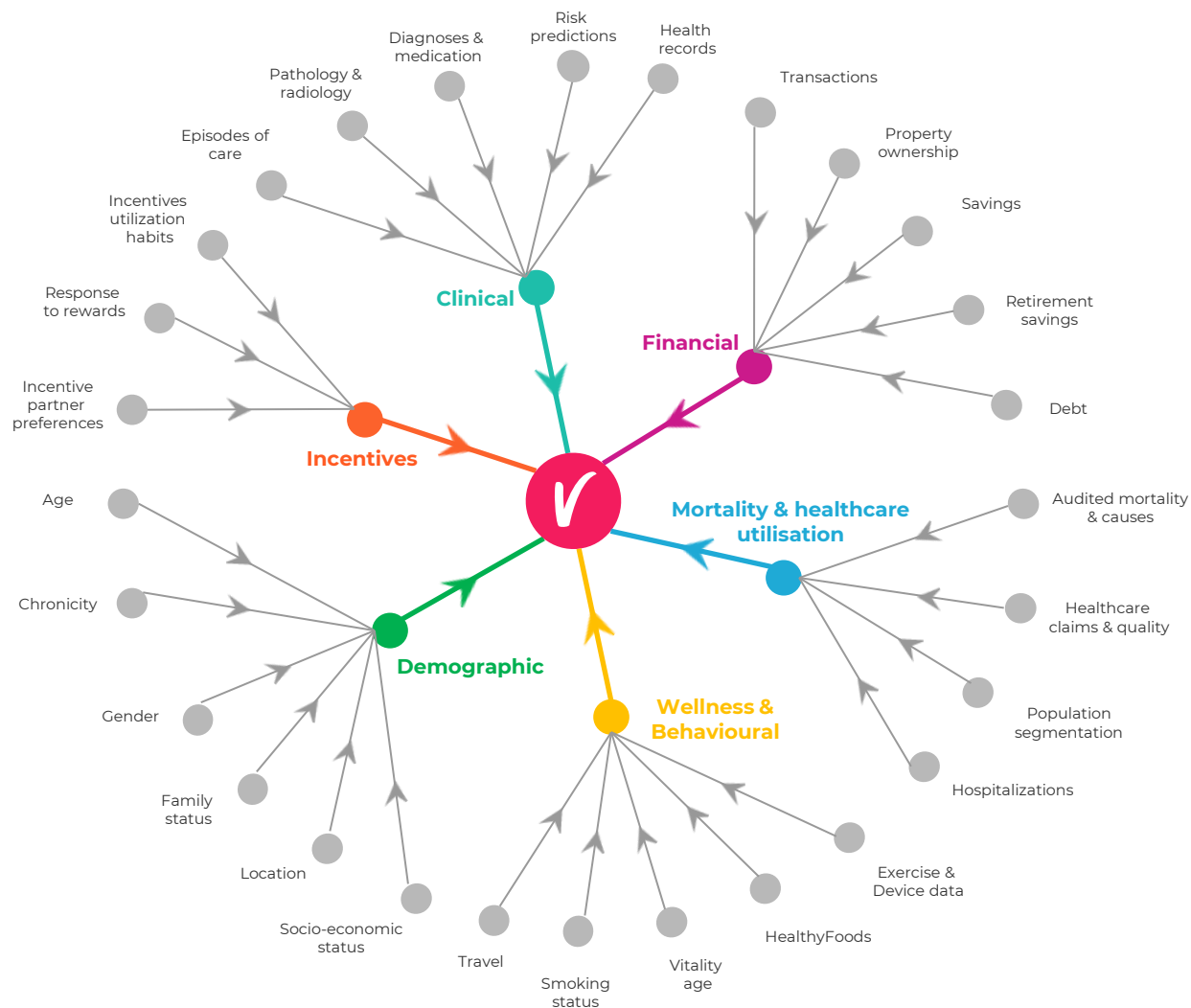
Incentivized engagement

AI recommender

Dynamic risk assessment

Data

Comprehensive dataset allows for a sophisticated understanding of behaviour and the impact on mortality



Clinical and wellness data linked longitudinally

Using data from 2008 until 2024, SA specific



Wellness

Device data | 1.1bn events

All step and heartrate data gathered by devices from the Vitality program

Vitality engagement | 26.5m life-years

Data from health checks and assessments, enrollment into Vitality programs such as healthy weight and smoking cessation



Clinical

Demographic | 48.7m life-years

Member information, e.g. age, gender, health-related test results, chronic conditions, and programs etc.

Health utilisation | 48.7m life-years

Claim lines, hospital admissions, benefit details,

Conditions | 11.7m life-years

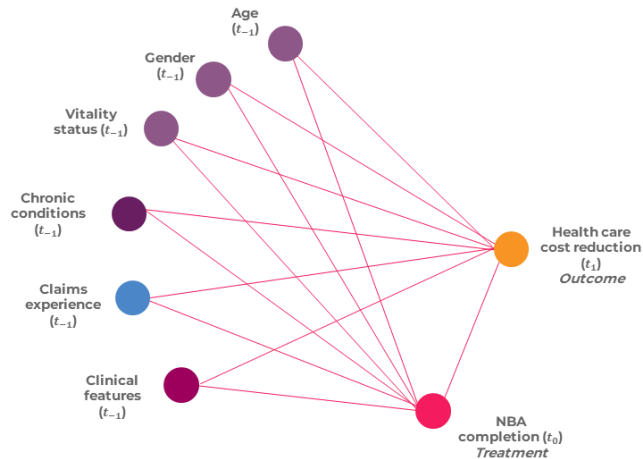
Chronic registrations, pathology results, health related test results

The data allows us to use value, propensity and habit to target risk factors that really count, in a way that resonates with individuals



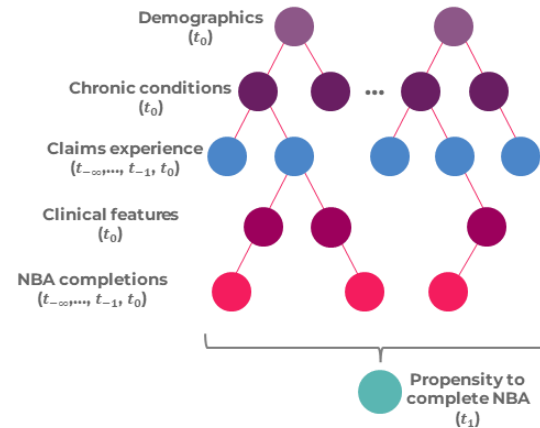
VALUE

Sophisticated causal model to determine the contribution of each action to long-term health improvement



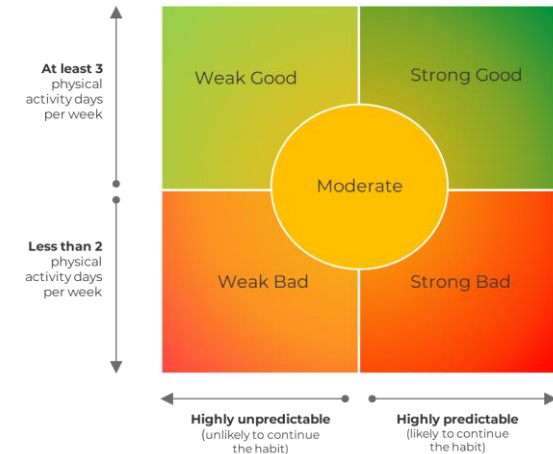
PROPENSITY

Machine learning model incorporating prior engagement data to estimate the probability of a customer to complete an NBA




HABIT

Index to quantify and classify a customer's consistency of completing an NBA and used to help encourage members to establish a strong habit



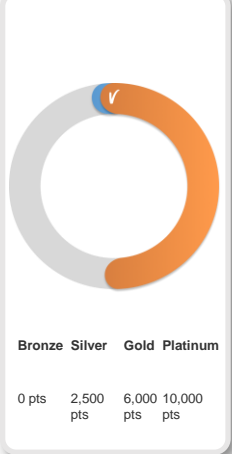
Behavioural science and incentives are foundational to the platform






Vitality Status

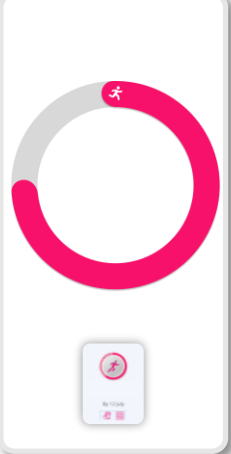
HYPERBOLIC DISCOUNTING






Active Rewards

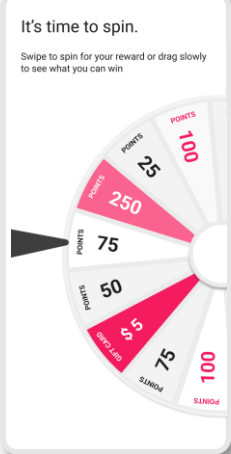
HABIT FORMATION






Gamification

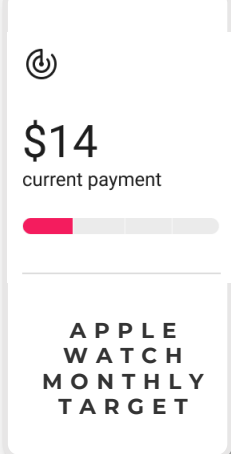
FRAMING





Earn Apple Watch

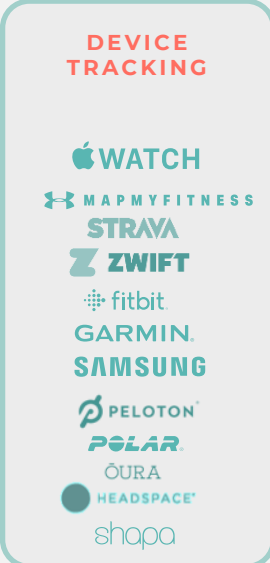
LOSS AVERSION




Curated intervention and reward partner network

180+ Program partners


DEVICE TRACKING




PREVENTIVE SCREENING



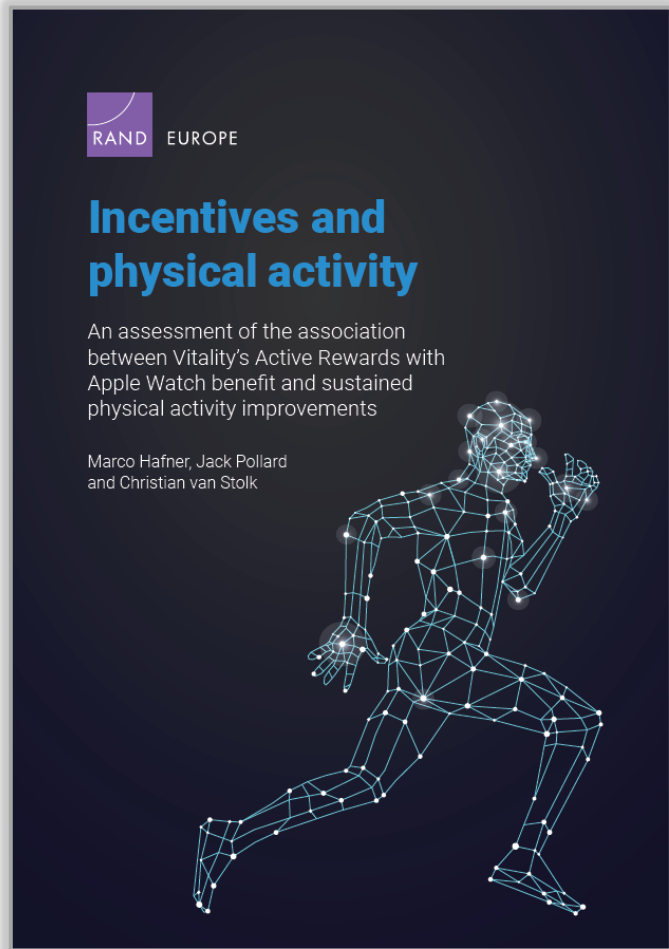
REWARDS/ INCENTIVES FOR HEALTHY HABITS



INTERVENTION PARTNERS



An example on impact is the largest behavior change study on physical activity based on verified data



Three countries

422 643 people, **91 000** Apple Watch users



Longitudinal tracking

Before and after taking up Apple Watch



Granular data

Demographic data + Biometric information + Physical activity engagement



Age



Gender



Place of residence



Body mass index



Gym day



Step event



Heart rate event

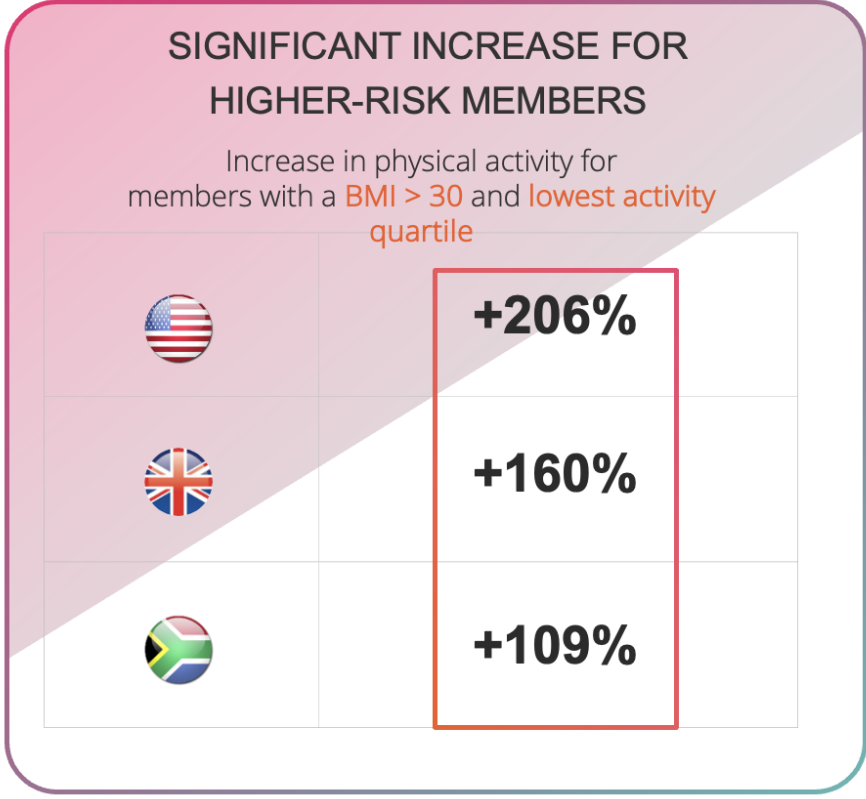
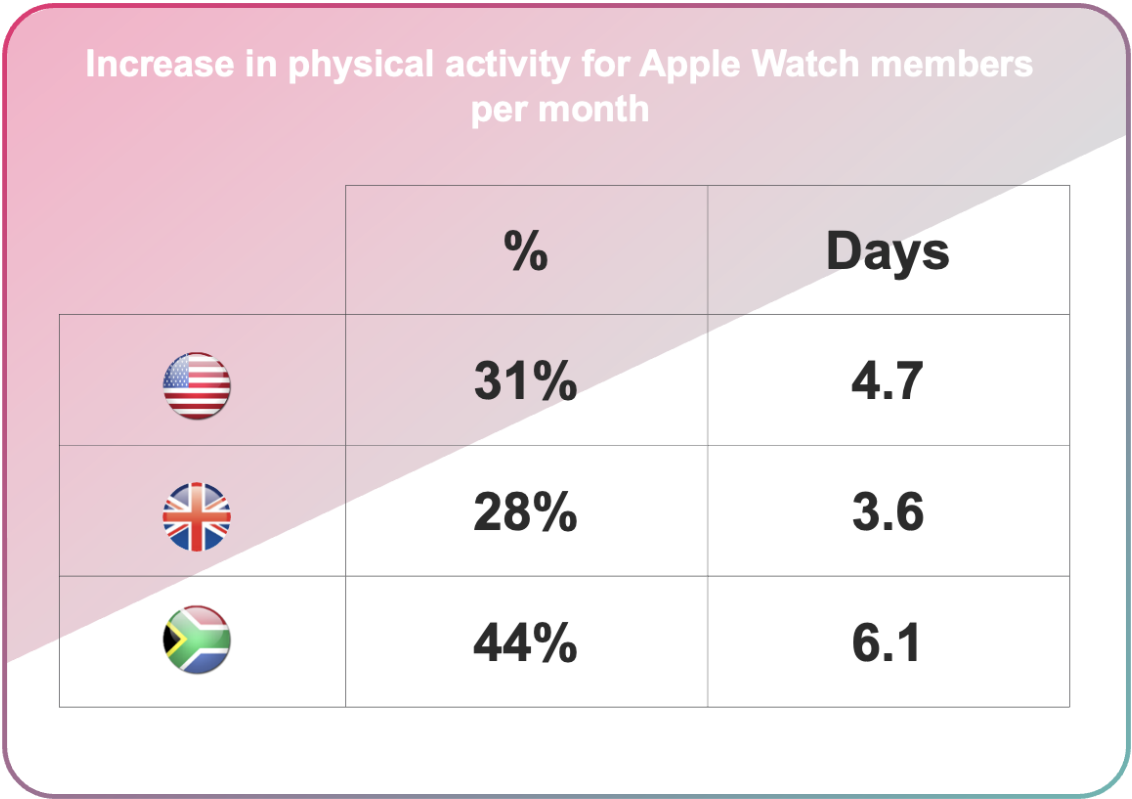


Calorie event



Intensity

Apple Watch benefit incentivizes behavior change



+34%

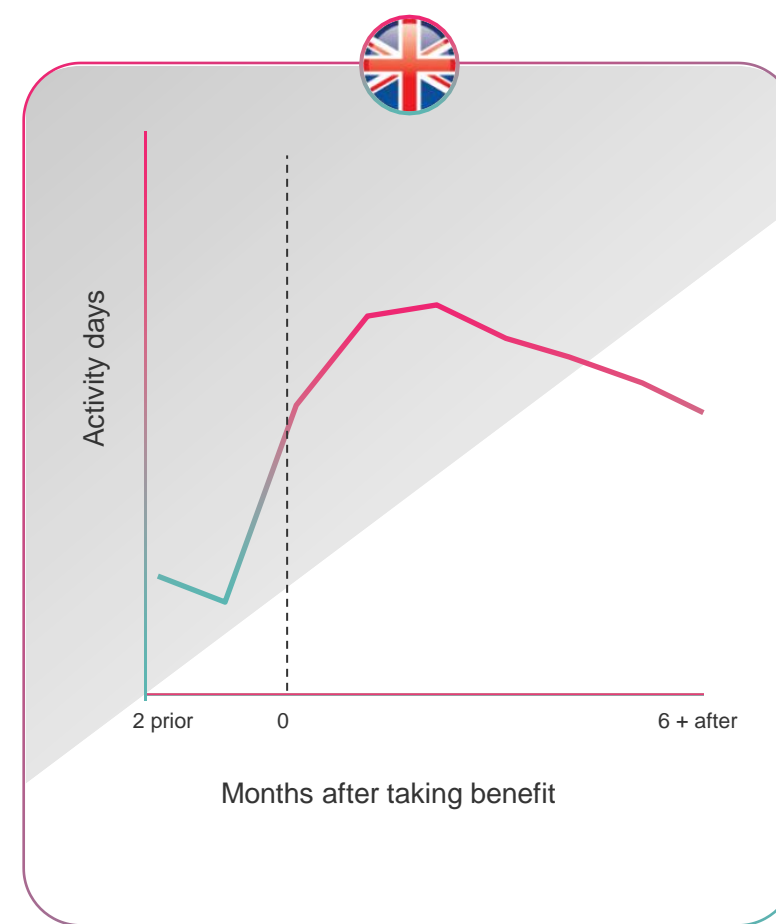
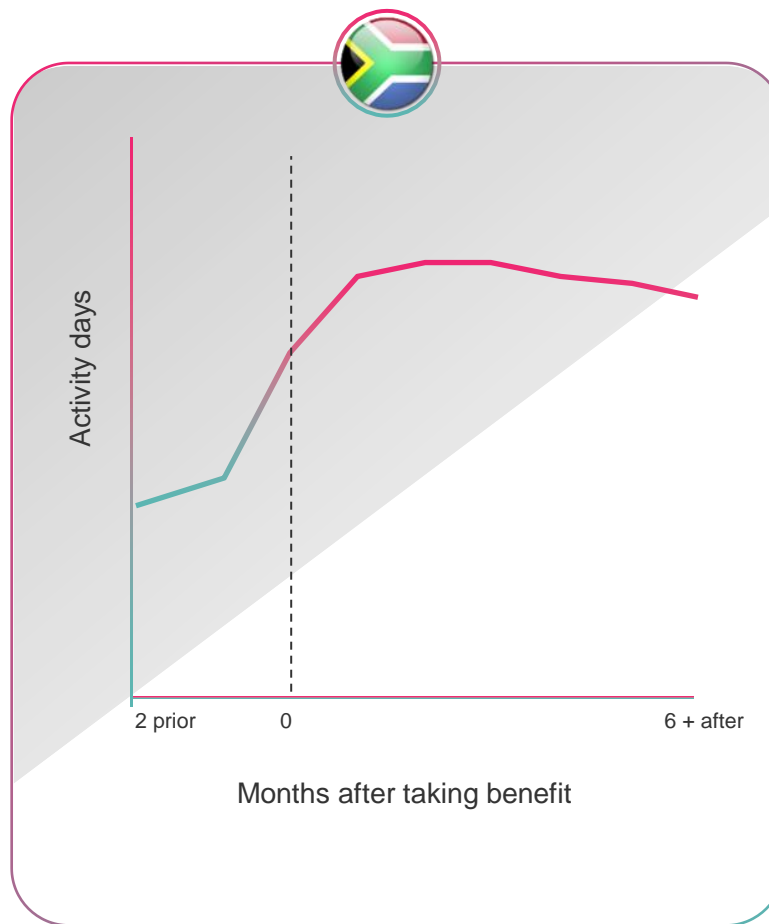
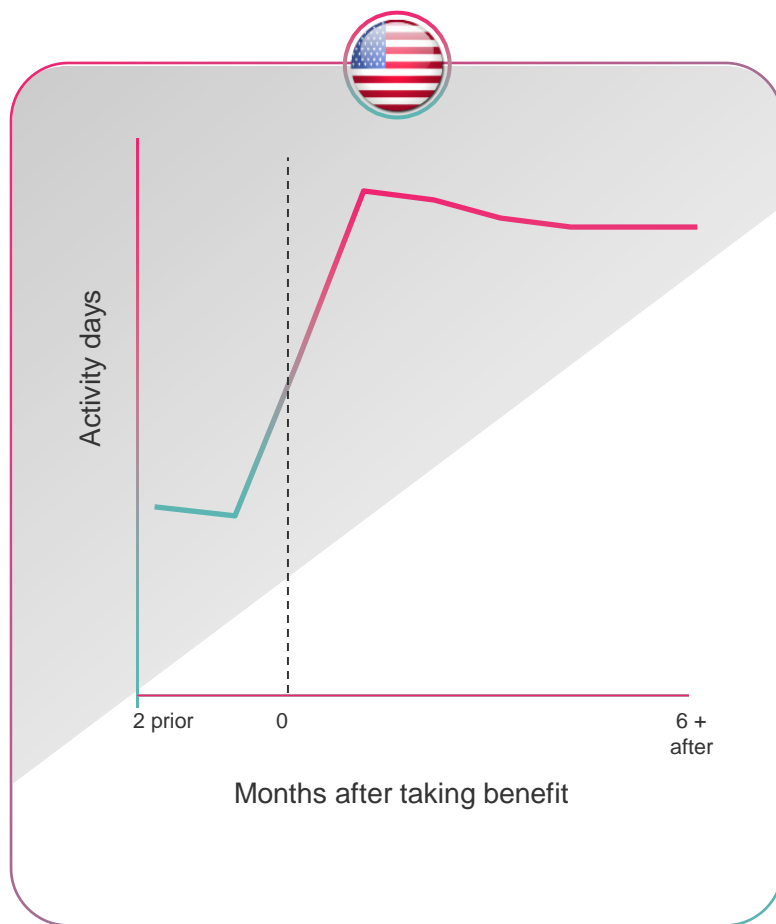
INCREASE IN PHYSICAL ACTIVITY

+4.8 DAYS

PER MONTH
OR ALMOST

ONE FULL WORK WEEK

Increase in physical activity is sustained



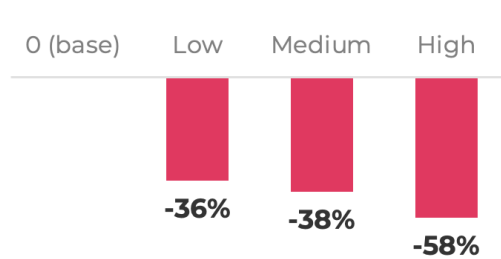
There is a lot at stake: Behaviour change has a significant causal impact on risk and the impact increases with age



Impact of physical activity...

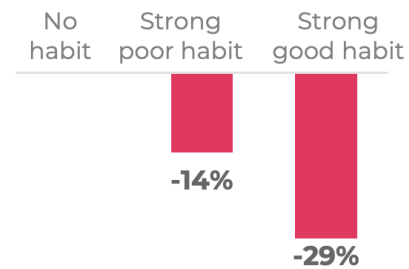
on mortality

Relative mortality for the 45-65 age group

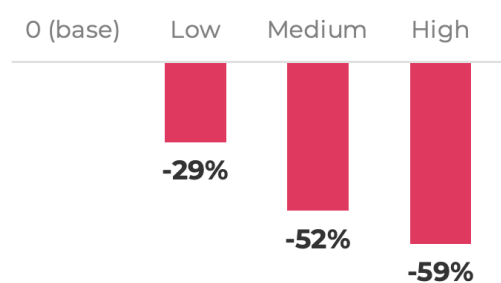


on healthcare costs

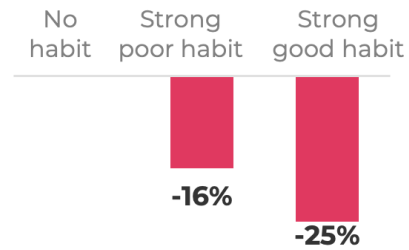
Relative reduction for the 45-65 age group



Relative mortality for the 65+ age group



Relative reduction for the 65+ age group



There is a lot at stake: Behaviour change has a significant causal impact on healthspan and lifespan; the relative impact increases with age



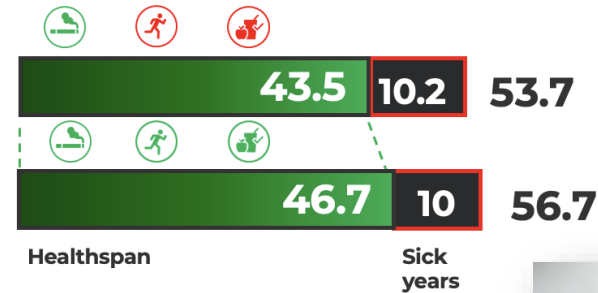

30-year-old male

- Non-smoker
- 40 minutes of moderate physical activity per day
- Average cardiorespiratory fitness
- Moderate consumption of alcohol, red meat, processed meat and sugar-sweetened beverages

Young moderately healthy 30-year-old

+7%

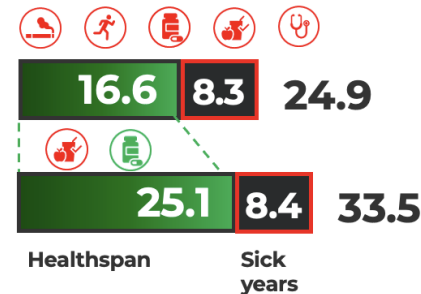

increase in healthspan



Middle age unhealthy 50-year-old

+51%

increase in healthspan

50-year-old female

- Current smoker
- 30 minutes of moderate physical activity per day
- Poor cardiorespiratory fitness
- High consumption of alcohol, red meat, processed meat and sugar-sweetened beverages
- Hypertensive and not adhering to medication
- Diagnosed diabetes



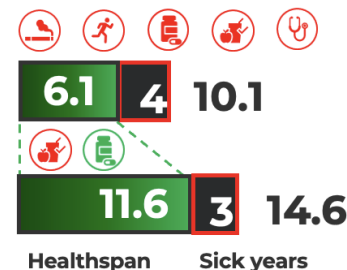
70-year-old male

- Ex-smoker
- Diagnosed diabetes
- 30 minutes of moderate physical activity per day
- Poor cardiorespiratory fitness
- High consumption of alcohol, red meat, processed meat and sugar-sweetened beverages
- Hypertensive and not adhering to medication

Advanced age unhealthy 70-year-old

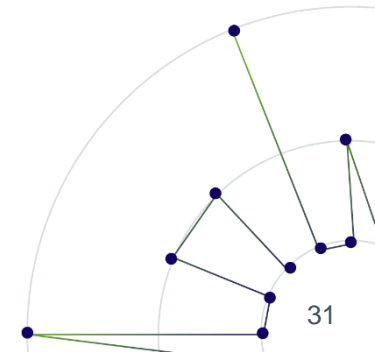
+90%

increase in healthspan

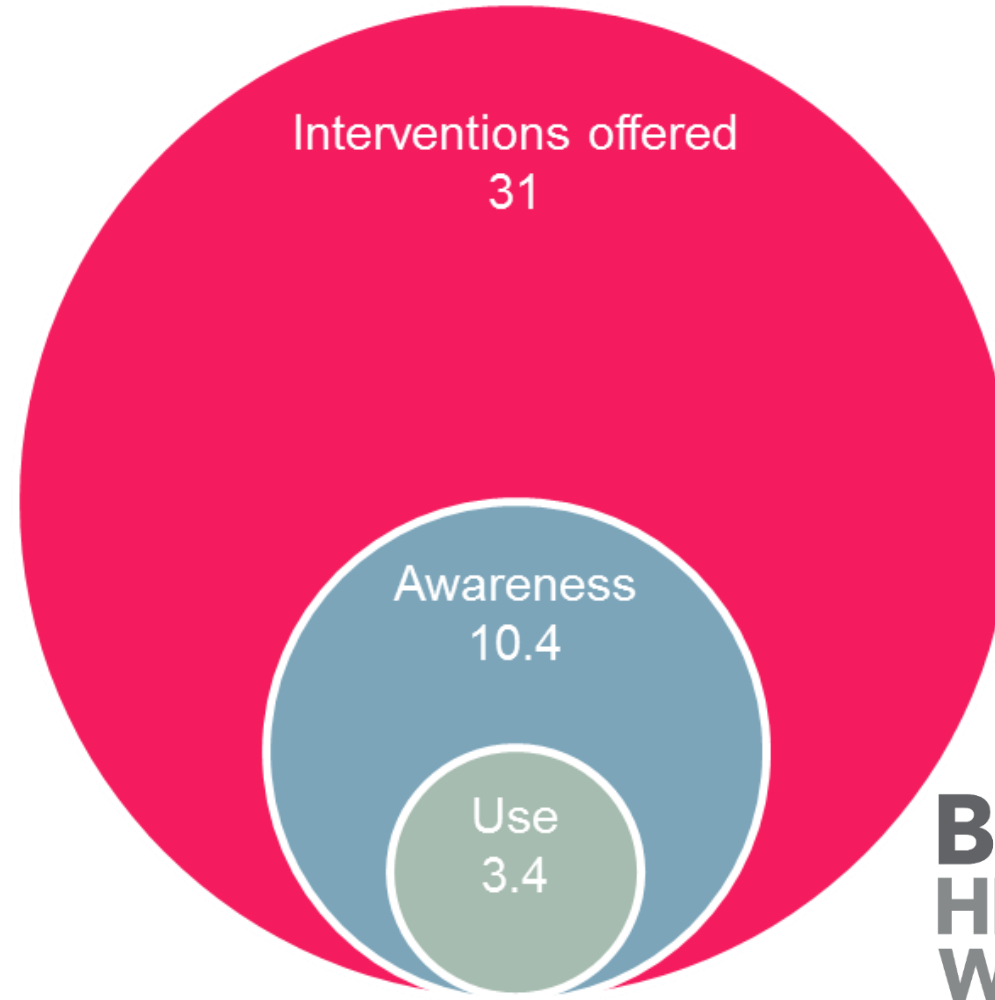


What are Employers doing?

Business Framework for Health



Employers face constraints in investing in wellness, and when they do, engagement tends to be low



**BRITAIN'S
HEALTHIEST
WORKPLACE**

Overcome cultural and behavioural hurdles and biases in the implementation of the programme



Longitudinal analysis

Increase in wellness programme participation associated with changes in governance and programme management, as determined across repeating employers and employees over the period 2014-2016



EUROPE

Make employee health part of the culture of the organisation

Feedback on health and wellbeing shared with employees

+10%

Health and wellbeing of staff seen as a measure of success

+15%

Health and wellbeing discussed at board level

+20%

Motivate employees to engage in the interventions on offer, such as

Allow participation during working time

+5%

Health promotion available for family members

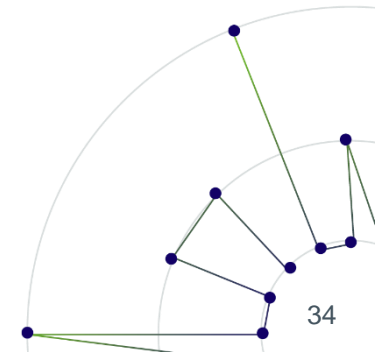
+19%

Providing incentives and rewards for participation

+70%

The Role of Policy Makers / Governments

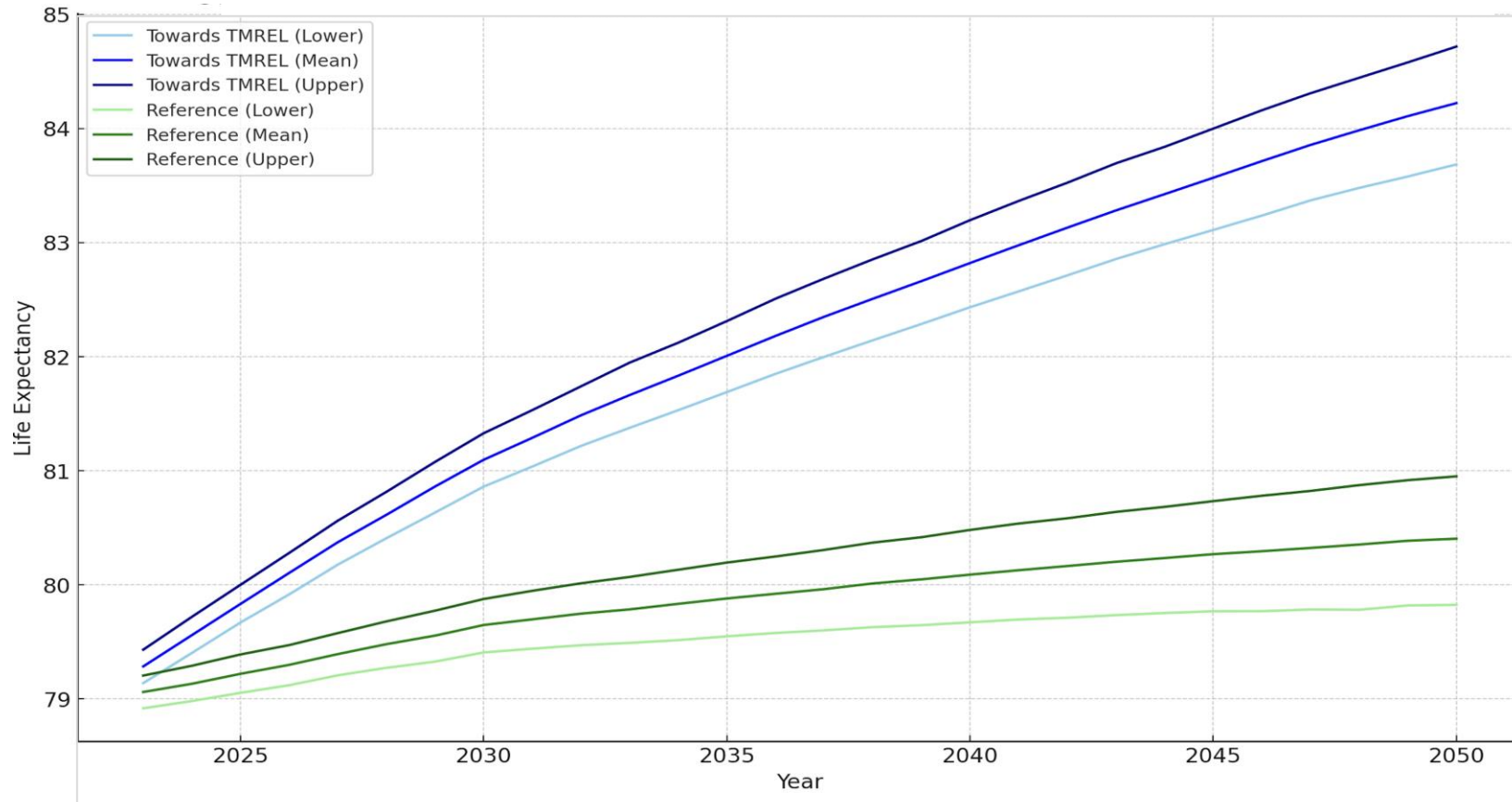
Business Framework for Health



Which Scenario of the Future are you Working Towards?



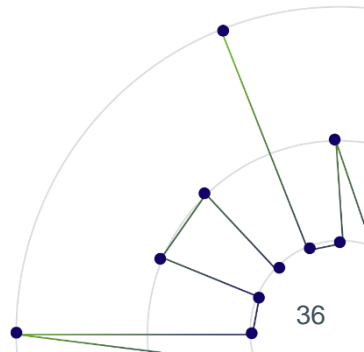
Projected US Life Expectancy at Birth
Reference versus Theoretical Minimal Risk Exposure Levels (TMREL)



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Poll question

*“On a scale of
1 (not for me) to 5 (fantastic)
how would you rate today’s webinar?”*



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How long can we go?



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Watch the replays of season 1 here: www.clubvita.net/us/events/event-recording

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