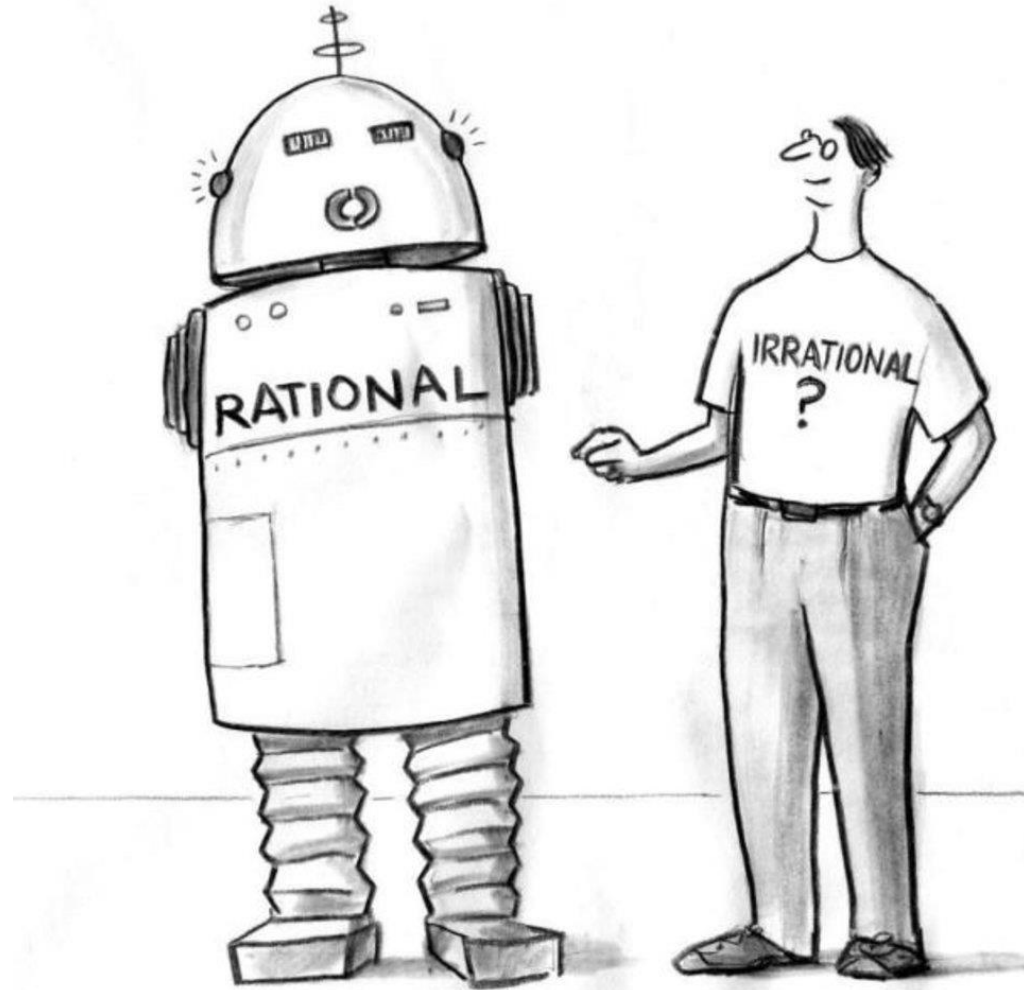


# The Application of Behavioural Economics to Impact Controllable Risk Factors and create Shared-Value

James Lidgett

# What is Behavioural Economics?



*Behavioral Economics is the idea that people don't always make strictly rational decisions.*

*People have **emotions, imagination and are unpredictable** and hence do not make perfectly rational, economic decisions*

# What is Behavioural Economics?

THE  
BEHAVIOURAL  
INSIGHTS TEAM. ♦



Discovery

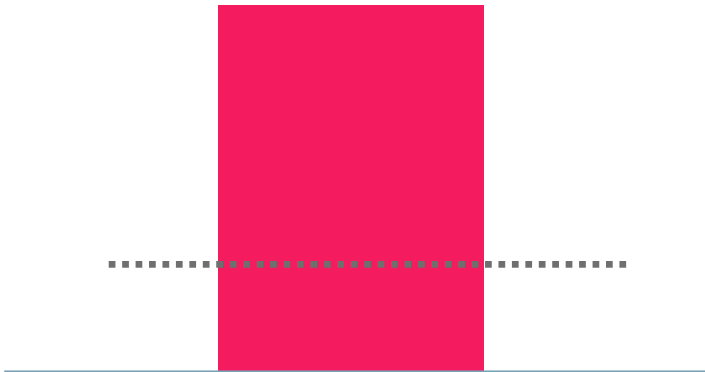


# Overconfidence and Optimism | People's expectations exceed the reality



% who think they belong in the top 30% for driving safety

83%

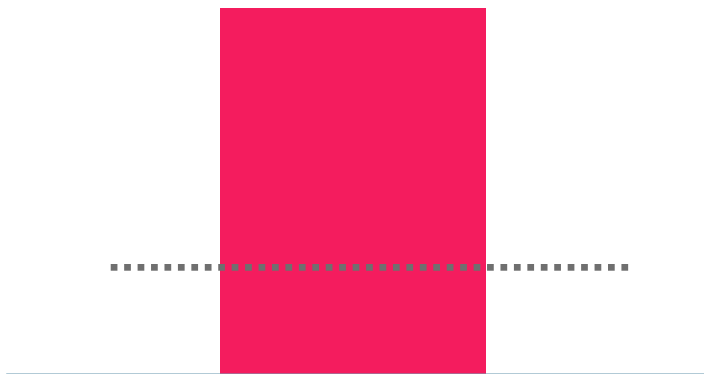


# Overconfidence and Optimism | People's expectations exceed the reality



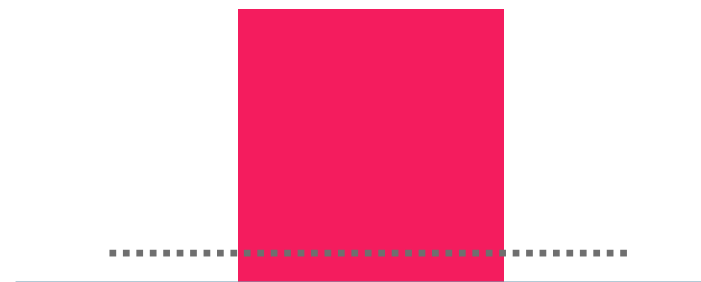
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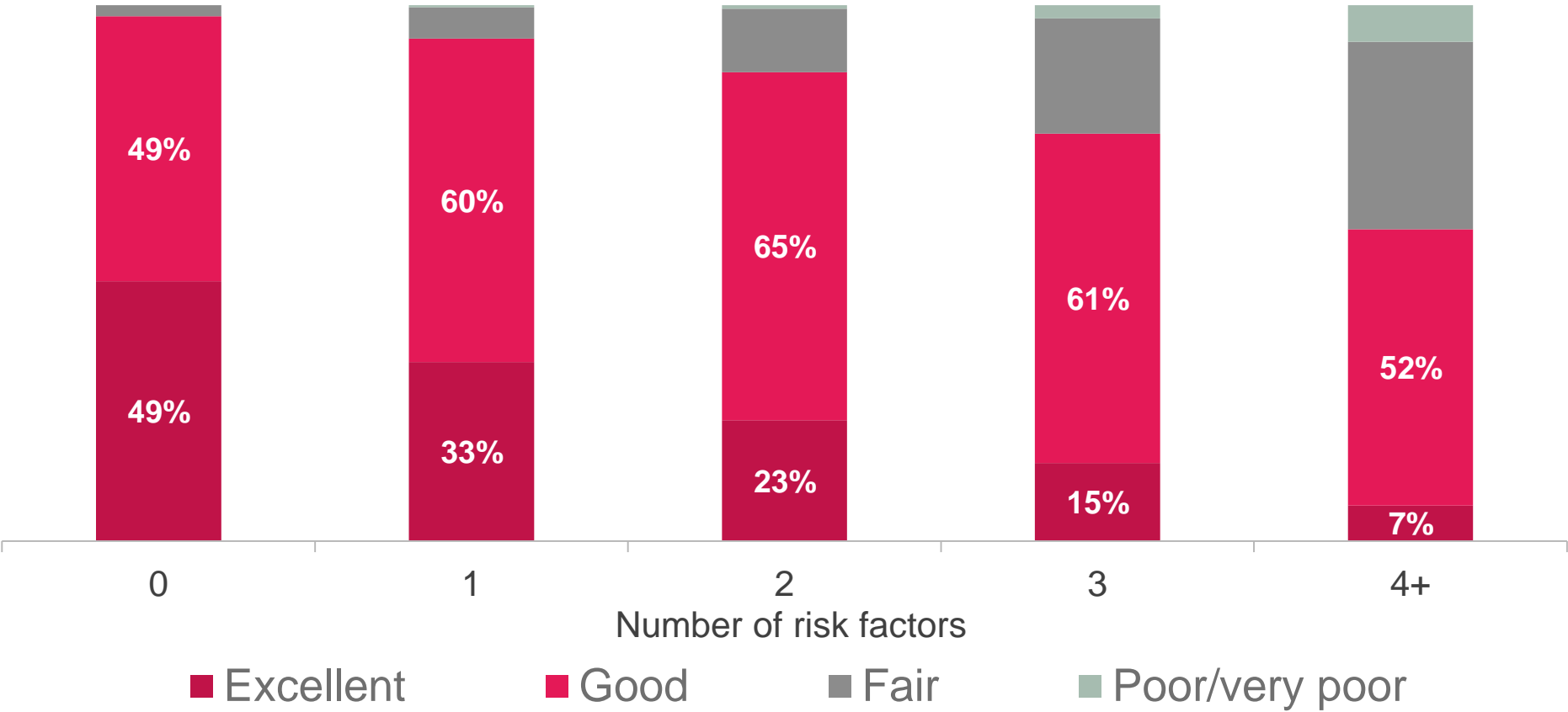
Participants who's test scores put them in the 12th percentile estimated themselves to be in the 62nd

62%



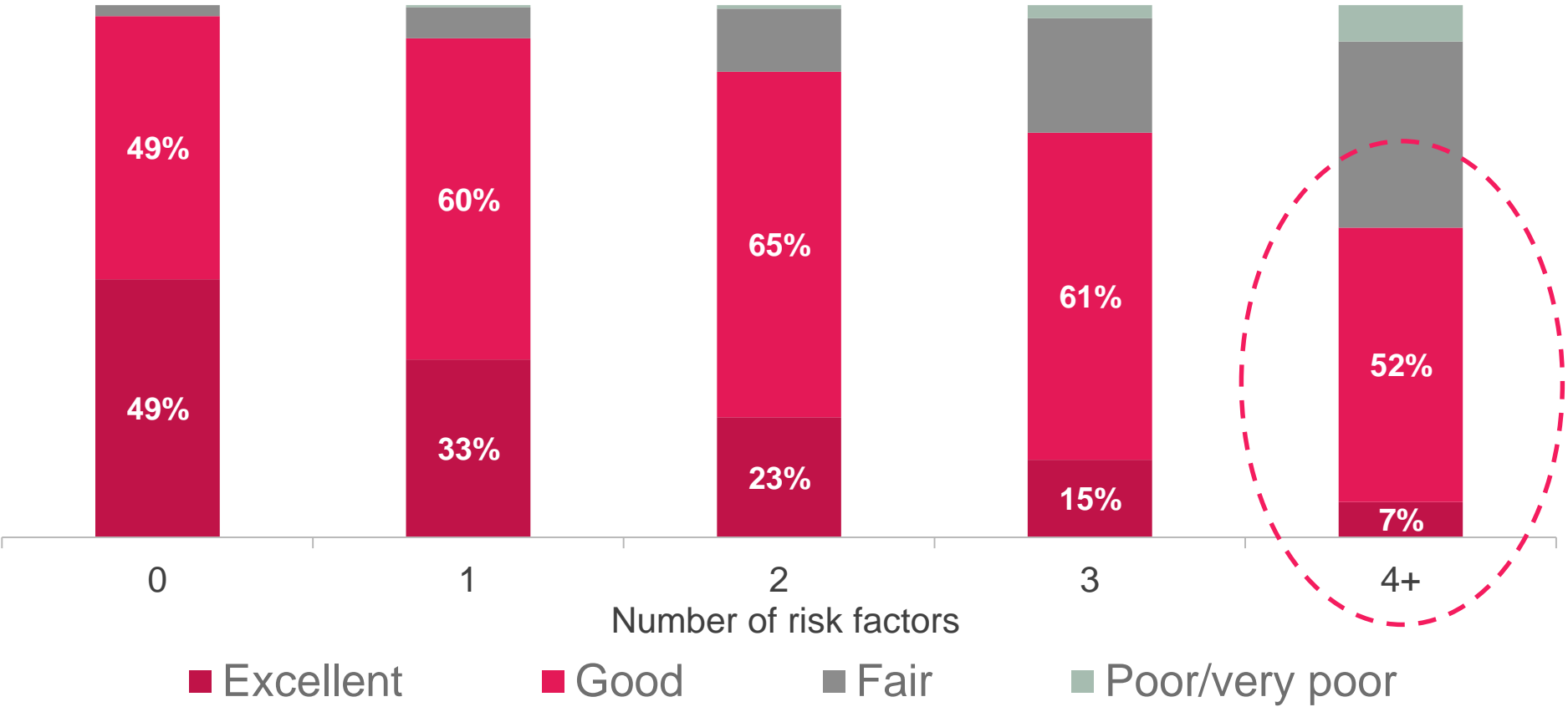
# Overconfidence - How would you rate your health?

Correlation between perception of health and risk factor prevalence

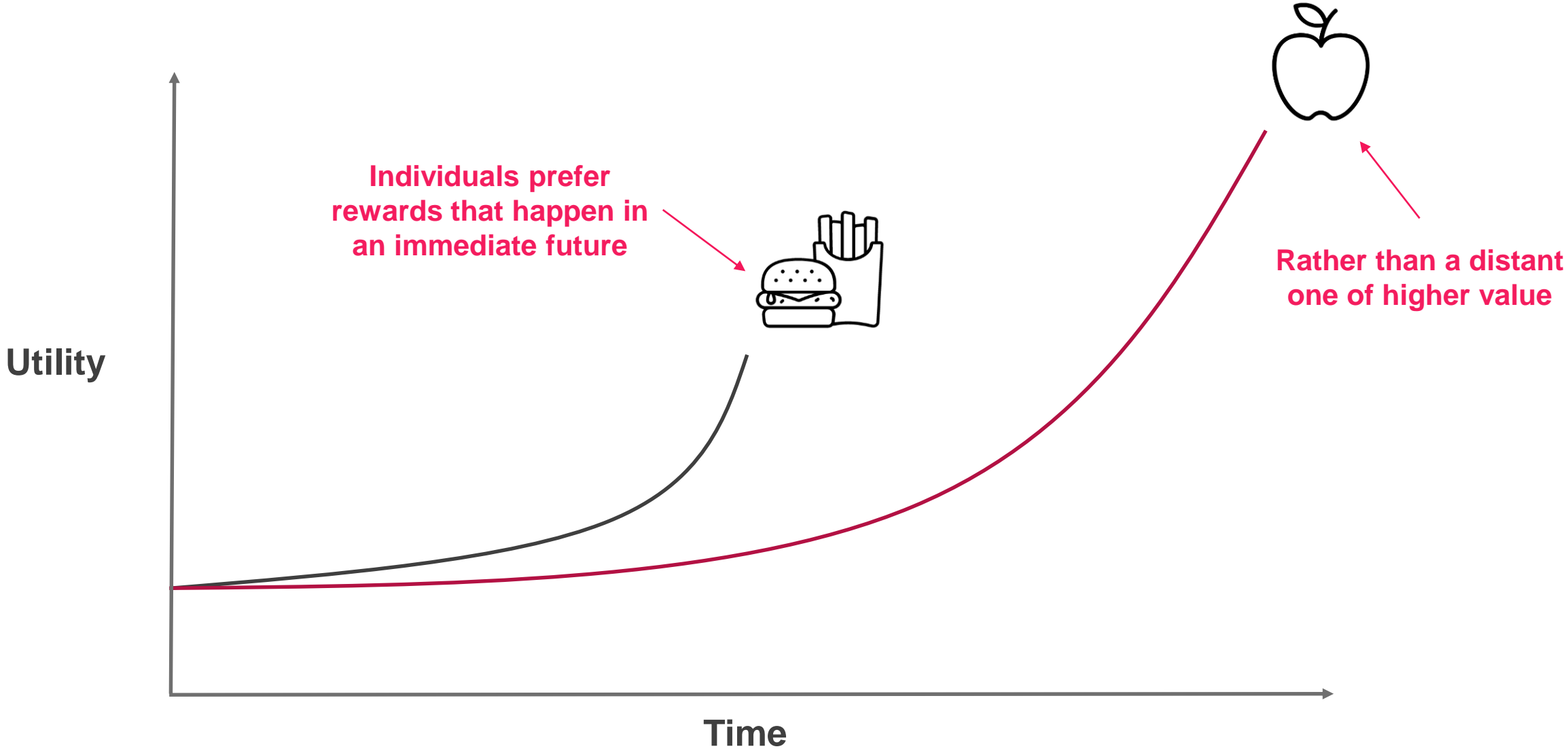


# Overconfidence - How would you rate your health?

Correlation between perception of health and risk factor prevalence



# Hyperbolic Discounting / Present Bias





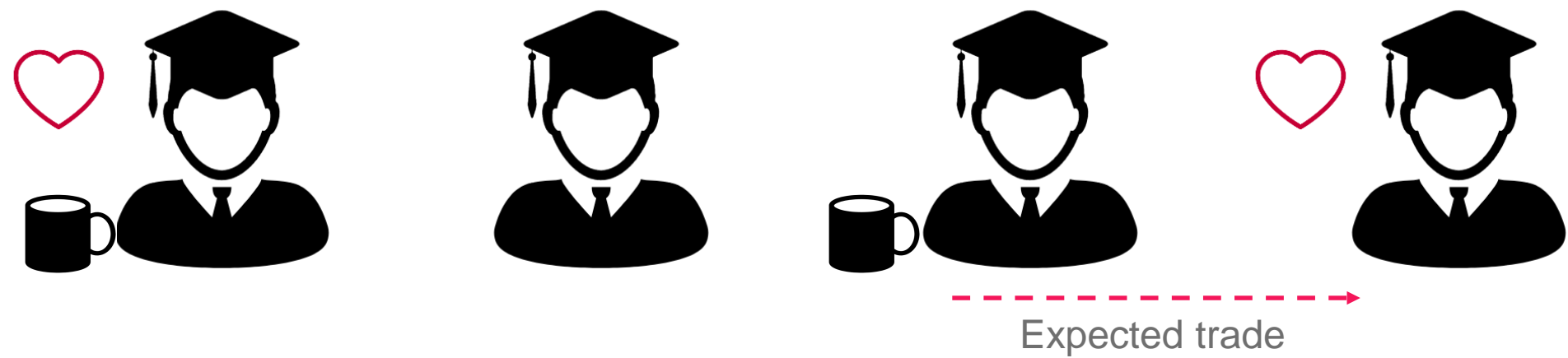
# Loss Aversion



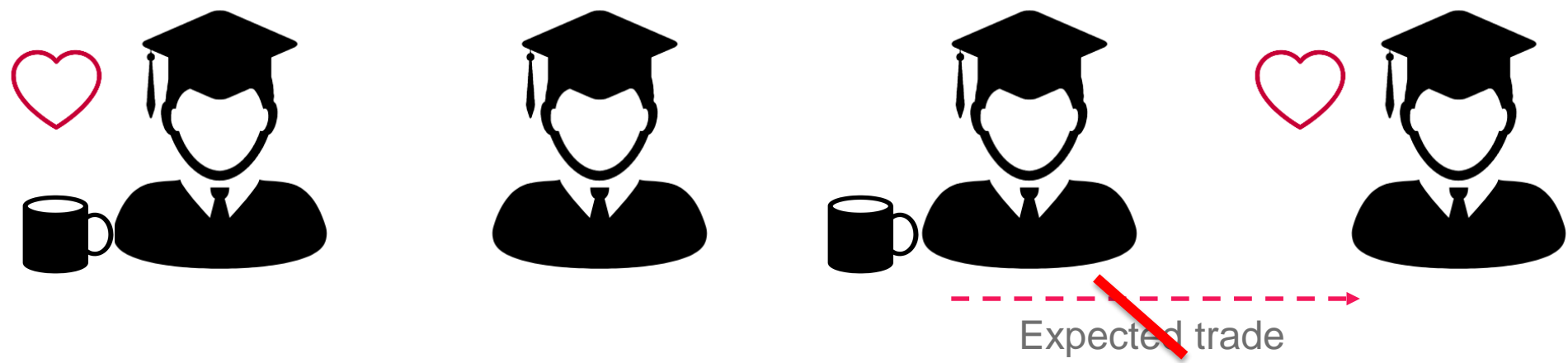
Endowment effect



Endowment effect

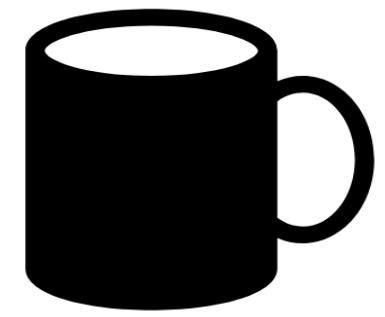


Endowment effect



Students with the mugs  
were willing to sell  
them, on average, for

**\$4.50**



Students with no mugs  
were willing to buy  
them, on average, for

**\$2.25**



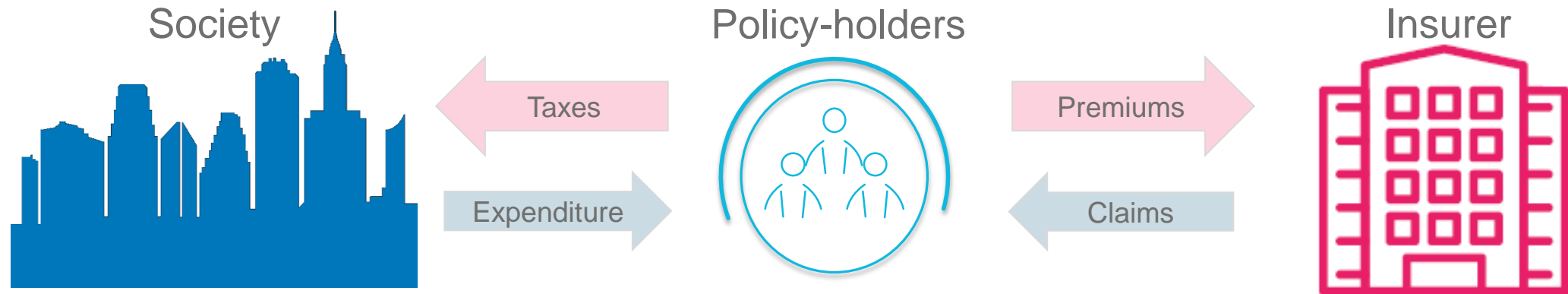
# What is a nudge?



# Traditional Insurance

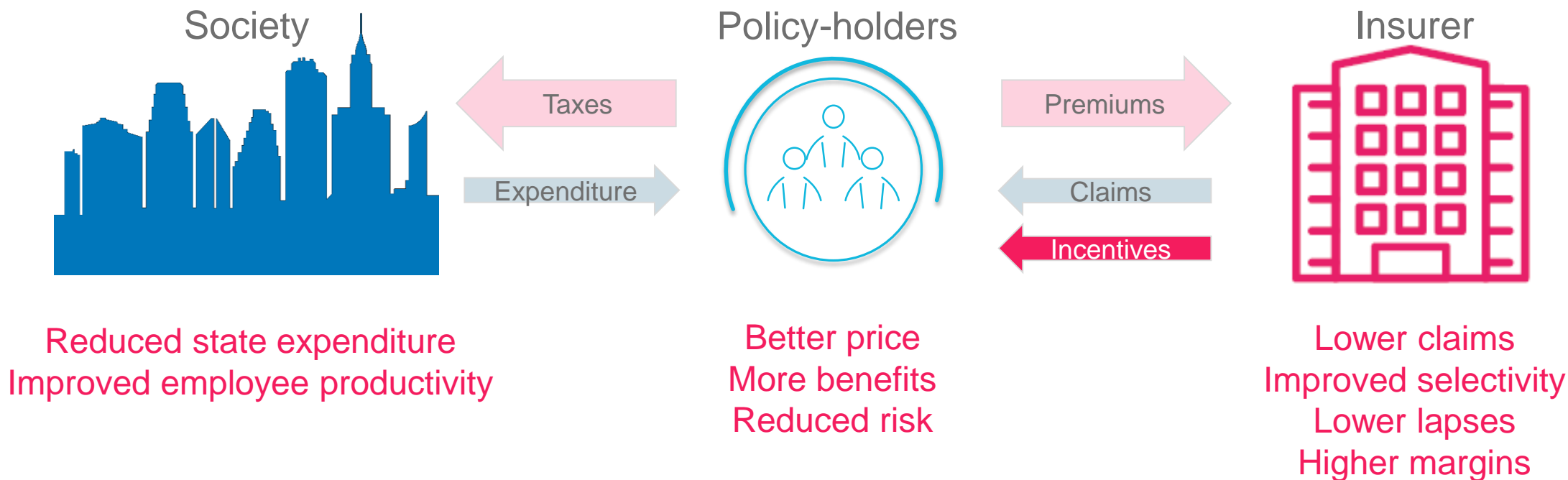
## *Traditional insurance*

*A trade-off exists between consumer value and insurer profit*



# Shared-Value Insurance

*Incentivising healthier behaviour creates value for policyholders, insurers, and society*



# Shared-Value Equation

$$\frac{\text{VALUE}}{\text{MEMBER}} = \frac{\text{Incentive}}{\text{Member}} \times \frac{\Delta \text{Behaviour}}{\text{Incentive}} \times \frac{\text{Risk Improvement}}{\Delta \text{Behaviour}} \times \frac{\text{Value}}{\text{Risk Improvement}}$$



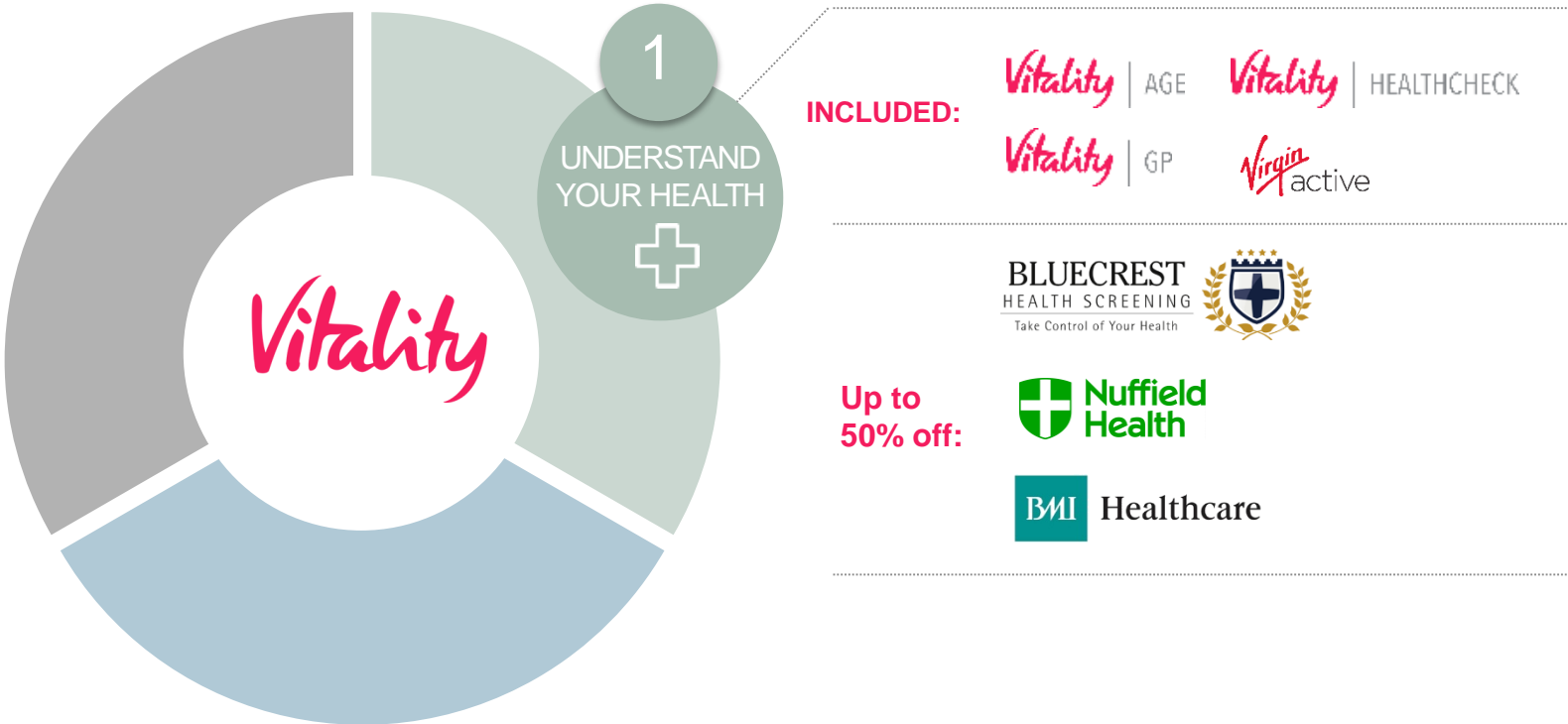


# Shared-Value Equation

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# Removing the cost barriers to entry - reducing the impact of hyperbolic discounting



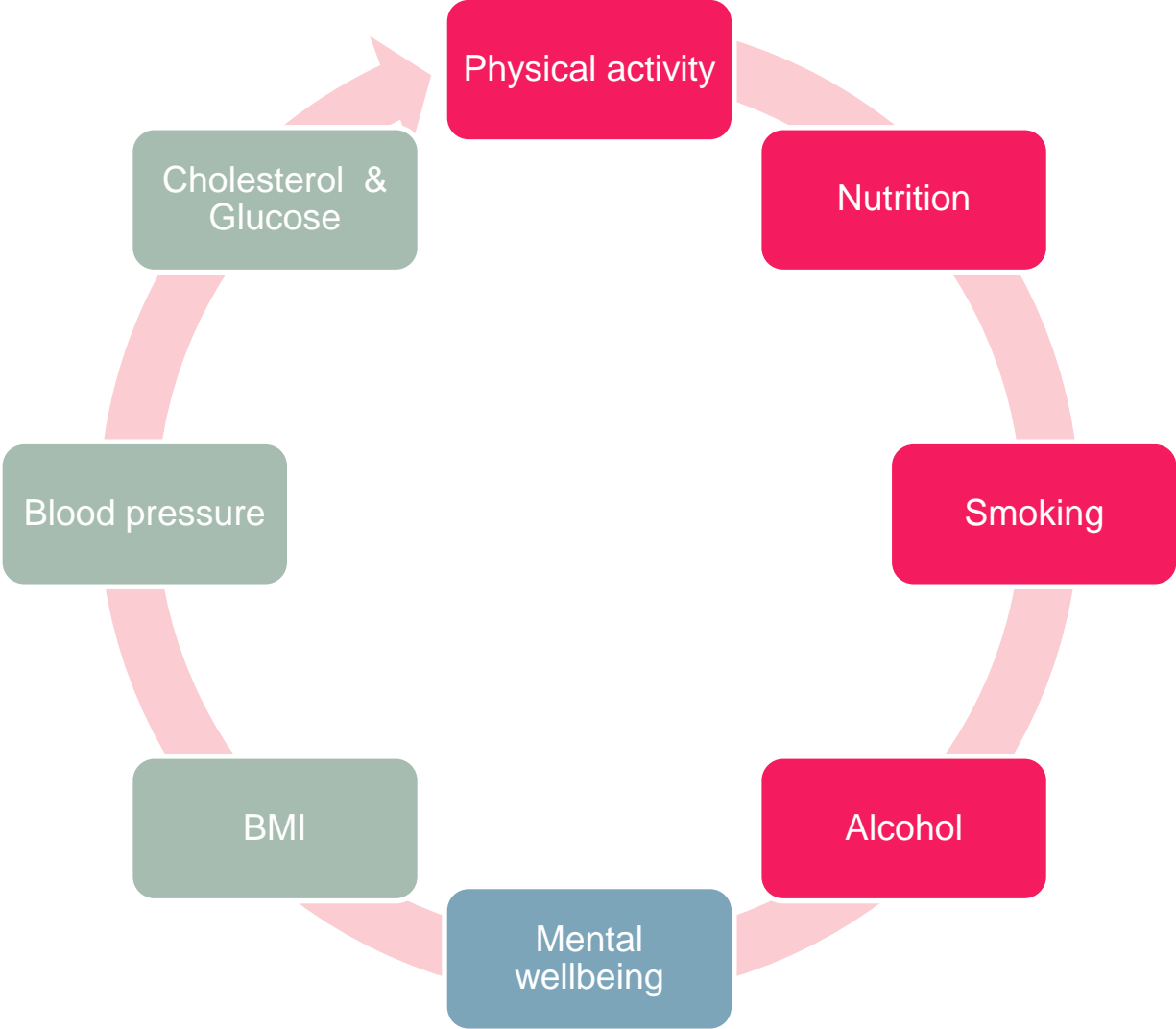
Correct as at February 2018

# Vitality | AGE

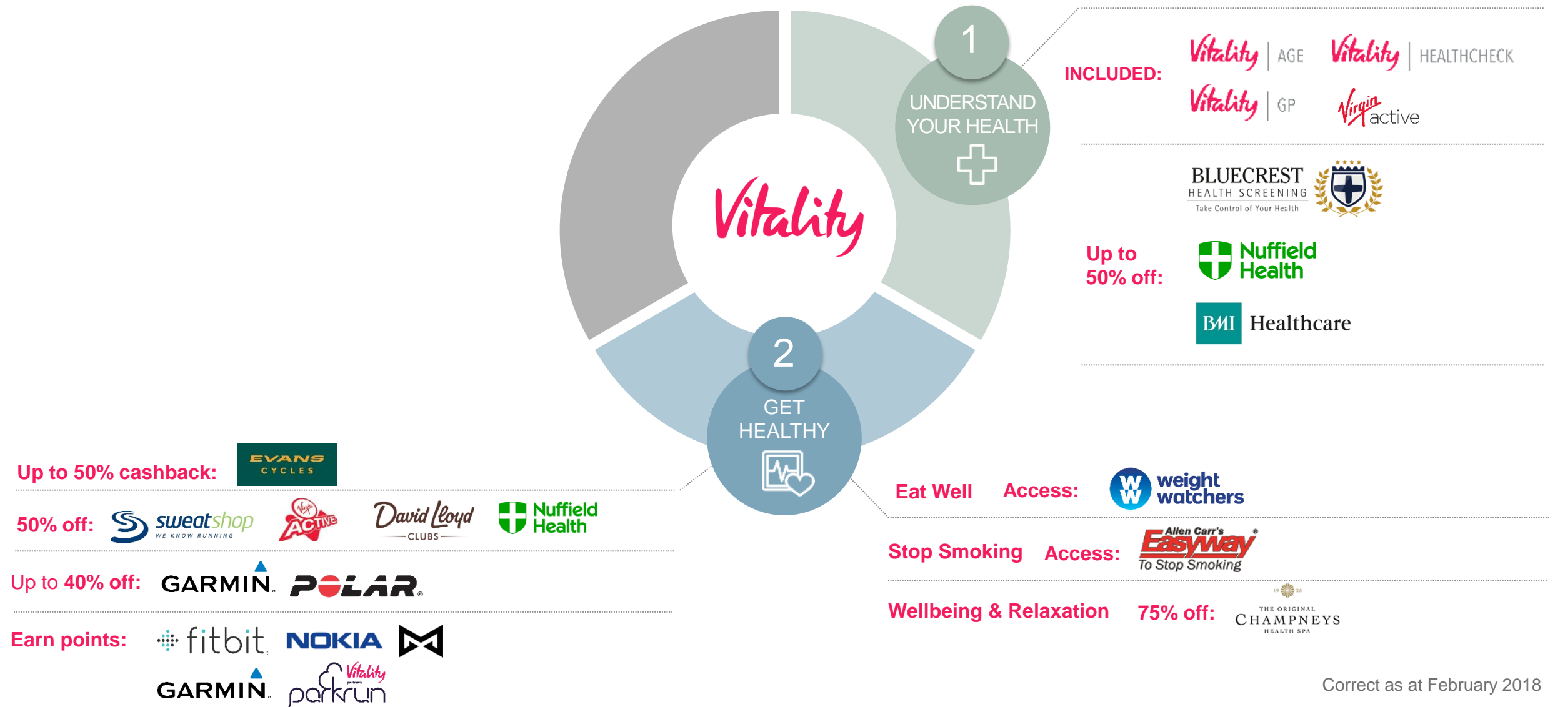
An individual's health age, adjusted for the impact of lifestyle and clinical physical and mental health risks

# Vitality | AGE

An individual's health age, adjusted for the impact of lifestyle and clinical physical and mental health risks

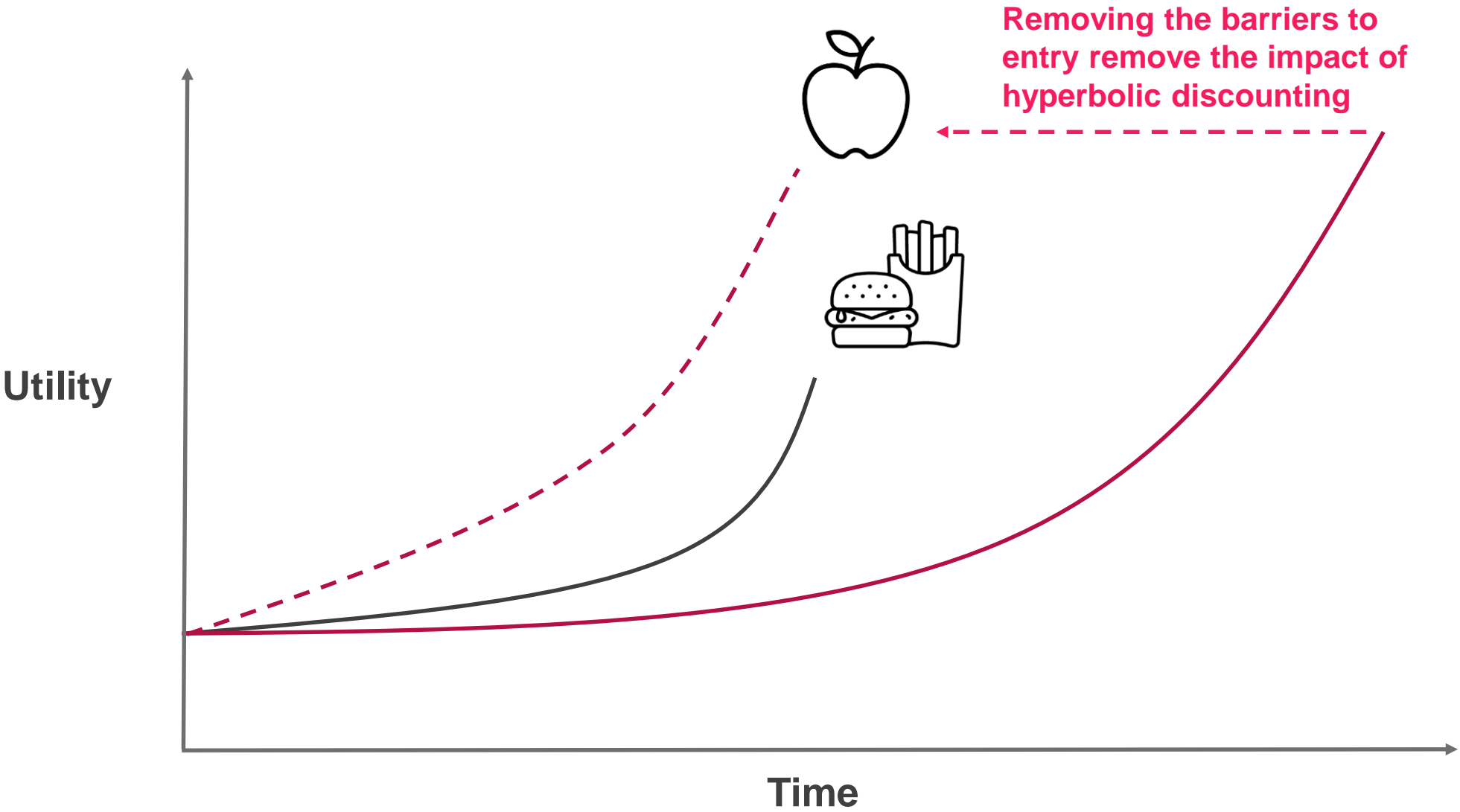


# Removing the cost barriers to entry - reducing the impact of hyperbolic discounting



Correct as at February 2018

# Removing the cost barriers to entry - reducing the impact of hyperbolic discounting



# Intelligent incentives lead to behaviour change

$$\frac{\text{VALUE}}{\text{MEMBER}} = \frac{\text{Incentive}}{\text{Member}} \times \frac{\Delta \text{Behaviour}}{\text{Incentive}} \times \frac{\text{Risk Improvement}}{\Delta \text{Behaviour}} \times \frac{\text{Value}}{\text{Risk Improvement}}$$



# Loss aversion and the endowment effect used to incentivise healthy behaviour



Correct as at February 2018



# Active rewards with Apple watch – Using loss aversion to encourage behaviour change

Get Apple Watch



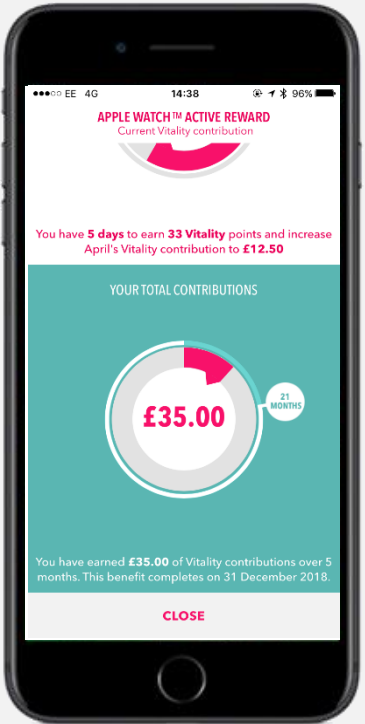
Get Active



£29

*Up-front activation*

Members who earn **160 Vitality activity points** each month will have a **Direct Debit payment of £0**



ACTIVITY POINTS  
EARNED IN A MONTH

MONTHLY DIRECT  
DEBIT PAYMENT

0-39	40-79	80-119	120-159	160+
£12.50	£10	£7.50	£5	£0

# Active rewards with Apple watch – Using loss aversion to encourage behaviour change



# The mathematics of Shared-Value

$$\frac{\text{VALUE}}{\text{MEMBER}} = \frac{\text{Incentive}}{\text{Member}} \times \frac{\Delta \text{Behaviour}}{\text{Incentive}} \times \frac{\text{Risk Improvement}}{\Delta \text{Behaviour}} \times \frac{\text{Value}}{\text{Risk Improvement}}$$



# Reducing costs balances our mental discounting



VITALITY SHOPPERS HAVE SIGNIFICANTLY HIGHER PERCENTAGES OF HEALTHY FOOD IN THEIR BASKET



# Reducing costs balances our mental discounting



VITALITY SHOPPERS HAVE SIGNIFICANTLY HIGHER PERCENTAGES OF HEALTHY FOOD IN THEIR BASKET



# Loss aversion as a tool to prompt further behaviour change



GET APPLE WATCH 3



GET ACTIVE

£29

*Up-front activation*

ACTIVITY POINTS EARNED IN A MONTH	0-39	40-79	80-119	120-159	160+
MONTHLY DIRECT DEBIT PAYMENT	£12.50	£10	£7.50	£5	£0

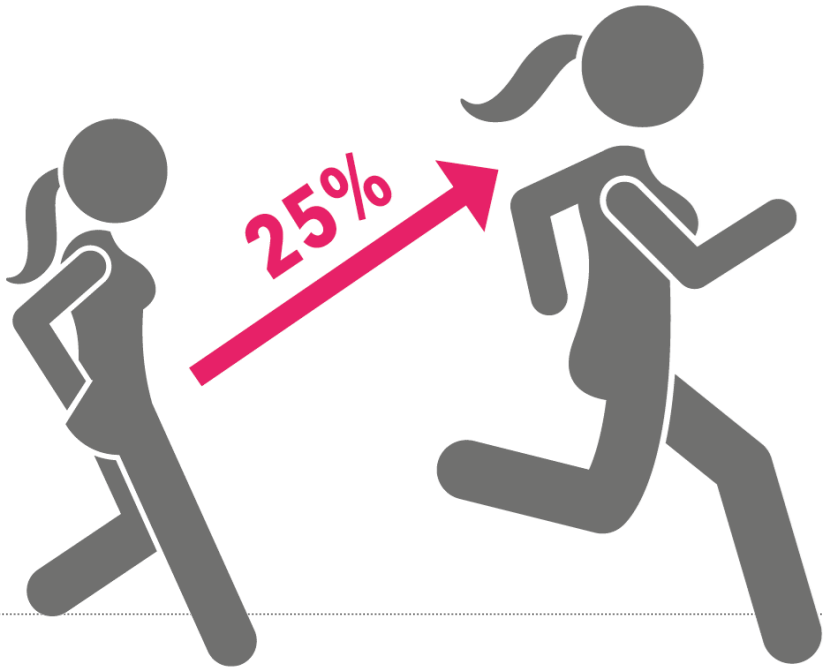
# Loss aversion as a tool to prompt further behaviour change



GET APPLE WATCH 3



GET ACTIVE



£29

Up-front activation

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POINTS PRE APPLE WATCH  
(MEMBERS EARNING PHYSICAL  
ACTIVITY POINTS)

POINTS POST APPLE WATCH  
(MEMBERS EARNING PHYSICAL  
ACTIVITY POINTS)

# Intelligent incentives lead to behaviour change

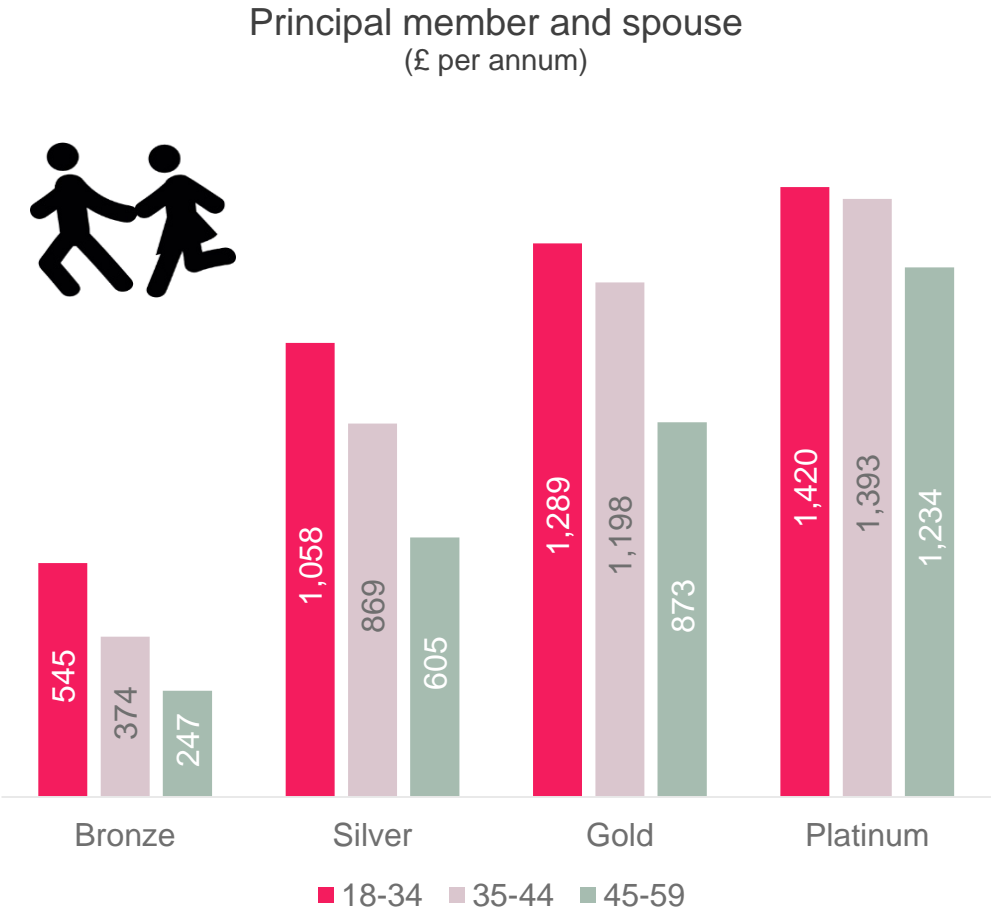
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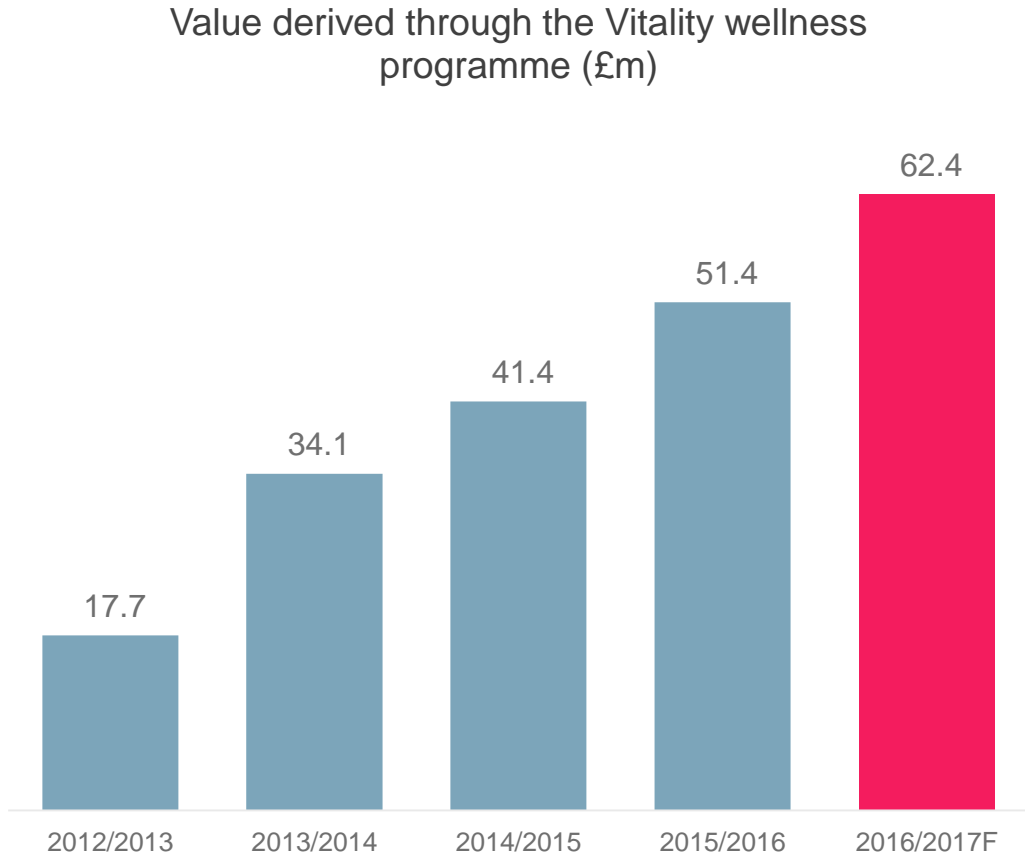


The effect of the incentives and the resulting improvement in health outcomes has resulted in substantial additional value for all stakeholders

Value by Status



Overall value from Vitality



# Better lifestyle behaviours lead to lower morbidity and mortality and derive actuarial surplus

## ENGAGEMENT RESULTS IN REDUCED RISK FACTORS



**35% of 2,120 members**

WERE SMOKERS AND QUIT



**46% of 12,140 members**

WERE INSUFFICIENTLY ACTIVE AND  
BECAME MORE ACTIVE

*of members who completed a Vitality Age  
in both 2016 and 2017*



**32% of 20,425 members**

HAD POOR DIETS AND IMPROVED  
THEIR NUTRITION

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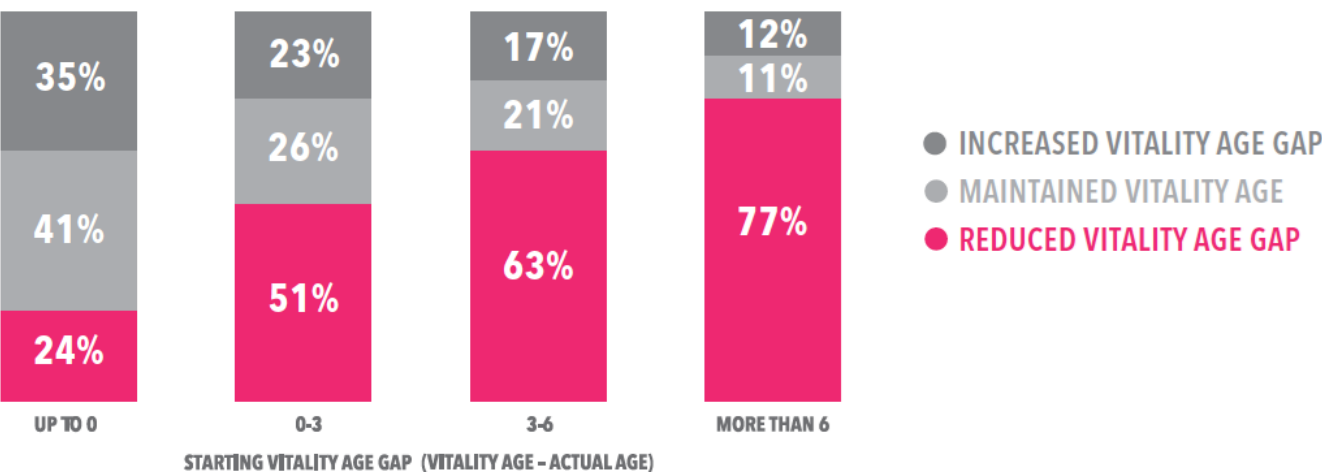


**32% of 20,425 members**

HAD POOR DIETS AND IMPROVED  
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## REDUCTIONS IN VITALITY AGE MORE EVIDENT AMONGST HIGHER RISK GROUPS

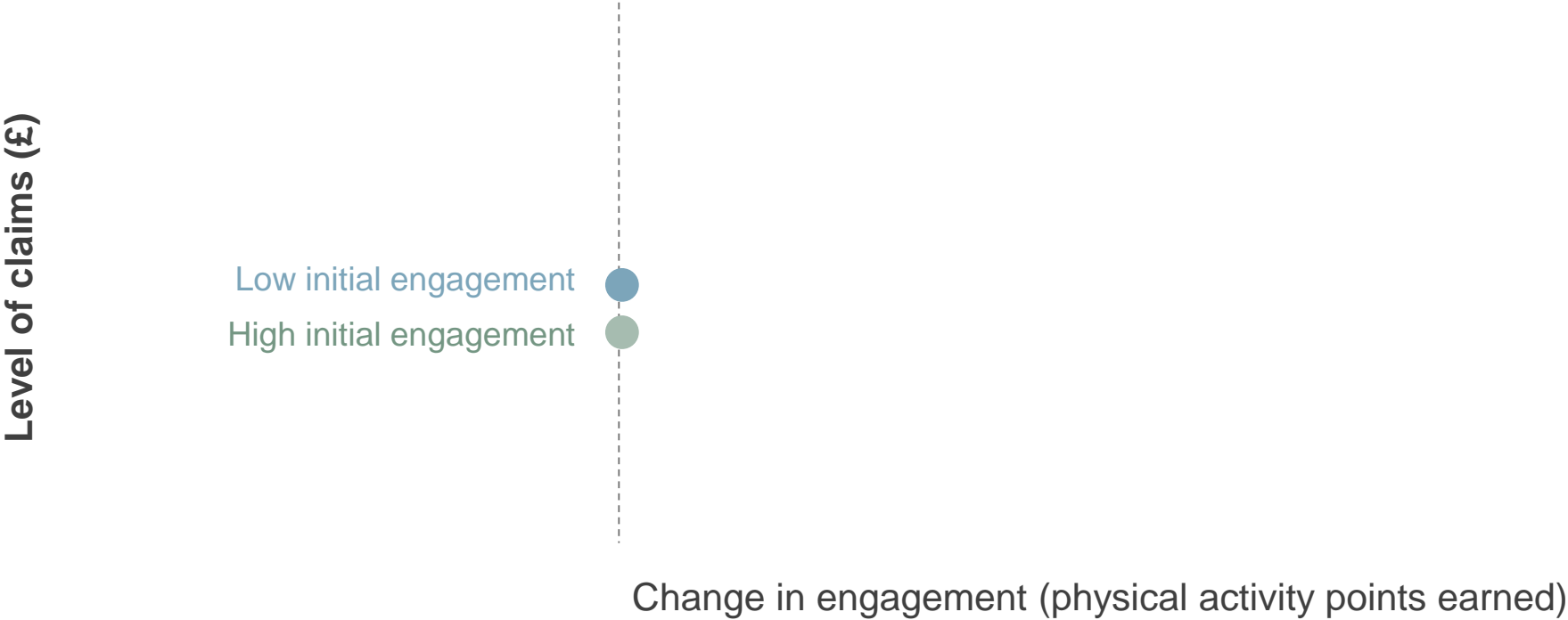
% OF MEMBERS WITH REDUCTION, HOLD OR INCREASE IN VITALITY AGE GAP BY STARTING VITALITY AGE GAP



*two-thirds of engaged Vitality members  
reduce their Vitality Age gap over a  
period of 1 year*

# The Vitality claims cost study demonstrates the impact of health outcomes on claims

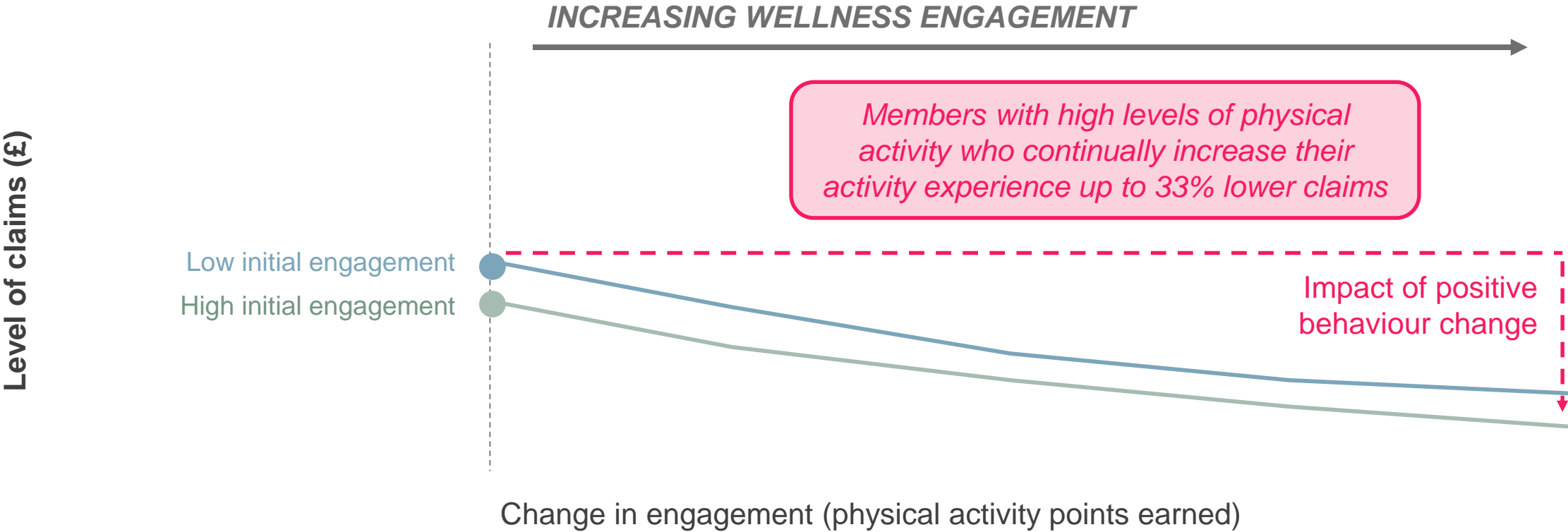
Claims rates for Vitality members based on initial wellness engagement and subsequent increases in health engagement



Source: 47,000 Vitality Health members 2014 - 2016

# The Vitality claims cost study demonstrates the impact of health outcomes on claims

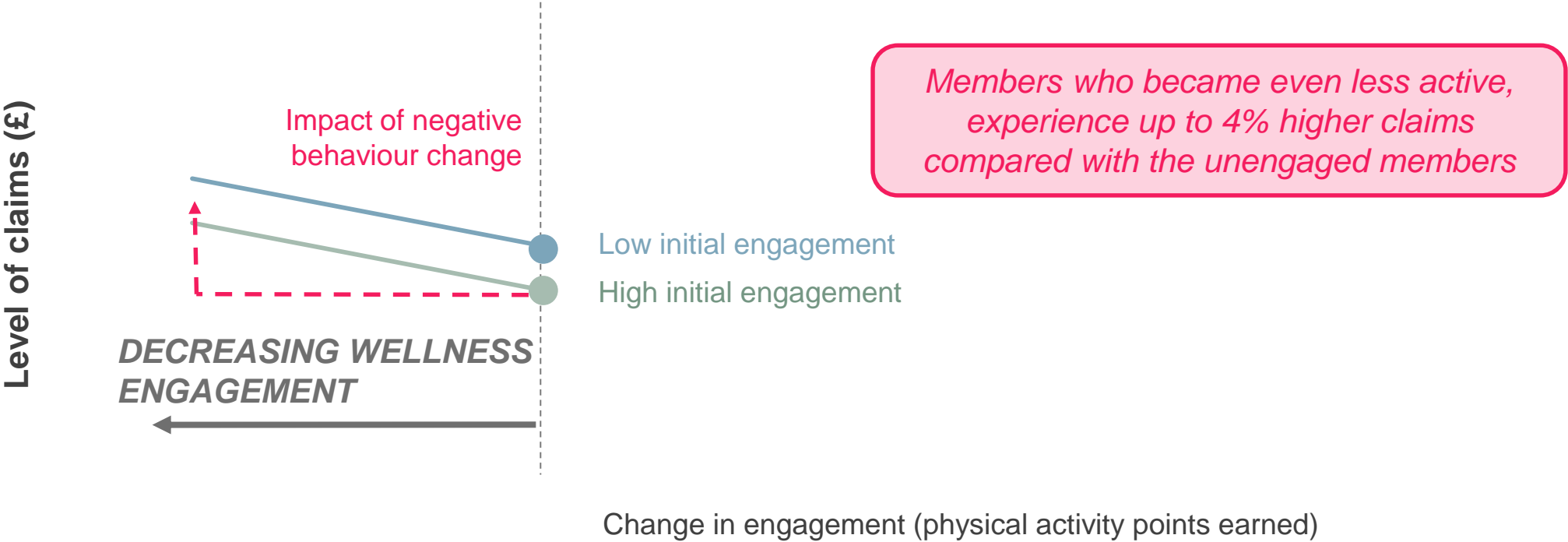
Claims rates for Vitality members based on initial wellness engagement and subsequent increases in health engagement



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# The Vitality claims cost study demonstrates the impact of health outcomes on claims

Claims rates for Vitality members based on initial wellness engagement and subsequent decreases in health engagement

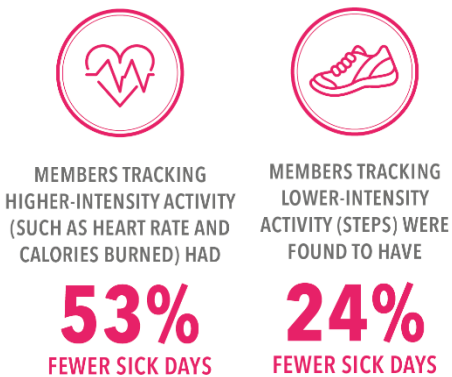
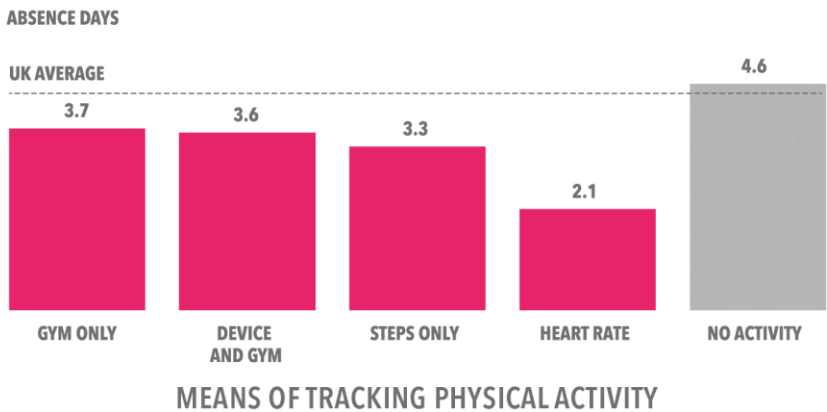


Source: 47,000 Vitality Health members 2014 - 2016

# Shared Value for employer

1

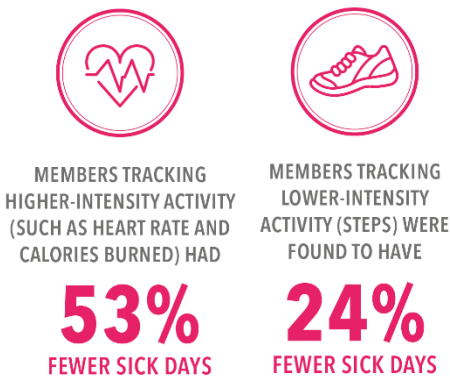
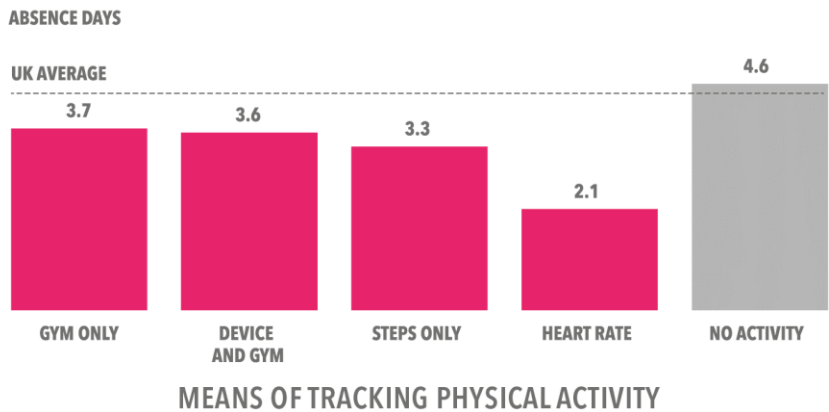
Cross Sectional Study (90,000 members)



# Shared Value for employer

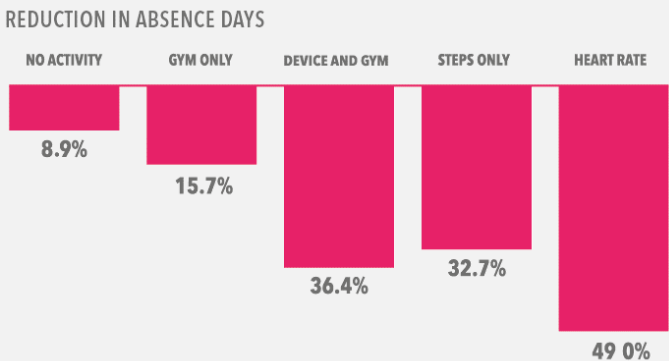
1

## Cross Sectional Study (90,000 members)

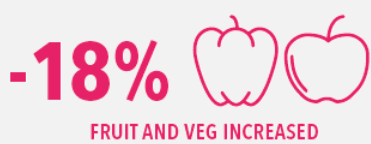


2

## Longitudinal study (30,000 members)



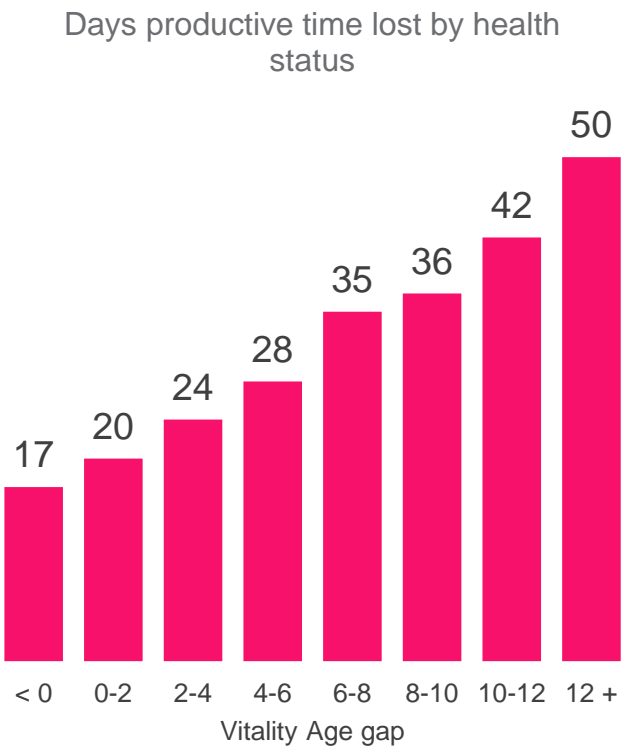
### CHANGE IN ABSENCE OVER 1 YEAR





# The impact of health on productivity holds true across a number of dimensions

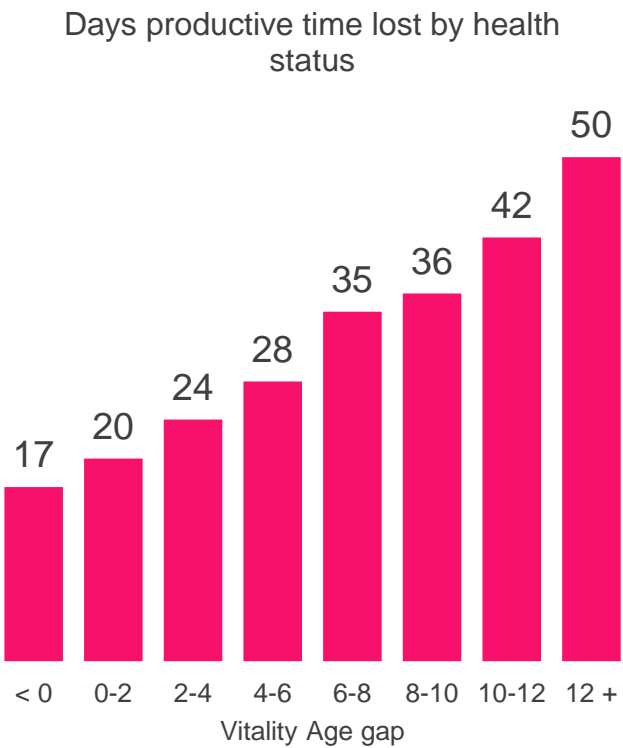
## 1 Employee lifestyle choices, health and productivity



Employee health and lifestyle choices are a key driver of work impairment

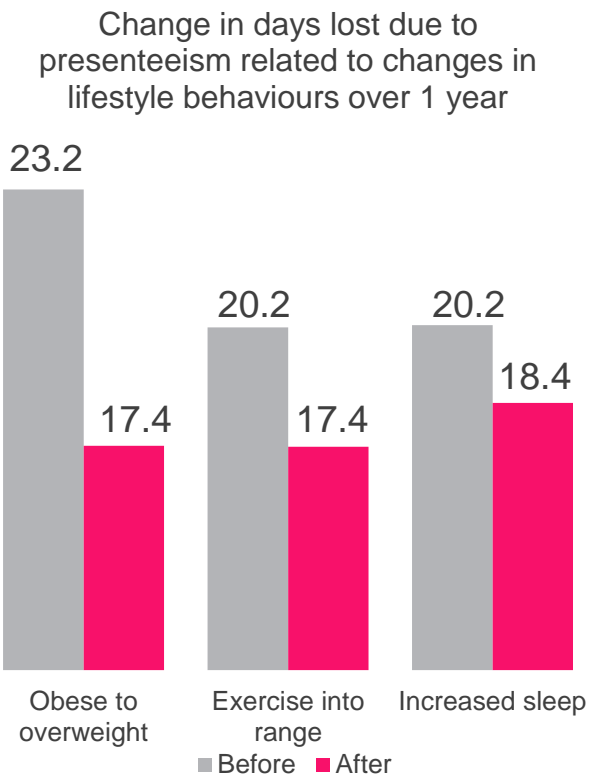
# The impact of health on productivity holds true across a number of dimensions

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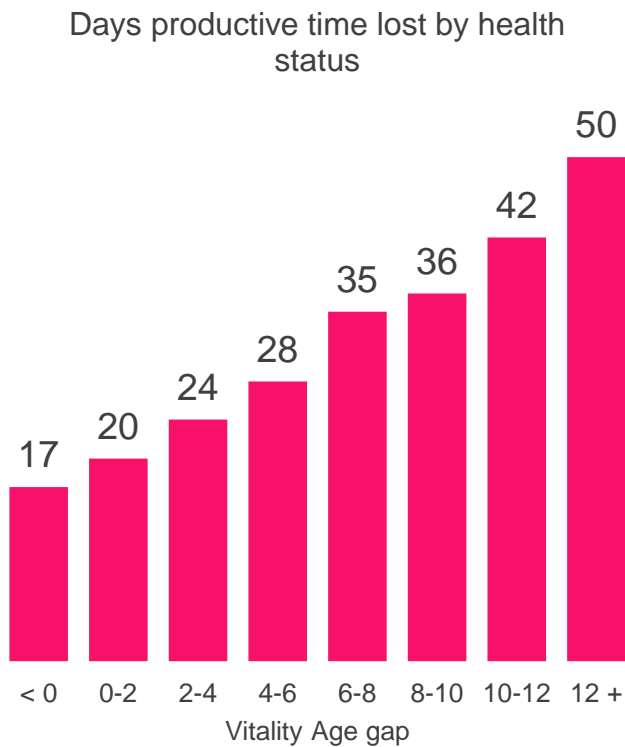
## 2 Changes in lifestyle and impact on productivity



When employees improve their lifestyle choices, their productivity improves

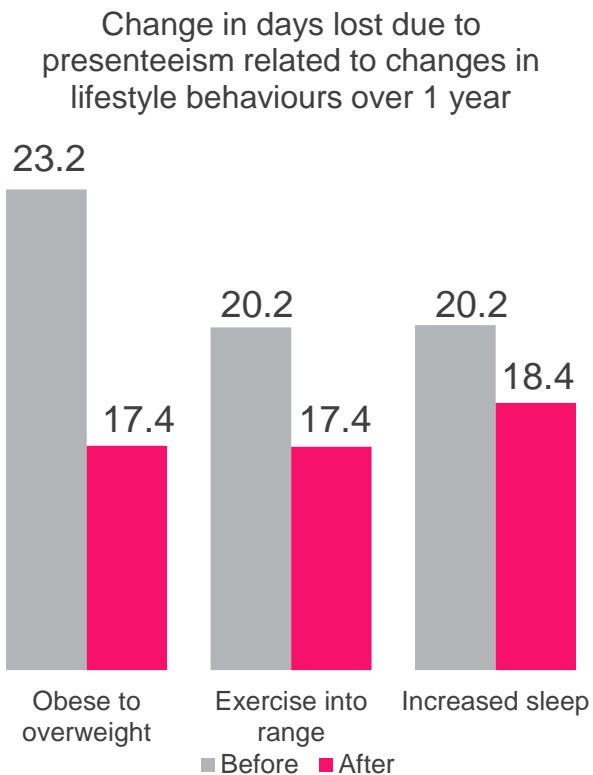
# The impact of health on productivity holds true across a number of dimensions

## 1 Employee lifestyle choices, health and productivity



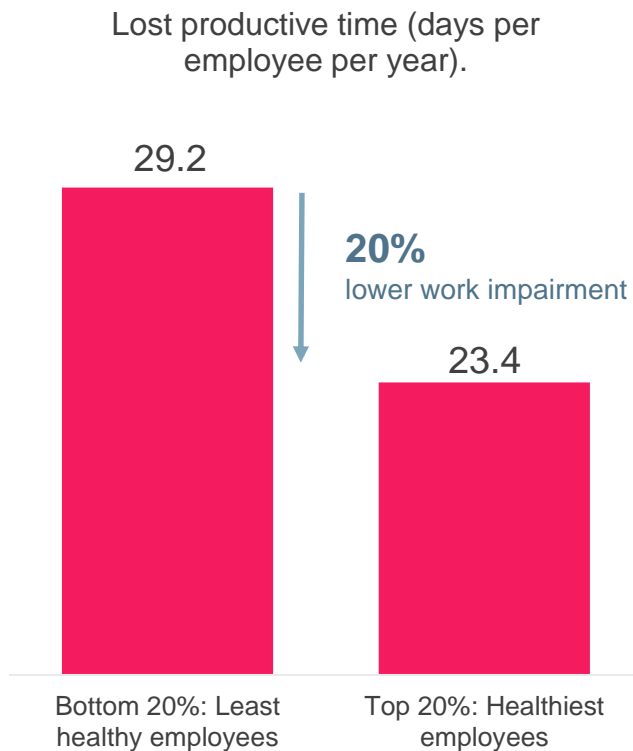
Employee health and lifestyle choices are a key driver of work impairment

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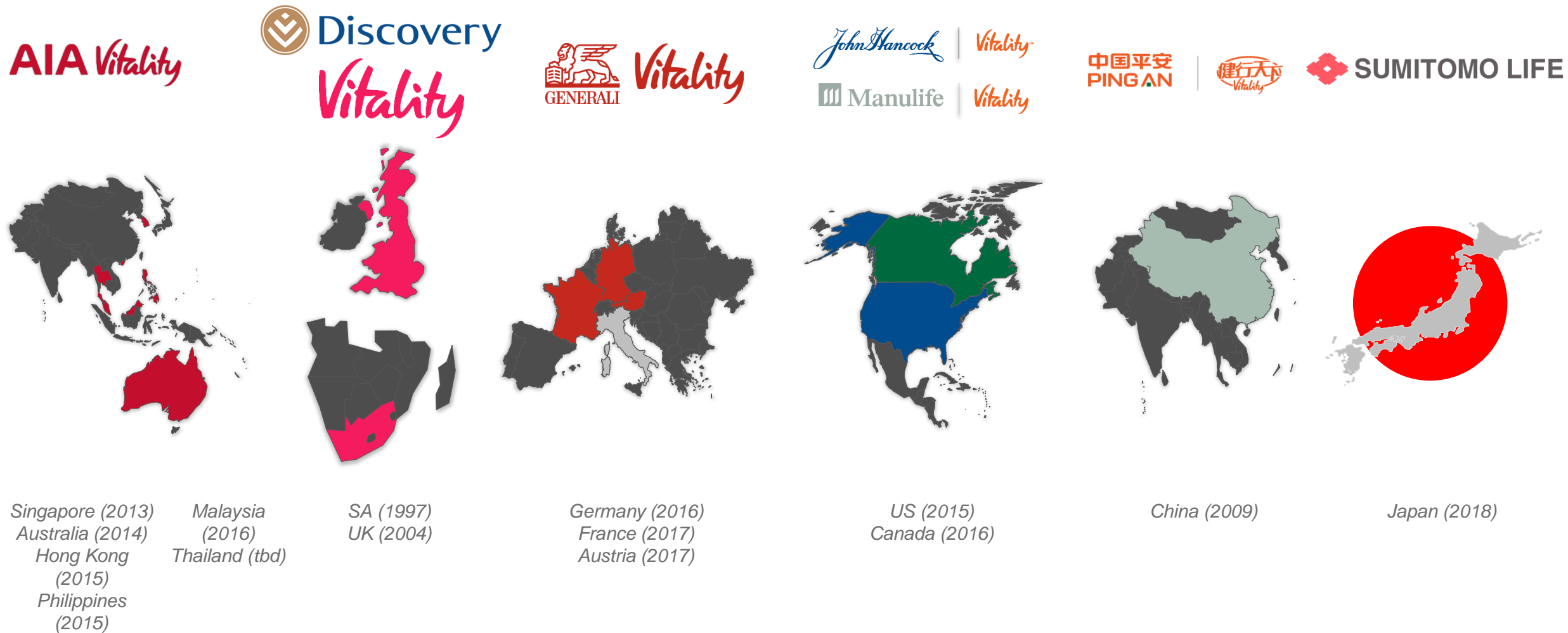
When employees improve their lifestyle choices, their productivity improves

## 3 Employee health and organisational productivity



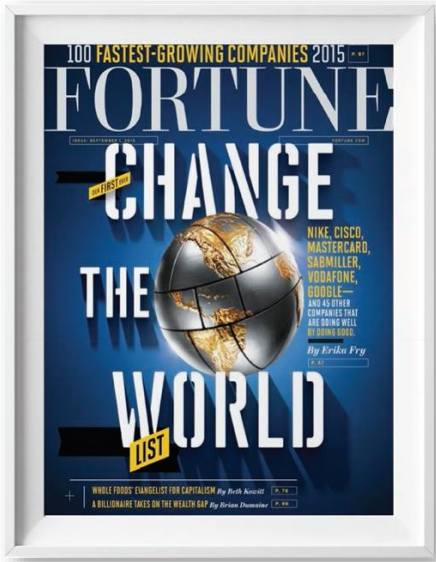
6 additional days of productive time per employee in healthier organisations

# Vitality Shared-Value Insurance is being exported to the world's leading insurers



# The Vitality model is recognised globally for delivering social value

Fortune's  
Change the World list



Harvard Business School  
Michael Porter



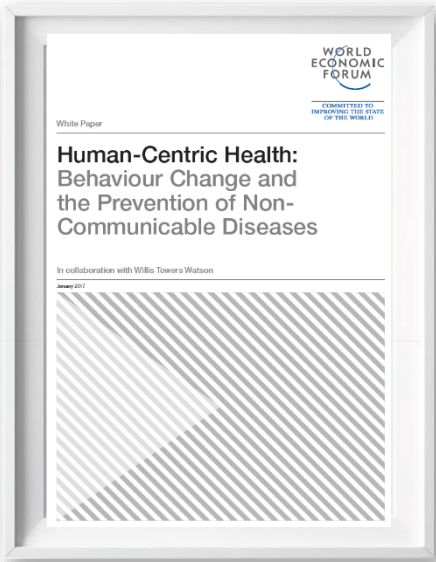
McKinsey Quarterly



International media



World Economic  
Forum



Vitality named leading health innovator at Davos in 2017