



# We are living in historic times



Rise of Chinese Dynasties

~200BC



Fall of the Roman Empire

~600



Crusades, Resurgence of Europe

~1100



“Discovery” of new world, Renaissance

~1500



Industrial revolution

~1750-1850

The Great Transition

2010 - 40

# Four forces are changing the world at an unprecedented pace and scale

1

The rise of emerging markets



2

The power of disruptive technologies



3

The aging of the global population



4

The integrating world



# 1. THE RISE OF EMERGING MARKETS

## The world's economic centre of gravity is shifting back to Asia

Locations weighted in 3D space by GDP

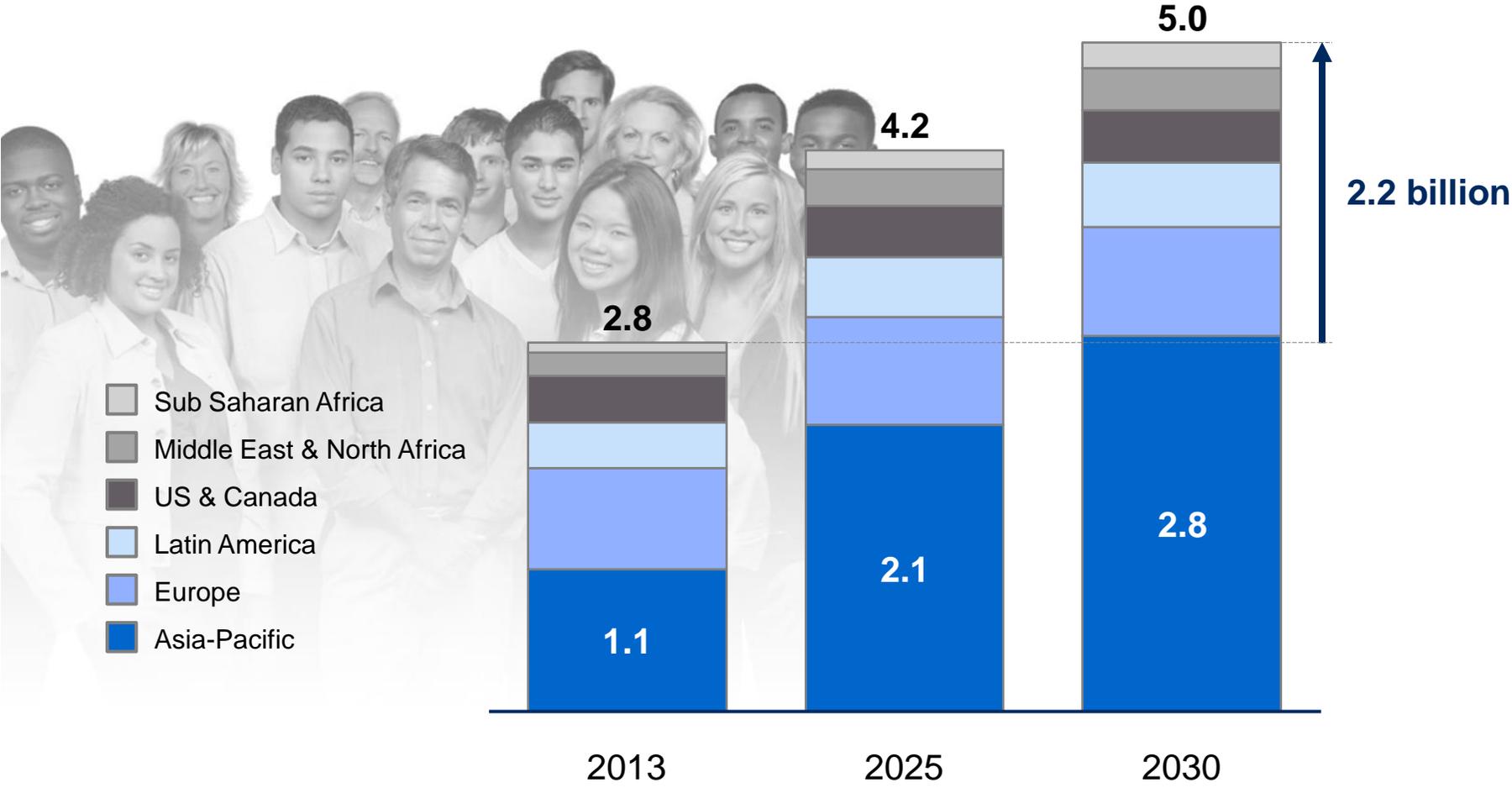


# 1. THE RISE OF EMERGING MARKETS

## There will be 2.2 billion new middle class consumers by 2030

### Global middle class<sup>1</sup>

Billions of people



<sup>1</sup> Annual personal income \$3,600 and over

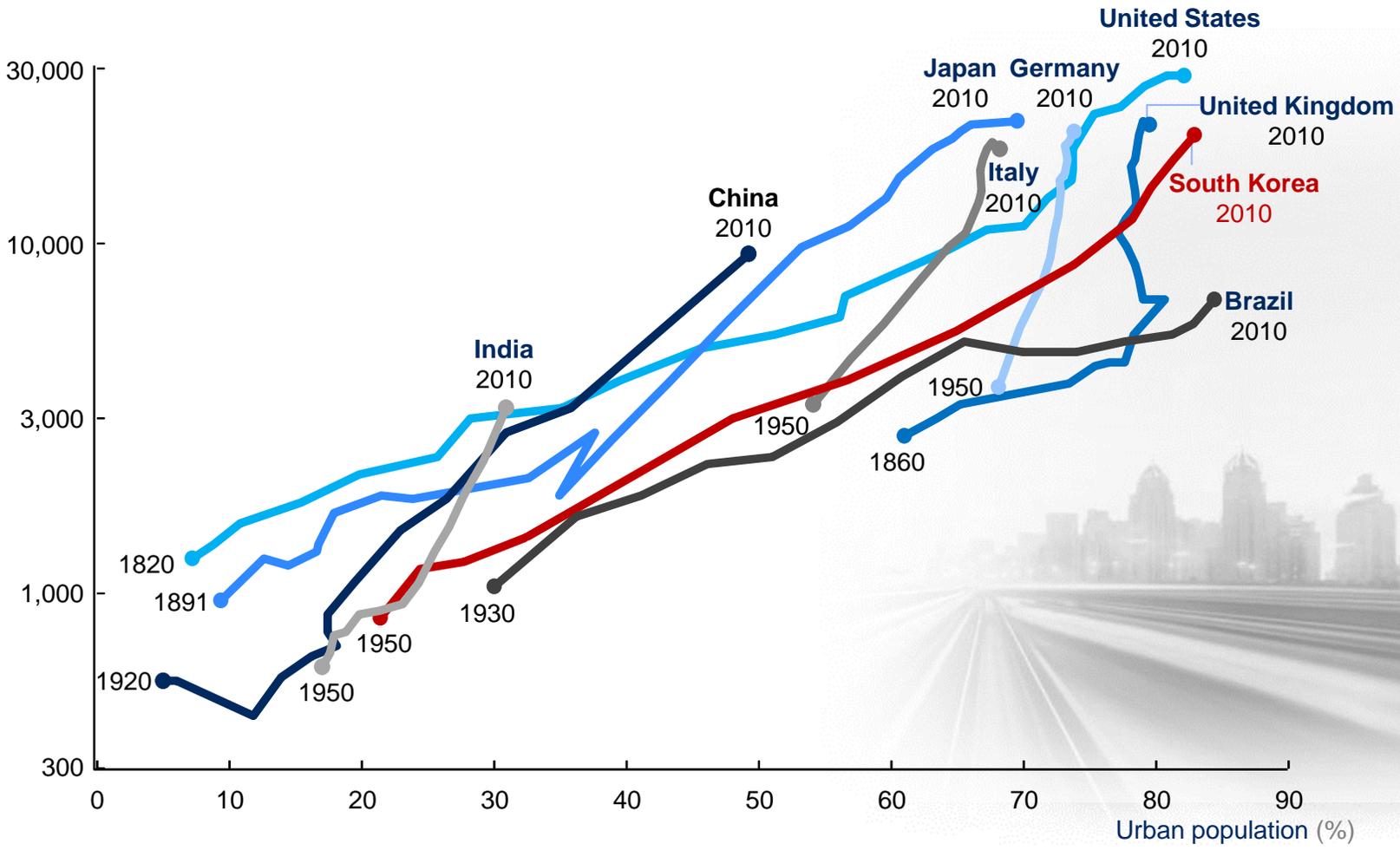
SOURCE: United Nations World Population Prospects; McKinsey Global Institute CityScope

# 1. THE RISE OF EMERGING MARKETS

## Urbanisation is driving rapid increases in individual wealth, especially in emerging markets

### Per capita GDP by urban density

1990 Purchasing Power Parity (log scale), Percent



SOURCE: McKinsey Global Institute

1. THE RISE OF EMERGING MARKETS

Shenzhen in...

1980



2015

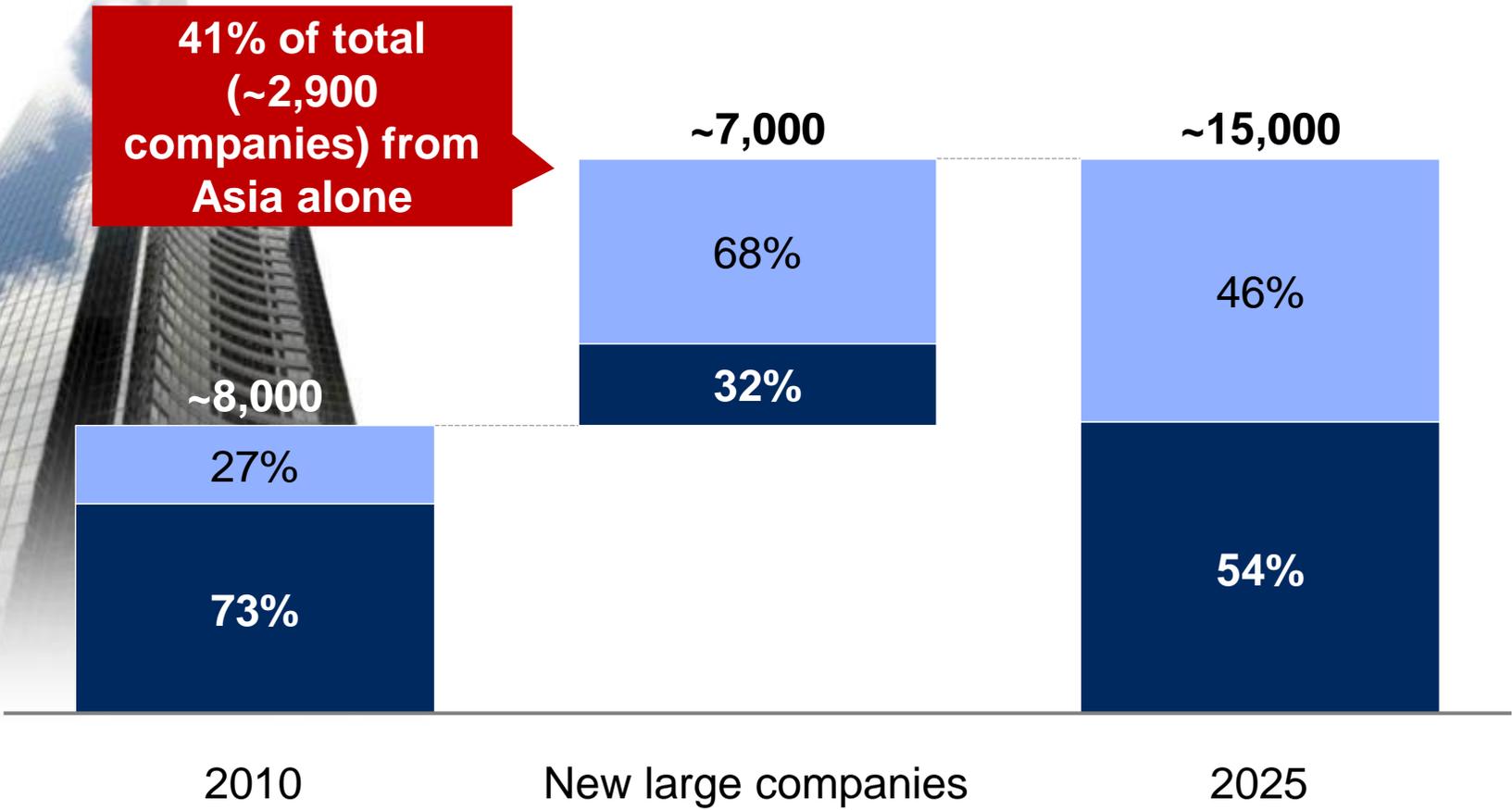


# By 2025, almost half of the world's billion-dollar-plus companies will be headquartered in emerging markets

## Number of companies with \$1B+ revenue

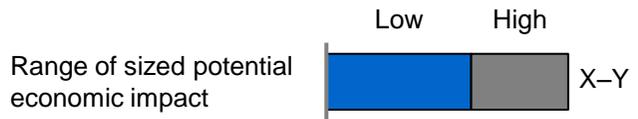
%, number of large companies

- Emerging regions
- Developed regions

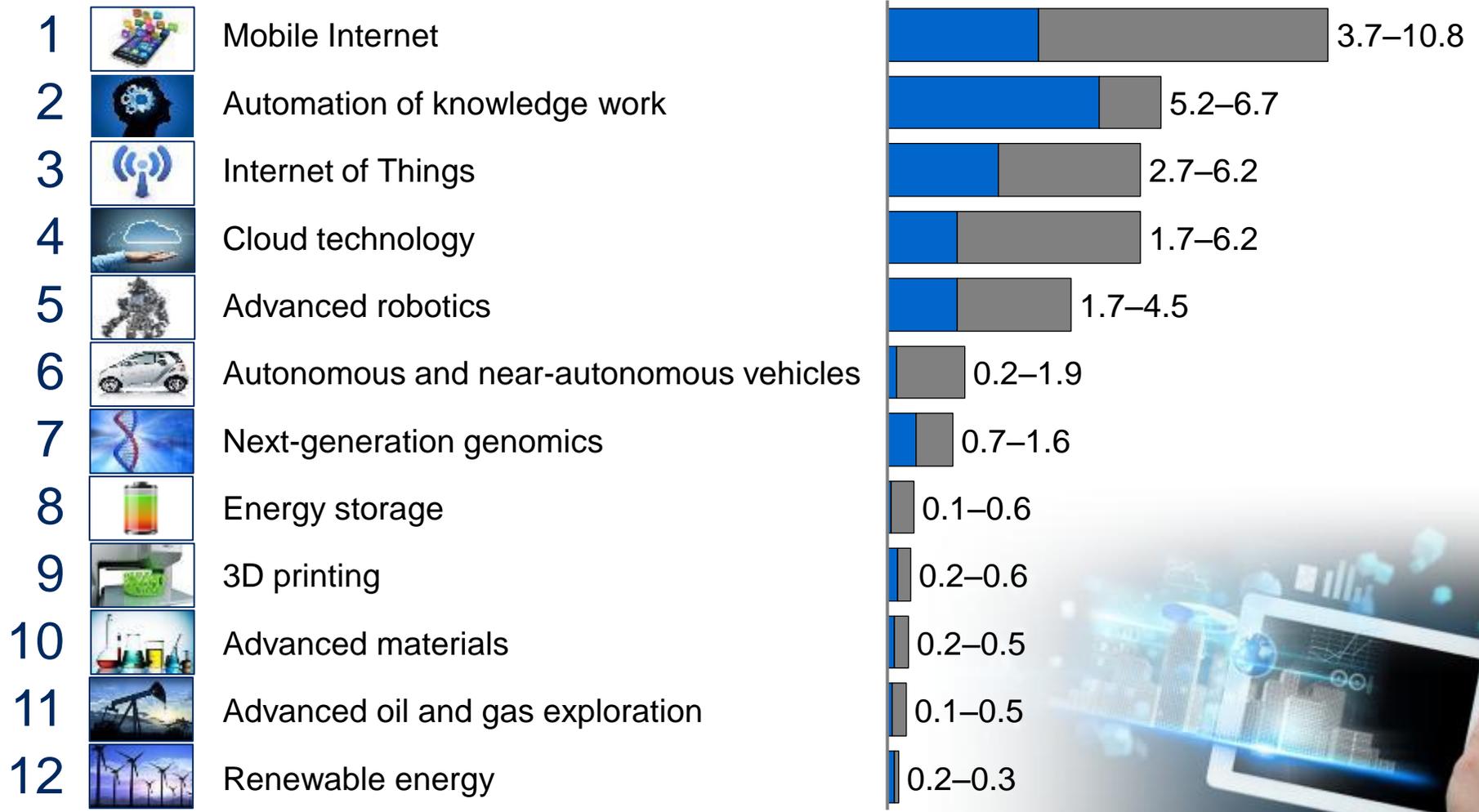


2. THE POWER OF DISRUPTIVE TECHNOLOGIES

# 12 disruptive technologies will have enormous economic impact by 2025



\$ Trillions, annual



SOURCE: McKinsey Global Institute

## 2. THE POWER OF DISRUPTIVE TECHNOLOGIES

### Technological innovations have already driven immense productivity improvements



A modern **washing machine** has more computing power than **Apollo 11** did in 1969



**1.2 billion smartphones** were sold worldwide in 2014

By 2020, **80% of the adults on the planet** will own a smartphone



In 2014, **industrial robot sales totaled ~230,000 units** – a 380% increase from 1995

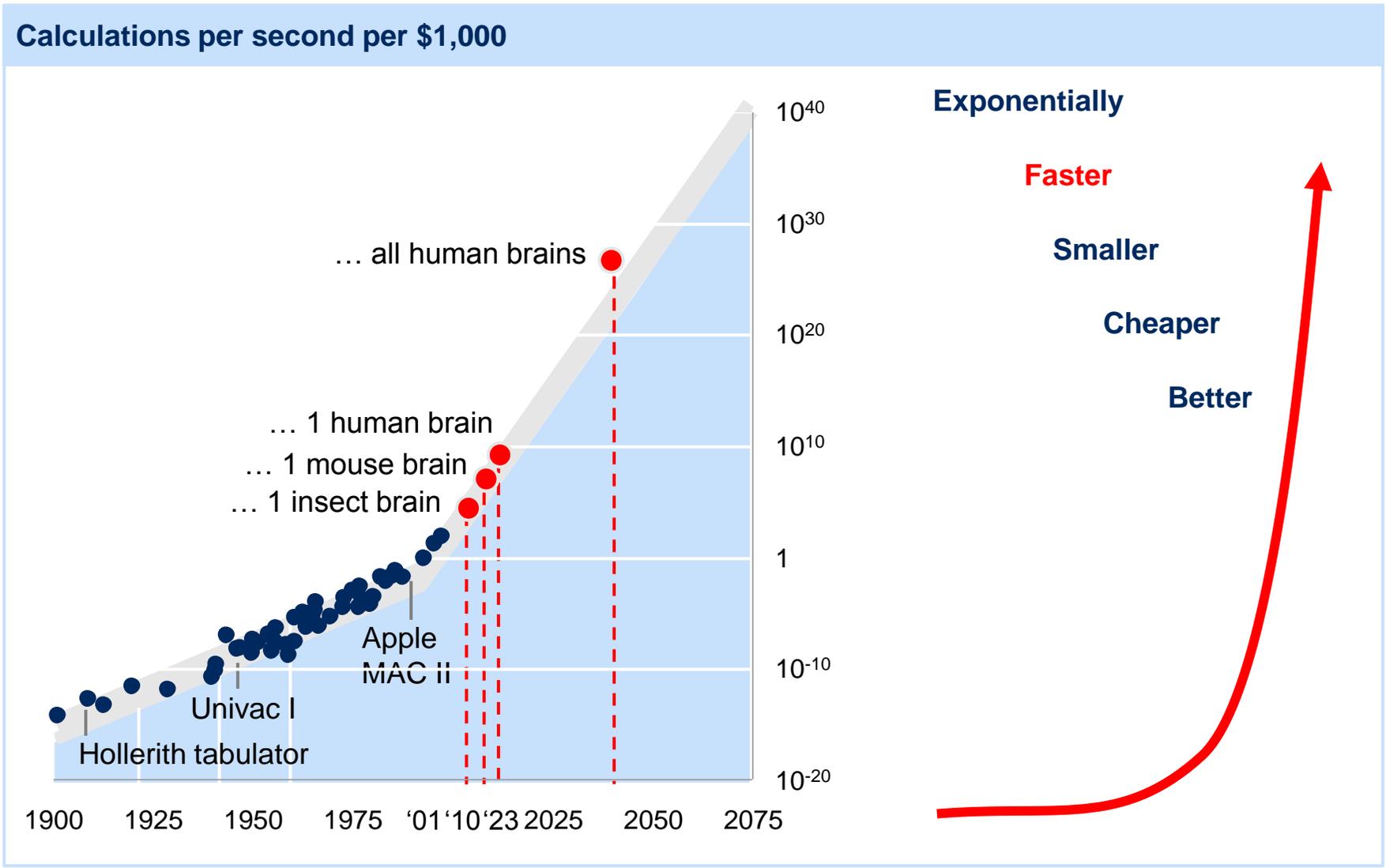


In the 1950s, nearly all goods were shipped 'loose'; today, **nearly 100% of sea freight is packed in standardized shipping containers**

2. THE POWER OF DISRUPTIVE TECHNOLOGIES

# The pace of digital disruption is accelerating

● Computer type



SOURCE: Singularity University



*There is NO BLINDSPOT on this car*

## 2. THE POWER OF DISRUPTIVE TECHNOLOGIES

### Digital disruption is affecting all industries

#### Healthcare

Worldwide healthcare **data will increase 50x** by 2020

#### Retail

Half of US retail sales are made **online** or influenced by the Web

#### Manufacturing

Over a million **industrial robots** are operating in factories around the world

#### Transportation

Proposed 'hyperloop' train could travel **2x as fast as high-speed rail**, and near the speed of sound

#### Energy

Over half of new **electricity generation capacity** added each year is now renewable

#### Agriculture

Acreage with genetically-modified crops has **increased 100x** in past 15 years

#### Social sector

The One Fund Boston **launched online 7 hours** after the **marathon bombings**, raising \$20 million in one week

#### Banking

The number of people using **mobile banking** will **double** in the next two years

A low-angle photograph of a building facade with the BBVA logo in large, blue, 3D letters. The sky is blue with scattered white clouds. A white speech bubble with rounded corners is overlaid on the image, containing text.

“ Some bankers and analysts think that Google, Facebook, Amazon, or the like will not fully enter a highly regulated, low-margin business such as banking.

I disagree. What is more, I think **banks that are not prepared for such new competitors face certain death.**

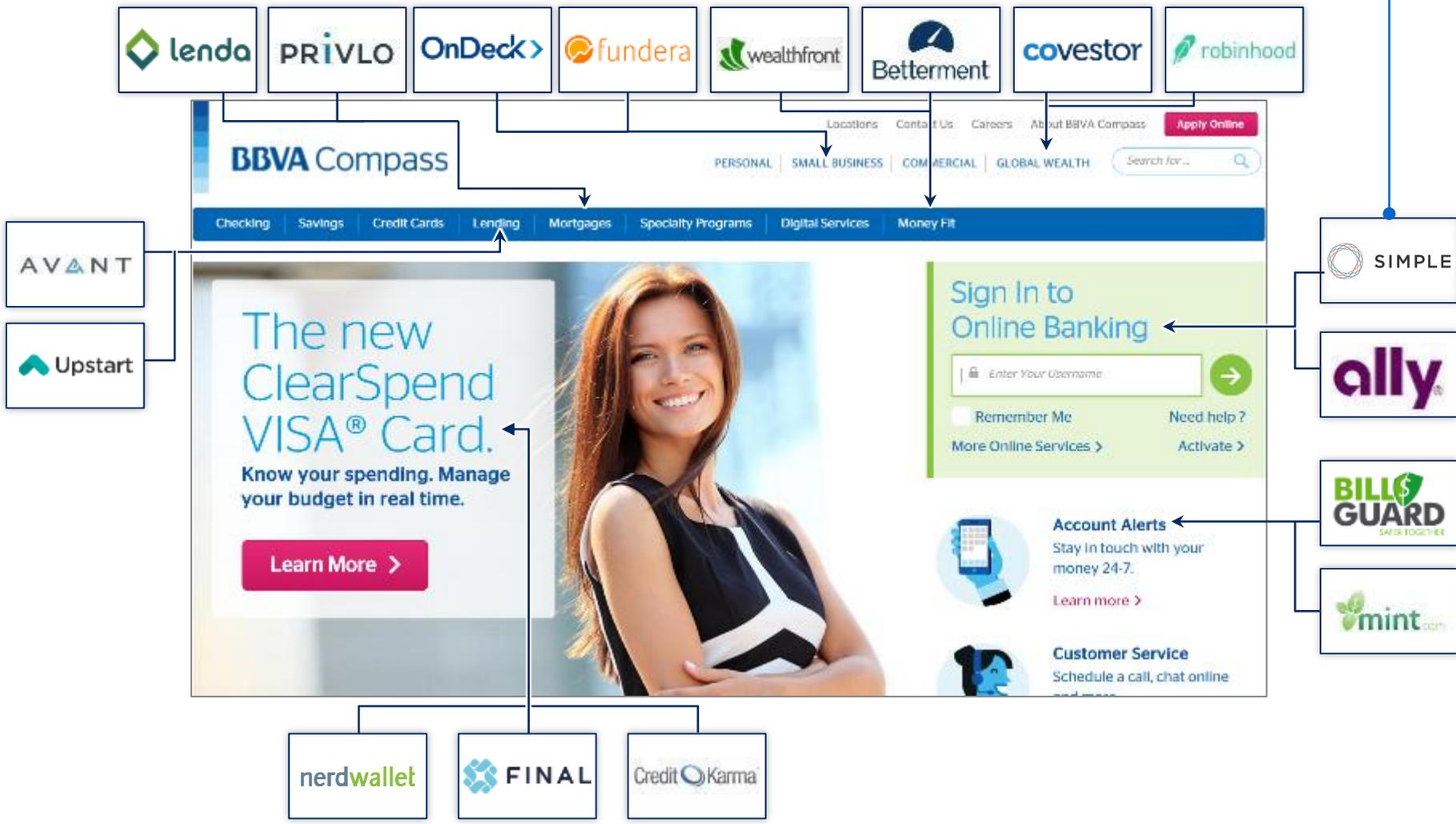
– BBVA executive chairman, Francisco González

”

## 2. THE POWER OF DISRUPTIVE TECHNOLOGIES

# Not all challengers will survive, but incumbents will still have to respond

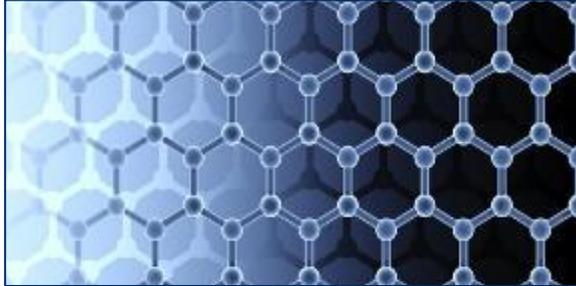
BBVA acquired Simple in 2014 to "disrupt itself"



# New technologies are changing manufacturing value chains and processes

### New materials

- Nanotech
- Composites
- Biologics



### Product design

- Internet of Things
- Advanced analytics
- Social media



### Production processes

- Modeling and simulation
- Advanced robotics
- Additive manufacturing



### Information systems

- Big data
- Computer-aided design



### Business models

- Circular economy
- New service models

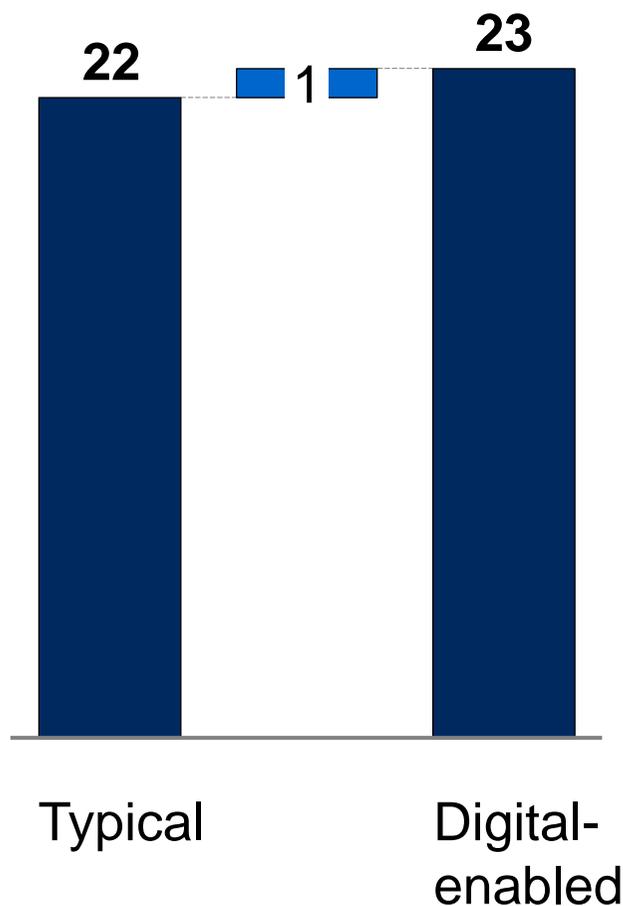


## Digitisation is driving massive improvements in efficiency



### Locomotive velocity

Avg miles per hour per day



- **Data analytics** – optimized scheduling and predictive maintenance reduce downtime, increasing velocity
- **1 mile per hour** increase worth **\$250M** in annual profit



## Digital is disrupting the beef and dairy industry – livestock sensor example

**1.4 B** beef and dairy cattle worldwide –  
**~10% lost** each year to injury and disease

Sensors remotely  
**monitor cow movements and health** – improving animal welfare and reducing labor costs



### 3. THE AGING OF THE GLOBAL POPULATION

## The global population is aging: by 2050 ...



The proportion of world's population **over age 65 will double**

The number of people worldwide **aged 80+ will quadruple** to 400 M

80% of people 65+ will live in **low or middle-income countries**

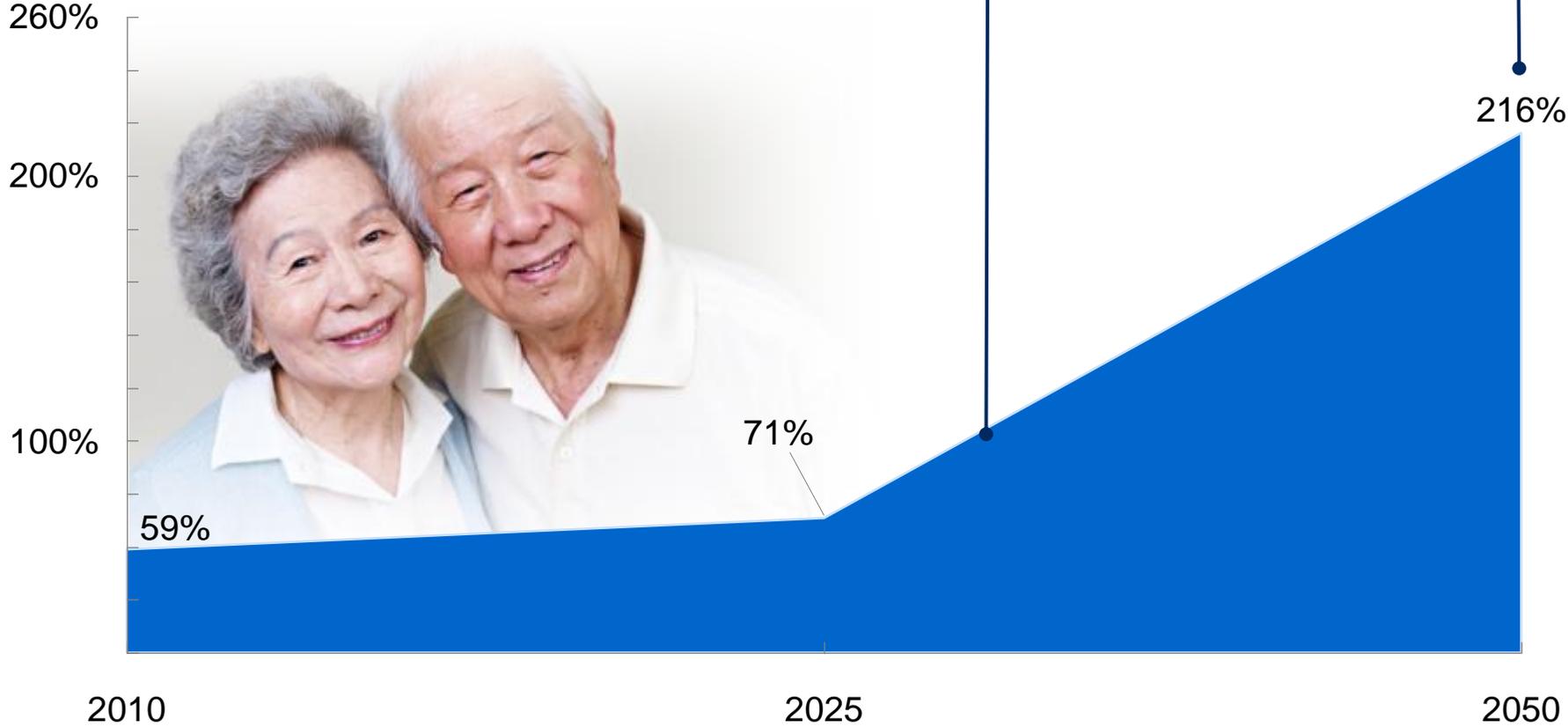
For the first time in history, there will be **more people 65+ than under the age of 14**

In Italy, Japan, and Spain, **1/3 of people will be 65+**

### 3. THE AGING OF THE GLOBAL POPULATION

## Aging will place massive strains on governments

**Net government debt**  
Percent of GDP



Global government debt will **exceed world GDP by 2030**

Age-related spending could raise median net government debt to **216% of GDP in 2050**

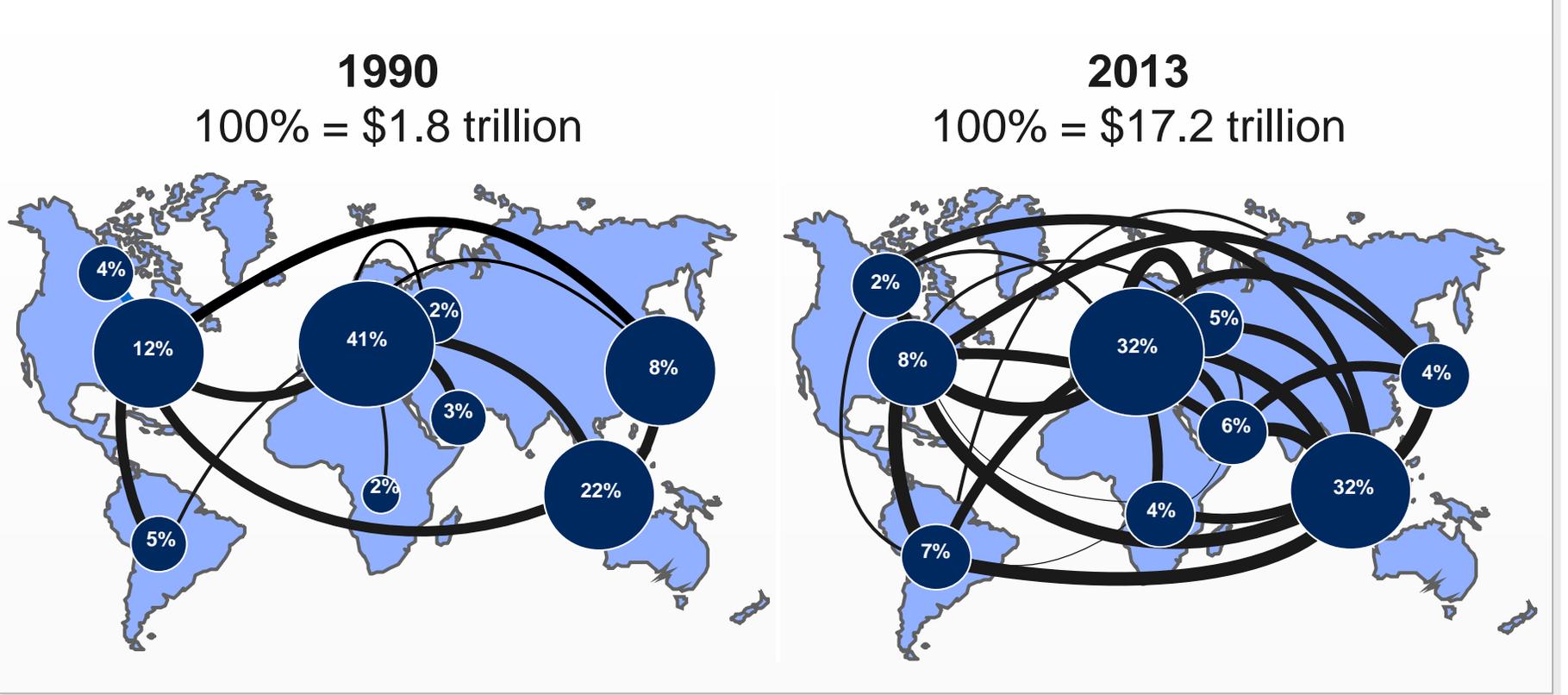
SOURCE: Standard and Poor's

#### 4. THE INTEGRATING WORLD

### Networks of global trade are larger and denser – heightening risks and opportunities

- USD 50–100 billion
- USD 100–500 billion
- USD 500 billion or more

Lines show total trade flows between regions; figures in bubbles show participation in world trade



SOURCE: The Conference Board Total Economy Database; UN Population Division; McKinsey Global Institute analysis

## Interconnected trade flows help generate global GDP growth

**\$250-\$450B**

Annual increase in world GDP from flows –  
about 15% - 25% of world's total GDP growth



**+40%**

Difference in impact of flows on GDP growth for countries at  
the centre of the network compared with ones at the periphery

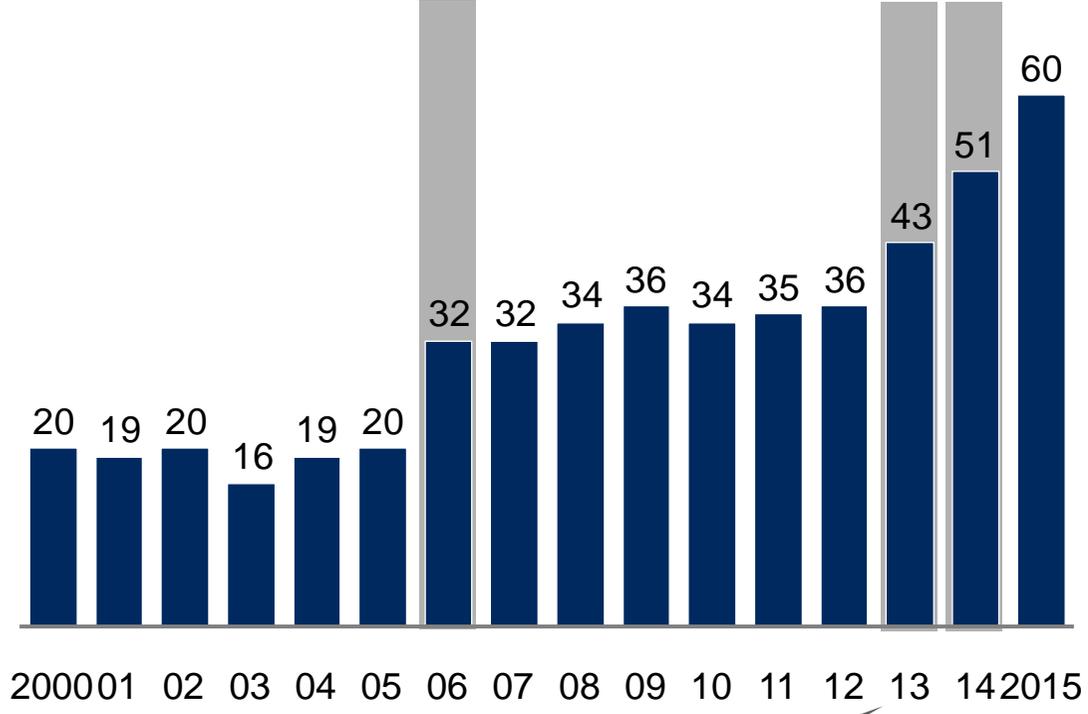
#### 4. THE INTEGRATING WORLD

**Our social problems are also interconnected – the number of global refugees is at its highest level since World War II**



**Refugees, internally displaced people, and asylum seekers worldwide**

Millions of people



Intensification of sectarian violence in Iraq (Iraqi 'Civil War')

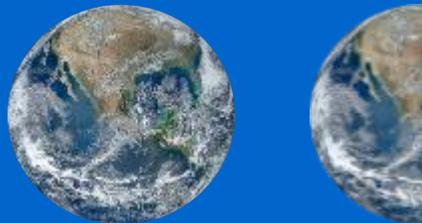
ISIS emerges as an autonomous entity

Number of migrants surpasses WWII level

#### 4. THE INTEGRATING WORLD

### Without action, this path will be unsustainable for the planet

2007



1.5 planets



In 2007, it took 1.5 years to fully replenish our annual resource use

2030



2.0 planets

2050



2.9 planets



With current consumption, it will take 3 years to replenish our annual use in 2050 – **we would need 3 earths to live sustainably**

## Executives say geopolitical instability is the #1 threat to global growth

**75%<sup>1</sup> of executives say geopolitical instability is a top 5 threat to global growth over the next 12 months...**

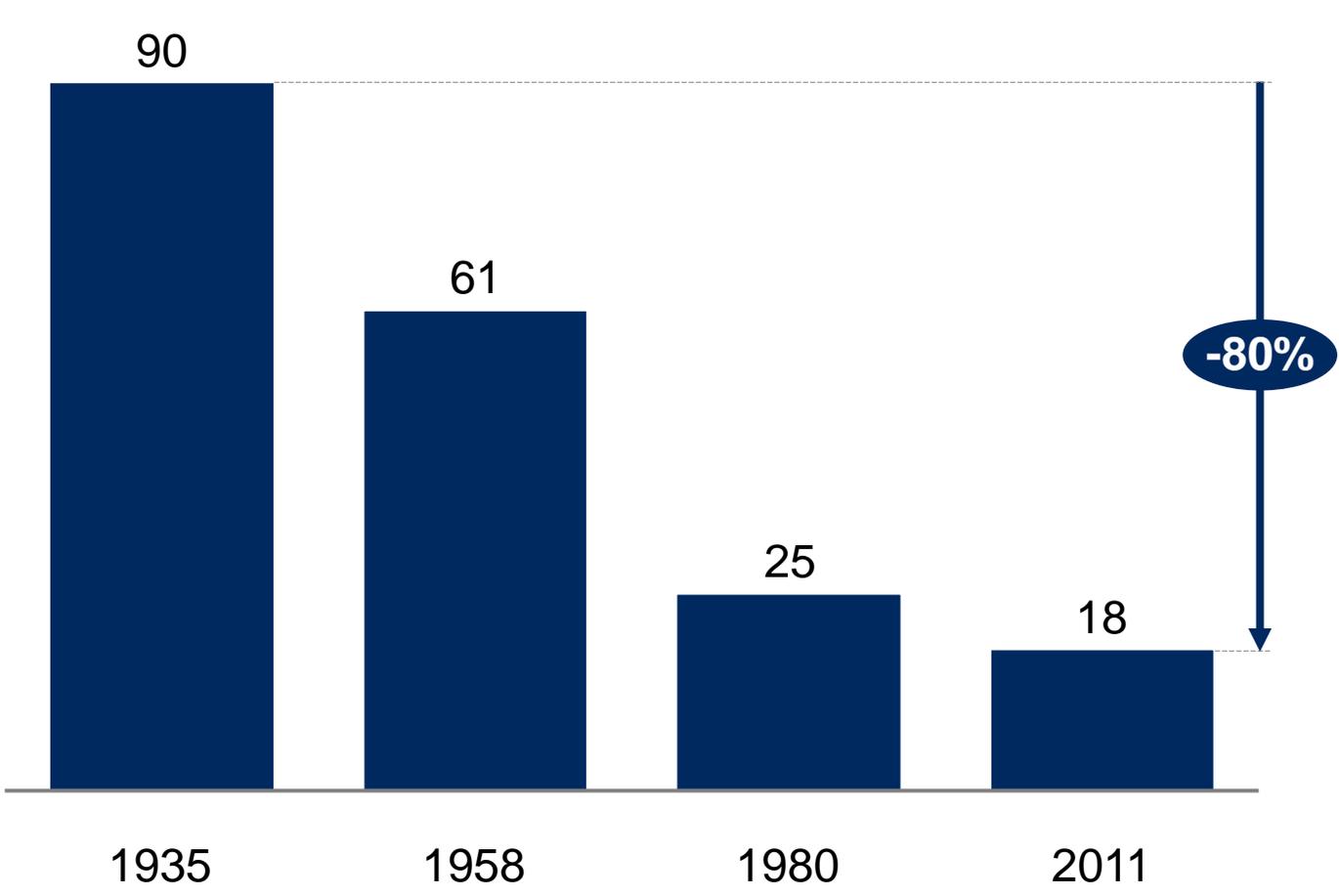
**...this is more than cited defaults on sovereign debt (39%), slowing consumer demand (22%), and new asset bubbles (20%)**

<sup>1</sup> N = 1,202; surveyed July 2015

# The average lifetime of companies is declining

## Average tenure on the S&P 500

Years



## Implications for business

1  **Think about growth in granular terms**

2  Invest in talent and Human Resources

3  Design a flexible organisation

4  Foster agility

5  Know the risks and test your resilience

6  Digitise

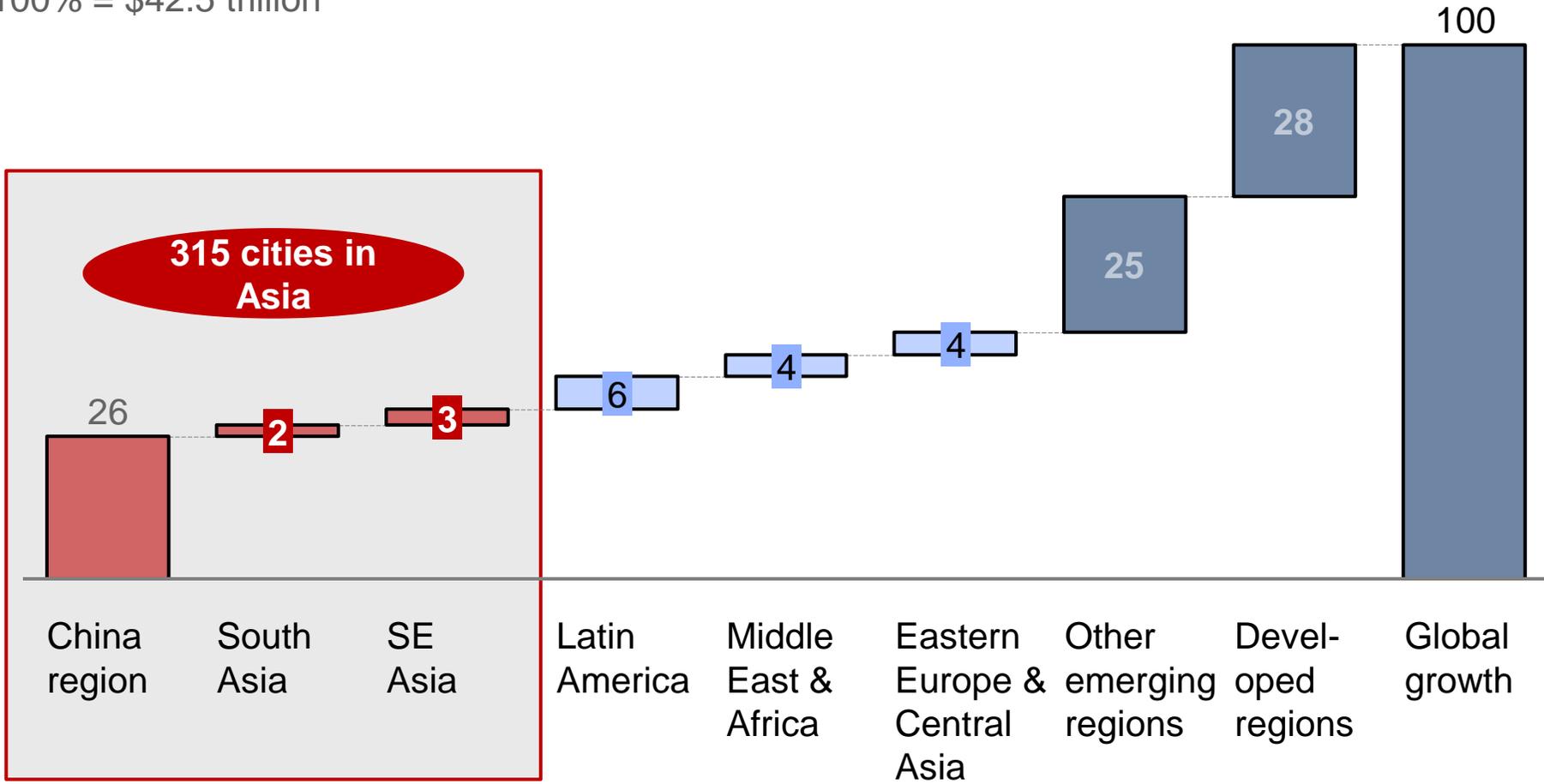
# 1. GRANULAR GROWTH



## 424 cities in emerging markets will fuel nearly half of the growth in global GDP through 2025 – 315 of which are in Asia

### Percent contribution to global GDP growth, 2012–2025

100% = \$42.5 trillion



SOURCE: McKinsey Global Institute Cityscope 2.55; note: does not sum due to rounding

# 1. GRANULAR GROWTH

## Emerging market cities, especially in China, will become the largest consumer markets in many categories

China  
Other emerging regions  
Developed regions

2025 Sales Rank	Sports & energy drinks	Facial moisturizers	Spirits
1	Chongqing	Tokyo	Shanghai
2	Tokyo	Shanghai	Beijing
3	Beijing	Beijing	Moscow
4	New York	Chongqing	Guangzhou
5	Shanghai	Osaka	Tianjin
6	Haerbin	Tianjin	Chongqing
7	Tianjin	Guangzhou	Shenzhen
8	Wuhan	Shenzhen	Tokyo
9	Nanjing	Wuhan	London
10	Bangkok	Chengdu	Wuhan
11	Xian	Dongguan	Rhein-Ruhr
12	Chengdu	Nanjing	Foshan
13	Los Angeles	Hong Kong	Hangzhou
14	Shenyang	Foshan	Chengdu
15	London	Seoul	Nanjing

## Implications for business

1  Think about growth in granular terms

2  **Invest in talent and Human Resources**

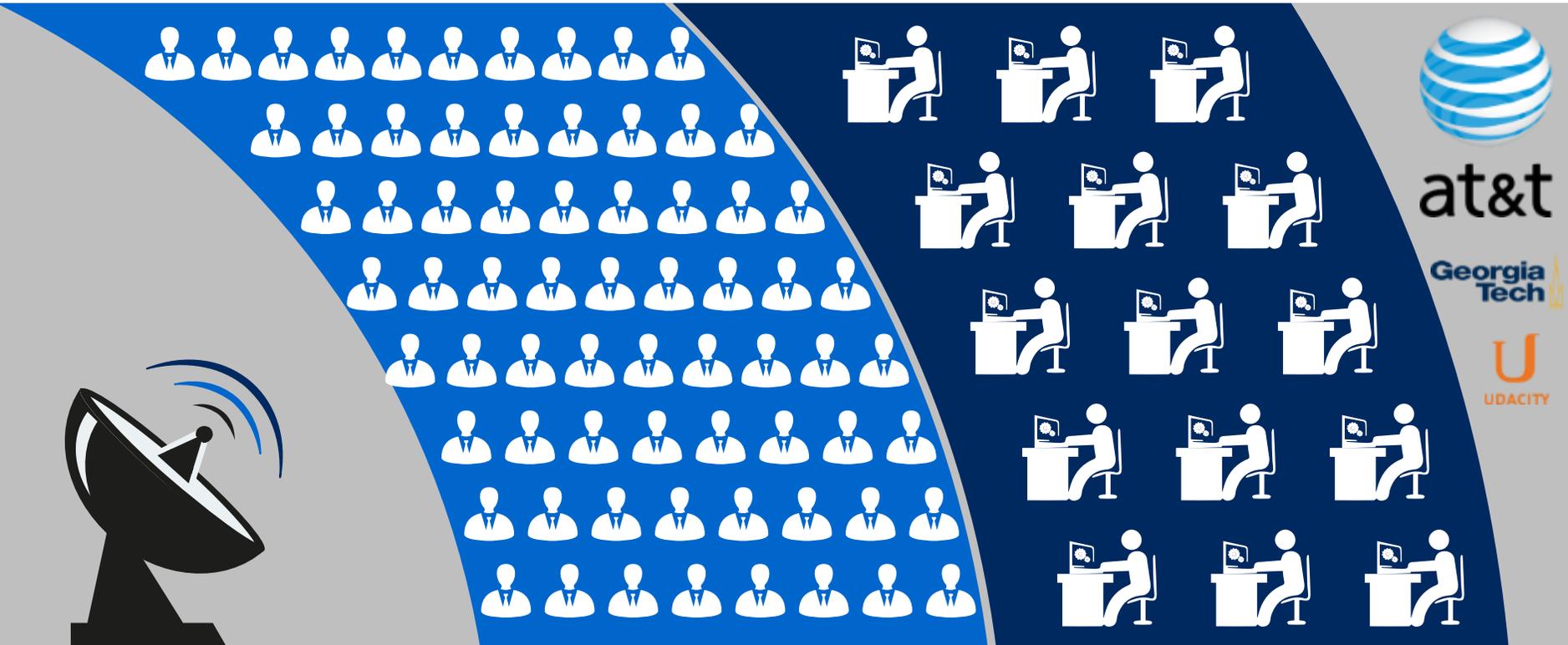
3  Design a flexible organisation

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 **AT&T is reinvigorating its talent management by partnering with a university to provide low-cost worker training**



Telecom being disrupted – 2.6B will use smartphones by 2018

**AT&T's challenge:** 230,000 employees, with skills becoming **obsolete** **83% faster** than just a few years ago

**AT&T's response:** partnering to provide online MSc in Computer Science to **2,200** employees at **\$200/month**

 **Advanced data analytics is opening up new ways to predict successful hires**



Uses an online test and sorts applicants using an algorithm identifying **traits associated with retention**, giving candidates a 0-100 score



**Reduced attrition to 4% per annum**, and was able to decrease hiring timeline to less than 2 months



Screens applicants based on **data points associated with retention** (e.g., having a short commute)



Saw **20% reduction in call centre attrition**, significantly reducing training costs and improving quality



Screens for **traits correlated with abusing worker's compensation** (e.g., driving record)



Achieved **68% decrease in worker's compensation claims**

## 2. TALENT AND HR



The 'new HR' is one of the hottest topics for managers today

HBR.ORG

# Harvard Business Review

JULY-AUGUST 2015

106 *The HBR Interview*  
Sony's Michael Lynton  
on the Hacking Debacle

38 *The Big Idea*  
Intel's Employer-Led  
Health Care Revolution  
Patricia A. McDonald et al.

118 *Managing Yourself*  
Job Search: Ace  
the Assessment  
Tomás Chamorro-Premuzic



IT'S TIME TO BLOW UP

# HR

AND BUILD SOMETHING NEW.

HERE'S HOW

PAGE 53

## Harvard Business Review



HUMAN RESOURCE MANAGEMENT

# People Before Strategy: A New Role for the CHRO

by Ram Charan, Dominic Barton, and Dennis Carey

## Implications for business

1  Think about growth in granular terms

2  Invest in talent and Human Resources

3  **Design a flexible organisation**

4  Foster agility

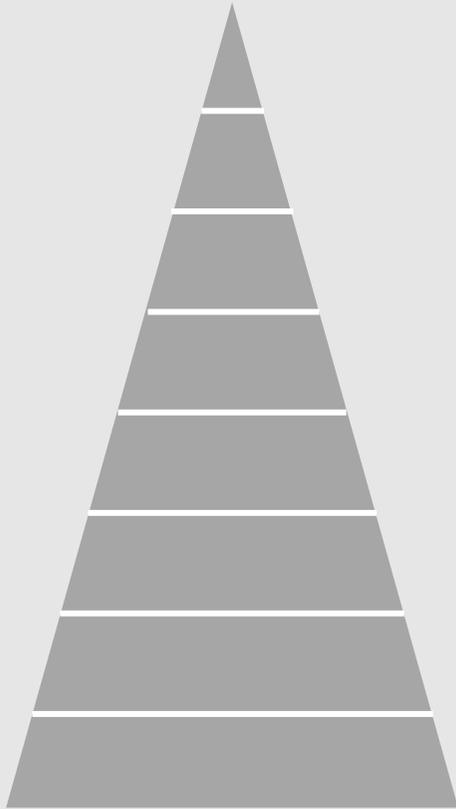
5  Know the risks and test your resilience

6  Digitise

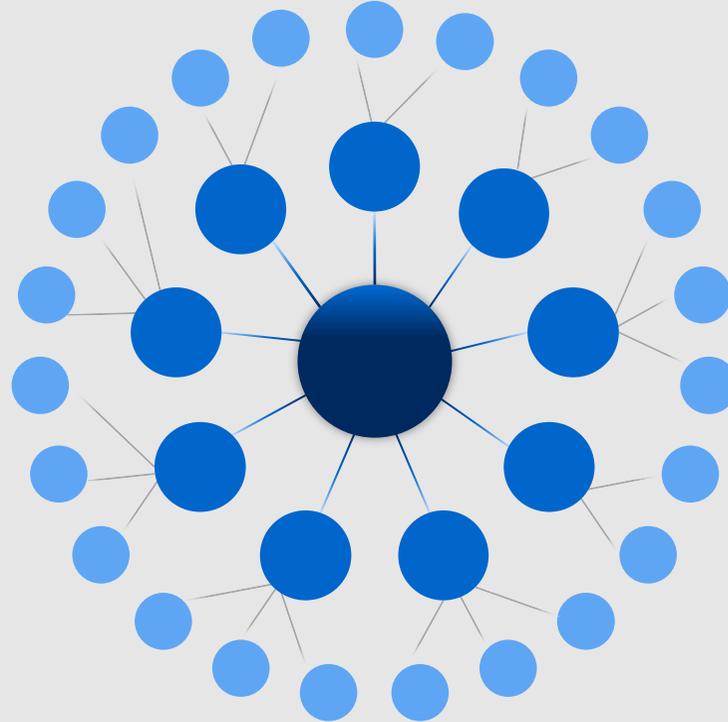
### 3. FLEXIBLE ORGANISATION



## The organisation of the future is a flatter, more decentralised model – as at Apple



Traditional hierarchy



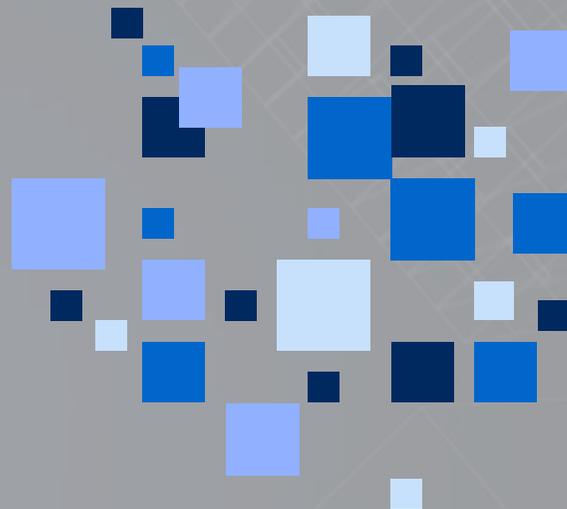
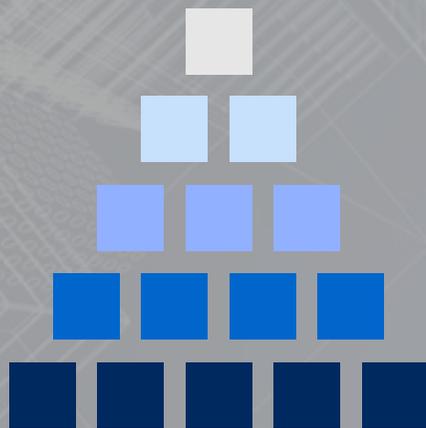
Organisation of the future

### At Apple:

- › 17 direct reports to Tim Cook
- › VPs in charge of critical pieces of work will temporarily report to the CEO

 Haier is restructuring to become an 'organisation of the future'

# Haier



Reorganised its 80,000-person workforce into **2,000 independent units**

Each unit manages its **own P&L**

Employees **paid on performance**

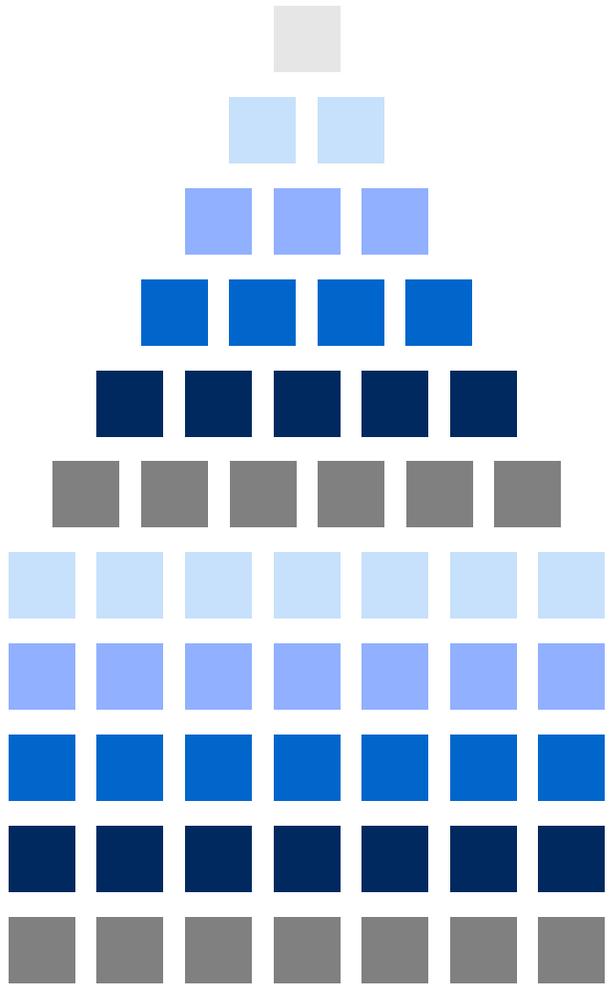
**Most valuable brand in China** for the past 13 years

**Market cap tripled** from 2011-2014

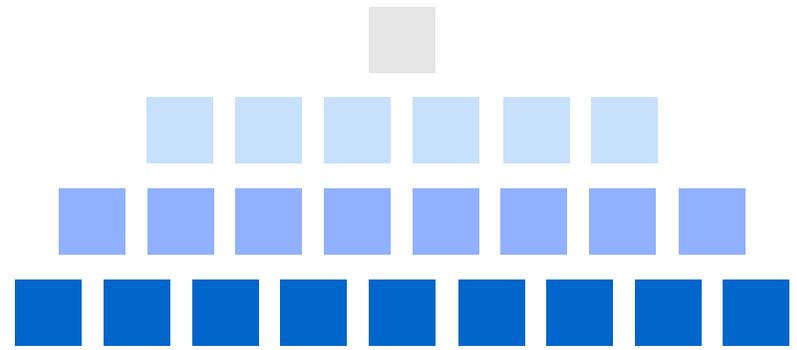
 DuPont has radically flattened and decentralised



1802 – early 2000s:  
11 layers



Early 2000s – today:  
4 layers



Organizational changes have helped **accelerate R&D significantly**

## Implications for business

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4  **Foster agility**

5  Know the risks and test your resilience

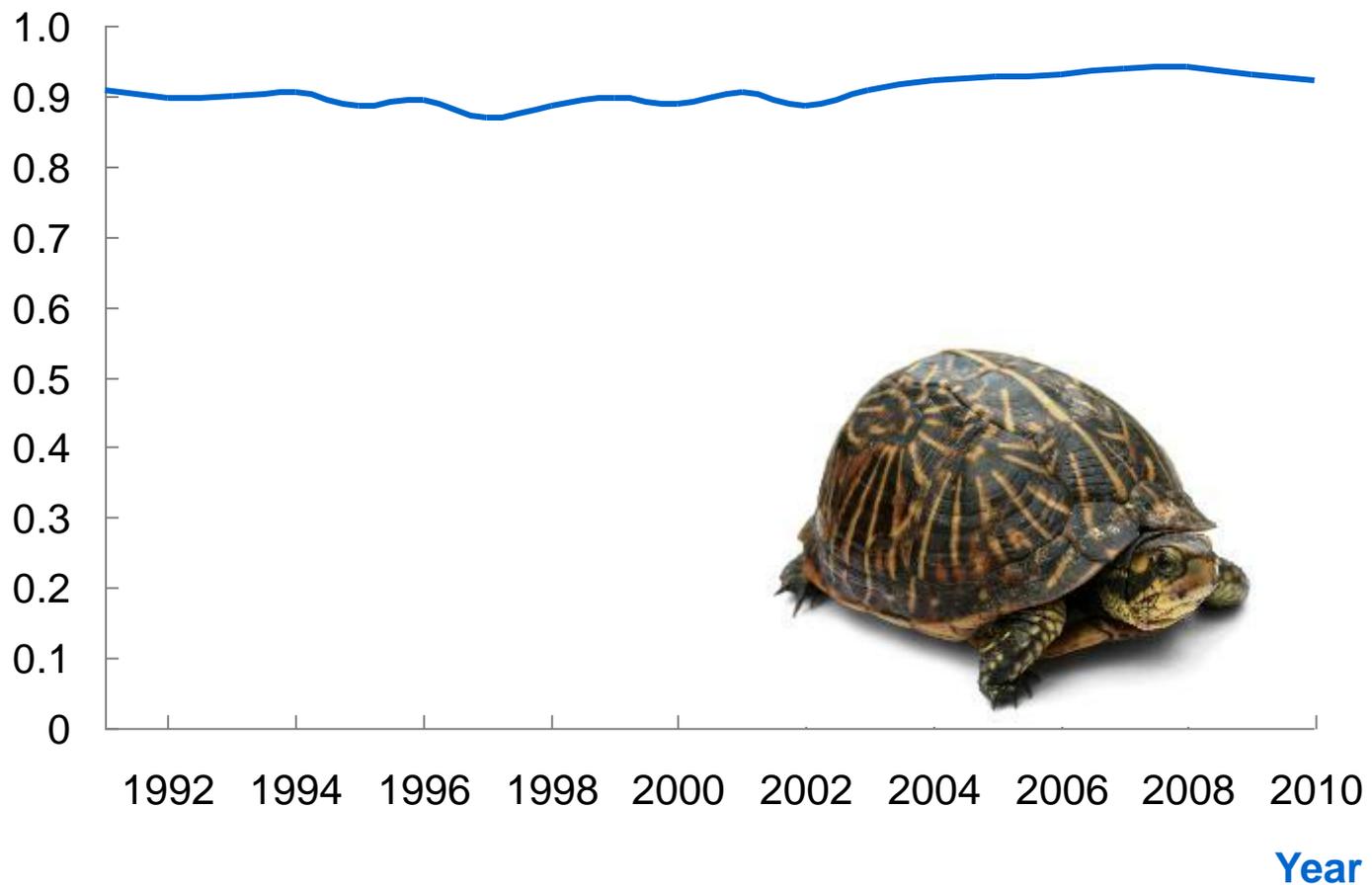
6  Digitise



# In the private sector, resource allocation is generally conservative

## Relative business unit year-to-year CapEx correlations<sup>1</sup>

Correlation index over years 1990-2010



**This year's allocation of CapEx is highly correlated with last year's allocation**

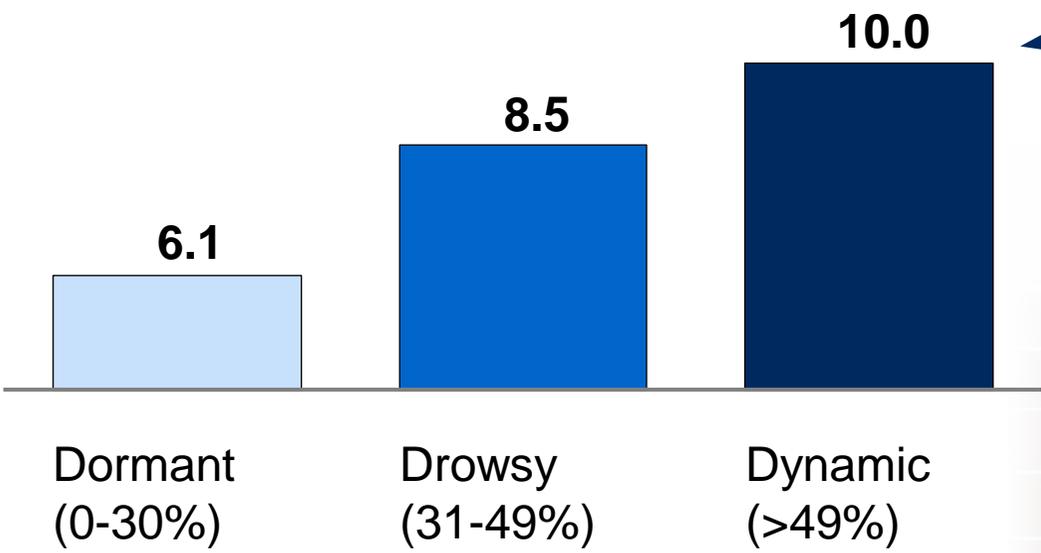
<sup>1</sup> Each year's proportion of company CapEx in each business unit was correlated to previous year's figure



However, top performing companies tend to be those that reallocate resources the most frequently

### Median TRS CAGR of companies by degree of reallocation

Percent, 1990-2010<sup>1</sup>



Degree of reallocation

A company growing at 10% CAGR v. 6.1% would be **worth twice as much** in 20 years



<sup>1</sup> n = 1,508 companies

SOURCE: McKinsey corporate strategy research program



## Toyota has introduced 'factories-in-a-box' that create greater operational flexibility



## Smaller, simpler factories give Toyota the agility needed to produce in emerging markets



**Small format factories** – produce 250 units / day vs. 2,500 at larger plants



Can function with **low automation**



Up-front investment **40% less** than for traditional plants

Factories can be built **quickly** and 'stacked,' allowing supply to be built up rapidly, anywhere

Allows for **opex-capex adjustment** and **reduces need for technical expertise** in young markets

**Capital can be saved** for future opportunities

4. AGILITY

Nutella's global value chain means that it can withstand shocks such as local supply shortages or currency fluctuations

Nutella global value chain

- Headquarters
- Main international suppliers
- Factories



Agile supply chain

250,000 tons of product are produced in 9 global factories

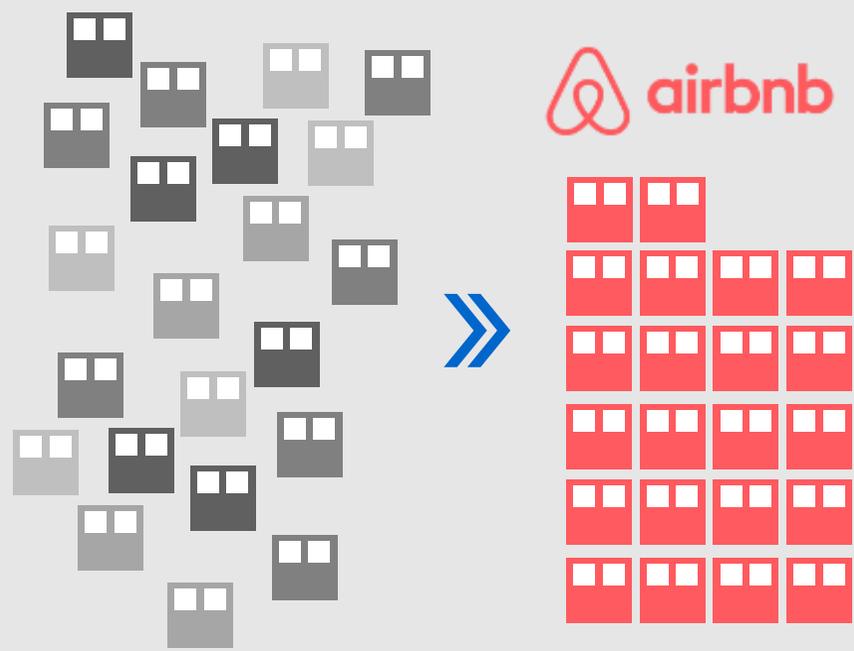
Packaging and some ingredients (e.g., skim milk) sourced locally; others (e.g., sugar, cocoa, vanillin, palm oil, hazelnut) sourced globally

4. AGILITY



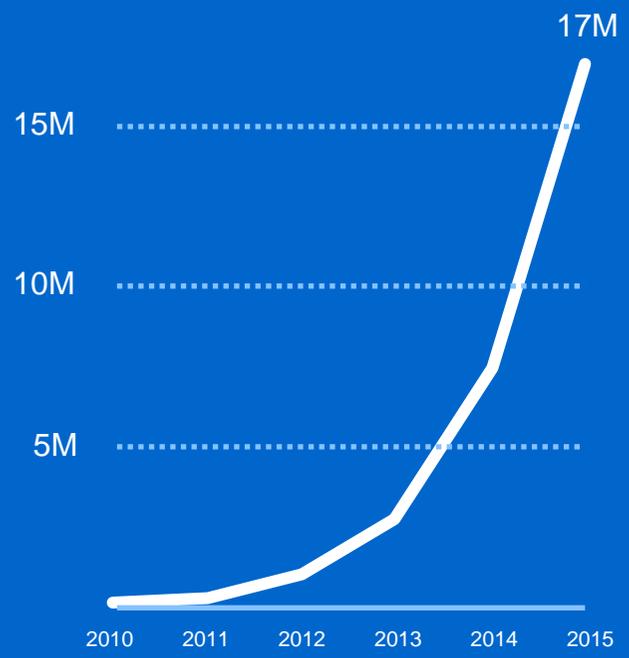
**Leveraging assets – rather than owning them – converts capex into opex and has allowed companies like Airbnb to rapidly scale**

Airbnb **leverages users' existing assets** – homes – to build a hotel business



Despite owning 0 properties and having only 1,600 employees, Airbnb has **grown 353 x in five years**

Number of Guests





## Partnering has allowed DJI to rapidly expand its product range – and market share



- Focuses on core tech and **provides developer kit for free** – allowing others to build apps (e.g., 3D mapping app)
- Known for excellent operating model and range of apps
- Has grown to **~\$9B valuation and #1 market share** in private-use drones since founding in 2006



## Implications for business

1  Think about growth in granular terms

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3  Design a flexible organisation

4  Foster agility

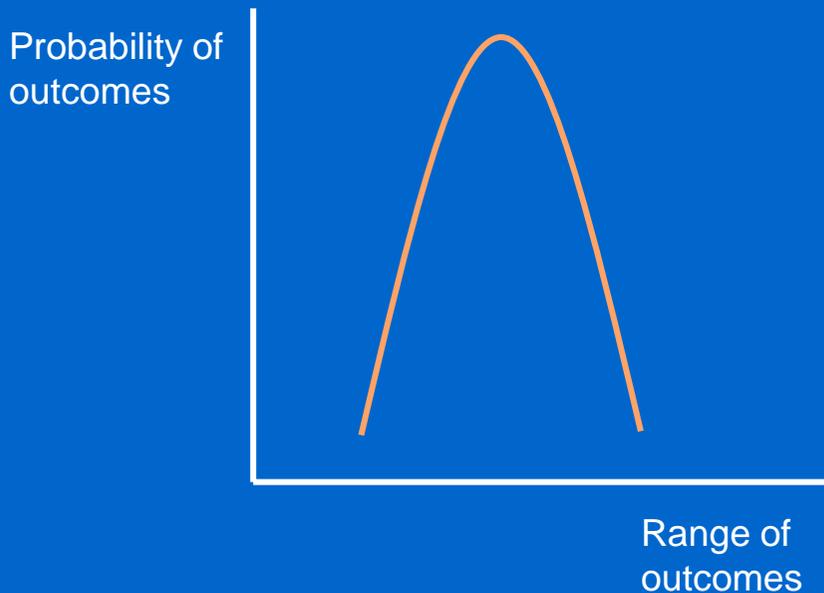
5  **Know the risks and test your resilience**

6  Digitise

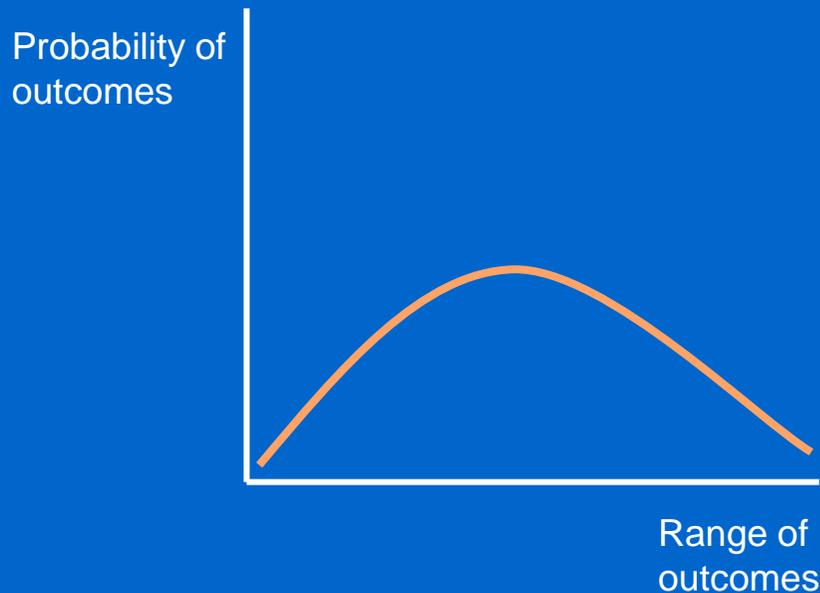
 **As global growth has diverged, volatility has become the norm – everything is a variable**

**From a relatively narrow set of possibilities ... to 'edge cases' becoming normal**

1990s & 2000s



2010s - ?



**Volatility manifests across the global economic system, e.g.:**

Oil prices

Commodity prices

Equity markets

Exchange rates

 **Companies are encouraging transparency to surface risks before crises**



Encourages complete transparency on potential risks and delays, even if they would be costly to address

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Ford Edge team **admitted pre-launch issues**, delaying launch, and was **praised** by former CEO Alan Mullaly



Encourages “out of order” communication – between anyone, at any time, outside of the normal “chain of command”

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“Communication needs to be between **anybody at any time**”

– *President Ed Catmull*

**Transparency and freedom of communication are key to ensuring that risks are raised early and can be managed proactively**

 Digital also creates new risks

# SONY

“This was an **unparalleled and well-planned crime**, carried out by an organized group, for which **neither Sony nor other companies could have been fully prepared**”



– Investigations Team

Cybersecurity incidents have **increased 1,100%** over the last 5 years



## Implications for business

1  Think about growth in granular terms

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6  **Digitise**



# Digitisation is upending the “fundamental truths” of business

## What we used to believe

## Disrupting companies

~~1 Need to own assets to leverage their value~~



~~2 Marginal costs > 0~~



~~3 Core services need to be delivered by own employees~~



~~4 Competitors take years to emerge and scale~~



~~5 Disruption comes from within your industry~~



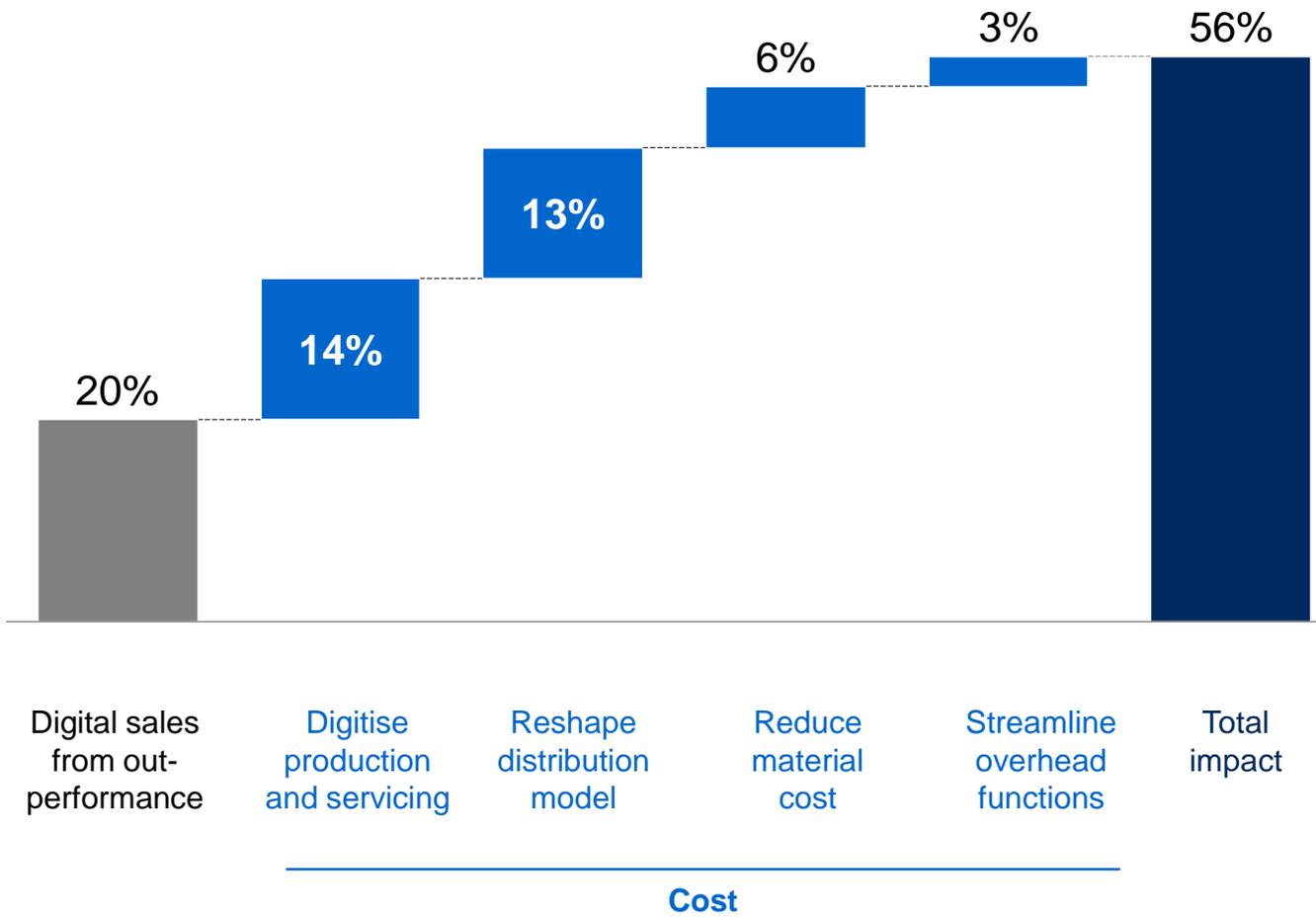
v.



6. DIGITISE

 To capture the digital opportunity, companies will need to understand the value at stake in their particular businesses

P&L impact of digital  
% of total



**Digital has the most impact on cost**

(36% impact on cost vs. 20% on revenue)



SOURCE: Digital Enterprise modeling

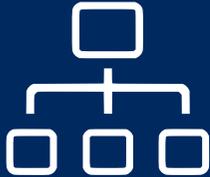


## Companies will also need to assess their “Digital Quotient” – does digital run through everything they do?

Scored out of 90

Based on 1,000s of benchmarks

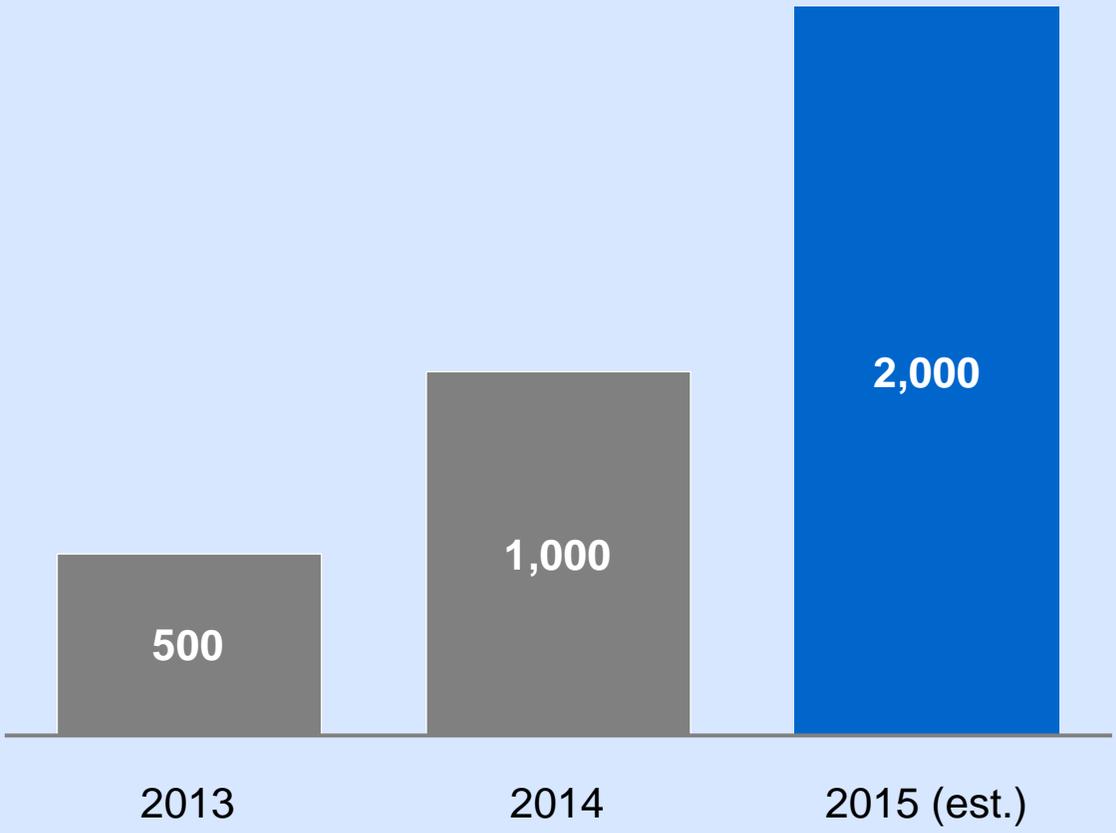


 <b>Strategy</b>	 <b>Culture</b>	 <b>Organization</b>	 <b>Capabilities</b>
<p>Bold, long-term orientation</p>	<p>Risk appetite</p>	<p>Roles and responsibilities</p>	<p>Connectivity</p>
<p>Linked to business strategy</p>	<p>Speed / agility</p>	<p>Talent and leadership</p>	<p>Content and digital marketing</p>
<p>Centered around customer needs</p>	<p>Test and learn</p>	<p>Governance / KPIs</p>	<p>Customer experience</p>
	<p>Internal collaboration</p>	<p>Digital investment</p>	<p>Data-driven decision-making</p>
	<p>External orientation</p>		<p>Automation</p>
			<p>IT architecture</p>



# CDOs are increasingly a part of the top team at major multinationals, helping companies to digitise

## Number of companies with CDOs



## Examples

**BBVA**

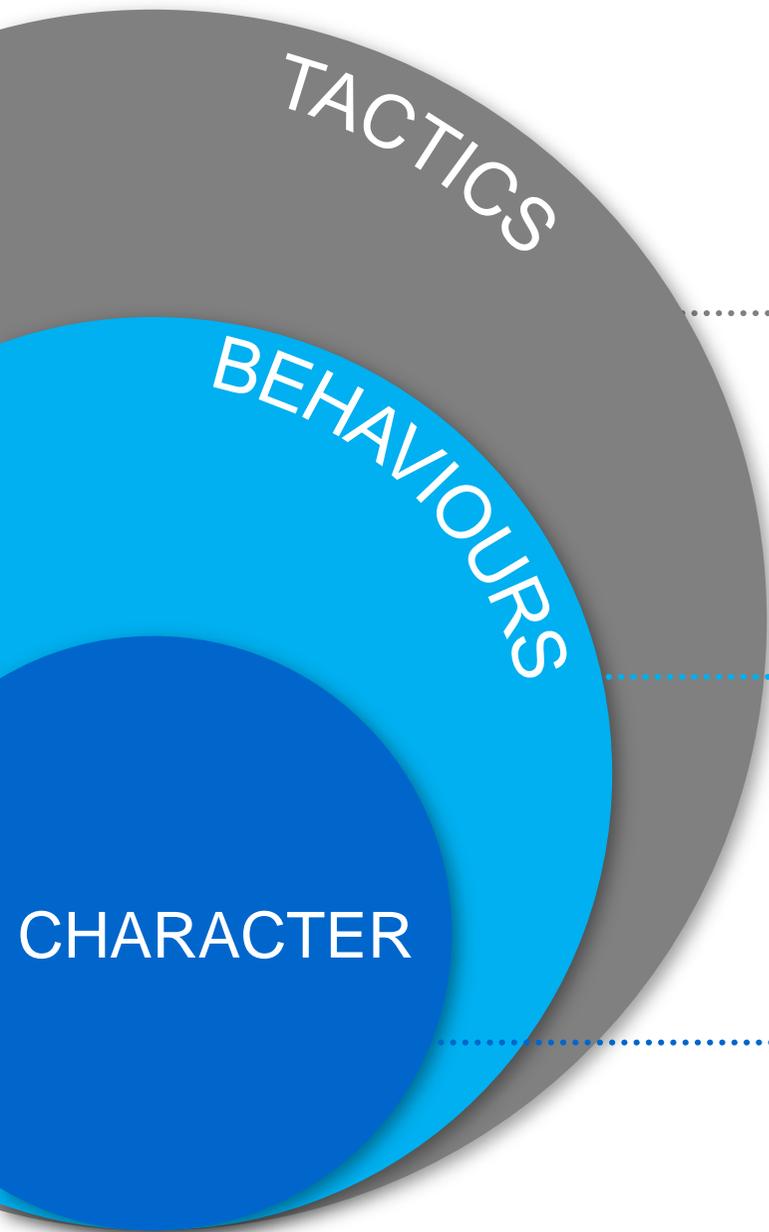
**BBC**

**verizon**

**Bank of America**

**Walmart**

# Character, behaviours, and tactics of 21st century leaders



*'Chief People Officer'*



*Set bold ambition*



*Manage energy*



*Telescope & microscope*



*Radar & lightning rod*



*Influence without authority*



*Purpose & resilience*



*Persistence & drive*



*Selflessness & broad-mindedness*



*Judgment & decisiveness*



*Absorb & compartmentalize*

