



Global megatrends and implications for leaders

Dominic Barton | Global Managing
Director, McKinsey & Company

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

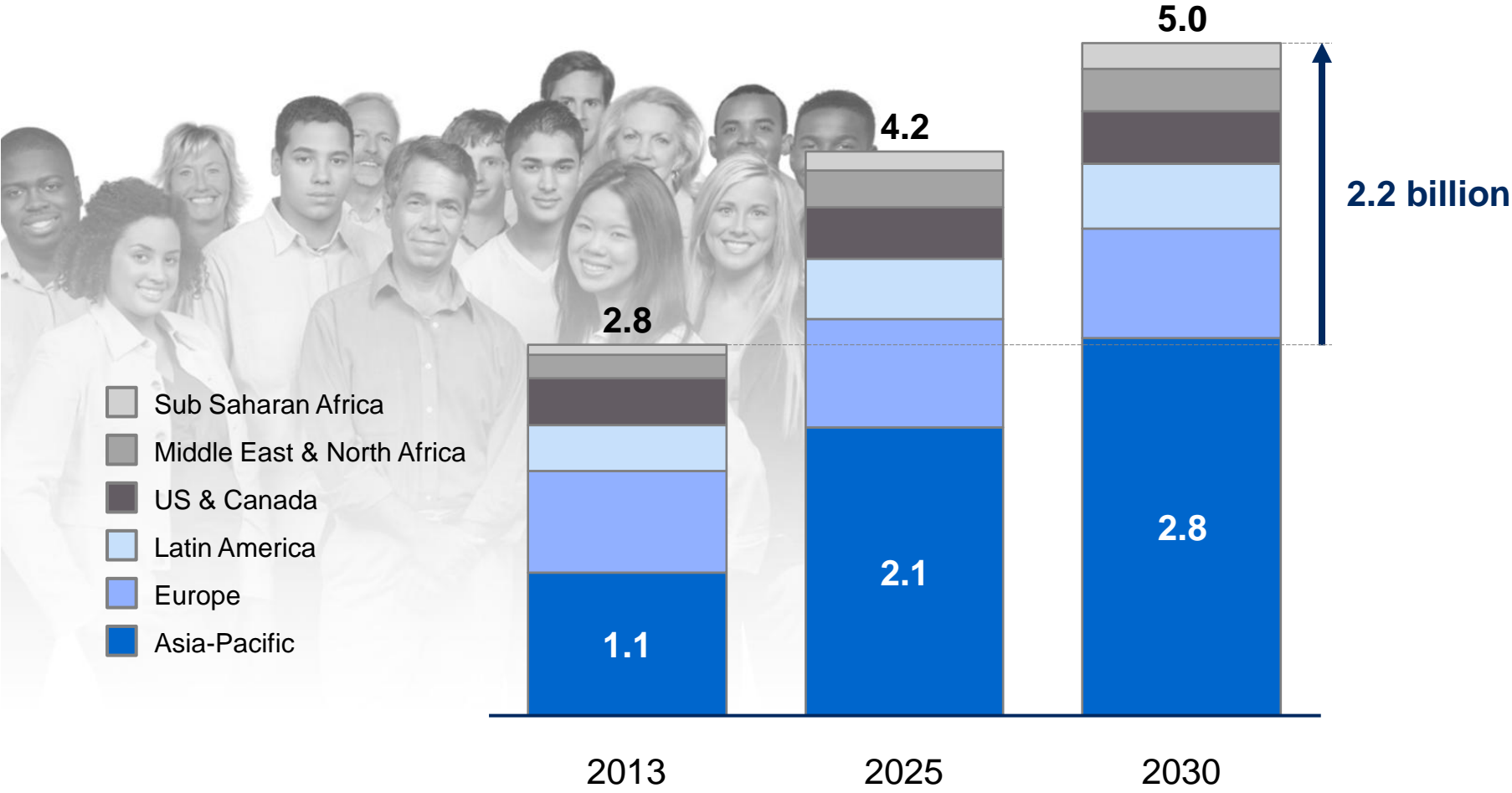


1. THE RISE OF EMERGING MARKETS

There will be 2.2 billion new middle class consumers by 2030

Global middle class¹

Billions of people



¹ Annual personal income \$3,600 and over

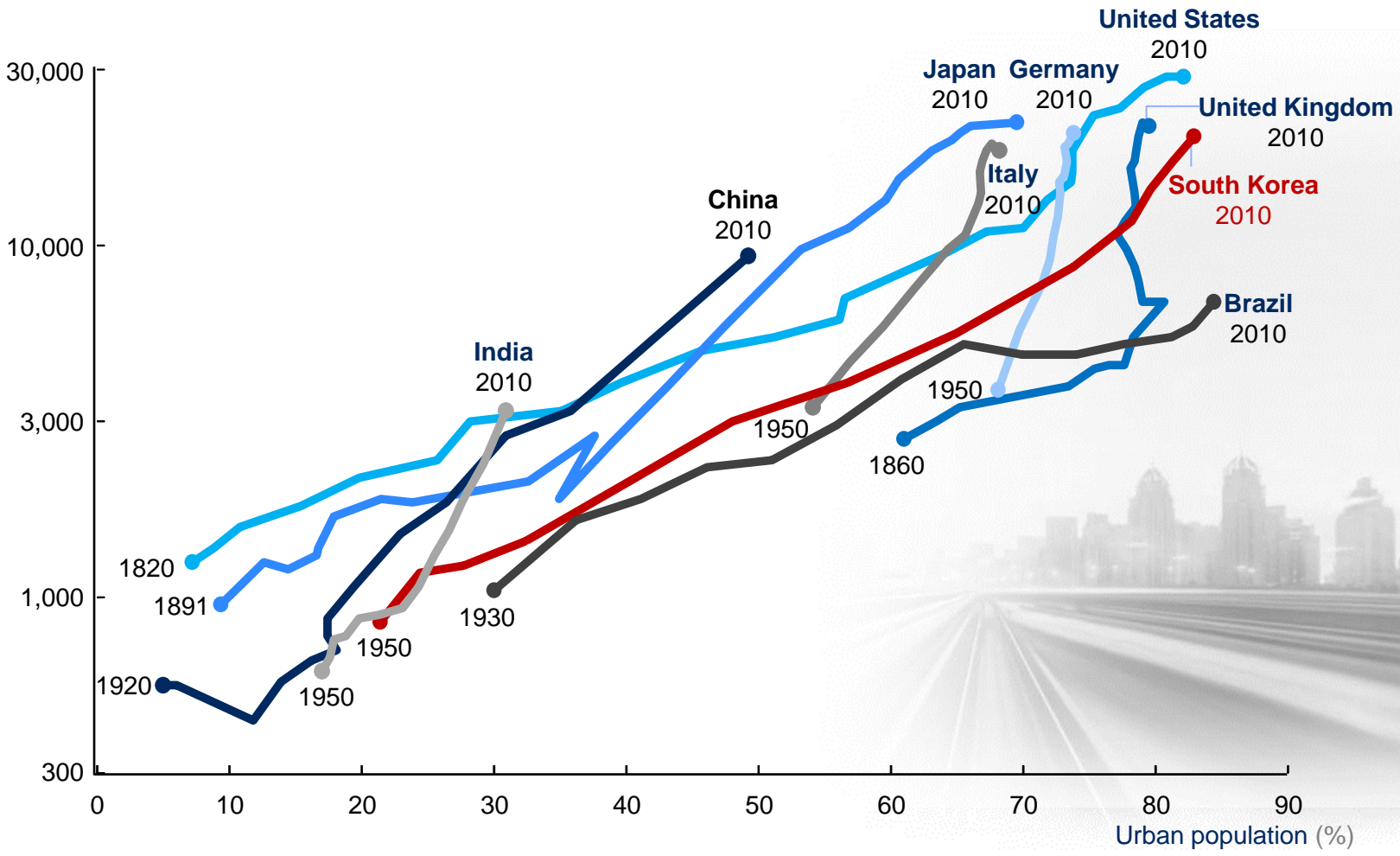
SOURCE: United Nations World Population Prospects; McKinsey Global Institute CityScope

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

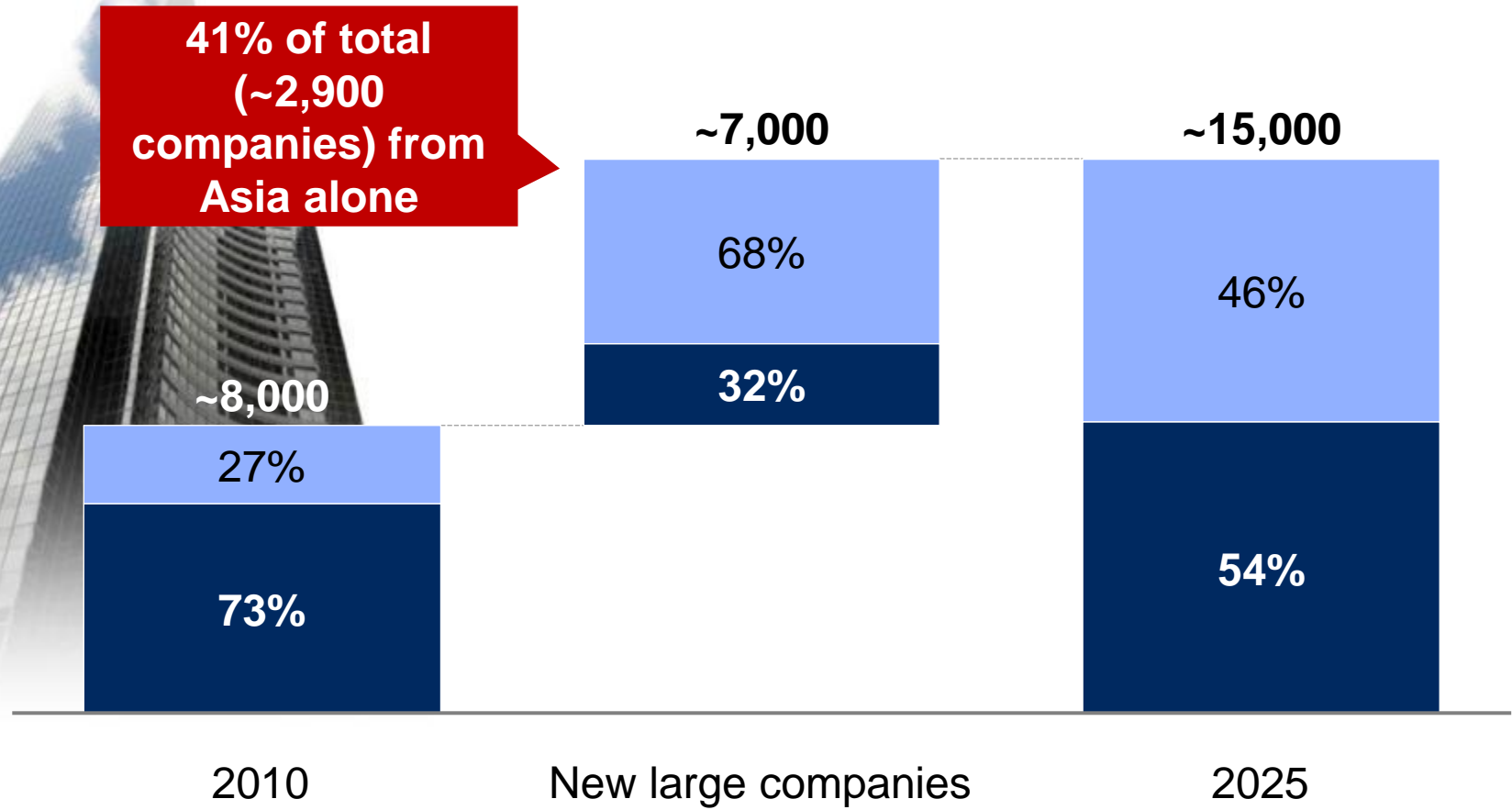


By 2025, almost half of the world's billion-dollar-plus companies will be headquartered in emerging markets

Number of companies with \$1B+ revenue

%, number of large companies

- Emerging regions
- Developed regions

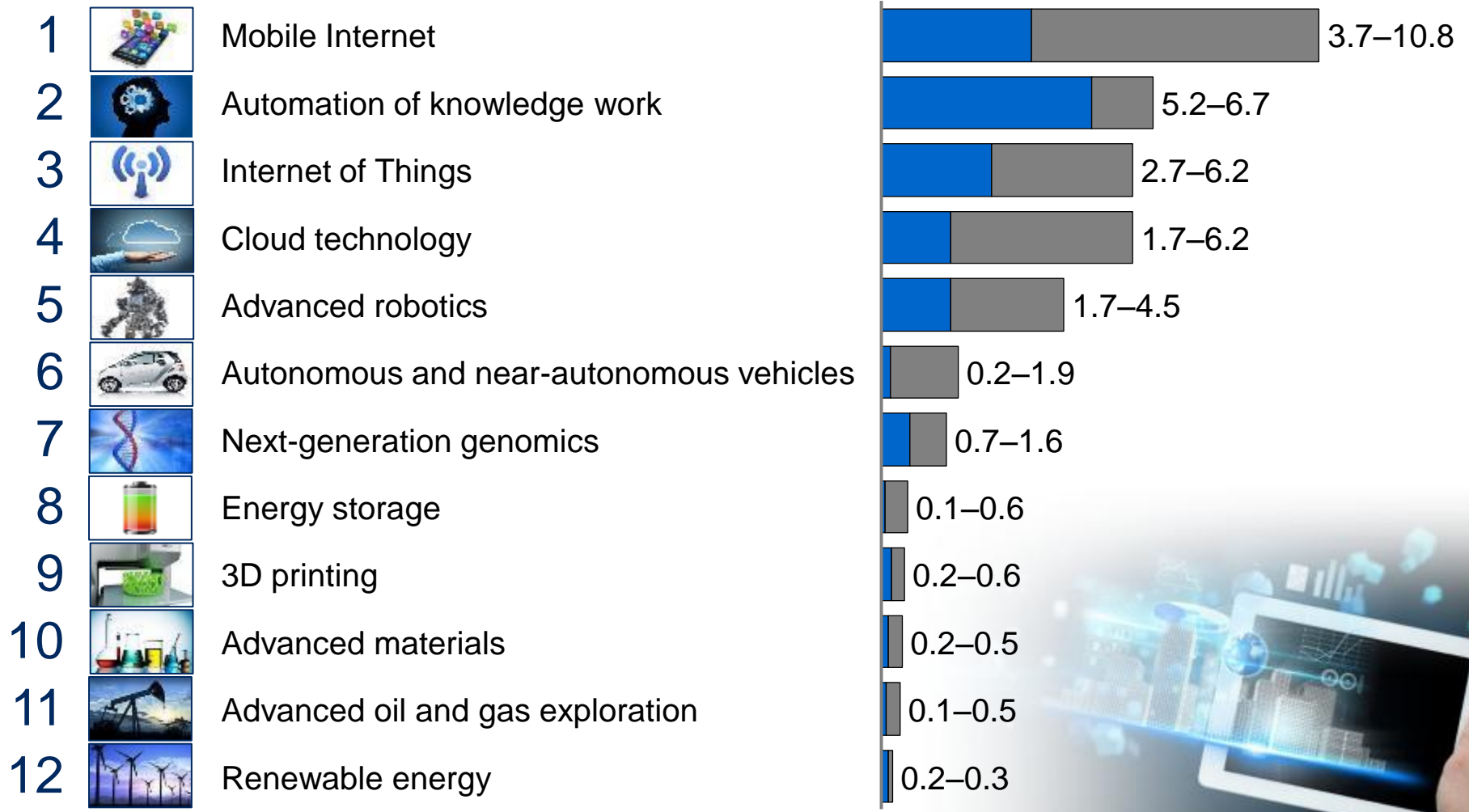


2. THE POWER OF DISRUPTIVE TECHNOLOGIES

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

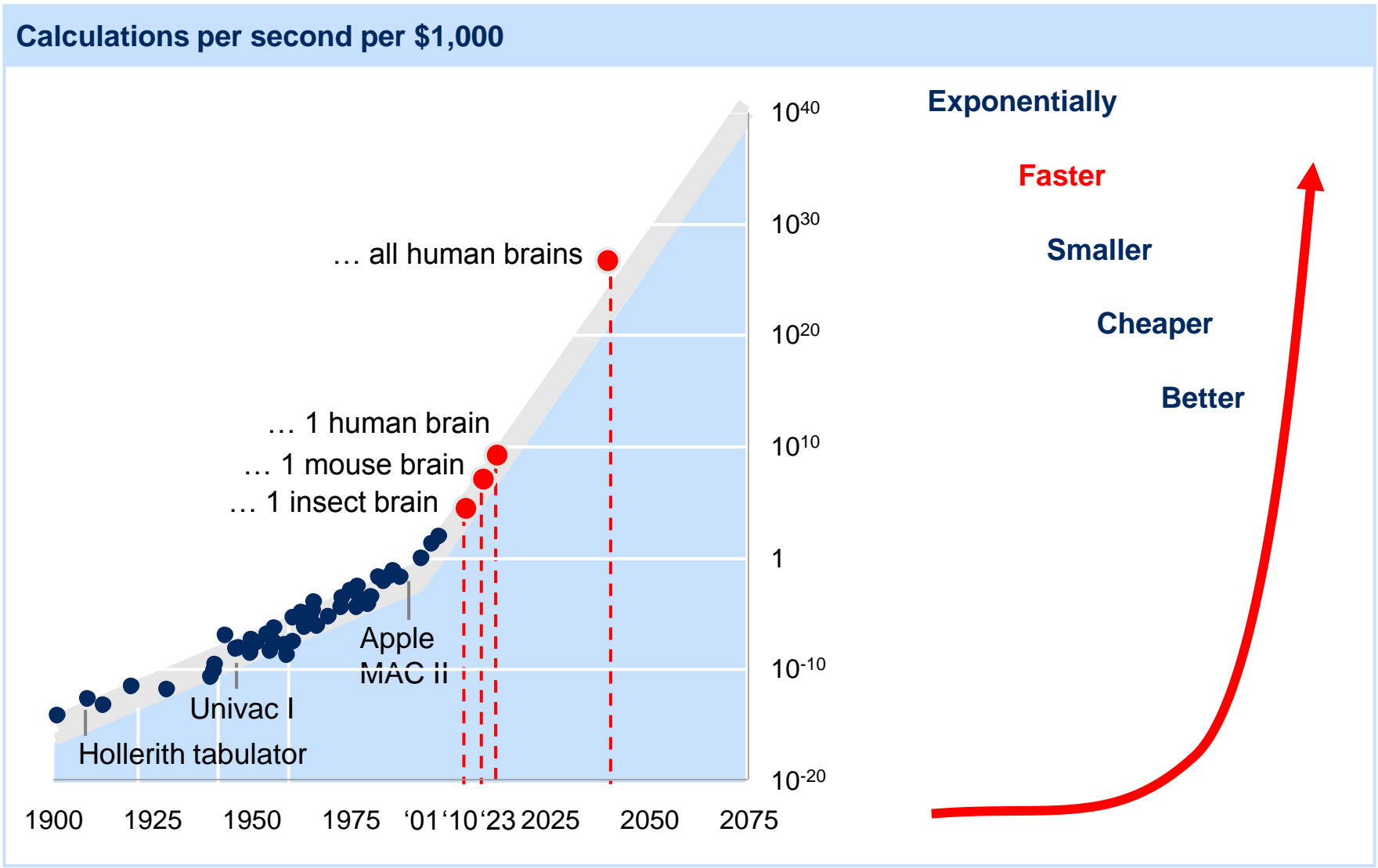


In the 1950s, nearly all goods were shipped 'loose'; today, **nearly 100% of sea freight is packed in standardized shipping containers**

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.**

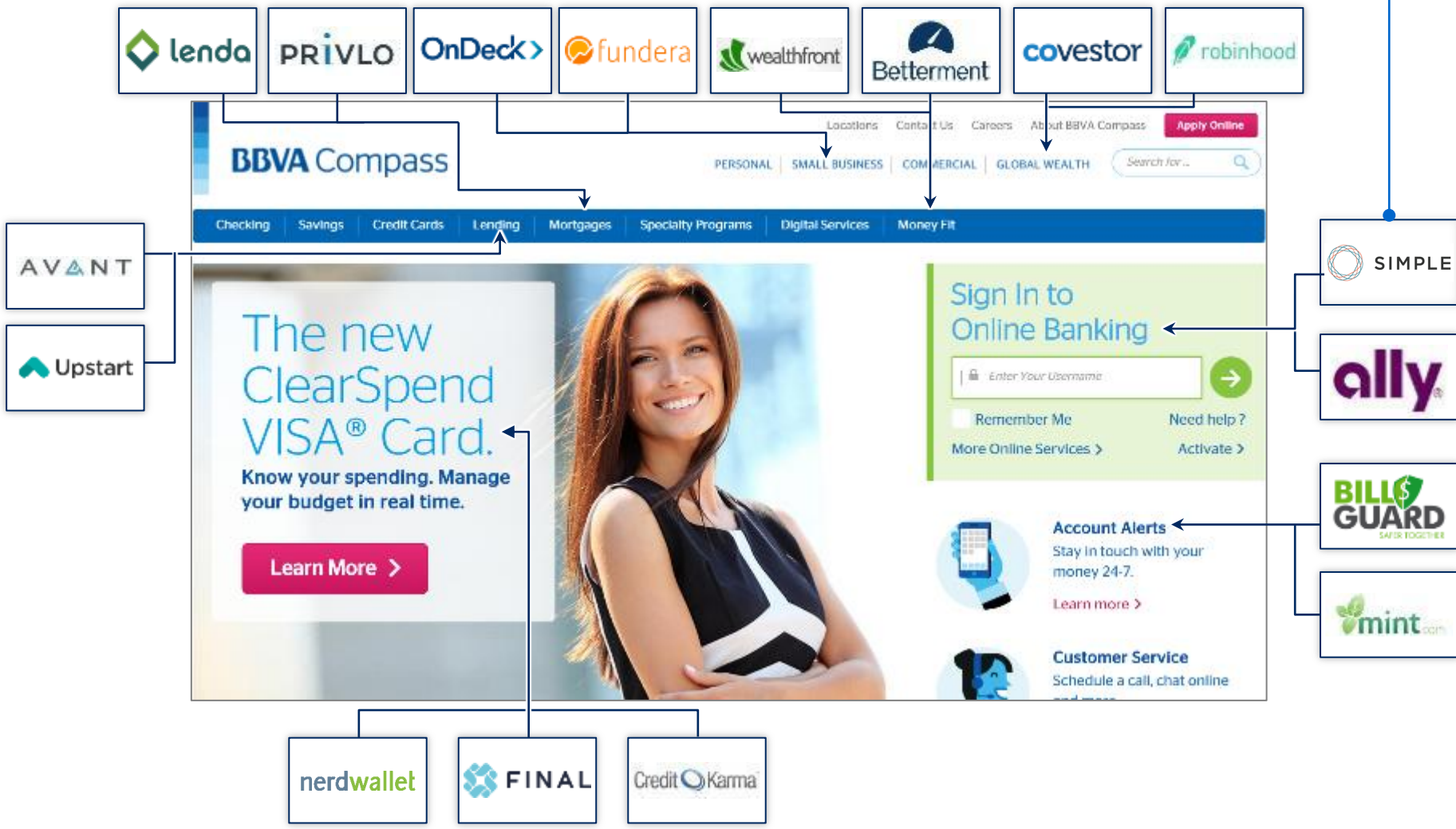
– BBVA executive chairman, Francisco González

”

2. THE POWER OF DISRUPTIVE TECHNOLOGIES

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

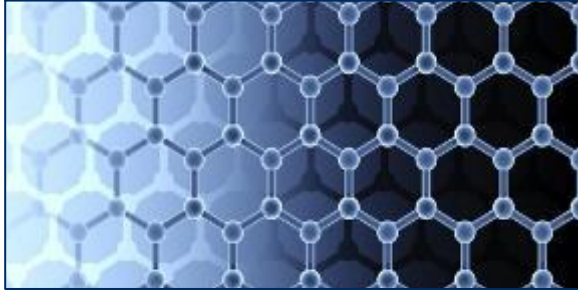
BBVA acquired Simple in 2014 to "disrupt itself"



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



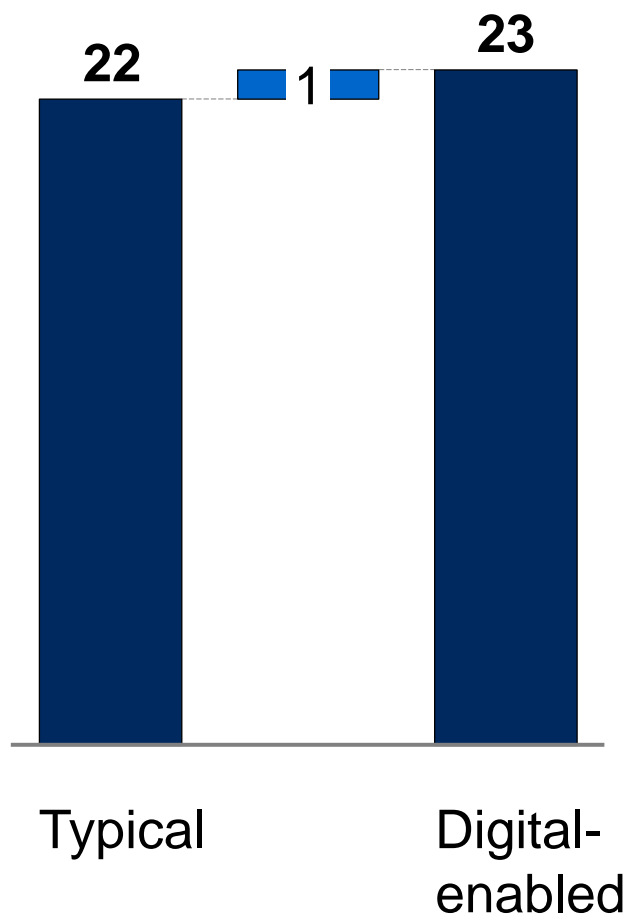
2. THE POWER OF DISRUPTIVE TECHNOLOGIES

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**

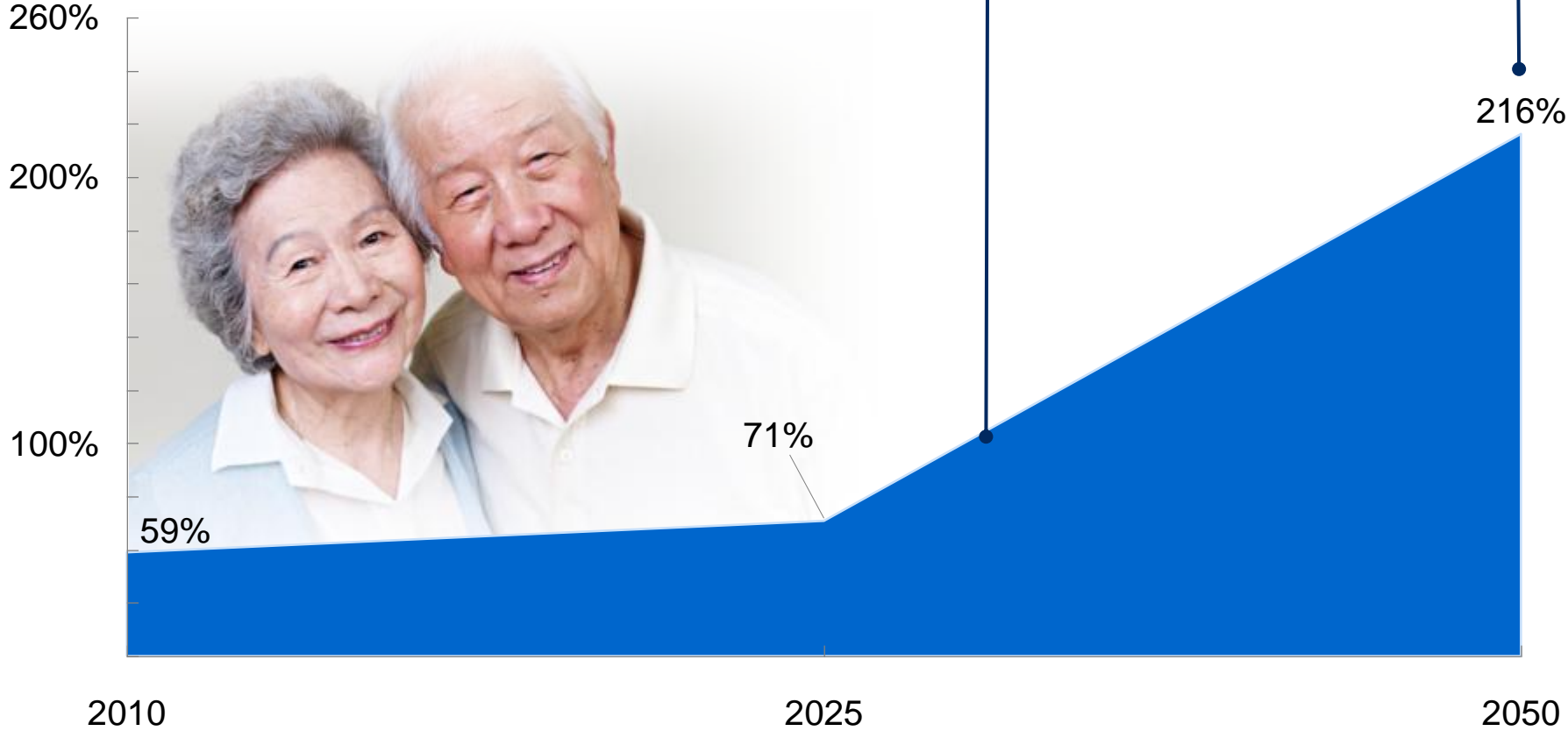
For the first time in history, there will be **more people 65+ than under the age of 14**

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**

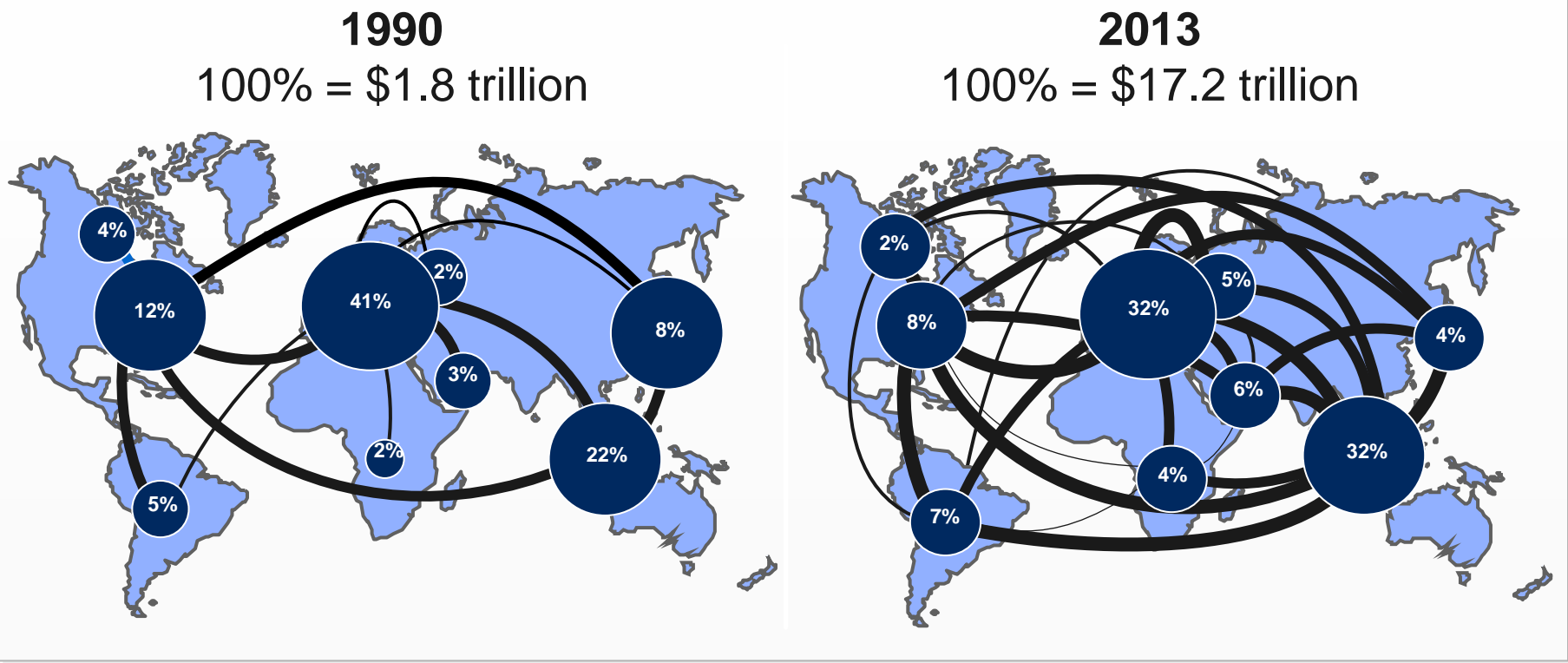
SOURCE: Standard and Poor's

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

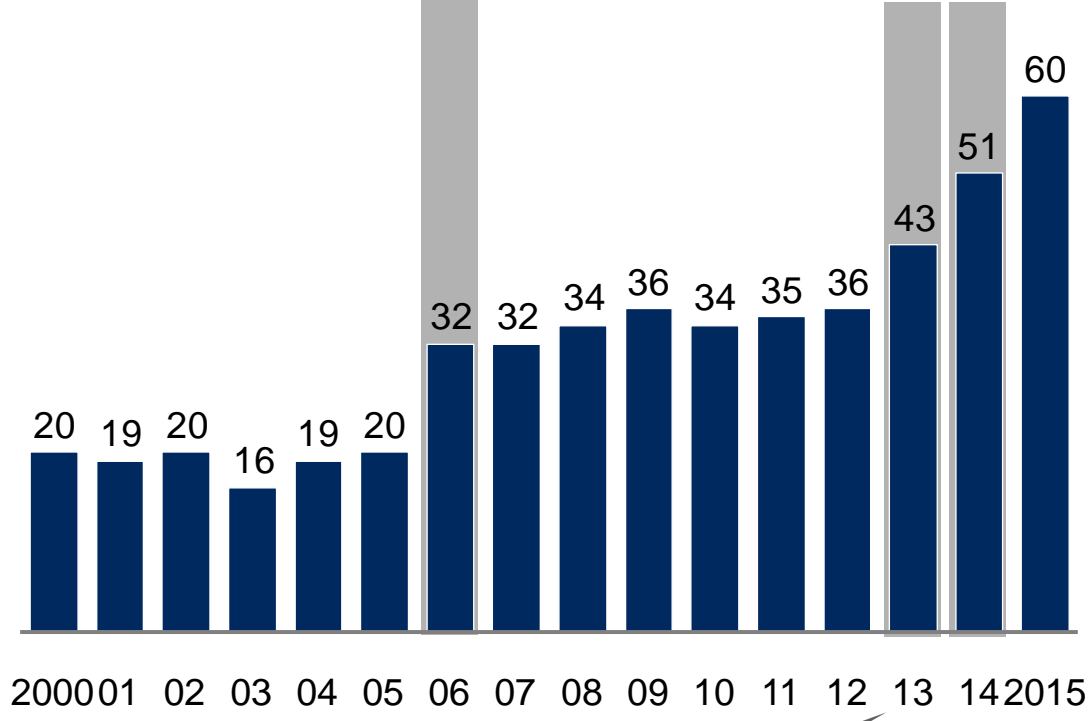
4. THE INTEGRATING WORLD

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')

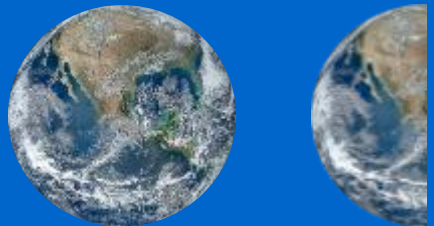
ISIS emerges as an autonomous entity

Number of migrants surpasses WWII level

4. THE INTEGRATING WORLD

Without action, this path will be unsustainable for the planet

2007

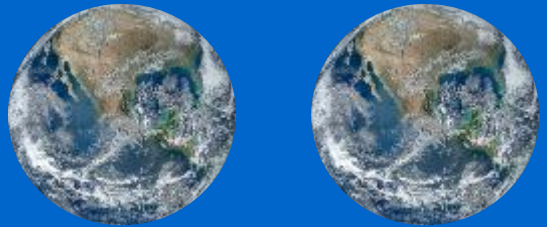


1.5 planets



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%¹ of executives say geopolitical instability is a top 5 threat to global growth over the next 12 months...

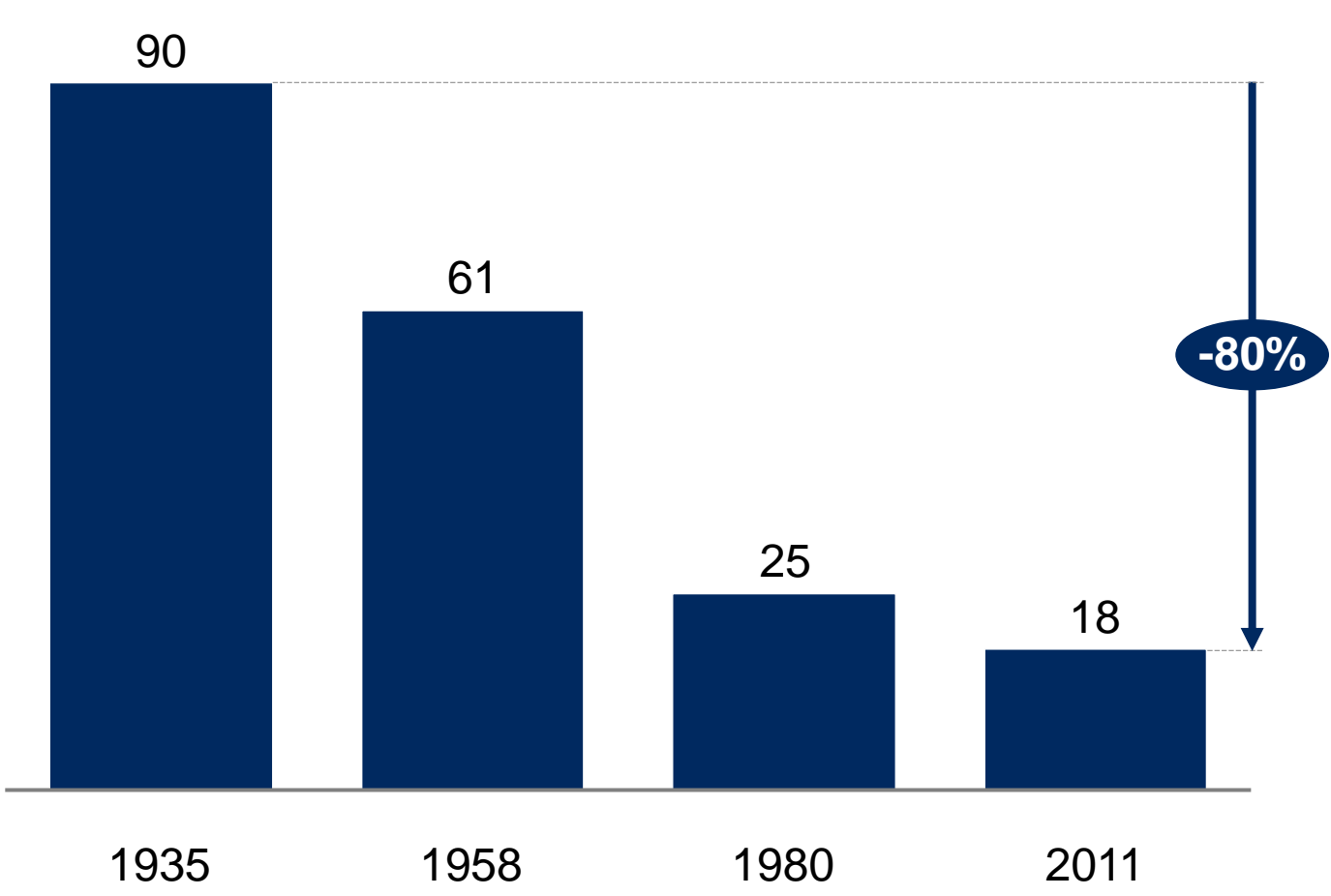
...this is more than cited defaults on sovereign debt (39%), slowing consumer demand (22%), and new asset bubbles (20%)

¹ 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

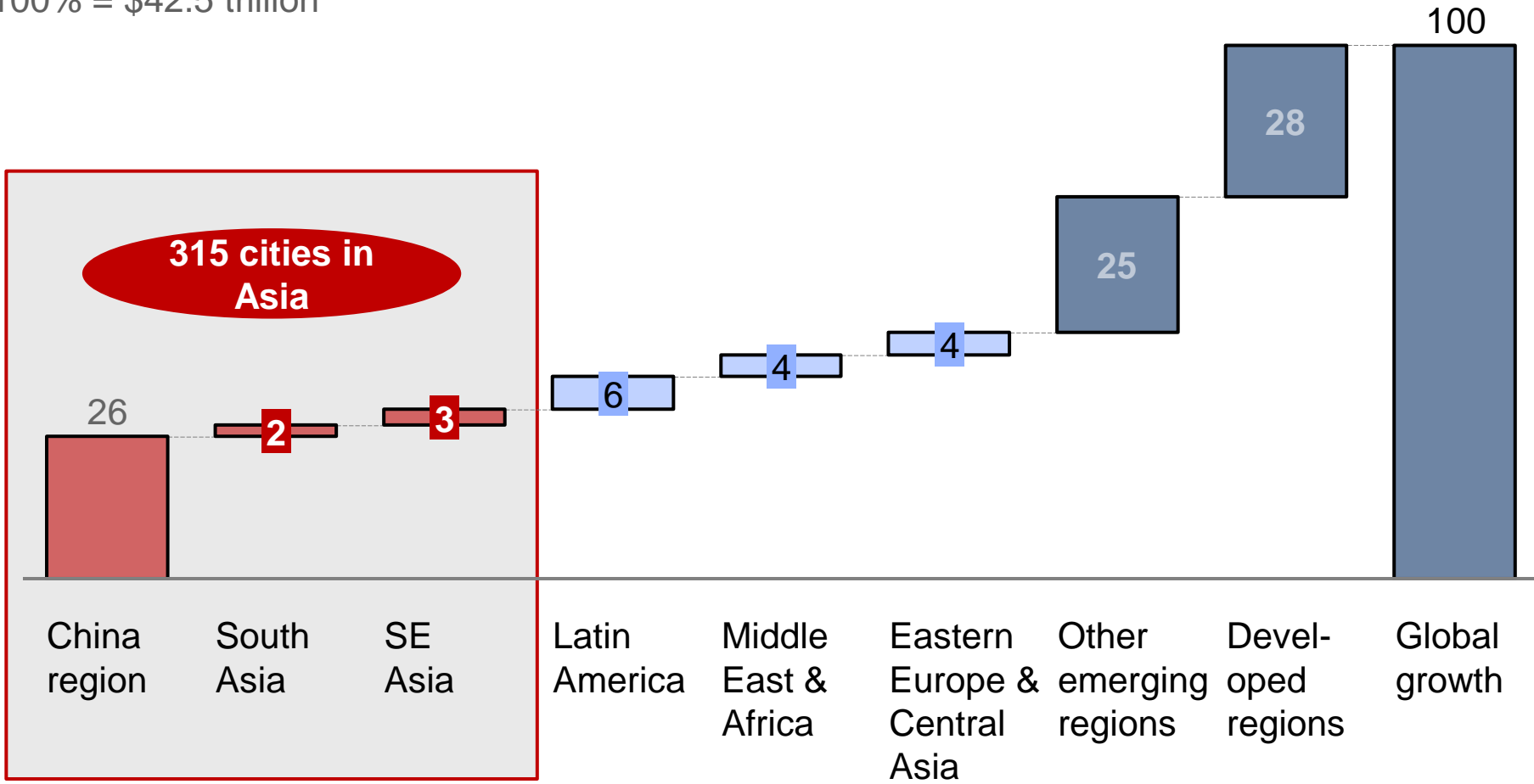
1. GRANULAR GROWTH



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 and 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

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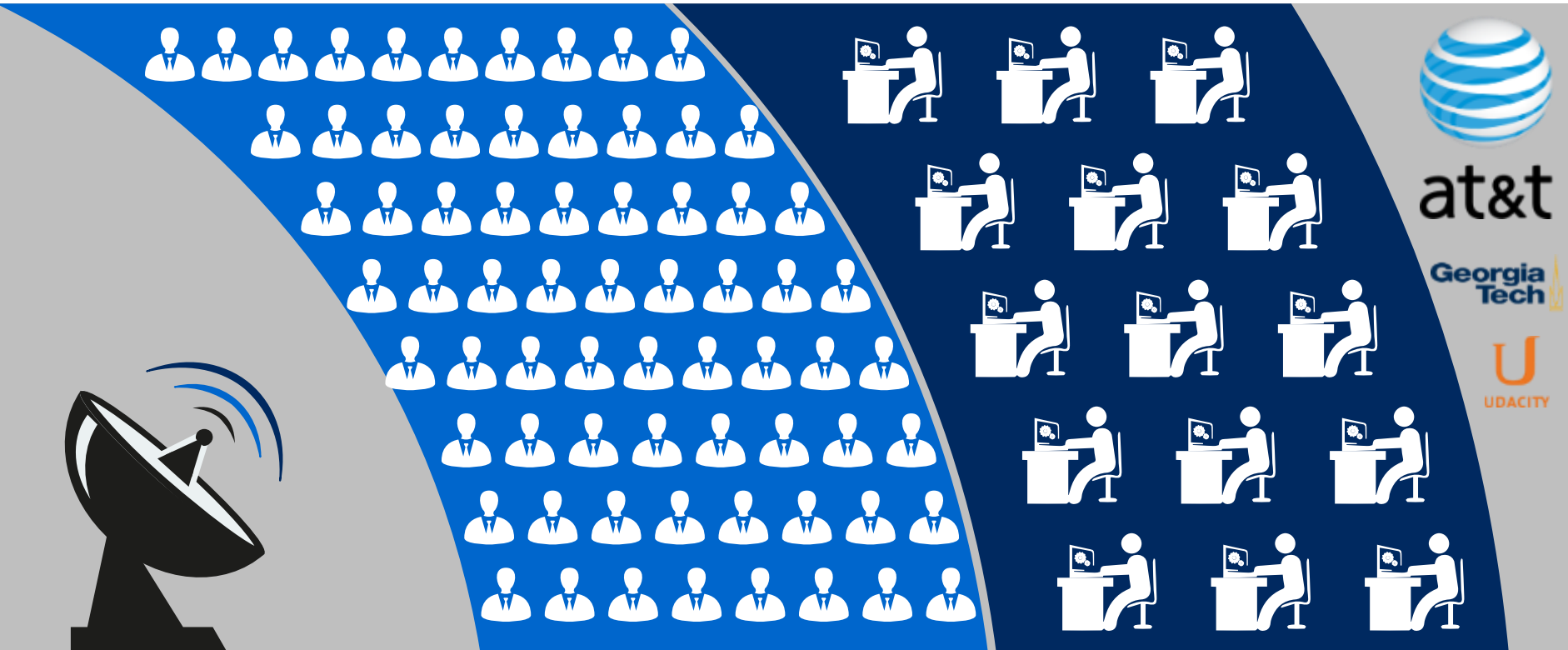
3  Design a flexible organisation

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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

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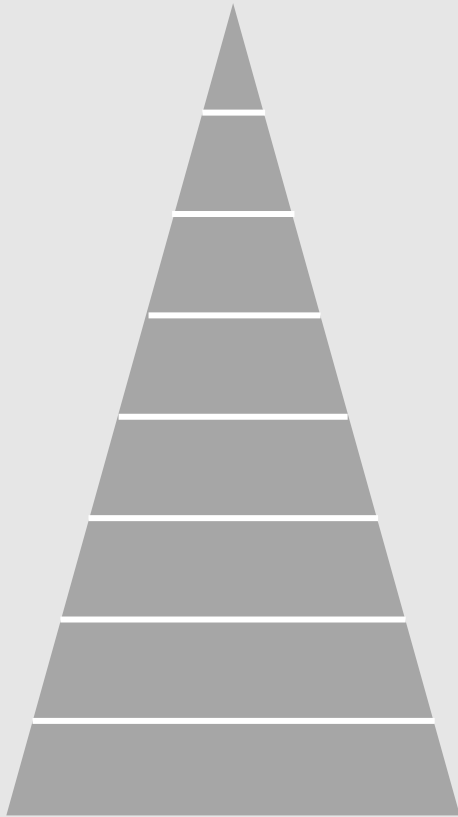
5  Know the risks and test your resilience

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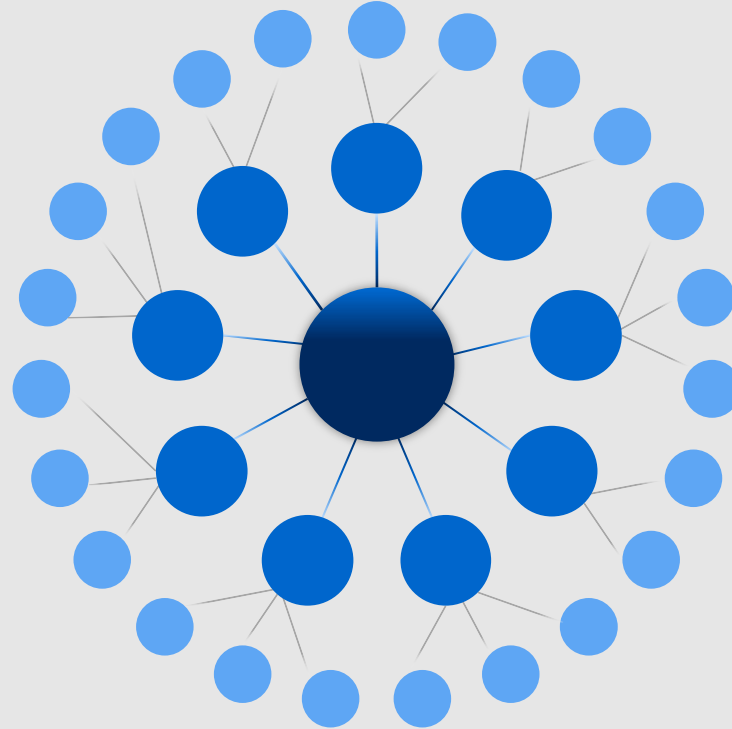
3. FLEXIBLE ORGANISATION



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



Traditional hierarchy



Organisation of the future

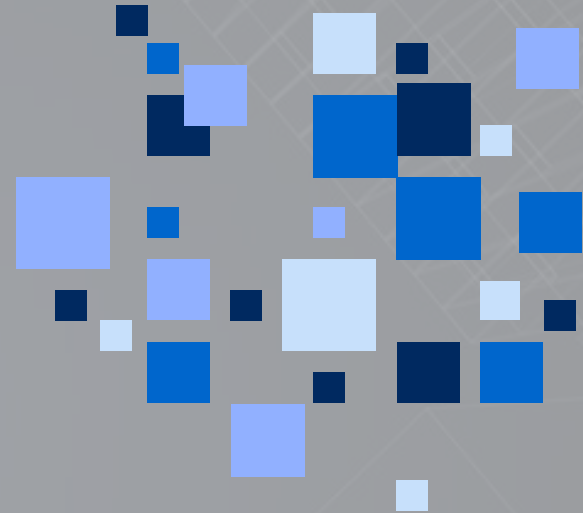
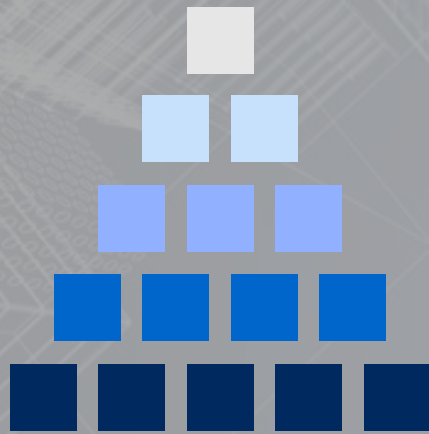
At Apple:

- › 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

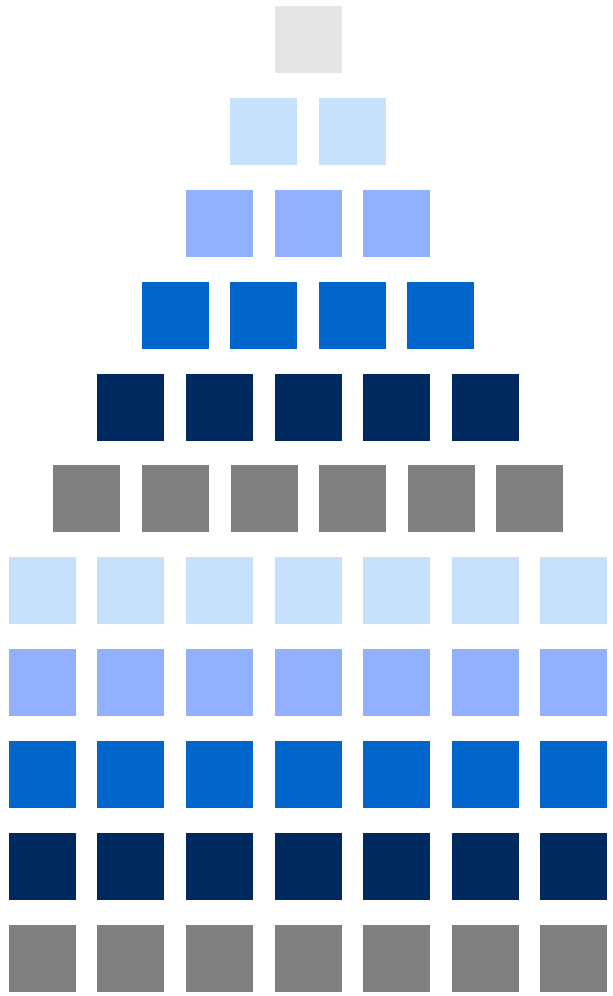
Market cap tripled from 2011-2014



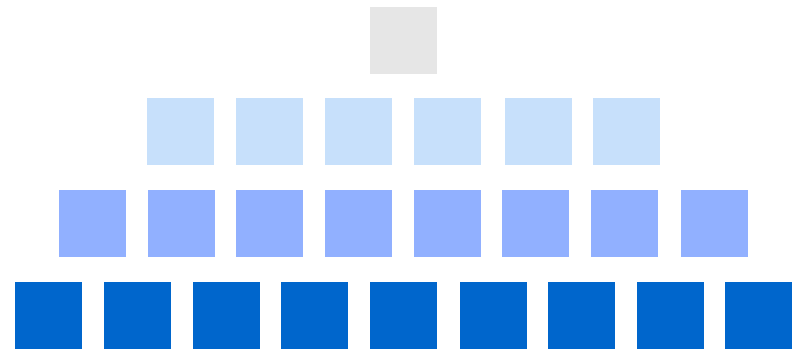
DuPont has radically flattened and decentralised



1802 – early 2000s:
11 layers



Early 2000s – today:
4 layers



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

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5  Know the risks and test your resilience

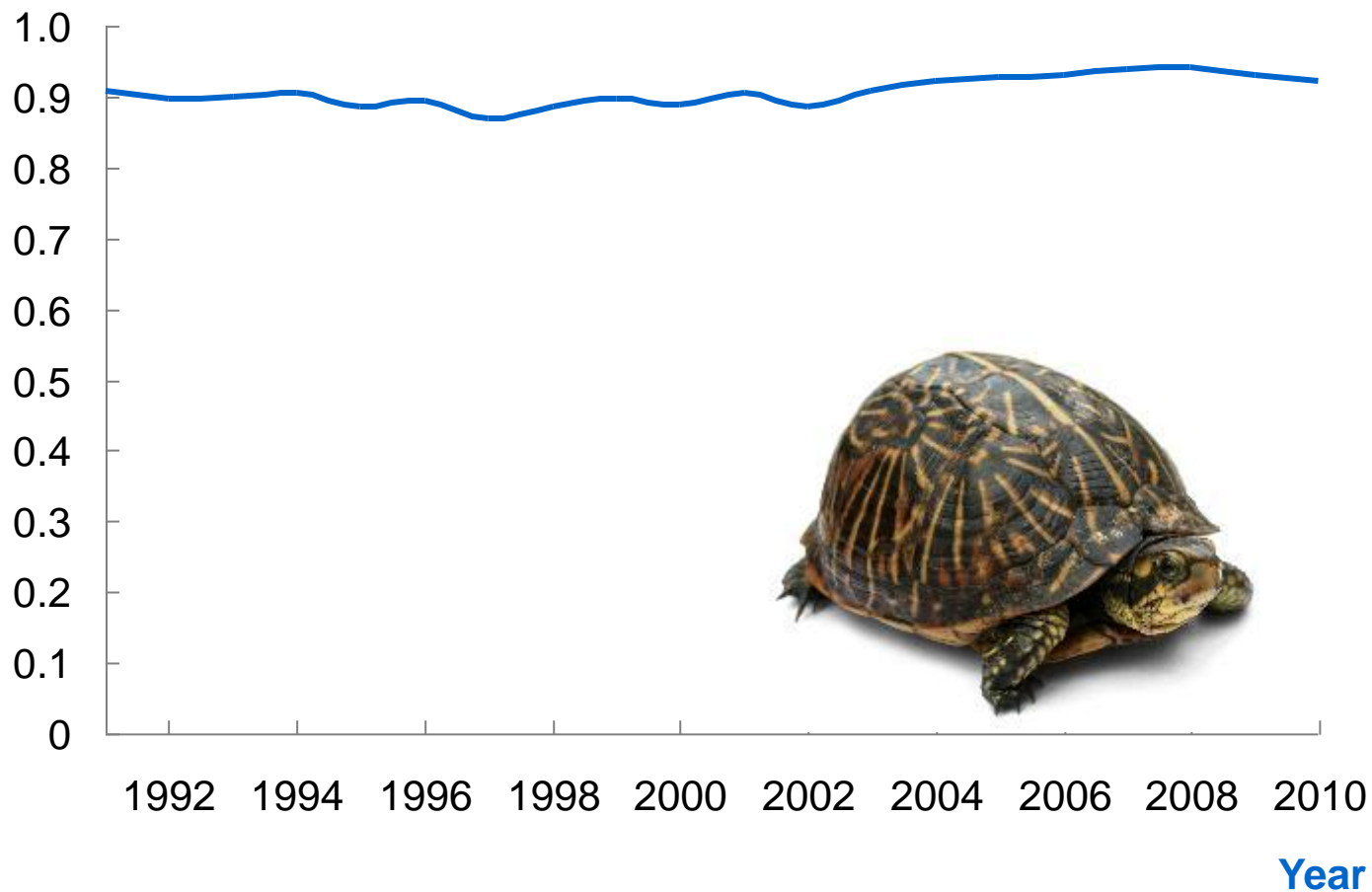
6  Digitise



In the private sector, resource allocation is generally conservative

Relative business unit year-to-year CapEx correlations¹

Correlation index over years 1990-2010



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

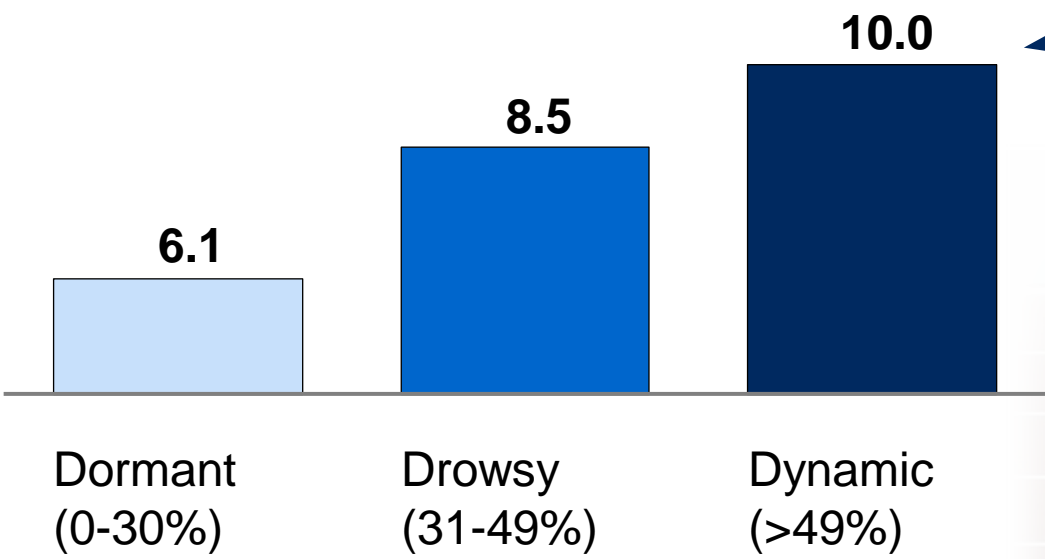
¹ Each year's proportion of company CapEx in each business unit was correlated to previous year's figure



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

Median TRS CAGR of companies by degree of reallocation

Percent, 1990-2010¹



Degree of reallocation

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



¹ 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

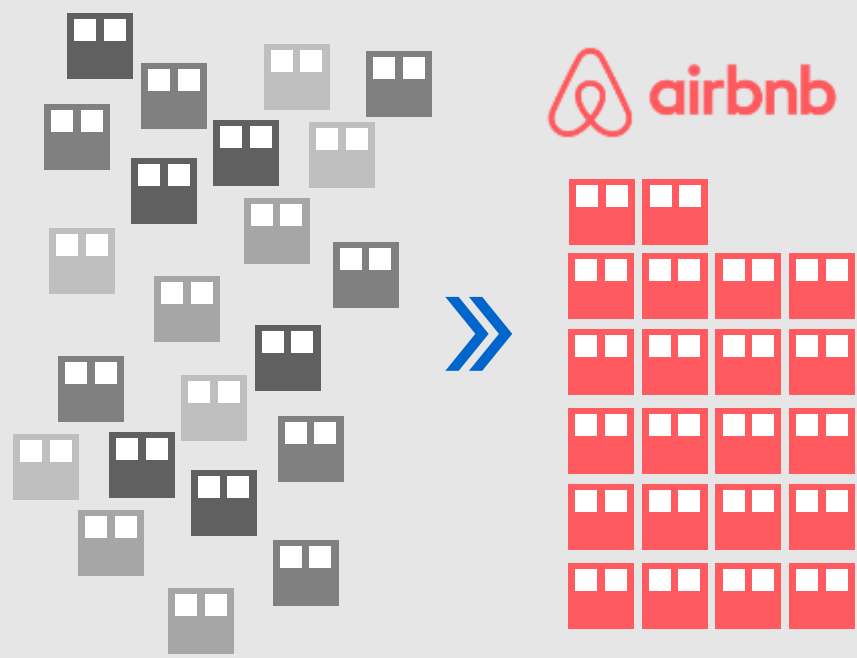
Packaging and some ingredients (e.g., skim milk) sourced locally; others (e.g., sugar, cocoa, vanillin, palm oil, hazelnut) sourced globally

4. AGILITY



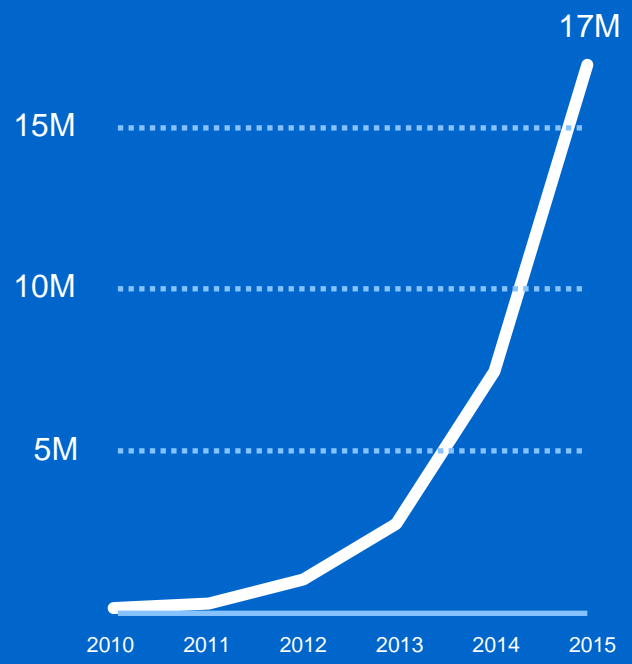
Leveraging assets – rather than owning them – converts capex into opex and has allowed companies like Airbnb to rapidly scale

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



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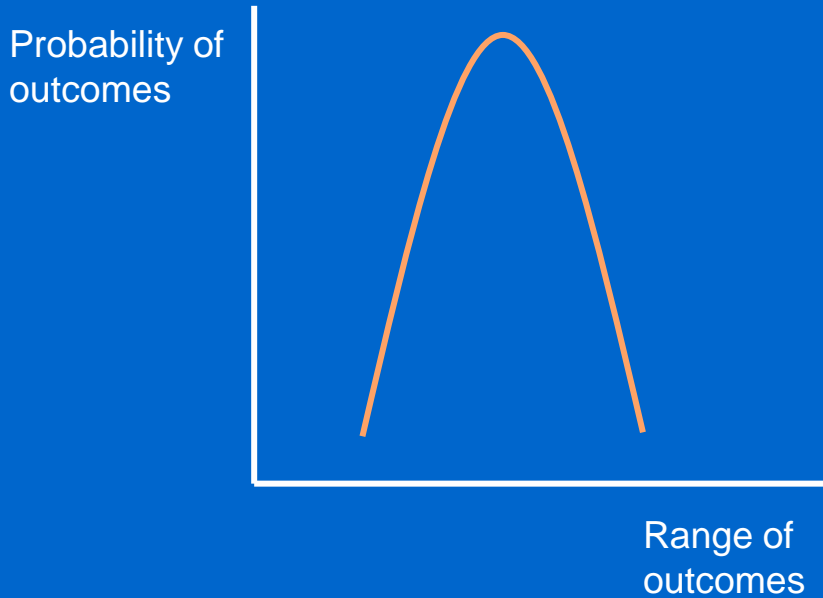
5  **Know the risks and test your resilience**

6  Digitise

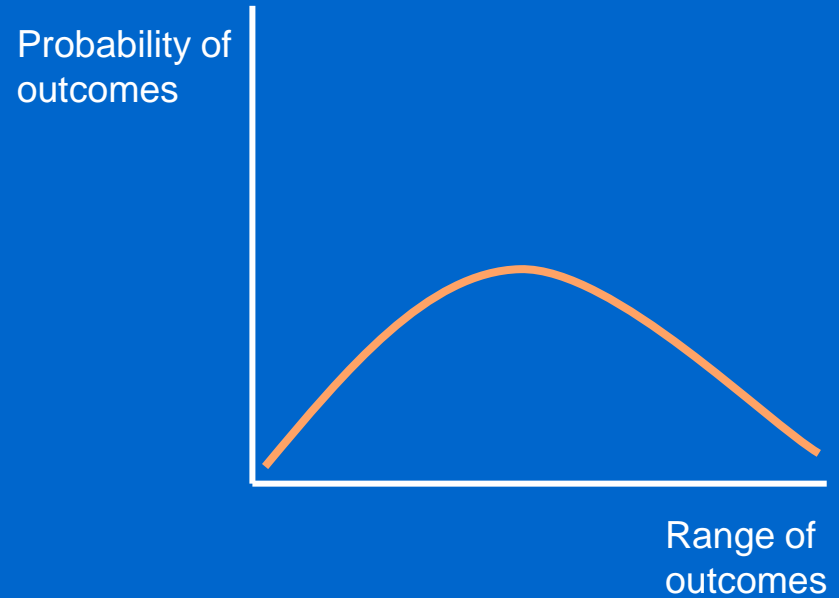
 As global growth has diverged, volatility has become the norm – everything is a variable

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

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”

“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

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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~~



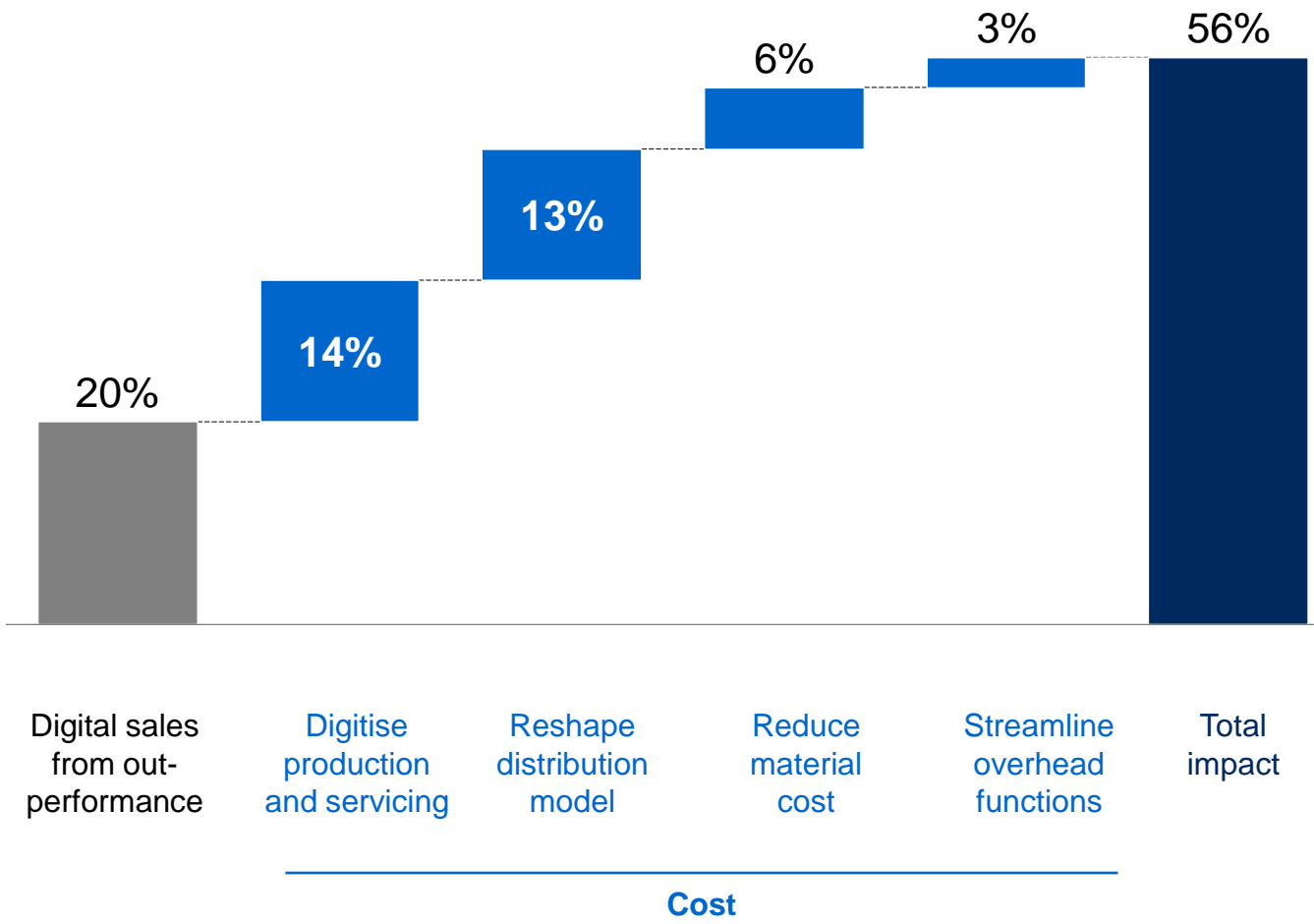
v.



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



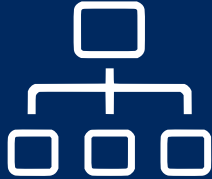



Companies will also need to assess their “Digital Quotient” – does digital run through everything they do?

Scored out of 90

Based on 1,000s of benchmarks

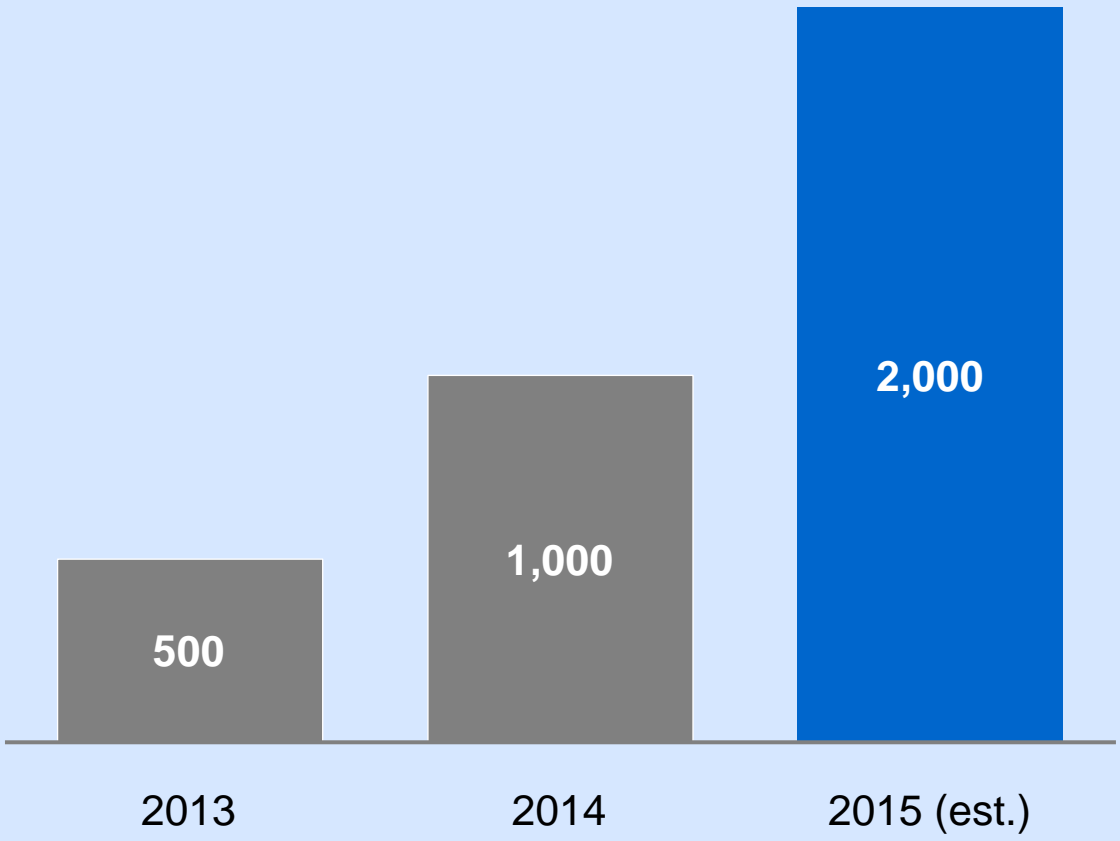


 Strategy	 Culture	 Organization	 Capabilities
<p>Bold, long-term orientation</p>	<p>Risk appetite</p>	<p>Roles and responsibilities</p>	<p>Connectivity</p>
<p>Linked to business strategy</p>	<p>Speed / agility</p>	<p>Talent and leadership</p>	<p>Content and digital marketing</p>
<p>Centered around customer 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

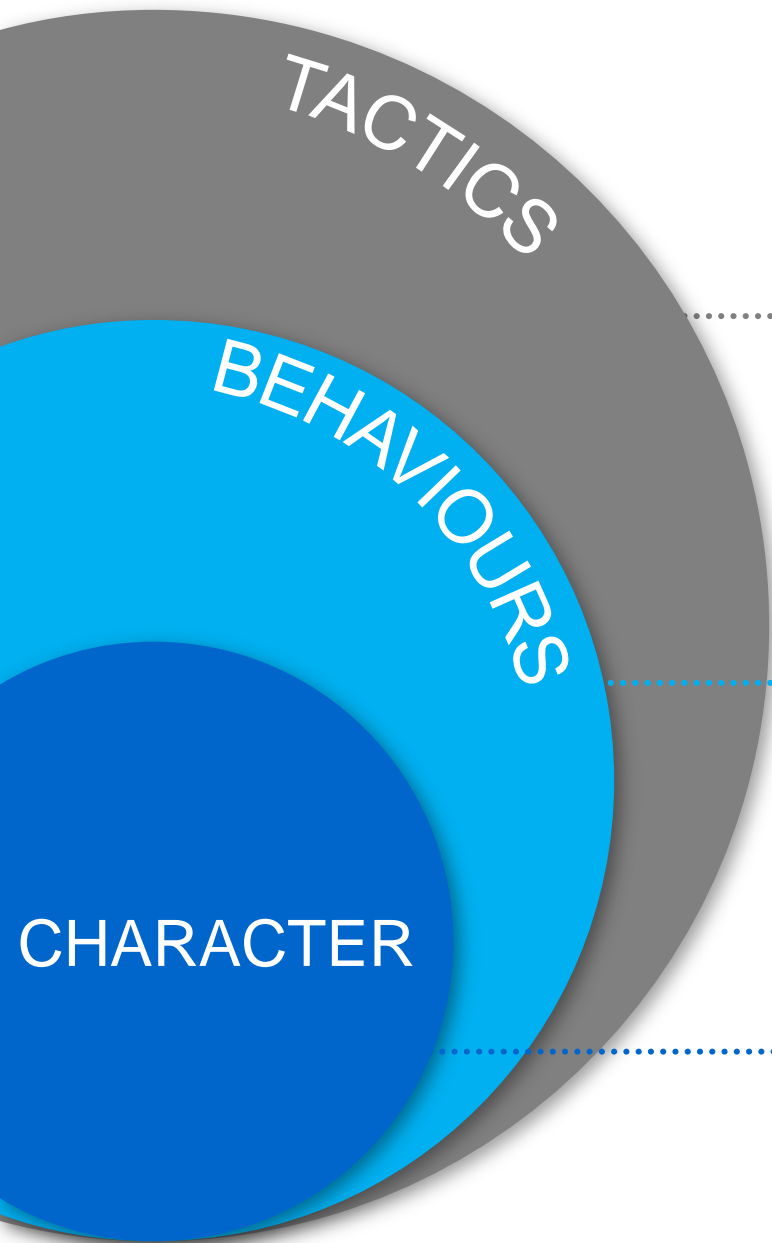
BBC

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



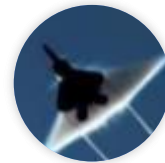
Purpose & resilience



Persistence & drive



Selflessness & broad-mindedness



Judgment & decisiveness



Absorb & compartmentalize



Global megatrends and implications for leaders

Dominic Barton | Global Managing
Director, McKinsey & Company