



Big Data

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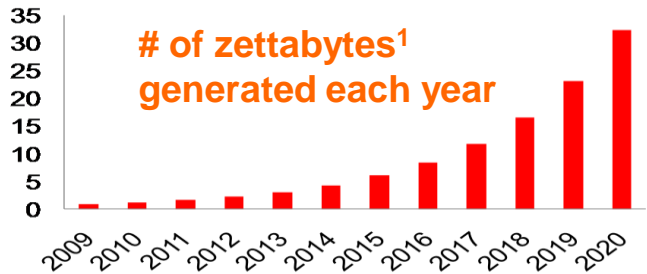
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Big Data changes the rules of the game

- 50 billion pieces of content shared on Facebook every month (2011)
- 5 billion active mobile users
- ~ 2 billion of TB of global data will be generated in 2012

... It's growing...

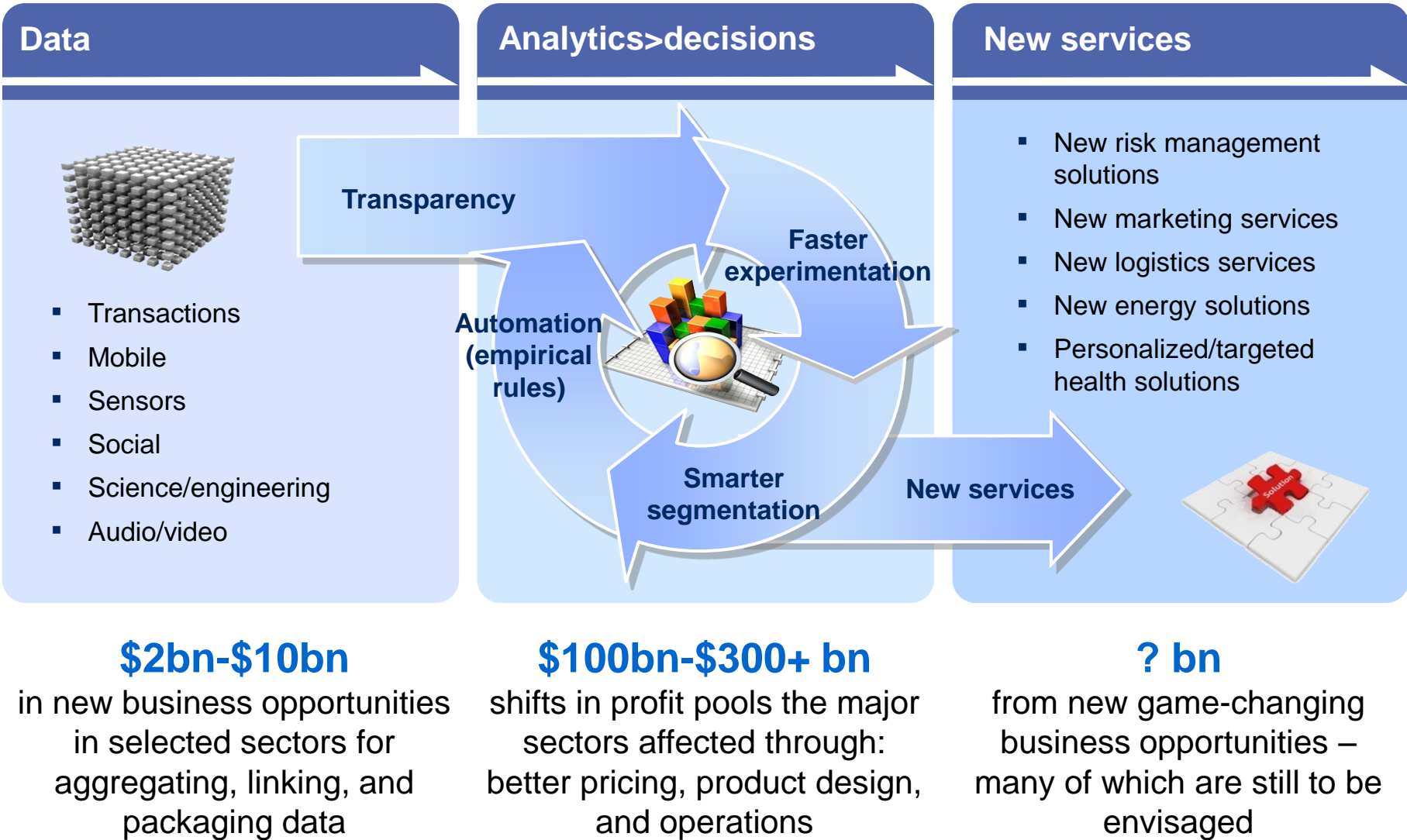
40% projected growth in global data generated per year



¹ A zettabyte (ZB) means 1 billion Terabytes (TB)

From...	... to
<ul style="list-style-type: none"> Structured, internal and centralized data 	<ul style="list-style-type: none"> Unstructured, external and distributed data
<ul style="list-style-type: none"> Data is a pain 	<ul style="list-style-type: none"> Data is an asset
<ul style="list-style-type: none"> Description of what happened 	<ul style="list-style-type: none"> Prediction of what will happen
<ul style="list-style-type: none"> Samples 	<ul style="list-style-type: none"> All
<ul style="list-style-type: none"> Asynchronous 	<ul style="list-style-type: none"> Real-time

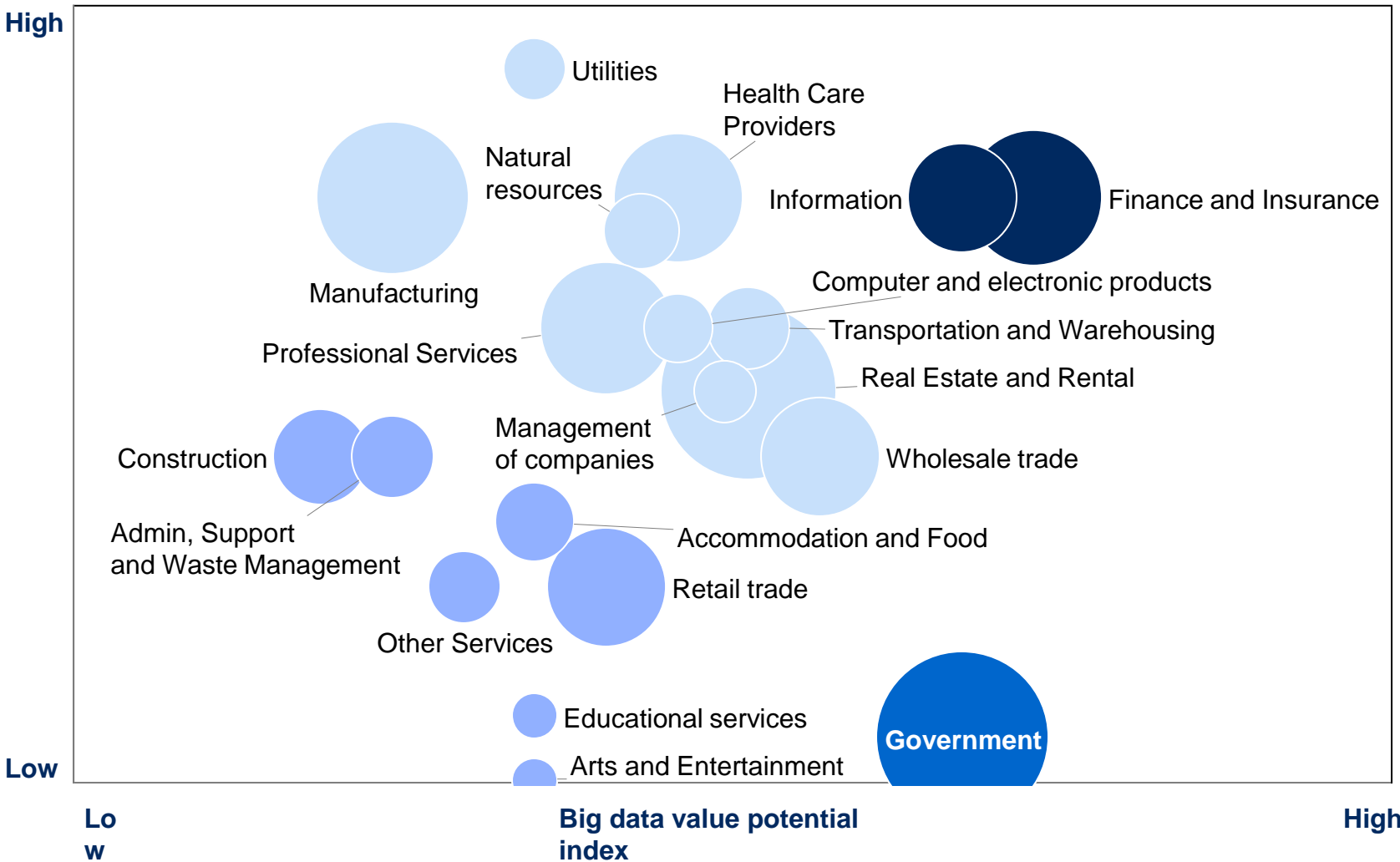
Significant value at stake, at different levels of disruption



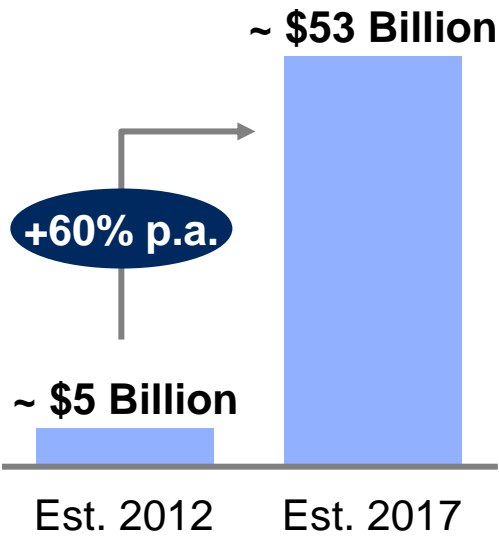
Relative value potential and ease of capture will vary among sectors

Big data ease of capture index

● Bubble sizes denote relative sizes of GDP



The CEO attention on Big Data is good news for technology providers



“Our goal is to develop a new generation of intelligent systems that can predict and respond to changes. They **will automatically analyze the peta bytes of data** generated by industrial equipments”
– SVP, Global Technology Director at GE

“... data about people, places, products, companies, brands, and pretty much anything. It will be a **huge competitive advantage** for companies able to **mine these data and glean insights**”
– SVP, Walmart Global eCommerce

Efforts are ongoing, but major gaps still need to be addressed

High Expectations

- 85% of organizations reported that they have Big Data initiatives
- 85% of the initiatives are sponsored by a C-level executive or the head of a line of business.
- 75% expect an impact across multiple lines of business

Capability gap


- Only 15% of respondents ranked their access to data today as adequate
- Only 21% of respondents ranked their analytic capabilities as adequate
- Only 17% of respondents ranked their ability to use data and analytics to transform their business as more than adequate

The talent battle will become a critical strategic imperative

	Big data savvy	Deep analytical	Big data infrastructure
Definitions	Employees who can define key questions that data can answer and have basic knowledge of statistics	Specialists who have conducted data analysis and advanced training in statistics and/or machine learning and	IT personnel who serve as database administrators and programmers
Occupations ¹	<ul style="list-style-type: none"> Business and functional managers Budget, credit and financial analysts Engineers Life scientists Market research analysts Survey researchers Industrial-organizational psychologists Sociologist 	<ul style="list-style-type: none"> Actuaries Mathematicians Operations research analysts Statisticians Mathematical technicians Mathematical scientists Industrial engineers Epidemiologist Economists 	<ul style="list-style-type: none"> Computer and information scientists Computer programmers Computer software engineers for applications Computer software engineers for system software Computer system analysts Database administrators
Potential gap by 2018	~1.5 Million	~150,000	~300,000

¹ Occupations are defined by the Standard Occupational Code (SOC) of the US Bureau of Labor Statistics and used as the proxy for types of talent in labor force.

Several use-cases start to be available



Optimize B2B service – better at lower cost – to be tailored by user behavior preferences, predicted need, and value at stake

Be able to offer value-based pricing to B2B customers with greater confidence in outcomes

Predict at-risk consumers (of churn or high costs) likely to cancel and what offers would retain them

Correlating marketing practices/spend with marketing outcomes

More real-time signal detection on risk (e.g., financial, fraud, and safety), allowing earlier interventions

Identify and engage underserved segments at more niche levels (10s→1,000s of segments)

Be able to make the right offer to a potential customer at the right time and right place

Quantify influencers and network of influence connections

Real-time rerouting of trucks and deliveries based on traffic conditions local inventory status, costs

Out there, some questions lay unanswered



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