Creating competitive advantage with Big Data and Analytics

Big Data and Analytics Conference

September 2018

The better the question. The better the answer.
The better the world works.

Building a better working world

About the Presenter

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Agenda

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02 Main Drivers for Big Data and Analytics?

03 Value of Big Data and Analytics

04 How can you make big data even bigger for your business?

05 Take Away

01

Introducing the Big Data

What is Big Data?

“Big data refers to the dynamic, large and disparate volumes of data being created by people, tools and machines.

It requires new, innovative and scalable technology to collect, host and analytically process the vast amount of data gathered to derive real-time business insights that relate to consumers, risk, profit, performance, productivity management and enhanced shareholder value.

It’s rapid growth is heightened by both advances in technology and to the declining costs of running or hosting big data environments.”

Big Data is little without analytics

Focus on business issues not technology

Why is big data important?

…Imagine watching all your “ad hoc” reports in real time, iteratively with unlimited granularity and aggregation power…

The key idea is **Be wiser and more agile than ever**

You have to be **wiser** to know how to act and react while **agile** to cope with this actions adapting to this new reality that the Big Data tsunami brings

Big Data Overview- The 4 Vs

Volume: Exponential as new data sources emerge

- The amount of data being created is vast compared to traditional data sources
- More and more devices and
- Each device generates more and more data

Variety: Not only about structured/unstructured

- Data comes from different sources and is being created by machines as well as people
- This is about an interconnected world with many external partners
- And so working with no or low-modeled data

The 4Vs."

Velocity: This is not about technical speed

- Data is being generated extremely fast – a process that never stops, even while we sleep
- This is about data value
- Data value decreases every minute!

Veracity: Data needs to be trusted

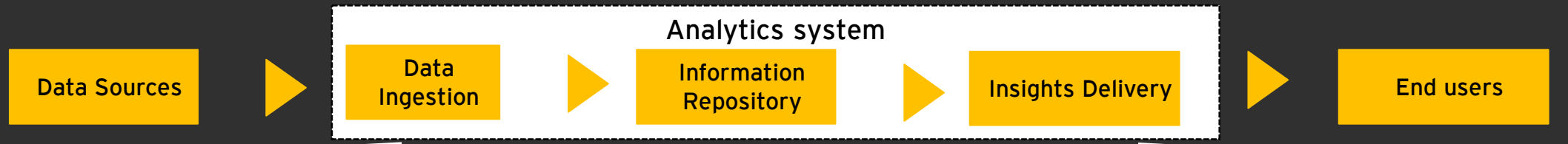
- Big data is sourced from many different places, and as a result you need to test the veracity/quality of the data

But… there is a 5th V

…But all the volumes of fast-moving data of different variety and veracity have to be turned into value! This is why value is the one V of big data that matters the most.

"Value refers to our ability turn our data into value. It is important that businesses make a case for any attempt to collect and leverage big data. It is easy to fall into the buzz trap and embark on big data initiatives without a clear understanding of the business value it will bring."

What is Big Data Analytics...

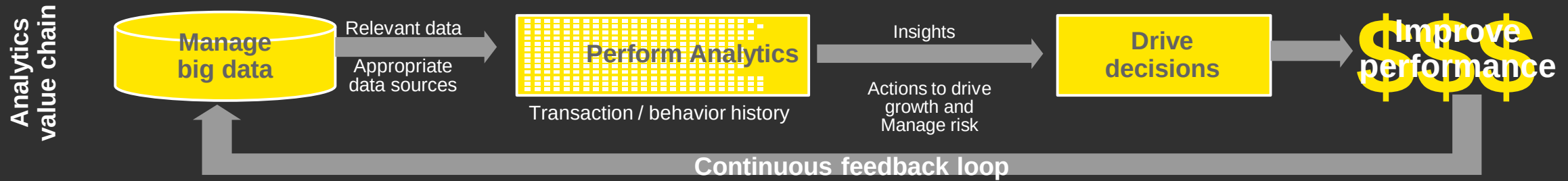


	What is it?	LOW	Medium	High
Volume	The volume of persistent usable data in the analytics system at any point in time.	▶ Typically I<5 TB	▶ Typically between 5 – 50 TB	▶ Typically more than 50 TB
Variety	The form and content of data – structured (RDBMS), semi structured (social media) or unstructured (text/documents)	▶ Batch oriented	▶ Near Real time/Real time	▶ Real time, low latency, streaming
Velocity	How quickly the analytics system process the data to create insights	▶ Structured	▶ Semi structured	▶ Unstructured
Complexity	The complexity handled by analytics systems to generate actionable insights	▶ Limited analysis	▶ Historical , multidimensional analysis	▶ Predictive Analytics

What is 'Big Data Analytics'? – Some Definitions	What are the characteristics of Big Data Analytics?
▶ Large volumes of data that cannot be sufficiently managed by traditional, relational technologies ▶ Non-relational/unstructured data streaming in from new sources ▶ All forms of data (structured and unstructured) at massive scale (e.g. hundreds of terabytes to petabytes)	▶ Various definitions and views exist for this stream, the elements of which are age old, namely – data volume, variety of the data, speed at which the data moves through the analytics systems and the complexity of the analysis

What does it mean to be good with data?

Organizations everywhere are suffering from **data chaos.** To drive better decisions, we must first ask the right business questions and then seek answers in the data. Thus, our work moves left to right, but our thinking must move from right to left.



What does it mean to be good with data?

	Big data	Not such big data
Volume	Terabytes / petabytes	Megabytes / gigabytes
Variety	Unstructured (text, voice, video)	Structured / relational
Velocity	Data in motion (streaming)	Data at rest
Veracity	Untrusted / Not cleansed	Trusted / cleansed

Analytical techniques, from descriptive, to predictive, to prescriptive analytics techniques.

- **Descriptive analytics.** This technique involves mining past data to report, visualize and understand WHAT has already happened – after the fact or in real-time.
- **Predictive analytics.** Leverages past data to understand the underlying relationship between data inputs and outputs to understand WHY something happened or to predict WHAT will happen in the future across various scenarios.
- **Prescriptive analytics.** This technique is used to determine WHICH decision and/or action will produce the most effective result against a specific set of objectives and constraints.
- **Forensic analytics.** This includes investigative data linking, social network analysis, artificial intelligence and predictive modeling to proactively seek opportunities to prevent and detect fraud, waste and abuse.

We embed analytics into all our services to help our clients take action in the following areas:

- Customer
- Supply chain
- Finance
- Fraud
- Risk management
- Compliance and reporting (including Audit and Tax)
- Valuation
- Talent management

02

Main Drivers for Big Data and Analytics

Big Data and Analytics are driven by a need…

1 The use of information is a necessity

- The business itself is changing and banks have to change with it
- This is BI at its best an old game with new tokens
- Other do it or will do it

2 You need information mastering

- Better management of complexity
- Standardization of procedures & metrics i.e. simplicity into complexity
- Self knowledge
- Effective use of this complexity into the business

To tackle a more complicated reality

3 Big data will helps to better deal with key problems

Concrete problems organisations have to face

- Low return
- Regulatory demands
- Chanel proliferation
- System fragmentation
- Geographic expansion
- Product proliferation
- 360º Client view
- Responds to shadow banking

Such that all type of data analysis and forecasting are at reach

4 **The use of information is a necessity**

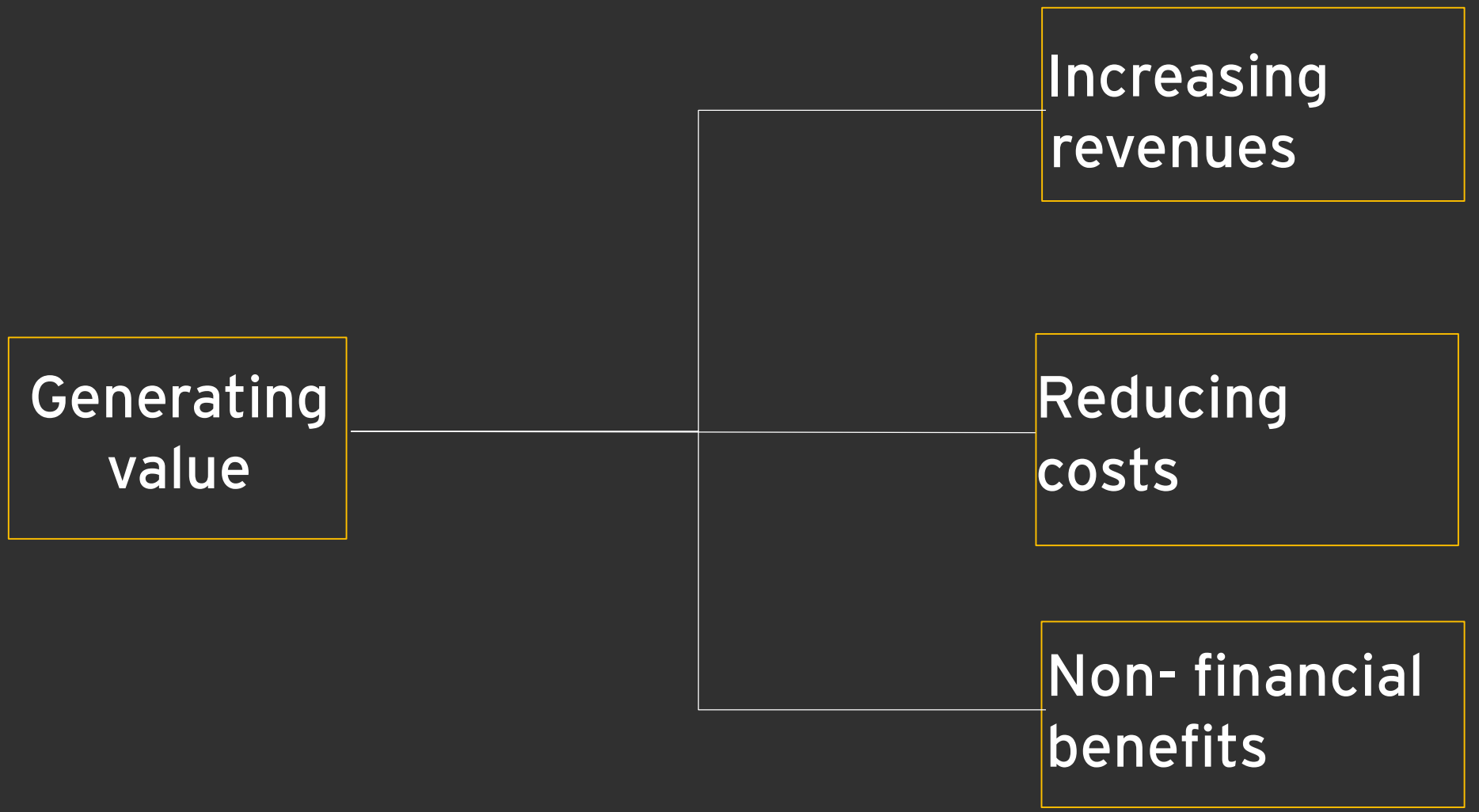
The new paradigm in data management is an extensive and intensive use in real time of a vast amounts of information to analyze and forecast

Big Data with predictive and reductive analytics with strong tools on visualization is the holy grail of BI

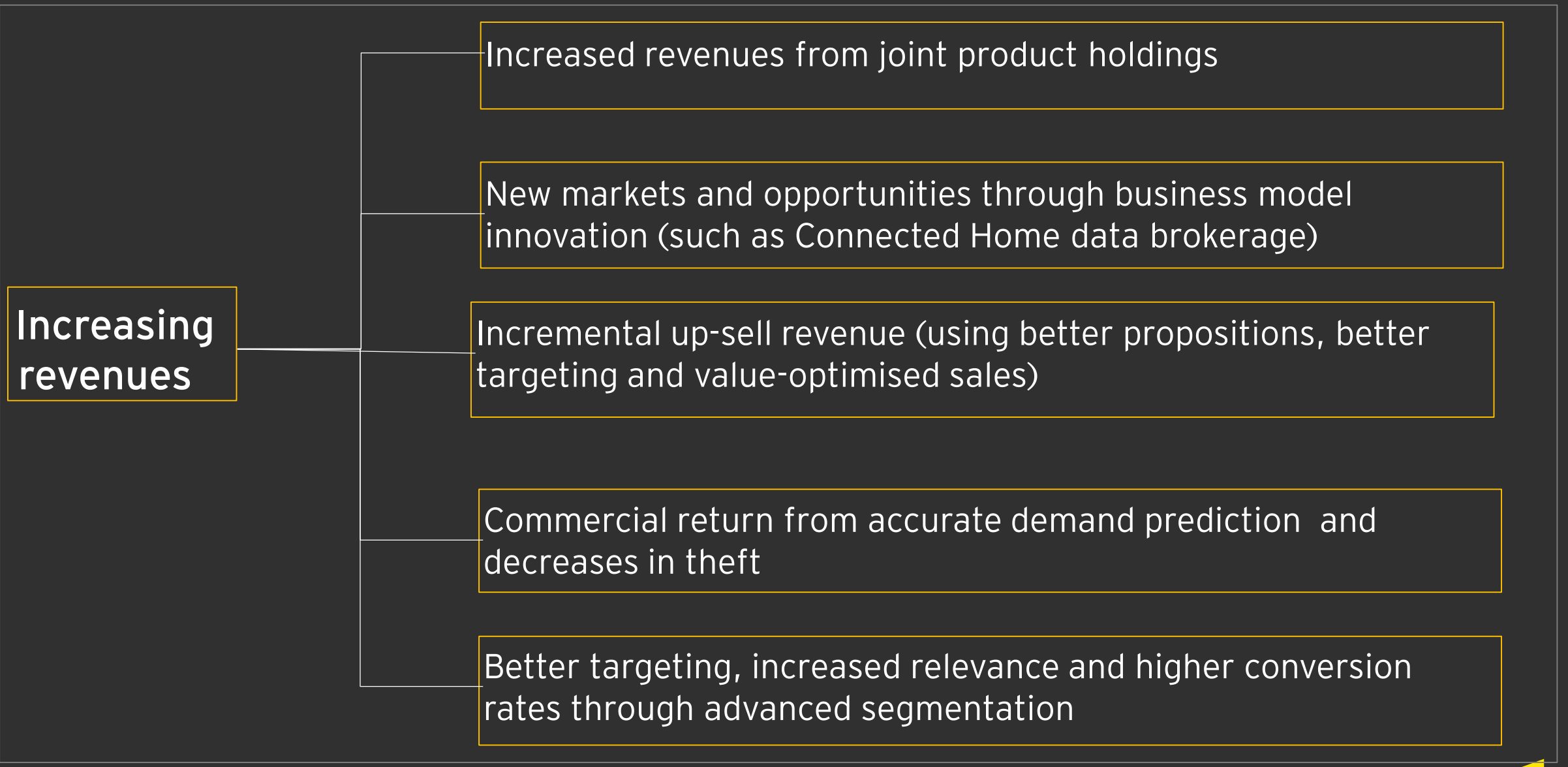
03

Whats in it for you in Big Data and Analytics

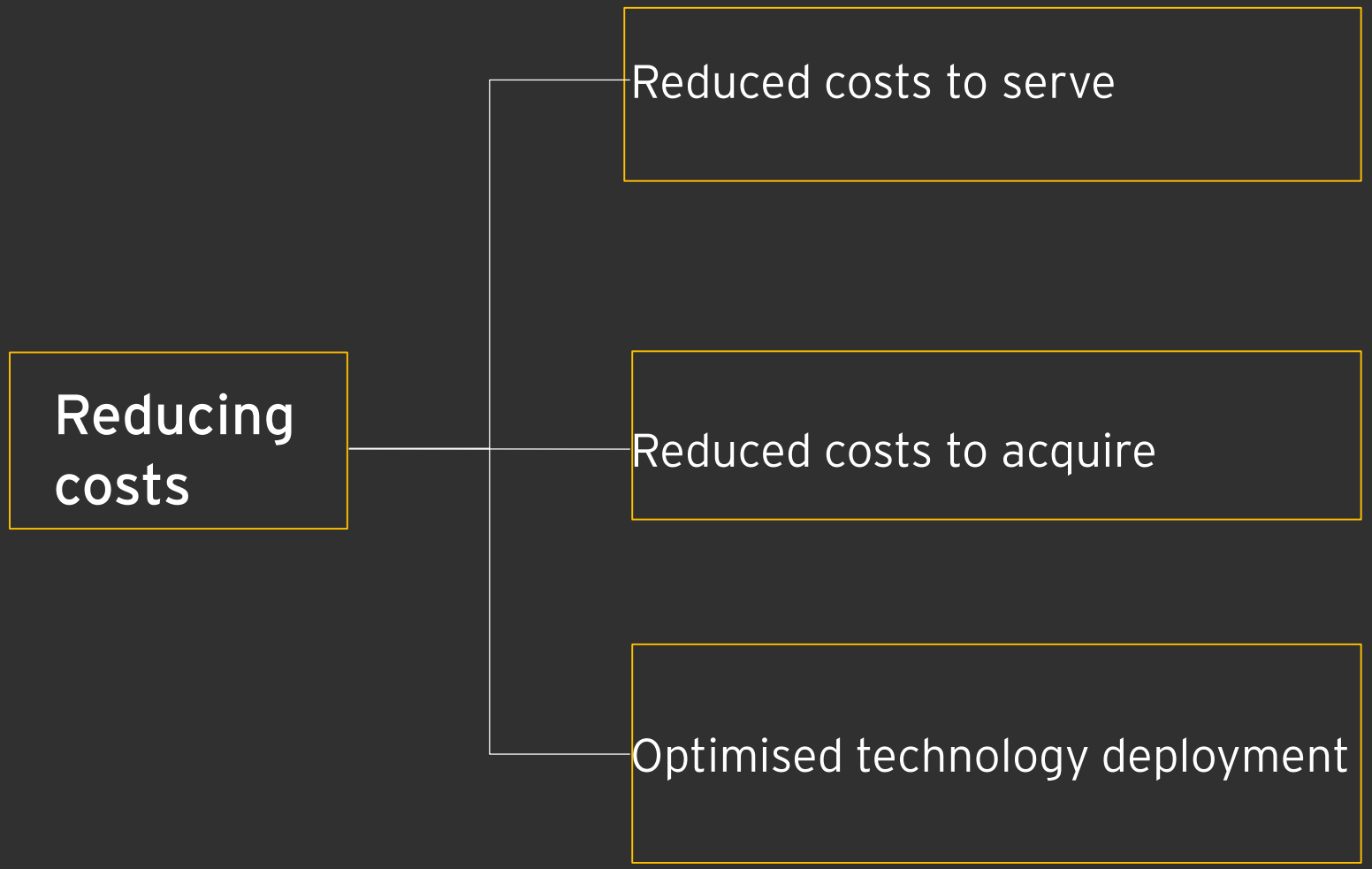
Big Data value opportunities



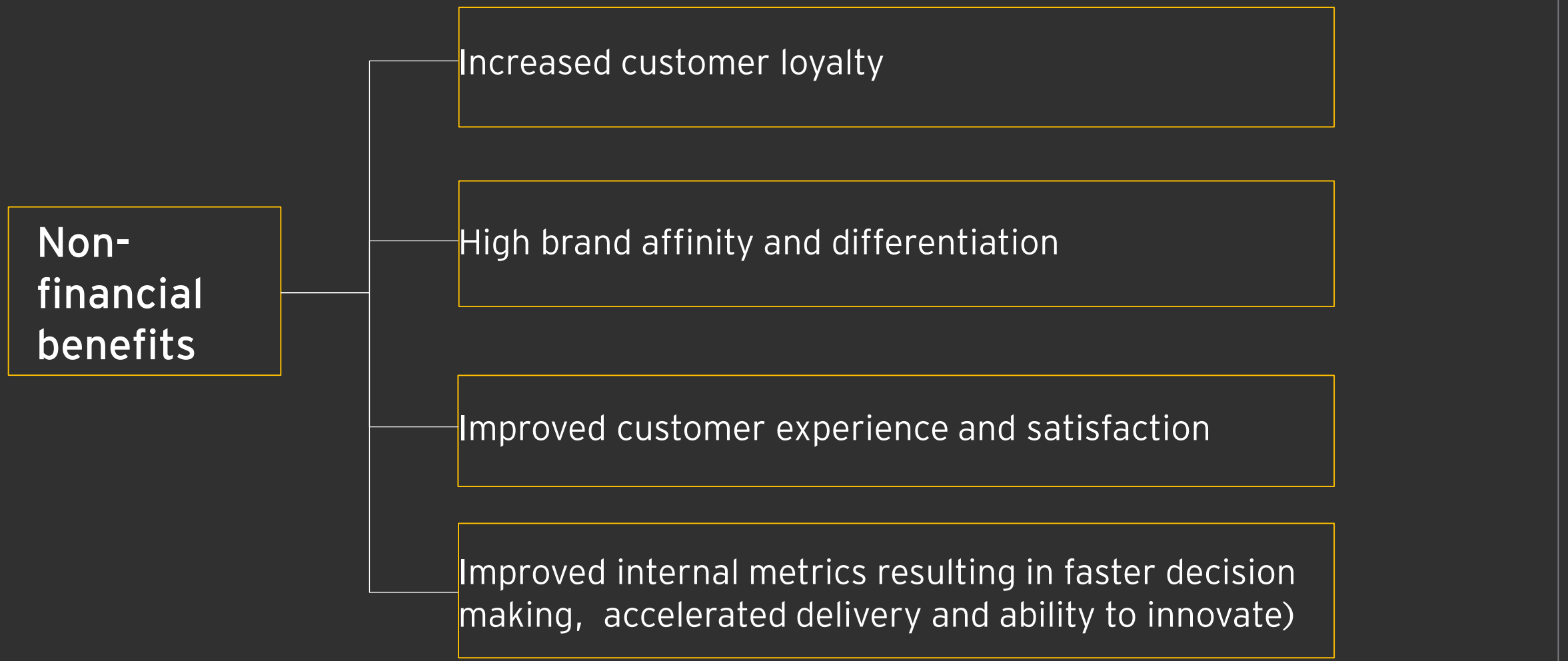
Big Data value opportunities



Big Data value opportunities



Big Data value opportunities



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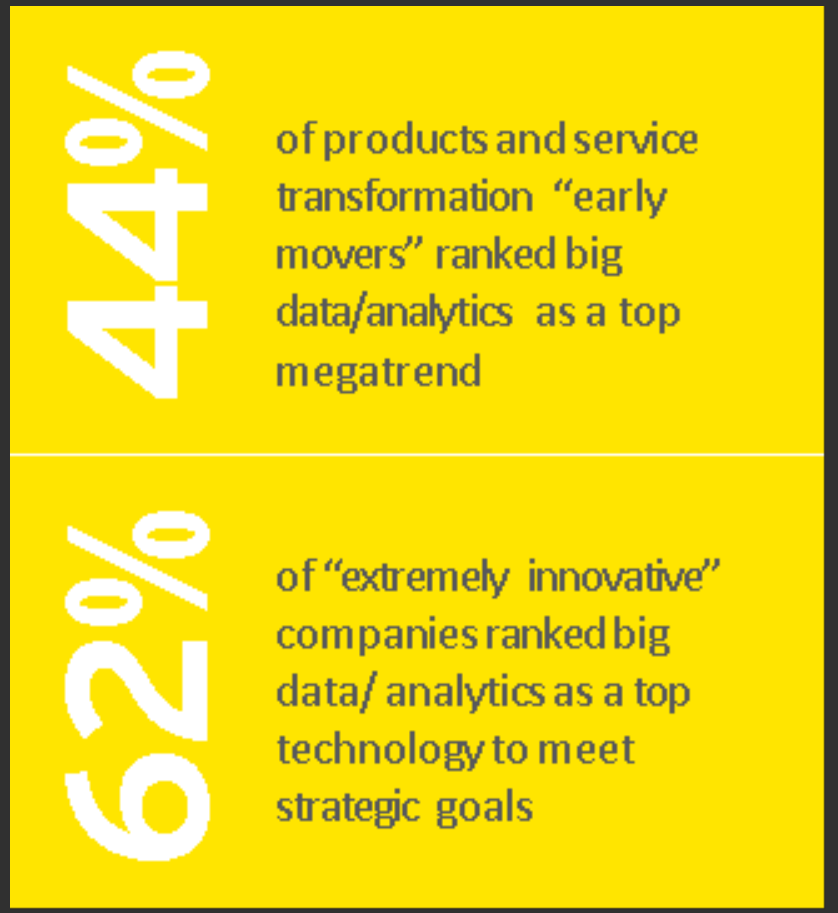
How can you make big data even bigger for your business?

What does this mean?

Big data and data analytics can change the way you do business – but first, you may have to change the way you do big data.

When you ask better questions of your data, you'll get better answers that can drive large-scale change in your business.

*EY recently completed a study, surveying 500 senior executives of industrial products companies in the US and Canada. Their responses were definitive: big data and data analytics is the most influential megatrend across their entire sector, now and over the next three years, and the most significant means for meeting strategic goals, particularly among "early mover" and "extremely innovative" companies



What does this mean?

You don't just think about data differently – you work with it differently.

No matter how valuable you think your data are, they're probably more valuable than that

Data-driven decision-making will move you toward internal cultural change

05

Take Away

Data and your approach to analytics have the ability to change your business – the way you do business, even the business you're in….

But you must start using data in different ways – not just for product development, but for business model change. Which means setting up your analytics program to expand the insight and strategic advantage you get from your data.

Because ultimately, you want to move from selling product, which tends to get commoditized and price-sensitive over time, to selling outcomes, which provides added value to your customers and greater profit margins for your company.

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Thank you