(Big) data – balancing commercialization and compliance

LES Scandinavia 2017

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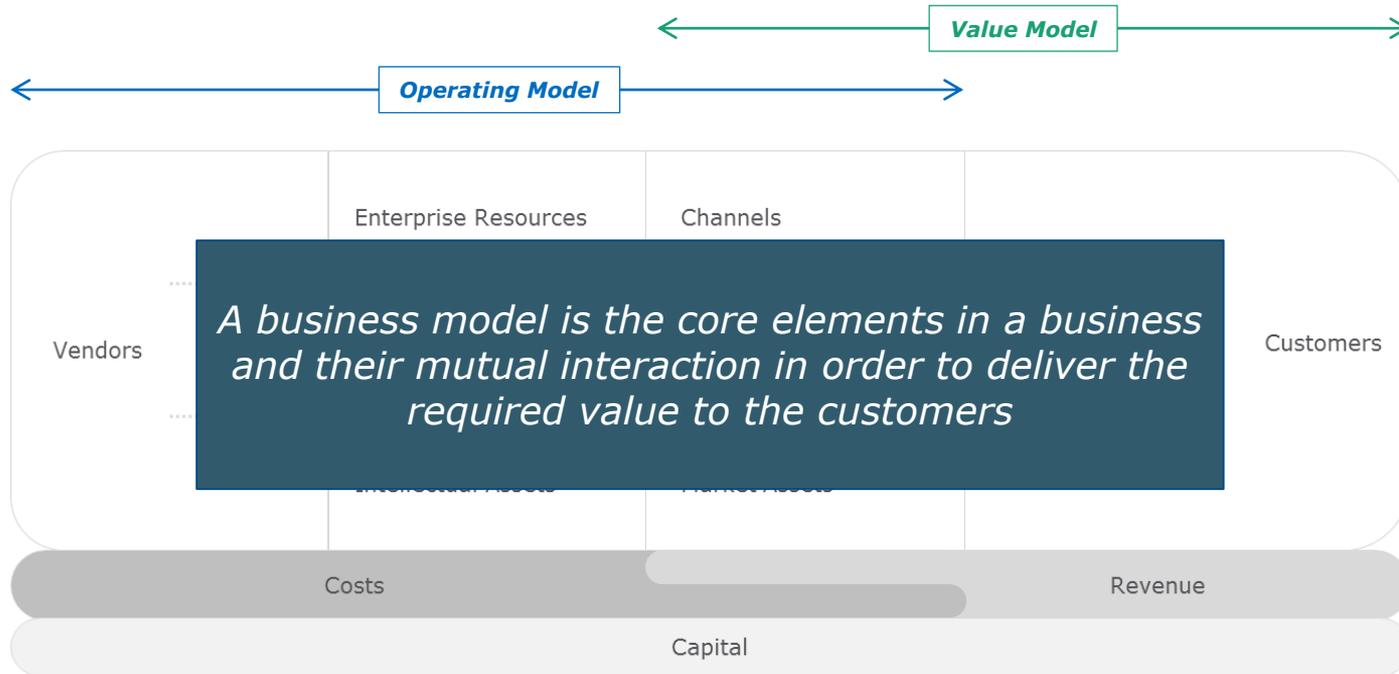
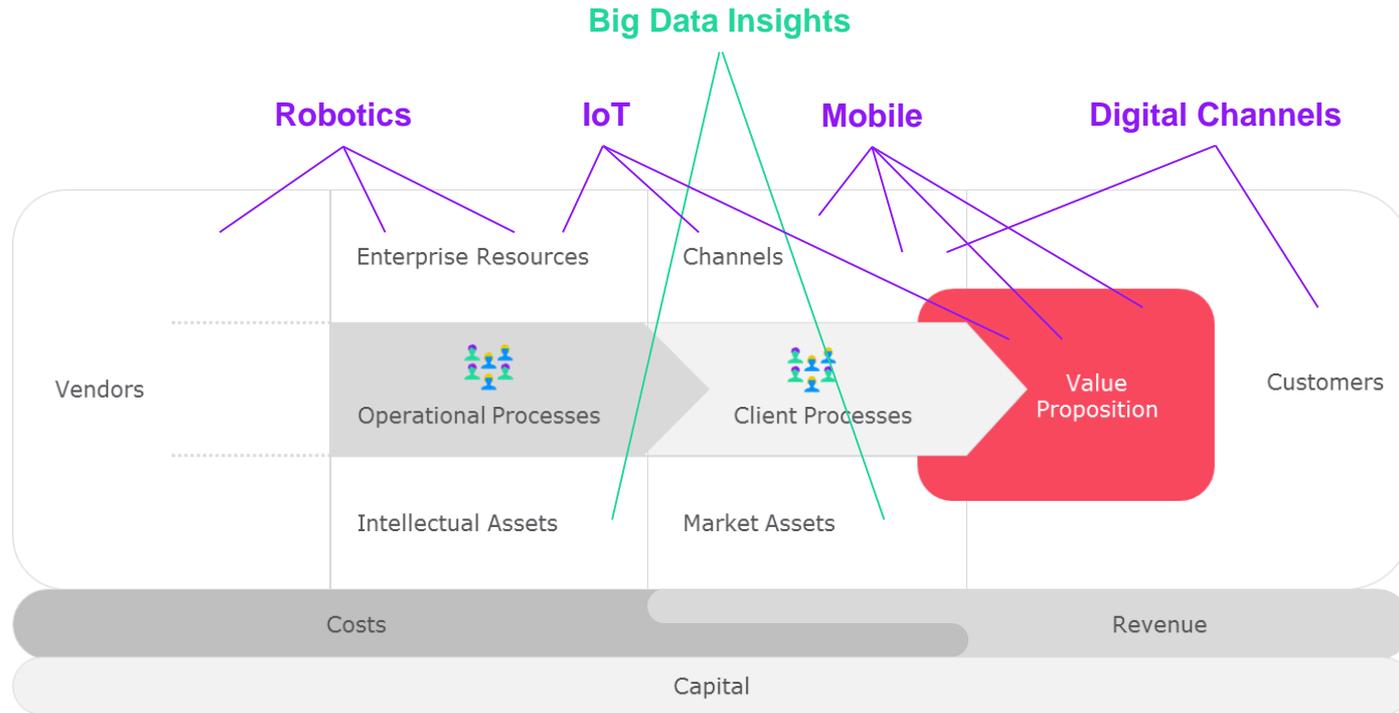# Balancing commercialization and compliance

Commercialization

Governance
Compliance

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Digitalisation is all about the business model
What is a business model?

Value Model

Operating Model

Enterprise Resources

Channels

Vendors

A business model is the core elements in a business and their mutual interaction in order to deliver the required value to the customers

Customers

Intellectual Assets

Market Assets

Costs

Revenue

Capital

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Digitalisation leads to data
… across the entire business model

Big Data Insights

Robotics

IoT

Mobile

Digital Channels

Enterprise Resources

Channels

Vendors

Operational Processes

Client Processes

Value Proposition

Customers

Intellectual Assets

Market Assets

Costs

Revenue

Capital

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Case

Case: Supermarket Chain
Traditional

Central distribution centre

Distribution to shops

Home page

Countrywide network of shops on high street

Easy access to a large selection of groceries
- Selection
- Price
- Quality
- Ecology
- Location
- Service

Enterprise Resources

Channels

Producers of groceries

Vendors

Operational Processes

Client Processes

Value Proposition

Clients

Family Denmark

Intellectual Assets

Market Assets

Costs

Revenue

Capital

Rent for shops
Storage & distribution costs
Labour costs
Campaign costs

"Purchasing intuition"

Purchasing

Campaigns - household commercials

Brand in accordance with VP

Customer Club

Transaction patterns

Sales transactions

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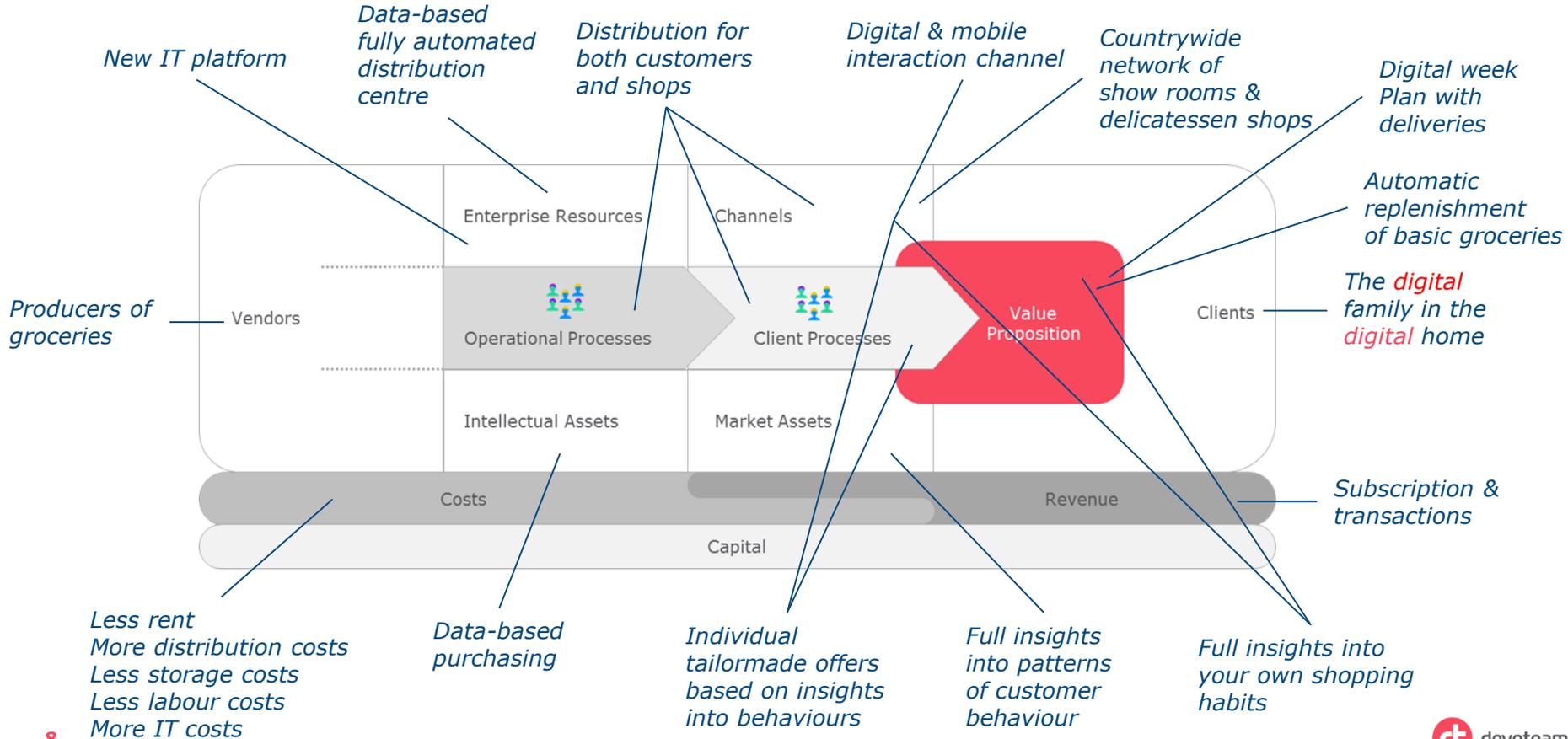# The digital family in the digital home
A change in technology – a change in behaviour

- 24/7 internet usage

- A fully digitalised refrigerator

- A fully digitalised kitchen cabinet

- "Post Box" – a large box with both a cooled and normal compartment

Case: Supermarket Chain
Digitalised

New IT platform

Data-based fully automated distribution centre

Distribution for both customers and shops

Digital & mobile interaction channel

Countrywide network of show rooms & delicatessen shops

Digital week Plan with deliveries

Automatic replenishment of basic groceries

The *digital* family in the *digital* home

Producers of groceries

Subscription & transactions

Less rent
More distribution costs
Less storage costs
Less labour costs
More IT costs

Data-based purchasing

Individual tailormade offers based on insights into behaviours

Full insights into patterns of customer behaviour

Full insights into your own shopping habits

Enterprise Resources

Channels

Vendors

Operational Processes

Client Processes

Value Proposition

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Intellectual Assets

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The commercial consequences of digitalisation …
In almost any business model

- From …
  - Receiver of goods to 'user'
  - Transactions to behavioural data on customers
  - Anonymous consumer to transparent customer

- … resulting in higher *customer value*
  - Easier interaction
  - More convenience
  - Tailormade
  - Faster delivery
  - Cheaper products

- … and better *operational efficiency*
  - Accurate predictions and planning
  - Automation
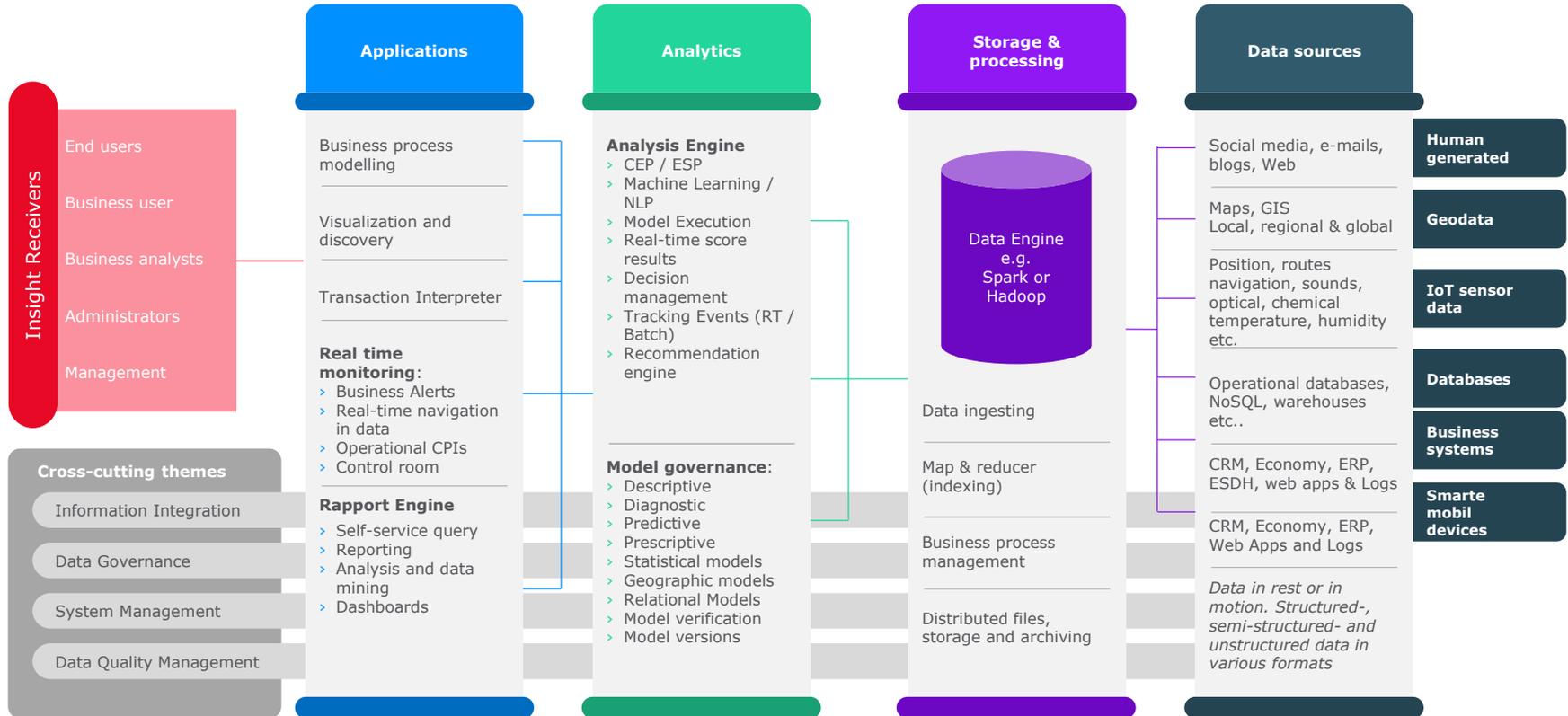 - Lower operational costs

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Data Science – a new field for commercial exploration

What is data science?

- Data Science is an interdisciplinary field about scientific methods, processes, and systems to extract knowledge or insights from data. The purpose of Data Science is "to unify statistics, data analysis and their related methods" in order to "understand and analyse actual phenomena" with data. It employs techniques and theories drawn from many fields within the broad areas of mathematics, statistics, information science and computer science.

- The business goal is to create actionable insights that levers on data through analytical statistics to deliver better customer value and drive a more profitable business. Overall, data science is an important blooming field which has the potential to transform and enhance business performance.

- Data Science is a new field and should not be confused with existing fields such as Information Management, Business Intelligence, etc.
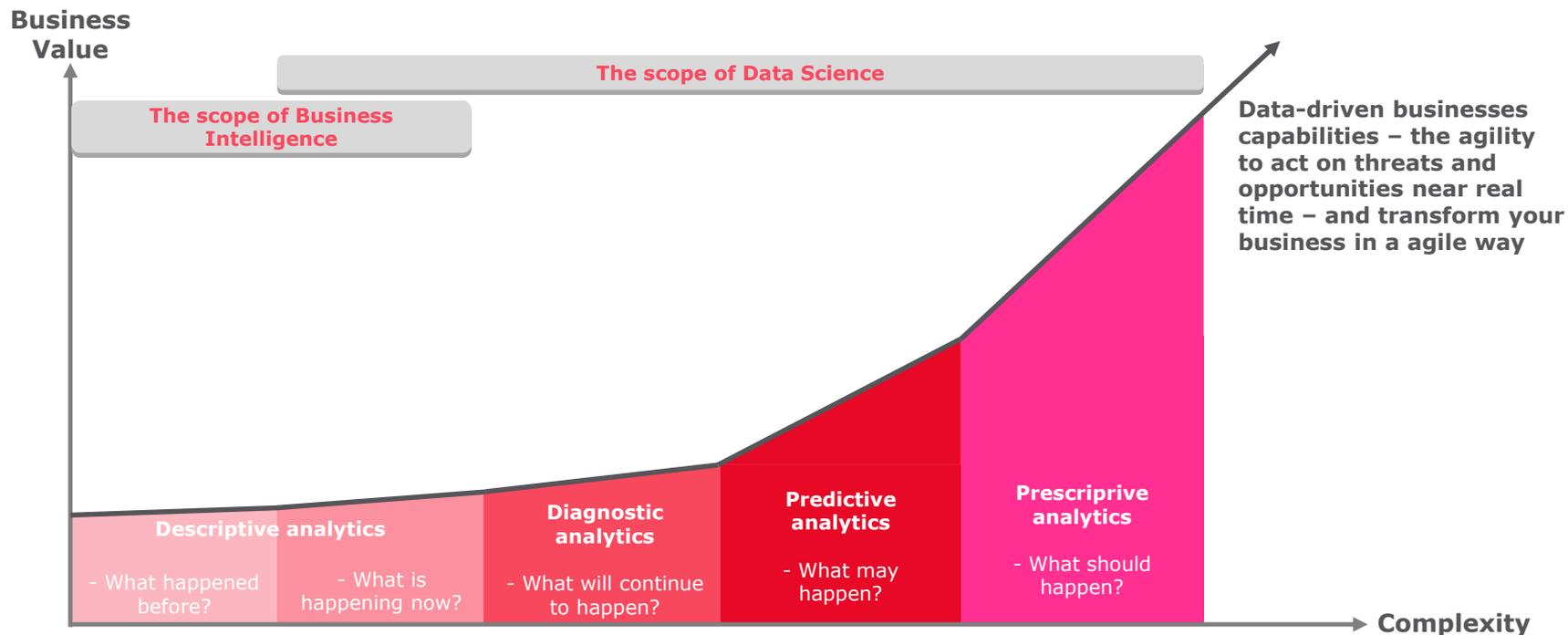
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A Data Science platform
Designed to find patterns and new insights

Insight Receivers

- End users
- Business user
- Business analysts
- Administrators
- Management

Cross-cutting themes

- Information Integration
- Data Governance
- System Management
- Data Quality Management

Applications

Business process modelling

Visualization and discovery

Transaction Interpreter

Real time monitoring:
› Business Alerts
› Real-time navigation in data
› Operational CPIs
› Control room

Rapport Engine
› Self-service query
› Reporting
› Analysis and data mining
› Dashboards

Analytics

Analysis Engine
› CEP / ESP
› Machine Learning / NLP
› Model Execution
› Real-time score results
› Decision management
› Tracking Events (RT / Batch)
› Recommendation engine

Model governance:
› Descriptive
› Diagnostic
› Predictive
› Prescriptive
› Statistical models
› Geographic models
› Relational Models
› Model verification
› Model versions

Storage & processing

Data Engine e.g. Spark or Hadoop

Data ingesting

Map & reducer (indexing)

Business process management

Distributed files, storage and archiving

Data sources

Social media, e-mails, blogs, Web

Maps, GIS Local, regional & global

Position, routes navigation, sounds, optical, chemical temperature, humidity etc.

Operational databases, NoSQL, warehouses etc..

CRM, Economy, ERP, ESDH, web apps & Logs

CRM, Economy, ERP, Web Apps and Logs

Data in rest or in motion. Structured-, semi-structured- and unstructured data in various formats

Human generated

Geodata

IoT sensor data

Databases

Business systems

Smarte mobil devices

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Data Science will set new standards for business value

The ability to handle complexity will drive value

Business Value (vertical axis)

The scope of Data Science

The scope of Business Intelligence

Data-driven businesses capabilities – the agility to act on threats and opportunities near real time – and transform your business in a agile way

Descriptive analytics
- What happened before?
- What is happening now?

Diagnostic analytics
- What will continue to happen?

Predictive analytics
- What may happen?

Prescriprive analytics
- What should happen?
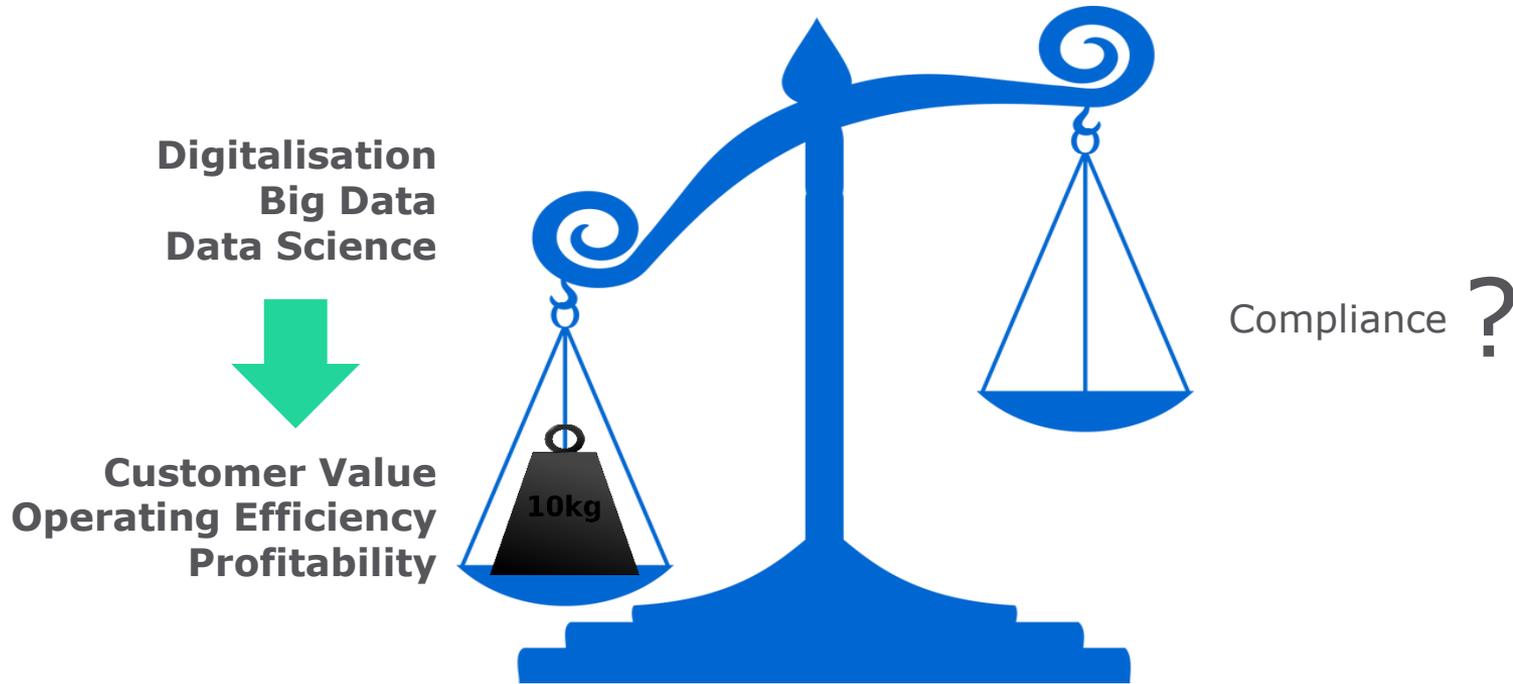
Complexity (horizontal axis)

From Hindsight →
Utilizing "old" data to describe what happened

... to Insight →
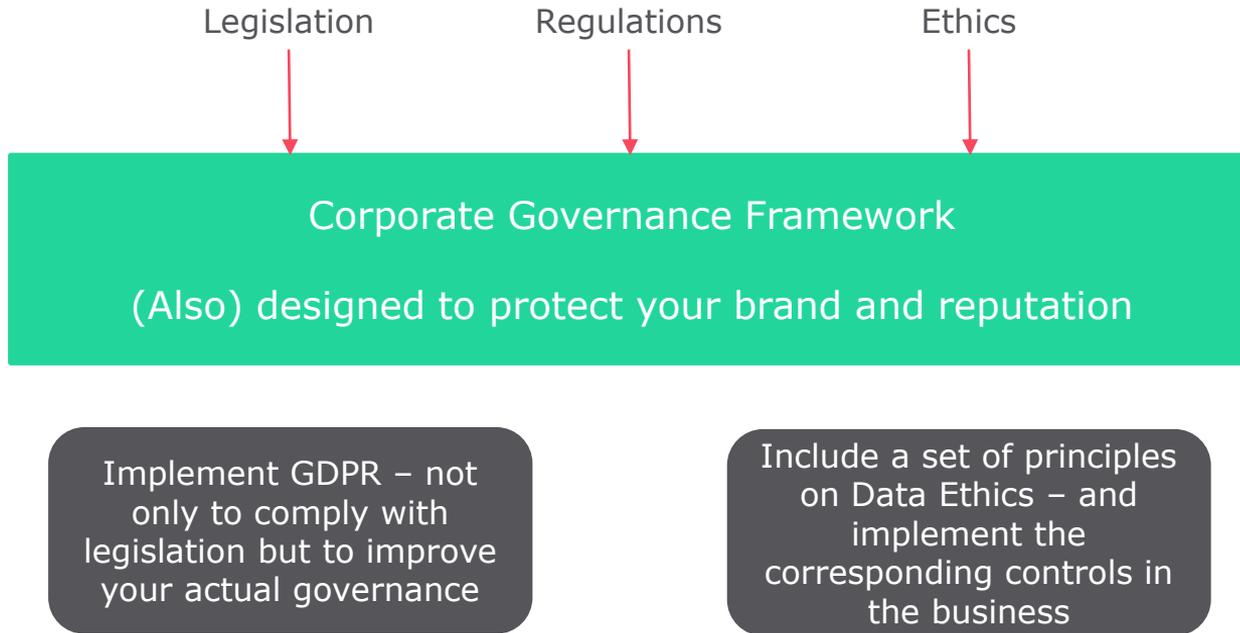Utilizing "new" data to describe what is happening

... to Foresight
Utilizing all data to forecast and predict what will happen

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Heavy commercial weights are on the scale ...

Digitalisation
Big Data
Data Science

Customer Value
Operating Efficiency
Profitability

10kg

Compliance ?

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Which weights can Compliance put on the scale?

An improved Corporate Governance on the usage of data

Legislation   Regulations   Ethics

Corporate Governance Framework

(Also) designed to protect your brand and reputation

Implement GDPR – not only to comply with legislation but to improve your actual governance

Include a set of principles on Data Ethics – and implement the corresponding controls in the business

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Questions?

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