Big data and data analytics in SSCs

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Organising for data analytics and big data

Ian Herbert, Deputy Director, Centre for Global Sourcing and Services, School of Business and Economics – *Research project funded by CIMA*
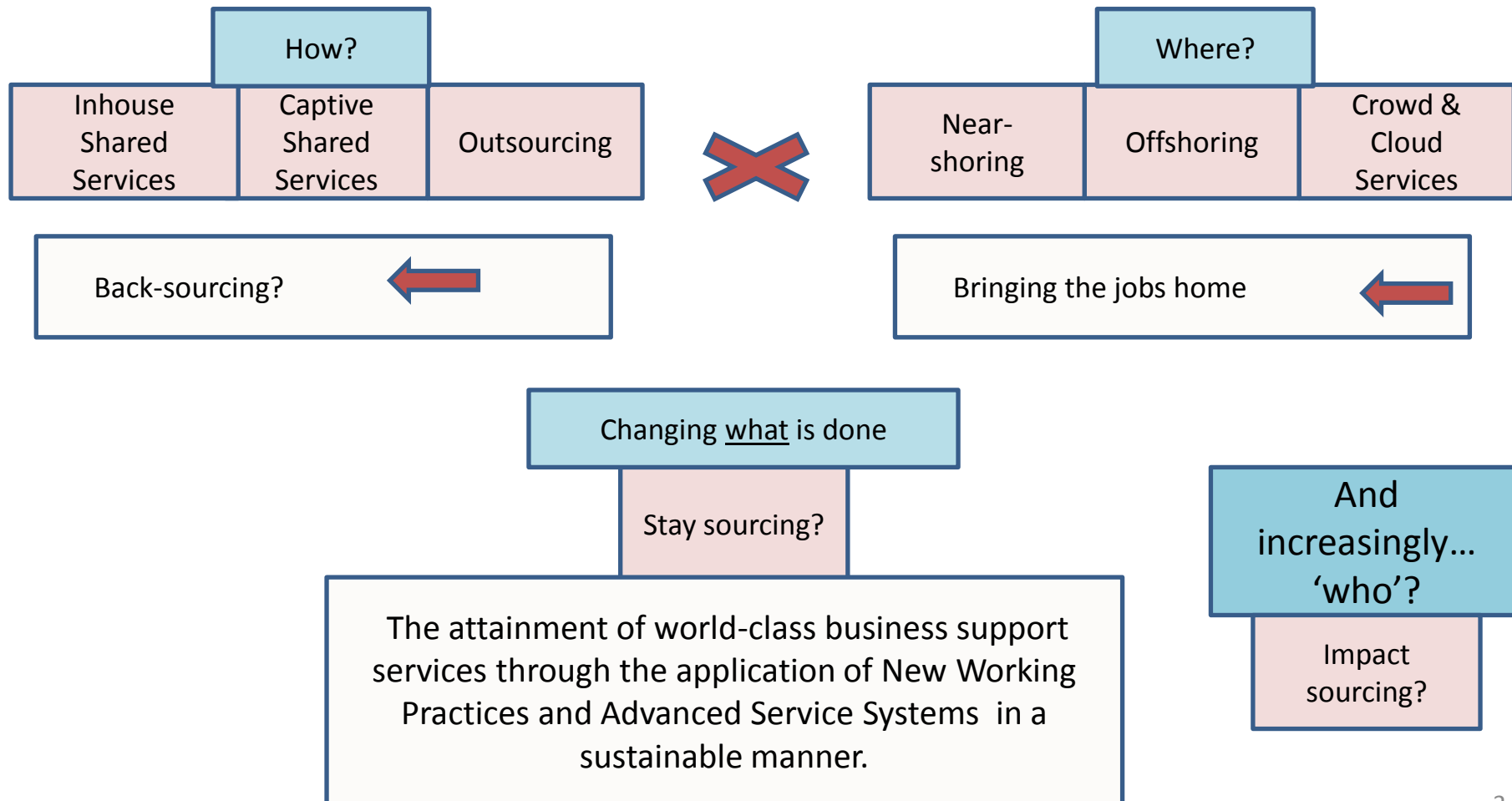
The Centre for Global Sourcing and Services

**Nothing's changed
but everything's different!**

What we do?

"The Centre is dedicated to carrying out both academic and 'focus on practice' high impact internationally renowned research on <u>how</u> organisations source and manage business and IT services in a <u>global</u> context"…….*Centre for Global Sourcing and Services Website*

How?

Inhouse Shared Services	Captive Shared Services	Outsourcing

Where?

Near-shoring	Offshoring	Crowd & Cloud Services

Back-sourcing? ⬅

Bringing the jobs home ⬅

Changing <u>what</u> is done

Stay sourcing?

The attainment of world-class business support services through the application of New Working Practices and Advanced Service Systems in a sustainable manner.

And increasingly… 'who'?

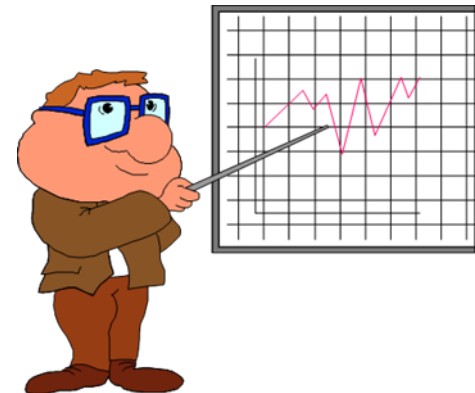Impact sourcing?

Some people will spend a <u>lot</u> of time getting data analytics right, and a <u>lot</u> of people will spend <u>some</u> time getting it wrong.

There are significant opportunities for generating insight through data analytics and big data. But…

- … research by Loughborough University's Centre for Global Sourcing and Services suggests that this potential may not be realised if organisations do not ask the right questions about the links between

- business partners,
- business process centres, and
- business units.

Data analytics & big data

- Whilst corporate-wide master data has improved significantly in recent years, big data requires new thinking.

- This means creating a different culture that values and leverages data to better support global end-to-end processes which deliver real outcomes.

Input $\rightarrow$ **BLACK BOX** $\rightarrow$ **Output**

But first, a 'recap'…..

What is the essence of the SSC model?

A simple idea that needs no big agenda!

Moving to a Shared Service Centre Model

Conventional Divisional structure
(support services embedded)

Shared service centre structure

Semi-autonomous

Thinking like a business

Networking & benchmarking

More than just a new organisation chart -
The SSC model blends different approaches

market

matrix

pyramid

Working across the organisation

Combining a market outlook with inhouse management control

Enabling a single source of the truth in real-time throughout the management chain

New structures, 'philosophy' & techniques

Shared service (&BPO) - Success factors

- ✓ Simplification
- ✓ Division of labour/deskilling
- ✓ Standardisation
- ✓ A single version of the truth
- ✓ Objective/independent
- ✓ Scalable
- ✓ Efficient & continuous cost reduction
- ✓ Finding the cheapest place on earth
- ✓ Networking and benchmarking
- ✓ Invisible to the business
- ✓ Phased migration, building on the wins

But… are these strengths compatible with the 'brave new world' of data analytics?

Complexity

Migration

Codification

Simplification

Standardisation

Sharing

Commoditization

Organising for data analytics and big data

- Big data is messy and its application needs to be tailored around individual business problems.

- Data analytics: needs new structures and thinking to go with the technical opportunities?

- But, what if the talent pipeline dries up as the professional 'training camps' are offshored ?

Segregated finance?

SSC

Retained finance

Globalisation

Business Partners

Finance operations

Segregated finance?

SSC

Retained finance

S1

MI and analytics?

Globalisation?

Business Partners

R1

?

S2

Finance operations

R2

Buy in – MBAs or SSC training?

Data analytics?

But before we go on..

What is essence of 'big data'

And,

is it just a fad?

"Big data" refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyze.

(*Big data: The next frontier for innovation*, competition, and productivity, McKinsey Global Institute, June 2011)

WHAT IS BIG DATA – THE 4 Vs?

The FOUR V's of Big Data

Volume — SCALE OF DATA

40 ZETTABYTES [43 TRILLION GIGABYTES] of data will be created by 2020, an increase of 300 times from 2005

6 BILLION PEOPLE have cell phones

WORLD POPULATION: 7 BILLION

It's estimated that 2.5 QUINTILLION BYTES [2.3 TRILLION GIGABYTES] of data are created each day

Most companies in the U.S. have at least 100 TERABYTES [100,000 GIGABYTES] of data stored

Velocity — ANALYSIS OF STREAMING DATA

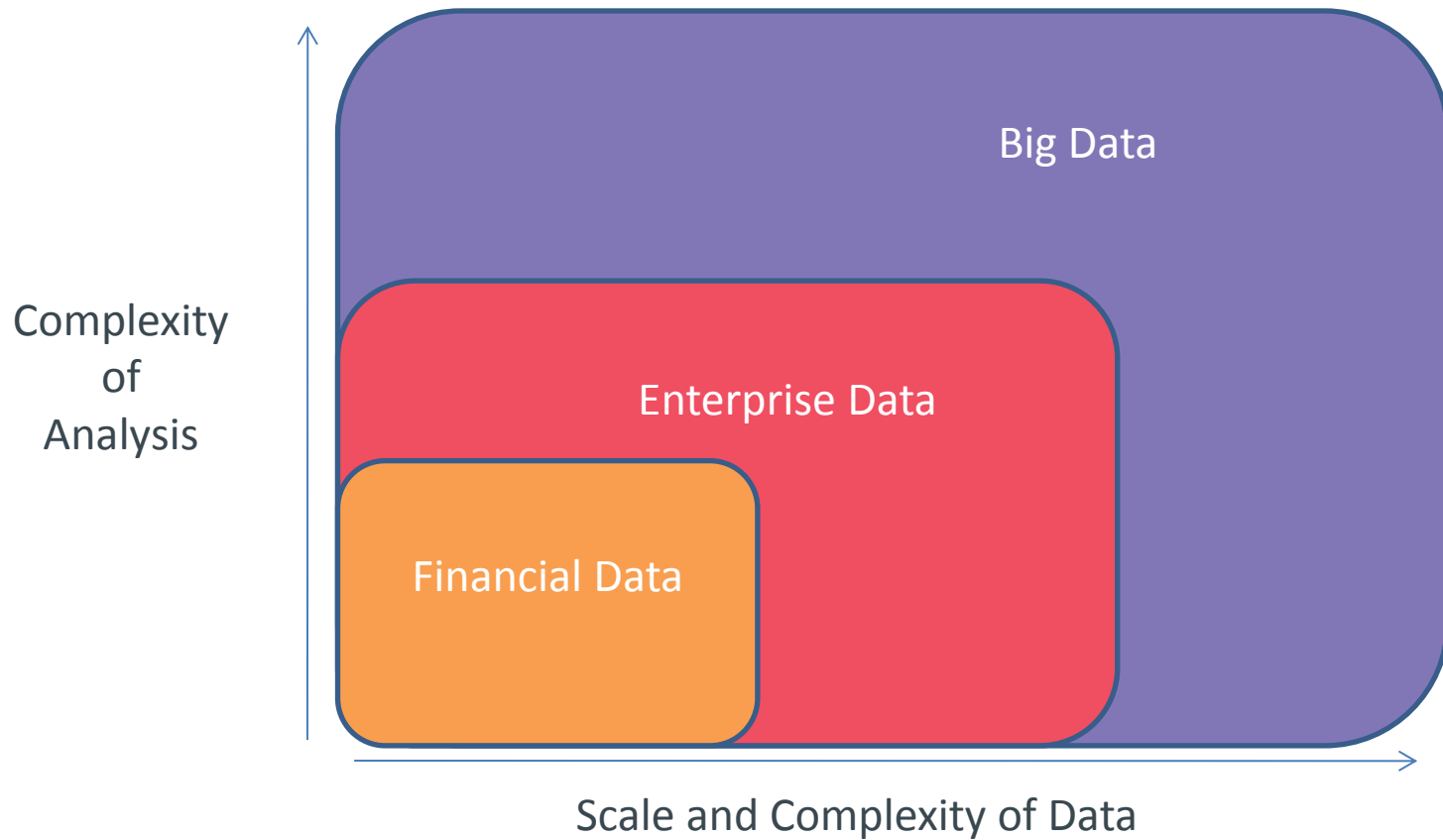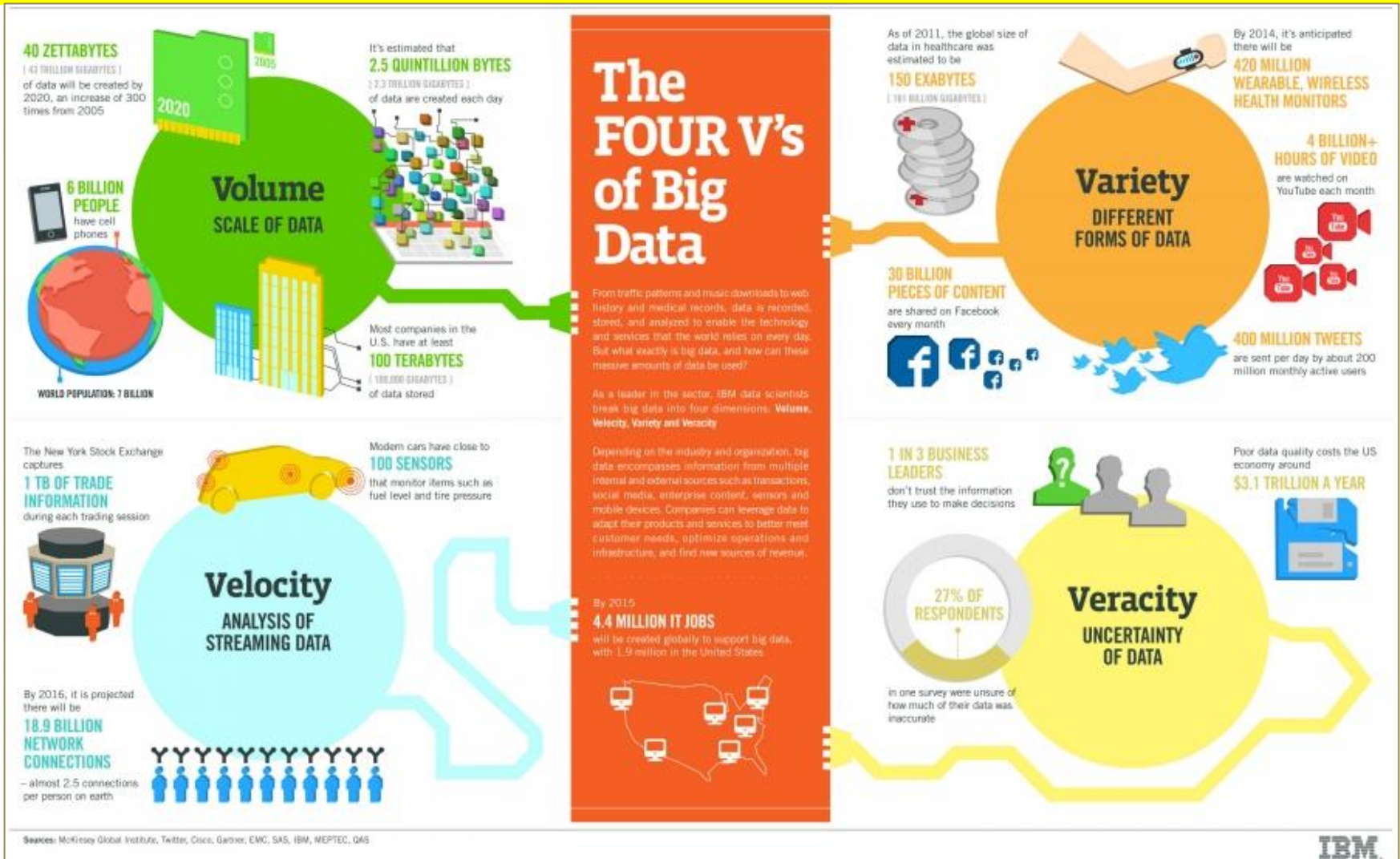The New York Stock Exchange captures 1 TB OF TRADE INFORMATION during each trading session

By 2016, it is projected there will be 18.9 BILLION NETWORK CONNECTIONS – almost 2.5 connections per person on earth

Modern cars have close to 100 SENSORS that monitor items such as fuel level and tire pressure

From traffic patterns and music downloads to web history and medical records, data is recorded, stored, and analyzed to enable the technology and services that the world relies on every day. But what exactly is big data, and how can these massive amounts of data be used?

As a leader in the sector, IBM data scientists break big data into four dimensions: Volume, Velocity, Variety and Veracity

Depending on the industry and organization, big data encompasses information from multiple internal and external sources such as transactions, social media, enterprise content, sensors and mobile devices. Companies can leverage data to adapt their products and services to better meet customer needs, optimize operations and infrastructure, and find new sources of revenue.

By 2015 4.4 MILLION IT JOBS will be created globally to support big data, with 1.9 million in the United States

Variety — DIFFERENT FORMS OF DATA

As of 2011, the global size of data in healthcare was estimated to be 150 EXABYTES [161 BILLION GIGABYTES]

30 BILLION PIECES OF CONTENT are shared on Facebook every month

By 2014, it's anticipated there will be 420 MILLION WEARABLE, WIRELESS HEALTH MONITORS

4 BILLION+ HOURS OF VIDEO are watched on YouTube each month

400 MILLION TWEETS are sent per day by about 200 million monthly active users

Veracity — UNCERTAINTY OF DATA

1 IN 3 BUSINESS LEADERS don't trust the information they use to make decisions

27% OF RESPONDENTS in one survey were unsure of how much of their data was inaccurate

Poor data quality costs the US economy around $3.1 TRILLION A YEAR

Sources: McKinsey Global Institute, Twitter, Cisco, Gartner, EMC, SAS, IBM, MEPTEC, QAS

IBM

"I think you'll find that mine is bigger…"

What is the basis for finance professionals' claim to be well placed to help unlock Big Data?

Use core skills

In business context to bring insight

To influence people

And lead the organisation

Efficiency

Data capture

Reports

Analysis

Insight

Influence

Impact

Effectiveness

Value

Comfort zone

Insight, influence and impact requires…

- Inspiration/creativity
- Leading-edge expertise
- Broad views & multidisciplinary collaboration
- Business connectivity & understanding
- Data security
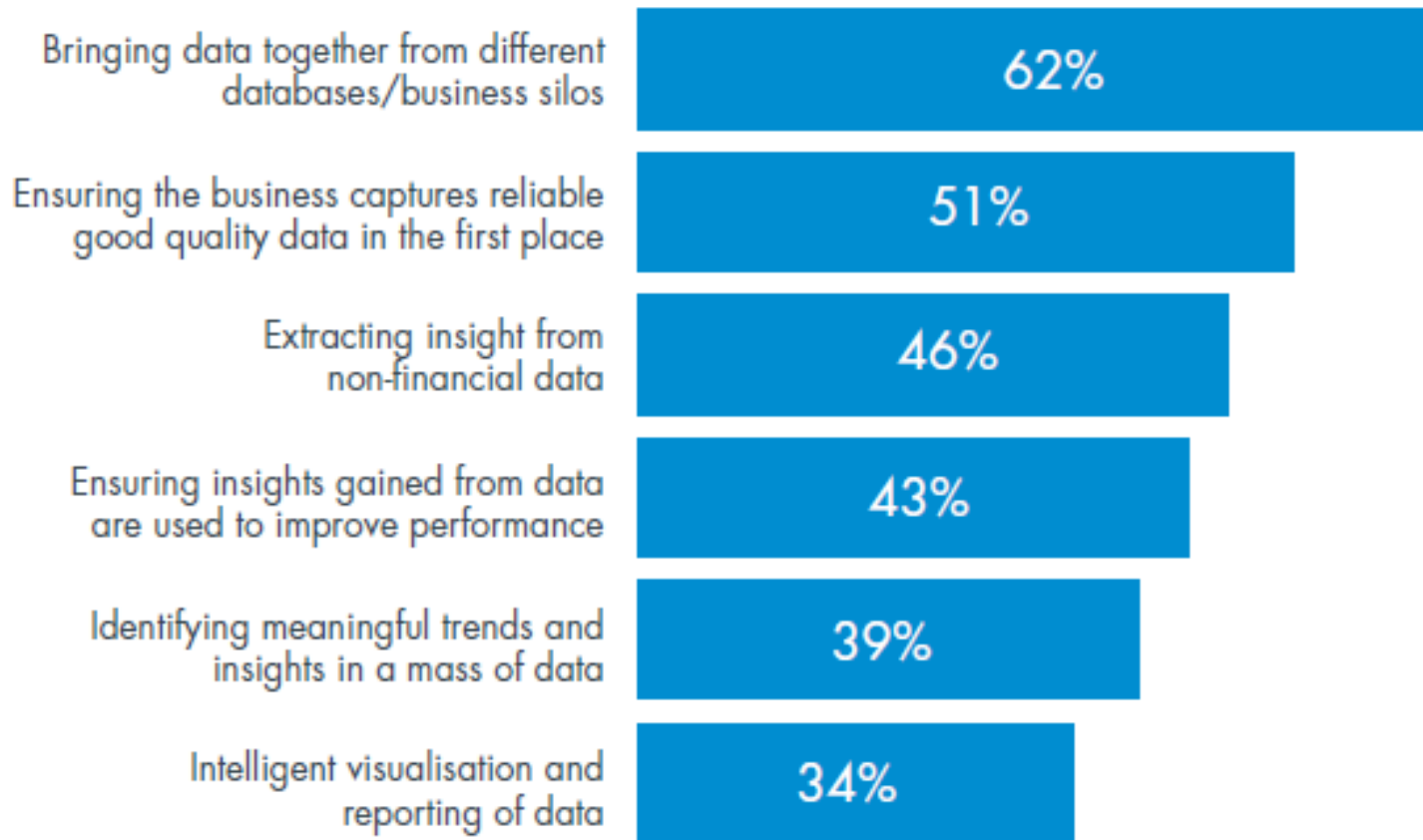- Intelligent information users
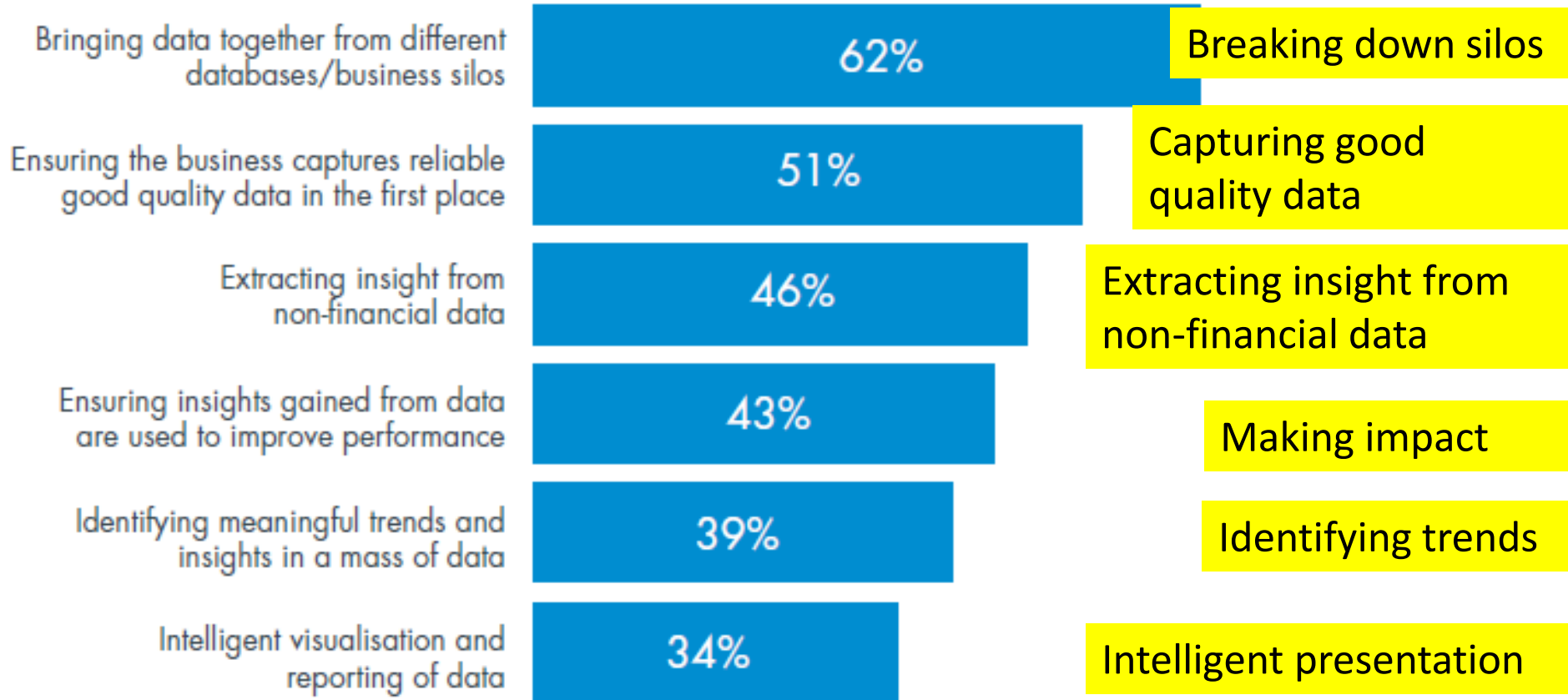- Interpersonal skills

CIMA Survey 2015

- For most companies, fully adapting to a data driven era of business remains a work in progress.

- '86% of the finance professionals we surveyed agree that their businesses are….

  … struggling to get valuable insight from data, not least due to issues such as organisational data silos, challenges relating to data quality, or difficulties in working with unfamiliar non-financial data.'
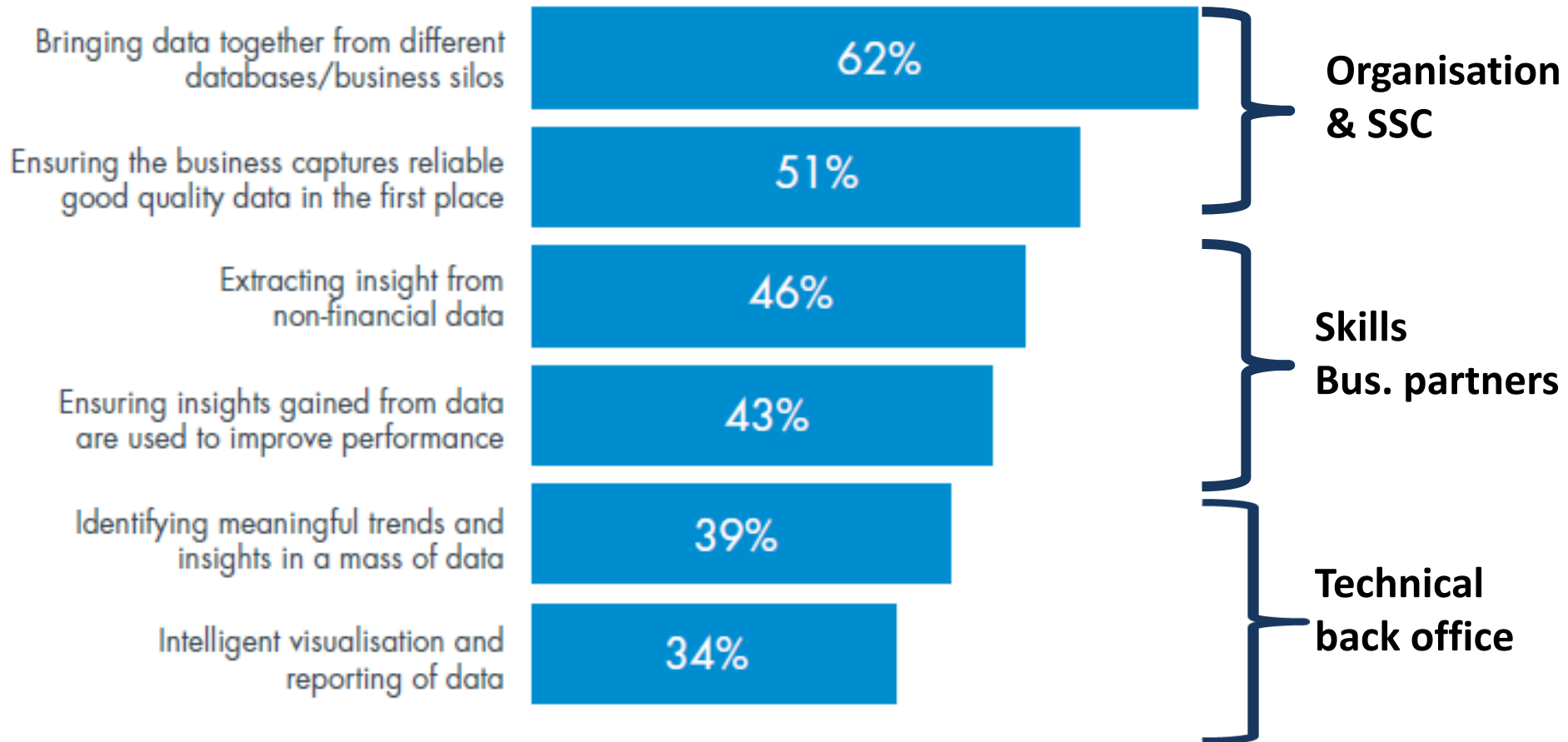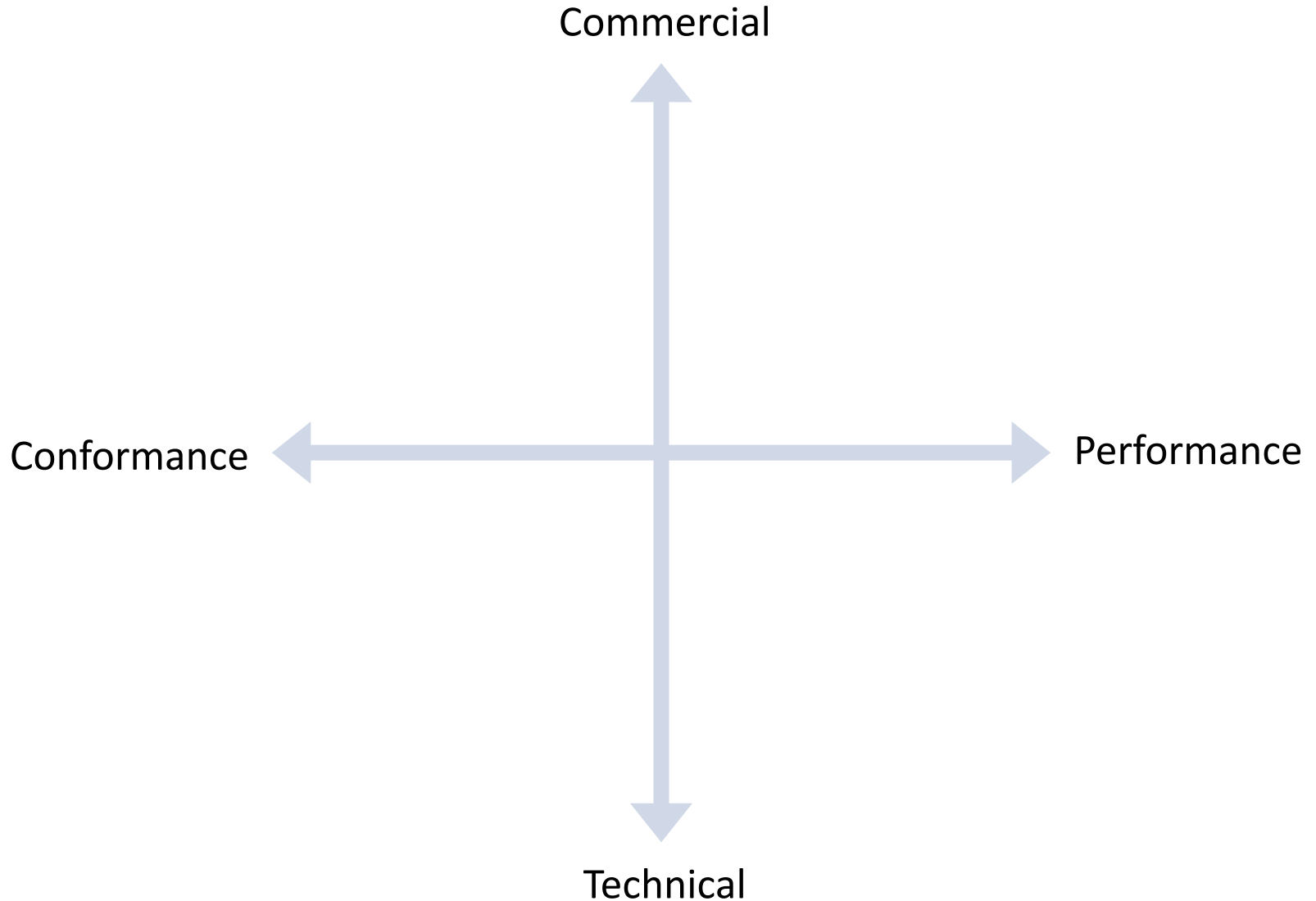
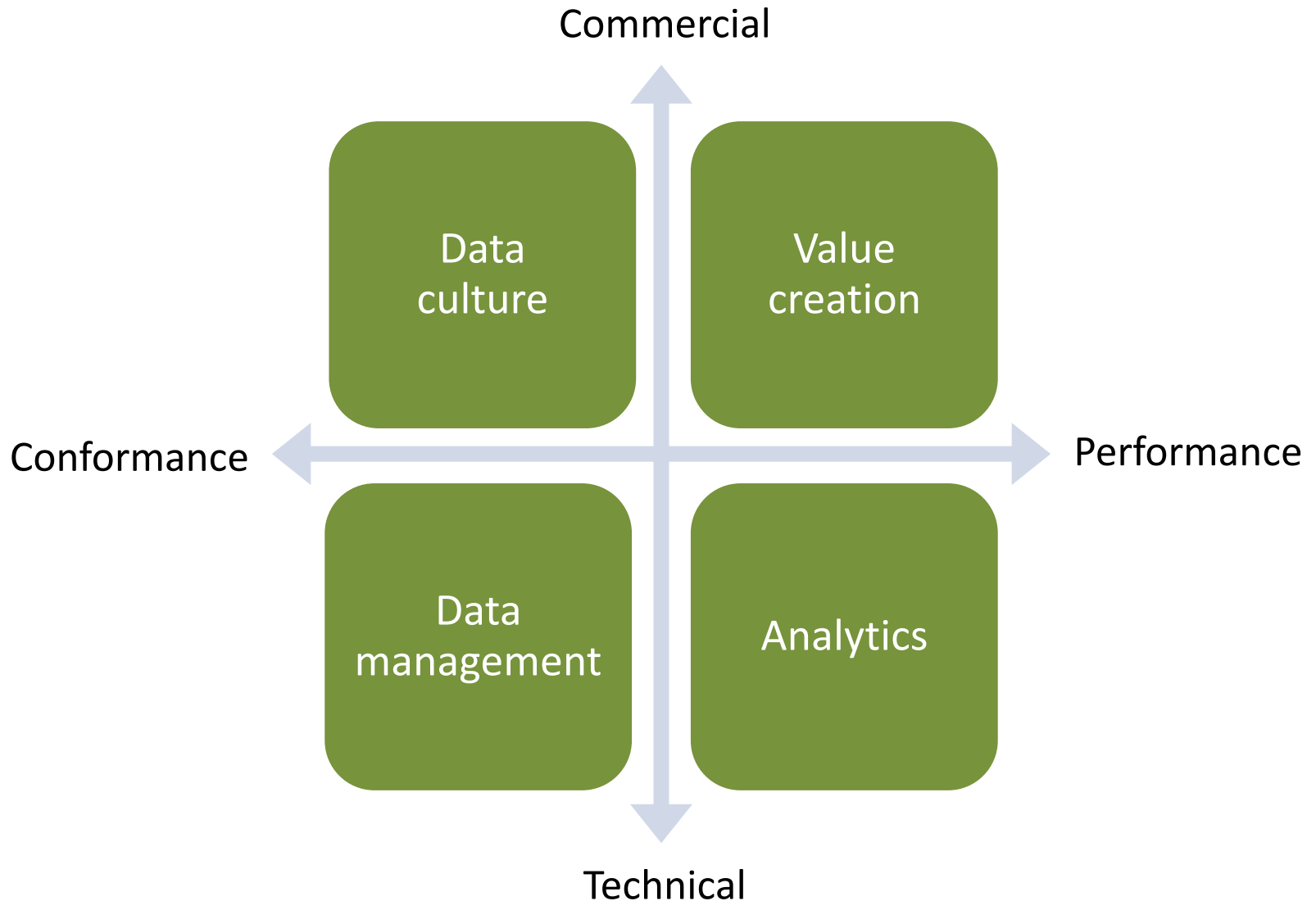# Challenges in harnessing Big Data

Challenge	Percentage
Bringing data together from different databases/business silos	62%
Ensuring the business captures reliable good quality data in the first place	51%
Extracting insight from non-financial data	46%
Ensuring insights gained from data are used to improve performance	43%
Identifying meaningful trends and insights in a mass of data	39%
Intelligent visualisation and reporting of data	34%

Challenges in harnessing Big Data

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Breaking down silos

Capturing good quality data

Extracting insight from non-financial data

Making impact

Identifying trends

Intelligent presentation

Challenges in harnessing Big Data

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Organisation & SSC

Skills Bus. partners

Technical back office

The competencies required for data analytics

Commercial

Conformance ← → Performance

Technical

The competencies required for data analytics

New roles for management accountants
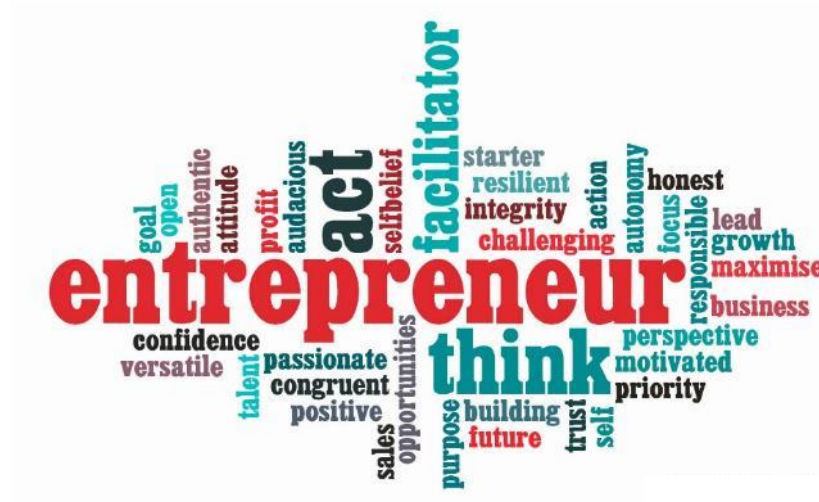
Insight – an example of product extension

Baby wipes

Routes to enlightenment?

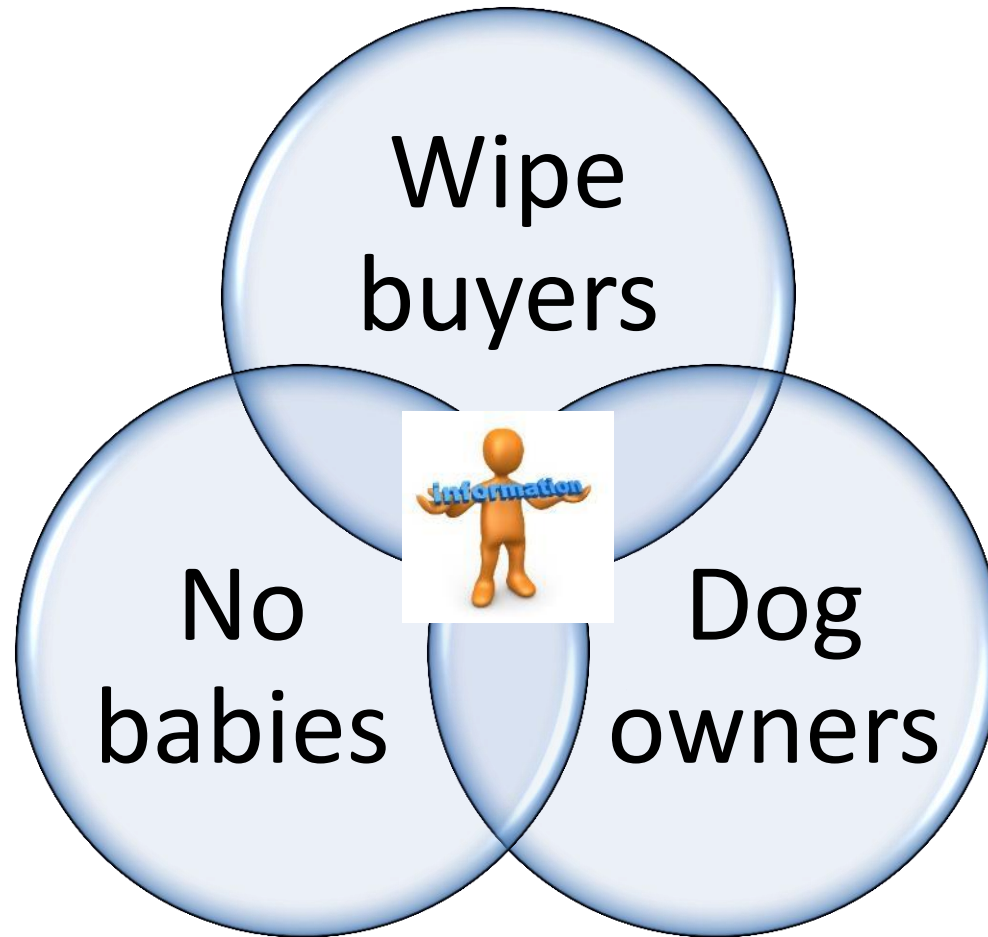inspiration

brainstorming

entrepreneur

intention data

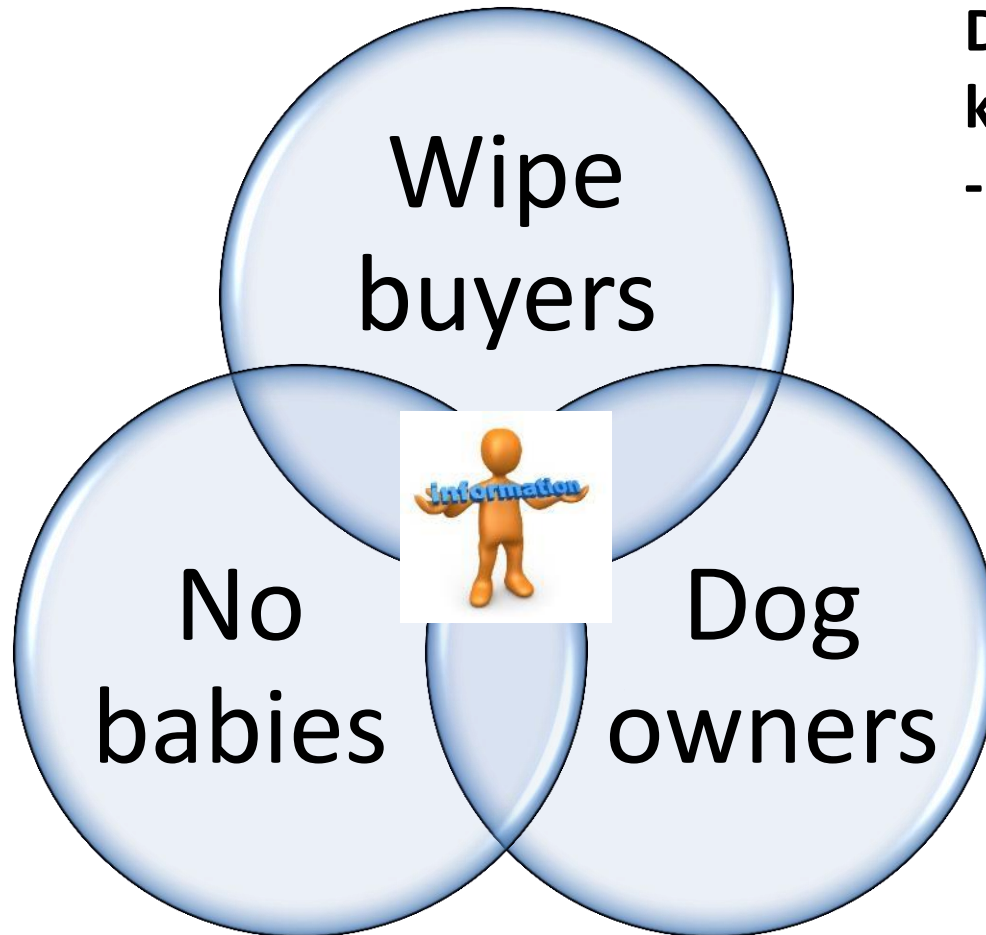consultant

actual data

Insight from data – people without babies buy baby wipes – but WHY?

Insight from data – people without babies buy baby wipes – but WHY?

Expert knowledge? - explicit

Domain knowledge? - tacit

Wipe buyers

No babies

Dog owners

Paralysis through analysis?

Extinction through intuition!

Questions?

Shared Services Research

Thought Leadership from Loughborough University

Loughborough University

Search

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- News and events
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- Our Publications
- The SSC Forum
- In the Spotlight
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Welcome!

Welcome to the Shared Services Project Website: A Resource for Academics and Practitioners

Here we'll tell the story of our investigation into the emerging phenomena of the Shared Services model. Through speaking with leading companies we have discovered a real need to understand the Shared Services model and come together to formulate best practice.

News

- Andrew Rothwell to present at Universities UK conference
- Malaysia Activity Report
- Intellectual capital: Optimising performance in SSC's
- Ian Herbert Participating in CIMA Expert Roundtable – 15th January 2013
- CIMA-Loughborough Sourcing event – 18th January 2013 – Colombo, Sri Lanka

If you have any query on the project, a story to tell from your Shared Service Experience, or if there is anything you would like to see added then please contact the team on ssc-research-team@lboro.ac.uk or let us know what you think through our Discussion Board.

In the Spotlight

Revisiting Ian Herbert and Will Seal's 2011 article 'Shared Services as a new organisational form: some implications for management accounting' – can you see any other issues that we must consider? **Join the discussion by clicking here**.

This project is supported by the Chartered Institute of Management

CIMA Chartered Institute of Management Accountants

Andrew Rothwell to present at Universities UK conference

www.shared-services-research.com/news/andrew-rothwell-to-present-at-universities-uk-conference/