

# Big Data in Context

**Data-intensive challenges: what's hot and what's hype?**

The Register: Intel Academy  
22<sup>nd</sup> November 2011

**Martha Bennett**

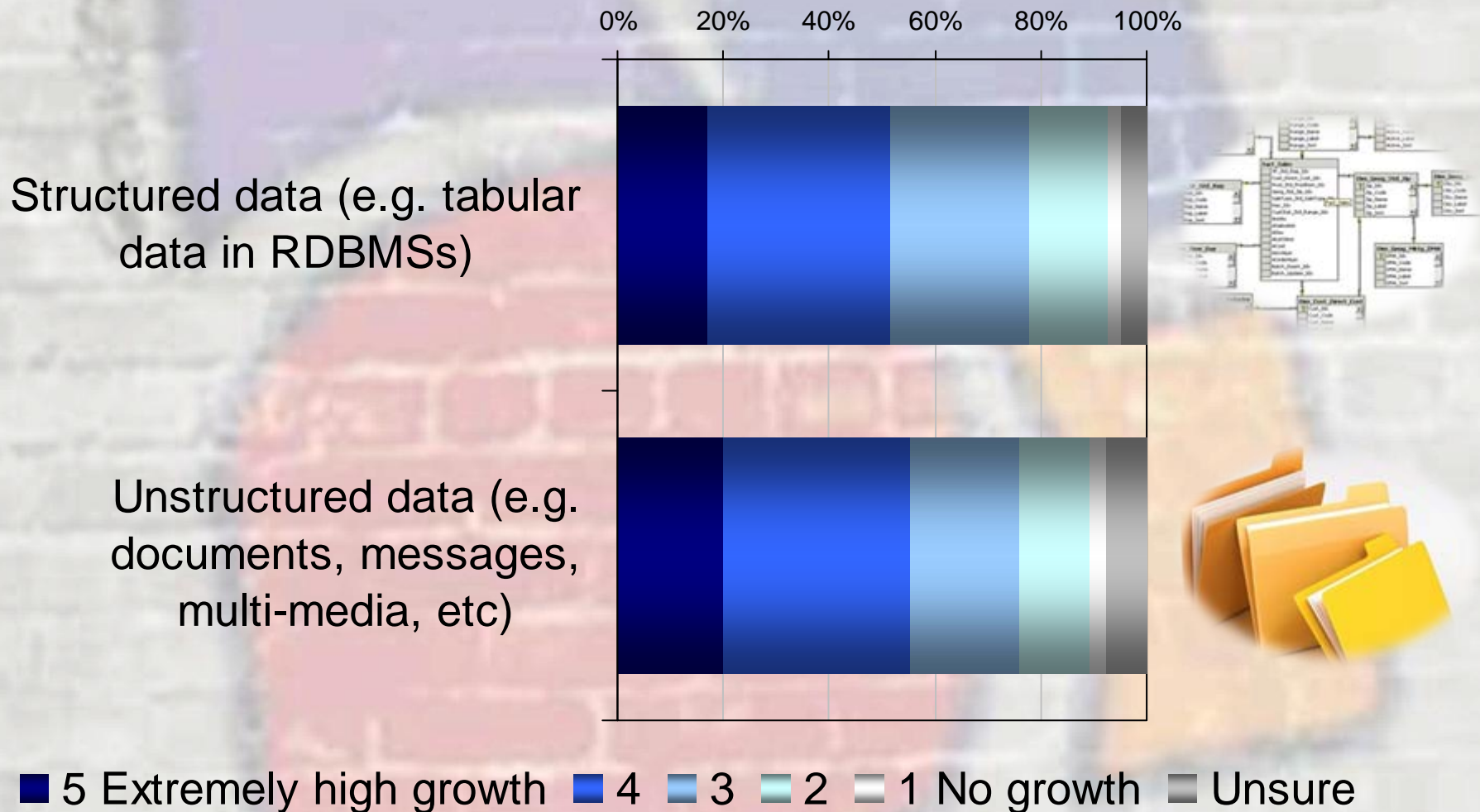
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# Topics

- Data, data everywhere ...
- The concept of value density – defining 'Big Data'
- The emerging 'Big Data' ecosystem
- A blended future
- Opportunities and challenges

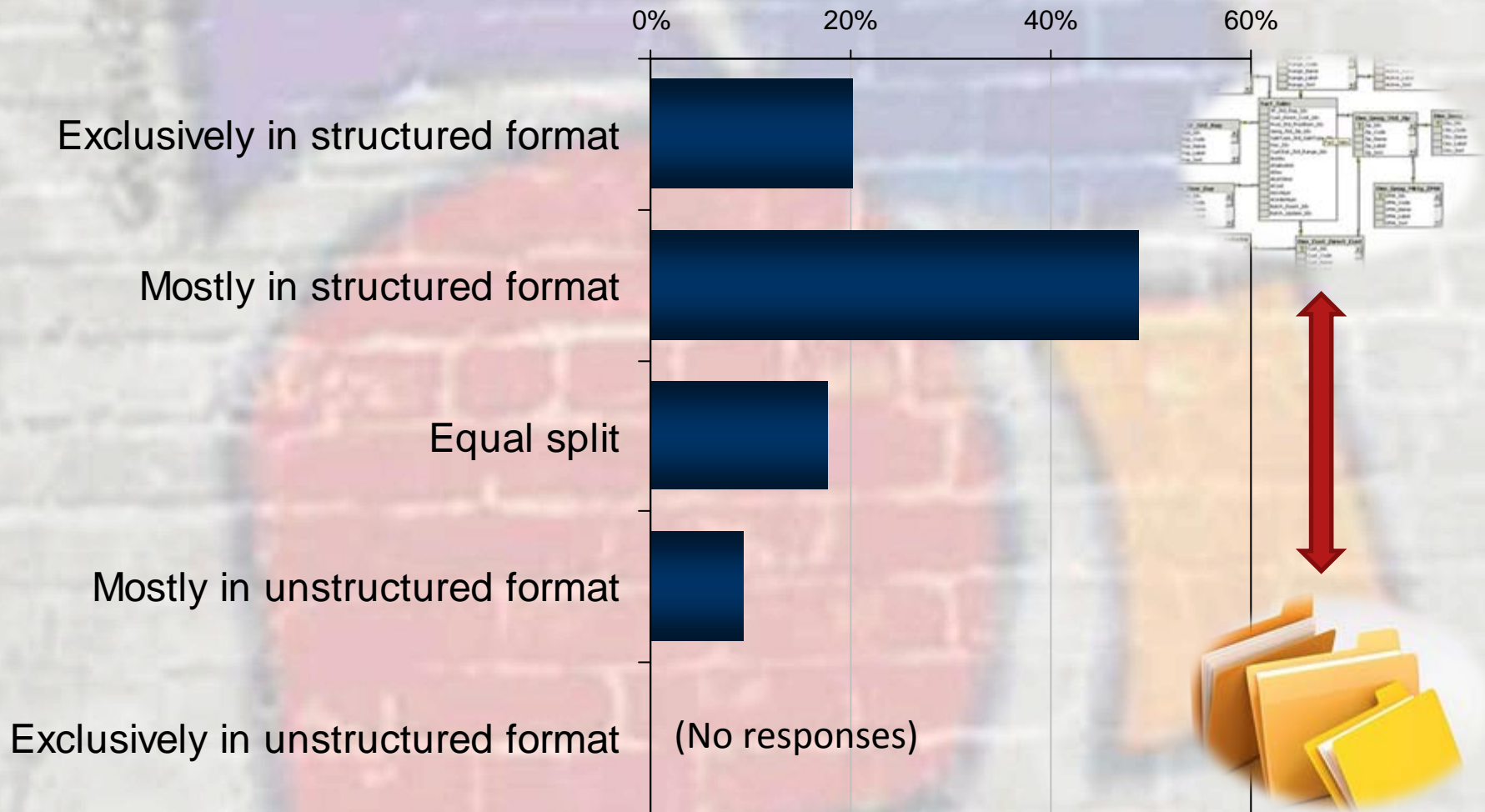
# What level of growth are you seeing in the following types of data within your organisation?



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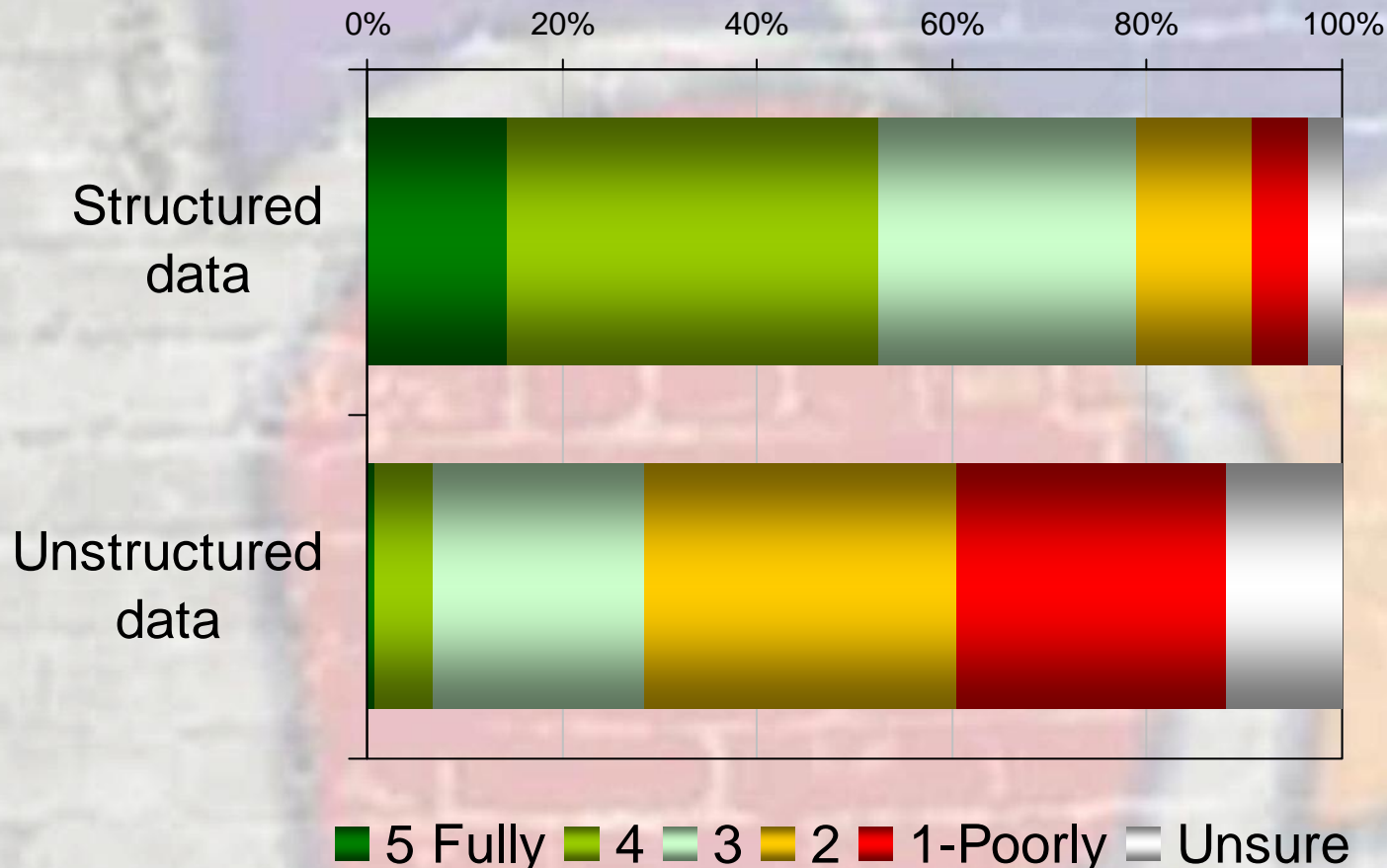
# In what form is your organisation's most valuable or critical data held (i.e. your crown jewels in information terms)?



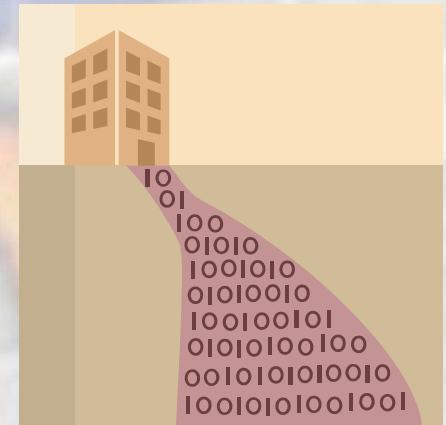
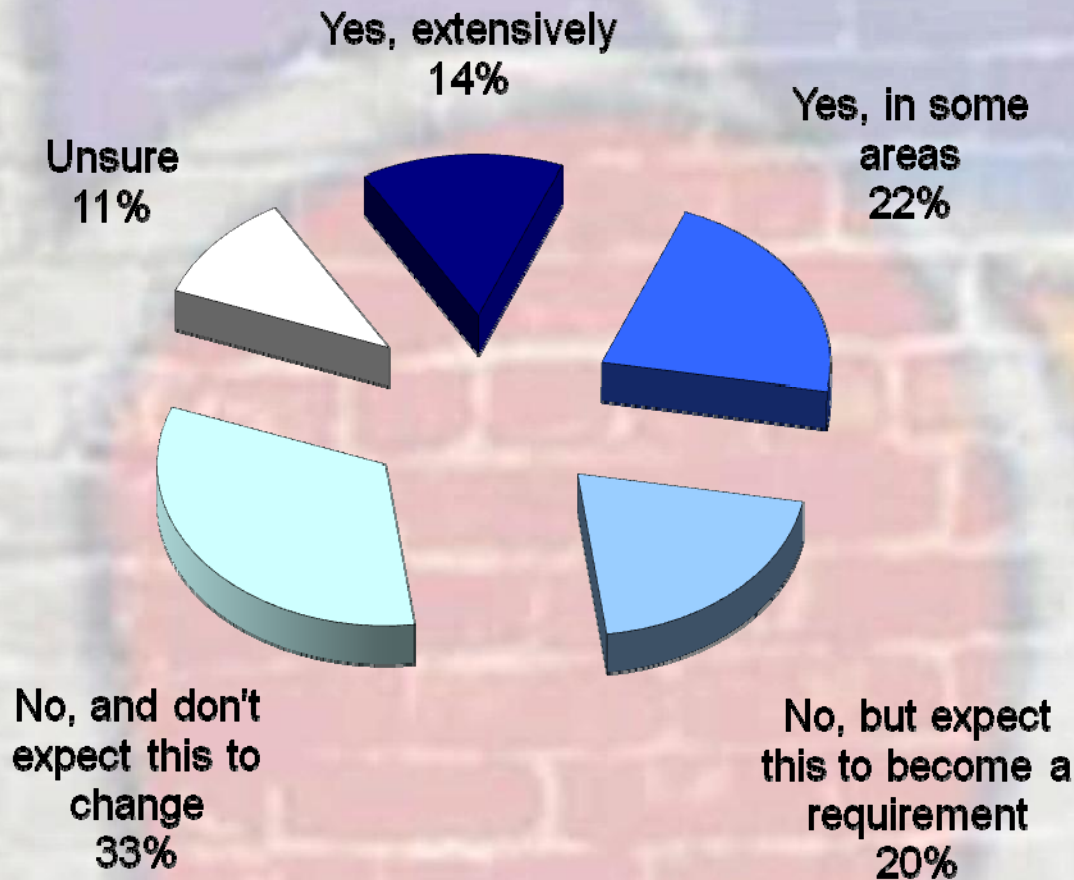
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# Considered overall, to what degree does your organisation exploit its information assets for analysis and decision making purposes?

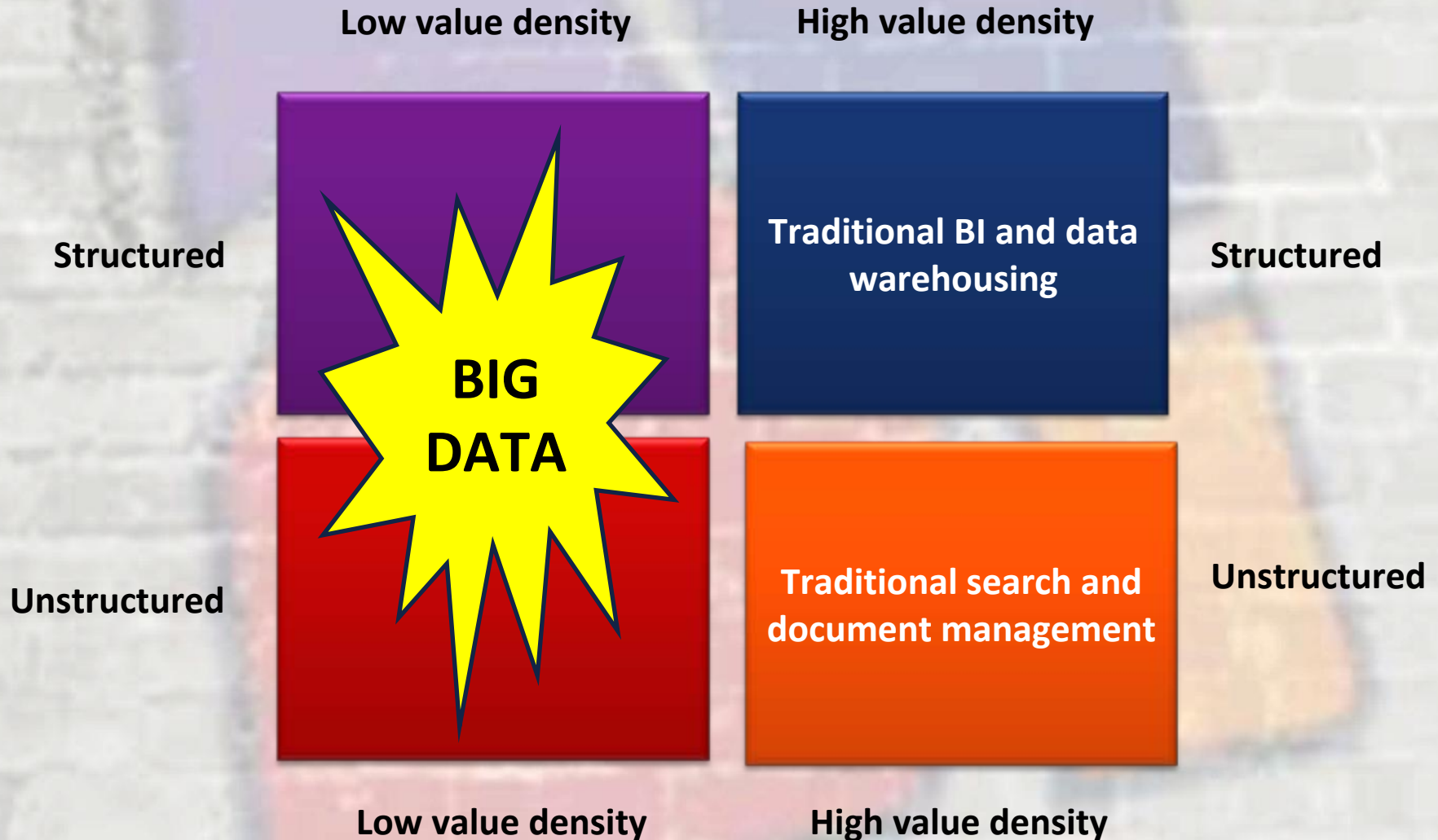


# Do you make use of high volume streams or feeds of data from external sources?





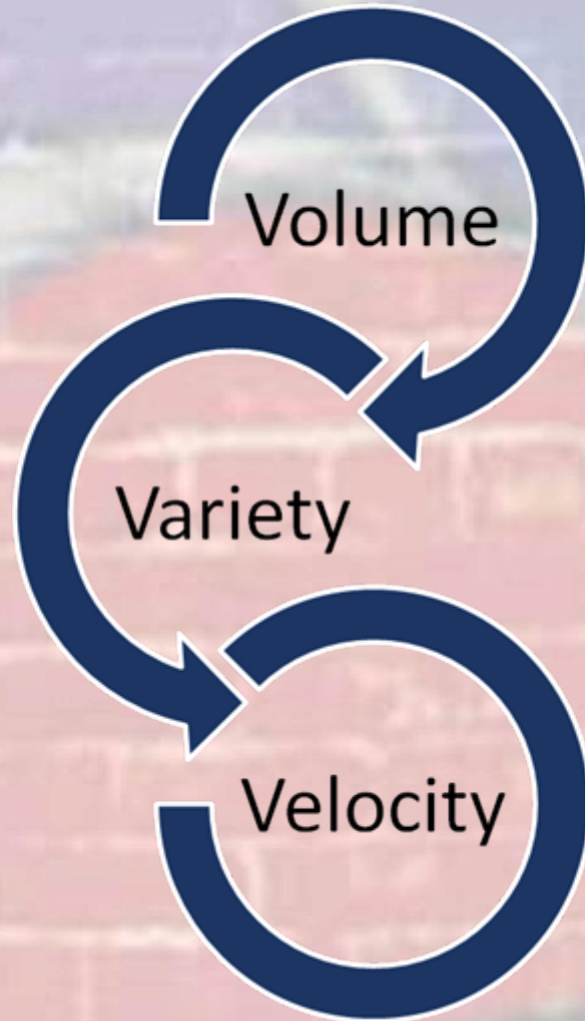
# The concept of value density – Big Data today



# The three Vs of Big Data

## Rule of thumb

Generally think of Big Data when two of these three apply



**High physical volumes with low value density**

**Different sources and formats or information**

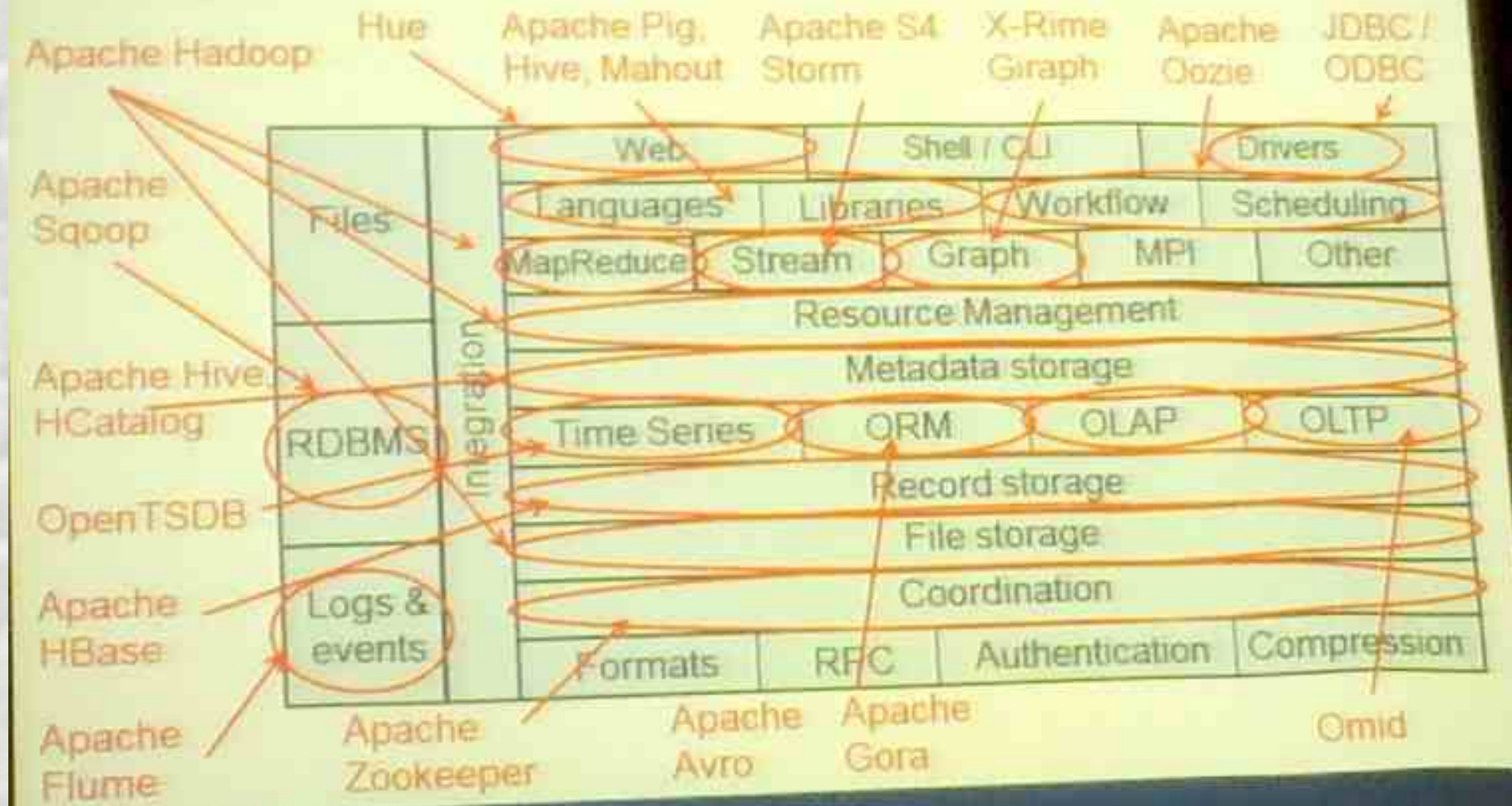
**Rapid rate of data movement, generation or acquisition**



# Introducing .....



# Getting crowded...



Source: The Register [http://www.theregister.co.uk/2011/11/09/hadoop\\_kernel\\_distro/](http://www.theregister.co.uk/2011/11/09/hadoop_kernel_distro/)

# Zooming out

## Distributed data analytics

- For executing parallel distributed data analysis on scale-out storage architectures

## Distributed indexing and search

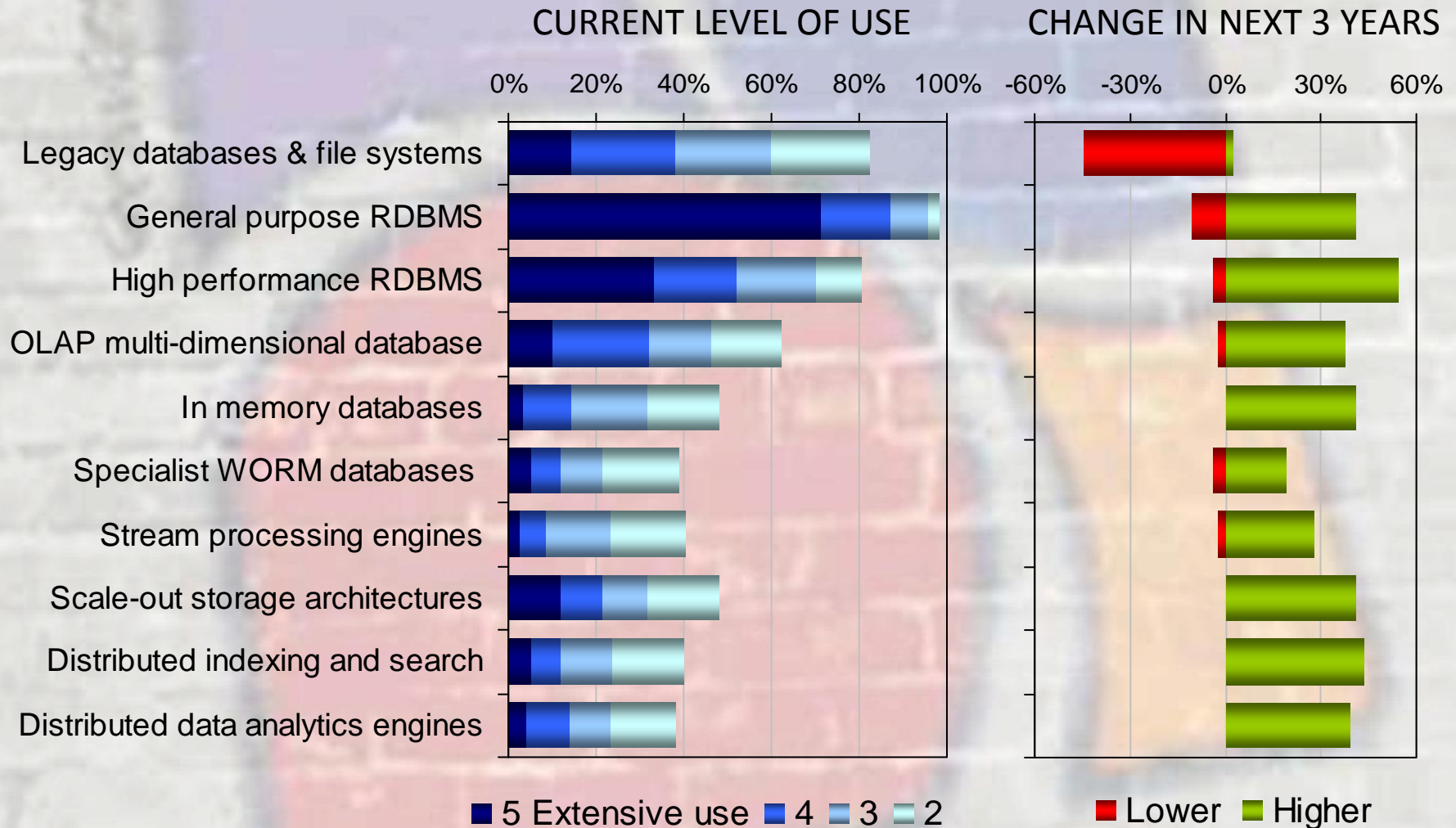
- For implementing fast distributed object storage and retrieval on scale-out storage architectures (including the so called 'No SQL' approach)

## Scale-out storage architectures

- Storage systems able to scale linearly through adding software, processing and storage elements integrated into standard building blocks under the control of a common management layer



# How much are the following used in your organisation today, and how will the level of use change over the next 3 years?



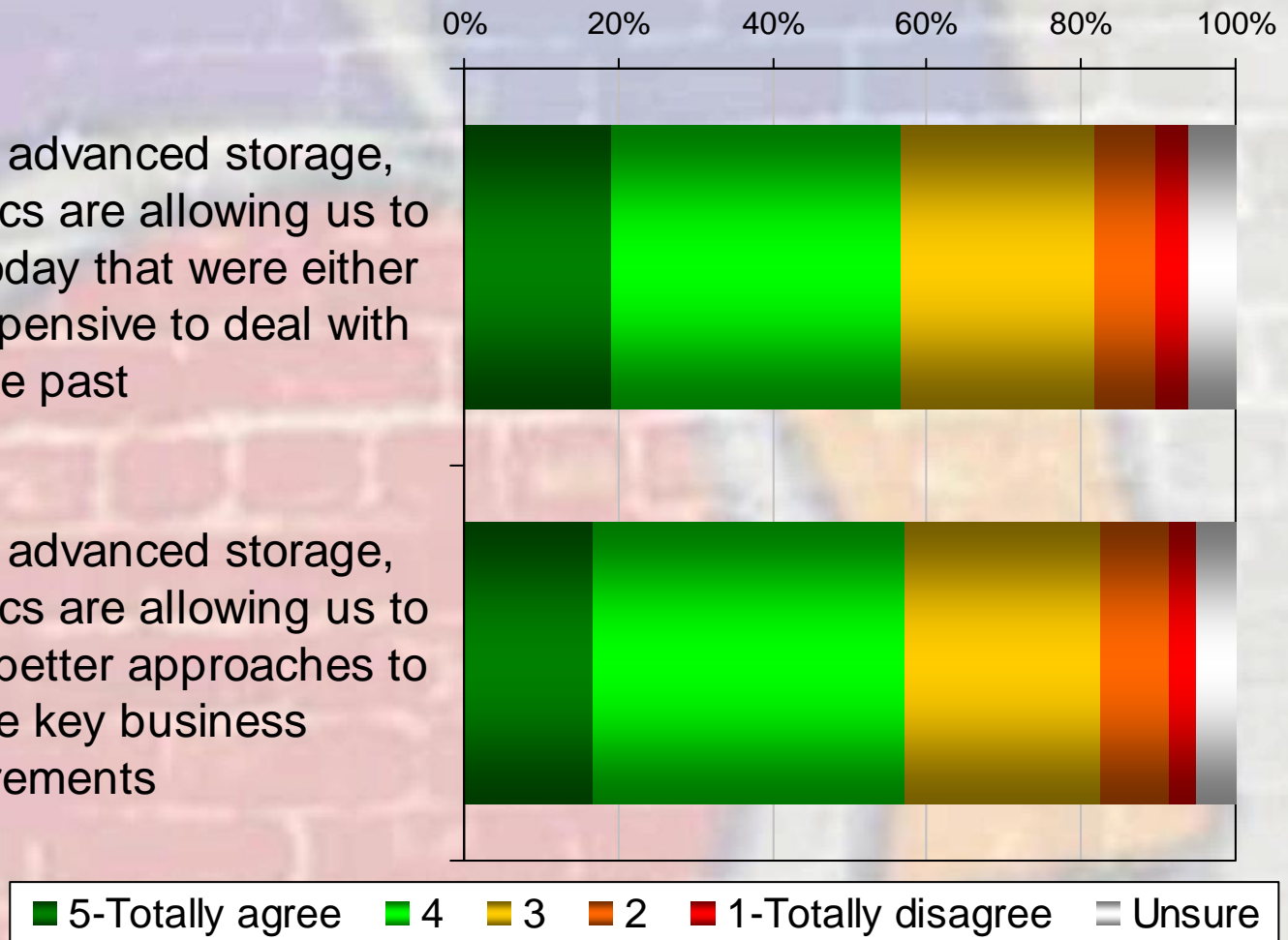
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# How much do you agree or disagree with the following statements?

Developments in advanced storage, access and analytics are allowing us to tackle problems today that were either too hard or too expensive to deal with in the past

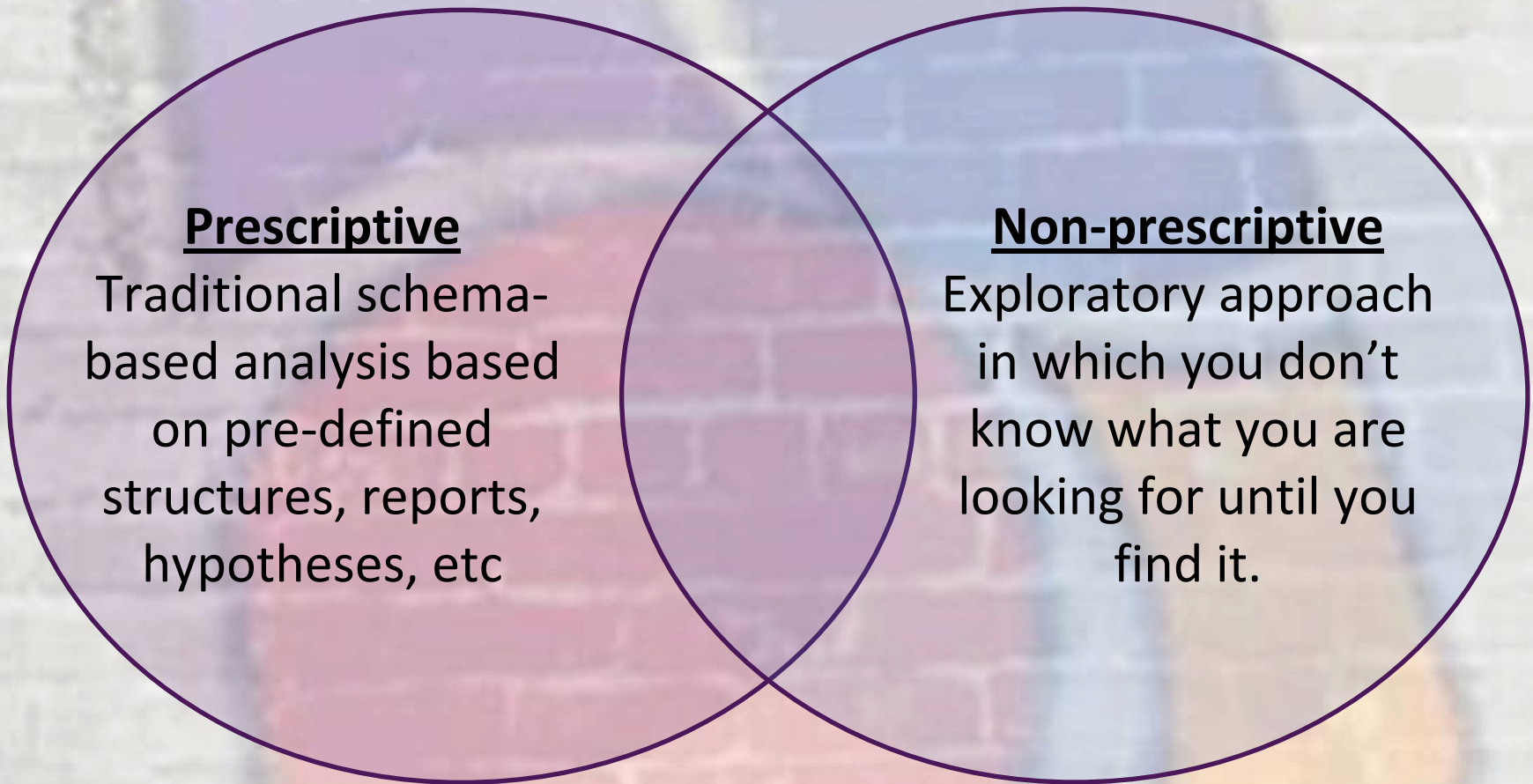
Developments in advanced storage, access and analytics are allowing us to take different and better approaches to tackling some key business requirements



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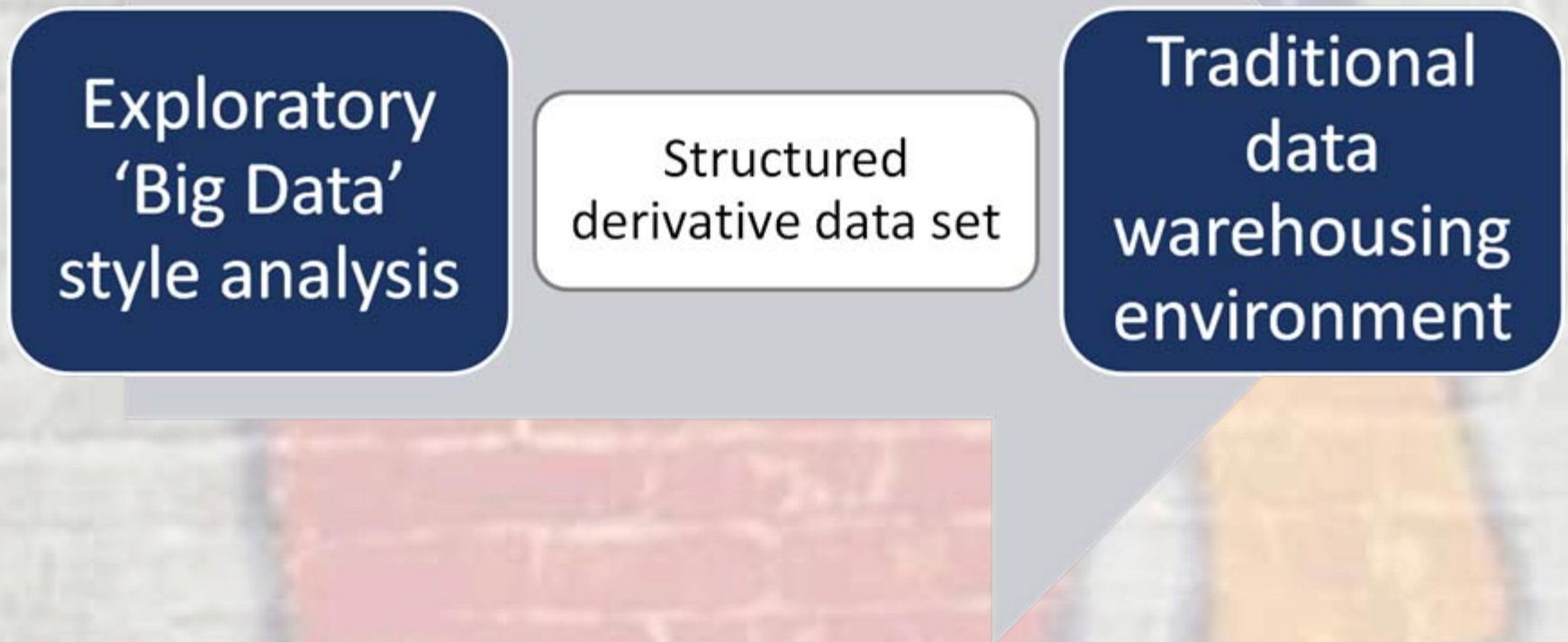
# A less prescriptive approach to analytics



- Both analytical paradigms have their place



# Blending approaches



- Big data feeding traditional BI systems
- But it can also go the other way

# Do you see cloud based services helping with any of the following in relation to more advanced storage, access and analytical solutions?

0% 20% 40% 60% 80% 100%

Rapid and cost effective setup and disposal of environment for familiarisation, training, experimenting and piloting

Access to high-end configurations for production systems that would not be cost effective to install on premise

Rapid and cost effective setup and disposal of environment for dealing with transient needs within the business

Removing concerns about scalability, e.g. running out of capacity for handling large data sets and heavy processing loads



■ Big benefit ■ Some benefit ■ No benefit ■ Don't know ■ N/A - cloud not for us at all

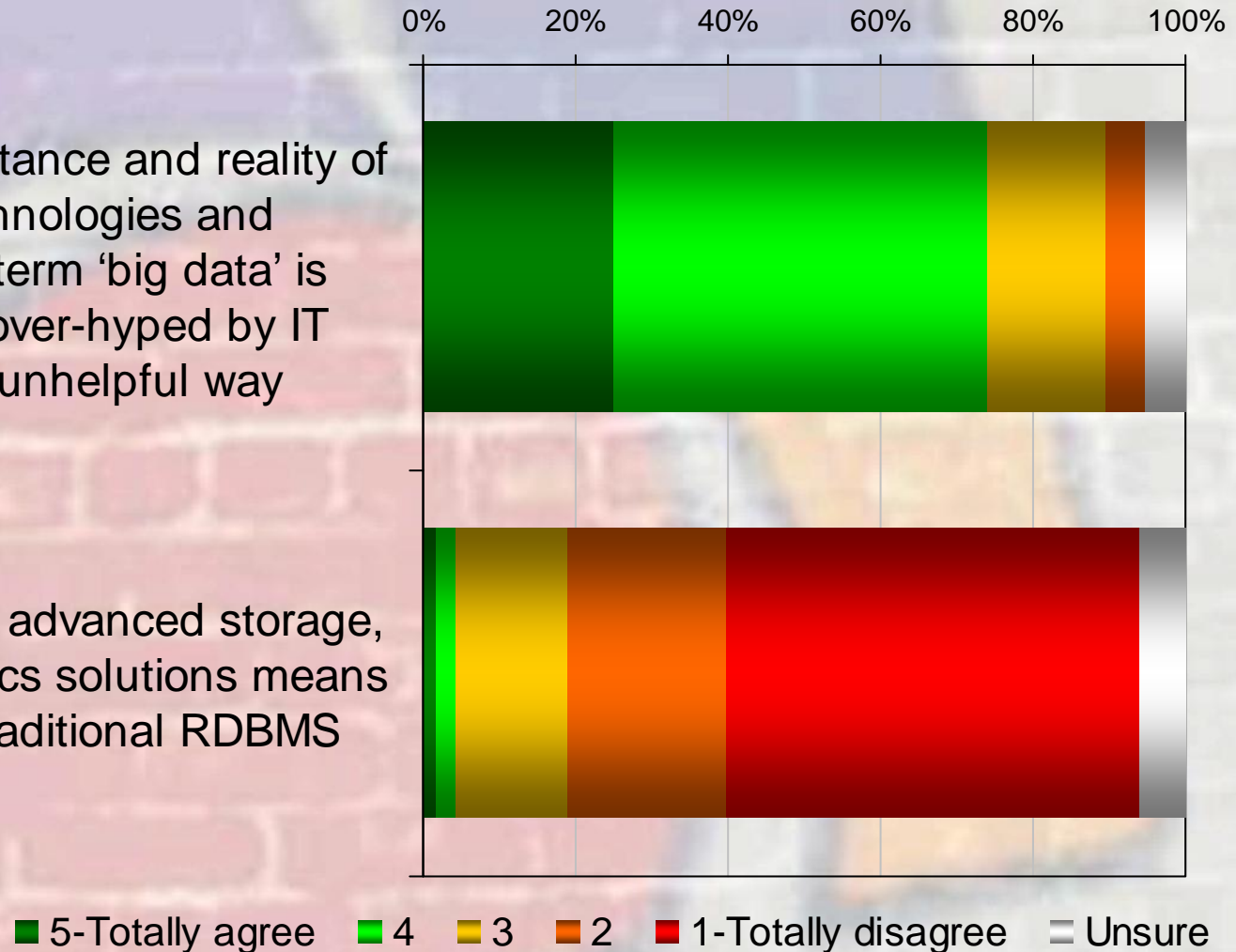
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# Issues around rhetoric and perception

Regardless of substance and reality of emerging technologies and techniques, the term 'big data' is currently being over-hyped by IT vendors in an unhelpful way

The emergence of advanced storage, access and analytics solutions means the end of the traditional RDBMS



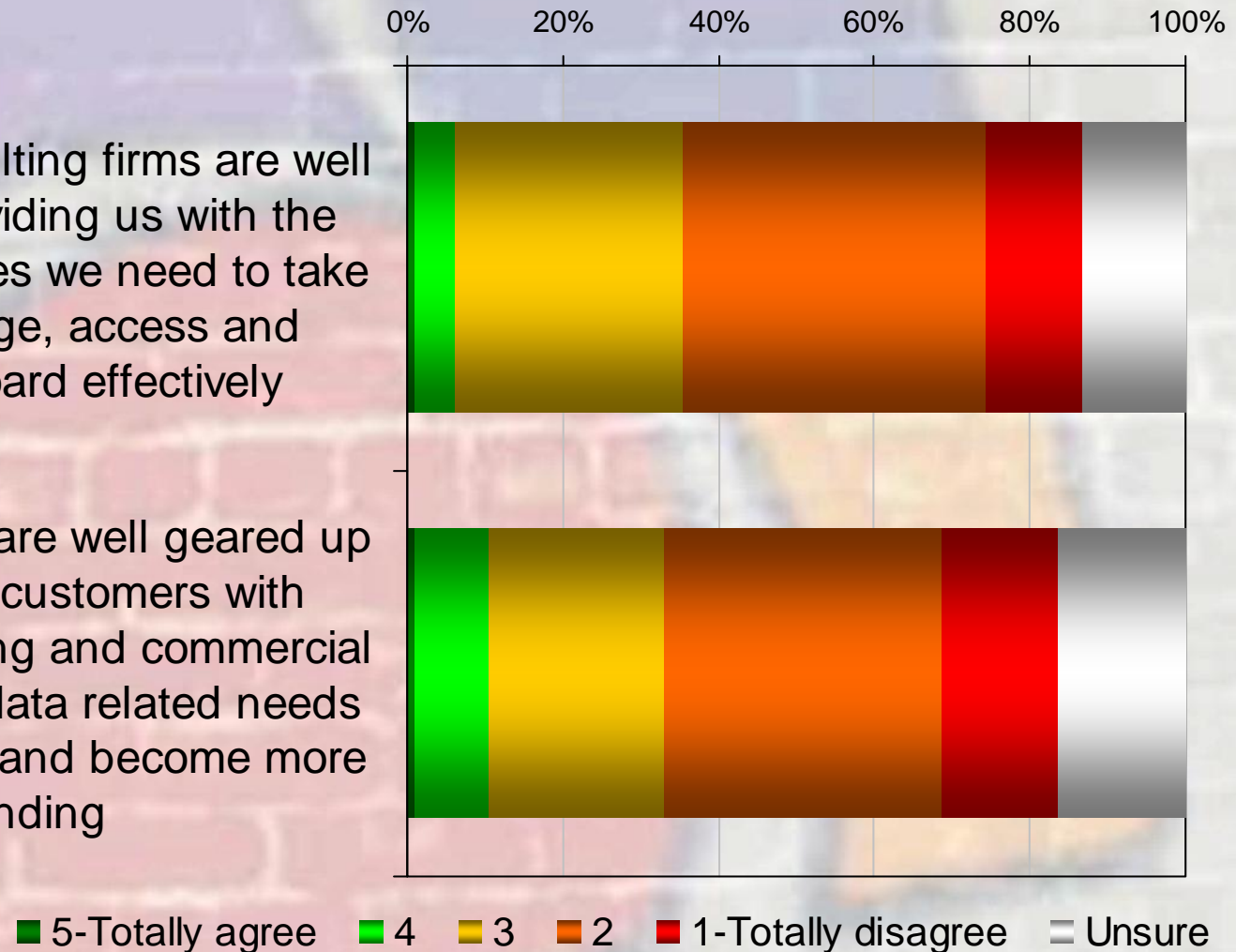
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# More practical challenges

Vendors and consulting firms are well geared up to providing us with the support and services we need to take advanced storage, access and analytics on board effectively

Database vendors are well geared up to support their customers with appropriate licensing and commercial arrangements as data related needs continue to evolve and become more demanding



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# In conclusion

- Data volumes will continue to increase
- New architectures and technologies have an important role
- Key challenges
  - Lack of skills
  - Security
  - Risk of 'standards' proliferation
  - It's not about "*or*", it's about "*and*"

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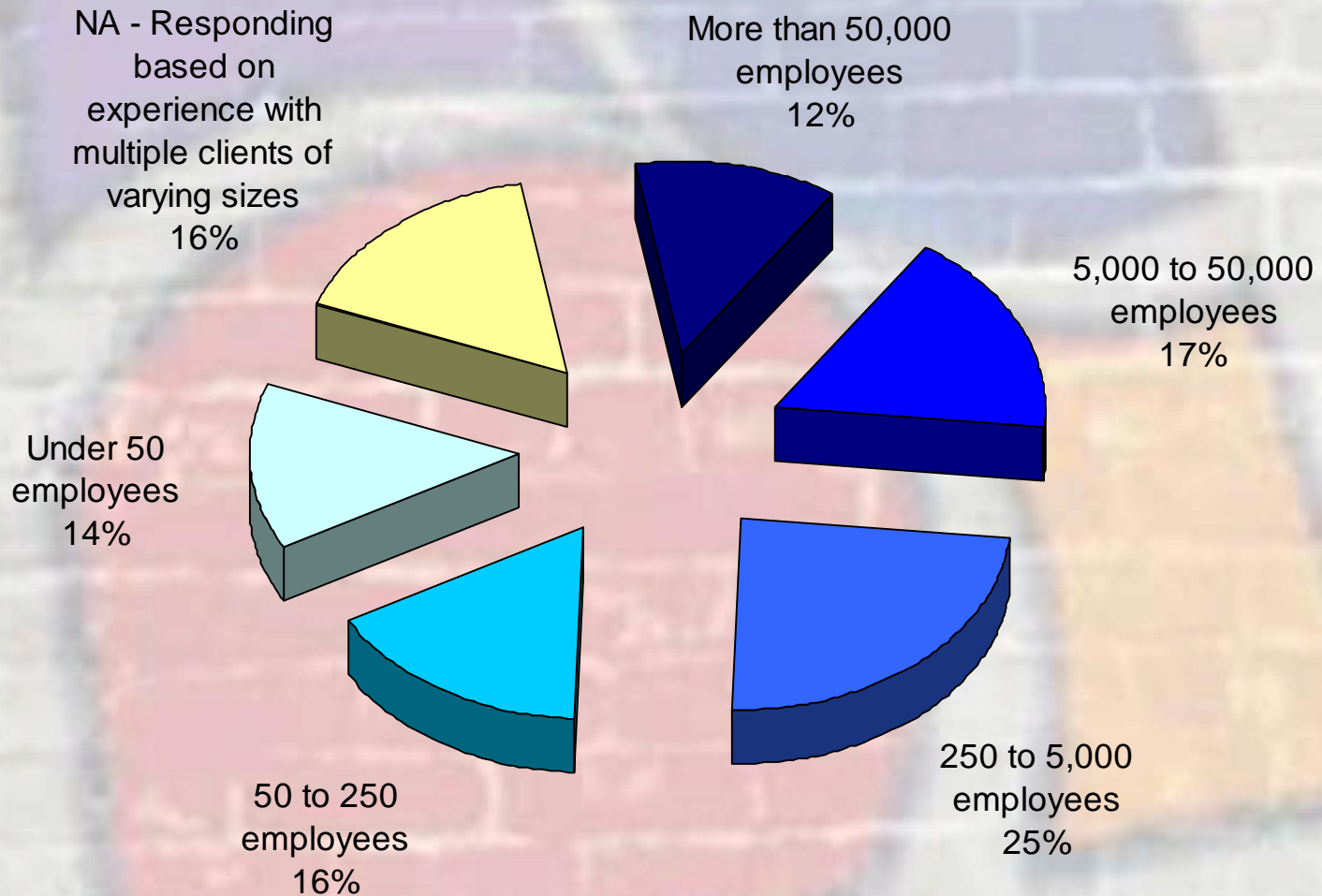
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# Appendix: Survey Demographics

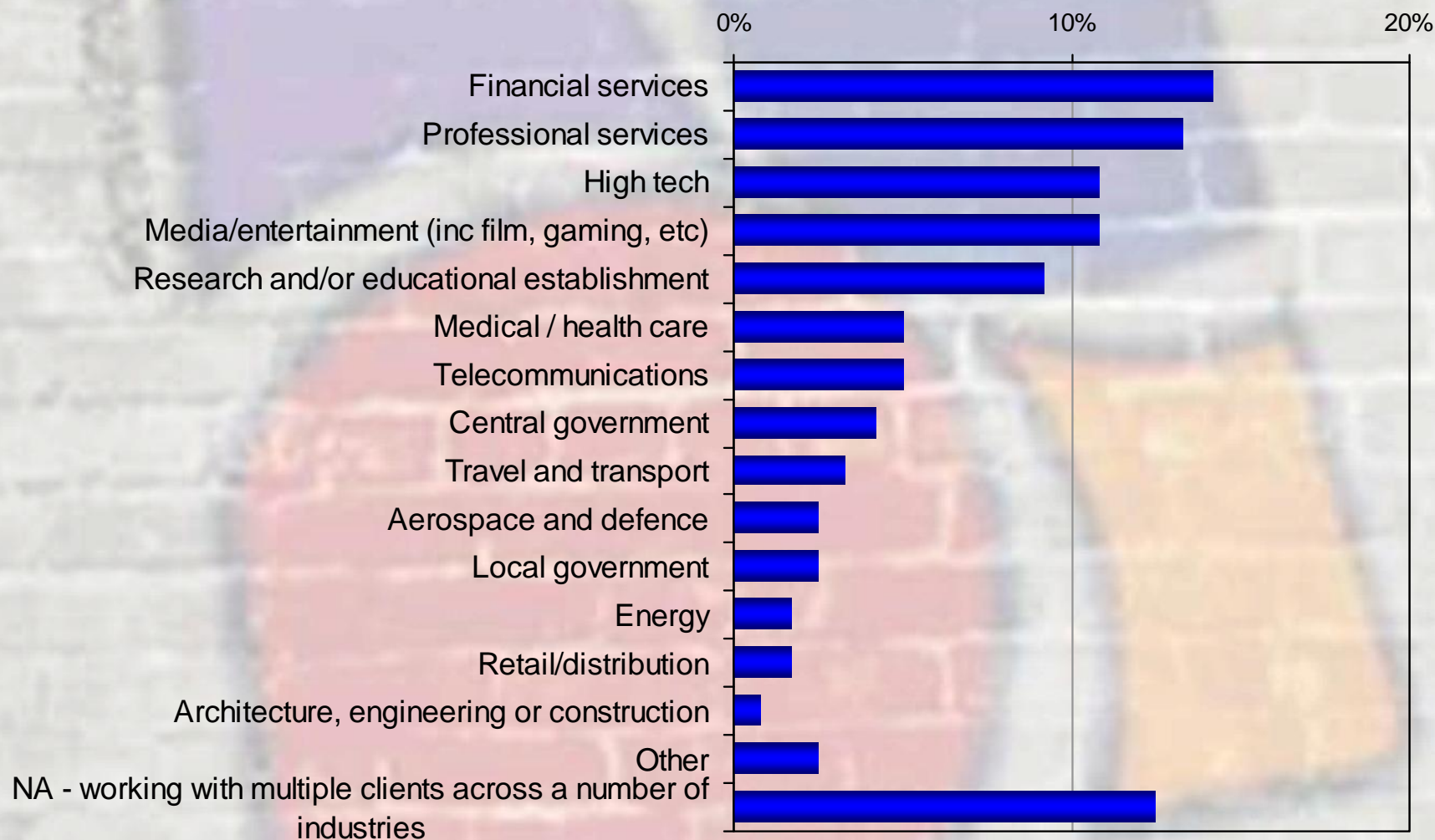
# What is the size of your organisation?



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# What industry sector does your organisation operate in?

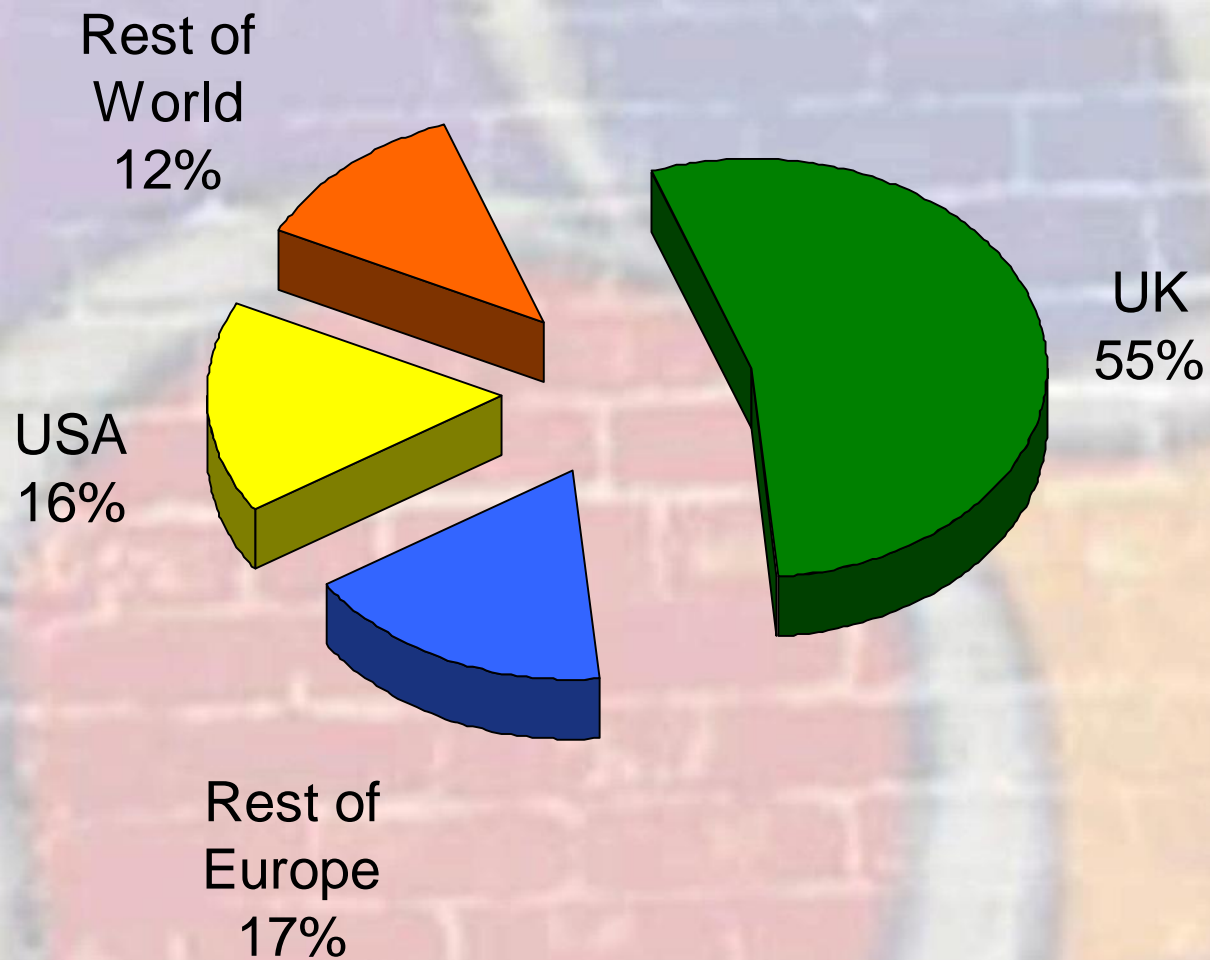


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# Sample by region



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