

Small Big Data

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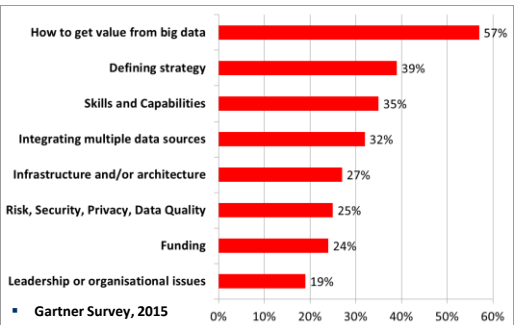
Me...

- Barry Corish
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 - IT Architect
 - Currently working in Financial Services
 - Background in IT in Education, the Voluntary Sector and Logistics

What is Big Data?

- Gathering of data?
- Transformation of data into information?
- Tools/software/hardware?
- A set of skills?
- An opportunity to drive change or progress?
- 60% of Big Data Initiatives in 2016 failed in some significant way.
 - Networkworld, 2017

What are the challenges?



Why do Big Data projects fail? Technology

- Lacking the right skills
 - Not just technology / statistics etc., but business understanding
- Technology Problems beyond Big Data
 - All the "old" technology problems
 - Plus brand new ones relating to new products and systems
- Svetlana Sicular, Gartner, 2016

Roles in a Data Analytics of Big Data Project:

- Business Users/SME
- Project Sponsor
- Project Manager
- Business Intelligence Analyst
- DBA
- Data Engineer
- Data Scientist

Roles in a Data Analytics of Big Data Project:



- Business Users/SME ✓
- Project Sponsor ✓
- Project Manager ✓
- Business Intelligence Analyst ✓
- DBA ✓
- Data Engineer 50
- Data Scientist ✗

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Why do Big Data projects fail? Purpose



- Management Inertia
 - When we get results, what are we going to do?
- Selecting wrong use cases
 - Too advanced, or too simple
 - Asking wrong questions
- If we knew the answer to this, what would we do with it?
 - Svetlana Siclar, Gartner, 2016

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What are we doing here?



- IT projects tend to live or die based on good requirements and analysis
- This is doubly true of big data projects.
- What are the questions we are trying to answer?

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Humans like patterns...



- Search hard enough, you will find patterns.
 - Numerology anyone?
- Humans get fixed on patterns...
 - ...particularly the first pattern they find
 - ...or what they believe before they start.

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The right questions are key...



- Better Questions give Better Results
 - BAD: Can you show that there is a relationship between X and Y?
 - BETTER: Can you show if there is a relationship between X and Y?
 - BEST: What are the strongest factors affecting Y?

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Humans like simple answers...



- ...particularly if the confirm existing beliefs
- ...or align with other objectives
- Presentation of results has to be done very carefully
 - ...if you're explaining, you're losing
 - ...and the local media always love a story

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Why do Big Data projects fail? Politics



- Disagreement on the enterprise strategy
 - Lack of buy in from everyone who will be involved
- Many parts of organisation will be involved
 - Solution avoidance
- Whose interests are served by the project?
 - Whose toes are you about to stand on?
- Svetlana Sicular, Gartner, 2016

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Governance and Compliance Questions



- GDPR and Data Protection
- Data Retention
- Open Data initiatives have significant cost and risk
 - Effective data anonymisation is hard
- Extra Role in project: CIO/Compliance/Legal expertise

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Don't start with..



- Hoovering up “all the data”
- Buying in data
- Buying new hardware, software or tools.
- Don't start by hiring technical skills
- A Big Data project

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Start with..



- Start with the questions
 - Work out and back from there
- Start with what you have
 - Data
 - Tools
 - Skills
- Hire-in, train and buy
 - When you know what is needed
 - Ensure we can repeat in-house and/or in-budget

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Questions?



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