Agenda

1. Context
2. Big Data – what’s it all about?
3. What does it mean for business?
4. What is the role of finance?
5. New skills needed?
6. Conclusion; what next?
Non-financial assets (intangibles); the most important determinants of value

Customer relationships  Knowledge and human capital  Technology  Strategic vision  Intellectual property  Supplier relationships  Processes  Financial assets  Manufacturing assets  Shareholder value  Natural assets

Non-financial: 68%
Financial: 32%

(Percentage of those who selected 8-10 on a scale of 1-10)

What data do you use to measure & manage your intangibles?
How to survive and thrive; The ‘new normal’ requires better information

Financial results are an outcome. Performance has to be managed along the value chain.
Bias in decision making

1. **Self Interest** – not objective
2. **Heuristic** – everybody’s happy with it
3. **Group Think** – dissenters not listened to
4. **Saliency** – a good past experience assumed to apply
5. **Confirmation** – credible alternatives not considered
6. **Availability** – only information to hand considered
7. **Anchoring** – historic figures set expectation
8. **Halo effect** – promoter or a link gives confidence

Source: Before you make that big decision; Kahneman, Lovallo & Sibony; HBR June 2011
Definition of Management Accounting:

- Communication and use of accounting and management information
- Sourcing and analysis of accounting and management information
- Preserving value
- Creating value
- Trust
- Influence
- Relevance
- Value

Ref: CGMA GMAPs
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What is Big Data?

“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)
Big Data?

Difficulty in accessing or analysing

Scale and Complexity of Data

Big Data

Enterprise Data

Financial Data
## Emerging view of BI and Big Data

<table>
<thead>
<tr>
<th></th>
<th>Traditional BI</th>
<th>Data Discovery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Buyers</strong></td>
<td>IT</td>
<td>Business</td>
</tr>
<tr>
<td><strong>Main Sellers</strong></td>
<td>Mega-vendors, large independents</td>
<td>Small, fast growing independents</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Top-down, IT modelled (semantic layers), query existing repositories</td>
<td>Bottom-up, business user mapped (mash up), moving data into dedicated repository</td>
</tr>
<tr>
<td><strong>User Interface</strong></td>
<td>Report, key performance indicator (KPI) dashboard, grid</td>
<td>Visualisation</td>
</tr>
<tr>
<td><strong>Use Case</strong></td>
<td>Monitoring, reporting</td>
<td>Analysis</td>
</tr>
<tr>
<td><strong>Deployment</strong></td>
<td>Consultants</td>
<td>Users</td>
</tr>
</tbody>
</table>

Source: Gartner
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Where would better data be of most value?

- Identifying opportunities to increase efficiency or save costs
- Developing and monitoring KPIs
- Driver-based forecasting
- Monitoring external risks
- Increase revenues (through better customer segmentation etc.)

- A higher priority for large companies than for SMEs
- A higher priority for SMEs than for large companies

Priority for SMEs

Low

High

1

2

3

4

5
Challenges in harnessing Big Data

- 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%
# How organisations are using data

## Existing business data (both financial and enterprise data)
- Using established forms of data as the basis of a business model, for example credit reference agencies or market data services.
  - **Oakland Athletics**

## Emerging big data (large volumes of unstructured, often complex data)
- Using new forms of data as the basis of a business model. For example turning operational data into a new product line or revenue source.
  - **Aimia**
  - **Xerox**
  - **InterContinental Hotel Group**
  - **EMI Music**
  - **McDonald’s**
  - **Tesco**
  - **ABN AMRO**
  - **Sears**
  - **Anheuser-Busch**
  - Adding the use of big data to optimise operational performance. For example, using social media sentiment analysis to improve customer service.
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Finance Transformation, the changing role of the management accountant

Accounting → Analysis → Business

Data → Reports → Analysis → Insight → Influence → Impact

Overhead → Valued
Big Data – the role of finance?

- A minority (23%) report no role in analytics
- Another minority (21%) claim a leading role
- A 55% majority say finance partners with others (55% = 37% + 9% + 9%)
- Interviews agree on a collaborative role
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The competencies a business needs for Big Data

- Data culture
- Value creation
- Data management
- Analytics

Commercial

Conformance

Performance

Technical
Opportunities for management accountants

- Data Champion
- Business Partner
- Data Manager
- Data Scientist

- Commercial
  - Data culture
  - Value creation
- Technical
  - Data management
  - Analytics

Value creation
Data culture
Data management
Analytics

Conformance
Performance

CGMA
AICPA
CIFFA
The Segregation of accounting & finance:

- **Finance Director**
  - Business partnering
  - **Globalisation**
  - **Skills & technology enables**
    - **Analytics, ad hoc analysis**
    - Routine Analysis
      - Standard reports
      - Transaction processing
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Five traits of the data enabled CFO

1. Have a clear sense of what customers care about most, and ideas about how to track this.
2. Able to identify which data points are useful in understanding what drives the business.
3. Able to embrace new forms of data, and creative ways to incorporate this into business decision-making.
4. Explore new ways to interpret data to better inform management.
5. Comfortable with uncertainty, including the reality that big data may not provide definitive answers.
Business Model – building blocks

- Value Proposition
- Resources and Relationships
- Key Processes
- Cost base
- Revenues
- Value Generated
From Data to Insight to Impact

Enterprise data → Data capture → Reports → Analysis → Commercial Insight → Influence → Impact

Lots of complex data → Analytics → Analytical Insight

No data → Assumptions → Idea

CGMA
Business Partnering Skills

- Effective business partnering relationships
- Empathy with business
- Compelling communication
- Preparedness to challenge
- Contribute insights into drivers of cost, risk and value
- Passion for business
- Commercial curiosity
- Professional objectivity
- Ability to integrate, apply and communicate
- Business understanding
- Analysis skills
- Accounting skills

CPD
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dunnhumby’s advice for smaller business
Matthew Keylock, Global Capability Managing Director of Data

1. Start with the data you have.
2. Identify ‘data owners’, encourage sharing and look for quick wins for the business as a whole.
3. Segment the customer base and continuously review the understanding of trends and behaviours.
4. It is fine to buy in 3rd party data to supplement own records, e.g. for prospecting but not the starting point.
5. Implement data projects in phases.
Seven skills finance professionals need
(to convert analytical insight to commercial insight and
help manage performance through to impact):

1. Strategic understanding of the business
2. Understanding of data sources and analytic techniques
3. Relationship building (IT, Data and Business colleagues)
4. Commercial curiosity; ability to ask the right questions
5. Business acumen; ability to recognise an opportunity
6. Communication skills; present compelling insights
7. Ability to influence and contribute to leadership

And/Or Advanced data and analytical skills
  - For those few with ambition to become ‘data scientists’.