Addressing the BDA Skills Deficit

BDA Retail Forum 2016

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Objective

- To identify the scale of the Big Data and Analytics Skills Gap
- To identify the roles of current decision makers who need up-skilling
- To identify critical themes from which short courses can be developed
The Institution for Engineering and Technology 2015 Skills Survey found that the UK 'skills gap has deteriorated for the ninth year in a row'.

Tech Partners and SAS (2014) identified need for 56,000 skilled BDA positions in 2020.

An American report in 2014 suggested that the number of Decision Makers who will need to understand BDA is approximately 10 times greater than the number of experts.

In the UK that is 560,000 people who will need up-skilling.
Context (2)

- **BDA Governance Issues**
  - Ethics
    - Questions for analysis – 2012 case
    - Actions
  - Project Success (or not)
    - Standish Group “Chaos Reports”
    - 60% of all BDA projects are not successful (IBM Insight 2015)
Context (3)

- Data governance
  - Data Protection regime
  - Connecting data sources
  - Ownership of data

- BDA hype?
  - Capabilities of BDA
  - Limitations of BDA
    - Predictive Analytics
IT Related Project Success

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<tr>
<th>Challenges</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>Determining value</td>
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<td>Skills and capabilities</td>
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<td>Risk and governance</td>
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<td>Defining strategy</td>
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<td>Funding</td>
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<td>Integrating multiple data sources</td>
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<td>Integrating with existing infrastructure</td>
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<td>Infrastructure/architecture</td>
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<td>Leadership or organizational issues</td>
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Source: Gartner Inc. global survey of 437 information-technology and business leaders, conducted online in June 2015

THE WALL STREET JOURNAL.
Developing Skilled BDA and Data Science Graduates

University Graduates and Apprenticeships
Big Data Opportunities – UK
Demand per year

BIG DATA JOB OPPORTUNITIES TO 2020

6,400
UK organisations with 100 staff or more will have implemented Big Data Analytics by 2020

117%
increase on 2017

222%
increase on 2013

21,400
Jobs
2013

47,600
Jobs
2017

56,000
Jobs
2020

Richard J Self - University of Derby
Shortage of Skilled Staff

Big data recruiters say it is difficult to find people with the required skills and experience i.e. it is not all firms, just those recruiting Big Data staff

57% 2013

20% Increase in a difficult year

77% 2014

BDA Skills

- IBM Bluemix
- IBM Watson
- SAS
- R
- Analytics
- Statistics

- Self learning
- Learning by research
- Learning by doing
- Analytics Challenges
- Finding data
- Finding “How to”
Decision Makers, BDA Project Sponsors BD Analytics Customers

Short Courses?
Objectives

- Define critical roles and levels
- Define needed skill sets
- Define curricula for short courses
- Commission course providers
- Target 560,000 existing staff by 2020
Roles, Levels and Skills

- **Output Required**
  - Matrix linking Roles and Skills
  - Suggested short course themes
  - How long?
OVER TO YOU
Role / Levels

- Corporate Directors
- CxO
- Executives
  - Etc
- Senior and Middle managers
- Business line?
  - Finance
  - Marketing
  - Inventory Management
  - Etc.?????
Themes and Topics

- Ethics
- Project governance
- Data governance
- Capabilities and Limitations of Analytics
- Self-service analytics
- Open data or datamarts