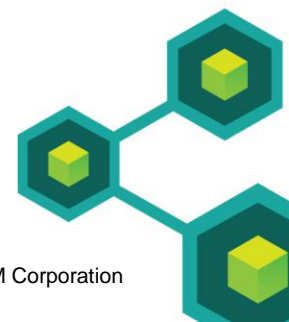




IBM Business Analytics Showcase

06 March 2013



AGENDA

| Time | Description |
|-------|--|
| 09.00 | Welcome <i>Michael Baker, Business Analytics, IBM</i> |
| 09.15 | Best Practices in Implementing Business Analytics <i>Danny McConnell, Partner, Deloitte MCS Limited</i> |
| 09.55 | Delivering Cognos BI 10 dashboards to put organizational focus on What Matters Most <i>Peter Mckenna, Business Intelligence Manager, Telefonica O2 Ireland</i> |
| 10.35 | Panel Discussion and Q&A |
| 10.55 | BREAK |
| 11.15 | <p>Attend one of the following IBM Business Analytics Software in Action break out sessions</p> <p>Business Intelligence & Advanced Analytics Track: What's new in IBM Cognos Business Intelligence 10.2</p> <p><i>This session will highlight what's new in IBM Cognos Business Intelligence 10.2, including:</i></p> <ul style="list-style-type: none"> ▪ <i>IBM Cognos Insight desktop analytics enhancements</i> ▪ <i>What's new for report authoring & consumption</i> ▪ <i>Cognos Workspace (formerly Business Insight)</i> ▪ <i>Dynamic Cubes for large data volumes</i> <p>Performance Management Track</p> <p><i>This session will demonstrate the usage of software capabilities in a real-life situation, including;</i></p> <ul style="list-style-type: none"> ▪ <i>How users can consume and interact with data both online and offline</i> ▪ <i>Creating personalised workspaces covering all time horizons</i> ▪ <i>Creating predictive models to determine better use of resources</i> ▪ <i>Personal analysis and exploration of data</i> ▪ <i>Best practices in budgeting such as high participation and high frequency planning</i> |
| 12.30 | LUNCH |

Best Practices in Implementing Business Analytics



Contents

1. Introduction
2. What do we mean by Business Analytics?
3. How do you build the business case?
4. How do you deliver analytics?
5. Where do you start?
6. Conclusions
7. Q&A

1. Introduction

- Danny McConnell
- Partner in Deloitte
- Career covering science, accountancy and technology
- Focused on analytics
- Worked with IBM for past 15 years

2. What do we mean by Business Analytics?

Gartner (February 2013) defines Business Intelligence & Analytics as a software platform that delivers on 15 capabilities across three areas as follows:

1. Integration

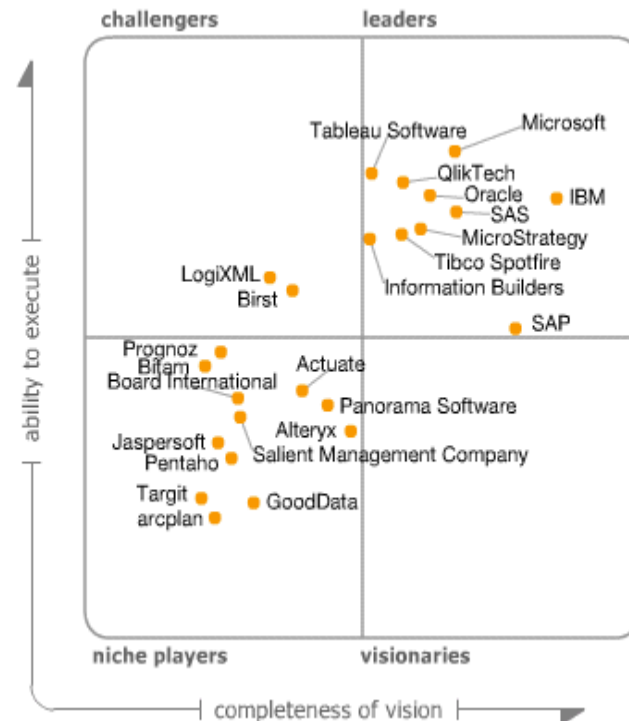
- BI Infrastructure
- Metadata Management
- Development tools
- Collaboration

2. Information Delivery

- Reporting
- Dashboards
- Ad Hoc query
- Microsoft office integration
- Search based BI
- Mobile BI

3. Analysis

- OLAP
- Interactive visualisation
- Predictive modelling and data mining
- Scorecards
- Prescriptive modelling



3. How do you build the Business Case?

What are the key considerations?

1. Key considerations include:
 - Business Sponsorship
 - Impact on the business
 - Understanding the costs and benefits
 - Understanding the risks
 - Planning ahead

4. How do you deliver Analytics?

Three potential delivery mechanisms to explore:

- In House Competency Centre
- Software as a Service
- Managed Service

4. How do you deliver Analytics?

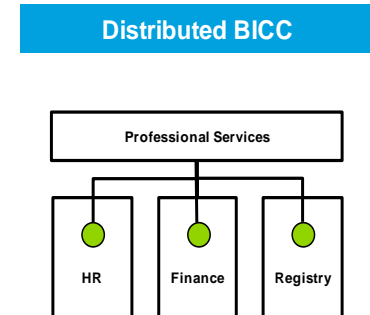
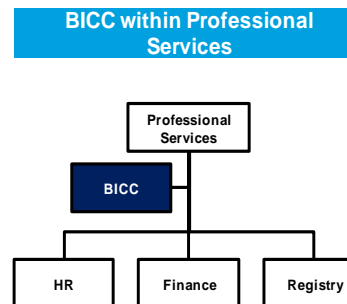
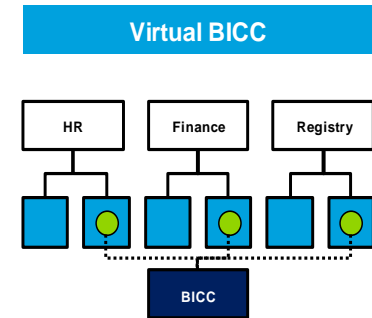
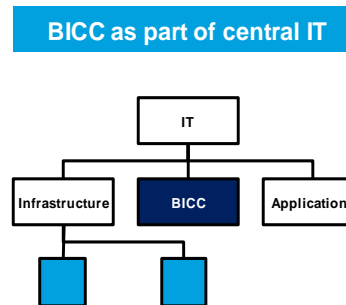
In House Competency Centre

Four Models illustrated being:

1. BICC as part of central IT
2. Virtual BICC
3. BICC within professional services
4. Distributed BICC

Aspects to consider in selecting a model:

- Availability of in-house resource
- Availability of required skills
- Acceptability of proposed model
- Data Governance
- Talent



4. How do you deliver Analytics?

Software as a Service (SaaS)

The SaaS value proposition:

- 1) Lower cost – lower up front costs and lower ongoing costs
- 2) Faster deployment times – substantially faster than traditional systems
- 3) IT staff freed up to focus on more strategic initiatives

What is "multi-tenant" SaaS?

- All clients on same release of source code at the same time

The incremental value proposition:

- 1) All vendor R&D invested in a single version
- 2) One bug fix is applied to benefit of all clients
- 3) Community of clients can share report and interface templates



Typical Characteristics of a SaaS Solution

- Modern, web-based architecture
- Application and data resides in the "cloud"
- Applications are managed by 3rd party service provider
- Billing based on per-user basis
- Reduced internal IT support
- Updates are distributed on a rapid release schedule

4. How do you deliver Analytics?

Managed Service

Key considerations relating to analytics via a managed service arrangement:

1. Do you have a clear understanding of what you are looking for?
2. Do you understand the impact of an analytics application on your business?
3. Do you have the appropriate resources internally?
4. Do you have the required capital available for investment?
5. Is there an organisation in the market that provides the application or solution that meets your business need?
6. What is the commercial model?
7. Who owns the IP relating to the application?

5. Where do you start?

All about the business

1. What is the business issue that you are looking to use analytics solve?
2. Illustrate with four examples:
 - UK National Health Service
 - UK Higher Education Institution
 - Global Media Company
 - Global Consumer Business Company

5. Where do you start?

UK National Health Service

The Business Challenge

The NHS has over 1.4 million staff, and an annual budget of £100 billion GBP. Over the next 4 years the NHS being challenged to maintain and increase quality and safety whilst:

- demographic pressures of a growing and ageing population increase demand
- budgets are being reduced by around 20% over the 4 year period

As roughly 65% of the current spend is on staffing costs, much of these efficiency and productivity improvements must come from fundamental workforce reconfiguration.



The Solution

Our work was designed to use data analytic techniques to create an evidence based workforce productivity programme focused on improving quality as well as efficiency. Our solution used advanced predictive modelling to assess areas of 'risk' within workforce configurations and highly where alternative configurations may deliver both quality and efficiency benefits.

The key challenges the project faced included:

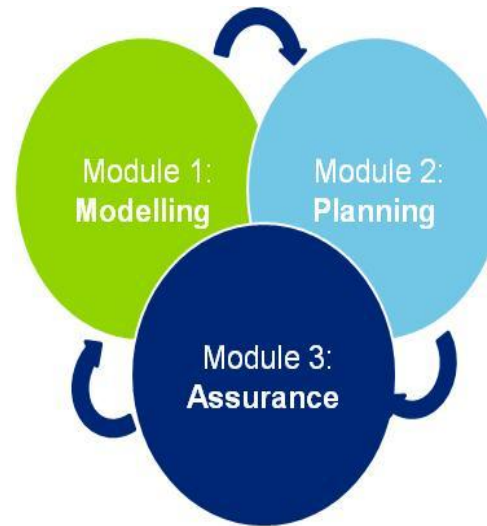
- The need to reduce workforce spend, whilst maintaining quality, and ensuring the focus remained on outcomes.
- Integrating data traditionally looked at in silos with largely manual processes: collaboration across Workforce, Finance, Activity, Quality and Safety was low.
- Different ways of working across the country: determining best practice and meaningful benchmarking were difficult.
- Reactive, short term focus, rather than the desired, proactive, long-term focus.
- Inability to easily see the effects of altering patient pathways, or setting specific outcome measures, and the impact on workforce
- Lack of understanding of the planning process, and what this means in specific areas of the organisations.

5. Where do you start?

UK National Health Service

The Modelling Module supports long term strategic planning by enabling:

- Advanced scenario planning
- Use of a series of different 'lenses' through which to consider demand
- Modelling of future workforce supply based on current workforce trajectories



The Planning Module supports complex distributed planning activities by:

- Providing a consistent set of assumptions / templates to underpin planning rounds
- Automating the process of departmental plan capture and aggregation
- Managing the review and approval cycles to enable feedback and

| Category | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|------|------|------|------|------|
| Central Functions | 0 | 0 | 0 | 0 | 0 |
| Estates (maintenance & works) - Hotel, property &... | 0 | 0 | 0 | 0 | 0 |
| HCA - Hotel, property & estates | 0 | 0 | 0 | 0 | 0 |
| Support Worker - Hotel, property & estates | 0 | 0 | 0 | 0 | 0 |
| Hotel, Property & Estates Support | 0 | 0 | 0 | 0 | 0 |
| Ambulance personnel | 0 | 0 | 0 | 0 | 0 |
| Ambulance technicians (Drivers) | 0 | 0 | 0 | 0 | 0 |
| Clinical & admin - Ambulance | 0 | 0 | 0 | 0 | 0 |
| Estates (maintenance & works) - Ambulance | 0 | 0 | 0 | 0 | 0 |
| HCA - Ambulance | 0 | 0 | 0 | 0 | 0 |
| Support worker - Ambulance | 0 | 0 | 0 | 0 | 0 |
| Support to Ambulance Service Staff | 0 | 0 | 0 | 0 | 0 |
| Central Functions - HCA | 0 | 0 | 0 | 0 | 0 |
| Central Functions - Support worker | 0 | 0 | 0 | 0 | 0 |
| Clinical & admin - Clinical support | 0 | 0 | 0 | 0 | 0 |
| Estates (maintenance & works) - Clinical support | 0 | 0 | 0 | 0 | 0 |
| Nursery Nurse | 0 | 0 | 0 | 0 | 0 |
| Nursery Nurse - School Nurse | 0 | 0 | 0 | 0 | 0 |
| Nursing Assistant / Auxiliary | 0 | 0 | 0 | 0 | 0 |
| Nursing Assistant / Auxiliary - School Nurse | 0 | 0 | 0 | 0 | 0 |


The Assurance Module supports operational risk management through:


- Predictive modelling of future performance
- Tracking of performance against planned target levels
- Assessment of 'risk' of deviation from a series of best practice business rules
- Benchmarking both within and across organisations within your portfolio of responsibilities
- Workforce to manage the response processes to ensure insight translates into action






























| Assurance of Plan | 1.83 | Assurance Against Plan | 1.17 |
|---|--------|---|--------|
| Planned Workforce Spend | 1.83 | Time Spent against plan | 0 |
| Workforce costs per FTE Support Staff (in 000s) | 40 | Average Length of stay against plan | 0 |
| Workforce costs per FTE (in 000s) | 0 | Number Hospital Attendance against plan | 1.83 |
| Clinical Non-clinical per | 5.74 | Number of referrals from OP against plan | 1.86 |
| Workforce costs per FTE Medical and Dental (in 000s) | 0 | Total number of Type 1 A&E attendances against plan | 0.39% |
| Workforce costs per FTE Scientific, therapeutic and technical staff (in 000s) | 0 | Workforce Spend against plan | 1.33 |
| Workforce costs per FTE Nursing and Midwifery (in 000s) | 0 | Workforce costs per FTE against plan - Clinical Support Staff | 99.99% |
| Pay bill (including temporary staff costs) as a % total revenue | 67.91% | Workforce costs per FTE against plan | 99.99% |

5. Where do you start?

UK National Health Service

 **Workforce Analytics Platform**

 **Administrator Area**

| Overview | Modelling | Actions | Analysis | Resources |
|---|--|--|--|--|
|  Regional Dashboard |  Scenario Modeller |  My Threads |  Benchmarking |  Help |
|  Organisation Dashboard |  Wizards | |  Plan Reports |  Workforce Dictionary |
| |  Skills Analysis |  My Notes |  My Flags |  Data Sources |
| |  Capacity Analysis |  My Assurance Logs |  Peer Groups |  FAQ |
| |  Direct lens | |  Lens analysis |  Supporting Materials |
| |  Metric Lens |  My Qualitative Indicators |  Scenario analysis |  Community |
| |  Pathway Lens | |  Impact analysis | |
| |  Activity Lens | |  Trend analysis | |
| | | |  Competance analysis | |

5. Where do you start?

Higher Education Institute

The Business Challenge

This client wanted to make strategic choices regarding the preferred student profiles to target and recruit, where to expend marketing and branding effort and how to maximise retention of enrolled students and provide the best on campus student experience.

The Solution

- Client data was enriched by incorporating additional data assets like geo-coding data and Census data
- Social Network Analysis was conducted to establish the connections between the various students

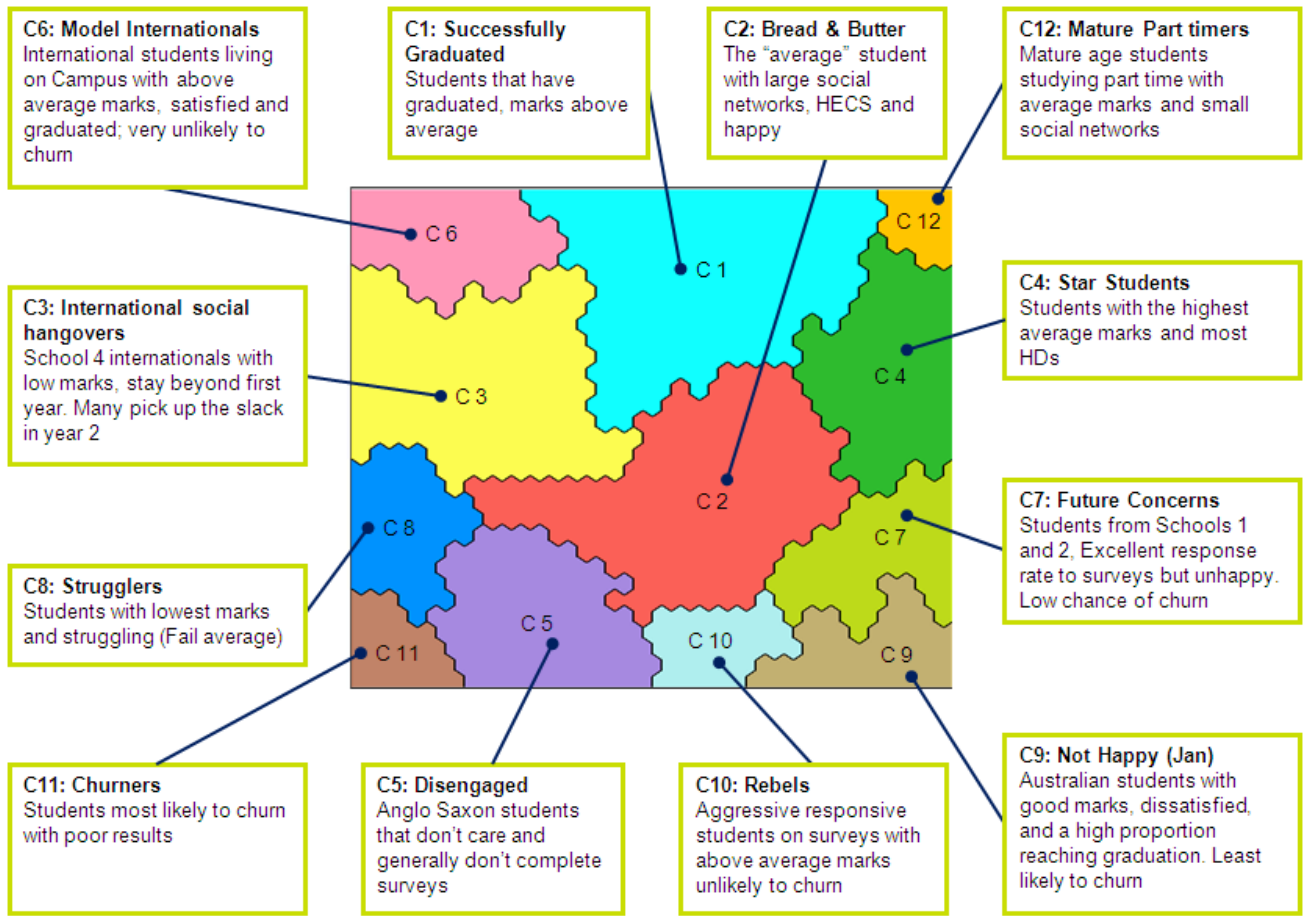
The Value Delivered

- Findings provided the University direction on where to focus their efforts to improve student retention, performance, and satisfaction
- Data-Driven foundation was created to tailor marketing and recruitment strategies to achieve significantly improved student outcomes.

5. Where do you start?

Higher Education Institute

The output (from a limited data source) will provide the 30"000 ft overview of the student cohorts in each cluster, and the ability to deep dive into each cohort cluster to a detail level of "one student"; Customer = 1.



5. Where do you start?

Global Pharmaceutical Company

The Business Challenge

This client wanted to understand the following three aspects of their business:

1. That the digital assets that they own are maintained in line with compliance requirements and other areas of governance.
2. Given the regulated environment in which they operate they need to understand how people are using their products in the digital space
3. They wanted to understand what people are saying about them

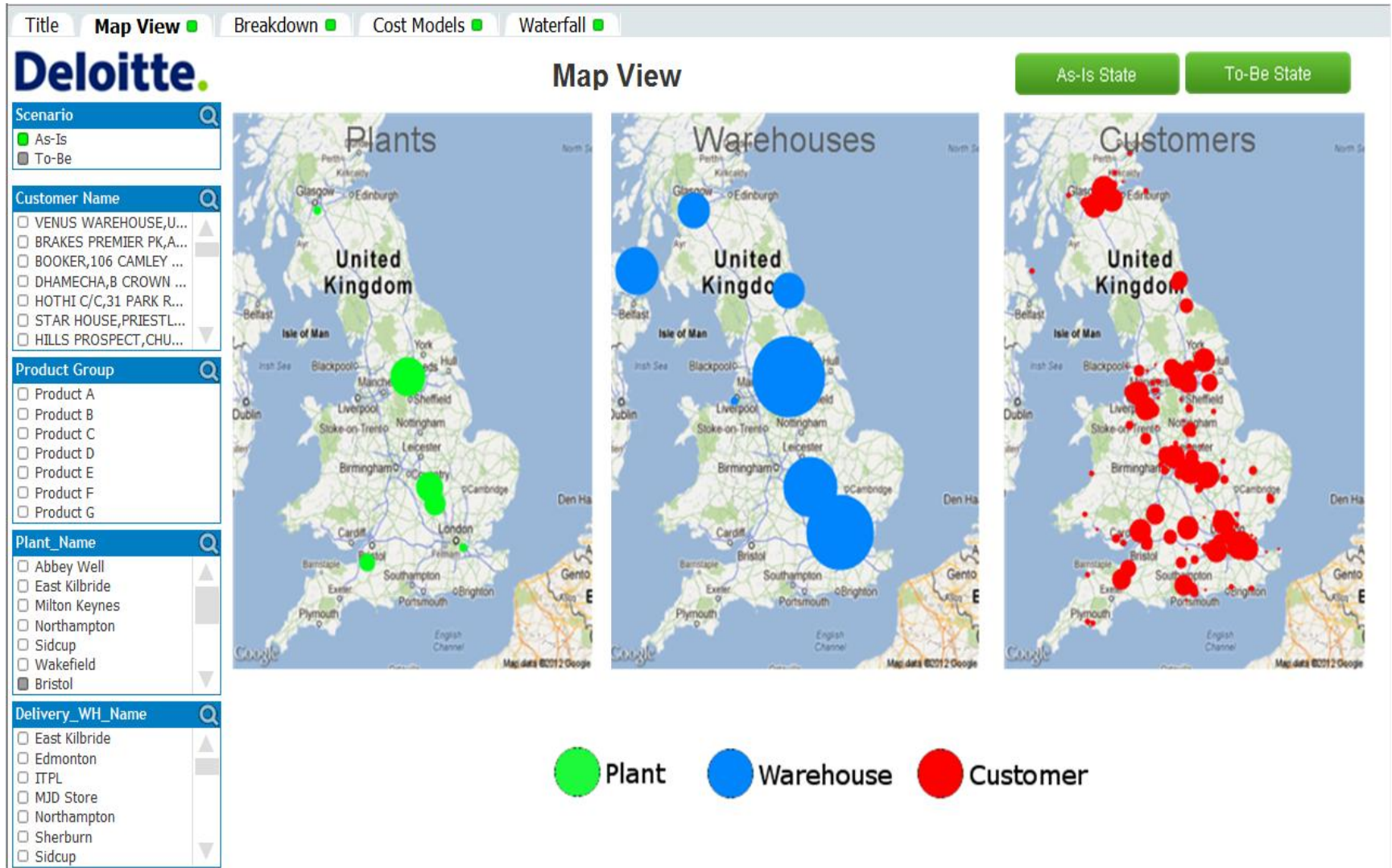
The Value Delivered:

- Estimated 1000 owned/controlled digital activities,
- Only 30% of these appeared in the top 50 search engine results
- Accountability was not established for nearly a half of digital activity,
- Significant exposure to regulatory risks given industry's highly regulated policies and compliance laws



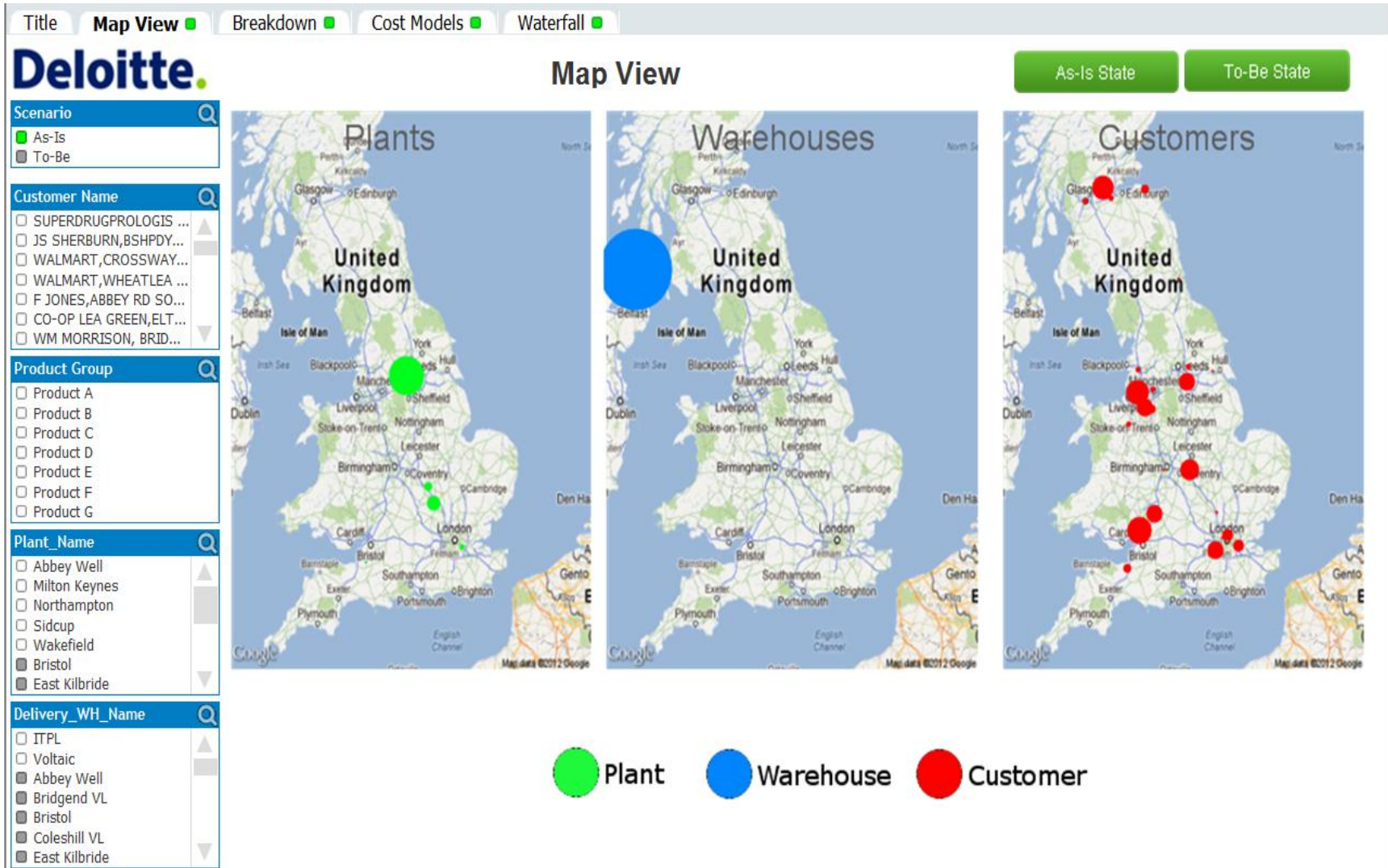
5. Where do you start?

Global Consumer Business Company



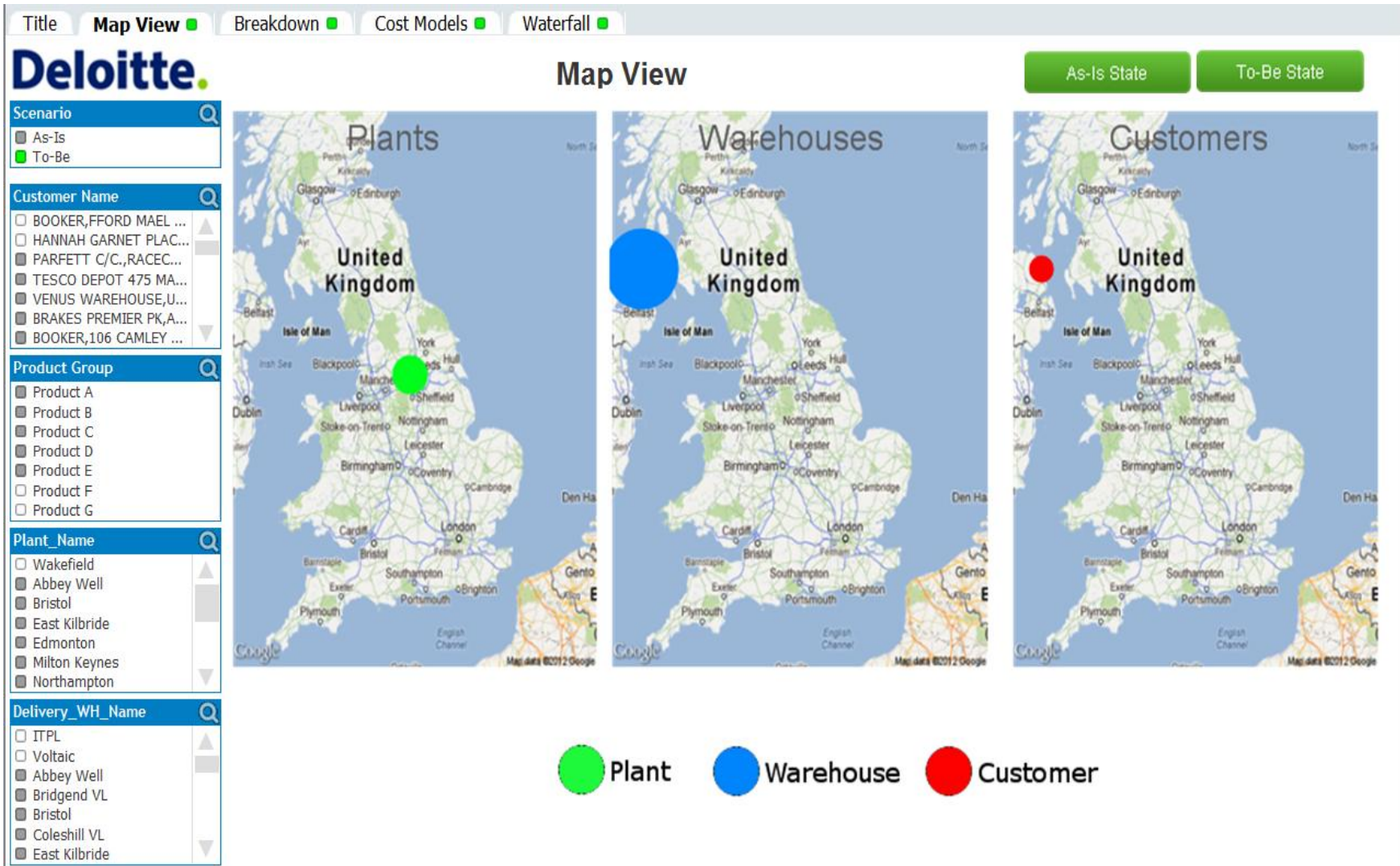
5. Where do you start?

Global Consumer Business Company



5. Where do you start?

Global Consumer Business Company



6. Conclusions

1. Clearly articulate the business issue that you are trying to address
2. Understand the impact of “lifting the stone”
3. Carefully select the right analytics technology
4. Prepare for evolution

Deloitte.

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