A Data Driven Company

*How Deloitte transformed itself*

QlikView Business Discovery World Tour
Eindhoven, 9 October 2013
Exponential growth of data will create demand for Data Analytics, which Deloitte has embedded in Deloitte’s services.

1. Exponential growth of data and the use of Data Analytics will shape markets towards 2020

2. Knowledge will become publicly available

3. Clients are expecting value based approach rather than per diem billing

4. By adopting an iterative development strategy to shape repetitive and scalable delivery:
   - Extensive use of internal and external data sources
   - Apply advanced analytical techniques
   - Add value to both the client and Deloitte
   - Apply value based billing

Source: Consulting on the Cusp of Disruption – Harvard Business Review Sep 2013

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In 2020 Big Data Analytics will be incorporated in professional services providing a fact based, data driven approach, allowing new value propositions.

**“Analytics in Everything We Do”**

- **Engine**
  - Client data
  - External data
  - Data processing

- **Insight**
  - Deloitte
    - Reports
    - Graphics
    - Dashboards
    - Models
    - Business rules
  - Data analyses
  - Defined interventions

- **Monitor**
  - Performance tracking
  - Limited adjustments

- **Transform**
  - Intervention plan and business case
  - Implement and improve intervention
  - Upscale implementation and transformation
  - Repetitive transformation
  - Transformation Performance tracking

- **Publish**
  - Deloitte
  - Data
  - Models

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Our innovation and investment roadmap is aligned with our big data analytics strategy

1. Deloitte Mega Data Analytics Cloud is providing a flexible/agile infrastructure to support both projects and subscription-based analytics.

2. Deloitte HIVE brings specialized, high-end big data visualization capabilities to support strategic analysis.

3. Managing internal data sets and Acquisition of external datasets to support rich big data analytics.

4. Deloitte Innovation is developing groundbreaking, proprietary analytics use-cases to support disruptive business propositions.
Company Profile: Deloitte is located in 150 countries and organized in Expertise Areas and Markets
Example:
Growth Enterprises Emerging Markets (GEM) solution
Deloitte’s Growth Enterprises Emerging Markets (GEM) solution offers insights in the possibilities for a company to expand to new markets.

**Input**
- **Questionnaire on Client specifics**
  - Industry specific
- **Deloitte knowhow**
  - Industry specific insights
  - Customer demand
  - Tax regulations between countries
  - Country specific risks
- **Open databases**
  - GDP developments
  - Ease of doing business
  - Industry specific indicators

**Output**
- **Company Readiness**
  - Organisational readiness
  - Product/Service readiness
- **Preliminary market scan**
  - Export from participating countries to all countries
  - Tailored to company, industry and origin country
- **Country Factsheet**
  - Client Specific factsheet
  - Starting point for sales

**GEM Solution**
- Modular Setup
- Easy to use interface
- Build in QlikView

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The Company Readiness and Country Attractiveness sheets are populated by combining internal data and external market information.

Growth Enterprises Emerging Markets (GEM) Solution Overview:
The Questionnaire sheet is leveraged to define to what extend a company is ready to expand to other markets

Overview “Questionnaire”:

Questions related to
(1) Company (e.g. Operations, Management Attention)
(2) Product / Production (e.g. Adaptivity, Logistics, Sales and Marketing)

Characteristics:
- HQ Location
- Countries with Production Facility
- Countries with Office
The Country Attractiveness sheet visualizes relative performance per country

Overview “Country Attractiveness”:

Table overview of scores per country

Interactive map with countries colored by scores based on internal and external data

Base view on different segments and types

Select different views: Current, past and future

<table>
<thead>
<tr>
<th>Country</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>4.33</td>
</tr>
<tr>
<td>Italy</td>
<td>4.33</td>
</tr>
<tr>
<td>Turkey</td>
<td>4.17</td>
</tr>
<tr>
<td>South Africa</td>
<td>4.17</td>
</tr>
<tr>
<td>Iran</td>
<td>4.16</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Product type

- Segment
- Type
- Use
- Speed

Current performance

Changes vs last year

Outlook

Low score

High score
The Country Fact sheet offers detailed country information, providing an instant and comprehensive overview on the local market situation.

Overview “Country Fact Sheet”:

- **Country Macro developments**
- **Market developments over time**
- **Marketshare development**
- **Sales by product, distributor, segment**
- **Relative Performance compared to similar countries**
- **Base view on different segments and types**
- **Local risks, taxes, quality of networks**
- **Table overview of demographic factors of selected country**

<table>
<thead>
<tr>
<th>Population</th>
<th>311</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanization</td>
<td>78%</td>
</tr>
<tr>
<td>GDP</td>
<td>4.33</td>
</tr>
<tr>
<td>Unemployment</td>
<td>9</td>
</tr>
<tr>
<td>Currency</td>
<td>US dollar</td>
</tr>
<tr>
<td>Government type</td>
<td>...</td>
</tr>
</tbody>
</table>
| ... | ...

Product type

<table>
<thead>
<tr>
<th>Segment/Type</th>
<th>Size</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
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</tbody>
</table>
The solution is QlikView based and helped Client X to get insights in performance, explore market expansion and ultimately grow revenue.

Possible inputs:
- Market size per product in units
- Average price per unit
- Number of competitors
- Quality of infrastructure
- Quality of Distributors
- Perceived Corruption index
- Ease of doing business
- Importing goods
- Market share per product
- Margins
- Volumes
- Maturity of products sold

Set up of Driver tree per segment:

- Market opportunities
- Client X Relative Performance
- Market Dynamics
- Client X Performance

GEM Dashboard:

Weight of parameter in performance calculation
Example:
Analytics for Global Mobility
Deloitte – Data Analytics for Global Mobility

“Show your business something it cannot already see”

“Tell your business something it does not already know”

“Enable your business to make better decisions”

Data Visualisation

Data Insight

Data Foresight

Gaining control and understanding of your data eco-system

Democratising access to data

Identifying value hidden in the detail

Harnessing your data to inform, enrich & improve organisational decision making

Prompting and driving action based on identified patterns of risk or opportunity

The Art of the Possible

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Business Travel Analyser

Deloitte has a unique perspective on the age-old problem of tracking and reporting business travelers. We remove the traveler from the equation by sourcing, cleaning and importing vast amounts of data from our clients' and their vendors' systems and leveraging this for a number of use cases:

- Automated identification of taxable travelers using our proprietary global tax engine
- Social tax and corporate PE tax risk identification
- Immigration risk tracking according to parameters agreed with our clients
- Travel expense cost analysis, policy exception monitoring and fraud detection
- Strategic view of travel patterns for better short term project and workforce planning
- Integration with workflow tools to manage downstream regulatory compliance

Business Travel Analyser
A fresh, global approach to the management and analysis of travel and other data sources to drive automated tax assessment, risk management and cost reduction whilst minimising traveler input

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Individual detail & Country Analysis

- Aggregate travel summary by country
- Traveller volume by destination country
- Comparative assessment of taxable travel
- Impact of tax treaty on taxable travel
- Country analysis of potentially taxable travel

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Business traveller - Summary view

Easy to use solution for global mobility managers and tax in-house tax professionals

Allows you to direct your attention to the individuals and trips that are potentially taxable instead of monitoring the entire population
Example:

(Internal) Audit Analytics
Audit Analytics
A data driven audit

A data driven audit approach

• Support both external and internal audits.
• Analyze the client's financial and operational data.
• QlikView dashboards provide interactive results for clients and auditors.

Benefits for the client and the auditor

• Efficient
• Effective
• Insights

Principles

• Risk based
• User friendly
• Flexible

Some examples

• Fraud detection
• Double Invoice Tracker
• Segregation of duties analysis
• Revenue Assurance
• Working capital reduction
• Benchmarking financial processes
Audit Analytics example: Efficiency
Accounts Payable Risk based reporting

1. The auditor selects risk based report: Unauthorized intervention in accounts payable process

2. Pre defined report is generated
Displaying the number and amount of unauthorized invoices and credit notes per vendor.

3. The auditor export results
The graph and predefined text can be used to discuss with the client
Audit Analytics example: Valuable insights
Accounts Payable Analysis

1. Invoice payment vs. due date
2. Select all invoices that were paid 30 or more days too early
3. Vendors: Identify opportunities for working capital reduction.
Audit Analytics
A data driven audit

Cohesive dashboards
With the same data, we can run a number of analyses and modules, including double invoice tracker.

Proven methodology
• Deloitte delivered Audit Analytics to 200+ clients, supporting both external and internal audits.
• Starting from standardized dashboards, we are developing increasingly more industry specific modules

Audit Analytics Modules

Record to Report | General Ledger

Purchase to Pay | Accounts Payable

Order to Cash | Accounts Receivable

Other / Customized

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