Data Quality?
Don’t Waste your Time

Nigel Turner
Head of Information Management Practice, BT Design
nigel.h.turner@bt.com

Dave Evans
Lead Data Management Consultant, BT Design
david.r.evans@bt.com
Data Quality – 8 Myths & Misconceptions

1. Data Quality matters to a business
2. Data Quality problems keep CEOs awake at night
3. Data Quality is an IT issue
4. Data architectures have value to a business
5. Metadata matters to a business
6. 100% data accuracy is a feasible aim in business
7. Businesses want 100% data quality
8. Businesses need 100% data quality
Myths & Misconceptions – Don’t Waste Your Time

- DQ is not seen as a business survival issue
- DQ experts do not win hearts and minds in organisations
- DQ champions struggle to win business support
- DQ specialists do not sell the importance of DQ in a language that connects to the business world
- And many researchers miss the point – misplaced focus

The real challenge…

- **DQ professionals:** convincing industry to take DQ seriously
- **DQ researchers:** supporting DQ professionals in this challenge

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Data Quality – the Business Realities

- Data Quality is a business transformation challenge
- Holistic approaches are needed, encompassing:
  - People
  - Systems
  - Processes
  - Technology
- Proving the benefits of DQ enhancement is the primary challenge
- Return on investment is king!!
- Results are achievable, but it’s a long haul
- Businesses need us!!
From Acorns to Oak Trees...

- BT’s DQ initiative started in 1997. Response to:
  - Slow deployment of new products and services
  - Desire to gain complete view of customers
  - Efforts to reduce business & IT costs

- DQ improvement team created:
  - Investigated DQ ‘hot spots’
  - Specified common approach and tool set
  - Kick started initial projects

- DQ in BT today:
  - Over 70 internal DQ improvement projects completed
  - DQ improvement team of 50+
  - DQ solutions to other companies, e.g. UK MoD, HBOS, Unilever

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BT’s DQ Challenges

- Provide accurate, complete and reliable information
- Improve core data in 700+ operational systems
  - *data quality problems were widespread*
- Ensure new systems stack contains high quality data
- Accelerate migration to new systems stack
  - *data migration recognised as challenge*
- Support e-enablement of processes
  - *you can only automate process if data is accurate*
- Ensure all assets recorded accurately
  - *an asset is only an asset if you know it’s an asset!*
- Comply with new EU & US data legislation
Organising for Change

Organising the Business

- Business champion in Group CIO team
- Champions in all lines of business
- IM Forum created . . . Focus on Data Quality
- Prioritising potential DQ projects

Organising the IT Department

- Created a Centre of Excellence (CoE) for DQ
- Head of CoE member of IM Forum
- DQ Consultancy established to bridge Business & IT functions
- Drive to establish common methods and tools
Gartner’s Maturity Model

Strategic Planning
Assumption: Through 2010, more than 75% of organizations will not get beyond Levels 1 and 2 in their data quality maturity (0.8 probability).

Strategic Planning
Assumption: Through 2012, less than 10% of organizations will achieve Level 5 data quality maturity (0.8 probability).

Andreas Bitterer - Gartner
Feb 2007
BT: An Early DQ Challenge
Some Example Data Quality Projects

- **REACTIVE TO PROACTIVE**
- **BATCH TO REAL TIME**
- **APPLICATION TO ENTERPRISE**

**TIME (1997 – 2006)**

- Consumer / SME
- Sales & Marketing
- Circuit Recovery
- Inventory
- Customer Service
- Systems Alignment
- Global OSS
- Name & Address
- MDM
Sources of ROI

- Process improvement…
  - Reduced costs of failure
  - Less scrap & rework
  - Enhanced productivity & morale
- CAPEX avoidance
- Improved asset utilisation
- Revenue recovery & creation
- Better ROI in IT investments
  - Reduced in-life costs
  - Faster deployment of enhancements
Data Quality: the bottom line benefits in BT

Benefits to 2001/02: $100 million
Benefits in 2001/02: $260 million
Benefits in 2002/03: $360 million
Benefits in 2003/04: $400 million
Potential Benefits: ???
Data Quality: the bottom line benefits in BT

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Potential Benefits: ???
Total Benefits: $1.1bn

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Principles & Approach

Dave Evans
People, Systems, Technology and Processes are all driving each other!

And don’t forget the regulator!
BT’s DQ Methodology approach

Problem & Opportunity Identification

Consolidation (Hold the Gains)
Data Reconciliation Tools

Re-Engineering
Data Re-Engineering/ETL/Data Profiling Tools

Prototype/Prove
The Concept

Investigate

Define Solution

Proposal

Client Involvement
Track Benefits

Build on Gains

Integrate Solution

Review/Reuse/Reject on Commercial Grounds

Data Discovery/Data Profiling/Data Modelling Tools

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BT’s DQ Methodology

Client Involvement
Track Benefits

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DQ Re-Engineering

Prototype/Prove The Concept

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Build on Gains

Integrate Solution

Integrate Solution

Build on Gains

BT’s DQ Methodology
Problem & Opportunity Identification

- Work with business & IT people – listen to their complaints and suggestions
  - Interviews
  - Workshops
  - Ideas schemes
  - Focus groups
- Talk business language
- Relate problems to key business objectives
- Identify the pain holders! Identify champions!
  - Same people?
- Expect some denial and even rejection
  - Don’t get downhearted
  - Persevere!
  - Look elsewhere
BT's DQ Methodology

Problem & Opportunity Identification

Consolidation (Holding the Gains)

DQ Re-Engineering

Prototype/Prove The Concept

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Integrate Solution

Define Solution

Proposal / Business Case

Deliver Solution

Review/Reuse/Reject on Commercial Grounds

BT's DQ Methodology
Diagnosis: DQ Healthcheck

- Find out how bad the situation *really* is
  - Don’t rely on people’s memories
  - Don’t trust the documentation
  - It’s probably worse than they think it is

- Profile your data!!
  - Use a best of breed tool
  - Don’t write SQL, C++ , Excel etc.

- Quantify the business impact
  - Work with the Business
  - Produce first cut estimates
  - Reject opportunities with no indication of business benefit
BT’s DQ Methodology

Problem & Opportunity Identification → Consolidation (Holding the Gains) → DQ Re-Engineering

Build on Gains → Integrate Solution

Investigate → Prototype/Prove The Concept

Define Solution → Proposal / Business Case

Review/Reuse/Reject on Commercial Grounds → Deliver Solution

Client Involvement Track Benefits

BT’s DQ Methodology

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Business Case and Proposal

- Be aware of your organisation’s DQ maturity
  - Wise owl or naïve donkey??
  - Start small
  - Under promise, over deliver

- Only progress opportunities that show indicative positive ROI

- Prioritise potential projects
  - Quantifiable ROI
  - Regulatory & legal impact
  - Brand & reputation damage
  - Benefits/cost ratio

- Produce Business Case
  - Gather more evidence to validate the case
  - Include ‘do nothing’ option
BT’s DQ Methodology

Client Involvement
Track Benefits

Problem & Opportunity Identification

Consolidation (Holding the Gains)

DQ Re-Engineering

Prototype/Prove
The Concept

Investigate

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Review/Reuse/Reject on Commercial Grounds

BT’s DQ Methodology Framework:

1. **Problem & Opportunity Identification**
2. **Consolidation (Holding the Gains)**
3. **DQ Re-Engineering**
4. **Prototype/Prove The Concept**

Key Stages:

- **Investigate**
- **Define Solution**
- **Deliver Solution**

Client Involvement and Track Benefits throughout the process.
DQ Re-engineering

- Design & Implement the Transformation
  - People, Systems, Processes, Technology
  - Business led, IT supported

- Standardisation
  - All systems use the same version of the same data
  - Enabler for further initiatives

- Don’t build one off solutions
  - Think agile & re-use
  - Remember it’s an iterative approach

- Consider the future
  - You might not be doing it now…..
  - But you will be soon!
BT's DQ Methodology

Client Involvement
Track Benefits

Problem & Opportunity Identification

Consolidation (Holding the Gains)

DQ Re-Engineering

Build on Gains

Integrate Solution

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BT's DQ Methodology
Consolidation – Holding the Gains

- Don’t do a DQ Transformation unless….
  - You can hold the gains
  - Improvement can be measured
- Use the same design
  - Ensure your designs fix it and keep it fixed
  - Whatever tool you use
- Use the same solution
  - If your solution gets it clean make sure it keeps it clean too
  - May involve training, BPR and culture
  - Remember the metadata
- Now move on to the next most important thing
  - DQ improvement never ends
  - It’s a holistic problem!
  - Some carrot some stick – use both
Improve the DQ - cleanse

Quick Win - focus on Service Assurance
Improve the DQ - holding the gains

Quick Win - focus on Service Assurance
Improve the DQ – save the $$$$!

DQ Bottom Line Benefits

- Inaccurate Billing
- Operational Savings
- Total

$million

2003/4 2004/5 2005/6 2006/7 Total

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## Lessons Learned

### Business Alignment
- Link DQ to strategic objectives
- Know business ‘hot spots’ & drivers and connect
- Ride on existing initiatives
- Explain DQ problems in the language of the business
- Do stakeholder analysis
- DQ not an end in itself

### Leadership
- Bad DQ is not bad IT
- DQ must be business led
- Only one measure matters - $$$
- Be confident in achieving ROI
- Let seed corn funds - let early successes fund later projects
- Governance – find a model that works for you

### Complexity
- Recognise that DQ problems are holistic & pervasive
- Each DQ problem is unique
- Analyse e2e business impact
- Aim for improvement not cure
- Recognise DQ improvement is a process not a project

### Communications
- You cannot communicate enough
- Hold conferences & briefings
- Produce success stories & case studies
- Look outside the organisation
- Create a DQ brand
Don’t Waste Your Time – Act Now

“If your actions inspire others to dream more, learn more, do more and become more, you are a leader”

John Quincy Adams

“A community is like a ship; everyone ought to be prepared to take the helm”

Henrik Ibsen
Thanks for Listening
Any Questions?

Nigel Turner
nigel.h.turner@bt.com

Dave Evans
david.r.evans@bt.com