Business Value of MDM and High Quality Data -- A Practical Framework

ABSTRACT

Creating a formal business case for MDM can be challenging. The reason is that MDM is an enabling set of processes and technologies, not an end purpose per se. There often are easily identifiable quick wins in e.g. direct mailing, but much of the value that MDM can offer is realized outside of the trivial examples. Moreover, the value is often hiding behind a number of operational and analytical processes and technologies, and multiple organizational layers.

A clear, pragmatic framework for analyzing the value potential is needed. There are good frameworks available in literature (e.g. English, Loshin, Eppler&Helfert) ,but such literature models can be of limited value to practitioners as their communicability to business and IT can be limited.

This presentation argues a comprehensive yet simple and most importantly, easily communicable, approach for any organization to perform benefit analyses on what improving how Master Data is managed can provide.

BIOGRAPHY

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Mr. Kimmo Kontra works as a manager for Accenture in Helsinki office, in Accenture Information Management Services, in Data Management & Architecture domain. Prior to joining the world of consultancy in 2005, Kimmo worked in various management positions in an Information Technology unit of a manufacturing company for nearly six years.

Recently Kimmo has mainly worked with the quality of structured data in enterprise system, having his focus especially in Master Data Management, Data Quality, and Data Governance topics. Kimmo's professional interests lie in ensuring good data quality that truly supports business strategies.

Kimmo holds a M.Sc. Degree from Helsinki University of Technology from the department of Industrial Management. He participated in MIT IQIS 2009 as a speaker on the topic of Data Governance.

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Business Value of High Quality Data

Practical Framework

Kimmo Kontra, Accenture
Information Quality Industry Symposium 2010
at Massachusetts Institute of Technology

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Business Value of High Quality Data

- "Nestlé has been […] improving the quality of its data. […] **For just one ingredient, vanilla, its American operation was able to reduce the number of specifications and use fewer suppliers, saving $30m a year.** Overall, such operational improvements save more than $1 billion annually."*

"Information is Changing Business", The Economist, 25th February 2010

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Demonstrating Business Value – a Piece of Cake?

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- Such examples of easy, high, and immediate benefit potential are tempting and there are aplenty of them (e.g. classic, oft-repeated claim of "600 billion lost annually due to data quality in US"* or "many percentages of revenues lost due to poor data quality"**).

*The Data Warehouse Institute. Data Quality and the Bottom Line: Achieving Business Success through a Commitment to High Quality Data.
**significant % of revenue claims by e.g. Redman T. Data Quality for the Information Age. and English L. Improving Data Warehouse and Business Information Quality.

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…or maybe not a piece of cake at all?

81% of respondents indicated that demonstrating the value of high quality data to their organizations is the single biggest challenge in DQ field.

IAIDQ and UALR-MSIQ, "2009 Information / Data Quality Salary and Job Satisfaction Report" by E. Pierce, C.L. Yonke, and A.Lintag, July 2009.

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A paradox

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- 600 billion allegedly on the table in the USA alone, a plethora of academics, practitioners, consultants, and other data afficionados talking about it, and yet such difficulties in demonstrating the value?

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Synthesis: BHAC's just don't materialize easily

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- Big, Hairy, Audacious Claims (BHACs*) such as that of having 600 billion waiting on the table don't easily materialize into concrete benefits in individual organization management's viewpoint.

Original expression BHAG, Big Hairy Audacious Goals, in "Built to Last", a book by James Collins and Jimmy Porras, 1996.

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Potential reasons for BHAC not materializing

- Provocatively put there are two possible reasons for the difficulties in finding BHACs – or any significant value, for that matter…
  - Data Quality **BHACs are plain wrong** (or maybe true, but are merely anecdotal coincidences) & we should stop making noise out of this DQ stuff. Overrated hype.
  - **BHACs do have truth in them**. High Quality Data is truly valuable. But for some reasons the jump to reality from a BHAC is difficult in most organizations.

For the sake of this presentation (and overall for MIT IQIS 2010) let us be firm believers in the latter statement.
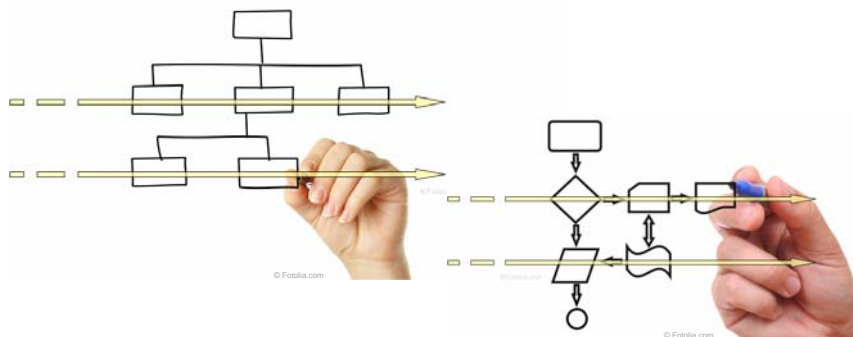
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What to do?

- Understand fundamental reasons **why** such challenges in demonstrating the value of high quality data exist.

- Build **an** approach **how to overcome** the challenges.

- Have **an actionable plan for really doing it**, showing the numbers that High Quality Data does have real value.

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Why 1: Cross-everything nature

- Measuring the value that spans multiple organizations & processes is not easy due to organizational, technical, and political complexities. What complicates it further is that High Quality data may cause extra cost in one process/one part of organization, while benefiting the rest. This is a source of tension.

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Why 2: "Infrastructural" nature of HQ data's value

"…supports other technology and business process investments and does not in and of itself return business value…"*

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- High Quality Data *per se* often does not have direct value. Its value is realized later, sometimes via long process and decision making chains. Complexity reigns, isolating the value is often not doable. Demonstrating the business value in an unambiguous way is challenging.

*"Building the Business Case for Master Data Management", Forrester 2008

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Why 3: Fatigue combined with cynicism

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- There have been enough of disappointments in the management in the past ten years for not-realized benefits of too many things that have the words "technology" or "data" or "information". Not to even mention infamous "*e*" prefix.

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Why 4: Inherent conflict of who "can claim the value"

- *"The value of this sourcing project can be attributed to investments in implementing **ingenious supplier management strategies.**"*

- *"No, actually the value is attributable to our state-of-the-art **ERP&SRM** systems we invested heavily that supports optimized sourcing."*

- *"Au contraire: it is the advanced **analytics capabilities** we've built. Without such there'd be no way to make good decisions."*

*Reality? "Strategic spend analysis projects can deliver savings of **5-12%** of indirect spend, but achieving the higher percentages depend on the project having **access to high quality information**." **

- There are significant conflicts of very fundamental nature when different initiatives compete who really has provided the value, and who thus gets the glory, further funding, and bonuses. The value of High Quality is very often in the very end of the food chain. Even if there is a valid BHAC for DQ, it is not recognized.

*"Creating Business Case for Data Quality Sustainment Using Gatekeeper", Sparesfinder, 2009

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Overcoming the "Why's" – step 1

- The first step is to acknowledge that there's **no panacea** for overcoming all the why's… There's just no one-size-fits-all magic formula for calculating the value of High Quality Data.
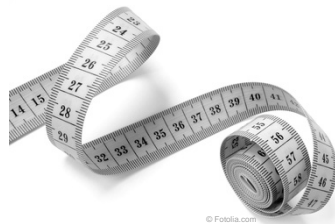
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Overcoming the "Why's" – step 2

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- Although there's no magic formula, Data Quality's value **certainly can and should be measured**. In fact, anything can be measured*.
- The key to measurement is to push the estimation of data's business value to business (and also IT!) itself. In practice this requires…

Hubbard, D.W. How to Measure Anything – finding the value of intangibles in business. 2007. Wiley

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Solution step 1 – introduce benefits framework

- A very basic approach to HQD (High Quality Data) benefits is that they either are realized via saving costs or increasing benefits. Data is not different.
- The major topic to keep in mind is that the nature of both "direct" and "indirect" benefits are, well, often quite indirect in nature.

Saving – direct: Where HQD helps to **cut** specific, often quantifiable, costs. E.g. in data maintenance labor, avoiding operative errors, …

Savings - indirect: Where HQD enables **productivity** increase e.g. in system integration work, in reducing risk (compliance risk, operative risks), in increasing employee satisfaction,, …

	Saving Costs	Increase revenues
Direct	"Cutter"	"Booster"
Indirect	"Product-ivity"	"Creator"
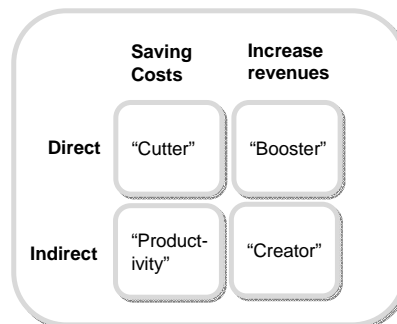
Revenues – direct: Where better data helps to **boost** revenues. E.g. in supporting cross- and up-sell., in helping to target marketing efforts, …

Revenue – indirect. Least concrete, most difficult to quantify. Where good data helps to **create** opportunities, in both business and technology.
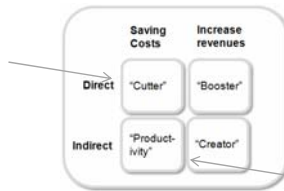
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Solution step 2 – institutionalize the calculation of DQ benefits

- The goal is to make estimating the effect of Data Quality a part of all initiatives that have significant exposure to data.
- For example, if freight costs are deemed too high, few lines of thought should be set to data, as well.

-Dimension & weight data is of poor quality. Potential to reduce freight costs by 4 % by having the loads optimized. We spend annually X million euros on freights, meaning X*0,04 cost cutting opportunity.

	Saving Costs	Increase revenues
Direct	"Cutter"	"Booster"
Indirect	"Product-ivity"	"Creator"

-Shipping clerks' morale is low due to frequent errors caused by wrong weight and dimension data. Their attrition is 15% compared to 4% in similar clerical tasks. Getting the data right has potential of increasing productivity.

- So simple? Of course not. There may be other reasons behind the clerks' low morale as well as non-optimized loads. Data is not everything. However, *the realization of data quality's potential role and even rudimentary use of the framework* will be the starting point to really finding the value of HQD.

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Finally – the culture of "data as an asset" and ownership for data

- Institutionalizing business value calculations of High Quality Data requires one thing: culture for "data as an asset". Without internalizing this deep into the collective mindset of the organization, no framework measuring the business value will help in the long run. The question of ownership (loaded word in this context!) is another. Otherwise the fundamental challenges of "cross-everything" nature and conflicts of interest are not solved.

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To summarize

- There **is a paradox** that must be acknowledged:
  - Data is claimed to be of immense business value, but still many organizations can't really find it.
- There are a number of **fundamental reasons** why the paradox exists:
  - Cross-everything and infrastructural nature of data, management fatigue & cynicism, and inherent conflicts of interest between the stakeholders.
- The solution is not to try to find a one-size-fits-all-formula from ivory tower, but to **institutionalize the process of assigning value** to High Quality Data to actual business initiatives.
- A simple **High Quality Data benefit framework** for assigning the value can be used
  - Value levers that High Quality Data offers can be classified to "cutter", "booster", "creator" and "productivity".
- True institutionalization requires strong data **culture** (beyond the scope of this presentation) and setting **accountability** for data.

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Questions / Discussion?

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