Capturing the Benefits of Data Management

consulting4bit

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Summary

This document outlines how the benefits of introducing a comprehensive data management can be captured and even be quantified. Being able to describe the benefits is important for getting a data management initiative improved. When starting such an initiative, a few key principles should be used as a guideline. In order to find tangible benefits a key activity will be the acquisition of information usually not available today. A few ideas where to find the benefits and how to work them out in more detail conclude this outline.

Planning a Data Management Initiative

Surveys on the importance of data management continously show that this topic has a very high priority for businesses. However, if you count the number of initiatives that exclusively deal with data management this number seems to disagree with this priority. More often data management initiatives are run within the context of larger projects, e.g. as part of a global ERP template project.

One reason why data management initiatives are often not run stand-alone is the difficulty to describe the benefits of data management. Benefits in this context tend to be elusive and often only address qualitative aspects. A quantification of benefits is often regarded as too difficult. Getting an initiative approved without having some tangible benefits is difficult. Simply declaring data management as "strategic" just begs the question.

Building a business case that describes tangible benefits of a data management initiative is not easy, but it is worth the effort. A business case will deliver a deeper insight where to set the priorities. The best way for getting the committment from the stakeholders for the data management initiative is to involve them in building this case.

Key Aspects for capturing Benefits

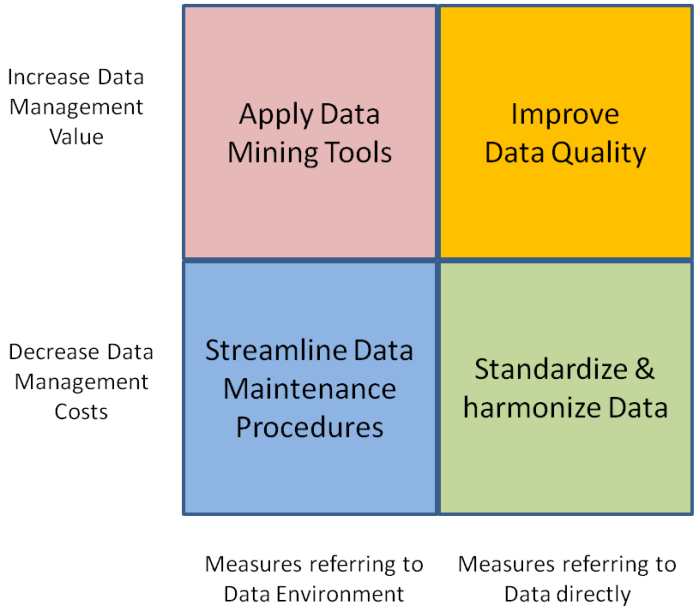
Data are always a means to an end. So the value data have for an organization can only be assessed when looking at the context in which the data are used. This is key for describing the benefits of data management. Try to answer the following exemplary questions:

- What function do the data have in the context of business processes ?
- Which decisions are made based on which data ?
- What happens if the data is wrong or gets lost ?

Discussing these questions with the stakeholders of the data management initiative will give you first hints where to search for potential benefits. The results should be used as input for a more detailed discussion and individual interviews. For organizing this you need to develop your strategy and methodology.

Developing the Strategy and Methodology for the Data Management Initiative

When planning the data management initiative you should be aware of the main focus of your initiative. Will you really look at the benefits of data management or is the initiative actually adressing only the cost side ? You can use the following matrix to get a clearer picture where to set your focus:



This matrix shows exemplary tasks that can be part of a data management initiative. Very often you will find tasks that deal with streamlining data management processes, e.g. data creation or data change. Such a task is clearly focussed on lowering costs, e.g. you replace manual data entries by an automated data distribution model. Having data standards and the harmonization of data in different IT systems is another major objective for companies today. However, introducing these standards is still mainly looking at reducing costs, e.g. save costs for data conversions.

Benefits correspond to the value of data. Typical measures that clearly focus on the value are data quality improvements. Without high-quality data you will not reap the benefits, even if you have efficient processes and data standards in place. An example of a value-focussed task that refers to the data environment is data mining which is meaningless if your data are neither standardized nor of high quality.

When starting with a data management initiative it is not necessary to address all sections of the matrix at the same time. Some measures that are more focussed on the costs are often prerequisites for measures that address benefits, e.g. data standards are the basis for data quality initiatives. The borderline between cost-focussed measures and benefit-oriented tasks is not solid. For example automated entries also help to reduce the amount of data quality issues caused by manual data entries.

Dealing with missing Information to appraise Costs and Benefits

No matter where you set the focus for your data management initiative be aware that you will most probably encounter some or all of the following difficulties you need to manage:

- Information about actual costs of your current data management will not be available
- Criteria for data quality are not in place and data quality is not measured systematically
- Stakeholders have a gut feeling that data quality is bad but can not give you examples
- Issues where data quality was the root cause have not been recorded as data quality issues or are mistakenly marked as an application issue
- Responsibilities for the data are not clear and an organization for data is still in its infancy

Dealing with these difficulties is inevitable and can require a considerable up-front investment. Stakeholders must be aware of that.

Exemplary Benefits

A business case for data management should include the following building blocks for costs and benefits

- Investments for setting up the data management initiative
- Expected cost savings
- Expected benefits
  - Qualitative benefits
  - Quantitative benefits
  - Monetary benefits

Try to quantify benefits as far as possible and agree with the stakeholders how you plan to do this. Whether a quantitative benefit is really a monetary benefit depends very much on the individual situation. For example a centralization of data management reduces manual data entry efforts. If that leads to an reduced headcount you can achieve hard savings. If no headcount reduction is possible you can try to assess other impacts of such a centralization on your organization and data, e.g. less training needed for data maintenance staff or better data quality by avoiding manual data entry errors.

The following table lists up more ideas how to find benefits and information that is needed to estimate potential savings.

Data Management Objectives	Information needed to assess Costs and Benefits	Comments
Reduce number of manual data entries	Who is maintaining which data today ? How many data maintenance transactions are done ? How long does it take to enter a new record (customer, product etc.) ?	Manual data entries are a major source for bad data quality Automated transactions are cheaper than manual transactions Data creations that take too long may be bypassed by other procedures
Standardize data maintenance procedures	How many different process variants for data maintenance do exist ? How many trainings are needed for the different process variants ?	Each variant causes costs and needs to be trained Process improvements must be implemented for all variants
Centralize data maintenance activities	Which organizations have data maintenance staff today ? Which application functionalities can be made redundant ?	Check if a reduction of headcount is possible Training efforts will be lower if a central team is responsible for data maintenance Global data standards are strongly supported by central data maintenance
Reduce amount of issues with insufficient data quality as root cause	Which issues were caused by bad data quality in the past ? Which issues resulted in fines ?	Add data quality as category in your HelpDesk to track future issues Interviews with stakeholders and data experts are primary information source
Avoid data duplicates	How many data duplicates do exist ? Which issues / risks are caused by your data duplicates ?	Have a clear view how duplicates are identified Build in duplicate checks in data entry procedures
Harmonize data and avoid data conversions	Where are data converted in an End-to-End process ? What happens if conversions fail ? How much faster can you close your books if you use a common chart of accounts ?	Every data conversion is costly and error-prone
Set up a concept für data quality KPI's	What does "data quality" mean to the stakeholders ? What are the rules that can be used to detect bad data quality ?	KPI's are needed to control the data management initiative Data quality must be checked continuously by automated rules
Identify use of data in business processes and set priorities for data	What do the different data control in a business process ? What happens in the process if the data is not correct ? Which negative events from the past shall be avoided ?	Analyse the use data within the context of the business processes Interview your business to capture impacts
Identify cost saving potentials and the criteria data have to fulfill to reap benefits	Are the same products purchased from different suppliers ? Are different organizations purchasing from the same supplier ? How much of the same product is in stock across all storage locations worldwide ?	Clear criteria for identifcation of duplicates or similarities between data records needed
Evaluate data for specific risks	Are there credit line risks caused by customer record duplicates ? Which risks might be caused if data in different IT systems are inconsistent ? Is a concept available how data of an acquired company can be scanned for risks ?	Risk categories to be defined, e.g. financial risks, compliance risks, security risks Being able to identify risks in the data of an acquired company is important task in due diligence phase
Standardize data used in reports	Which data attributes are used in reports today ? Are these data attributes standardized and harmonized ?	Often huge undocumented efforts for consolidating inconsistent data

Starting a Pilot Project

For building a showcase that data management actually delivers value it is better to keep the scope of your first initiative narrow and not start with a company-wide project. A data warehouse project could be appropriate for launching a data management initiative in parallel. Reason for this is that a data warehouse often discloses shortfalls in the data domains but cannot eliminate the root causes of these shortfalls. Many projects just build workarounds but the data issues remain. If you find a project which has a vital interest for good data but which has a limited influence on the data itself this could be the right combination for you to start.