White Paper

Why Manage Data as an Organizational Asset?

WP0220 | December 2015

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I have been exposed to a lot of pain caused by a lack of data management and organizational focus on the data assets of numerous organizations. In this paper, I will outline some of the pain experienced, and value to be generated from a holistic approach to managing your data.

Organizations facing into this pain are identifying that they need to wind back 20+ years of poor data management practices, ad hoc data processes and project driven approaches to moving data around the organization and a lack of visibility to their data assets.

Poor data management practices does slow your business down. It reduces your agility, increases your costs to deliver services and projects, leads to poor customer experiences, reduces your ability to compete, creates an inability to deliver timely and automated reports, reduces your revenue generating insights, and increases concerns at Board and Executive level.

It can be frustrating as you find that project teams rarely cleanse the data they are moving around the organization. They would prefer to build a new interface than engage with your Enterprise Architects on a whole-of-enterprise solution, enable Project Managers to make decisions on your organizational data, and focus on time and cost outcomes rather than business value outcomes.

These breakdowns in governance lead to organizational pain. Below are two case studies as well as some best practice approaches outlining why everyone should participate and manage your data as an organizational asset.

Case Study - 1

I have worked at a number of organizations who have created mission critical data and customer services off the back of an Access database or Excel spreadsheet. These are not the environments for managing the complicated tasks of customer service and delivering revenue generation initiatives, least of all reporting, analytics and management of financial transactions.

However, they can be a good low cost starting point in specific circumstances for new initiatives, or where new business processes are being developed, and application and data requirements are yet to be defined. At the same time, it is critical that they be the subject of some architecture oversight and governance to manage the risk of continued use. To continue to develop functionality in these low maturity environments can often result in a situation where the demand for increased functionality far outweighs the limited capabilities of such simple applications.

In one such organization over 20 separate excel spreadsheets were used plus a number of CRM applications to manage customer details. The resultant pain was easy to measure as they were unable to create a measure of how many customers were receiving what services, unable to track revenues, manage address details or undertaking a mail out to these customers. With limited data auditing and tracking, addresses were incomplete, naming conventions were not followed and a true representation of organizational value was not being captured.

Case Study - 2

One organization I encountered had spent a lot of time and effort in developing an Access database to enable some level of reporting and visibility for customer details and activities. They were able to establish some basic functionality in the Access database with basic reports and analysis, but did not apply any data management or governance to the data. As such, data quality became a significant issue in delivering the services accurately and appropriately to its customer base. Data became inaccurate, incomplete and inconsistent, and teams were wasting precious time manipulating data while at the same time customer service was constantly being compromised.

The range of case studies available on poor data management practices is not limited to immature or poorly designed environments. It can be experienced across a wide range of environments, including those with mature CRM, Data Warehouse, and ERP platforms. These business data problems are experienced in every business today, and your ability to bring these issues to life and convince your stakeholders of the cost and magnitude of the problems will dictate how successful you are in achieving your business objectives.

Worst still if you don't even have visibility on how poor data is compromising your business, because then first steps involve establishing some level of visibility for your senior management.

But where to start?

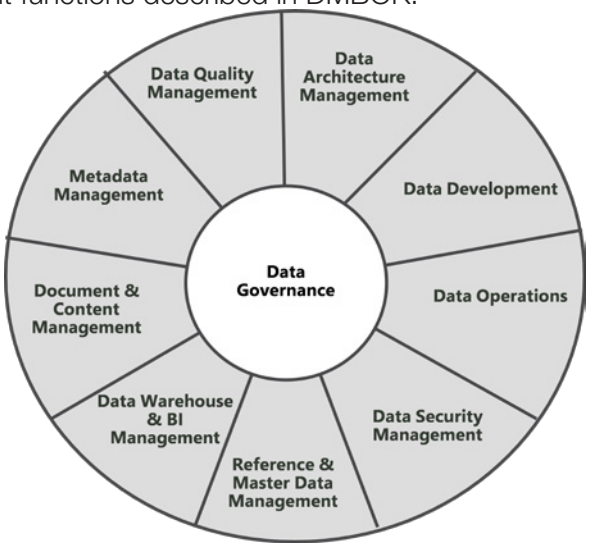
Approaches to Managing Data

There are a couple of different approaches you can take to addressing the business problems created by poor data. Firstly you can take a bottom up approach to the problem and be quite specific about the business issues and interrogate specific data sets. This enables you to get a sense of the various cost impacts and level of data quality that is hindering your business. This activity certainly has a direct cost that can be understood by stakeholders based on man hours spent doing the unproductive tasks caused by poor data.

Alternatively you can leverage one of the many different methodologies available to drive a top down development of your data management capability so as to better manage your data assets. A number of different methodologies and approaches exist to support your Data Management planning and maturity, such as ITIL, TOGAF, COBIT, or Mike2.

However, there is one methodology that I believe provides a detailed development path and enables a holistic enterprise wide approach to addressing your business pain caused by poor data, and that is the DMBOK (Data Management Body of Knowledge) methodology provided by DAMA (Data Management Association).

The methodology outlines a wide range of information management best practice approaches to building visibility, understanding and management of your data assets. I will use "Information" and "Data" Management interchangeably throughout this paper as they both relate to the lifecycle of turning data into information, insight and knowledge. The following model provides a high level overview of the Data Management functions described in DMBOK:



Source: DAMA – Data Management Body of Knowledge, V2.

DMBOK Functions

Following is some simple definitions and rationale for deploying the DMBOK functions:

DMBOK Function	***Description***	***Rationale for Managing Data as an Asset***
Data Governance	The exercise of authority and control over management (Planning, Monitoring and Enforcement) of the data assets	Critical input for defining the owners, sponsors and data governance forums
Data Architecture Management	Defining the data needs of the organization and the master blueprints to meet those needs. This includes development and maintenance of the enterprise data architecture, within the context of the broader enterprise architecture. This involves defining the Data Principles to be applied and their relationships with your Application and Business Architecture	Critical for visibility of "What" data needs to be managed by your organization
Data Development	Designing, implementing and maintaining solutions that meet the data needs of the enterprise. These data focussed activities include development of the Conceptual, Logical and Physical data models that describes your data, data requirements analysis and design, implementation and maintenance of the data related solution components	Critical for project delivery and business engagement activities
Data Operations Management	Planning, control and support for the structured data assets across the data lifecycle from creation and acquisition to merge, archival and purge	Similar to Data Architecture Management – combines the what data with who will own and where it is located
Data Security Management	Planning, development and maintenance of the security policies and procedures to properly authenticate, authorization, access and auditing of data and information	Critical to ensure protection of your data assets
Reference and Master Data Management	Planning, implementation and control activities to ensure consistency for a golden set of conceptual data values. Reference data is that data held in tables for reference purposes i.e. classifications and master data is that data to be mastered from a single point of truth	Critical for managing key data sets as a single point of truth.
Data Warehousing and Business Intelligence Management	Planning, implementation and control processes to provide decision support data and support for knowledge workers involved in reporting, query and analysis	Treating data with respect and deploying data as a competitive advantage

DMBOK Function	*Description*	*Rationale for Managing Data as an Asset*
Document & Content Management	Planning, implementation and control activities to store, protect and access content held in electronic files and physical records i.e. emails, documents, text, graphics, images, audio and video	Enable the management of unstructured data across your enterprise
Meta Data Management	Planning, implementation and control activities to enable easy access to high quality integrated meta data i.e. data about the data and primarily supports search functions	Support the efficient search and retrieval of unstructured data
Data Quality Management	Planning, implementation and control activities that are apply quality management techniques to measure, assess, improve and ensure the fitness of data for use	Critical for reporting, analysis and insight

Source: DAMA – Data Management Body of Knowledge, V2.0

Understanding your current state as it relates to each of these Data Functions is a critical first step to establishing your Data Management priorities and approach. This will support a review of your business and assist in developing a gap analysis which can prioritize your next steps.

Where to start

A lot depends on your current maturity, skill sets, executive appetite and range of business problems being experienced by poor data. Some initial analysis and quantification of the pain being experienced by your users will give you a good sense of what Data Functions should be addressed first.

If you have a high level Conceptual Data Model you can start to ask questions such as:

- Where is the data?
- What is the priority data?
- How many systems store it?
- How accurate is it?
- Who needs it and can they access it?
- Will they support or sponsor a data project?

This will build a body of information about the data you hold. Rest assured many organizations have the same data sitting in multiple repositories with many interfaces traversing the data across their environments. Getting to understand the nuances of your data also enables a broader discussion with your stakeholders about the issues they would support and like to address first.

The benefits of the Conceptual Enterprise Data Model include:

- Illustrating the basic structure of the business data to various interested parties (such as business areas, new joiners, consultants, and development teams).
- Identifying the subject areas for the classification of data, process and applications.
- Identifying the major data items of greatest importance to the business.
- The model is described in business terms and is intended to promote communication between business areas and IT.
- Providing an implementation independent view of the enterprise.

A Conceptual Data Model can then be augmented into a Logical Data Model to provide further depth and definition of the important data to your organization. The purpose for developing these models is primarily to develop visibility of your Data DNA and give you a sense of the scale and pain being experienced. You can also map risks / issues and the number of issues per data domain can give you a sense of where most of your pain is being experienced.

Often there is very little in the way of formal data governance addressed by organizations. The value from Data Governance is that it enables a group of committed stakeholders to talk about data, review the data issues and come together in a shared agenda to improve your data assets. Often the lack of data governance allows the proliferation of spread sheets and extensive Excel deployments with many of these becoming core business data stores used to manage key aspects of mine operations.

Data is often created “on the fly” to fill gaps tactically and there is no potential to re-use the data in any other area. Without a formal enterprise data architecture across the enterprise there are often a wide range of COTS packages with no consistency across sites and no integration strategy.

Final Word

Whilst both bottom up and top down approaches have proven successful in starting your data journey, developing visibility of your "Data DNA" is a critical first step to improving data maturity across the enterprise and managing data as an asset. Some stakeholders relate to the organizational outcomes more so than specific Divisional outcomes so there are genuine arguments for using either approach depending on the traction and culture within your organization.

Making progress on your understanding of the data in your organization is the first step and incrementally over time, enables a body of knowledge to be established and a committed group of stakeholders to be engaged on the data journey. A critical mass of committed stakeholders promoting both the pain and the value from addressing your data issues enables the organization to mature its data management, business intelligence, customer insights and therefore fast track cost reduction and revenue generating activities.

Reference

DAMA – Data Management Body of Knowledge, V2.0
(Accessible: https://www.dama.org/content/body-knowledge)

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