Master Data Management

Do any of the following experiences resonate?

- You are required to repeatedly provide the same details over and over to different persons in service organizations e.g. banks, health care insurers, public sector workers, utilities, whilst they try to connect you with the correct person to deal with your enquiry, despite being a regular and long-standing customer?
  
  o **Possible cause:** poor customer master data

- You receive multiple promotional materials on the same day for the same deal from the same company?
  
  o **Possible cause:** Multiple Master Data for the same customer

- You were refused credit in one part of a business whilst another section approves it?
  
  o **Possible cause:** No single view of the customer

- You were permitted to breach credit policies by opening additional accounts in multiple branches of a business with whom you deal.
  
  o **Possible cause:** No single view of the customer, unable to apply business rules
    
    o You were refused access or services due to incorrect personal details being held about you?

  o **Possible cause:** Incorrect Master Data

- Suffered identity theft?
  
  o **Possible cause:** Badly managed / secured Master Data

- You lost business because you couldn’t find/access customer / product / price details in time to satisfy a customer enquiry or request?
Possible cause: Poor, inaccessible Master Data, multiple applications

- You won €115m in the Euro millions lottery only to be embarrassed by the media disclosure that a nosey public official sneaked a peek at your social welfare history (and possibly shared this personal information with other unknown parties)?

Possible cause: Badly managed sensitive Master Data and Master Data policies

O.K., chances are that you won’t have experienced Irishwoman Dolores Mc Namara’s EuroMillions €115m lottery win of July 2005 or the subsequent breach of her privacy but there is a fair chance that most readers have experienced at least one of the other situations outlined above – scenarios that play out all over the world thousands of times every day.

Consider for a moment the annoyance these events cause loyal customers. Consider also the loss of reputation, internal productivity and lost revenue that they cause.

At the heart of each of the scenarios described above are the lack of definition, use, availability and management of Master Data – a field otherwise known as Master Data Management (MDM). Where master data is well defined and managed, it is available for consumption by IT applications and business professionals as necessary, resulting in higher customer satisfaction, increased revenues, higher productivity and less rework and waste – benefits that all organisations claim to want. Where MDM is badly conceived and managed all sorts of glitches occur, resulting in customer dissatisfaction, revenue loss and employee frustration, not to mention loss of productivity and increased cost. And data quality problems are expensive - they can cost a company 15% - 25% of bottom line profit.

**What is Master Data?**

Master data includes non-transactional data that organisations routinely collect, manage and use about customers, vendors and products. Where organisations wish to analyse and compare this data across functional groups, business unit or geographical boundaries, a Standard Chart of Accounts and / or other data may be added to the master data.

**What is Master Data Management?**

Master Data Management provides a cluster of processes that collect, aggregate, harmonise, consolidate, quality-assure, persist, and distribute master data throughout an organization, ensuring consistency and control in the ongoing maintenance and application use of this information.

Gartner’s definition: “MDM is a workflow-driven process in which business units and IT collaborate to harmonize, cleanse, publish and protect common information assets that must be shared across the enterprise. MDM ensures the consistency, accuracy, stewardship and accountability for the core information of the enterprise.”

**Why MDM is important**

1. Organizations want to analyze, compare and report on data by Customer; by business segment; by product line(s); by business unit; by geography and other criteria;

2. Organizations want to apply business rules consistently across their lines of business, and to apply business rule changes quickly;
3. Certain organizations involved in regulated industries are obliged to track and report on product data that spans global value-chains (e.g. Life Sciences must track drugs through all stages of their life cycle). Compliance with these requirements places very onerous requirements and disciplines on product identification and component identification all through the life cycle - from initial sourcing to an indefinite period beyond consumption.

4. Organizations undergoing mergers and acquisitions want to merge customer data from similar and different lines of business/business units to create a unified view of the business and to inform restructuring and commercial decisions.

These types of analyses and activities are often impeded by:

- Lack of enterprise wide master data definitions;
- Poor data governance / lack of stewardship, fuelled by internal politics and lack of trust;
- Master data that is defined for single application use only, with multiple variants of data residing in many applications;
- Master data residing in functional and geographic silos;
- Master data that is limited by the boundaries and definitions of master data in chosen enterprise application e.g. SAP. These applications definitions may be too narrow to fulfill enterprise-wide MDM needs.

Consider the case of the Financial Services single organizational unit as shown in figure 1 above. Each application has defined its own master data for its own purpose without any consideration for the future re-use or sharing of that information, greatly limiting analysis, aggregation and comparison. In the simple example above, it is not possible to analyse all of “Jane Smith’s” (or should it be “Jane May Smith’s”) activity without considerable rework, something that is easy to do for one customer but not for datasets containing hundreds of thousands or even millions of records.

There is an enormous proliferation of duplicate master data in business applications, databases and other repositories all over the world. This information is duplicated across lines of business within single organizations, and in multiple business units, resulting in the need for costly and time consuming data merging, cleansing and de-duplication. In lean thinking this is rework and a form of waste. This piecemeal approach also opens the door to data variation across organizations which results in loss of credibility with...
customers and leads to staff confusion and frustration. Finally, data from these databases do not lend themselves to analysis and comparison without significant rework.

The issue of MDM is not new – it has been knocking around for decades. Now, however, due to two major trends tactical approaches that worked in the past are no longer sustainable:

1. **The digital universe is growing at a stratospheric rate**

   According to IDC, between 2009 and 2020, information contained in the Digital Universe will grow by a factor of 44 rising to 35 trillion gigabytes by the year 2020. Furthermore, IDC data says that 75% of all data held is duplicate data and that, by 2020, business transactions on the internet – business-to-business and business-to-consumer – will reach 250 billion a day. If your organisation is engaged in B2B or B2C activity manual and semi-automated data management will be too slow to meet pace with these new demands. Your business will become overwhelmed by unprecedented volumes.

2. **Investment in IT staff will not increase at a comparable rate to data growth or business transactions**

   Forecasts from leading technology research organisations do not indicate an increase in IT staff to manage this growth.

**The new MDM reality**

Put simply, business needs to find new ways to manage data and storage in a more efficient and effective way or face business collapse as their data growth and transactional levels soar out of control. Incremental, local approaches will no longer be adequate as they will be too slow and consume too many resources.

IT will be forced to find new and better ways to manage master data and information storage.

The issues associated with poor and disintegrated data, in combination with the challenges of managing an exponential growth in data with the same or less IT staff, dictate a radical and strategic enterprise-wide approach to MDM improvement projects.

**Think outside of the box for new solutions to Master Data Management:**

*“We can't solve problems using the same kind of thinking that we used to create them” Albert Einstein*

Challenge current perceived wisdom and apply the three main process and quality improvement methodologies to improve the quality of Master Data and MDM, governance and practices:

- Apply Business process management approaches for the development and management of robust governance and stewardship processes;
- Apply Six Sigma tools to reduce variation and improve data quality. Joe Danielewicz explains how to apply Six Sigma to data management in his excellent article for Enterprise Data;
- Apply Lean Systems tools to improve customer intimacy, establish root causes and eliminate the horrendous waste;
BPM, Quality and IT professionals will find rich pickings in this space. To form an initial understanding of the opportunities available calculate the level of duplicate data that can be eliminated in your organization, calculate the sigma level of the master data and assess current governance and stewardship practices and processes.

What to do, how to begin?

1. **Enlist the support of the CEO**

   The first order of business is to enlist ‘C’ level support.

   Today, that precious Master Data is buried in functional and geographic silos. Add multi-lingual environments to this mix, different local regulatory requirements and lack of trust between parties sharing the master data and the task becomes even more complex. Achieving cross-organizational or enterprise consensus on a single set of enterprise-wide Master Data will require a herculean effort and the support of a determined leader. This is why you need the support of the CEO. With the CEO, anticipate and plan for resistance to change in this area as it will by necessity, cross departmental, functional, business unit and geographic / country boundaries.

   Ask the CEO to establish a Master Data Governance Group or Committee who will develop the governance model for master data and define ownership and stewardship responsibilities and accountabilities throughout the organisation. A member of the Executive Team should be appointed to Chair this group, ideally an executive close to customers and commercial decisions e.g. the Sales Executive who will have lots of ‘skin in the MDM game’.

   A strong Data Governance and stewardship model will deal with most of the challenges and embed new MDM practices. Note that in this new MDM world as no single line of business will own the customer, making good governance and stewardship critical.

   Technology companies specializing in this area support this top-down thinking. Whilst they are eager to bring sophisticated tools, techniques and extensive experience to bear on MDM activities they are quick to caution that the project is unlikely to succeed without executive level support. Bill Harte, Master Data Management, IBM Europe, asserts that “Master Data Management is not an IT issue - it is actually a business issue and deliver value to the organization”.

2. **Develop a credible business case**

   Do ensure that a solid rationale and a credible business case is available to explain the situation in business terms (no geek speak). If necessary, enlist external MDM experts to help build the case for strategic management of MDM. They know where the MDM Euros are buried and they will provide invaluable assistance with the definition and measurement of MDM ‘As-Is’ processes. They will also help establish a future vision and realistic expectations for the ‘Could -Be’ position. Ideally the business case for Master Data Management will be led and owned by the business and supported by IT, not the other way round.

   Where are the Euro savings likely to be found?
   - In Core Business Functions
   - Marketing, Sales & Distribution, Operations,
   - In Support Functions
   - IT, Finance, Regulation & Risk Management
Build a set of tangible, practical measures and ranges of benefit to explain the business case – see Table 1 below for some examples realised by IBM customers resulting from MDM initiatives. Bear in mind that benefits will be far greater where data is very fragmented and disintegrated i.e. multiple systems/ multiple business units / countries.

Increase confidence in the achievability of the MDM strategy by providing management with relevant examples. Many organizations, including Citi, RBC, Commerzbank, Irish Life and Pensions all claim major bottom line and customer satisfaction improvements through their MDM programs.

Benefits are available throughout the value chain and some examples are shown in figure 2 below.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Cost Benefit Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce time setup processes for product changes</td>
<td>26-39% (60% reduction in time for each changed product)</td>
<td>Establishing product usage, integrating of multiple systems, and significant research on the impact of that change in the various systems</td>
</tr>
<tr>
<td>Reduction in costs due to issues caused by product update errors</td>
<td>40-60% (60% of changed product)</td>
<td>Product change advances significantly reduces requirements to identify, understand, track, and record product change errors</td>
</tr>
<tr>
<td>Reduction in issues to respond to in error</td>
<td>30 - 60% (reduction in incidence)</td>
<td>This benefit incurs the cost to maintain customer information accurately, as errors may be the result of an integrated view of customer and product</td>
</tr>
<tr>
<td>Reduce time to setup for new Product Introduction</td>
<td>26-39% (60% reduction in time for product setup across systems)</td>
<td>Establishing a successful migration of multiple systems, and significant research on the impact of that new setup in the various systems</td>
</tr>
<tr>
<td>Reduction in cost due to issues caused by product update errors</td>
<td>40-60% (60% reduction in time for error)</td>
<td>Many problems caused by incorrect information are reduced and the consideration of significant resources be avoided, increasing, enhancing, and correcting the process</td>
</tr>
<tr>
<td>Reduction in cost due to errors during product updates</td>
<td>3-6 months (per call handled by Average Handle Time)</td>
<td>Due to the need to maintain customer data, knowledge and integrity, it is an integrated view of the customer</td>
</tr>
<tr>
<td>Cost savings from controlling customer data updates</td>
<td>20-65% (cost per call handled per person per customer for customer updates)</td>
<td>Reduce costs by controlling customer data updates from multiple change acknowledgments</td>
</tr>
</tbody>
</table>

Figure 2. Some of the benefits realized from strategic MDM programs

3. Take an IT architectural decision and decouple MDM from Business Applications and Systems

Figure 3. Independent MDM application serving all other applications/systems
Place all enterprise-wide master data in one centralized MDM application that will ‘serve’ master data on demand to transactional applications requiring master data.

**Benefits to this approach**

This approach: eliminates endless opportunities for duplication, error and rework; enables master data consistency across all applications; provides proactive centralised data management; and enables the MDM team with an opportunity to hone and execute Data Management Processes and practices at a superior level. This architecture also has the advantage of independent scalability and extensibility – MDM will not be bounded by the scope, strategy and upgrade path of underlying application systems but by the defined business Master Data needs.

In this newly re-architected environment, Customer centricity is achieved. It is now possible to analyse Jane (May) Smiths activity without the necessity of rework or data manipulation within or outside of the individual line of business applications.

![Image](image-url)

**Figure 4. Jane May Smith Customer Centricity example – Master Data**

**Anticipate push-back**

Various parties – business, IT application specialists steeped in the dogma of the current way of managing Master Data are likely to resist change. Vendors will view the separation of MDM from applications as a loss of power, status and revenue. Vendors who strongly resist this architectural approach will claim their MDM functionality can be the “ONLY ONE”. Careful and objective examination of these claims will show that this is not the case. Rather it is the natural response from vendors seeking to maintain the dominant position in your IT architecture and therefore increase its importance to your business.

Prepare well for these debates. Again, MDM specialist can provide valuable assistance in developing tactics and strategies to deal with this resistance.

**4. Deploy technology to assist the MDM programme**
Happily there are many technical tools available today that can ease the burden of cleansing and merging data. There are also many external sources of sector specific standard Master Data e.g. product catalogues, that can be acquired and imported to alleviate the task of building high quality Master Data. Develop a technical strategy in tandem with the MDM strategy to ensure that appropriate tools are chosen.

5. Do it now!

Many organizations wait for a major IT implementation such as ERP before addressing the issue of poor data quality. This approach merely delays the day of reckoning for data clean up activity. It also increases the risk to the major IT implementation as data cleansing is a task that is invariably a larger and takes longer than originally planned.

MDM Case Study: Norwich Union

The Norwich Union Challenge

• High number of call centres – no flexibility as agents were tied to supporting particular policy administration systems

• No way of identifying an individual customer and their holdings – major problems when customers die!

• High volume of calls which are simple enquiries – could not support customer web self service to lack of single view

• Plan to outsource policy administration to third party – need to understand the customer to allow the handoff

Benefits

• A scalable, easily deployable CVH service that agents can use as the basis for consolidated customer service initiatives going forward

• Introduction of new front end system supported by CVH allows work based routing which has reduced number of call centers and agents

• Integration with Authentication solution to provide single security entry point for all customer interactions

• Enabled outsourcing of policy administration by allowing seamless handoff to third party

• Enabled drive to customer web self service reducing volume of calls to call centre

References

1 Jack E Olsen of SvalTech presenting to the DAMA Phoenix Chapter, 2010

2 IDC Digital Universe Study, May 2010)

BPTrends Linkedin Discussion Group
We recently created a BPTrends Discussion Group on Linkedin to allow our members, readers and friends to freely exchange ideas on a wide variety of BPM related topics. We encourage you to initiate a new discussion on this publication or on other BPM related topics of interest to you, or to contribute to existing discussions. Go to Linkedin and join the BPTrends Discussion Group.