



Incremental CDI – deliver the business value your stakeholders demand

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Customer Data Integration or CDI is a key area of Master Data Management or MDM. Any successful business considers looking after the customer their top priority. Understanding who the customers are is the first step in that exercise. And the best way to truly understand your customer is through integrating all your customer data and getting a 360° view. This is essentially why Customer Data Integration is a key goal shared by many organizations. Furthermore, all organizations strive to derive a return on their investment, and the quicker the better. While these might all seem like disparate goals or statements, they really aren't. There is a way to achieve them all, incrementally. The business can integrate their customer data, understand who their customers are, and get returns on their investment and it doesn't have to be in that order but rather interspersed.

In case you are one of those overwhelmed by the sheer volume of jargon in the earlier sentence, let's break that down just a bit. MDM, as you've probably heard by now has become the latest lofty goal in the world of Business Intelligence and for good reasons. It is essentially an attempt to use a single version of the same master data in all parts of an organization. This is trying to reverse the not unusual situation where different areas of an organization use multiple versions of the same master data.

For instance, in a large financial institution, the credit card and banking product areas may have the same physical customer yet treat that customer as though they were two different people – one of them known to the credit card business and the other known to the banking business. This typically happens because the different groups in a business environment likely built their systems from the ground-up in a very specific manner to service their business model.

It is possible that there are other groups within the organization, that actually bring together this information from different product groups for reporting or analysis purposes, such as the Marketing function in the organization. However, each of the product groups often conducts their business in a disconnected manner. So, the same customer may receive two sets of communication from their services provider, one from the credit card group and the other from the banking group.

While this is a bit of a simplification, the reality is generally similar and often complicated by mergers and acquisitions that result in bringing together considerably diverse groups into a single business unit. Often, due to the sheer cost of bringing such groups together, such diverse groups continue to operate separately at least until one organization or the other can adopt the systems of the other or until such a point that a significant integration exercise is undertaken to get some of the different systems to communicate with one another.

So what would the panacea be? MDM purports to be the answer by creating a single collection of master data. The different areas in which MDM may be applied include products, services, lines of business, and customers, to name a few. The basic concept involves arriving at a consolidated unique database of products, customers etc. using the data in all related databases as inputs.

The related databases from where necessary data is sourced are often referred to as Source systems. Where the same product or customer exists in multiple source systems, the intent would be to create a single product or customer record in the 'master database' of products or customers respectively. Since repeated or duplicate customer, or product records often do exist, this presents a whole slew of matching, cleaning, and merging challenges.

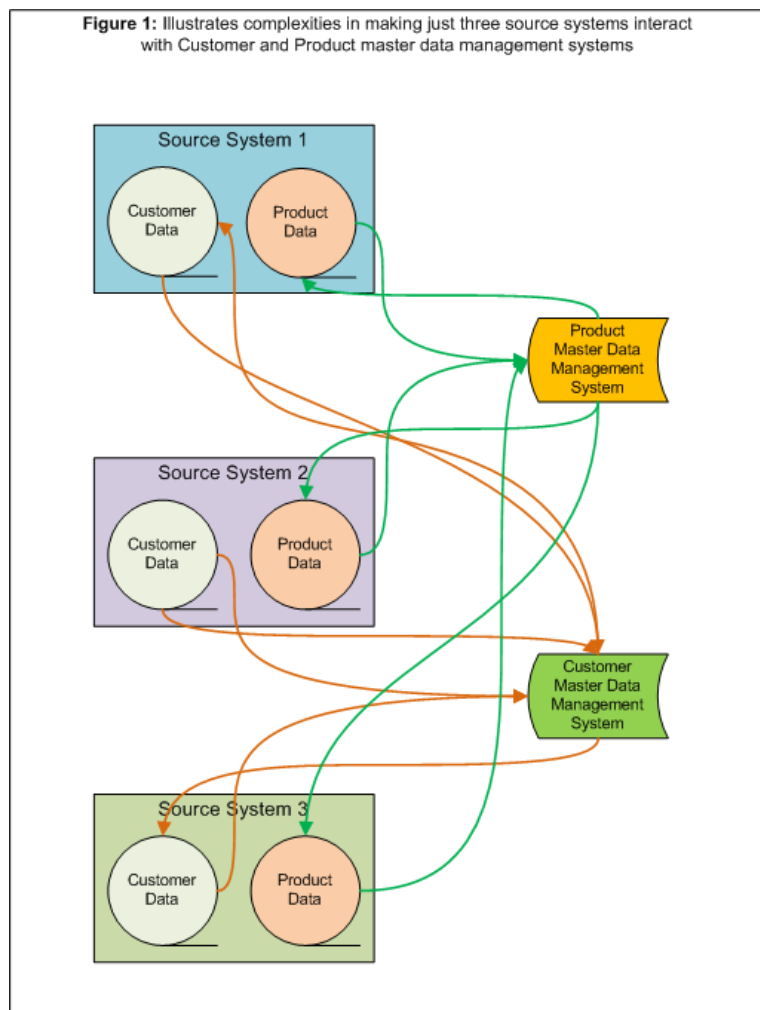
Let's consider a scenario where we are trying to build a Customer Master Data model. If the same customer exists in more than one source system, each with its own set of associated information, how do we tell which particular record is the more reliable record?

For any given record, is all the information on the record equally reliable or are certain elements more reliable than others? Does the information in the source system get updated continuously or periodically?

Figure 1 illustrates the number of flows of information when trying to work with just three source systems and two master data models, Customer and Product. As we all realize, an actual enterprise is significantly more complex.

Furthermore, once the Master record has been created, does the source system need to be altered in order to directly read and update the Master data or does the source system need to be altered to periodically send and receive a feed to/from the Master data model?

Or does the source system read from the Master data record but not update it directly? Or does the source system receive periodic feeds from the Master Data file but update the Master data directly as soon as the source system information is changed.

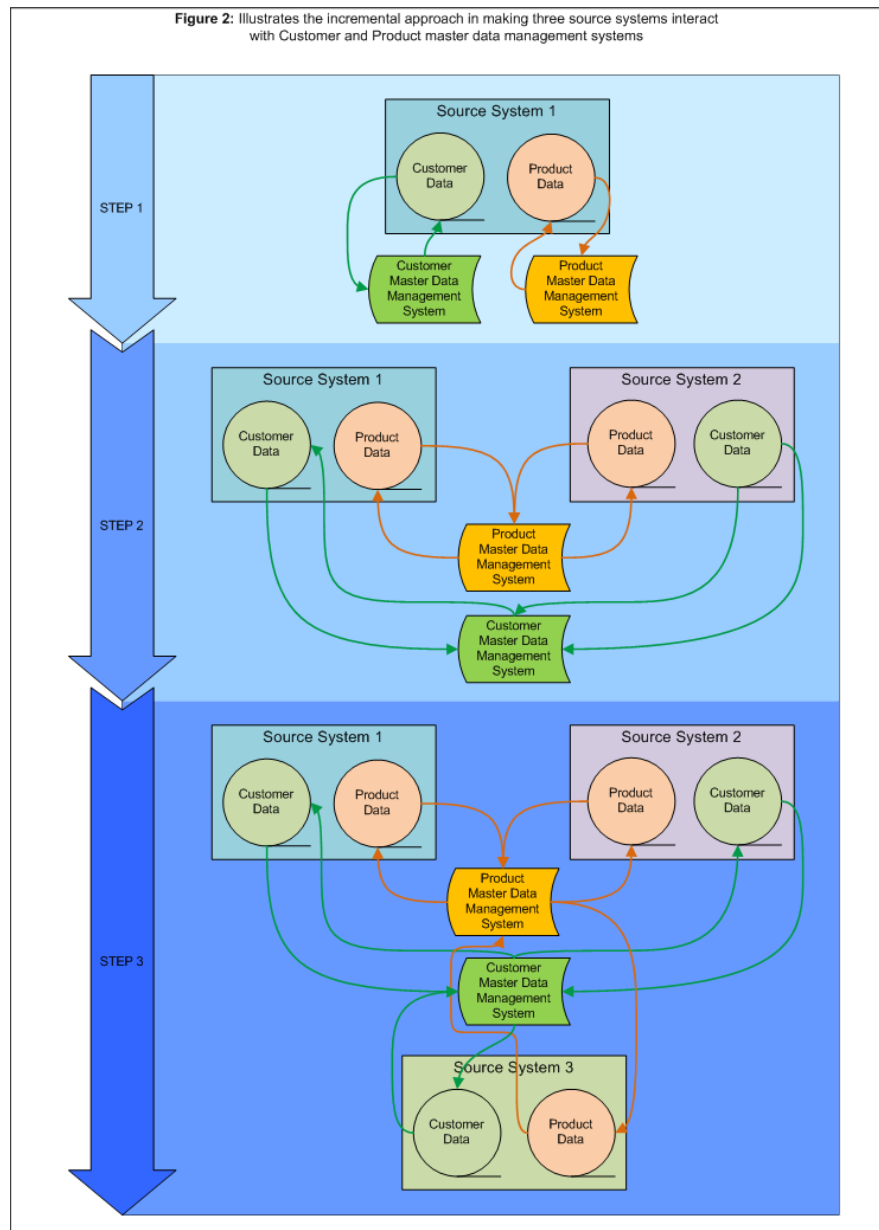


To further complicate this, what should the system do should the information pertaining to the same customer be updated in two or more source systems within seconds of one another?

Add to this the challenges around data ownership and organization structure and it becomes clear that creating a Master Data Model in any one area is complex. Yet more complex is the creation of multiple models, such as customer, product, and line of business. Consider also the fact that depending on the nature of organization, there may be many different source systems, For instance, in a banking organization that has insurance and credit card lines of business, it is likely that the banking line has sub-streams such as commercial and residential.

Similarly, the Insurance line of business has sub-streams such as home and auto. And finally the credit card line of business likely has sub-streams such as Personal and Corporate. Each of these sub-streams likely has its own associated systems that serve as source systems when creating a Master data model.

As you can well imagine, that are a lot of source systems to tackle. And organizations have, in the past, tackled the problem of MDM using a holistic perspective, trying to address all source systems at the same time or nearly the same time – one could refer to it even as an idealistic perspective. Yet it does not take a genius to see that the problem has too many variables.



So what is the better way to tackle the problem of MDM?

As the subject of this paper suggests we advocate an incremental approach. What that really means is that rather than attempt building the entire Master Data Management System in one go, you take a step-by-step approach, each step building on the earlier step but getting you closer to your goal of enterprise-wide coverage.

Thus, for instance, let's reconsider the case of the large enterprise with many lines of business that we considered earlier on in this paper. In that scenario, you might start with the Customer records in the Visa line of business. Even within the Visa line of business, you might start with the application or system that is considered the 'Book of Record' of customers.

You might consolidate that one application by bring Customer data into the MDM and then proceed to adding other applications or systems within the Visa line of business, one at a time. Each application or system may take one or more months of work to consolidate customer records into the Master Data Management System. However, when bringing across the customer records, other processes may also be put in place to only continuously keep the MDM updated but, ideally, for the peripheral source systems to use the MDM.

Again since you're doing this one application at a time, the impact is contained and the benefits realized by the business group fairly quickly, rather than having to wait for a prolonged integration initiative. Figure 2 illustrates the step-wise implementation process using the Incremental Approach with the same three source systems and two Master Data Management systems. Notice how the first step is considerably less complex and each subsequent step builds on the previous step.

Does this incremental approach not present some potential for rework? Absolutely! Anyone telling you otherwise is not being entirely truthful. However, the extent of rework is not significant when compared to the size of any MDM initiative. The rework can also be minimized to an almost insignificant level through good management practices and slightly flexible design.

Furthermore, there is a real opportunity to realize business benefits early on and continuing to demonstrate those benefits periodically. Also the increased efficiency from working within smaller teams should more than offset any rework. One thing that can greatly benefit any MDM initiative is acceptance of the fact that almost none of this is brand new and certain artifacts can be acquired to speed up the process.

There are all sorts of products out there from data models to frameworks to full-function working applications, a lot of which are standards based and enterprise-grade material. While there is often the temptation to go it alone, building everything from scratch, one needs to stay on the practical path and realize quick wins in order to retain business interest.

There are many ways to achieve that oft-elusive goal. For instance, one approach might involve acquiring an MDM or CDI application that is based on open standards and where the vendor gives you the full source code as well as generic or industry-specific data models.

Several vendors have frameworks, tools and applications that can give you a head start. In the context of this paper, the difference between a framework and a tool is that a framework acts as a foundation whereas a tool can be used to accomplish a specific intermediate goal. An application is probably the favorite concept of the author of this paper since it has the potential to give the greatest possible boost to your project.

For instance, the Denologix CDI application, 'out-of-the-box' provides good data models for master data management of customer, line of business and product data. These open models can be enhanced easily to render them industry-specific with or without help from Denologix. Furthermore, Denologix advocates the Incremental approach to building an MDM so if you stay within the application feature set, it is extremely easy to deliver real value to the business in a very short period of time – the vendor promises an almost unbelievable 30 days, and they do have a track record of delivering on this promise.

If you stayed within the initial feature set, the vendor would 'eat' any additional costs they incur, naturally depending on the nature of the engagement. That sounds like an incredible offer and it is since it affords a solid opportunity to demonstrate business value and therefore buy time for integrating data from other enterprise systems. As each new source system is integrated into the MDM and becomes live, the business will clearly see the benefits within the sphere of their business.

In summation, MDM projects are complex initiatives. Delivering results on such initiatives demands that the problem be broken down into manageable chunks. An incremental approach does just that and allows you to deliver return on investment for each business area while you gradually build the MDM and integrate the multiple systems across the organization into the MDM.