The Information Difference

Master Data Management Projects in Practice

An Information Difference Research Study

December 2009

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EXECUTIVE SUMMARY

Master Data Management (MDM) has received growing attention recently as an essential component of information management alongside data governance and data quality. Alongside this growth in interest in master data management, the provision of services for the implementation of master data management is featuring with increasing prominence in the portfolio of services offered by many Systems Integrators (SIs).

While many SIs currently claim or suggest they have extensive implementation expertise in master data management, there is little concrete information available regarding the use of systems integrators by end-user organizations for implementing master data management programs in business. We have therefore conducted a survey of both end-user organizations and systems integrators aimed at gaining deeper insight into the levels of expertise, experience and usage of systems integrators specifically related to undertaking MDM implementations.

Some 131 respondents completed the survey from all around the world, the majority from North America (47%) and Europe (30%). A high proportion (42%) of the respondents came from companies having annual revenues greater than US $ 1 billion. The respondents represented a wide spectrum of industries.

The key findings from the survey are summarized below:

- Those organizations that have undertaken implementations indicated that they manage a median of 3 million master data records (the maximum reported was 990 million), have taken 6 months to implement and involved an 8-person project team. The membership of the team was 25% business, 40% own IT and 35% SI staff.
- “Customer” and “Product” still remain the main data domains for MDM implementations, although the wide spread of domains reported indicate that end-user organizations are extending the range and focus of their master data management.
- Despite the claims of the SIs in terms of their ability to implement MDM, most have not undertaken very many projects—the median they reported was nine projects with the median value for 2009 being five.
- Around one-third of end-user organizations have undertaken more than two MDM implementations, which suggests that MDM is now coming of age and moving beyond the pilot stage.
- The majority of implementations, as reported by the SIs, used the Consolidation model (38%) of MDM. However, they reported that roughly one–third of implementations focused on the Transaction model.
- Those who had already implemented reported a median maintenance cost as 20% of the initial project costs.
- Data quality is a key component of any MDM implementation and the time and effort (cost) required to achieve data of acceptable quality is frequently severely underestimated. The median reported was 30% of the overall initial project costs.
- The median costs of software expressed as a percentage of the initial project costs was 25%; in other words, a company spending $X on an MDM software license can expect to spend 4X in total.
- There was a broad preference for traditional proprietary MDM, data quality and data integration solutions. However, there appeared to be a clear willingness to explore further open source options alongside a significant group (18%) already deploying open source solutions in business critical areas

- 60% of those who have already implemented had prepared a business case for their MDM project; of those planning to implement MDM, two-thirds planned to produce a business case for this. This means that at least a third of MDM projects have no business case.
- Both those already implementing (80%) and those planning to implement recognize the pivotal importance of establishing data governance.
- 40% of those already implementing MDM did a post implementation review (PIR) and a further 40% intend to do so upon completion.
- SIs and end-user organizations alike identify poor data quality as a key roadblock implementing MDM initiatives.
- Among the main recommendations from the respondents for successful delivery of MDM implementations were: (a) *A successful MDM project is a business-driven project,* (b) *Up-front planning*, and (c) *Do not use a waterfall methodology*.
- About one-fifth of end-user organizations have opted for "custom build".
- Most organizations chose competitive tender as the route to selecting an SI partner.
- Most organizations (57%) that had implemented MDM as well as those planning implementations chose to use their own methodologies.
- 67% were at least satisfied with the performance of their chosen SI against 33% who were unhappy. 59% considered that their SI had "adequate" expertise and experience with MDM while 41% felt them to be "not very experienced". Given that SIs are supposed to be providing expertise in the subject, this is somewhat disappointing.

BACKGROUND TO THE SURVEY

Master Data Management (MDM) has received growing attention in recent years as an essential component of information management alongside data governance and data quality. More and more, organizations are turning to master data management as a key enabler in improving the quality, timeliness and reliability of business intelligence with the ultimate goal of improving business performance. Increasing regulatory requirements and the recent financial crisis have ensured that master data management is increasingly finding its way onto the business agenda.

Against the backdrop of this growth in interest in master data management, the provision of services for the implementation of master data management is featuring with growing prominence in the portfolio of services offered by many Systems Integrators (SIs). There is some indication that organizations are turning to these SIs to help them architect and implement master data management initiatives.

While many SIs currently claim or suggest they have extensive implementation expertise in master data management, there is little concrete information available regarding the use of systems integrators by end-user organizations for implementing master data management programs in business. We believe it important for end-user organizations, systems integrators and MDM software vendors to understand the current position and the degree of satisfaction, confidence and success which systems integrators deliver.

We have therefore conducted a survey of both end-user organizations and systems integrators aimed at gaining deeper insight into the levels of expertise, experience and usage of systems integrators specifically related to undertaking MDM implementations.

We wanted especially to gain deeper insight into the following questions:

- To what extent are SIs being used to assist organizations in implementing MDM initiatives?
- Which vendor technologies are they implementing?
- Which MDM styles and architectures are being (or plan to be) implemented?
- What is the level of satisfaction with SIs?
- What is the view of their actual level of experience and expertise?
- What is the median length of the MDM implementations?
- What data domains are covered?
- Do SIs offer added value in the form of standard industry models?
- For those organizations that have not yet implemented MDM, do they plan to use an SI to assist in the future?
- What benefits have SIs found when their clients have implemented MDM?
- What roadblocks have they identified to successful MDM implementation?

THE APPROACH

The survey was undertaken over the Internet in October and November 2009 and the participants were selected by e-mail invitations directly from The Information Difference and also from media sponsors BeyeNetwork, Information Management (formerly DM Review), ObisOmni and TechTarget. Additionally, participation was also possible from a link on The Information Difference website. The survey was targeted mainly at the senior business level worldwide substantially from large organizations (with revenues greater than US $ 1 billion annually).

The participants were provided with the following information prior to completing the survey:

"As part of our research into the master data management (MDM) market we would be grateful if you could tell us a little about your experiences with using (or planning to use) a systems integrator (SI) with master data management software and implementations. As you will see, the survey is short and should take just a few minutes to complete.

There is surprisingly little concrete information available regarding the use of systems integrators in implementing MDM programs in businesses. At The Information Difference we believe it important to both enterprises and vendors to understand the current position and the degree of satisfaction, confidence and success which systems integrators deliver. This is the purpose of this survey.

All information provided will be used in aggregate form only and will be kept strictly confidential. The survey has only 20 questions on the topic and should not take more than 10 minutes to complete. In return for a fully completed survey, you will receive a free summary of the analysis of the survey results."

The full questionnaire is appended in the section headed Questionnaire as Survey 1: End-User Survey.

In a further attempt to gain insight into the both factual and anecdotal experience of systems integrators with implementation of MDM, we invited some 55 systems integrators to participate in a survey specifically targeted to their experience and expertise. The full survey is provided as Survey 2: Systems Integrators Survey under the main heading Questionnaire. All these SIs had been identified as having an MDM practice.

Finally, to glean more detailed insight into the experience of systems integrators with their client MDM implementations, we undertook a number of in-depth interviews. Interviews lasted approximately one hour and these were written up and are included (with the permission of the systems integrators). They proved a valuable source of input for the conclusions and recommendations.

ABOUT THE RESPONDENTS

Altogether, 131 respondents completed the survey worldwide. 47% came from North America (including Canada), 30% from Europe and the remainder from the rest of the world.

A substantial number of the respondents were drawn from larger organizations having annual revenues greater than US $ 1 billion (42%). A detailed breakdown is shown in Figure 1.

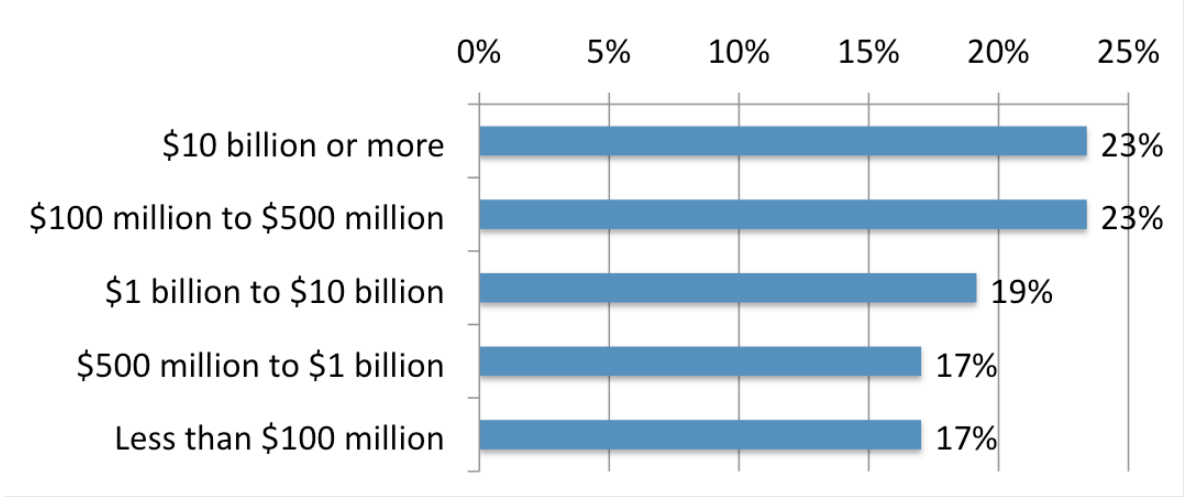

Figure 1 - Respondents by Company Revenue

The range of job functions from which the respondents were drawn was broad, with some 32% from a business background and 68% from an IT background. 36% had job titles at the VP, Director or General Manager level and 34% had either the title of Enterprise Architect or similar. The detailed results are presented in Figure 2.

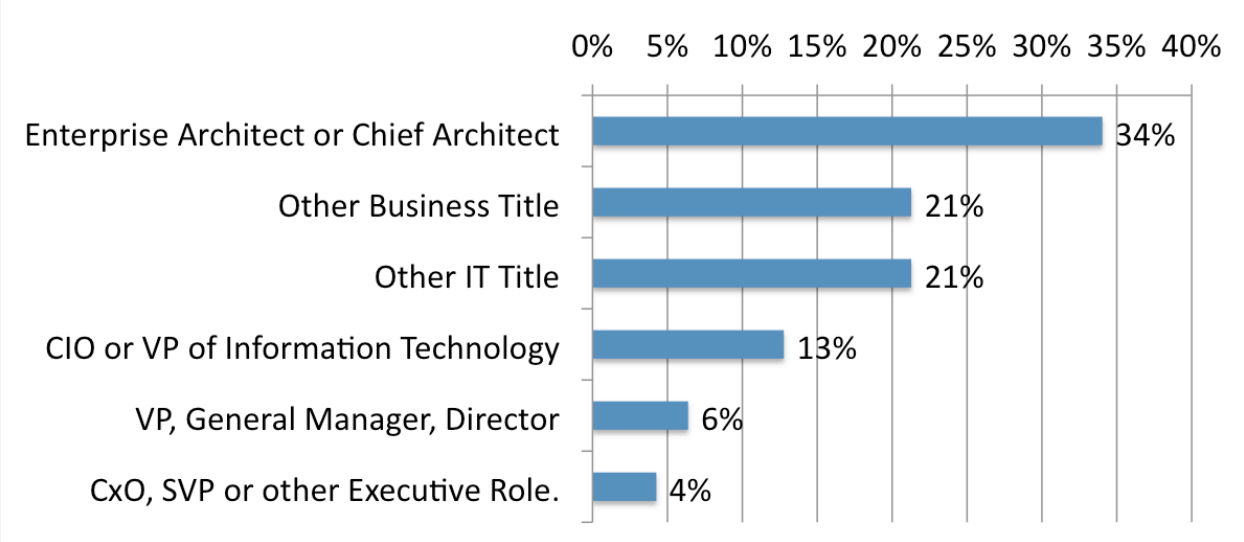

Figure 2 - Respondents by Job Function

A wide spectrum of industries was represented with the largest participation (21%) drawn from the banking and financial services sector. Around 15% came from the manufacturing sector, which underlines the current high level of interest in MDM in the manufacturing industry.

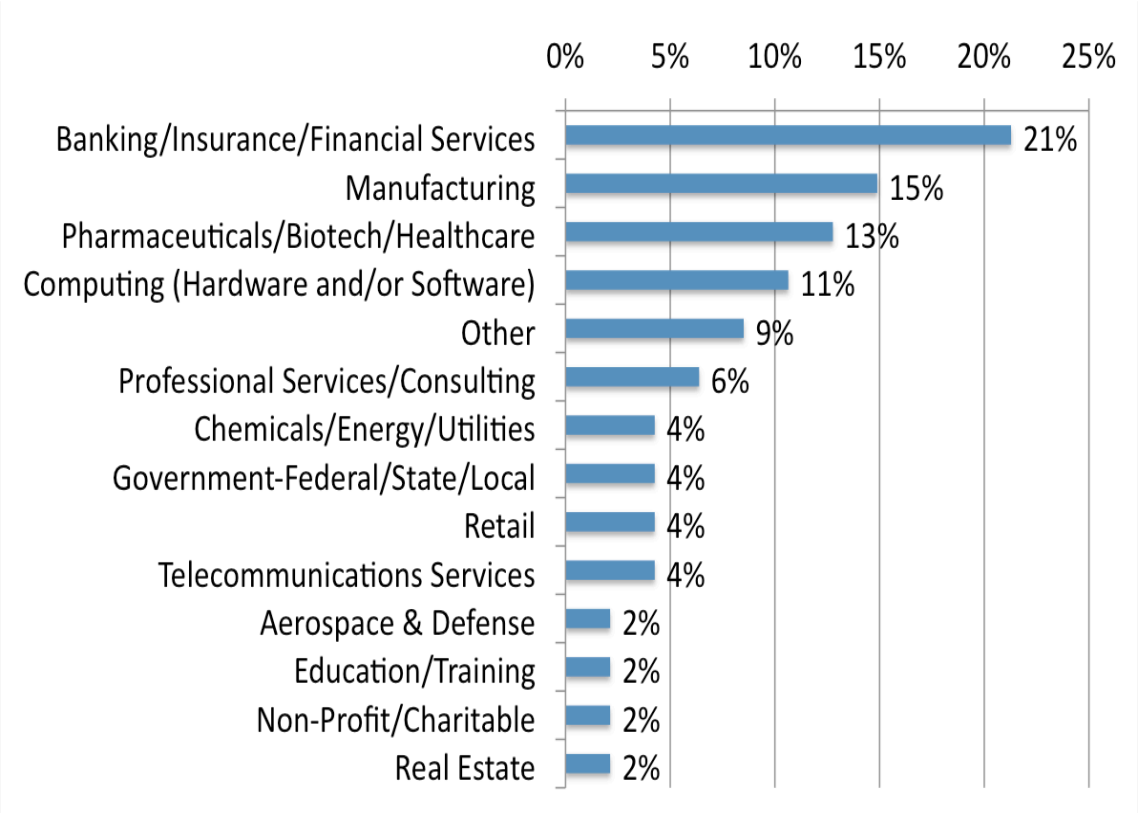

Figure 3 - Respondents by Industry Sector

The results were analyzed to ascertain whether there were any statistically significant differences discernable when comparing the results split by region (North America and Europe) with the overall results. No such differences were found, the patterns for North America being close to those for Europe.

THE END-USER SURVEY

We were first of all eager to understand who was using or planning to use a systems integrator to assist them with their MDM implementation. Accordingly, we asked respondents [Q1, see Survey 1: End-User Survey] to tell us if they were undertaking (or had completed), had used or planned to use an SI to help them implement MDM. The full results are shown in Figure 4.

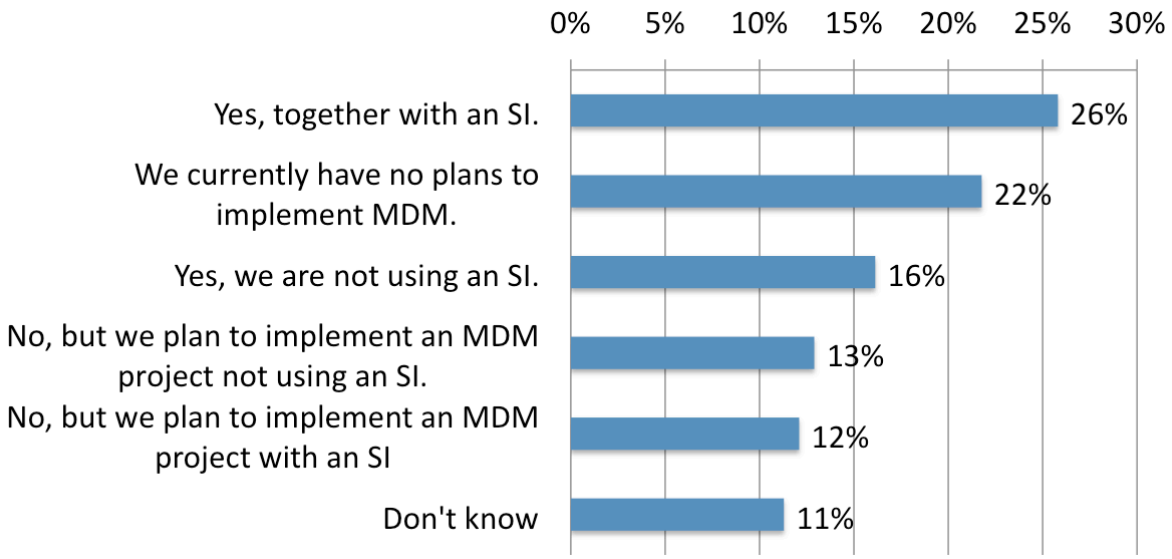

Figure 4 - Involvement of SI in MDM Implementation

42% of respondents' organizations were already implementing or had implemented MDM. A further 26% told us they planned to implement. More than a fifth (22%) currently had no plans to implement MDM and some 10% didn't know at this juncture. Interestingly, 38% were either using or planned to use an SI to help them with implementation, compared to 29% who were implementing or planned to implement not using an SI. Given the complexity of implementing even a smaller MDM program, it is surprising that almost a third already decided to or in future plan to go it alone without engaging an SI. This is underpinned by the observation from a least one respondent that "we felt that there was no SI in the UK with the required experience". This does however suggest that SIs with relevant experience and a good track record may well be missing out on opportunities and failing to market effectively their expertise. Indeed, our analysis of the SI market leads us to conclude that SIs, in contrast to software vendors, tend to make scant use of marketing.

To facilitate analysis of the findings from the survey, we have split the results into two major sections addressing those organizations that have already implemented or are currently implementing MDM and those who plan to do so.

ALREADY IMPLEMENTING MDM

Responses have been grouped under three broad headings: **MDM Implementations** – focusing on the size, scope and costs of the MDM implementations; **Systems Integrators** – addressing the selection process for the SI, technologies deployed and end users evaluation; and **Benefits and Barriers** – describing the benefits, road blocks and factors leading to successful implementation.

MDM Implementations

First, we wanted to understand the nature of the organizations' MDM implementations in terms of their size (number of projects, size of the team, number of master records, duration of the implementation, geographies covered, etc.) together with the costs.

Organizations reported [Q4] that they had undertaken between 1 and 25 MDM implementations with a median of 2. Most organizations (43%) had undertaken only a single implementation of MDM,

although some 25% reported they had undertaken two. 11% told us that they had done three implementations and two noted that they had done 10. Encouragingly, around one-third have done more than two implementations, which clearly indicates that MDM has moved beyond the pilot stage to serious business projects.

When asked about the geographies covered [Q5], respondents reported a wide range of regions, with the main focus, as might be expected, on North America and Europe. The results are shown in Figure 5. Encouragingly, Asia figures third in the ranking showing that some businesses are taking a global view of master data management.

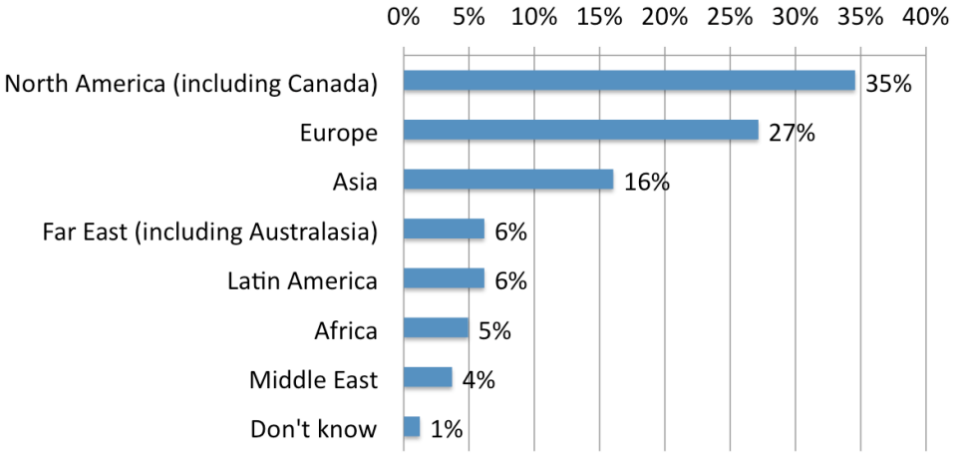

Figure 5 - Geographies for MDM Implementations

How many people are required on average for a project team to implement MDM? We asked respondents to tell us about the size of their team [Q9]. The numbers ranged from 2 to 100 with a median of 8. We then asked about the composition of the implementation team [Q10]. What proportion was drawn from the business compared to their internal IT department or hired in SI consultants? Encouragingly, respondents told us that generally a quarter of the team came directly from the business, 40% from the internal/own IT department and 35% were provided by the SI. Possibly a slightly higher representation from the business side would be desirable, but in any event it is very encouraging to see that there is significant business input—MDM implementations are doomed to fail without this!

The time required to complete MDM implementations [Q11] varied in the range of three months to three years. Unsurprisingly, given the level of complexity of MDM implementations they can take some time. The overall results are shown in Figure 6.

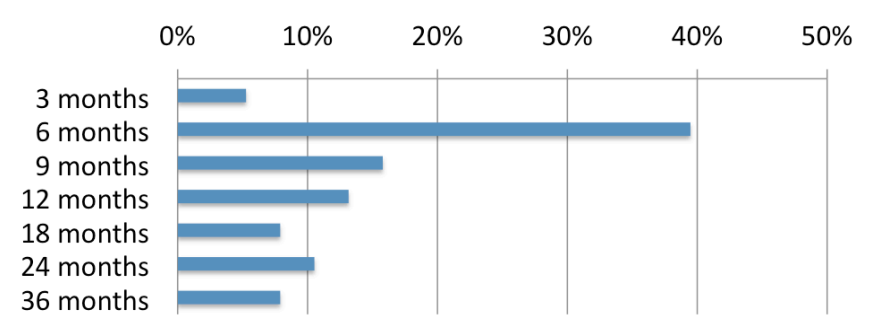

Figure 6 - Time to Complete MDM Implementation

Most respondents reported that their implementation had taken 6 months. In our experience, this suggests that the majority of implementations were relatively small. This is supported by the

responses to our question about the total number of records managed [Q17]. Respondents reported numbers of records managed by their MDM systems ranging from 1 to 990 million records with a median of 3 million. Around one-third had MDM implementations managing 1 million records.

We were interested to understand the scope in terms of master data domains covered by their MDM implementations [Q16]. The results are summarized in Figure 7. Note that it was possible to select more than one option here so the figures are indicative of the ranking.

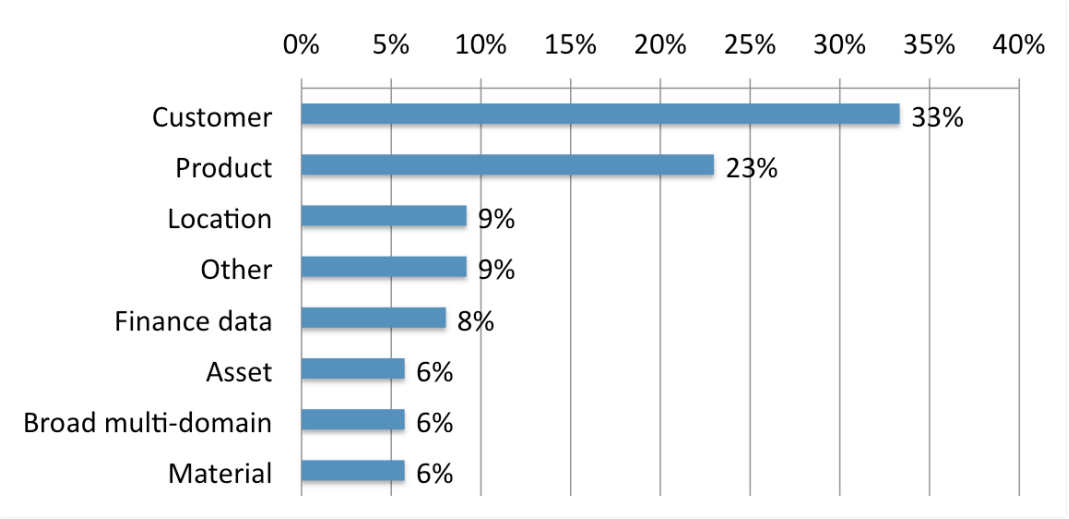

Figure 7 - Scope of Master Data Domains

Interestingly, the focus would still appear to be the traditional domains “Customer” and “Product”; however, it is encouraging to note that there is a clear spread, indicating that organizations are looking beyond these two domains to managing a wider field of master data. This is supported by results from an earlier survey we conducted where 81% clearly felt that data quality is not all about name and address.

Aside from the once-off project costs, it is important for MDM implementations to allocate budget for maintenance on an annual basis. We asked those organizations with live implementations to tell us what they found to be the level of maintenance expressed as a percentage of the original project cost [Q18]. The results reported varied from 5 to 40% with a median of 20%. Thus, a useful guide for those about to embark on an MDM implementation is to make provisions for an ongoing maintenance cost of around one-fifth to one-quarter of the estimated project costs.

Key to a successful MDM implementation is to invest in improving data quality. We asked respondents what proportion (%) of the total project cost had been devoted to improving data quality [Q19]. The values reported varied from 3 to 75% of the initial project costs with a median of 30%. Based on this, it is clear that dealing with data quality requires significant investment and this needs to be taken into account when budgeting for your MDM implementation.

We were interested to understand what proportion of the total project cost was spent on acquiring the necessary software. We asked end-user organizations what they had found to be the costs of software expressed as a percentage of the total project costs [Q22]. The results they reported varied over a wide range—from 5 to 80% with a median of 25%. This falls roughly in line with the usual “rule of thumb” in project budget estimation that the cost of services is around three to four times the cost of software. The survey result is even higher than the rule of thumb typically used by the SIs (three times the cost of software).

Next, we wanted to understand more about the technology and software-licensing model used in the MDM implementation [Q8]. The results (corrected for multiple selection) are shown in Figure 8.

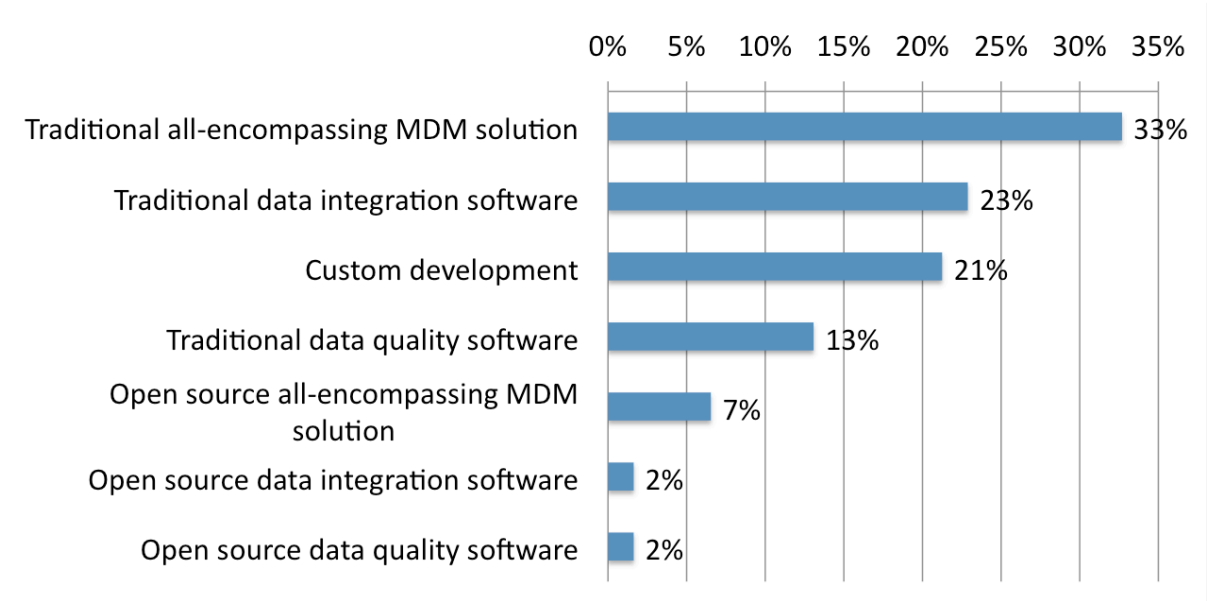

Figure 8 - Technology and Licensing Model

There is a clear choice for traditional MDM, data integration and data quality software over open source alternatives. What is surprising is the relatively high rank accorded to "Custom development" suggesting that organizations cannot find vendor technologies that encompass all their specific requirements. Possibly this represent an opportunity, especially for the open source vendors, to develop tools which are more easily configured to meet end-user requirements without the need for low-level coding.

Systems Integrators

First, we wanted to understand how end-user organizations had set about selecting an SI [Q3]. The results are summarized in Figure 9.

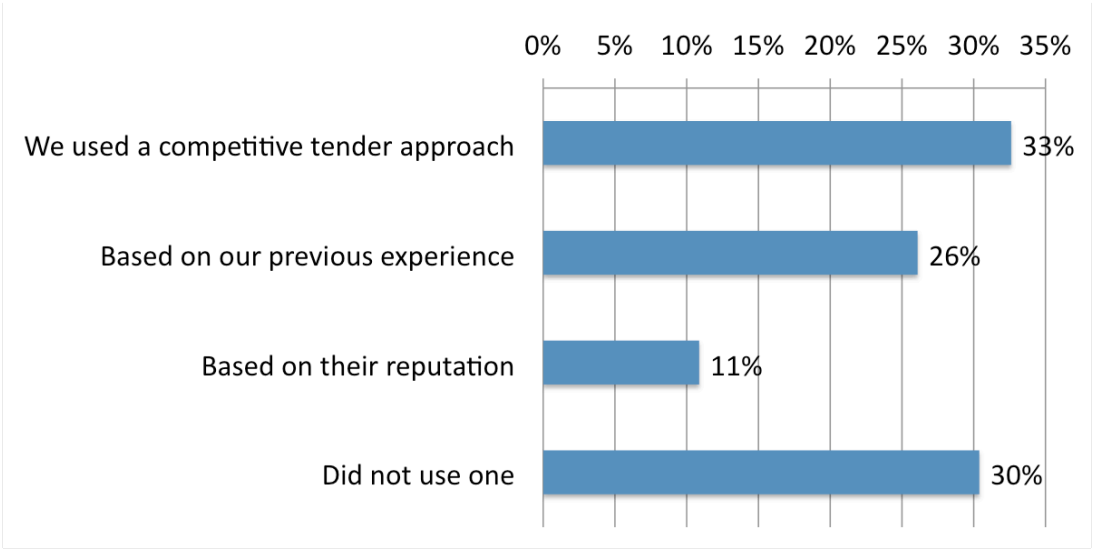

Figure 9 - How did you select your SI?

The respondents once again indicated that roughly a third did not use an SI. The most popular approach was to go out to competitive tender. Interestingly, only 11% based their choice on the reputation of the SI. This suggests that SIs probably should be doing more to market their experience and expertise.

One way in which SIs can bring added value to an MDM implementation is by being able to use a "tried and tested" methodology for implementation which is specific to MDM initiatives. We asked respondents whether they used a methodology provided by their SI [Q2]. The results are presented in Figure 10.

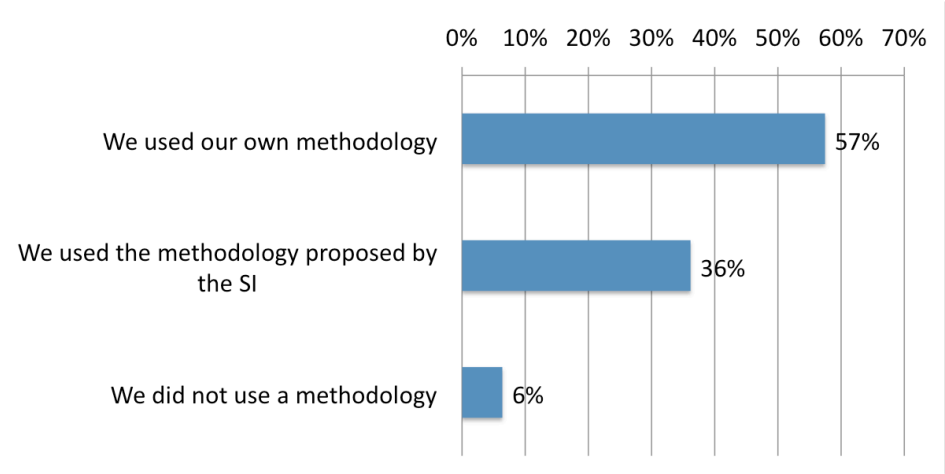

Figure 10 - Methodology Used

Surprisingly, only a third reported that they had used the methodology provided by their chosen SI, with 57% opting to use their own methodology. This is clearly an area where SIs could bring added value for potential end-user organizations.

We asked organizations to tell us which SIs they had used (they had the option to select more than one if they had done several MDM implementations) [Q6]. The results are summarized in Figure 11 for the "top 5" ranked highest and it is unsurprising that "none" is given a high ranking considering that fully one-third did not make use of an SI.

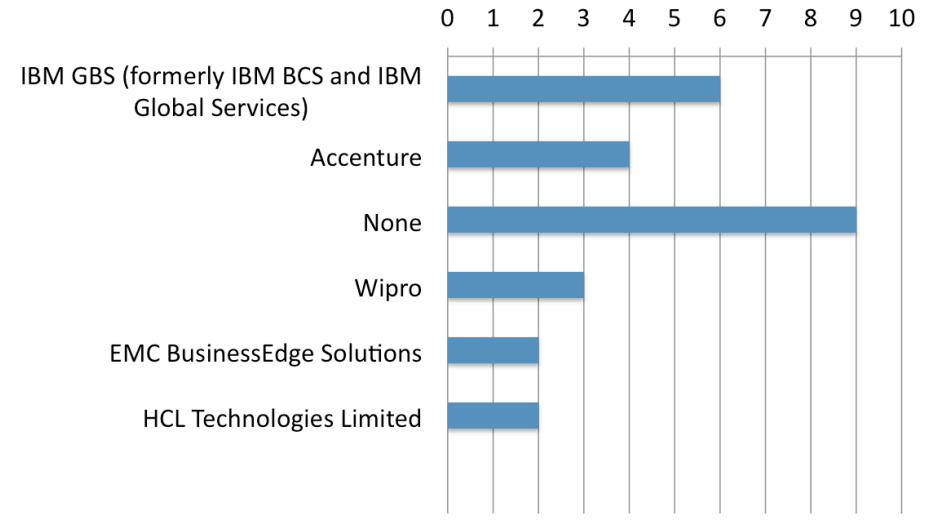

Figure 11 - Which SI did you use?

Most of the remainder were afforded about equal ranking based on broadly similar citation levels. It is not really surprising that two global players feature high in the ranking: IBM GBS and Accenture. What *is* perhaps surprising is that other major players (such as CSC, Capgemini, Deloitte, Atos Origin, etc.) did not make it into the top five. Careful analysis of the individual results leads us to wonder whether the claims of experience with MDM implementation made by a number of those SIs contacted are somewhat exaggerated.

This, in turn, led us inevitably to explore the level of satisfaction with the SIs among the end-user organizations alongside their opinion as to the levels of competency, experience and expertise they found from their chosen SIs [Q14 and 15].

Their responses to the question "How happy were you with your SI?" yielded the following results set out in Figure 12.

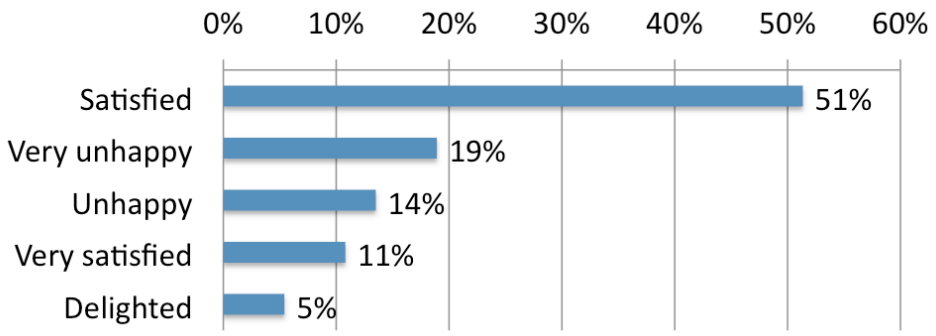

Figure 12 - How happy were you with your SI?

Half the respondents expressed themselves broadly satisfied with the performance of their SI while only 16% were Very satisfied or better. Disturbingly, fully a third were quite dissatisfied and unhappy. This clearly suggests considerable room for improvement on the part of many SIs.

This conclusion is clearly linked to the respondents' answers to the question relating to their assessment of the experience of the SI. The responses are summarized in Figure 13.

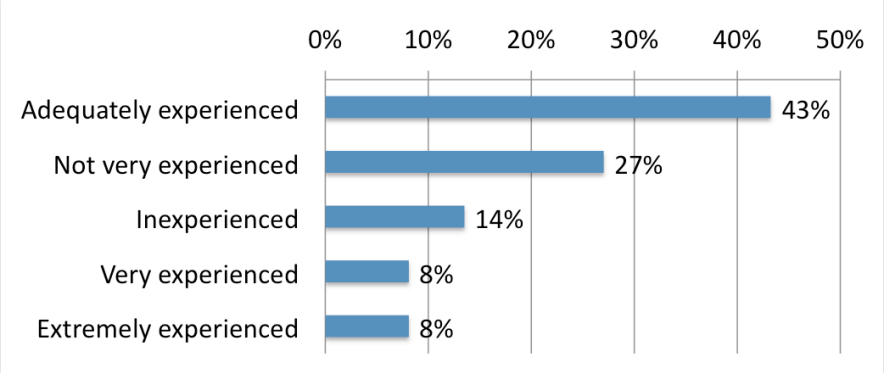

Figure 13 - Assessment of level of experience of SI

59% considered their chosen SI to be adequately experienced or better, while 41% found them to be not very experienced or worse. This is a serious concern for end-user organizations that in general pay large sums for the assistance provided by SIs. This result further fuels the concern that there are many SIs out there who claim experience in MDM implementation which in practice they do not have. Only 16% were considered to be very experienced, which is worryingly low.

Which vendor technologies for MDM are being implemented by end-user organizations [Q7] with or without the support of the SIs? We asked respondents to tell us about their implementations and chosen technologies. The results are summarized in Figure 14. The scale is based on a ranking of the number of citations since respondents were asked to select more than one technology if they had implemented a number of MDM programs (the scale represents relative ranking).

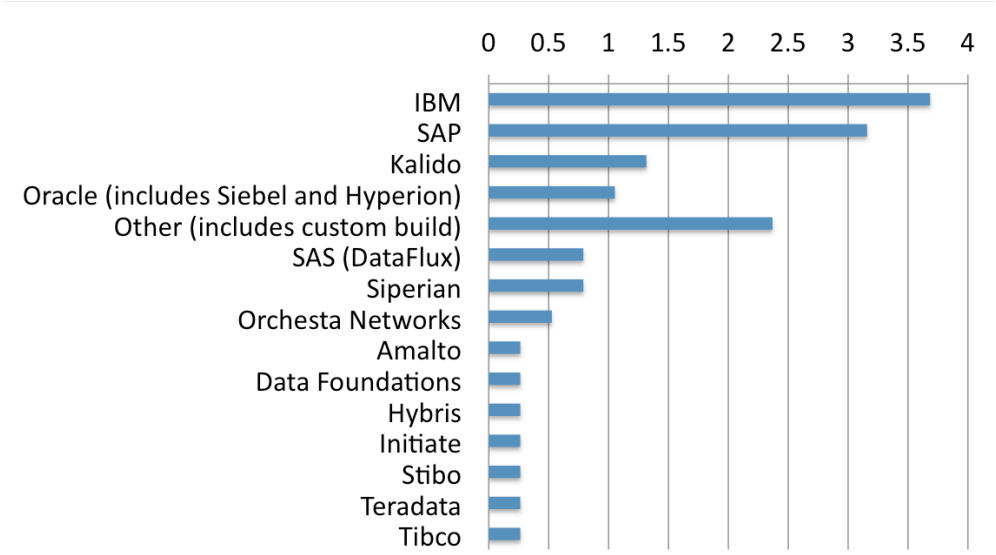

Figure 14 - Ranking of MDM Technologies Implemented

It is unsurprising that IBM and SAP MDM solutions dominate given the size of the two companies and their installed base. In general, there is a wide spread of technologies being implemented. What is perhaps surprising is the high ranking afforded to the category "Other" which includes mostly "custom build" solutions. Given the wide range of technologies currently available, it is interesting that many organizations apparently cannot find adequate solutions among them. Clearly this indicates gaps and missed opportunities for the technology vendors.

Benefits and Barriers

We asked respondents to share with us what, in their organizations, were the main benefits which they had experienced resulting from their MDM implementations [Q20]. Their responses included:

- Better quality of data, higher level of understanding of the process impact of bad data.
- Standardization of data context, content, standard values and business rules – trusted data leveraged across a disparate application landscape – consolidated business process.
- Huge improvement in quality (accuracy, analysis capabilities) of reporting. Much easier to automate processes and integrate systems, because all systems use the same data and have the same data definitions. Big reduction in system maintenance workload, it's no longer necessary to maintain users/customers/accounts etc., in a number of different systems, as all systems are integrated now and master data is synchronized automatically.
- Single view of customer.
- Single source of truth for customer and product data gives confidence and trustworthiness to data when used by consuming systems.
- Improved coordination of effort and investment in each customer account.

- Product data is now owned and managed by Data Stewards, and not by IT Stewards. MDM helps promote proper Data Governance policies and master data management and sign-off (The Business Rule Book) by the Business Stewards.
- Better understanding of who our customers are and how many customers we have.
- Reduce the number of enterprise applications needed.
- Faster execution of subsequent projects, improved ease of data use.
- Single (source of) customer with a consistent management of the customer data life-cycle.
- Reduction of 3rd party processing costs and single place for all new applications to get data. Also, this helped kick start a much needed governance project.
- We have been able to consolidate our vendor master data from over 10 ERP systems into a single system, enrich this data with data from Dun & Bradstreet, and feed the enriched data to our data warehouse to support spend analytics.
- Single Customer Hub Single multi-entity hub (excluding customer). Vast efficiencies in master data management costs enabling specific business processes or business units to perform maintenance of dimensions for transactional or analytical purposes.

We also asked respondents to share what they believed to have been the single biggest barrier or problem that they faced during their MDM initiative [Q12]. The main and most frequently recurring problems cited included:

- Conversion of data from source system to target system and cleaning of the data.
- Good integration with application team and understanding from their side on why and how we do this.
- Information indifference.
- Business rules, validation logic and detailed understanding of business work process (work flow).
- Being on the edge regarding technologies implemented needs a lot of commitment with the software vendor.
- Both business and technical knowledge are required for implementing MDM; few people have both so there's always a learning curve involved.
- Quality of the data.
- Lack of qualified MDM Product personnel.
- Identifying the key information upon which to base the customer record.
- Identify an architecture adapted to a small organization (lightweight). Just starting the project.
- Integration with front-end transactional systems and ERP (SAP ECC).
- Governance.
- Politics.
- Consistency among various teams.
- Slow response from people.
- Data quality.
- Unclear business requirement.
- Shortage of relevant skill sets.
- Business glossary of terms and metadata.
- Clear direction.
- Not being able to convince everyone that MDM projects are not ERP and standard approach projects. Lack of commitment and involvement by business associates. While the business (procurement) seemed to buy into, and be committed to, using MDM to address issues with vendor master data, they did not stay the course. Business resources were moved to other projects and not promptly replaced. Over time, the project became more and more of an IT

project with IT forced to explain why we needed an MDM solution and why we were even doing the project.
- Customizing “out of the box” MDM to our environment.
- Data quality and how to improve it.
- Data harmonization.

Respondents were also asked to share with us their one tip for ensuring success in an MDM project [Q13]. The key suggestions received included:

- The requirements and scope of the project should be well defined. Continuously changing scope gives a lot of problems.
- Involve the application group from the start because all changes around MDM will require process changes. Additionally, make sure to agree on who is responsible for what
- Focus on understanding business rules, validation logic across data life cycle (create through archive). The technology is the least of the issues to address.
- It is important that Business and IT Top management are both committed to the project. Strong communication to find sponsors/first clients.
- For each type of master data, determine the best (most motivated, most incentivized) business owner. Everything else follows from that.
- Proper MDM design and data quality.
- Develop a clear roadmap of incremental steps.
- Create an MDM Center of Excellence involving IT and Business owners of data, and users of data.
- Make sure you have identified all of the stakeholders to the MDM area you are impacting.
- [We are] just starting the project. Start from "Reference Data" modeling (business point of view).
- Make sure the MDM project is NOT owned and/or managed by the IT department (or IT Steward). Must be owned and managed by the Data Steward (Enterprise Data Mgmt. Dept.), according to typical Data Governance flow.
- Business involvement.
- Data quality.
- Use a single canonical model and make each project relate back to that single model even if they choose different models for their own needs.
- Goal-oriented project work.
- Data synchronization is very important.
- Keep it simple.
- Engage a very experienced architect that has done it before.
- Address solutions to the glossary of business terms and ontology early in the MDM project or even before it has begun.
- Up-front planning.
- Interview the SI. Do not go for the lowest; you'll get what you pay for. Do not use a waterfall project methodology. It is too complex to be able to determine costs and all requirements so early in the process.
- A successful MDM project is a business-driven project. It cannot be seen as an IT project.
- Get to understand your business processes and people governance upfront; don’t focus on the technology alone!
- Use iterative design and ensure that you are clearly addressing realistic and valuable business processes.

Analysis of both the barriers and tips reported by respondents revealed five main conclusions:

- It is essential to ensure the MDM implementation is business-led, not IT-led.

- Getting clear and unequivocal sponsorship at the senior business level in the organization (CxO level) is essential for success. Don't start without it. Ensure that the senior sponsors really understand what their commitment means.
- Ensure establishing data governance parallels the MDM implementation.
- Data quality is key and will take more time and effort than you think.
- Do not use a waterfall methodology.

From the feedback provided by the respondents, these are the most frequently reiterated themes.

Key to ensuring acceptance of your MDM initiative and to understanding potential benefits is to develop a quantified business case. Development of an effective business case was often cited as a "must have" for successful MDM implementation. We asked organizations to tell us whether they had produced a business case including quantified return on investment [Q21]. The results are shown as Figure 15.

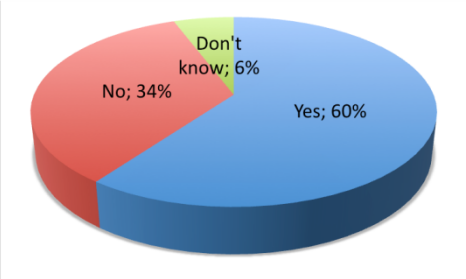

Figure 15 - Did you produce a Business Case?

Almost two–thirds of respondents told us that they had produced a quantified (including return on investment, e.g., net present value) business case. Previous surveys on the topic of implementation of MDM have resulted in much lower figures, so it is encouraging that so many organizations have taken this important first step. Clearly, you cannot assess the benefits (especially in qualitative terms) of your MDM implementation without first having a business case. Even so, fully a third failed to produce a business case.

It is becoming generally accepted that establishment of a data governance program goes hand in hand with implementation of MDM. We were interested to understand how far organizations had taken steps to set up data governance alongside or as part of their MDM implementation [Q23]. Experience shows that MDM implementations often fail due to the lack of a clear data governance initiative. The results are shown in Figure 16.

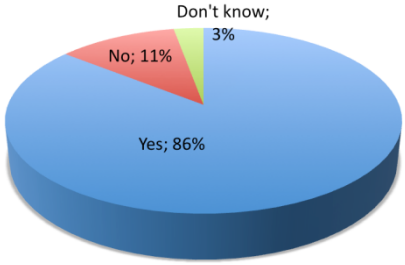

Figure 16 - Did you establish Data Governance?

It is very encouraging to note that 86% of those currently implementing MDM have an established data governance program. Clearly, the messages about the importance of data governance (and data quality) to a successful MDM implementation are being heeded.

A final area of interest to us was to understand whether organizations had undertaken a post-implementation review [Q24] of their MDM implementations in order to better understand the benefits and to learn from the roadblocks and pitfalls encountered. The outcome is presented in Figure 17.

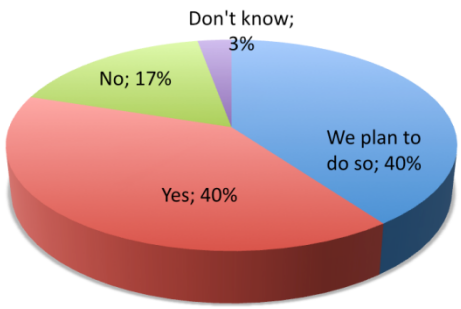

Figure 17 - Did you do a post-implementation review?

Encouragingly, 40% told us that they have already done a post-implementation review and a further 40% plan to do so. This is indeed encouraging given that an Aberdeen Group study some years ago showed that in general only 5% of organizations actually did one (this study was, however, not specific to MDM).

PLANNING TO IMPLEMENT MDM

We then turned our attention to those who have not yet implemented an MDM initiative but plan to do so in the near future.

Planned MDM Implementations

We asked those planning MDM implementations about the size and scope of their planned MDM systems. We firstly wanted to understand the scope in terms of master data domains [Q29]. The results are shown in Figure 18.

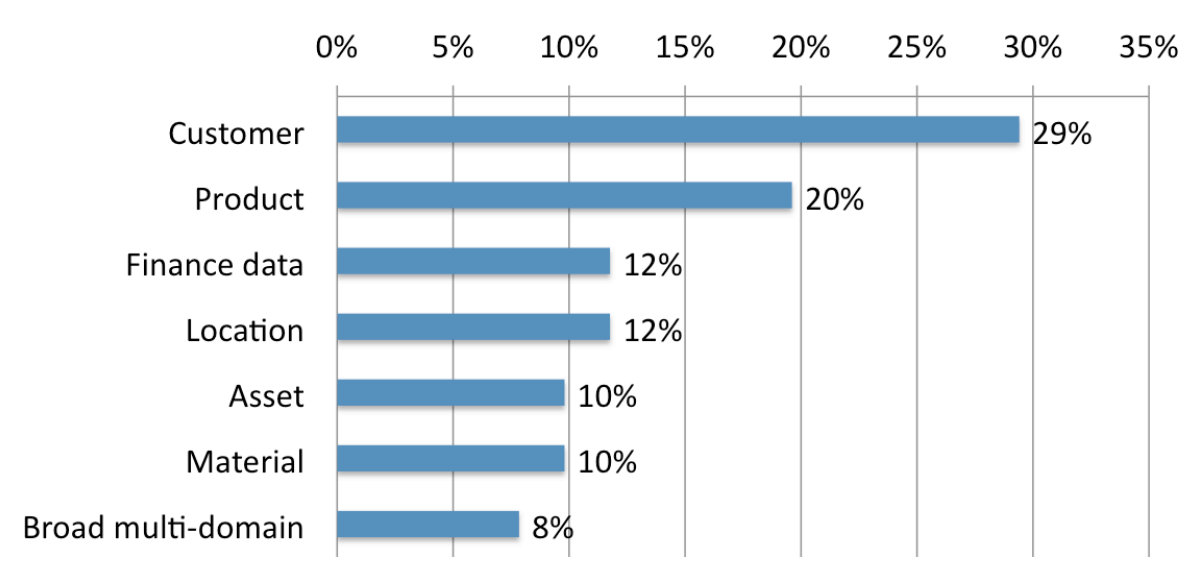

Figure 18 - Planned scope of MDM Implementation

Mirroring the scope of those already implemented, those planning implementations told us they planned to focus on "Customer" and "Product". Here again, however, there is a clear indication that a wider range of master data domains is under consideration.

In which regions is this group planning to implement MDM [Q27]? Figure 19 gives a summary of the results.

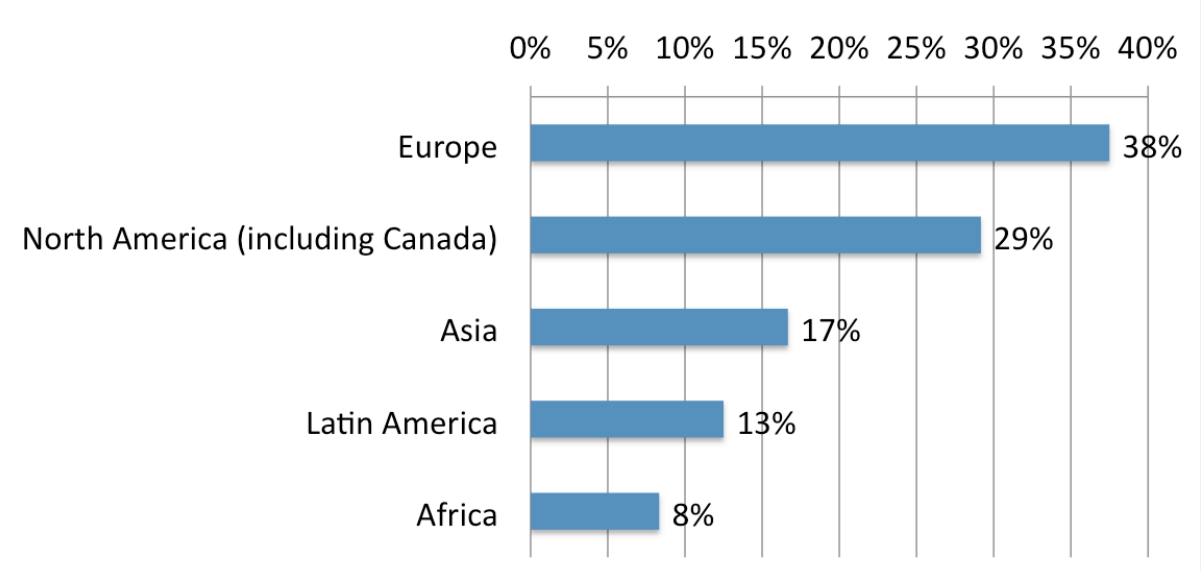

Figure 19 - Geographies where MDM implementations are planned

Interestingly, in the case of this group planning implementations, the main focus is clearly on Europe in contrast to the group that had already implemented, which focused more towards North America. Potentially, this reflects to some degree that organizations that have initially implemented in North America are turning their attention to their European businesses.

What is the size of the planned MDM implementations [Q31] in terms of the total number of records managed? The sizes quoted range from 1 to 1000 million records with a median of 5, so probably

not really significantly larger than those already implemented. This may well be indicative of adoption of a frequently recommended stepwise approach to MDM implementation.

What do those planning MDM implementations envisage to be the relative proportions of staff in their project teams [Q28]? Their view is that 37% will be from business, 38% drawn from their internal IT organization and supported by 25% external staff from the SI. This implies that they believe they will have a greater proportion of business staff involved than has been the case with the existing implementations. This is encouraging since in our experience a proportion of 33% from each area is likely to be about right.

What do those planning MDM implementations envisage as the technologies and licensing model they plan to use [Q30]? The results are summarized in Figure 20.

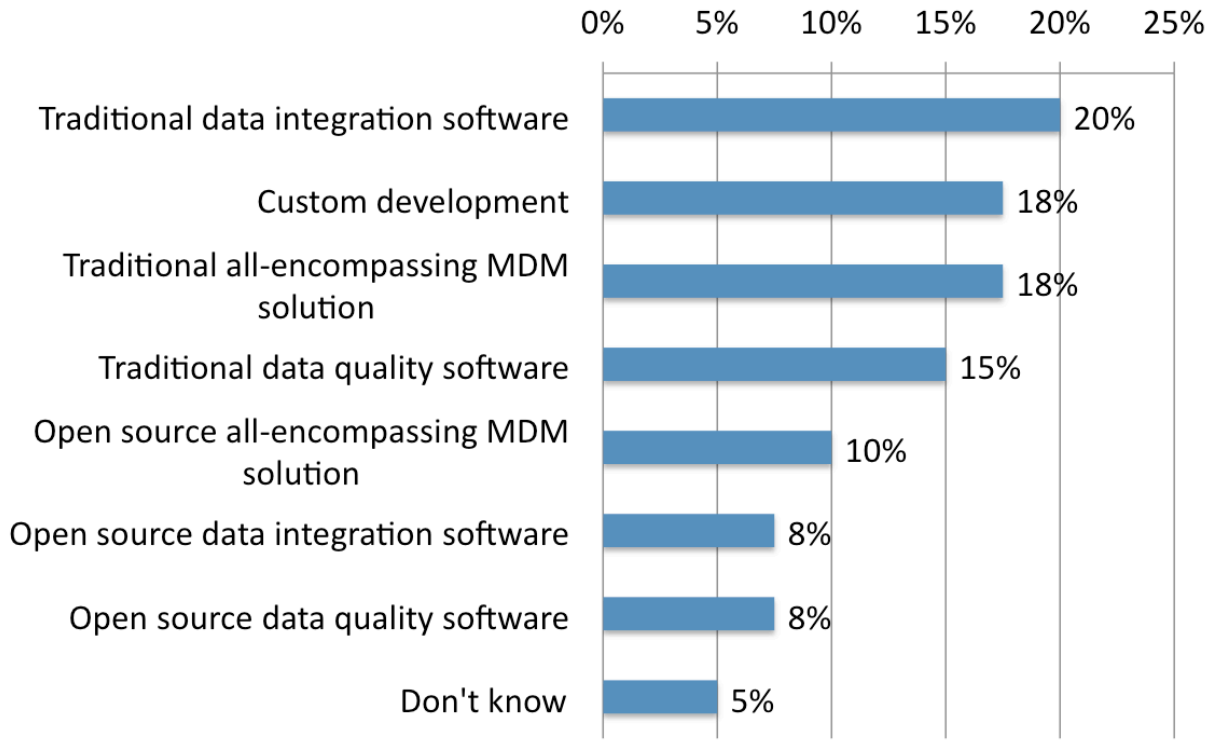

Figure 20 - Plans for Technology and Licensing Model

Again, the general pattern seems to be to opt for traditional approaches with a predominance of "Custom build". This again prompts the question: why is it that organizations feel compelled to opt for custom-built solutions when there is a broad range of software on the market? Vendors need to seek further to identify gaps and develop collateral to help convince end users of the benefits of adopting a packaged solution. They should also explore more the option to make their "standard" solutions more easily configurable to meet end-user requirements without the need to resort to programming.

We asked those with plans for MDM implementations to estimate what in their view would be the level of maintenance effort they planned to budget for as a percentage of the total estimated project costs [Q32]. The median was 15% with a range of 1 to 50%. This is clearly less than the amount that those who have already implemented have encountered in practice (20%).

Systems Integrators

We asked how those planning MDM implementations were going to select their SI [Q26]. The results are shown in Figure 21.

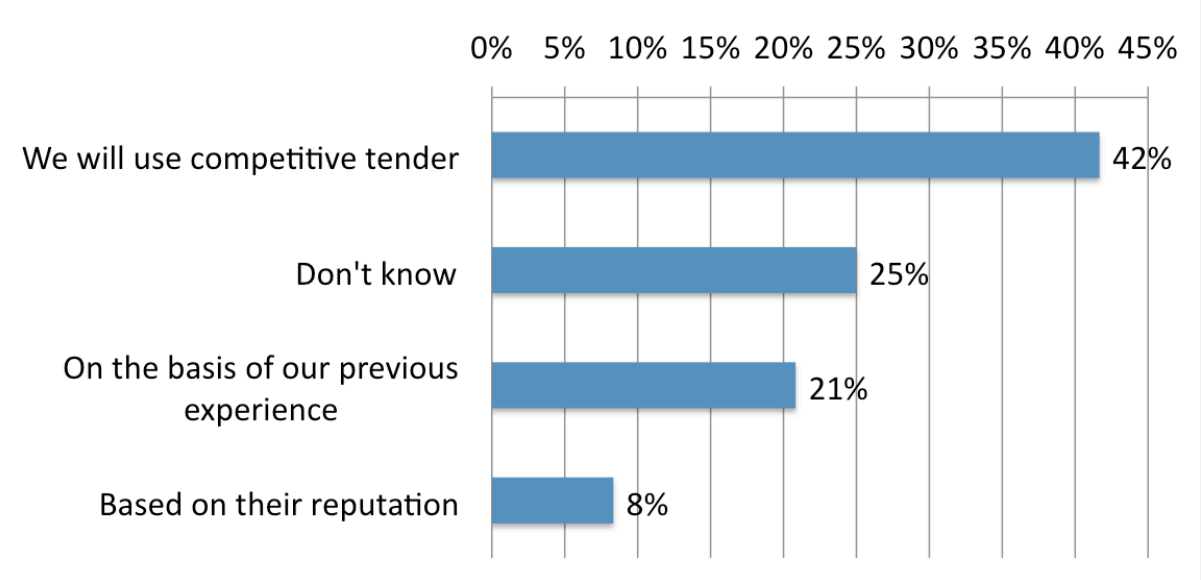

Figure 21 - How do you plan to select your SI?

42% told us they plan to use competitive tender and only 8% based upon the reputation of the SI. Around one-fifth plan to base their decision on past experience. A higher proportion of those planning MDM implementations propose using competitive tender for selection compared to those who had already implemented (33%).

We then asked which project methodology they planned to use [Q25]. The feedback they provided is summarized in Figure 22.

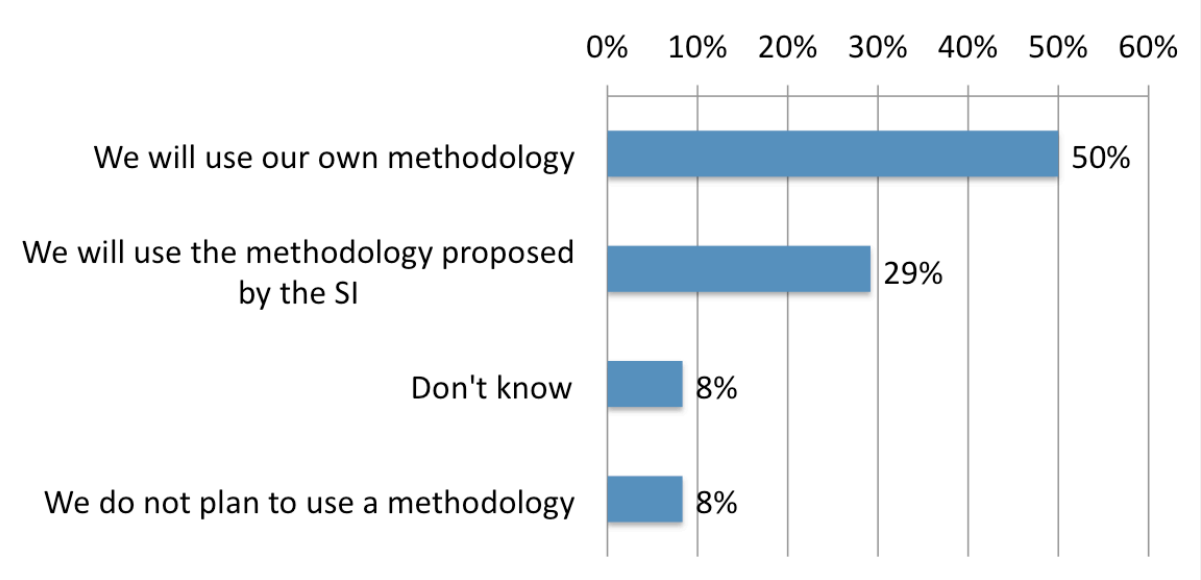

Figure 22 - Which methodology will you use?

Fully half of those planning implementations told us they intended to use their own methodology rather than that offered by the selected SI. This compares with those who have already implemented MDM where 57% told us they had used their own methodology. This high reliance on

the use of own methodology suggests that SIs appear not to have convincing alternatives in this area. This is surprising given that a tried and tested methodology is one of the added value benefits that an SI should bring to an MDM implementation. Again, this leads us to wonder whether the majority of SIs currently in the market really have extensive experience in implementing MDM.

Benefits and Barriers

Initially, we asked this group to tell us whether they had prepared, or were planning to prepare, a business case with quantified return on investment [Q33]. The results are shown in the chart in Figure 23.

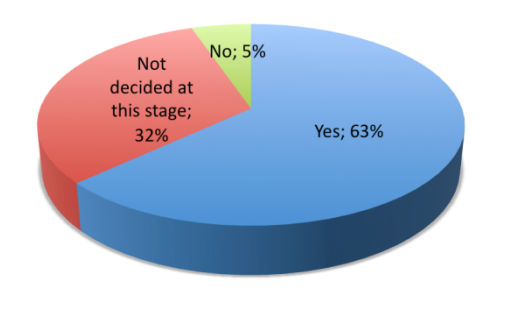

Figure 23 - Are you planning to produce a Business Case?

Almost two-thirds confirmed that they planned to develop a business case. This is encouraging given the importance of this highlighted by those who have already implemented MDM. What is somewhat surprising is that one-third have yet to make a decision on this despite being partway along the planning cycle.

Next, we asked end-user respondents to tell us what they believe to be the biggest problem they expect to face in terms of getting the project justified and its budget approved [Q34]. The responses included:

- Business case and value of implementation.
- Belief that there will be quantifiable business benefits in an outsourced environment. Battle for budget against other directly related operational changes.
- Consensus about where to start.
- The challenge of getting a direct business benefit for the MDM initiative, as it impacts funding as well as degree of business involvement.
- Customer approval.
- Undocumented in-house developed applications.
- Business Process Benefits.
- Getting upper management to understand its use.
- Understanding the approach, the implementation path and the return on investment.
- Getting high priority when there are many other projects that are also needed.
- Showing how important this job is to our organization. Some people do not understand what MDM is and the benefits it can give to us.
- Agreeing assumptions and time frame and also getting buy-in from management/users.
- Political challenges of moving from a silo-centric organization to an entity/data-centric business.

Finally, we were interested in learning what proportion of those planning MDM implementations intended to undertake a post-implementation review [Q35]. The results are shown in the chart in Figure 24.

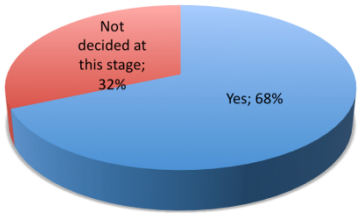

Figure 24 - Will you carry out a post-implementation review?

Fully two-thirds confirmed that they plan to carry out a post-implementation review at the end of the MDM implementation. This contrasts with those who have already implemented where 40% had done a review and 40% still intended to carry out such a review.

OPEN SOURCE TECHNOLOGIES

Recently, there has been increasing interest in the adoption of open source software by organizations. Although the main focus of this survey centers on SIs and MDM implementations, we wanted to understand to what extent organizations were looking to adopt open source software, such as that for data integration or data quality, for mission critical applications such as MDM. We therefore asked organizations to inform us about their current position on the use of open source [Q39]. The results are summarized in Figure 25.

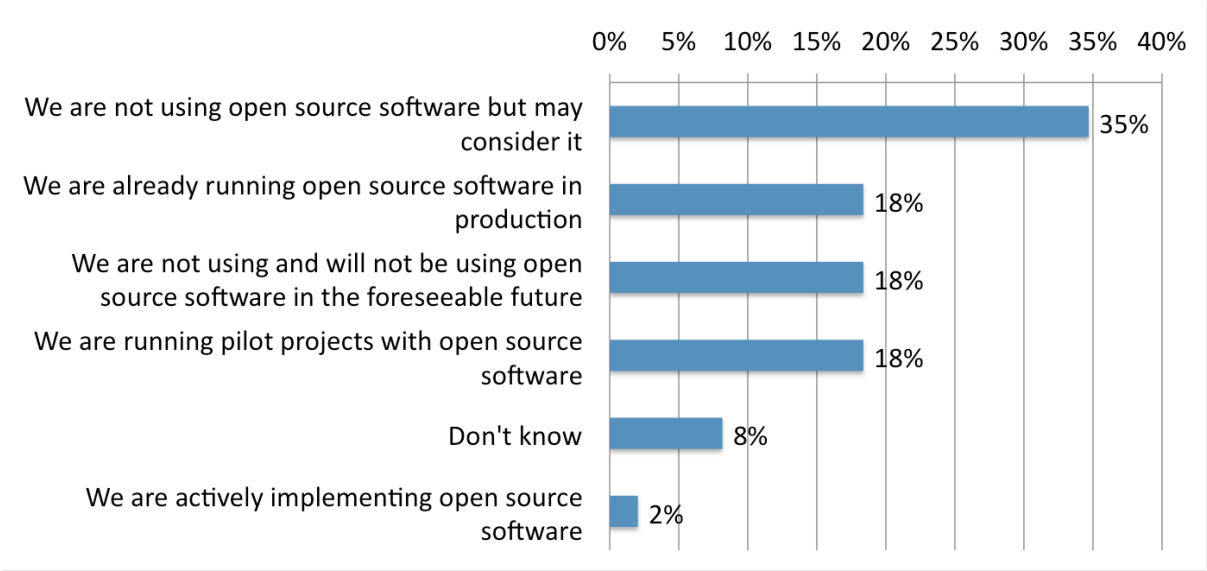

Figure 25 - Adoption of Open Source Technologies

The results confirm the growing interest from organizations in open source as an alternative to traditional solutions. 35% indicated that they would consider using open source while some 38% are already running it in either pilot or operational stages.

THE VIEW FROM THE SYSTEMS INTEGRATORS

As a second component of the survey, we asked some 55 systems integrators, all of whom claimed MDM expertise, to complete a questionnaire (see Survey 2: Systems Integrator Survey). In this, we elicited some basic factual information such as the number and size of projects that they had been involved with but also asked them to indicate the benefits and roadblocks found during these implementations. About half of them responded, the majority from Europe with North America a close second.

We firstly [Q1] asked them to tell us how many staff they had trained in MDM technology in order to gain an impression of the level of expertise available currently. The median was 13 staff with one company claiming 700 and another 250. In response to the question [Q3] about the total number of MDM projects they had conducted, the median answer from Sis was 9 (again with one company reporting 750!). When we asked how many projects [Q4] they were involved in during 2009 the median was 5. It's interesting to note that the two companies who claimed large numbers of projects had only a small number in 2009. These relatively low numbers suggest that despite the currently high profile and levels of interest in MDM, relatively few companies are implementing (at least assisted by an SI).

We were also interested in understanding whether they used a specific methodology [Q2]. The majority (55%) reported using an interactive methodology which is now becoming generally accepted as best practice. Only three reported that they still used a waterfall approach.

Where (in which geographies) are SIs implementing MDM [Q5]? Europe topped the list with North America a close second. This may well be a reflection of the high merger and acquisition activity especially in Europe over the past few years.

Vendor Technologies

A key question was [Q6] regarding which MDM vendor technologies the SIs had implemented. The majority listed Oracle at top of the list with, surprisingly, "custom build" as second. The "top ten" are shown in Figure 26 (the scale represents relative ranking).

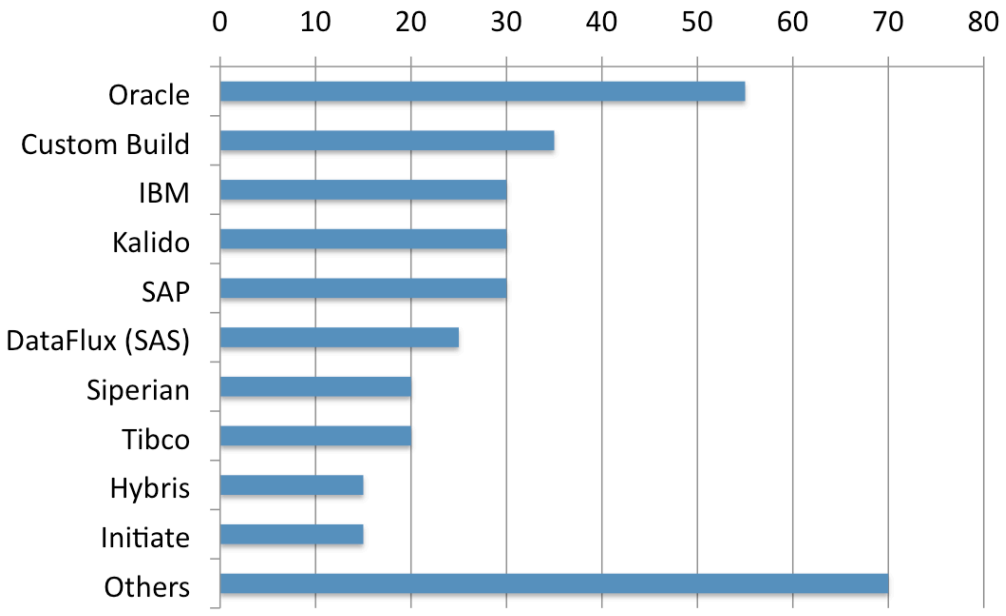

Figure 26 - Ranking of MDM Technologies Implemented

MDM Architectures

We asked SIs to tell us about the architecture selected in the implementations they had conducted with customers [Q7]. Which of the forms Registry, Consolidation, Co-existence or Transaction were being implemented? We provided definitions to clarify these terms (see Survey 2: Q7). The majority of implementations (around 38%) used the Consolidation model but we were very surprised to discover that 31% of implementations were Transaction model based. We note that we have yet to find a live project that is a true Transaction architecture, i.e., the one and only source of master data, having replaced functionality within transaction systems.

In a related question [Q8] we asked about the selection between Analytic and Operational MDM implementations. We were less surprised to learn that two-thirds were Operational MDM implementations given the emphasis on this in the market.

The Transactional/Operational approach is arguably the more difficult architecture to implement successfully compared to analytic MDM. It is likely that these are smaller scope projects, restricted to a limited part of the customers' business. This view is supported by the fact that the median project size reported [Q9, Q10] is 4 staff and the median length of a project is 6 months. In our experience of large MDM projects (e.g., globally based enterprises implementing globally) 6 months seems to be very short.

Implementations were reported covering a wide spread of industries [Q11] with the top three ranked as Utilities, Finance/Banking/Insurance and Manufacturing in that order. Given the recent financial crisis and its aftermath, it is perhaps unsurprising that financial institutions feature largely in the list. The globalization of Utilities during the past 5 years probably explains the high interest in MDM in these industry sectors.

In principle, one area in which an SI could add significant value to an MDM implementation is by having industry specific models which could be tailored to meet the specific customer needs, resulting, one may hope, in reduced implementation times and costs. We asked [Q13] SIs to tell us whether they had such models available. Half reported that they had no such models. One reported having models for the financial services, retail and telecoms industries while another had models for healthcare and retail. In general, it was disappointing to learn that in an area where SIs could really add value, half were unable to offer customizable solutions.

Size and Staffing of MDM Implementations

Next we were interested to understand the size of MDM projects in which SIs were involved. We used two measures to assess project size; the number of master data records managed [Q14] (a measure of the size and complexity of the repository/software to be implemented) and the size measured in terms of the number of person-years of consultant time [Q15].

In terms of the total number of master data records, about a quarter of the SIs claimed projects around 100 million records with one (Initiate) a 500 million record implementation and another (Siperian) a 300 million one. The median was 6.5 million (average 80).

Expressed in person-years of consultant time, one vendor claimed 150 and a few others between 12 and 30. The median was 5.5 (average 23). These figures reveal that while there are a very few larger projects, most fall into the medium to small category (say 5 person-years, 5 million records, 6 months duration).

We also wanted to understand the staffing of MDM implementations. In particular, what proportion of staff on the project was drawn from business compared with the SIs own consultant staff and staff from the end-user organization's IT department [Q20]. On average, 27% of staff on an MDM implementation came from the end–users' business, about an equal number from the customers' own IT department (28%) and the remainder (45%) were supplied by the SI as consultants.

Range of Data Types

What range of data types is being addressed in the MDM implementations [Q19]? The results are shown graphically in Figure 27 (the scale represents relative ranking).

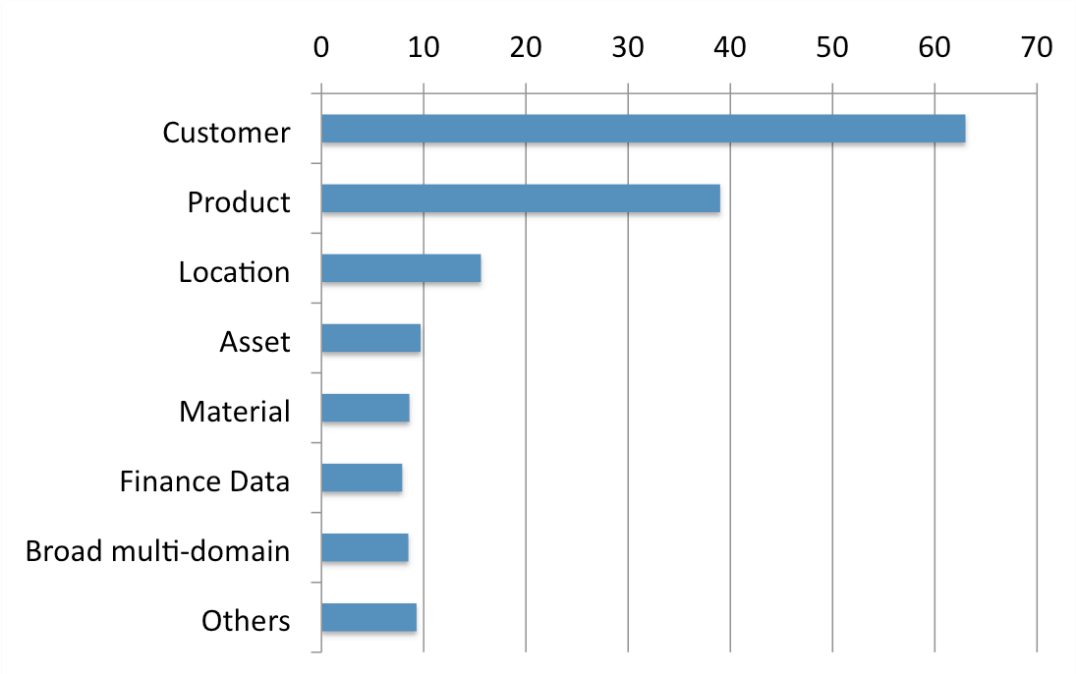

Figure 27 - Range of master data types being addressed

Customer and Product top the list and appear still to be the main data domains to receive attention. However, there is a wider spread encompassing Location, Asset and extending to broad multi-domain types. This underlines the increasing trend which we have reported elsewhere that end-user organizations are increasingly looking to include a wider base of master data for MDM.

Many end-user organizations focus on the costs of software required for MDM, but this is just part of the overall implementation cost. We were curious to explore what proportion of project costs was attributable to the direct costs of buying the MDM software license [Q21]. In general, the values reported varied between 15 and 80% (in one case) with an average of 33%. So a good rule of thumb for estimating the total costs of an MDM implementation might well be three times the costs of the software licenses. The results from the end users in the survey found it to be four times.

Given the relatively large number of SIs in the market, we were interested [Q16] to understand more about who they perceived their main competitors to be. While this showed considerable variation on an individual SI basis, a "common theme" was revealed with the top five ranked as follows:

1. Accenture
2. IBM GBS
3. Capgemini
4. Deloitte Consulting

5. Atos Origin

Given the size, scope and reach of these five large organizations it is not surprising that they head the list; most SIs report that they usually encountered one of these in pre-sales discussions. What is perhaps more revealing is that some equally large SIs such as Tata, PwC, Oracle Professional Services and HP Information Services came low on the list.

Benefits

What are the three key benefits that SIs have seen their end-user organizations achieve from implementing MDM [Q18]? The comments received included:

- Process and productivity improvement.
- Ability to cross-sell and upsell.
- Streamlined data management processes.
- Ability to quickly react to changes in the business and reflect new mappings in master data – minutes to days.
- Developed single source of truth for all master entities, and brought in control & governance to improve data accuracy.
- Shock, I did not know it was this bad! Consequence: the proper level of awareness, allocation of resources.
- Increased transparency.
- Improvement of data quality.
- Accurate reporting.
- Improved customer insight/BI.
- Reduced costs.
- Enterprise View of the Customer.
- Data quality and just-in-time information delivery.
- Insights into wasted effort and redundancy in go-to-market efforts.
- Allows DG team to manage reference data without IT intervention.
- Reduced costs through decrease in average call time by eliminating and preventing duplicate accounts and through use of consistent customer hierarchy across regions.
- Better management information.
- Less development time/resources focused on data integration.
- Reduced operational errors.
- Supporting and enabling harmonized business processes.
- Improved compliance efforts.
- Decreased time-to-market for new products.
- Opportunity to alter business processes for revenue enhancements.
- IS simplification through hub or single point of truth and management build.
- Value added product life cycle management.
- Better, richer information sharing with customers and trade partners.
- Corporate memory & audit trail – start and stop dates on mappings.
- Solution allows client to identify the same customer across all parts of the business. This enables improved customer experience in several ways.
- Assortment growth with same number of employees.
- Regulatory compliance.
- Reduced system integration costs.
- Better business insight.
- Better decision making.
- Increasing effectiveness of marketing programs.

Tips for Successful MDM Implementation

We then asked SIs to share with us their tips for ensuring a successful MDM implementation [Q12]. These include:

- MDM is not a project; it is a transformation in the way an organization will see, use and exploit the very important data asset of master data.
- Focus on process and governance first. Once the process is understood, evolved and governed, look for opportunities to streamline and optimize some steps through technology.
- It must be business-driven, via data stewards, and must engage C-level management.
- MDM is an iterative journey from enablement to profitability, not an end state. It is also more than the implementation of technology, and involves streamlined data processes, establishing robust data governance with business & IT participation.
- Think big, start small! Step by step approach; starting with quick wins.
- Top level management must support the project because it's company-wide and different departments are involved. If one department is leading, the solution is not enterprise-wide.
- Try not to identify all your master data in one project (Big Bang Approach). Data governance is critical for MDM. It should not be an IT project.
- Our most successful clients are the ones who 1: understand that MDM is operational/transactional and 2: retain us to build a roadmap prior to choosing a vendor solution.
- Business case is key. Often the business decides to make a strategic investment in data quality to be delivered by an MDM solution so the business case may not be that detailed. This will fall at the first hurdle as those in line of business functions will question the project benefit and expect answers.
- Begin any MDM initiative only after obtaining strong executive support and leverage Research Analyst firms for obtaining such support. Form Enterprise Architecture (EA) if one doesn't exist already, and initiate the formation of data governance framework at the organization. Both of these could be started with internal resources to begin with. Formulate the MDM strategy and architecture at the enterprise level which must include all master data domains of importance to the organization. However, the actual implementation should be phased, with each phase taking about 4 to 8 months of time, putting a complete MDM solution at the enterprise level over a number of years. The initial phases should tackle the most problematic areas of master data first, thus gaining incremental support within the organization with each phase of implementation.

Challenges

What do the SIs see as the main challenges or roadblocks to achieving a successful MDM implementation [Q17]? The main responses included:

- Maturity of the client.
- Getting the executive buy-in and expectation management around the business case.
- Failing to build user-centric workflows and flexible user interfaces for data management processes that fit the work styles of the people being asked to participate in the process. Too often, little consideration is given to how the process will be maintained in favor of focusing on the data model and the system-system integrations. Unfortunately, failure to engage the data experts, who understand the business context and meaning of data attributes, results in a solution that primarily serves IT's needs, and over time any progress on governance and creation of "data as an asset" goes away.

- Managing expectations is the biggest challenge, e.g., understanding the data is critical; profile data – Engage all functional SMEs from the start – Set realistic scopes; prepare for adjustments – Paradigm shift takes time; it's a steep learning curve for everyone – There is a lot to build when you start fresh – MDM takes work – Critical, but difficult, to measure value delivered
- The primary challenge we have observed in MDM program implementations is to clearly define how the MDM program supports business initiatives & secure strong business-IT alignment. Often enough, there is inadequate alignment of the design with the stated business objectives, and this is compounded by lack of business & IT executive sponsorship. This often happens because customers do not create a proper roadmap, integrating the MDM implementation with other enterprise objectives.
- Everybody understands the importance of the quality of master data for transactions processing and analytics. Few want to REALLY pay for it. Management (all layers) does not like to dedicate internal resources to MDM as it is seen as a new activity that costs money. Whereas the costs of repairing the consequences of errors are normally absorbed in the total application support costs of organizations. A "Catch 22 situation"!
- Change of the organization.
- Existing data quality and how to structure enterprise-wide data in a new system.
- Building the Business Case and value assessment.
- Executive understanding of how it will drive business value.
- The biggest challenge is inaction—like many BI projects unless there is a good business case, the project is rocky.
- Organizational change (maturity, existing workload, prioritization), IT complexity. Keep focus over long periods of time.
- Lack of business involvement and executive sponsorship.
- Establish enterprise-wide data quality processes and adopt Data Stewardship.
- Achieving nirvana with an MDM solution at an enterprise level takes strong initial and continuous executive support not to mention the need for mega millions of dollars. This poses challenges in terms of ROI justification. Whereas ROI can be maximized exponentially with an MDM solution that is successfully put in place at the enterprise level for multiple master data domains with strong intersection capabilities across these multiple domains. However, it is not easy and practical to budget, plan and implement any MDM solution at this level in one shot. The challenge is in convincing the management about overall ROI and ROI for initial phases and secure the requisite resources and the support at the middle management level to ensure that the MDM initiative will not only take-off but will continue to be enhanced until all the pieces of the puzzle are put in place. Often times some form of Enterprise Architecture teams exist in many organizations that need strengthening in the context of MDM initiatives. Making enterprises realize this need and finding the right owner for this task is often a challenge. It also takes lot of convincing to initiate a Data Governance program which often is triggered by Systems Integrators with half-hearted support from enterprises. The real momentum for the data governance program doesn't really kick in until organizations really understand what MDM means to them and their business.

CASE STUDIES

During the course of the survey we conducted a series of in-depth interviews with a number of systems integrators. The interviews were usually one hour in duration and were targeted to obtain more details of the systems integrators' experience with MDM implementations that they had undertaken with their customers.

Baseline Consulting

In addition to its business analytics, data warehouse, and data governance work, Baseline Consulting (www.baseline-consulting.com) delivers full-lifecycle master data management projects, though initially engages with clients at the strategy and planning stage of a master data activity. An example of this was at a major global computer manufacturer, who found it very difficult to get a consistent view of their business. Customer details would often appear in multiple country-level systems, not always with a consistent definition of a global company and its subsidiaries. The problem involved considerable scale, as there were hundreds of millions of customer records involved; the desire was to resolve ownership hierarchies and to ultimately link this to the company's financial systems. In this case, their existing infrastructure was based on a home-grown, Oracle-based architecture. Baseline helped the client identify the various business processes that could be supported by good quality master data, and to map out the functional requirements that these processes required, e.g., it turned out that the client had very elaborate hierarchy management needs. Based on the newly-identified functional needs, a shortlist of three vendors was established, and the client then went on to evaluate these and choose a new customer hub technology (in this case Initiate Systems).

"Baseline recommend investing heavily in up-front planning around master data."

In another case, a major pharmaceutical company asked Baseline to help with their master data planning, including the creation of an MDM roadmap and a subsequent business case for an MDM program. In this instance the most pressing issue was that of tracking physicians. In US law, pharmaceutical companies are required to report marketing spending on individual physicians by state, yet there are many complications: some physicians practice across multiple states and some data records about them are provided by 3rd party data providers in assorted formats. A better understanding of the physicians, the relationships they have with a group practice or hospital, and their degree of influence could have a considerable effect on communication, outreach, and reporting efforts. This greater insight alone could yield savings of tens of millions of dollars. The business case was completed based around the various business processes and constituencies that were affected by the physician master data, and a quantified business case for change was delivered. This was followed by a competitive evaluation of three of the leading MDM technologies, and subsequently one was chosen (in this case, Siperian).

In another example, a Canadian credit union asked Baseline to help with MDM architecture and planning as well as initial data governance work. (Interestingly, Baseline is increasingly seeing data governance activities springing up independent of master data initiatives.) The client needed to tie their customers together across different systems. These customers often had multiple products (e.g., a loan, an insurance policy, a credit card) in order to correctly assess customer profitability and to be able to better categorize customers so as to provide them with appropriate services. It was important to identify which customer attributes needed to be dealt with across the enterprise, and which were needed only in specific business lines, and to identify who was responsible for data quality in these cases. In some cases the responsibilities were quite involved. For instance, local legislation meant that there had to be "Chinese walls" between some of the business lines, e.g., one part of the business may not be allowed to know that a client had a certain product with another part of the business.

In the past, Baseline has had clients treat MDM as an adjunct to data warehouse initiatives. However, their most sophisticated clients understand that operational master data has entirely different characteristics and business drivers. They recommend investing heavily in up-front planning around master data, creating a high-level roadmap, building use cases, mapping out business processes, and delineating responsibility and ownership before bringing in a technology, as

often the choice of the most effective technology will be heavily driven by requirements that may not be clear without such planning.

Evaxyx

Evaxyx's (www.evaxyx.com) experience with MDM technologies started in 2005 working with DWL (later acquired by IBM), and since they have worked with many of the leading MDM technologies, including Siperian, Kalido and Initiate, they have conducted many large-scale MDM projects for blue chip companies.

An example of one of their projects is one at a European bank which had a major issue with inconsistent customer data. This was causing significant numbers of trades to be rejected in the settlement phase, adding a cost of around GBP 75 per transaction, which given the high volume of transactions executed by this bank added up to a lot of money. After initially considering a manual data clean-up using an offshore firm, it was decided to put in a customer hub that would become the master source of customer data. A Siperian hub was chosen, and after its implementation with a team of six consultants, ended up being the source to drive a dozen other operational systems in real time at the bank; the project paid back its costs in under a year.

Evaxyx feels that the biggest challenge for MDM projects are the people and politics of a company. They have seen a number of projects which have been initiated by the IT department, and only later was it realized that the business part of the company needed to sponsor the project and take ownership of their data before progress could be made. This phase of setting up data governance is key to the success of an MDM project, as well as the effective implementation of the data governance processes, which Evaxyx calls "data government". Most of the work is engaging the business staff to decide which data is really critical and who should really own it across organizational boundaries.

Further issues include the difficulty in understanding the data and applications landscape, given the wide scope of MDM projects. There are many vested interests in a typical IT estate, and the greater the scope of the MDM initiative, the more difficult it is to balance all of these groups. The evangelical approach to selling MDM, where its framework elements are stressed over easier-to-understand package approaches, can exacerbate these divisions.

The company observes that whereas in 2006 and 2007 they were seeing MDM projects mostly of departmental scope (even though some of these projects could in themselves be very large), in recent months they have seen many more companies taking a more strategic, enterprise-wide approach to their MDM projects. Often, MDM programs are component parts of wider transformation objectives. It is essential that the business drivers of these wider undertakings are addressed directly by the MDM program.

InfoSys

Infosys (www.infosys.com) works with most of the major MDM technologies. One particularly interesting project was at a major telecom software provider, who needed to improve the consistency of their customer data. In particular, the requirement was to achieve a consistent view of the contracts and services supplied to corporate customers: the core data resided in a mix of several SAP systems, Salesforce, Remedy and other systems. The project to address this took 18 months and involved building a business case through to implementation of a customer hub. The

business case was made through looking at the effect of reducing average customer call times, the reduced effort in dealing with duplicate account information, and lower IT costs through a reduction in interfaces. The final hub (based on an Oracle UCM solution), which took a year to implement, manages just under 10 million customer records and involved a project team of five business people and a peak of 15 consultants. The project will soon enter a second phase, but before this happens, the business needs to complete the switching off of the capability of producing new customer accounts in the various operational systems, which is proving tricky. Some of this is due to technical issues (application packages are not usually designed to have the creation of core data done elsewhere) but can also be a non-technical challenge.

Another interesting case was for a large US bank. They have made a number of significant acquisitions which meant that they now had several different sources of customer data, along with all the problems that that situation can cause. A major project to establish a consistent customer view was undertaken, involving the implementation of a customer hub (in this case, based on IBM WCC). The system has to deal with significant operational requirements: 150 million accounts, 450 transactions per second, and must act as a feed to twenty other applications. The company now uses the hub for a variety of tasks, including the building of customized loan offers. The project involved 75 core staff at its peak and took two years to complete. The bank has already successfully undertaken the integration of customer data from one major acquisition, but has realized that it will probably need to cope with a managed federation of hubs for customer data, partly due to the scale of its acquisitions, and in some cases legal issues that mandate the storing of certain customer data in "local" locations.

"Customers need to consider their business processes, and address data governance and (master) data quality in addition to considering the correct architecture for the master data technology."

Other major MDM projects that Infosys has been involved with have included a 300 million enterprise patient hub solution (using Initiate), a customer hub for a major US office supplier and an Oracle PIM-based product information hub for a well-known beverage retailer. In general, they find that companies often fail to realize that MDM is a journey rather than a one-off project, and sometimes fail to engage the business sufficiently in owning, and taking an interest in, their data. Customers need to consider their business processes, and address data governance and data quality in addition to considering the correct architecture for the master data technology.

One issue which vendors have so far failed to address is the successful management of both B2C and B2B customer data in the same hub (these have different characteristics). Similarly, product hub technology typically fails to successfully deal with both product data and inventory component data.

MindTree

MindTree (www.mindtree.com) has had a consulting practice focusing on data warehousing and business intelligence for seven years. They found that one of the most common issues that affected such projects was the need for well-structured master data, and started working on this area in 2003. MindTree build their own master data management framework "RUBIC MDM" (Re-Usable Business Intelligence Components). In 2007, they set up a focused MDM practice. They have also worked with several of the leading MDM vendors such as Kalido, Siperian, SAP and IBM.

One example of a project was at a global consumer goods company. This company used SAP MDM for product mastering at the global level, but wanted to provide their operating company subsidiaries with the ability to have local flexibility, e.g., adding extra attributes that were important

for local markets, such as Japan. MindTree developed the infrastructure to allow this layer of flexibility, based on Kalido MDM, which operated in concert with the global product MDM system. This project involved ten consultants at peak, and took six months to complete.

Another project was at a leading drinks company. In this case, the company used SAP MDM for product master data but needed to develop a similar capability for customer data for its business customers. However, they did not at that time want a full-blown implementation of a customer hub based on commercial technology. MindTree built a custom solution for them, initially for their North American subsidiary, a project involving above 40 consultants at peak.

A well-known producer of imaging technology needed a master data strategy, as their portfolio of 800 applications was causing them many problems. MindTree conducted a strategy study that recommended splitting front office from back office systems in terms of data, including some rationalization of the application portfolio. Potential business benefits above $40 million at a global level were identified through cost reduction and improved sales efficiency. The study was based around business processes, and considering the macroeconomic situation, supported the customer in initiating an initial pilot project involving focused aspects of product and customer data.

At a global consumer packaged goods company, MindTree carried out a project to improve the company's ability to analyze global supplier spend, which was held back by inconsistent data definitions across the company's subsidiaries. The project, based on Kalido, involved some custom application development and was regarded as the most successful project in the company that year, gaining praise from the CIO and resulting in savings of nearly USD 100M.

At a major financial institution, MindTree carried out a strategy study which resulted in putting in place a data governance framework—but no new technology—covering the business processes across seven countries. In this case, seven different charts of accounts were simplified into one, and a single implementation of the existing general ledger system was implemented.

In general, MindTree sees policy as a foundation for successful projects, on which there are the three pillars of data stewardship process, data stewardship structure and technology. They have a 10-point project framework which they use for MDM projects. In their experience, "Data quality is the single biggest challenge." Another critical element for MDM projects is the definition of standard data definitions, as defined by the business rather than IT staff.

"Data quality is the single biggest challenge."

In terms of challenges, one common issue is that MDM projects can have many benefits, but these tend to be indirect. For example, standardizing on a single customer view could result in more effective cross-selling, an indirect benefit. This can make it hard to build business cases for MDM projects. In general, MindTree has found that the technologies that they have worked with each have strengths in particular areas, but also significant weaknesses in others. Hence, it is critical to choose technology that suits your particular project needs.

Platon

Platon (www.platon.net) has been involved with a range of MDM projects, from tactical initiatives to wide-ranging, strategic programs. One example of the latter is at a major information services company, who found that a series of problems with their customer data were hampering them in their communications with customers. In one case, an urgent communication to all of their customers at a particular bank was required, yet it took over a week to produce a good quality list. In

another case they wanted to communicate to all their corporate clients, yet found major problems in doing this since putting together a complete mailing list involved merging such lists from different divisions of the company. One division sent out mails and letters to 6,000 clients, the other division, 1/3 the size of the first one, sent out to 16,000.

These problems were occurring despite the fact that they had made major investments in customer hub technology, with just two major systems across the organization holding customer data. During the course of a strategic review, it became clear that the key to why these problems were continuing was lack of ownership and management across business processes, with people in one part of the organization not realizing that they were responsible for data that was needed elsewhere. This company now has a strategic project to address the customer from an enterprise perspective, involving organizational change, business process redesign as well as technology changes. This is ambitious in scale: two years, with 50 full-time staff, but the project will have an effect on 10,000 staff. Technology is a very small component of the project.

"Platon finds that most companies are not well set up to deal with master data issues, as they are organized along specific business lines, yet master data stretch across the enterprise, so ownership is a constant issue."

Another example is a Canadian retailer, who had an aging IT infrastructure and wanted, as they went through a replacement cycle, to do a better job with their master data than had previously been the case. A key element here was to engage the business and explain to them why they should care about master data. One example which helped was a real case where a particular product code was used for a lubricant that was sold in the retail stores. Later on, the manufacturer came out with a larger size package, but the individual responsible for assigning product codes saw no reason to not use the same product code for this new, physically larger, product. This resulted in orders being put together than would not physically fit on palettes, and trucks being overloaded. In another case, to illustrate the perils of data quality, warehouse staff were puzzled that that the delivery trucks suddenly started being given loads that only half-filled the trucks. It transpired that there was a special offer being made on an inflatable boat, and the person entering the dimensions of the product had entered the fully inflated dimensions. The company has now completed the first phase of a project to deliver a data governance program.

A further example is a manufacturing company who needed to revisit their material master and spare parts data. They had several ERP system implementations in different countries, and discovered that they were spending considerable sums of money on spare parts that in fact were in stock, but this data was not visible due to the separate implementations. One amusing side note of the MDM project to address this was that the business was surprised to find large amounts of equipment in their warehouses associated with wood-working (nails, planks, shovels, etc.) despite their business being nothing to do with the timber industry; it turned out that staff were ordering lots of such equipment for their own use on home-improvement projects. In another case, an Australian Directory provider found it very difficult to work out how many active and paying customers they had. There are around 1 million businesses in Australia, yet they had 2.5 million listings. Similarly there are around 13 million addresses in Australia, yet they held 60 million address records. Clearly a major data clean up, and a change to the processes which caused this mess to happen, was required.

In general, Platon finds that most companies are not well set up to deal with master data issues, as they are organized along specific business lines, yet master data stretches across the enterprise, so ownership is a constant issue. It is important than companies develop mechanisms that allow the ownership of maintenance of data that is distributed, since realistically company data is always held across departmental lines. As business automates more processes, the more apparent master data

issues become. It is important that companies think strategically about their data, and engage business in this process by getting to understand the hidden costs of duplicate and poor quality data. Companies that tackle this thorny issue early, and do it well, will have a significant competitive edge.

CONCLUSIONS

Key conclusions and recommendations resulting from the survey analysis are summarized below. These have been split into two groups: those of direct relevance to enterprises and organizations considering or in the process of implementing MDM initiatives, and those relating to the MDM software vendors and systems integrators.

Enterprises

- Most of the implementations undertaken thus far fall into the category of small to medium size. They manage a median of 3 million master data records, have taken 6 months to implement and involved an 8-person project team. The membership of the team is 25% business, 40% own IT and 35% SI staff. Interestingly, the view from the SIs is that their projects involve 6.5 million records and 5.5 person-years of consultant time, which falls more or less in line with the enterprises' view. Also, their view of the team composition is broadly similar (27% business, 28% from the users' IT department and 45% supplied by the SI) with perhaps the contribution from the SI being on the high side. Those planning MDM implementations are envisaging similar size projects with a median of 5 million records. In their view, the future team composition will be 37% from business, 38% internal IT and 25% external staff from the SI. This latter view is probably closer to what is best practice, but a contribution of one-third from business is often difficult to realize in practice. We believe, however, that a rough ratio of one-third from each area is optimal.
- "Customer" and "Product" still remain the main domains for MDM implementations although the quite wide spread of domains reported by all three groups supports the view that end-user organizations want to extend the range and focus of their master data management. For Sis, this means they need to ensure they have the in-house skills and experience to implement more complex MDM initiatives than the traditional PIM and CDI ones. Despite the claims of the SIs in terms of their abilities to implement MDM, most have not undertaken many projects—the median they reported was 9 with the median value for 2009 being 5.
- Around one-third of organizations have undertaken more than 2 MDM implementations which suggests that MDM is now coming of age and is well beyond the pilot stage.
- The majority of implementations as reported by the SIs used the Consolidation model (38%). However, they reported that roughly one-third focused on the Transaction model. Given that this Transaction/Operational architecture is arguably the most difficult architecture to implement successfully, this is a surprising result. It seems plausible that these are smaller projects restricted to a part of the end users' business. The reported small to medium project size and 6 month implementation timescale supports this.
- In most projects, maintenance plays a pivotal role and this is especially the case with MDM implementations, since these initiatives are ongoing programs and not projects in the conventional sense. Those who had already implemented reported a median maintenance cost as 20% of the initial project costs while those planning were estimating around 15%. Those about to embark on an MDM implementation would probably do well to take up a figure of at least 20% in their budgets.
- Data quality is a key component of any MDM implementation and the time and effort (cost) required to achieve data of acceptable quality is frequently severely underestimated. The median reported was 30% of the overall initial project costs. So data quality will account for a high

proportion of the budget and adequate provision needs to be made for this at the outset. The feedback in the "Tips" and "Barriers" sections underlines this recommendation.

- Many organizations focus on the costs of software when planning their MDM implementation, almost to the exclusion of all else. The median costs of software expressed as a percentage of the initial project costs was 25%. We suggest that a good rule of thumb when estimating your MDM implementation budget is that services (e.g., the costs of employing the SI, data quality improvement and other implementation costs) is roughly 3 to 4 times the cost of the software.
- We explored with both those who had already implemented MDM and those planning to do so their views on the use of open source solutions for MDM implementation. In both cases there was a broad preference for traditional MDM, data quality and data integration solutions. This may well be the result of the broadly held belief that open source solutions are less likely to be able to meet end-user requirements than traditional solutions at the moment. Also, there are few open source products available as yet. A similar pattern was repeated when end-user organizations were asked about their broader view on the use of open source. Here, however, there appeared to be a willingness to explore further open source options alongside a significant group (18%) already deploying open source solutions in business-critical areas. Clearly, there is an opportunity here for open source vendors to address this gap. In particular, to provide good solutions for MDM alongside existing options for data quality and data integration. The results show that there is certainly interest in this product area. Ideally, an open source solution integrating MDM, data quality and data integration tools would have a major advantage in this market. It may well convince those opting for "custom build" to look towards this area for an acceptable solution.
- 60% of those who have already implemented told us they had prepared a business case, and of those planning to implement, two-thirds planned to produce a business case. This is encouraging news since earlier studies showed much lower numbers with the concern that "it was too difficult to produce a business case". Without a business case, it is both difficult to initially justify the project (difficult enough even with a quantified business case sometimes) but also difficult to measure and realize subsequent benefits. Strong focus and investment in up-front planning of the implementation with the business case as cornerstone will ensure a much higher chance of success. This is underlined in at least one of the case studies.
- It is very encouraging that both those already implementing (80%) and those planning to implement recognize the pivotal importance of establishing data governance. We cannot emphasize enough the importance to successful MDM implementation of establishing data governance as a precursor.
- As a general rule in our experience, few project teams carry out a post-implementation review (PIR) following completion of the implementation. Indeed, in a report some years ago Aberdeen Group put the figure at around 5%. We were pleasantly surprised to learn that of those already implementing MDM 40% did a PIR and a further 40% tell us they intend to do so upon completion. Two-thirds of those planning implementations said they intend to do a PIR on completion. In our experience, those organizations that have done PIRs—and they are few—have reaped benefits both in terms of lessons learned but also in terms of identifying and quantifying benefits delivered as a direct consequence of the implementation of MDM.
- One of the most often cited barriers to MDM implementation is poor data quality. SIs and organizations alike identify this as a key roadblock.
- Among the main recommendations from the respondents for successful delivery of MDM implementations were:
  - A successful MDM project is a business-driven project.
  - Up-front planning.
  - Do not use a waterfall methodology.

Systems Integrators

- Only a quarter of respondents used an SI for MDM implementation. Overall, 42% had implemented MDM and 25% plan to do so (only half using an SI). So about one-third of organizations surveyed are implementing or plan to implement MDM without an SI. Given the complexity of implementing even smaller MDM initiatives, it is surprising that they are electing to go it alone. Whether this implies a view that "*we can do it better ourselves*" or a lack of confidence in the claims of the SIs is unclear. At least one respondent noted, "*We felt that there was no SI in the UK (…) with the required experience*." This, taken together with the conclusions on satisfaction and assessment of the expertise level of SIs below, does suggest that end-user organizations lack confidence in the ability of SIs to deliver.
- A significant proportion of end-user organizations have opted for "custom build" (about one-fifth). Again, does this mean that organizations are unable to find MDM solutions with the required functionality to meet their needs or is there an intrinsic belief that "we can do it better ourselves"? We suggest that technology vendors would do well to focus on producing solutions that are capable of being configured to match user requirements rather than having to resort to programming. Given the wide range of MDM solutions on the market, it is surprising that so many end-user organizations believe they need to do in-house development.
- Most organizations chose competitive tender as the route to selecting an SI partner, with selection based upon previous experience coming second. Interestingly, reputation appeared to be of little importance. Given that few SIs indulge in marketing and promotion this is perhaps unsurprising. We believe that SI should do more in this area in order to become more visible to potential end-user client organizations. To date, there are not many able to provide collateral to underpin their claims to expertise and experience in implementing MDM.
- Interestingly and somewhat surprisingly, most organizations (57%) that had implemented MDM and those planning implementations chose to use their own methodology, even when they engaged an SI. It is reasonable to assume that one key area of added value which the SI should be able to contribute to an MDM implementation is a tried and tested methodology for implementing. That this is not being taken up suggests either that SIs are in practice unable to offer acceptable methodologies or organizations are locked in the belief that they can do it better their way. Neither of these is acceptable. SIs need to ensure, if they offer MDM implementation, that they have an effective methodology while end-user organizations should question the sense of engaging an SI, supposedly to bring added value through their proven expertise, only to reject this. The majority of SIs claimed to be using an iterative methodology that is certainly nowadays regarded as best practice for MDM implementations.
- Perhaps unsurprisingly, IBM GBS and Accenture head the ranked list of SIs, interestingly followed by "none". As mentioned above, a substantial proportion of organizations chose to go it alone. Below this there was a wide spread of SIs used and it is perhaps difficult to believe that they all had/have extensive experience and expertise with the implementation of MDM, especially given the limited numbers of implementations.
- 67% were at least satisfied with the performance of their chosen SI compared with 33% who were unhappy. 59% considered that their SI had "adequate" expertise and experience with MDM while an almost equal number felt them to be "not very experienced". This, when linked with the wide spread of SIs employed (above), suggests that despite the claims of many SIs, they lack the experience and expertise really required to deliver effective MDM implementations. We believe the SIs need to redress this position urgently. They either should withdraw from this area or form partnerships/alliances with SIs who do have proven expertise in this complex area.

ABOUT THE INFORMATION DIFFERENCE

At the Information Difference (www.informationdifference.com) we offer in-depth analysis of the master data management industry. We offer in-depth profiles of the MDM vendors, assessments of the marketplace and whitepapers discussing key issues and best practice. If you are contemplating an MDM project, we can advise you on strategy, vendor selection and best practice. We carry out primary market research and can help you with MDM project justification and return on investment.

QUESTIONNAIRE

The questions used in the surveys are listed below. The navigation logic is not shown.

Survey 1: End-User Survey

Systems Integrators and MDM Implementation Survey 2009

Introduction
As part of our research into the master data management (MDM) market we would be grateful if you could tell us a little about your experiences with using (or planning to use) a systems integrator (SI) with master data management software and implementations. As you will see, the survey is short and should take just a few minutes to complete.

There is surprisingly little concrete information available regarding the use of systems integrators in implementing MDM programs in businesses. At The Information Difference we believe it important to both enterprises and vendors to understand the current position and the degree of satisfaction, confidence and success which systems integrators deliver. This is the purpose of this survey.

All information provided will be used in aggregate form only and will be kept strictly confidential. The survey has only 20 questions on the topic and should not take more than 10 minutes to complete. In return for a fully completed survey you will receive a free summary of the analysis of the survey results.

Please note that questions marked with an asterisk (*) are mandatory.

1. Have you already implemented (or are you already implementing) an MDM program? *

- Yes, together with an SI
- Yes, but we are not using an SI
- No, but we plan to implement an MDM project using an SI
- No, but we plan to implement an MDM project not using an SI
- We currently have no plans to implement MDM
- Don't know

Already Implementing MDM

2. Did you use a project methodology specific to MDM projects from the SI, or your own standard project methodology? *

- We used the methodology proposed by the SI
- We used our own methodology
- We did not use a methodology
- Don't know
- Other (Please specify)

3. How did you choose your SI? *

- Based on our previous experience
- Based on their reputation
- We used a competitive tender approach
- Don't know
- Other (Please specify)

4. How many MDM projects have you conducted in total? *

We have undertaken [ ] MDM projects.

5. In which geographies have you conducted your MDM projects? [Please select all that apply.] *

- Europe
- North America (including Canada)
- Latin America
- Asia
- Middle East
- Far East (including Australasia) Africa
- Don't know

6. Which SI did you use? [Please select all that apply.] *

Accenture
Adastra
Arhis
Atos Origin
Attevo
Baseline Consulting
BI4U
CGI-American Management Systems
CSC (Computer Sciences Corp.)
Capgemini (formerly Cap Gemini Ernst & Young)
Caritor
Cognizant Technology Solutions
Conversion Services International
Data Hub Solutions
Deloitte Consulting
Detica
Dialog Information Technology
EMC BusinessEdge Solutions
Evaxyx
Fujitsu (formerly DMR)
HCL Technologies Limited
HP Information Services (incl. EDS &Knightsbridge Solutions)

Hitachi Consulting
IBM GBS (formerly IBM BCS and IBM Global Services)
ITC InfoTech
Infosys
Logica Management Consulting
Marks Baughan & Co
New Frontiers
Northrop Grumman
Oracle Professional Services
Platon
PwC
SAIC (Science Applications International Corp.)
SITA Corp.
Satyam
Sierra Atlantic
Synergic Partners
Unisys
Wipro
Other (Please specify)

HighPoint Solutions
Infogain
L&T InfoTech
LumenData
Merckle
Northgate Information Services
One IT (BT)
Patni
Project Performance Corporation
Q4K
SBS (Siemens Business Services)
Sapient
Scope e knowledge
Steria
Tata Consultancy Services
Vivamex
eVerge Group

7. Which vendor technologies have you carried out implementations of? [Please select all that apply.] *

Amalto
Data Foundations
Heiler
IBM
Kalido
Orchesta Networks
QAD (Full Tilt)
SAS (DataFlux)
SmartCo
Stratature (Microsoft)
Teradata
i2
None
Other (Please specify)

Ataccama
Global IDs
Hybris
Initiate
Oracle (includes PeopleSoft, Siebel and Hyperion)
Purisma (D&B)
SAP
Siperian
Stibo
Sun
Tibco
Custom build

8. Which technologies and licensing models did you use? [Please select all that apply]*

- Traditional all-encompassing MDM solution
- Open source all-encompassing MDM solution
- Traditional data integration software
- Open source data integration software
- Traditional data quality software
- Open source data quality software
- Custom development
- Don't know

9. What is the size of the overall project team that you have employed on your MDM project? (if more than one, then please use the average) *

The average size of team was [ ] people.

10. What proportion of the project is business staff/your own IT staff/systems integrator staff? Please provide a rough estimate. *

[ ] Percentage of staff from business
[ ] Percentage of staff from your own IT department
[ ] Percentage of staff from the systems integrator

0% of 100% total

11. What is the length of an MDM project that you have been involved with? (if more than one, please use the average) *

The average length is [ ] months.

12. What is the single biggest problem you faced on your MDM project?

_____
_____
_____
_____

0/250 allowed words.

13. Which one tip would you give for MDM project success?

_____
_____
_____
_____

0/250 allowed words.

14. How happy were you with your SI? *

- Very unhappy
- Unhappy
- Satisfied
- Very satisfied
- Delighted

15. To what extent did you feel that the SI staff actually had good experience of MDM? *

- Inexperienced
- Not very experienced
- Adequately experienced
- Very experienced
- Extremely experienced

16. What was the scope of your MDM project(s)? [Pleases select all that apply.] *

- Customer
- Product
- Location
- Asset
- Material
- Finance data
- Broad multi-domain
- Other specific data domain (Please specify)

17. What is the size of your MDM project that you have done in terms of the number of master data records managed (if more than one, please use the largest)? *

The (average) project size was [ ] million records.

18. If your project is live, what maintenance effort have you found it needs in terms of the percentage of the original project cost? *

Maintenance is approximately [ ] percent of the total project cost.

19. What proportion of your project effort was associated with data quality? [Please give a rough estimate as a percentage of the total project cost.] *

Data quality accounted for [ ] percent of the total project cost.

20. What main benefits have you experienced as a result of your MDM projects?

_____
_____
_____
_____

0/250 allowed words.

21. Did you produce a business case for your project, with quantified return on investment e.g. net present value/IRR? *

- Yes
- No
- Don't know

22. What have you found to be the typical costs of the MDM software expressed as a percentage of the overall project costs? [Please enter estimated percentage attributable to software costs.] *

Generally software accounts for [ ] percent of the overall project costs.

23. Have you set up a data governance program? *

- Yes
- No
- Don't know

24. Have you conducted a post implementation review of your MDM project? *

- Yes
- No
- We plan to do so
- Don't know

Planning to implement MDM

25. Do you plan to use a project methodology specific to MDM projects from the SI, or your own standard project methodology? *

- We will use the methodology proposed by the SI
- We will use our own methodology
- We do not plan to use a methodology
- Don't know
- Other (Please specify)

26. How do you plan to choose your SI? *

- On the basis of our previous experience
- Based on their reputation
- We will use competitive tender
- Don't know
- Other (Please specify)

27. In which geographies do you plan to implement your MDM project? [Please select all that apply.] *

- Europe
- North America (including Canada)
- Latin America
- Asia
- Africa
- Middle East
- Far East (including Australasia)
- Not decided yet

28. What proportion of the project do you plan to be business staff/your IT staff/systems integration staff? *

[ ] Percentage business staff
[ ] Percentage own IT staff
[ ] Percentage staff from systems integrator

0% total

29. Is the scope of your MDM project(s) likely to be one or more of the following? [Please select all that apply.]

- Customer
- Product
- Location
- Asset
- Material
- Finance data
- Broad multi-domain
- Don't know
- Other specific data domain (Please specify)

30. Which technologies and licensing models did you use? [Please select all that apply]*

- Traditional all-encompassing MDM solution
- Open source all-encompassing MDM solution
- Traditional data integration software
- Open source data integration software
- Traditional data quality software
- Open source data quality software
- Custom development
- Don't know

31. What do you expect to be the size of your MDM project in terms of the number of master data records to be managed? Please provide a rough estimate. *

We expect the size to be [ ] millions of records.

32. Once your project is live, what maintenance effort do you intend to budget for it in terms of proportion of the original project cost? Please express as a percentage of the estimated total project costs. *

We estimate the maintenance to be [ ] percent of the total project cost.

33. Do you intend to produce a business case for your project, with quantified return on investment e.g. net present value/IRR? *

- Yes
- No
- Not decided at this stage
- Don't know

34. What is the biggest problem you expect to face in terms of getting the project justified and its budget approved?

_____
_____
_____
_____

0/250 allowed words.

35. Do you intend to conduct a post implementation review of your MDM project? *

- Yes
- No
- Not decided at this stage
- Don't know

Company Details

36. What was your company's total revenue last year? *

- $10 billion or more
- $1 billion to $10 billion
- $500 million to $1 billion
- $100 million to $500 million
- Less than $100 million

37. Please select the main industry in which your company operates. *

- Aerospace & Defense
- Agriculture
- Banking/Insurance/Financial Services
- Chemicals/Energy/Utilities
- Computing (Hardware and/or Software)
- Construction
- Education/Training
- Government-Federal/State/Local
- Leisure/Travel/Hospitality
- Manufacturing
- Media/Publishing/Entertainment
- Metals & Mining
- Non-Profit/Charitable
- Pharmaceuticals/Biotech/Healthcare
- Professional Services/Consulting
- Real Estate
- Retail
- Telecommunications Services
- Transportation Services
- Other

38. Which of the following best describes your title or role in your company? *

- CxO, SVP or other Executive Role
- VP, General Manager, Director
- CIO or VP of Information Technology
- Enterprise Architect or Chief Architect
- Other Business Title
- Other IT Title

39. What is the general position of your organization as relates to open source software for mission critical applications (independently of your MDM project)?*

- We are already running open source software in production
- We are actively implementing open source software
- We are running pilot projects with open source software
- We are not using open source software but may consider it
- We are not using and will not be using open source software in the foreseeable future
- Don't know

40. Are you willing to take part in a brief, confidential discussion on this topic with an Information Difference analyst? *

- Yes
- No

41. Would you be willing to share your contact information with our research sponsors in order to learn more about their products?

- Yes, Baseline Consulting
- Yes, Talend
- Yes, both
- No

42. Please provide your brief contact details

First Name _____

Last Name _____

Email Address _____

Please select your country * [Please select from full list of countries provided.]

Survey 2: Systems Integrators Survey

MDM Systems Integrator Survey Q3 2009

Introduction
As part of our research into the master data management (MDM) market we would be grateful if you could tell us a little about your experiences as a systems integrator with master data management software and implementations. As you will see the survey is short and should take just a few minutes to complete.

All information provided will be used in aggregate form only and will be kept strictly confidential.

Please note that questions marked with a red asterisk (*) are required.

---

1. How many staff do you have that are trained in MDM technology?

2. Do you have a methodology specific to MDM projects?

( ) We use a waterfall approach
( ) We use an iterative methodology
( ) Other [Please specify]
( ) We use our standard project methodology (not specific to MDM)

3. How many MDM projects have you conducted in total?

4. How many MDM projects are you involved with in 2009?

5. In which geographies have you conducted your MDM projects?

[Please select all that apply.]
( ) Europe
( ) North America (including Canada)
( ) Latin America
( ) Asia
( ) Africa
( ) Middle East
( ) Far East (including Australasia)

6. Which vendor technologies have you carried out implementations of?
[Please select all that apply.]

( ) Amalto
( ) Ataccama
( ) Data Foundations
( ) Global IDs
( ) Heiler
( ) Hybris
( ) IBM
( ) Initiate
( ) Kalido
( ) Oracle (includes PeopleSoft, Siebel and Hyperion)
( ) Orchesta Networks
( ) Purisma (D&B)
( ) QAD (Full Tilt)
( ) SAP
( ) SAS (DataFlux)
( ) Siperian
( ) SmartCo
( ) Stibo
( ) Stratature (Microsoft)
( ) Sun
( ) Teradata
( ) Tibco
( ) i2
( ) Custom build
( ) None
( ) Other [Please specify]

Some definitions are included below for reference.

Registry *- This system contains pointers (keys) to where master data lives in operational systems. There is unidirectional data flow from source to hub. Data quality is still controlled at the source. Produces "best version" of data dynamically via matching at hub*
Transaction *- The system becomes the one and only source of master data; all other systems get their master data from this*
Co-existence *- The system contains master data where practical, with links to other master data sources where impractical. Bi-directional data flow between hub and sources*
Consolidation *- The system contains master data as copy. One-directional data flow from sources to hub, but not back. Suitable for analytical purposes.*

7. What proportion of your projects have been: registry/consolidation/co-existence/transaction

[Please enter as estimated percentages. A rough estimate is fine. Please note that each of these figures may be up to 100% so ignore the total.]

[ ] Registry
[ ] Consolidation
[ ] Co-existence
[ ] Transaction

The following definitions are provided to assist you to answer the next question.

Analytic MDM *- Provides authoritative master data for the purposes of enterprise-wide reporting and analysis.*
Operational MDM *- Provides authoritative master data to operational applications.*

8. What proportion of your projects have been: analytic MDM versus operational MDM?
[Please enter estimated percentages. A rough estimate is fine.]

[ ] Analytic MDM
[ ] Operational MDM

9. What is the typical size of project team that you have employed on an MDM project?

10. What is the typical length of an MDM project that you have been involved with?
[Please enter the typical length in months.]

11. Which industries have you conducted MDM projects in?
[Please select all that apply.]

( ) Accounting
( ) Advertising
( ) Aerospace / Aviation / Automotive
( ) Agriculture / Forestry / Fishing
( ) Biotechnology
( ) Business Services (Hotels, Lodging Places)
( ) Computers (Hardware, Desktop Software)
( ) Communications
( ) Construction / Home Improvement
( ) Consulting
( ) Education
( ) Engineering / Architecture
( ) Entertainment / Recreation
( ) Finance / Banking / Insurance
( ) Food Service
( ) Government / Military
( ) Healthcare / Medical
( ) Internet
( ) Legal
( ) Manufacturing
( ) Marketing / Market Research / Public Relations
( ) Media / Printing / Publishing
( ) Mining
( ) Non-Profit
( ) Pharmaceutical / Chemical
( ) Research / Science
( ) Real Estate
( ) Retail
( ) Telecommunications
( ) Utilities

( ) Wholesale
( ) Transportation / Distribution
( ) Utilities
( ) Business / Professional Services
( ) Other

12. Which one tip would you give for MDM project success?

13. Do you have any industry-specific data models that you use for MDM projects?
( ) No
( ) Don't know
( ) Yes [Please specify]

14. What is the largest MDM project that you have implemented in terms of the number of master data records managed?
[Please enter the number below in millions of records. A rough estimate is fine.]

15. What is the largest MDM project that you have implemented in terms of the number of person-years of consultant time?

16. Who do you see as your top 3 competitors for MDM engagements?
[Please select up to three.]
( ) Accenture
( ) Adastra
( ) Arhis
( ) Atos Origin
( ) Attevo
( ) Baseline Consulting
( ) BI4U
( ) CGI-American Management Systems
( ) CSC (Computer Sciences Corp.)
( ) Capgemini (formerly Cap Gemini Ernst & Young)
( ) Caritor
( ) Cognizant Technology Solutions
( ) Conversion Services IntΓÇÖl
( ) Data Hub Solutions
( ) Deloitte Consulting
( ) Detica
( ) Dialog Information Technology
( ) EMC BusinessEdge Solutions
( ) Evaxyx
( ) Fujitsu (formerly DMR)
( ) HCL Technologies Limited
( ) HP Information Services (incl EDS & Knightsbridge Solutions)
( ) HighPoint Solutions
( ) Hitachi Consulting

( ) IBM GBS (formerly IBM BCS and IBM Global Services)
( ) ITC InfoTech
( ) Infogain
( ) Infosys
( ) L&T InfoTech
( ) Logica Management Consulting
( ) LumenData
( ) Marks Baughan & Co
( ) Merckle
( ) New Frontiers
( ) Northgate Information Services
( ) Northrop Grumman
( ) One IT (BT)┬á
( ) Oracle Professional Services
( ) Patni
( ) Platon
( ) Project Performance Corporation
( ) PwC
( ) Q4K
( ) SAIC (Science Applications International Corp.)
( ) SBS (Siemens Business Services)
( ) SITA Corp.
( ) Sapient
( ) Satyam
( ) Scope e knowledge
( ) Sierra Atlantic
( ) Steria
( ) Synergic Partners
( ) Tata Consultancy Services
( ) Unisys
( ) Vivamex
( ) Wipro
( ) eVerge Group
( ) Other [Please specify]

17. What is the biggest challenge that you see for MDM project success?

18. What main benefits have your customers experienced as a result of your MDM projects?
[Please enter up to three.]

1 - _____
2 - _____
3 - _____

19. What proportion of the MDM projects that you have seen has involved: customer/product/location/asset/material/finance data/other specific data domain/broad multi-domain.
[Please enter estimated percentages. A rough estimate is fine. Please note that each of these figures may be up to 100% so ignore the total.]

[ ] Customer
[ ] Product
[ ] Location
[ ] Asset
[ ] Material
[ ] Finance data
[ ] Broad multi-domain
[ ] Other specific data domain [Please specify]

20. What is the typical ratio of staff deployed on a project: business staff/customer IT staff/your consulting staff?
[Please enter estimated percentages.]
[ ] Customer business staff
[ ] Customer IT staff
[ ] Your consulting staff

21. What have you found to be the typical license costs of the MDM software expressed as a percentage of the overall project costs?
[Please enter estimated percentage attributable to software costs.]

22. Would you be willing to participate in a brief telephone interview with an Information Difference representative?
( ) Yes
( ) No

23. Please include any additional comments you may have in the space below.

24. Please provide your brief contact details

First Name _____

Last Name _____

Email Address _____

Telephone Number _____

Please select your country * [Please select from full list of countries provided.]