

## Field Report: Semarchy for “Agile” Reference Data Management

Monday, October 5, 2015

### Why is “Reference Data Management” So Important?

Reference Data Management (RDM) is a relatively new offspring of Master Data Management (MDM) functionality. RDM provides the processes and technologies for recognizing, harmonizing and sharing coded, relatively static data sets for “reference” by multiple constituencies (people, systems, and other master data domains). Certain MDM vendors such as IBM and SAP have re-purposed their MDM hub functionality to manage reference data as a special type of master data. Such a system provides governance, process, security, and audit control around the mastering of reference data. In addition, RDM systems also manage complex mappings between different reference data representations and different data domains across the enterprise. Most contemporary RDM systems also provide a service-oriented architecture (SOA) service layer for the sharing of such reference data.

Prior to the availability of commercial RDM solutions, organizations built custom solutions using existing software such as RDBMS, spreadsheets, workflow software (business process management or BPM) and other tools. Such systems often lacked change management, audit controls, and granular security/permissions. As a result, these legacy solutions have increasingly become compliance risks. Because reference data is used to drive key business processes and application logic, errors in reference data can have a major negative and multiplicative business impact. Mismatches in reference data impact the integrity of BI reports and are a common source of application integration failure. Just as businesses no longer build their own CRM, ERP, and MDM systems, so too are organizations beginning to acquire commercial RDM solutions, which can be easily tailored or configured and have the full ongoing support of a major software vendor.

Within the realm of commercial RDM solutions, there are two main families: “multi-domain RDM,” and “real-time RDM”. “Multi-domain RDM” solutions are non-industry specific solutions that can span functional areas (finance, risk and compliance, human resources) and content types (ISO country codes, and other non-volatile reference data to be mastered and shared). “Real-time RDM” is typically a very high performance solution for use in the capital markets industry (brokers, asset managers, and securities services firms) as well as command and control military/intelligence markets.

During 2015-16, we believe a great amount of current and next-generation commerce will be facilitated by on-premises and cloud-based RDM solutions that support both “private” and “public” reference data. “Public” reference data is what many people typically think of when they consider reference data. Public reference data is based on standards where overall consistency is a primary goal. Examples of public reference data include industry standards (GS1 GPC), national standards (FIP 10-4, US Census MSA/CSA), International Standards (ISO, ISIC), and data from vendors (Bloomberg, D&B, S&P). “Private” reference data is used to maintain consistency when doing business with external parties. Examples of private reference data include financial and organizational hierarchies, and employee organizational structures. Mapping logical connections between different master data domains and reference data illustrates that both kinds of reference data (public and private) have a large number of connections to every MDM domain. This means that an error in reference data will ripple outwards affecting the quality of the master data in each domain, which in turn affects the quality in all dependent transactional systems. The heavily interconnected nature of reference data is why it requires separate management and governance.

**Clearly, Reference Data Management is a major IT initiative being undertaken by a large number of market-leading global 5000 enterprises.** Both as an IT discipline and a commercial off-the-shelf software solution, RDM solutions are being brought to market at an increasing pace. Additionally, RDM is a good entry-level project to show success for initial MDM investment which can be built on as a data governance model.

**BOTTOM LINE: Semarchy Agile RDM can provide lower TCO relative to the alternative do-it-yourself RDM based on RDBMS-based MDM. A key differentiating feature is the semantic model-driven architecture to quickly and agilely generate the required authoring screens, workflows and integration points directly from the data model with minimal IT assistance. For the intersection of: (a) governance of enterprise RDM code sets and (b) semantic agility in defining and evolving RDM assets, we believe Semarchy Agile RDM is one of the stronger and more flexible RDM solutions on the market.**

## The "Field Report" Methodology

**2015-16 "MDM & Data Governance Road Map".** Part of the deliverables for our client Advisory Council is an annual set of milestones to serve as a "road map" to help Global 5000 enterprises focus efforts for their own MDM programs. For planning purposes, we thus annually identify ten milestones that we then explore, refine and publish via our MDM Alert research newsletter. This set of "strategic planning assumptions" presents an experience-based view of the key trends and issues facing IT organizations by highlighting: MDM, Data Governance, Customer Data Integration (CDI), Product Information Management (PIM), and Reference Data Management (RDM).

Thus the 2015-16 MDM road map helps Global 5000 enterprises (and IT vendors selling into this space) utilize these "strategic planning assumptions" to help focus their own road maps on large-scale and mission-critical MDM projects. During the following year, we use these milestones as the focus for our analyst research in that every research report we write either confirms or evolves one or more milestones as its premise:

- |                          |                          |
|--------------------------|--------------------------|
| 1. Pervasive MDM         | 6. Social MDM            |
| 2. Data governance       | 7. Identity resolution   |
| 3. Business process hubs | 8. Big data              |
| 4. Universal MDM         | 9. Business-critical MDM |
| 5. Reference data        | 10. Budgets/skills       |

As an industry-funded multi-client study, the MDM Institute is releasing its **"Reference Data Management: Market Review & Forecast for 2015-16"** during 2H2016. Among other benefits, this industry report provides insights into: what is RDM, what are the business drivers for RDM, what are the major use cases, what are the technical challenges, who are the major solution providers (software vendors and consultancies), how to evaluate such solutions, and what are the best practices for RDM in the large enterprise. Additionally, the MDM Institute is providing a series of Field Reports that will provide details on the merits and caveats of the variously marketed commercial multi-domain RDM solutions.

**The majority of this Field Report on Semarchy Agile RDM capabilities therefore represents our analyst opinion buttressed by in-depth reviews, evaluations and (often) hands-on proof-of-concepts executed by the membership of the MDM Institute's Customer Advisory Council.**

## Evolution of Semarchy as a Reference Data Management Solution

Semarchy's Agile RDM capability is arguably a 4th generation MDM hub (SOA architecture, integrated data governance) that has found uptake as an RDM solution in progressive IT organizations. In short, Semarchy's Agile RDM provides out-of-the-box RDM services to centrally create, change, govern and distribute reference master data across an enterprise's entire landscape.

In our informal survey of the Semarchy customer base, we found the product used as an RDM solution in more than half of their North American customer base (10+ of the ~20 Semarchy MDM sites known to us). Concurrently, we have found that many IT departments are willing to consider a standalone RDM solution as an adjunct to their mega vendor MDM (e.g., IBM, Informatica, Oracle or SAP). This is because IT departments have found that MDM solutions that are designed for a specific domain such as Customer (Informatica MDM, IBM MDM Server) or Product (PIM solutions) are harder to adapt to RDM requirements.

### Figure 1 – Semarchy History

- *In 1998, one of first Enterprise Application Integration (EAI) software firms was successfully launched in France as Sunopsis*
- *Eight years later, the software & company were acquired by Oracle Corporation & the main product was subsequently renamed Oracle Data Integrator (ODI)*
- *From 2007-2010, the former Sunopsis management team successfully revamped Oracle's ETL strategy by merging the functionality of Oracle Warehouse Builder with ODI*
- *At the same time, this management & R&D team guided the overall Oracle Data Quality strategy & set the processes in play to acquire Datanomics & GoldenGate Software to round out the Data Integration portfolio*
- *In 2011, the same team left Oracle and took their 15+ years of working together as a Data Integration R&D & marketing team to begin start-up Semarchy*
- *2012 saw the 1<sup>st</sup> release of Semarchy MDM & the company was immediately profitable*
- *Self-funded growth established a US presence (2013) & then UK (2014)*
- *Main successes to date have been MDM in financial services & retail*
- *Long term goal for the company is to "commoditize the MDM market" similar to the shift from ERP to SFDC & from BOBJ to Tableau ... i.e., to bring MDM applications to the end-user applications & thus make MDM more immediately valuable & consumable by business users ("think SFDC, not SAP")*

Source: The MDM Institute

## Summary Evaluation - Top 10 Evaluation Criteria

As part of the interactions with its Customer Advisory Council, the MDM Institute captures and promotes models such as "top 10 evaluation criteria" for key MDM-related technologies and areas of interest. During 1H2015 and as part of the background research for the much more comprehensive "**Reference Data Management: Market Review & Forecast for 2015-16**" report, more than thirty Global 5000 size enterprises shared their software evaluation processes and also contributed commentary and supporting details for a set of "top 10" evaluation criteria for RDM solutions. These evaluation criteria (figure 1) are discussed in more detail in the above referenced market study. The majority of this Field Report in turn takes these "top 10" evaluation criteria as a framework to discuss and understand the capabilities of Semarchy Agile RDM as an RDM Hub.

**1. Ability to Map Reference Data** — An RDM hub must be able to manage application-specific or local adaptations of a reference data set (e.g., foreign language versions) along with canonical data sets. In addition, relationships between reference data sets should also be managed. With Semarchy Agile RDM, standard reference tables support both private (e.g., finance department) and public reference data (e.g., syndicated data such as DUNS and ISO and other standard reference data sets). Semarchy can accommodate most any reference data that the customer wants to draw into the model (via the business user interface).

Agile RDM supports 1:1, 1:many and many:many mappings between reference data value sets. Taxonomies and associations can be easily modeled within Semarchy to construct reference taxonomies (e.g., industry classifications, product categories, market segments) and reference data maps (e.g., crosswalk ICD-9 code sets with ICD-10 code sets). Furthermore, as changes are made to an application-specific reference data set, the data steward (subject matter expert or SME) can easily identify those changes and determine whether they require new entries to be created. Changes may also be fronted with tailored workflows to curate code changes or enable re-map activities essential to keep reference data sets accurate and relevant. The Semarchy data steward interface has Data Entry workflows as a core object to handle such mappings including RDM to RDM (e.g. SIC to NAICS) and also MDM to RDM lists (e.g., SFDC customer codes to RDM lists).

**2. Administration of Reference Data Types** — One of the common problems with homegrown reference data solutions is that a single data model cannot easily represent the many different types of reference data required for the enterprise. The data model needs to be extended to support new reference data sets, and new properties specific to the varied types of reference data being managed. Because most MDM solutions use a relational DBMS approach, model changes require development work and IT intervention to enhance the repository, screens, and interfaces. This further reinforces the need for semantic or object-oriented modeling and implementation of reference data.

Semarchy Agile RDM leverages the multi-domain flexibility as it enforces no prebuilt model (entities and relationships) and can thus model any variation of code tables and the relationships therein via its hierarchy support.

## Figure 2 - Overview of Semarchy Agile RDM

### STRENGTHS

1. *Iterative, agile methodology*
2. *Cloud availability – #1 on AMZN AWS marketplace*
3. *Flexible architecture, single platform for MDM & RDM*
4. *Semantic model, rather than pre-built model, enables flexibility to manage simple-to-complex reference data*
5. *Workbench simplifies physical MDM & allows focus on logical model*
6. *Scalable pricing*
7. *RDM credentials<sup>1</sup>*

### CAVEATS

1. *Nascent plans to support syndicated public & private reference data sets (NAICS, SIC, ICD-9/10, LEI, UDI)*
2. *Nascent Cloud story*
3. *Underinvested in marketing*

<sup>1</sup> *Billabong, Chipotle, Elsevier, Merck/MSD, MundiPharma, Oakley, PIMCO, Rolex, & Volkswagen*

Source: The MDM Institute

**3. Management of Reference Data Sets** — Semarchy Agile RDM enables collaborative co-creation between cross-functional stakeholders across the front-office, back-office and performance management-office to deliver reference data sets that ensure business agility and promote trustworthy insights. By providing intuitive UIs and agile process automation for reference data stewards/SMEs/authors as well as information contributors and consumers, an enterprise can quickly install, configure and manage reference data with minimal ongoing IT involvement. As a result of the semantic object model used to define Semarchy Agile RDM tables, all of the UIs and stewardship processes are thus semantically intuitive to business users and IT professionals. Semarchy workflows further support the management of multi-step workflows to collaborate around the approvals chain, RACI matrices, etc. This is in contrast to RDBMS-based MDM solutions retrofitted to serve as RDM solutions. Such alternative RDM-via-custom-domain solutions typically entail more initial implementation work than a purpose-built/native RDM solution. In addition, the “custom build” approach usually requires additional development effort on an ongoing basis. Comparatively speaking, many other RDM solutions do \*not\* leverage the semantic/object data model but instead take a Swiss Army knife approach to RDM in that each RDM object type is implemented as a separate MDM domain. Additionally, Semarchy Agile RDM includes a robust audit trail of workflow activity insuring that the governance of reference data is efficient and safe.

**4. Architecture/Performance** — Semarchy Agile RDM utilizes the Oracle RDBMS as its foundation and the standard Semarchy MDM platform supports 10s of millions of golden records (although classic reference data often doesn't require such large data volumes). Simply put, Semarchy benefits from Oracle's scalability regarding data volumes. For example, if the installation uses Oracle RAC then Semarchy benefits from RAC's increased performance and high availability. But Semarchy does not require these high-end RDBMS performance features, and in fact is compatible with Oracle SE1 and (even) Oracle Express Edition. For response times, it is traditionally assumed that semantic/object model databased (and thus MDM with that underpinning) does not scale up to hundreds of concurrent users. In our research, we did find that the optimum/maximum headroom for Semarchy in general appears to be 2-300 users with 30-50 millisecond response times. Note that while the RDM use case is for many enterprises batch master/slave style publish and subscribe, there are also RDM uses requiring sub-second response time to support e-commerce or simple customer/product/supplier on-boarding. When optimum online performance levels are required, Semarchy customers apply the same architecture used with IBM, Informatica and Oracle MDM hubs. That is, where single millisecond response is needed (or tens of thousands of users), IT architects will apply a “publish/subscribe” model where an enterprise service bus (ESB) receives the RDM data from Semarchy and then acts as the cache for downstream systems for extremely fast and scalable performance.

**5. Hierarchy Management Over Sets of Reference Data** — Reference code tables can be either flat lists or have hierarchies. The hierarchical structure is a key aspect of reference data that needs to be managed in addition to the values and mapping relationships. For example, a hierarchy can be defined over values within a code table, or a hierarchy might be defined where each level is a code table in its own right. While the meaning of reference data elements have low rates of change, the relationships, or hierarchies, defined by reference data change more frequently as a business realigns its reporting structures and systems to match changing business requirements. A simple example is how a company may have several definitions of what is included in North America with an alternative reference data set where the Legal department view may include Mexico in North America, yet a Sales and Marketing view may consider Mexico as part of a Latin American grouping.

This need to customize, or adapt, reference data hierarchies and definitions manifests itself across all kinds of reference data — especially private reference data from the finance department or domain. For Finance, there are often three main adaptations: tax, regulatory reporting, and managerial. However "privatized" reference data can cause problems if it loses its association with its original source. This is because sources continue to evolve (especially true for industry standards) and without lifecycle management and ties back to its “public” antecedent, the “privatized” set can quickly get out of sync (reducing the benefit of implementing a standard). This requires that the platform support adaptations while maintaining links to the original data set.



The very nature of the semantic/object model employed by Semarchy for all master data domains (party, thing and reference data) lends itself to real-world (rather than the arcane FOREIGN KEYS and JOINS required to model hierarchies in RDBMS-based MDM hubs). Thus sophisticated yet real-world modeling of hierarchy management is automatically supported by Semarchy Agile RDM by virtue of building the model to match the hierarchy requirements. Browsing and editing the hierarchies includes ragged or unbalanced hierarchies along with easy to use filters such as Microsoft Excel utilizes (Semarchy's intuitive query language [SemQL] provides access to the semantics of the logical data model so that filters that would be complex to write in SQL are intuitively and semantically simple in SemQL). Note that the name "Semarchy" is a [portemanteau](#) of "Semantic" and "Hierarchy". The Semarchy data steward application is generated automatically, and makes it extremely easy to make changes to the underlying hierarchy model. This provides great agility for customers as requirements change in terms of the reference data being modelled and its evolution over time.

**6. Connectivity** — It is vital that an RDM solution provide multiple, flexible means of connectivity to provide maximum "accessibility". Reference data must be made easily available to downstream application systems, remote subscribers, etc. Furthermore, each consumer of RDM data must be able to access the data in a means and format that is most convenient to them. Therefore, RDM solutions must be able to expose the reference data in multiple, flexible diverse ways such as: (a) on-demand access using SOAP or REST web services, (b) on-demand access or scheduled publication to flat and XML files, and (c) direct connections to remote databases. Each RDM channel must allow for retrieving either all data sets or lookups of specific entries. General RDM-consumer application connectivity channels for Semarchy Agile RDM include: Excel, CSV, databases, web services, SFDC, SAP, etc. provided out-of-the-box by the Semarchy Data Integrator. This is attractive in that Semarchy can accommodate such a broad range of application connectivity by using its own ETL (Stambia from former Sunopsis product family) ... or use Oracle Data Integrator, Informatica Power Center, Talend ETL, etc. In practice, Web Services increasingly dominates as the predominant mode for RDM distribution and connectivity. This provides an excellent combination of generic "Data as a Service". While such Web Services are conceptually identical in all situations, Semarchy Agile RDM can also generate custom web services, strongly typed based upon the semantic model. Such generic Web Services are desirable wherein a completely consistent and stable end point is desirable and the RDM deployment team understands the metadata requirements. Moreover, Semarchy's model-based Web services are perfect when the client wants a simple, strongly-typed end point to retrieve or submit data easily. Such RDM web services are self describing and automatically updated to reflect any changes to the underlying semantic model. Lastly, SQL access to Semarchy Agile RDM data is available as well.

**7. Import and Export** — The Semarchy Agile RDM solution provides import and export of reference data in multiple formats. For example, for general connectivity options include inbound and outbound mappings from/to data definitions, sources and destinations such as flat files, file servers or databases, as well as CSV and XML formats. Specific connectivity options include: Excel, SQL databases, web services, SFDC, SAP, etc. as provided by the Semarchy Data Integrator. For more customizable import/export, there is programmatic import/export available through APIs.

**8. Versioning Support** — The notion of "time travel" or "temporal RDM" relates to the ability to traverse forward or backwards in time ("effective dates", etc.) in support of recreating reference data tables and the hierarchies that manage the reference data relationships. Semarchy Agile RDM's "Golden Data" approach ensures that atomic level management of temporal aspects (data and relationships) fully enables "effective dating" and supports versioning of reference data sets and related mappings. Such versioning is used in conjunction with lifecycle management to manage changes to the reference data sets and mappings over time. This versioning support manages the lifecycle of a canonical set, the lifecycle of application-specific or local sets mapped to the canonical, and the lifecycle of the mappings themselves. Semarchy's built-in versioning supports the "time travel" use case in that it performs version management for both the merged "Golden Data" as well as the "Master Data" from each source system. Analytics based on changes over time are easy to accomplish as Semarchy automatically manages the data as a slowly changing dimension. A single table

contains the changing versions of the data for each data set. For the large number of SFDC customer struggling with change management of the members/hierarchies, it has been found helpful to treat SFDC as current system of record, with history maintained in Semarchy. Additionally, custom versioning requirements may be managed through Semarchy's semantic modeling (e.g., "effective dating").

**9. Security and Access Control** — As with any master data, workflow-based security as to "who can do what" is critical for such enterprise information assets as reference data. Row-based security enables the enterprise to control who sees what data. Attribute-based security also provides control at the reference table cell level (read/write/no access). Semarchy's Agile RDM security is straight forward to set up and leverages all the standard security systems (ACLs, LDAP, Microsoft Active Directory).

**10. E2E Lifecycle Management** — A robust data governance facility for an RDM solutions should include UI and workflow processes to support formal governance of reference data, thus putting end-to-end lifecycle management of enterprise reference data in the hands of business users — reducing the burden on IT, and improving the overall quality of data used across the organization. This change management process is controlled through a configurable lifecycle management facility that is used by the data stewards to control versions of reference data sets and mappings that are in use. Every reference data set and mapping has a state that corresponds to its current state in the lifecycle (e.g., draft, approved, retired).

The Semarchy Agile RDM solution supports lifecycle management such that lifecycle states and transitions are configurable without requiring development, enabling the formal governance processes to keep up with a company's changing governance requirements. The solution provides full agility to make changes in the Development environment with additional structure and traceability in test and production environments. Thus the history of RDM metadata is always documented, as is the history of the data. The "create phase" of authoring reference data requires the agility to quickly make changes and test the results and the "deploy phase" requires the agility to push tested changes into production quickly. Therefore, trust in corporate reference data is critical. Semarchy Agile RDM ensures this by letting users know where the data came from, when it will expire, and what did it historically look like.

## Competitive Outlook

Competition for a multi-domain RDM product such as Semarchy Agile RDM solution includes:

- Custom-built, manual solutions
- Hierarchy management system adaptations
- Custom MDM domain type
- Multi-domain RDM
- Purpose-Built or Industry-Specific RDM

**Custom-Built, Manual Solutions** — Many enterprises struggle with home-grown RDM using spreadsheets and other error-prone manual processes to manage to reference data sets and their relationships to each other. Just as customer-built CRM, ERP and MDM have faded when commercial off-the-shelf solutions became widely available, so too will manual RDM solutions fall into disfavor. With custom-built or home-grown RDM solutions stewards have to rely on IT for changes to functionality and are unable to change the business rules relating to the reference data themselves. Semarchy often struggles to get the attention of large, well-known consulting firms for two reasons: (1) these consultancies would rather sell clients a custom RDM solution; and (2) they would rather implement more complex RDM modules that increase implementation cycles and grow billing potential. Semarchy Agile RDM is a lightweight RDM solution with a relatively small footprint that is easy to deploy and administer.

**Hierarchy Management System Adaptations** — Organizations can attempt to use simple hierarchy management software, but such systems do not readily support publish-subscribe, classification mapping, etc. (e.g., Microsoft Master Data Services (MDS)). Many finance departments use tools such as Microsoft MDS for financial hierarchies and attempt to apply these tools to hierarchies in human resource assets, location assets, etc. To provide rudimentary RDM-like capabilities, any organization that utilizes Microsoft MDS will also need to introduce another 3<sup>rd</sup> party RDM bolt-on such as Profisee, Riversand and Visionware. This approach has not proven enterprise-scalable in our experience and introduces multi-vendor complexities. Because Semarchy Agile **RRM** is a multi-domain RDM, it is possible for it to handle both hierarchies for Finance departments and other domains.

**Custom MDM Domain Type** — Both Informatica (Informatica MDM) and SAP (SAP Master Data Governance CUSTOMER object) offer the capability for custom domains to be created and managed to implement reference data management. Reports from organizations that have gone this route indicate that it is not as easy to implement RDM as a custom domain type as these vendors promote. In multi-domain MDM solutions originally designed for managing customer data (e.g. IBM MDM Server and Informatica MDM), organizations report lack of data modeling flexibility, rudimentary lifecycle management capabilities and limited data governance features, in particular around authoring, workflow and cross-temporal relationship management. Additionally, such solutions (IBM, INFA) are not as good at working with subject areas that reside at the intersection of multiple domains (RDM often involves working with multi-dimensional constructs, code blocks, mappings, etc.), all areas where Semarchy excels. Furthermore, SAP's MDG approach to domain customization is only appropriate for those very large organizations that have the in-house SAP expertise necessary to custom code such hierarchy management and related RDM capabilities.

**Multi-Domain RDM** — Certain of the commercially available MDM products were architected with semantic layers on relational DBMS which provided flexibility in defining and managing multiple domain types (hence the name "multi-domain" or "multi-entity" MDM). While these products provide good flexibility and ease of use, the market feedback is that certain of these systems incur substantial processing overhead when attempting to scale into a large-scale enterprise solution. As an architectural/performance tuning option, certain of these RDM solutions offer the ability to run parts or all of the RDM/MDM platform on a standard relational DBMS platform.

Approaches to data governance of reference data vary among the multi-domain RDM offerings— ranging from the “do-it-yourself approach” (tool kit with additional integration required to data quality and related facilities) vs. systematic data governance operating model including a scalable information model that is coupled with support for configuring complex business rules (without coding), and data-driven orchestration of processes to automate change management and data remediation.

**Purpose-Built or Industry-Specific RDM** — Certain enterprises have used SAP's PIM solution as a consolidation type of RDM support. For example, consider SAP's "item master" with its staging areas and mini model for landing reference data which also includes simple workflows. There are also purpose-built RDM solutions which leverage the hierarchy management capabilities of a mainstream MDM platform such as IBM MDM Server and Kingland Systems' Security Master. Other organizations have attempted to manage look-up tables such as RDM data via an existing Asset Control, Eagle or GoldenSource real-time RDM by simplifying what features are used. The challenge in this scenario is that many times these premium priced real-time RDM solutions do not make good economic sense.



## BOTTOM LINE

**While MDM software acquisition is often at LOB or departmental level sales, the acquisition of RDM software is more certain to be enterprise IT-driven rather than business-sponsored. Semarchy Agile RDM can provide lower TCO relative to the alternative do-it-yourself RDM based on RDBMS-based MDM. A key differentiating feature is the semantic model-driven architecture to quickly and agilely generate the required authoring screens, workflows and integration points directly from the data model with minimal IT assistance.**

Coming to market during 2015-16 are RDM solutions characterized by multiple, diverse levels of integration with market-dominant operational MDM hubs (IBM, Informatica, Oracle, SAP) as well as repackagings of existing mid-market MDM and data governance capabilities to address RDM business needs (e.g., Ataccama, Collibra, Orchestra Networks). Semarchy is in the vanguard of such data governance-enabled products and is an excellent choice for RDM in enterprises ranging from SMB to Global 5000 size. Clearly, the Semarchy solution has certain advantages in that it is architected (and proven) to support both business user-driven management, stewardship, and distribution of reference data within the enterprise. The challenge for Semarchy is to grow its most common customer/prospect profile from “innovative/disruptive market leader (fast moving IT departments such as Billabong, Chipotle, Elsevier, Merck, Oakley, PIMCO and Volkswagen)” into more traditional IT organizations. The current Semarchy most common customer is IT groups with a progressive attitude and willing to execute new-ish tech such as semantic database, open source, RDM, etc. While such organizations do not put a huge premium on being mainstream established IT solutions provider and therefore are partial to new technologies that is only slowly being embraced by mega vendors.

**For the intersection of: (a) governance of enterprise RDM code sets and (b) semantic agility in defining and evolving RDM assets, we believe Semarchy Agile RDM is one of the stronger and more flexible RDM solutions on the market.**

See you at the next annual MDM & Data Governance Summit in your hemisphere where we will be hosting panels on "Best Practices in RDM" as well as providing industry-specific case studies and more on reference data management.



Aaron Zornes

Chief Research Officer

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Independent, Authoritative, & Relevant

## About the MDM Institute

The MDM Institute is the world's leading research and advisory consultancy exclusively focused on master data management. As chief research officer, Aaron Zornes delivers the technology-related insight necessary for its clients to make the right decisions in their use of master data management (MDM), customer data integration (CDI), reference data management (RDM) and data governance solutions to achieve their customer-centric business goals. The MDM Institute provides authoritative, independent and relevant consulting advice to senior IT leaders in corporations and government agencies, to business leaders in high-tech enterprises and professional services firms, and to technology investors. The MDM Institute delivers its research and advice to more than 60,000 clients in 10,500 distinct enterprises via Twitter, Linked In, Xing, Google+ and email newsletters. Additionally, each year more than 2,000 paid delegates attend its MDM & Data Governance Summit conference series held in London, New York City, San Francisco, Singapore, Sydney, Tokyo and Toronto (now in its tenth year). Founded in 2004, the MDM Institute is headquartered in San Francisco and has clients primarily in North America, Europe and Asia-Pacific. For more information, visit <http://www.the-mdm-institute.com>.

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