

Magic Quadrant for Customer Data Integration Hubs, 2Q07

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The CDI hub market continues to grow rapidly and is starting to mature. IBM, Oracle and SAP are taking the lion's share of the market, but best-of-breed vendors continue to differentiate in terms of their capabilities and their strength in key vertical markets.

WHAT YOU NEED TO KNOW

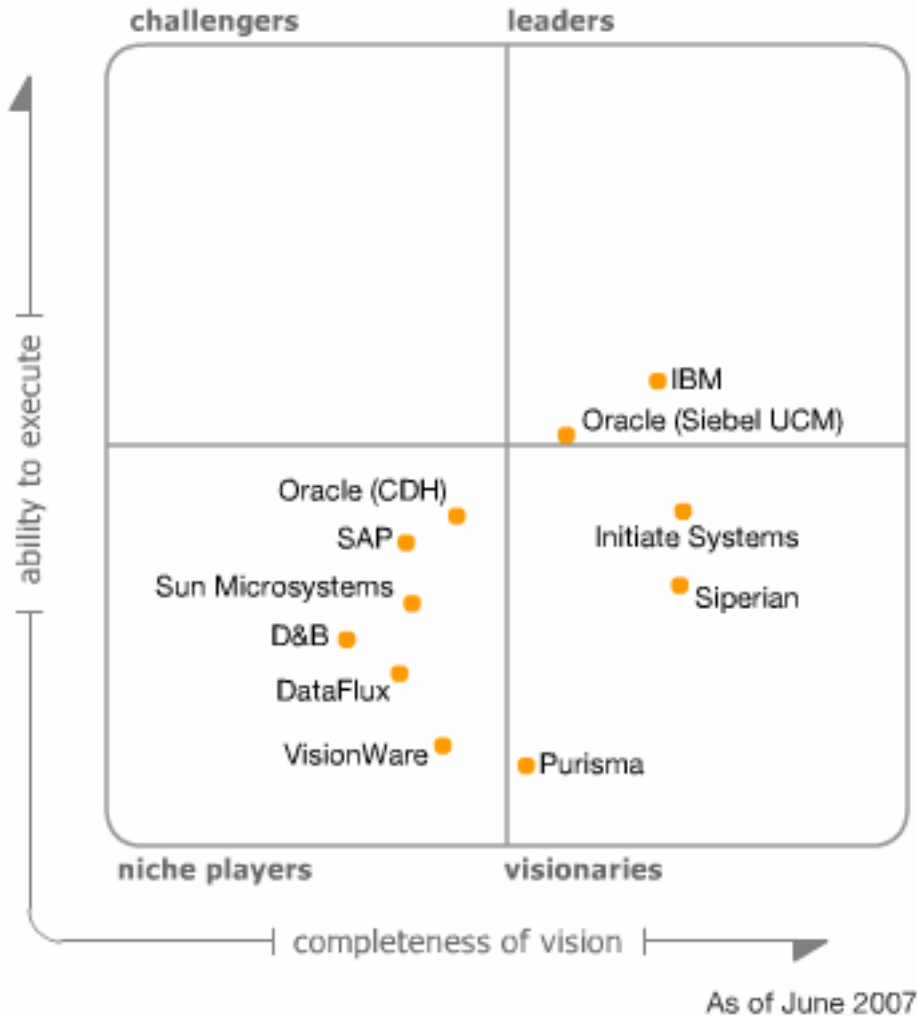
Organizations that lack a consistent, complete and accurate single view of the customer in a heterogeneous environment have the choice of building or buying a solution for managing customer master data. Since 2003, the trend has swung heavily toward buying. Gartner's 2Q07 Magic Quadrant provides a relative positioning of the packaged customer data integration (CDI; see Note 1) hub products and vendors, based on a comprehensive set of criteria.

Use this Magic Quadrant to understand the market and how Gartner rates the leading CDI hub vendors and products. Draw on this research to evaluate vendors based on your own customized set of objective criteria. Gartner advises organizations to not simply select vendors in the Leaders quadrant. All selections are buyer-specific, and vendors in the Challengers, Niche Players or Visionaries quadrants may be a better match for your requirements. Technology is not the only thing that you need to get right. Organizational issues can be more difficult to solve. To succeed, you will need to put together a strong business case, get high-level sponsorship, set up the appropriate data stewardship and governance environment, and provide strong program management.

MAGIC QUADRANT

Gartner's 2Q07 Magic Quadrant for CDI hubs provides insight into the evolving CDI hub market. It positions CDI hub technology providers on the basis of their completeness of vision relative to the CDI hub market and their ability to execute that vision.

Figure 1. Magic Quadrant for Customer Data Integration Hubs, 2Q07



Source: Gartner (June 2007)

Market Overview

The creation of the single view of the customer is not a new aspiration; however, most organizations have struggled throughout the years to meet the goal. Since 2003, interest in CDI has grown dramatically as organizations have revisited their need for a single view of the customer and their capability to achieve it. A combination of supply and demand factors has driven this interest.

On the demand side, there are strong business drivers for improved revenue, profit, customer experience and loyalty on one side of the equation and costs savings, risk management and regulatory compliance on the other side of the equation. All require a single customer view, but most large organizations continue to have a heterogeneous application portfolio with fragments of often inaccurate, incomplete and inconsistent data residing in various silos. Many organizations

thought that CRM and ERP systems would solve this problem, but sometimes they created additional silos.

Organizations are investigating approaches, such as CDI hubs. These software products:

- Support the global identification, linking and synchronization of customer information across heterogeneous data sources
- Create and manage a database-based system of records
- Enable the delivery of a single customer view

Historically, organizations, such as large banks, built their own operational customer master database; however, since 2003, a diverse set of vendors have rushed to supply packaged CDI hub solutions. Gartner published its first annual Magic Quadrant for CDI hubs in 2005. In 2007, after reaching a level of maturity in products, skills and experience, CDI hubs are becoming suitable for fast followers and early adopters. However, risks exist because vendors' products vary in terms of their sweet spot, and vendors have varying levels of capability in different vertical markets and geographies.

The CDI hub market has grown rapidly in the past couple of years. In 2006, the total software revenue (license and maintenance) grew more than 56% from 2005 (see "Market Share: CDI Hub Software, Worldwide, 2006, Composite View"). Investments have taken place across all vertical industries, including government, and in consumer and business customer situations. The leading vertical industry is financial services. Before 2006, most of the interest in CDI hubs was in North America; however, during 2006, we saw a major upswing in interest and investment in Europe, often, but by no means always, in the context of a wider master data management (MDM; see Note 2) strategy.

IBM, Oracle and SAP accounted for nearly 60% of the market share in 2006, but best-of-breed vendors (such as Initiate Systems and Siperian) continue to differentiate themselves in terms of their capabilities and their strength in key vertical industries. We expect further consolidation during the next few years, with the strongest best-of-breed vendors surviving. Increasingly, vendors are repositioning for MDM, but keeping their drill-down focus on CDI requirements. The CDI hub market will continue to grow healthily for several years, but with gradually reducing growth rates. The CDI hub software market will account for nearly \$1 billion in software revenue in 2011 (see "Forecast: CDI Hub Software, Worldwide, 2006-2011, Composite View").

In this 2Q07 CDI hub Magic Quadrant, IBM is joined by Oracle (by virtue of its Siebel UCM product) as the only vendors in the Leader's quadrant. IBM has fallen just behind the leading best-of-breed vendors Initiate and Siperian (which are well-placed in the Visionaries quadrant) in terms of completeness of vision. Oracle has strong sales momentum with Siebel UCM, and its references are much improved. Oracle's Customer Data Hub (CDH) product is mainly positioned for existing E-Business Suite customers. SAP continues to improve, but is still mainly chosen for business-to-business (B2B) customers within SAP's base. Sun Microsystems places its focus on selling the overall Sun Java CAPS suite and does not have a strong CDI hub road map. DataFlux is taking a graduated approach to CDI and often prefers to sell its data quality platform or accelerators, as opposed to its CDI Solution. VisionWare continues to do well in the government, is becoming more cross-industry and is expanding into North America. It is the only Microsoft .NET-based CDI hub. Purisma continues to show innovation, particularly in managing business customer data, and is starting to extend its reach through reseller agreements. Finally, we have added D&B this year. It provides an option for B2B organizations, but it lags other offerings in terms of functionality and breadth of vision.

Market Definition/Description

Organizations have a common set of needs regarding the management of customer master data and the creation of a single view of the customer. CDI hubs, as in "hub and spoke" architecture, are packaged software products that meet that need in a strategic manner. Since 2003, a market for CDI hubs (see Note 3), has become established and is steadily maturing.

CDI hub products:

- Support the global identification, linking and synchronization of customer information across heterogeneous data sources through semantic reconciliation of reference data
- Create and manage a central, database-based system of record
- Enable the delivery of a single customer view (for all stakeholders)
- Support customer data quality compliance through monitoring and corrective action techniques

CDI hub architectural forms vary in terms of:

- Instantiation of the customer master data — varying from the maintenance of a physical customer profile to a more-virtual, metadata-based, indexing structure
- The use of the customer master data — varying from supporting operational requirements to supporting analytical requirements
- The latency of the customer master data maintenance — varying from real-time, synchronous reading and writing of the master data in a transactional context to batch, asynchronous harmonization of the master data across systems

Vendors have different "sweet spots" relative to these architectural forms and many scenarios exist (see Note 4).

Organizations use CDI hub technology as part of an overall CDI strategy. CDI enables organizations to establish a "single version of the truth" around a fundamental set of customer data elements necessary to ensure the consistency, accuracy and accountability for these core information assets. CDI is part of MDM, which goes beyond customer data to include product, asset, person, party, supplier, financial and other domains or subject areas that organizations deem to have cross-functional significance. Within MDM are CDI hub technologies that focus on managing the domain relating to customer data, whereas product information management (PIM) technology focuses on the domain relating to product data (see "Magic Quadrant for Product Information Management, 2Q07"). MDM is part of the broader organizational mandate to manage all information, not just master data, as strategic assets. Gartner defines this movement as enterprise information management (EIM; see Note 5) — see "Gartner Definition Clarifies the Role of Enterprise Information Management."

Inclusion and Exclusion Criteria

Inclusion Criteria

In view of the relative immaturity, but rapid growth, of the CDI hub market, we continue to set the bar for inclusion criteria relatively low. As the market evolves, these criteria will become more stringent. We include specialist vendors, as well as large enterprise software vendors with a product in the market, along with additional vendors that Gartner views as having a unique vision or position in the market worthy of inclusion, even if they do not fully meet the all inclusion criteria.

Market traction and momentum — The vendor should have:

- At least eight (up from five) live customer references for CDI hub product functionality
- At least five (up from four) new customers for CDI hub products in the past four quarters
- At least \$7 million (up from \$5 million) in total revenue related to CDI hub product software in the past four quarters

Near-term viability — The vendor should have:

- Sufficient professional services to fulfill customer demand during the next six months
- Enough cash to fund a year of operations on current burn rate — that is, companies spend their cash reserves if the year of operations is cash-flow-negative

Exclusion Criteria

This Magic Quadrant excludes:

- *Vendors focused on a single vertical market.* We have excluded CegeDIM and Dendrite (now owned by CegeDIM) on the basis that they only focus on the life science industry. Similarly, we have excluded Cicada and GoldenSource because they only focus on the financial services industry.
- *Marketing service providers or data providers.* We have excluded Acxiom and Experian on the basis that although they provide an external CDI reference database service (see Note 6), they don't provide a CDI hub product that can be implemented within an organization's firewall. We recognize that their data services and external CDI reference database services are potentially valuable complementary services to the CDI hub products rated here. D&B is similar in that it provides data services and an external CDI reference database, but it also provides an on-premise CDI hub, Integration Manager. Thus, we have evaluated it.
- *Vendors that are still too small or too new to the market.* We have excluded Orchestra Networks because it does not meet the revenue qualifier and have excluded Software AG, which is reselling Orchestra Networks' product as webMethods Master Data Manager, because it is too new to the CDI hub market. We have also excluded Teradata, which is too new to the CDI hub market and does not have references managing customer master data yet.
- *MDM vendors that solely focus on analytical (downstream) requirements.* Although we will increasingly see interest in solutions that tackle the analytical environment aspects of CDI and MDM, in the 2007 CDI Hub Magic Quadrant, we are excluding products that solely focus on MDM issues for analytical requirements. This includes Hyperion MDM (now owned by Oracle), Kalido 8M and Stratature +EDM. (now owned by Microsoft).

A high-level overview of these vendors and service providers is in Note 7.

We continue to include Oracle CDH and Siebel Universal Customer Master (UCM) on the basis that following its acquisition of Siebel, Oracle continues to sell both products under the banner of Oracle Customer Hub, which, in turn, is part of Oracle MDM's offerings.

Added

D&B, which has its Integration Manager product, has been added to this year's Magic Quadrant.

Dropped

Cordys has been dropped following its repositioning as a business process management suites vendor and its reduced focus on CDI and MDM.

Evaluation Criteria

Ability to Execute

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Technology providers are judged on their ability and success in capitalizing on their vision. The criteria and weightings are almost exactly the same as those used in the 2Q06 Magic Quadrant for CDI hubs, with the exception that data stewardship and workflow requirements (to address increasingly important data governance requirements) are more explicitly called out and the implementation styles for CDI hubs are updated in line with Gartner's September 2006 update (see "How to Choose the Right Architectural Style for Master Data Management").

Vendors are rated on the basis of the following criteria (and weighting):

Product (High)

Software products offered by the vendor compete in and serve the CDI hub market. This includes product capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Vendors are measured on the ability of the product release to support the following CDI hub product subcriteria:

1. Data modeling capabilities — The applicability of the data model to your organization is a fundamental requirement. It must:

- Model the relationships between the organization and its business and consumer customers, as well as intermediaries and other parties, with the ability to handle complex hierarchies
- Map to the master customer data requirements of the entire organization, not just to selected areas
- Be configurable, customizable and extensible, but also upgradable
- Support vertical-industry-specific requirements
- Provide a base for the required workload mix and level of performance
- Be expressed using commonly accepted logical data model conventions with associated metadata

2. Information quality management capabilities — A good data model is of little value unless it contains accurate, up-to-date data for a customer. The CDI hub product should:

- Have strong facilities, in batch and real-time mode, for cleansing, matching, linking and identifying customer master data in different data sources to create and maintain the "golden record"; these facilities may be provided by the CDI hub vendors or by offering tight integration with products from specialist data quality partners

- Support a "data steward" role, enabling data stewards to manage customer data throughout its life cycle and provide data governance, including the ability to:
 - Configure rules for matching and linking the data
 - Review data quality metrics and take corrective actions
 - Determine where to source data and under which circumstances, including the ability to give preference to the most-dependable source
 - Manage the merging or unmerging of customer data with full auditability and survivability
 - Ensure that business rules and associated metadata related to data cleansing are sufficiently visible to satisfy compliance requirements

3. Loading, integration and synchronization capabilities — The CDI hub product needs to provide facilities for loading the customer data in a fast, efficient and accurate manner. There will also be a need for integration middleware, including publish and subscribe mechanisms, to provide a communication backbone for the bidirectional flow of customer data between the central database or hub, and the spoke systems. These facilities may be provided by the CDI hub vendor or by offering tight integration with products from specialist middleware partners. The CDI hub product should be able to:

- Leverage a range of middleware products to data sources, including legacy data sources, and expose industry-standard interfaces
- Support integration with different latency characteristics and styles (for example, real time and batch)
- Support integration with downstream business intelligence and analytical requirements

4. Business services and workflow functionality — Many leading organizations will plan to use the new customer master database as the basis for new business applications. In the new SOA world of enterprise architecture, service-oriented composite business applications may consume CDI hub business services through Web services standard interfaces. The CDI hub should protect and complement the data layer with a layer of business services for accessing and manipulating the customer data that is built for an SOA environment, and exposing Web services interfaces.

5. Performance, scalability and availability capabilities — If the CDI hub supports operational applications and is tightly integrated with established systems and new applications, then serious demands are likely to be made on its performance, scalability and availability. The CDI hub should have:

- Proof points, preferably through live references, of different aspects of performance and scalability that match your current and future requirements
- Appropriate availability characteristics regarding planned and unplanned downtime

6. Manageability and security capabilities — Facilities need to be available to manage the CDI hub, such as facilities for reporting on activity in the CDI hub and the ability to report on the quality of data within the CDI hub. Also, vendors need to demonstrate an ability to integrate the CDI hub with common system management tools, such as BMC Patrol and HP OpenView.

On the security and data privacy management front, vendors need to have the ability to:

- Manage the policies and rules associated with potentially complex privacy access rights

- Configure and manage different rules of visibility, providing different views for different roles

7. Technology and architecture considerations — CDI hub solutions should be capable of flexible configuration into a range of architectural styles in terms of instantiation, latency and use of customer master data to enable it to satisfy different use-case scenarios, such as the consolidation, registry, coexistence and transaction scenarios. The vendor will also be measured on the ability of its architecture to support global rollouts and localized international installations.

Overall Viability (High)

Viability includes an assessment of the CDI hub vendor's financial health, the financial and practical success of the business unit or organization in generating business results in the CDI hub market, on a global basis, and the likelihood of the organization or individual business unit to continue to invest in developing the product, offering the product and advancing the state of the art within the organization's portfolio of products.

Sales Execution (High)

The vendor's capabilities in all CDI hub-related, pre-sales activities, on a global basis, and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record (Standard)

Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve, and market dynamics change within the CDI hub market. This criterion also considers the vendor's history of responsiveness.

Marketing Execution (Standard)

The clarity, quality, creativity and efficacy of programs designed to deliver the vendor's message, on a global basis, to influence the CDI hub market, promote the brand and business, increase awareness of the products and establish a positive identification with the product/brand and organization in the buyers' minds. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience (High)

Relationships, products and services/programs that enable clients to be successful, on a global basis, with the products evaluated. This includes implementation and support and the way customers receive technical and account support. It also includes a measure of clients' success in implementing CDI hub products, having customer references and achieving total cost of ownership

Implementation and Support:

- Professional services — Provide internal professional service resources or partner with external service providers (ESPs) with vertical industry expertise, CDI hub domain knowledge, global and localized country coverage, and a broad skill set (for example, project management and system configuration) to support a complete project life cycle.
- Customer support — Provide satisfactory prompt service to its customers worldwide with ranges of service-level agreements to meet different requirements.
- User groups — Provide support to an active user group.

Customer References:

The vendor must produce a sufficient number of production-level references, on a global basis, with varying levels of scenario complexity and workload to demonstrate the viability of its CDI hub product in the marketplace.

Total Cost of Ownership:

The total cost of ownership for the CDI hub product during a three- to five-year span, including purchase of software license, implementation, and ongoing maintenance and administration, should provide a good balance between cost and the value obtained.

Operations (No Rating)

The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, such as skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis. This criterion was not explicitly rated, but was rolled into the Viability and Sales and Marketing Execution criteria.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	high
Overall Viability (Business Unit, Financial, Strategy, Organization)	high
Sales Execution/Pricing	high
Market Responsiveness and Track Record	standard
Marketing Execution	standard
Customer Experience	high
Operations	no rating

Source: Gartner

Completeness of Vision

Gartner evaluates technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and competitive forces, and how well they map to the Gartner position. Technology providers are rated on their understanding of how market forces can be exploited to create opportunities for them. The criteria and weightings are almost exactly the same as those used in the 2Q06 Magic Quadrant for CDI hubs, with the exception that a higher weighting was given to the need to position CDI hub offerings within an context of a emerging, wider, multidomain, MDM market.

Vendors are rated on the basis of the following criteria (and weighting):

Market Understanding (High)

Ability of the vendor to understand buyers' needs and translate these needs into products and services. Vendors show the highest degree of vision and listen to and understand buyers' wants and needs, and can shape or enhance those wants with their added vision. Vendors should demonstrate a strategic understanding of CDI hub opportunities (for example, new application functionality or customer segments) and ongoing vendor market dynamics (for example, consolidation trends) on a global basis, and translate these needs into products and services.

Additionally, vendors must understand the wider implications and position of CDI within an organization's multidomain MDM strategy, as well as the impact and relationship of CDI to an EIM program and business process platform strategy.

Marketing Strategy (High)

Vendors must have a clear, differentiated set of CDI hub messages consistently communicated throughout the organization and externalized globally through the Web site, advertising, customer programs and positioning statements. Intersection with CDI, MDM and industry challenges, as expressed by Gartner clients, is important.

Sales Strategy (Standard)

Vendors' strategies for selling CDI hub products should use the appropriate global network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy (High)

A vendor's approach to product development and delivery should emphasize differentiation, functionality, methodology and feature set as they map to current and future requirements. The vendor's published "statement of direction" (or Gartner's understanding of it) for the next two product releases needs to keep pace with or surpass Gartner's vision of the CDI hub market. Gartner's main product-oriented criteria focus on:

- Data-modeling capabilities
- Information quality management capabilities
- Loading, integration and synchronization capabilities
- Business services and workflow functionality
- Performance, scalability and availability capabilities
- Manageability and security capabilities
- Technology and architectural considerations

The vendor needs to offer a CDI hub product that can be configured into a range of architectural styles, in terms of instantiation, latency and use of customer master data, to enable it to satisfy different use-case scenarios, such as the consolidation, registry, coexistence and transaction-style scenarios.

The vendor must also understand major technology/architecture shifts in the market and communicate a plan to leverage them, including migration issues that may affect customers on current releases. Specifically, the vendor should have a vision to support mainstream software infrastructure technology, as opposed to a proprietary stack, and have an evolutionary path toward service-oriented architecture (SOA).

Business Model (Standard)

Vendors are assessed on the soundness and logic of their underlying business proposition. Vendors should have a well-articulated strategy for revenue growth and sustained profitability. Key elements of strategy include the sales and distribution plan, internal investment priority and timing, and partner alliances, such as with ESPs.

Vertical/Industry Strategy (High)

Vendors need to have strategies to direct resources, skills, and offerings to meet the specific needs of individual market segments, including vertical industries. Included are reviews of the vendor strategy for meeting the needs in specific vertical industries, such as banking, manufacturing, communications and government.

Innovation (High)

Vendors need to be able to lead this market and, in so doing, provide customers with an innovative solution and approach to service customer needs in a complex, heterogeneous environment. Innovation implies a well-rounded and well-thought-out road map for solving CDI issues and an understanding of wider, multidomain, MDM issues.

Geographic Strategy (Standard)

Vendors need to have strategies to direct resources, skills and offerings to meet the specific needs of geographies outside their base or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market. This includes sales, marketing and support for complex global companies.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	high
Marketing Strategy	high
Sales Strategy	standard
Offering (Product) Strategy	high
Business Model	standard
Vertical/Industry Strategy	high
Innovation	high
Geographic Strategy	standard

Source: Gartner

Leaders

Leaders have strong results and delivery capabilities now, and will continue to have them in the future. They typically possess a large and satisfied customer base (relative to the size of the market) and enjoy high visibility within the market. The size and financial strength of leaders enable them to remain viable in a challenging economy. Leaders have mature offerings and a track record of successful deployments, even in the most challenging environments, across all geographies and in many vertical industries. Leaders have the strategic vision to address evolving client requirements. However, they are not necessarily the best choice in all cases.

Challengers

Challengers demonstrate a clear understanding of today's CDI hub market, but they have not demonstrated a clear understanding of the CDI hub market direction or are not well-positioned to capitalize on emerging trends. They often have a strong market presence in other application areas.

Visionaries

Visionaries display healthy innovation and a strong potential to influence the direction of the CDI hub market, but they are limited in execution or demonstrated track record. Typically, their products and market presence are not yet complete or established enough to reach leadership status.

Niche Players

Niche players do well in a small segment of the CDI hub market or have limited ability to be innovative or outperform other vendors in the market. They may be focused on a specific functionality, domain or industry, or have gaps relative to broader CDI hub functionality requirements. Niche players may have limited implementation and support services, or have not yet achieved the necessary scale to solidify their market positions.

Vendor Strengths and Cautions

D&B

Strengths

- D&B is the world's leading provider of business information related to companies. It has a dominant position in the U.S. market with strong brand recognition in U.S. B2B sales and marketing departments. It has a substantial, but not as strong, worldwide presence. D&B has good viability with 2006 revenue of \$1.5 billion.
- CDI is a major focus for D&B, which can leverage its leading position in the data service market and its DUNSRight process to provide a range of subscription-based CDI offerings and consultancy to meet sales and marketing functional requirements in large enterprises. It is also targeting enterprise requirements.
- D&B can offer a CDI hub, Integration Manager, that combines an organization's data and D&B enrichment data in an on-premise solution that has tight integration with D&B's external reference database. It leverages the D&B data, D&B's matching technologies and the DUNSRights process to identify entities, build legal entity hierarchies and enrich customers' data.
- Integration Manager is generating growing subscription-based revenue.

Cautions

- D&B has strong brand recognition in U.S. B2B sales and marketing departments. It is well-known for its data provision services, but has poor recognition in IT departments as a supplier of enterprise software solutions.
- D&B's focus is restricted to business organization data, and not consumer data. Therefore, it only addresses part of the overall CDI market requirements. In addition, D&B only focuses on the customer data domain and has no multidomain MDM vision.
- Integration Manager has a good customer base in the U.S., but it lacks presence in other geographies.
- Integration Manager is unique in its ability to tightly couple D&B and customer data, but it lags best-in-class products in various functional areas. Integration Manager needs

improvement in data model flexibility, multiple hierarchy management, matching technology, data stewardship facilities and flexibility in architectural styles.

DataFlux

Strengths

- DataFlux has strong data quality and integration capabilities, a good market position and CDI project experience to offer a packaged CDI solution and later more-generic MDM solutions.
- It has strong viability. DataFlux is wholly owned by SAS, but it keeps its own brand and has a large degree of autonomy.
- The company offers a graduated approach to CDI and MDM. It offers its data quality platform, CDI accelerators or the CDI solution, depending on the organization's maturity in data management and its proactiveness.
- DataFlux Solution for CDI v.1.2 has good workflow and data stewardship capabilities, mainly focusing on consolidation, registry and coexistence scenarios.

Cautions

- DataFlux is relatively late to the packaged CDI hub and MDM markets. It is more comfortable selling its data quality platform and accelerators than its CDI solution.
- The company needs to demonstrate strong references based on the CDI solution approach in different vertical industries and use cases. DataFlux's CDI solution is not yet referenceable widely in high-volume transactional implementations.
- DataFlux will need to build up its international reach, although it can leverage SAS Institute's organizational strength. DataFlux has limited organization outside North America, and its main focus is on data quality platform sales.
- Its CDI projects have not tended to use the off-the-shelf data model, which needs greater modeling flexibility, hierarchy management and verticalization.

IBM

Strengths

- WebSphere Customer Center (WCC) v.7.0 is well-architected for SOA, has a comprehensive generic data model and business services layer, and has improved data quality and loading capabilities following Ascential QualityStage and DataStage integration. WCC can operate in combination with IBM's Entity Analytics Solutions to provide identity and relationship resolution.
- WCC has the strength of IBM's R&D, sales and marketing behind it. The product achieved strong growth rate of 140% between 2005 and 2006, and it was the largest selling CDI hub product in 2006.
- IBM's WCC has a strong customer base with good references and numerous strategic, multiphase rollouts in progress.

- The experience and knowledge of IBM's core personnel is often a differentiator with prospects, but IBM needs to ensure the availability of sufficient experienced implementation consultants to complement the success in license sales.

Cautions

- A major upgrade is forthcoming as WCC v.7 converges with WebSphere Product Center (WPC) to create Multiform MDM v.1. Further integration with Ascential products and Information Server is also in the pipeline. Data stewardship user interface and workflow needs improvement.
- WCC's value-based pricing model is seen as expensive, with numerous add-on options.
- WCC has limited verticalization outside of financial services, making it difficult to compete with Initiate in healthcare, SAP in manufacturing and retail, and Siperian in life sciences.
- Many prospects perceive WCC to be too heavyweight and don't appreciate the value of the business services and the data model approach. IBM has traditionally marketed WCC as a solution for high-end, transaction, hub-style requirements in SOA environments. However, WCC is capable of being implemented in a more lightweight registry style. IBM needs to adjust its positioning and prove that WCC's registry-style credentials can cater to a wider audience.

Initiate Systems

Strengths

- Initiate is a well-respected, best-of-breed CDI and enterprise master patient index (EMPI) specialist that is just starting to reposition itself as a customer-centric, multidomain MDM player.
- The company continues to build on its strength in healthcare-related markets (for example, providers, insurers and retail pharmacies). It is also expanding its presence in local and central governments. Initiate has a more opportunistic approach to other vertical industries and is building a presence in the financial services industry.
- Initiate has strong partner relationships with ESPs, particularly in vertical industry focus areas, and it has a strong direct sales team.
- The company has good references with high volumes of business-to-consumer (B2C) data, but there's still room for performance improvements in a range of vertical industries and increasing capabilities and references in the B2B area.
- Initiate Identity Hub v.7.5's differentiators include good performance, strength of recognition technology, time to value, the ability to offer an initial registry style, and an evolutionary road map toward an increasingly complex data model and transaction style.

Cautions

- Initiate needs to choose whether to continue to focus on just CDI or to position itself more widely. It is behind other vendors in positioning for MDM. It will need to clarify its position and make clear what it will and will not do.
- The company has limited strength and depth outside of healthcare, government and financial services (mainly healthcare insurance). It needs to develop strength in other

industries. As the CDI and MDM markets consolidate, best-of-breed vendors will need to defend and develop existing strongholds, and find and develop other defensible niches to continue to thrive.

- Initiate has increasing, but still limited, global reach outside North America. It is missing opportunities and needs to scale up the organization.
- The company's revenue growth is strong, but revenue is only approximately \$50 million. Initiate's size may require contracts to be primed by ESPs to reduce the risk.
- Initiate's product and architecture is evolving quickly, but the company needs more proof points for transaction style, B2B and wider industry expertise. Some organizations prefer deterministic, as opposed to pure probabilistic, matching or a mixture.

Oracle (CDH)

Strengths

- Oracle has a strong focus on CDI and wider MDM areas and sees them as foundational for integration within the current and future Oracle application portfolio, and for the integration of data from non-Oracle systems. Oracle is continuing to develop Oracle CDH under the Applications Unlimited initiative and is developing a Fusion MDM product set in a parallel track.
- Oracle CDH release 12 appeals to organizations with commitments to Oracle E-Business Suite (EBS) applications. Oracle CDH release 12 enables organizations to source CDI functionality from their strategic vendors and leverage existing skills. It can be deployed with the EBS instance or as a stand-alone product. It can be installed with Oracle's PIM Data Hub in the same or different instance to provide an integrated, multidomain MDM capability.
- Oracle has an integrated set of CDI software and middleware from a single vendor, a good data visualization interface in Oracle Customers Online and steadily improved integration with third-party data quality vendors and data providers.
- Oracle's global reach leads to strong sales success, particularly in government, high-tech and manufacturing industries.

Cautions

- Oracle CDH is not Oracle's lead CDI product; Siebel UCM is. CDH is mainly proposed to organizations with investments in Oracle EBS applications.
- Positioning is complex because of Oracle's multiple CDI products. On Oracle's price list, CDH is packaged with Siebel UCM as Oracle Customer Hub. Poor communication exists regarding the relative positioning of the two products and the content of the ongoing Applications Unlimited road map for CDH.
- CDH may be superseded by Fusion MDM, although, as with Oracle EBS applications, most customers will not choose to move until 2010 or later. At that point, the move to Fusion MDM will be an upgrade, as opposed to a migration, for CDH customers. Fusion MDM will have a new party model, mainly derived from Oracle TCA, which is at the heart of EBS and CDH. Customers are increasingly integrating with CDH via its Web services. These will continue to be supported, but the Fusion MDM business services are still undefined, and there are likely to be differences.

- Sales momentum is good in the Oracle EBS user base, but Oracle is favoring Siebel UCM in other areas. We don't often hear about CDH in open evaluations.
- CDH is improving, but the data model will not have sufficient flexibility if organizations want to express their own data model. It is behind best-in-class products for data quality performance and capabilities, data model verticalization and privacy management. Implementation of CDH effectively requires the installation of Oracle EBS. Finally, Oracle does not position CDH for registry-style implementations, which limits its appeal, particularly in government and healthcare provision.
- References continue to improve, but more references are needed with impressive live workloads at blue chip names across different industries.

Oracle (Siebel UCM)

Strengths

- Oracle has a strong focus on the CDI and wider MDM areas and sees it as foundational for integration within the current and future Oracle application portfolio and for the integration of data from non-Oracle systems. Oracle is continuing to develop Siebel UCM under the Applications Unlimited initiative and will be introducing a multidomain and multiuse-case MDM product set with Fusion MDM.
- UCM is positioned as Oracle's leading CDI hub solution for all prospects and customers. It mainly appeals to the existing, sizeable Siebel CRM customer base in heterogeneous environments, as well as to organizations investing in Oracle's industry application portfolios in industries such as banking, telecommunications, utilities and retail.
- UCM has the strength of the Oracle name behind it, leading to an impressive number of commitments from blue chip names in the Siebel customer base and beyond in financial services, telecommunications (where it is the CDI leader), energy and manufacturing.
- UCM v.8.0 is a capable product with an extensible data model, good data quality capabilities, an embedded rule engine, privacy management, and proven performance and scalability. It has steadily improving B2C and B2B references.

Cautions

- Oracle's multiple CDI products result in complex positioning. On Oracle's price list, UCM is packaged with Oracle CDH as Oracle Customer Hub. UCM's positioning as the lead CDI product and the content of the ongoing Applications Unlimited road map for UCM have been poorly communicated.
- UCM may eventually be superseded by Fusion MDM, although, as with Siebel applications, most customers will not choose to move until 2010 or later. At that point the move to Fusion MDM will be a migration (albeit automated), as opposed to an upgrade. Fusion MDM will have a new party model, mainly derived from Oracle TCA. Customers are increasingly integrating with UCM via its Web services. These will continue to be supported, but the Fusion MDM business services are still undefined, and there are likely to be differences.
- Sales momentum is good, but UCM is often missing out on deals to IBM and best-of-breed specialists in the Siebel CRM application customer base.
- The UCM product continues to improve, but the data model will not have sufficient flexibility if organizations want to express their own data model. Oracle does not position

UCM for registry-style implementations. The product runs on the Siebel application server as opposed to Oracle's 10G application server, which is part of Fusion Middleware.

- References continue to improve, and live transactional workloads manage up to 80 million consumers. More references are needed with impressive live workloads at blue chip names across different industries. UCM needs registry-style references to widen its appeal.

Purisma

Strengths

- Purisma is an innovative best-of-breed CDI hub vendor. It is repositioning for MDM and planning to introduce support for additional data domains, but maintaining a bias toward managing customer master data. The company is an early leader in managing B2B data and is the first vendor to offer appliance-based CDI solutions to meet point problems (for example, integration with D&B and D&B data enhancement).
- Purisma Data Hub 3.0 has a flexible data model with strong matching, hierarchy management, visualization and data stewardship capabilities. It can manage B2B or B2C data; it is particularly good for B2B and is often in a BI context. Purisma is developing functionality for analytical MDM requirements, such as performance management, and operational requirements.
- Purisma Data Hub 3.0 is attractive to organizations wanting to achieve good time to value, based on an initial registry-style implementation, followed by a later evolution to a more physical data model. Purisma has built a good reference base, with implementations ranging from registry-style through to transaction-style; however, it does not provide a business service layer.
- So far, Data Hub 3.0's growth rate is based on direct sales and is accelerating with deals across a range of industries. Purisma is starting to sign reseller deals (for example, with D&B), which should provide greater sales and marketing reach and deliver strong revenue growth.

Cautions

- Purisma was relatively late to the CDI market. It is a fast-growing, but still small, vendor with 2006 revenue of less than \$5 million.
- The company needs to build up its direct and, particularly, indirect channels to become a major player. Reseller partnerships, such as D&B, are new and have yet to show impact. The nature and success of these partnerships could determine the long-term direction for the company, which could cause problems for some customers.
- Purisma lacks global reach. It has no direct presence outside the U.S. and limited indirect presence. It is getting its first sales in Europe through partners.
- The company doesn't have a stronghold in any particular vertical market, which could be problematic when market consolidation occurs. However, it is well-differentiated in technology terms.
- Its company positioning is for tackling CDI challenges in large enterprises, line of businesses and midsize organizations; however, Purisma sometimes provides confused

messaging regarding its area of focus. It could go in different directions in terms of scale of solution targeting and operational vs. analytical CDI.

SAP

Strengths

- SAP has a large and loyal user base, particularly in manufacturing, consumer packaged goods (CPG), retail, high tech and energy organizations that are increasingly looking for integrated applications and application infrastructure from SAP.
- The company has a strong vision for NetWeaver and Enterprise SOA. SAP MDM is a key part of the NetWeaver application infrastructure and is a key enabler for the Enterprise SOA vision and ERP instance consolidation.
- SAP's strong worldwide sales and marketing departments delivered a major ramp up in MDM sales, including the CDI aspect, during 2006. SAP is now No. 3 in CDI hub market share.
- The company is able to meet a wide range of MDM requirements for product, customer, supplier and employee data domains in a single product.
- SAP MDM v.5.5 SP5 has good data model flexibility and innovative index-based and caching performance mechanisms by virtue of building on the acquired A2i core technology.

Cautions

- SAP has ambitious goals. It aims to meet all MDM requirements (all data domains, use cases and industries) in a single product. It will need to keep delivering regularly on its multiyear road map. CDI capabilities have improved since 2006, but SAP is still behind CDI best-in-class vendors in areas such as inbuilt matching and data quality capabilities.
- The company is more comfortable with B2B requirements and tends to only understand the parts of the CDI market that it is exposed to via existing SAP users. SAP is not strong in government, service industries or large B2C scenarios.
- SAP established its first B2B references for managing customer data in 4Q06, but it needs more and greater proof with higher volumes. Also, it needs B2C references in high-volume, transactional environments.
- It needs to turn the sales success into more live CDI implementations and higher intents to implement within six months. In many SAP MDM sales, the first phases are focused on product or supplier data, with the focus on customer data following much later, which results in a shelfware issue.
- Its CDI and MDM products mainly appeal to SAP-centric organizations and not to organizations with little or no SAP applications or with very heterogeneous environments. SAP needs to improve its products to meet the demands of both the user base and wider CDI and MDM markets.
- In the banking and insurance industries, SAP offers a choice of products for CDI. If the organization is an existing customer or a prospect for SAP's banking or insurance applications, then SAP offers Customer Information Manager (CIM), which is also known as Business Partner. In other situations SAP MDM is offered.

Siperian

Strengths

- Siperian offers an integrated, model-driven, flexible MDM platform. It can model multiple domains of data, but with a core strength around customer data.
- Siperian MDM Hub XT SP2 is a good fit if an organization wants fast time to value, flexibility in terms of data model, the ability to evolve the architectural style and a good fit for SOA evolution. The product is strong in hierarchy management and has a good track record of innovation. It is now in the data governance area.
- The company is doing well in the life sciences industry, but it is facing more competition from SAP. It is also doing well in selected financial services sectors, mainly vs. IBM, and it has strong customer loyalty.
- Siperian's effective marketing continues to gain good "mind share" and strong partnerships, extending its reach and mitigating risk.

Cautions

- Siperian is a successful, rapidly growing company, but it only has approximately \$20 million in revenue in 2006. It may not be a suitable strategic choice for risk-averse companies. Such companies may prefer to work initially or through Siperian's ESP partners.
- As the market consolidates, best-of-breed vendors like Siperian will need to create defensible markets to prosper. Siperian is a potential acquisition target.
- Siperian needs to build up its international reach. It is only present in North America and the U.K.
- The company needs to further expand into the financial services industry and other vertical markets.
- Siperian has built up good proof points, but it needs more references with large B2C volumes and registry and transaction styles.

Sun Microsystems

Strengths

- Sun Microsystems can leverage its large company size and global reach, and it has the ability to cross-sell eView into its installed base.
- The company can leverage a larger software infrastructure platform story — Sun Java Composite Application Platform Suite (Java CAPS) — with its CDI product, eView, and often has a price advantage.
- The eView component of Sun Java CAPS v 5.1.3 is a well-established CDI product with a large customer base, although the intent to implement level is unknown.
- Sun's strong domain knowledge and user base in the healthcare market can be leveraged to build strength in other industries.
- eView has a flexible data model and good probabilistic matching and data stewardship facilities.

Cautions

- SeeBeyond was strong in healthcare EMPI, but failed to take full advantage of the potential in other vertical industries. The Sun acquisition added to the lack of focus, allowing competitors to move ahead in terms of capabilities and market share.
- Sun needs to renew its focus on CDI and a single customer view proposition. The company doesn't have a clear MDM vision. Sun needs to focus more on CDI and MDM development, sales and marketing to improve its position in the market.
- The CDI messaging still gets lost in the wider software infrastructure platform focus, and organizations may already have other software infrastructure commitments.
- Sun's products are most suitable for B2C and registry-style scenarios. The company needs better hierarchy management for B2B, more ability to handle multiple styles and more verticalization.
- Sun needs to repeat success in healthcare to build its strength in other industries.

VisionWare

Strengths

- VisionWare has the only CDI hub product on the market that is based solely on Microsoft technologies (.NET and SQL Server). The company has very competitive pricing. Its products are attractive for resource constrained organizations that are Microsoft-centric.
- The company is able to get great leverage out of its Microsoft relationship, and Microsoft's long-term direction is to build platform MDM capabilities to support domain partners, such as VisionWare, in the CDI space.
- VisionWare has a strong domain knowledge of the local government market and has a relatively large customer base (80 customers), almost entirely in the U.K.
- VisionWare MultiVue v.1.7 has a flexible data model, allowing modeling of other data domains besides customer data. It uses VisionWare's own probabilistic matching technology and strongly leverages Microsoft technologies.

Cautions

- VisionWare is a small company, with only \$7 million in revenue in 2006. It is growing below the CDI hub market growth rate.
- The company is strongest in the U.K., but it is starting to feel competition in the government sector from vendors such as Initiate. VisionWare is starting to win deals in the U.S. through partners (typically, Microsoft Gold-Certified Partners), but it is still in the early stages of building a strong presence. The company plans to open a U.S. office in 2H07, but no offices or indirect channels exist in other countries yet.
- VisionWare needs to build up a strong indirect channel to reach new industries and geographies, gain market share, and demonstrate a scalable, profitable business model.
- VisionWare MultiVue v.1.7 is restricted to running on Microsoft .NET technologies and SQL Server. This may not be suitable for large-scale requirements or IBM and Oracle

relational database management system mandates. VisionWare needs to improve its hierarchy management and reporting capabilities, which is due in v.1.8 in 2H07.

- Sometimes, VisionWare loses out in evaluations based on matching performance and lack of transparency of matching process.

RECOMMENDED READING

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"Key Issues for Applied Technology and Life Cycle Management for Applications and Processes in 2007"

"Mastering Master Data Management"

"Vendors Have Different Approaches to Implementing Master Data Management"

"How to Choose the Right Architectural Style for Master Data Management"

"The Important Characteristics of the MDM Implementation Style"

"How to Evaluate a Vendor's Master Data Management Solution"

"Q&A: Master Data Management Questions From Gartner's 2007 BI Summit"

"Market Share: CDI Hub Software, Worldwide, 2006, Composite View"

"Forecast: CDI Hub Software, Worldwide, 2006-2011, Composite View"

"Creating the Single Customer View With Customer Data Integration"

"Magic Quadrant for Product Information Management, 2Q07"

"Enterprise Information Management Represents the Future of Data"

"The Essential Building Blocks for Enterprise Information Management"

"EIM Reference Architecture: An Essential Building Block for Enterprise Information Management"

Note 1

CDI Definition

CDI is the combination of the technology, processes and services needed to create and maintain an accurate, timely and complete view of the customer across multiple channels, business lines and organizations, where there are multiple sources of customer data in multiple application systems and databases.

Note 2

MDM Definition

MDM is the consistent and uniform set of identifiers and extended attributes that describe the core entities of the enterprise and are used across multiple business processes. Some examples of core entities are parties (customers, prospects, people, citizens, employees, vendors, suppliers or trading partners), places (locations, offices, regional alignments or geographies) and things (accounts, assets, policies, products or services). Groupings of master data include

organizational hierarchies, sales territories, product roll-ups, pricing lists, customer segmentations and preferred suppliers.

MDM is a process that may be workflow-driven or transactional in nature in which business units and IT departments collaborate, cleanse, publish and protect common information assets that must be shared across the enterprise. MDM ensures the consistency, accuracy, stewardship and accountability for the core information of the enterprise.

Note 3

Definition of a Market

Markets are a set of actual or potential customers for a given set of products or services that have a common set of needs or wants, and that reference each other when making a decision. Market segments are portions of that generic market that are qualified by more exact criteria that more tightly group potential buyers. Segmentation may take two forms:

- A generic market may be divided into a recognizable entity where the rules for defining a market still hold.
- An individual vendor may segment the market to target its products more precisely and differentiate itself from (or avoid competing with) other players addressing the same overall market. However, the targeted buyers may not know they are part of the same market segment. Such segmentation will not be reflected explicitly in the Magic Quadrant, although it may be reflected implicitly (via placement of a vendor in the Niche Players quadrant, for example).

Note 4

Architectural Styles of MDM Systems and CDI Hubs

Consolidation Style: The consolidation style has a physically instantiated, "golden record" single view of master data stored in the central hub. This usually supports reporting; however, it can also be used for reference operationally. If used for reporting, then it may be referred to as a downstream "system of reference" for reporting needs. The golden record is constructed by standardizing, cleansing, matching, linking and merging master data from multiple sources, where they continue to be authored, and assigning a unique global identifier. However, this record is not guaranteed to be up-to-date.

Registry style: A registry-style maintains a central register of unique global identities, links to where the master data object is physically held in various source systems, and includes rules for how to transform and assemble the data as it's retrieved. In its purest form, the registry style effectively creates a new index of record that enables assembly of the golden record at runtime, but does not store that golden record centrally. Master data continues to be authored in the source or spoke systems. It is a relatively noninvasive approach to creating an accurate, consistent and up-to-date single view of master data. It is typically faster and easier to implement than the other three styles, which involve greater central storage and maintenance of physical data — with an accompanying need for greater governance.

Coexistence style: The coexistence style physically instantiates a golden record in the central location and harmonizes master data across the application portfolio. The golden record is constructed in the same manner as the consolidation style, and, in the operational world, consolidation-style systems often evolve into the coexistence style. However, the key difference is the concept of a central system that publishes selected master data out to the subscribing spoke systems. This style includes a set of workflow processes, based on middleware

infrastructure, which has the effect of harmonizing the consistency of the master data across the various systems.

Transaction style: The transaction-style hosts a central, physically instantiated, single version of the truth for master data. Upstream, transactional applications can read and write master data to the new system, and, potentially, all spoke systems subscribe to updates published from the central system in a form of harmonization. This style often evolves from the consolidation and coexistence styles. In a similar way, it physically instantiates a golden record single view of master data in the central database; however, the key difference is that the master data is authored in the center. The transaction style is the one most likely to be designed for an SOA environment, exposing a layer of business services that are consumed by new SOA applications and wrapped applications.

Note 5

EIM Definition

EIM is an integrative discipline for structuring, describing and governing all information assets, regardless of organizational and technological boundaries, to improve operational efficiency, promote transparency and enable business insight.

Note 6

External Reference Database

In this scenario, a marketing service provider (for example, Acxiom, D&B or Experian) buys in and integrates customer data from many sources. The provider uses this data to build a trusted source of master data on the entire customer population in a geographic region. Access to this reference database is provided as a service, and organizations are able to match their customer data to the external reference database. Matching is usually in batch and sometimes in real time, and global identifications and links are assigned to the customer data. The purpose is for absolute identification. This style of CDI is not classified as a CDI hub because it does not provide a centralized, in-house, database-based system of record for an organization's customer data. It is seen as a valuable complementary offering.

Note 7

Other Vendors

In addition to the vendors that have been rated in the Magic Quadrant, many vendors and service providers are on the periphery of the CDI hub market. They include MDM vendors that don't position themselves specifically for CDI, vertical market MDM or CDI hub vendors, and service providers that offer an external reference database service

MDM vendors without a specific CDI hub capability or that mainly focus on analytical requirements:

- **Data Foundations** is a small company that offers enterprise data management software. Its OneData product is an MDM framework with a flexible data model that can manage multiple domains of master data and metadata, and an accompanying methodology for implementing MDM solutions. Initially available in 2002, OneData had early success in the CPG industry managing product and supplier data, but now has customers in government and other industries.
- **Hyperion (now owned by Oracle)** — In April 2007, Oracle acquired Hyperion, a business intelligence and performance management vendor that had been offering a product called Hyperion MDM, resulting from the acquisition of Razza Solutions in 2005.

Now renamed Hyperion Data Relationship Management, the product is a data-model-neutral solution that focuses on managing change in hierarchical structures and building consistency in the relationships between information assets, including general ledgers accounts, cost centers, companies, products, vendors, locations, assets and related entities. It is typically used for analytical MDM, but is also sometimes used in operational MDM use cases. Its analytical MDM capabilities are complementary to Oracle's CDI hub products, and we expect it to be positioned under the Oracle MDM banner and provide intellectual property toward the Fusion MDM products.

- **i2**, a supply chain management solutions vendor, offers i2 MDM. i2 MDM is mainly geared toward meeting data management challenges with product and vendor master data in the manufacturing, retail and distribution industries, although it is starting to gain some experience with customer data challenges. i2 licensed its MDM product to Teradata in December 2006.
- **Kalido** offers what it calls Active Information Management, based on a business modeling-driven approach. It established a name for itself by providing adaptable data-warehousing software and is leveraging that experience by offering Kalido Master Data Management. This provides a cross-subject area MDM capability for all types of data objects. Kalido MDM does not include any automated data quality technology, but does include data stewardship and governance workflow capabilities to handle invalid data and enforce a master data review process. Because of its background, Kalido's strength is in analytical MDM use cases where data from analytical or operational data sources is rolled up for reporting purposes.
- **Orchestra Networks** is a small French MDM vendor. Its EBX.Platform is designed to manage reference data, such as products, pricing, regulatory data or organization data. It can act as a CDI hub, but there is no specific positioning for that market. EBX.Platform does not include its own data quality software and often partners with Informatica to meet that need. Orchestra Networks has a strong blue chip client list in France and is counting on partnerships, such as with Software AG, to extend its reach elsewhere.
- **Software AG** has been successfully partnering on MDM projects with Orchestra Networks in France for several years. In December 2006, it signed a worldwide OEM deal to resell Orchestra Networks' EBX Platform as Crossvision MDM, part of its Crossvision SOA suite. Following the acquisition of webMethods in June 2007, Software AG has adopted the webMethods brand in favor of Crossvision. Now the MDM product is called webMethods Master Data Manager and includes webMethods (formerly Crossvision) Service Orchestrator, Software AG's ESB. Additionally, Service Orchestrator ships with CentraSite, Software AG's registry/repository, that provides governance facilities. It is too early to gauge Software AG's progress in the CDI hub and wider MDM markets.
- **Stratature (now owned by Microsoft)** — In June 2007 Microsoft acquired Stratature, a small analytical MDM vendor with a product called +EDM (Enterprise Dimension Manager). +EDM is designed to align customer, product, vendor, location and financial account dimensional data, master data and reporting hierarchies across business intelligence, performance management, data warehouse and operational systems for consistent and compliant enterprise reporting. Microsoft intends to rework and repackage +EDM and deliver MDM functionality through Microsoft Office system applications and servers on top of an infrastructure provided by SQL Server. Over time, these capabilities will become part of the Microsoft Office Business Applications Platform and will be leveraged by PerformancePoint Server, Dynamics and SharePoint

lines of products. It is also intended that CDI hub partners, such as VisionWare, will be able to leverage these platform capabilities.

- **Teradata** licensed i2's MDM product in 2H06 and announced its own Teradata MDM product. This consists of an MDM platform capability, which could be used to build a CDI solution, and a packaged PIM solution, resulting from the i2 heritage. Teradata will be focusing on the convergence of enterprise data warehousing and MDM, and it is too early to determine its impact on the CDI hub market
- **Tibco Software** offers an MDM product called Collaborative Information Manager (CIM), following the acquisition of PIM vendor Velosel in August 2005. Tibco positions CIM for multidomain MDM and, although it still has the most experience in managing product data, it is steadily gaining experience in managing business partner, client, counterparty, asset and location data in the consumer goods, retail, financial services and energy vertical industries. Tibco has grown its CIM customer base by 100% every year since the Velosel acquisition and is becoming a candidate for future inclusion in the CDI hub Magic Quadrant.

Selected external reference database service providers:

- **Acxiom** (now owned by ValueAct Capital and Silver Lake Partners) provides a wide range of customer information-related solutions, including data provision and recognition management, in a range of industries. Its Acxiom CDI family of products is geared toward providing a hosted external reference style of CDI for keeping consumer data accurate and up to date. Acxiom's Recognition Manager product could be useful as a form of external registry CDI hub to aid customer recognition. In addition, Acxiom has a partner relationship with Oracle to provide what they call Knowledge Based MDM. In this scenario, Acxiom offers pre-built integration with Oracle's Siebel UCM product, providing it with an ongoing supply of high-quality consumer data for prospecting, cleansing and enriching new customer data.
- **Cegedim**, a French company operating in 59 countries, focuses on the pharmaceutical industry. Its offerings include CRM sales and marketing technology, as well as pharmaceutical data services to help improve sales and marketing effectiveness. Cegedim's OneKey Connect offering can provide an external healthcare professional reference database capability and integrate with a pharmaceutical company's own systems. Cegedim acquired Dendrite International in May 2007. The merged entity, Cegedim Dendrite, plans to create a combined vision for CDI in life science. Details have not yet emerged.
- **Experian** provides a wide range of credit, marketing and automotive solutions that cover business, consumer and vehicle data. Its offerings include reference-based matching technology, which provides persistent identification for consumer and business data in marketing databases and data warehouses.

Vertical industry CDI hub or MDM vendors:

- **Cicada** provides market, reference and counterparty data management software, as well as compliance solutions, for the financial services industry. The company's solutions are built using components and are functionality contained within its proprietary data management technology, called Cicada Composer. One of the company's focused customer data management solutions, Cicada Profiler, is built using this framework. Cicada Profiler helps organizations centrally manage customer data and conduct the due diligence and compliance reviews required by anti-money laundering and "know your customer" regulations.

- **Dendrite International** (now owned by Cegecim) provides industry-specific data, services and software for life science companies. It gained a CDI hub capability via its acquisition of Software Associates International and its NUCLEUS Pharma product, which it is migrating to its new Pharmaceutical .NET Framework. However, Dendrite views CDI as a core technology infrastructure required to support specific business applications, such as State Guardian, not as a stand-alone offering. State Guardian helps pharmaceutical companies comply with U.S. legislation requiring the disclosure of sales and marketing promotional activities at the customer level. Dendrite was acquired by Cegecim in May 2007. The merged entity, Cegecim Dendrite, plans to create a combined vision for CDI in life science. Details have not yet emerged.
- **GoldenSource** focuses on financial services companies and business lines, including investment banking, asset management and wealth management. It provides a framework, including a centralized repository, for auditing, controlling and managing customer data, plus securities, counterparties, positions and transaction data in a financial services context. GoldenSource has two products for managing data: GoldenSource Customers manages customer data, and GoldenSource Counterparties manages counterparty data.

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word-of-mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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