



IBM® **Information Management** software

Customer Care Solutions for the Communications Industry

Driving Business Value with Master Data Solutions.

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Executive summary

Today, customer care pressures are pushing communications service providers to a tipping point. They need to transform by managing convergence/consolidation; offering a differentiated customer experience; and launching innovation products and services. Communications industry leaders recognize this, are defining their new requirements and many are already demonstrating success. In this white paper we will discuss how master data solutions can help to streamline your organization in the following business areas:

- *Customer loyalty*
- *Campaign management*
- *Operational / Business support systems (OSS/BSS) consolidation*
- *Mergers and Acquisitions*
- *Order Processing*
- *Web based commerce*
- *Privacy, risk and compliance*

Achieving this transformation requires a trusted advisor with a broad set of capabilities and a combination of technology and expertise. Many communications industry clients are turning to IBM to guide them through this transformation to achieve a competitive advantage in their markets.

Customer example

Will, a wireless client, logs into his service provider's Web site to order a new Blackberry service. The system finds that Will's wife Jane is also a customer with the service provider and suggests he can save by switching to a family plan. All this is possible because the service provider has a 360 degree view of Will. Based on his home address and credit history, a new promotion available only since the previous day, is identified for Will – DSL service for his home computer for only an additional US\$19.99 per month. However, with the new Blackberry service he can get it for a low bundled rate of US\$14.99 per month. Will is now a delighted customer with the special care he receives and the service provider was successful in upselling additional products in this highly competitive and saturated market.

Business issues in the communications industry

Today, communications service providers are faced with convergence, consolidation, cost reduction and customer satisfaction issues that prevent them from having more delighted customers like Will. The industry must transform itself, from being network-centric communication operators to becoming customer-centric service providers. Poor information quality and disconnected processes are a hidden crisis in the industry today and the cost of this inconsistency is enormous in terms of operational efficiencies, customer dissatisfaction or lost opportunity. Whether it is product attributes, customer identifiers, supplier contracts, pricing or service codes, what should be a unique entry might have multiple values and locations, across various systems. Today, data is scattered across the enterprise and stored multiple times in systems that operate in discrete silos like billing, OSS/BSS, service, order management and call centers. This issue manifests itself in numerous challenges which communications providers face in managing their information about product and service offerings, partners and suppliers and customers. Example challenges include:

- *Slow time to market because mergers and acquisitions have created silos of information and processes*
- *Errors in ordering and provisioning because service providers have numerous customer and product information systems which function in silos – creating enormous integration challenges*
- *New product announcements taking several months longer than the business needs; many clients must reduce time to market to a matter of weeks*
- *Compromised customer service because information updates and changes across sales channels (call center, Web and retail stores) are not synchronized*
- *High operating expenses to provision (configure) services, provide billing and fulfill orders*
- *Inability to grow the business by identifying new revenue streams in next generation offerings and services*
- *High customer churn and poor loyalty because the company is unable to identify and cultivate profitable, high-value customers*
- *The need to control operating costs by improving online ordering-adoption rates, which today are very low (at under 5 percent)*
- *Lack of a 360-degree customer view to enable improved service and differentiate from competitors*
- *Poor ability to extract business intelligence from data warehousing operations*

However, by taking control of enterprise-wide data and processes in their environments, telecommunications service providers can change the landscape of their business and transform these weaknesses into strengths.

How do we solve the problem?

Master Data Management (MDM) is a comprehensive strategy that you can use to determine and build a single, accurate and authoritative source of truth of your company's information assets. Master information is core data that service providers use for their everyday needs to uniquely define business objects. Core data includes parties (customers, vendors, suppliers, trading partners or employees), places (locations or geographies) and items (products, services or accounts). Master data can be deployed for multiple usage patterns: collaborative (author and harmonize); operational (real-time synchronization with downstream applications) and analytical (harness business insight and management reporting). Realizing a master data strategy solves a variety of business issues around customer centricity, product and service optimization, risk and compliance and threat and fraud. A master data strategy enables companies to deliver critical business information on demand to the systems, people and processes which need it.

One form of MDM system is commonly referred to as product information management (PIM) to manage offerings, descriptions, pricing and product bundles. Customer data integration (CDI) is another type of MDM system to manage financial profiles, location, demographic data, billing and account information of a party. Finally, systems that provide capabilities such as entity analytics enable clients to discover non-obvious relationships or connections in their master data which can help with such common issues as knowing who is who among their customers.

MDM solutions are proven to give a strong return on investment (ROI). Industry-leading companies that have invested in MDM report revenue increases achieved by shortening time to market, increased customer satisfaction by ensuring high-quality data and enabling collaboration with clients and channels. On the cost-reduction side, MDM solutions help improve user productivity and streamline and automate processes for new offering announcements, customer self-care, campaign management, product bundling and diverse channel requirements.

The IBM Institute of Business Value Analysis and the Azure/Analysys, Operator Attitudes to Revenue Assurance, 2004 studies have shown that order-to-cash transformation can generate significant cost and revenue benefit as shown in the following tables with a potential ROI as high as 300%.

Revenue Benefits (4% to 5% of revenue)	Cost Savings (18% to 23% of operating expenses)
Reduction of Billing Adjustments (1.5% to 1.9%)	Order Fulfillment (6.3% to 7.9%)
Increased Sales Productivity and Retention (1.2% to 1.5%)	Improved Order Management (4.3% to 5.4%)
Reduction in Unbilled Revenues (0.8% to 1.0%)	Increased On-Line Orders (3.1% to 3.8%)
Revenue Acceleration (0.16% to 0.2%)	Reduction in Billing Calls (2.4% to 3.0%)
	Outsourcing Order Calls (2.3% to 2.8%)

The IBM MultiForm Master Data Management solutions are currently deployed at over 150 leading companies in the financial, insurance, retail, consumer products, electronics, telecommunications and the automotive industries.

These solutions have strong features for search, hierarchy, structured taxonomy maintenance and business process management. Other IBM middleware products can provide complementary capabilities for data integration, e-commerce platform, portal deployment and unstructured content integration. The solutions are scalable for managing complex customer requirements.

Service oriented architecture (SOA), which is a Web services, standard-driven, modular architecture to deliver pervasive integration with real-time business agility is an emerging area for building next-generation applications. MDM is an integral part of any SOA implementation to address issues such as data quality, multiple versions of the truth and management of reusable metadata assets. Conflicting sources of the same data create barriers to successful SOA migrations.

MDM systems are also used to feed data warehousing projects to provide them with correct data for their business intelligence and campaign management applications. Data warehousing projects will fail with poor quality data as input. IBM provides integrated data warehousing and analytical reporting capabilities with communications-industry specific data, services and business models for service providers. A robust MDM system should, at minimum, have the following key features:

- *Data model—must support item, location, organization, party, trade terms, price and complex relationships; It must also be customizable, configurable, extensible and upgradeable, and offer the ability for users to edit information.*
- *Information quality—must offer robust tools for data profiling, quality and cleansing.*
- *Integration and synchronization—must be able to leverage middleware tools to understand, transform, synchronize and federate both structured and unstructured information.*
- *Business processes and services—must have strong workflow tools like security, audit trails, access control and versioning, and expose business services for SOA implementations.*
- *Performance and scalability—must scale to data volumes and processes with reasonable response times.*

The IBM Information Server (IS) delivers all of the functions required to integrate, enrich and deliver information for MDM business initiatives. With rich functionality, broad connectivity to heterogeneous sources and unified metadata, it provides a strong foundation to understand, cleanse, transform and deliver information across your enterprise.

Telecommunications Data Warehouse (TDW) is an entity relationship logical model with pre-defined data warehouse structures to automatically generate the physical data warehouse database from the model. TDW includes nearly 40 key performance indicators that enable quick and easy specification of analytical reporting requirements that form the basis of reports and executive dashboards.

By unlocking information contained in individual applications and repositories from a variety of vendors and making it readily available to people and processes that need it, both IS and TDW can create a foundation for MDM initiatives and help put you towards the path of SOA.

Strategies for deploying MDM solutions

IBM has been involved in planning and implementing MDM projects with communications service providers to help them become more customer-centric. A major North American service provider is using MDM to tailor product bundles, and services for unique customer preferences and profiles. The goal is to promote customer loyalty and improve up-sell opportunities. For this company, MDM is the glue integrating customer account information with the marketing data warehouse and the call center. It provides agents with information in real time so they can respond more readily to customer inquiries with relevant support as well as profitable up-sell and cross-sell offers. They have also lowered operational and processing costs by eliminating data residing in multiple silos. Another service provider in Europe has consolidated product information from enterprise resource planning (ERP) and multiple billing systems to enhance their e-commerce systems to improve scalability and usability. They have now successfully streamlined their new product-introduction process to better respond to customer trends and business demands. Some of these, and other, deployment strategies around master data management which are being considered in the industry are described in the following sections.

Strategy 1: OSS/BSS consolidation

Communications service providers need to streamline processes for managing the customer, product, network and billing information. MDM solutions consolidate all relevant information from disparate silos improving data quality and access for the downstream applications and users (Refer Figure 1). Customer and offering information can also be harmonized with the source systems using the MDM hub as the 'single source of the truth' for this data. This approach increases consistency and reduces redundancy of the data, shortens integration time for mergers and acquisitions, eliminates incorrect data for warehousing projects and helps meet compliance and regulatory reporting requirements.

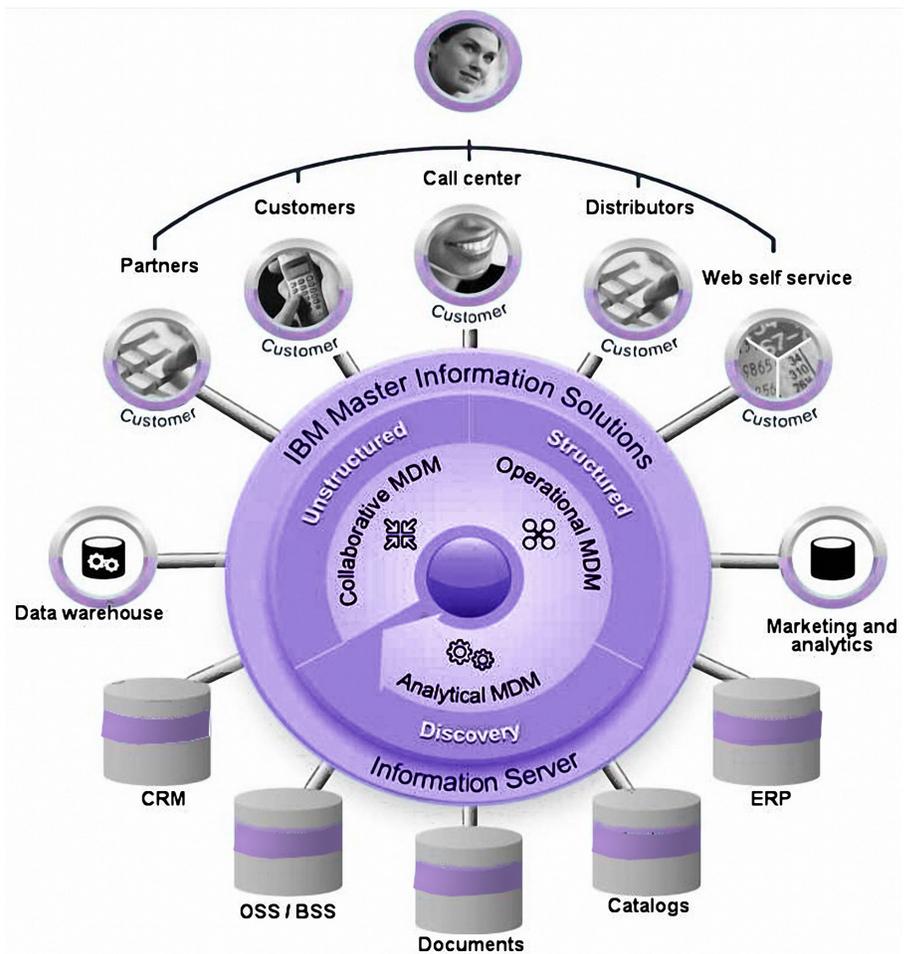


Figure 1: Improve customer satisfaction by providing current, accurate and complete data to all systems and channels

Strategy 2: Optimize order processing

MDM enables service providers to improve the customer experience with online tools for configuration and ordering (Refer Figure 2). These sales-productivity enablers help with real time access to offerings, bundles, price, promotion and customer information. By automating the process for data collection, errors and inconsistencies are eliminated. Specific products and bundles can be tailored for customers based on their individual needs increasing up-sell and cross-sell opportunities, reducing errors in orders and billing and improving customer loyalty.

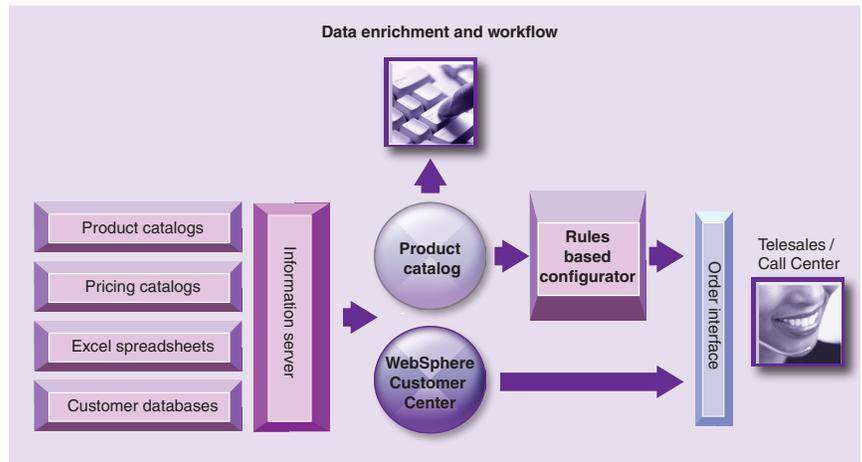


Figure 2: Lower operating expenses by reducing order processing errors

Strategy 3: Web based commerce

Deploying a MDM system with a commerce engine enables communications clients to improve the effectiveness of their multi-channel strategies. When the MDM system is used as the master catalog for the enterprise, clients are assured that the most current, relevant information about products and service offerings is shared across all consumer touchpoints. The end result is for customers and channel partners to more easily select the right product or service – whether hardware, wireline, wireless, high-speed Internet or digital television – and process those sales transactions through the Web or call-center (Refer Figure 3). Clients can now rest assured that their consumers are getting the most current information about product and service offerings, because changes or updates can be published out immediately. This stands in stark contrast to the current method of using manual and batch processes, which often result in out-of-synch information across consumer touchpoints.

Web-based tools can enable clients to lower operating costs by synchronizing changes across multiple channels. This level of responsiveness dramatically improves competitive advantage.

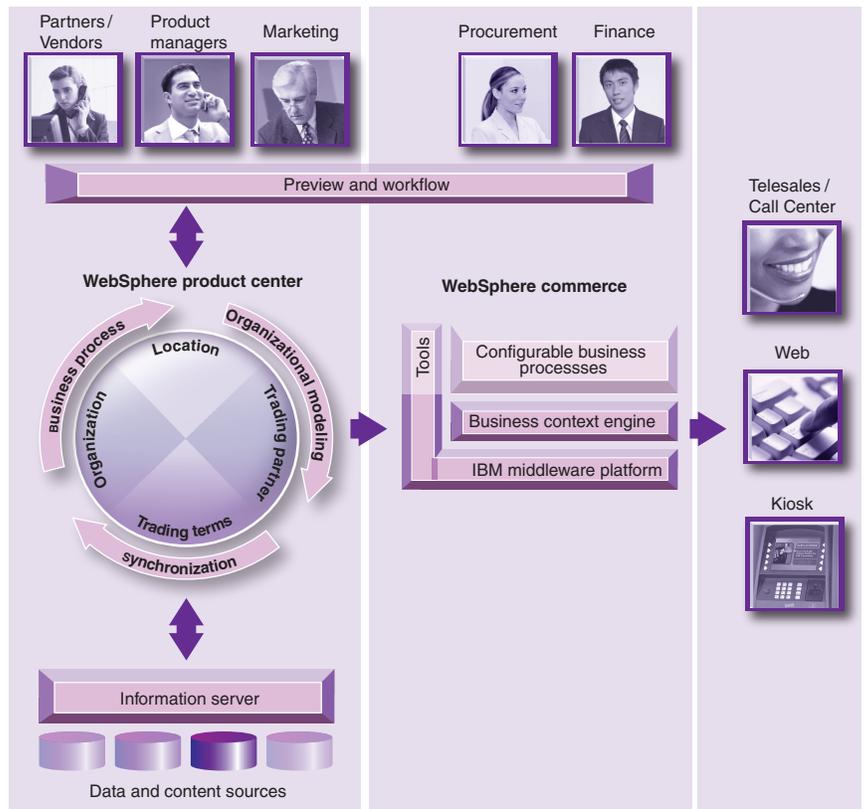


Figure 3: Grow revenue by improving customer self-service with Web-based commerce.

A long-term MDM strategy requires integration with other systems, workflow, a scalable information repository, and the ability to synchronize and syndicate information to a variety of destinations in multiple formats. By implementing the right strategy, service providers can make MDM a reality and a competitive advantage, helping the industry to:

- *Ensure that customer and offering information is always correct, current and consistent*
- *Improve time to introduce new offerings and products*
- *Lower costs by streamlining and automating processes for creating, collecting, enriching and searching for offering and party information*
- *Improve customer service and loyalty and decrease churn*
- *Strengthen collaboration between trading partners*
- *Integrate data and processes following a merger or acquisition (M&A)*
- *Consolidate the various IT systems*
- *Increase revenue with upsell and cross-sell opportunities*

Conclusion

MDM solutions span across multiple areas such as new offering announcements, e-commerce, customer care, campaign management, partner collaboration, back-office transformation and risk and compliance. IBM is involved with over 90 percent of the world's communications service providers and has about 1,500 MDM consultants world wide. Every service provider has unique needs and requirements, and IBM begins every engagement with a discovery study to understand the current situation and the desired end state. A road map is then developed clearly showing you how to get to the desired destination. In many cases, IBM can assist with the Business Value Assessment study to help justify the project and build the ROI model. IBM services teams are also available to help you implement the project using proven methodologies and best practices. One best practice is to select a specific business problem with a strong ROI to focus on, and then tackle the data ownership, governance and business processes to manage and maintain the master data around that particular problem. This strategy of solving a small problem and showing rapid business value will help build a foundation for continued success.

For more information

To find out more about IBM Master Data Management (MDM) solutions, contact your IBM representative or IBM Business Partner, or visit:

IBM MDM Solution Page

<http://www-306.ibm.com/software/sw-bycategory/subcategory/SWB60.html>

IBM Communications Industry Home Page

<http://www-03.ibm.com/industries/telecom/index.jsp>



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