

White Paper



Master Data Management

Springboard for Success - A Logistics Perspective

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Abstract

In the competitive logistics industry, a focus on “doing it right the first time, all the time” is vital for improving customer satisfaction and driving revenues. To accomplish this, Logistics Service Providers (LSPs) need access to high-quality data across the enterprise.

Master Data Management (MDM) offers LSPs the way to a unified data solution based on a comprehensive strategic plan that minimizes risks while maximizing return on investment.

High-Quality Data and Effective Logistics Solutions – Never the Twain Shall Meet?

As the pace and complexity of business increases, manufacturers, retailers, and other customers are looking to Logistics Service Providers (LSPs) for breakthrough solutions to meet their outsourcing needs. While LSPs have devised various strategies such as optimized warehouse activities, transportation management, and yard management, etc. to adapt to rapidly changing and evolving supply chains, incomplete and inaccurate information from customers and vendors limit the LSP's ability to deliver an optimal logistics solution.

Master Data Management (MDM) is a challenge for LSPs having IT systems that are used by diverse business functions. With Master Data often stored in multiple, disconnected systems and databases, unmanaged information can lead to discrepancies causing expensive disruptions to business flow. These discrepancies are magnified exponentially when LSPs integrate Enterprise Systems, each containing a database of millions of items.

Data quality issues impact a company's ability to do business. Here are some of the data challenges that LSPs face:

- 17% of business names change every year.
- About 14% of the US population moves every year generating approximately 45 million address changes with about 18% of people changing telephone numbers.
- LSPs that operate globally need to work with over 5000 languages and dialects, varying name formats, multiple address formats, and a lack of address validation references in some countries.

The ability to acquire and manage high-quality data in the logistics industry can be a key factor in streamlining operations and driving customer satisfaction.

Current Practices – Piecemeal Solutions for a Single Problem

Many LSPs, while recognizing the need maintain highquality data, have adopted a point-solutions approach to address the issue rather than implementing a consistent and unified enterprise-wide strategy and solution.

For example, an automated, workflow-based data entry solution will probably help in reducing data entry errors.

However, it will not address issues related to data distribution and may require an additional implementation for most of the data validation functionality.

Regional master data solutions may help with locally maintained data, but will not capture cross-market customer and vendor opportunities. Similar limitations arise with partial standardization of data at a market or line of business level.

Additionally, non-inclusive data governance that doesn't encompass aspects like an end-to-end master data life cycle or a master data architecture that also supports key organizational initiatives will limit the effectiveness of such governance.

4 Key Components for a Robust Master Data Foundation



Approaching MDM along these four dimensions provides LSPs with “a single version of truth” for all systems and ensures discipline in information management across multiple domains. Multiple areas of expertise, like experience in logistics and transportation supply chain optimization, enterprise data modeling, and integration, as well as efficient implementation is required to enable companies eliminate information errors – the root cause for breakdown in the supply chain networks.

Best Practices for MDM

When deploying an MDM solution, here are some best practices for its various components, which are also conditions for success:

Data Model:

- Support complex account and product relationships.
- Customizable according to requirement.
- Easily upgradeable after customizations.

Information Quality

- Integrates data hygiene (address validation, duplicate identification, etc.) for customer records and product classification based on descriptions for product data.
- Supports the concept of “levels of trust” for each master attribute coming from different source systems.
- Supports the concept of data stewards.

Integration & Synchronization

- Supports synchronization of master data across the enterprise.

Business Services

- Includes a business service layer to encapsulate the master data and make master data accessible to the enterprise based on Service Oriented Architecture (SOA).

Scalability

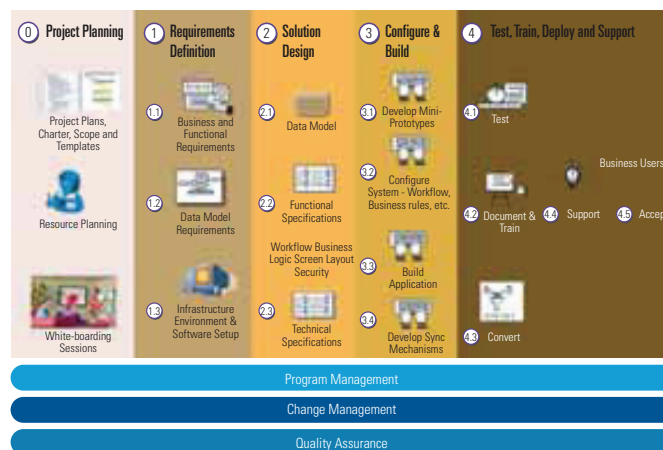
- Handles high data volumes.

Data Governance & Stewardship

- Establishes clear ownership and stewardship roles for master data.
- Identifies clear organizational structures to govern master data.

Managing Data the MDM Way

A comprehensive implementation methodology is required in order to bring an MDM Enterprise Solution to life.



Planning is a critical stage of the MDM process. It is important to define each project phase clearly, identify resource requirements, and determine the horizontal services required to ensure that the MDM implementation is successful.

In most situations a gradual transition to a unified master data solution, based on a comprehensive strategic plan, minimizes risks while maximizing return on investment.

Conclusion

The current technology landscape provides enormous capability to deliver a flexible yet robust system with on-demand analytical tools, customizable rules, and workflows that seamlessly integrate with ERP modules and custom systems.

In the dynamic market landscape and ever changing world of demand, pricing remains an important challenge that needs to be addressed to maximize revenue and increase profitability. With a robust pricing engine and an effective governance model deployed as a system, it will enable the price management teams to work cohesively with the sales forces to deliver a competitive price point and value across multiple dimensions:

- Increase customer satisfaction
- Address market demands
- Maximize revenues
- Decrease disputes
- Reduce time to market
- Increase profitability

About the author

Alex Farcasiu is a Principal Architect at Infosys, Retail, CPG and Logistics unit. He has more than fifteen years of software development and enterprise architecture experience, working with global distribution and consumer goods companies. He specializes in enterprise integration strategies with focus on enterprise master data management.



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