

How to Measure the Business Value of Master Data Management

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Initiatives: [Data and Analytics Strategies](#)

The success of MDM programs is jeopardized when data and analytics leaders fail to measure how MDM is contributing to business outcomes. Data and analytics leaders must take a structured approach to quantify how improvements in master data are enabling key business objectives.

Additional Perspectives

- [Summary Translation: How to Measure the Business Value of Master Data Management](#)
(04 August 2021)

Overview

Key Findings

- Many data and analytics leaders share a common misperception that the business impacts of master data either need not or cannot be measured.
- Too often, data and analytics leaders rely only on data quality metrics to measure master data management (MDM) program success.
- Data and analytics leaders who fail to make a connection between improvements in master data quality and business outcomes are unable to prove the value of MDM.

Recommendations

To quantify the business benefits of MDM, data and analytics leaders must:

- Hierarchically map business outcomes to master data elements and measures by applying a value-based metrics framework.
- Align MDM program metrics to those used by business stakeholders across all levels of the metrics framework by modeling expected business impacts.

- Quantify the business impact of MDM by aggregating the modeled impacts across all in-scope metrics.

Strategic Planning Assumption

Through 2025, more than 75% of MDM programs will fail to meet business expectations because of a failure to connect MDM value to business value.

Introduction

As recently as 2019, a Gartner survey showed that 90% of data and analytics leaders fail to measure the business impacts of their MDM programs. ¹

This disconnect is fatal to the effectiveness, credibility and longevity of MDM programs. In many cases, MDM leaders focus on data quality metrics that are only indirectly relevant to the business. These metrics measure things like the cleanliness of master data, data standardization, or the number of master data records maintained. Such metrics are essential for managing master data, but they alone do not measure business effectiveness. Worse yet, these operational measures may define “success” with MDM, even if business performance is lagging.

The disconnect between MDM value and business value leaves MDM programs vulnerable to deprioritization and a lack of continued investment at a time when organizations need a strong master data foundation more than ever before.

How Can MDM Fulfill Its Promise to Drive and Sustain Business Improvements?

Data and analytics leaders should take a structured approach to connect MDM measures that relate directly to the outcomes that matter most to business stakeholders. Examples of strategic business outcomes include:

- Improved customer/student/citizen satisfaction
- Increased revenue from the acceleration of a product development cycle
- Revenue gains associated with cross-selling to existing customers
- Cost savings realized by optimizing a supplier relationship
- Reduction of business risks associated with improved audit compliance

This research provides a structured framework to allow for the value of MDM to be quantified by establishing a hierarchical relationship between MDM metrics and the most important business metrics and outcomes.

Analysis

Connect MDM and Business Outcomes

MDM programs must be aligned to supporting the outcomes deemed most important by business stakeholders.

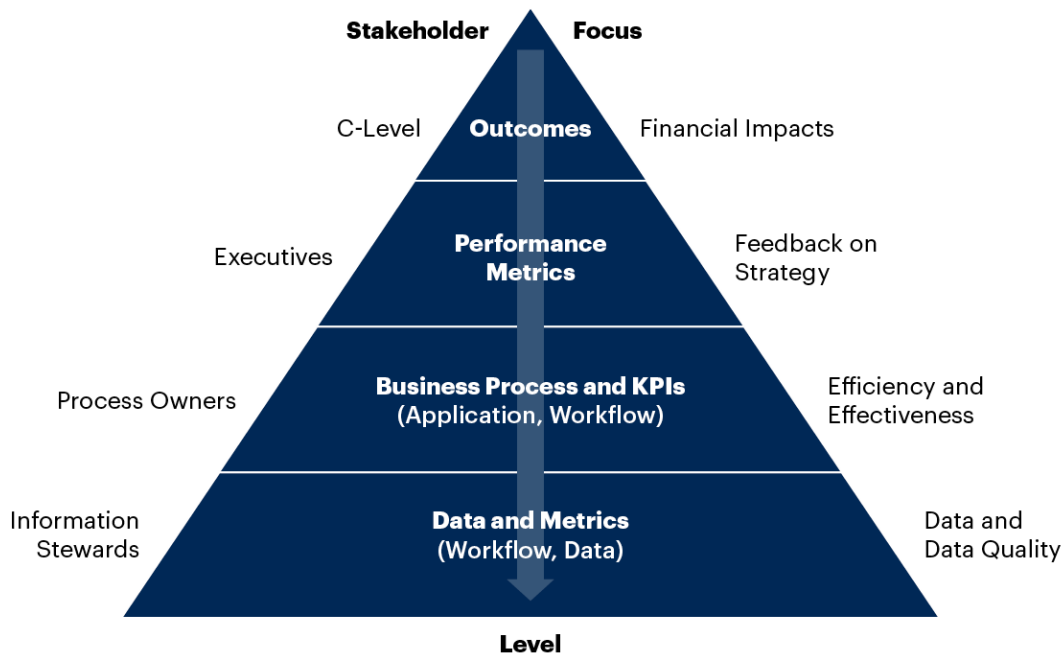
The connection between an MDM program and business outcomes cannot be hypothetical or conceptual – it must be quantifiable.

MDM program leaders who only make a conceptual or theoretical link between master data and business outcomes are asking their stakeholders to take a leap of faith on an investment in MDM – a leap many won't make.

The first step to measuring MDM value is to utilize a metrics framework that allows high-level business outcomes to be hierarchically linked to master data. This framework allows for business and MDM metrics to be captured and linked at every level of the hierarchy. Metrics is one of the constituent parts in Gartner's MDM Operating Model (see [Three Essentials for Starting and Supporting Master Data Management](#)).

Gartner's recommended metrics framework is the Data and Analytics Business Value Pyramid, as outlined in Figure 1 below.

Figure 1. Use the Gartner Business Value Pyramid to Link Outcomes to Data

Use the Gartner Value Pyramid to Link Outcomes to Data

Source: Gartner
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Gartner

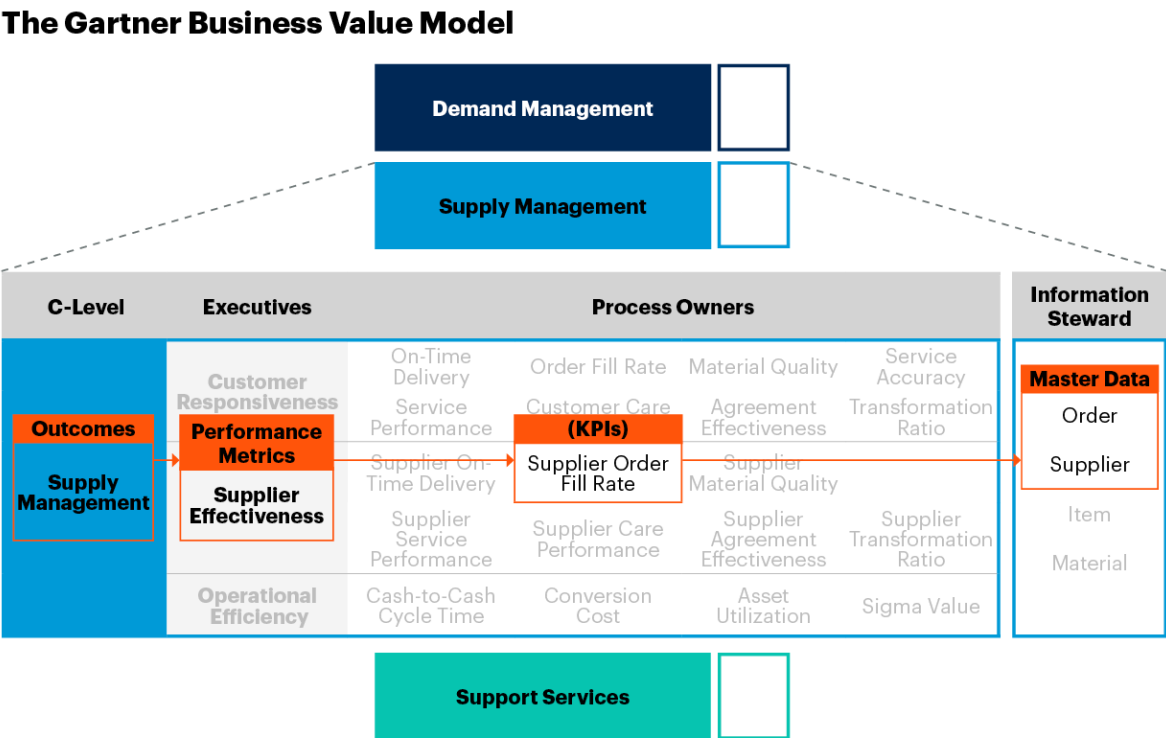
A dependency for measuring the value of MDM programs is understanding the business priorities and how they are measured. This requires data and analytics leaders to collaborate with stakeholders at multiple levels of the organization, starting at the top of the pyramid in Figure 1 and working down. With such an approach, data and analytics leaders engage the business stakeholders' priorities and vital interests, opening the door for their active participation in leveraging MDM to meet their business goals (see [7 Steps to Build a Successful Business Case for MDM Programs](#) and [Tool: How to Connect Data and Analytics to Business Value](#)).

Conversations with business stakeholders must occur at multiple levels of the organization, starting with more senior-level executives whose goals will naturally tend toward higher-level business strategies. The goals of these stakeholders will often be widely communicated both internally and externally, and will appear on annual financial statements, publicly facing websites or internal strategic roadmaps. Conversations with stakeholders at lower levels of the organization around their top-priority performance metrics and key performance indicators (KPIs) tend to be more tactical, but should optimally be hierarchically linked to higher-level outcomes expressed by top business leaders.

Every organization must develop its own metrics framework, adapting and possibly consolidating or dropping one or more layers. For larger organizations, the layers may be more distinct and defined; in smaller organizations, there may be fewer layers, and their responsibilities and focuses may overlap or merge.

A valuable tool to aid in connecting higher-level goals to lower-level performance metrics and KPIs is the Gartner Business Value Model, which provides examples of how metrics at every level of the value pyramid could have an upward linkage back to desired business outcomes, and downward linkage to specific master data domains. See Figure 2, as well as [Use Gartner’s Business Value Model to Make Better Investment Decisions](#).

Figure 2. The Gartner Business Value Model



Source: Gartner
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For earlier-stage MDM initiatives, or for those just starting to quantify the business impacts of their MDM program, prioritization and managing for metrics scope is vital. You will not initially be able to quantify the connection between all potential business outcomes, performance metrics, KPIs and master data sources. In Figure 2, a connection is made between an outcome of improved supply management and supplier and order master data, through a KPI of supplier order fill rate. However, this is just one of several possible KPIs supporting this business outcome. This means that it is necessary to identify which KPIs (and the business processes they measure) are higher-priority than others based on input from senior leadership and your expected business impacts.

Over time, as your MDM program matures and expands, you'll eventually get to a point where you understand how master data influences all or most of your KPIs.

At the start of an MDM program, maintaining a razor focus on keeping your scope manageable through a focus on a limited number of business KPIs is of paramount importance.

The primary goals of this phase of connecting business outcomes to MDM is to:

- Develop an ongoing relationship with business stakeholders to understand their priorities.
- Prioritize your business outcomes, metrics and KPIs based on senior-level guidance. This is especially the case for early-phase MDM programs, or those just starting to quantify the business benefits of MDM.
- Understand at a high level which master data elements and KPIs are supporting your priority business KPIs, metrics and outcomes — and the hierarchical nature between them.
- Help data and analytics team members understand that better data quality alone is not the endgame for MDM programs, and that driving business outcomes is paramount.

Model the Business Impacts From Master Data

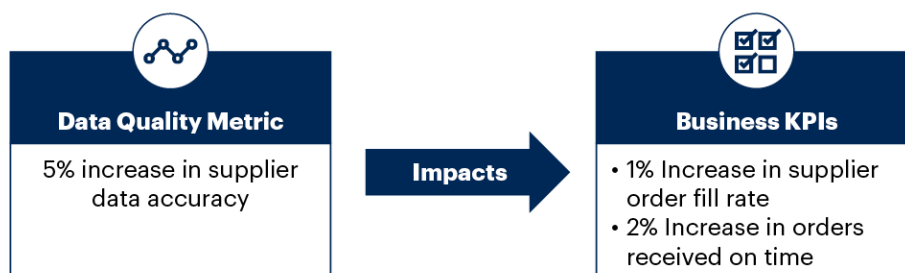
A critical aspect of measuring the business benefit of MDM is building models to quantify how improvements in data will lead to improvements in business processes, and ultimately the delivery of desired business outcomes. This step is often overlooked or avoided by most organizations, yet it's critical to establish a quantifiable link between data and outcomes.

These modeled estimates support an assertion that improvements in data will drive *some* improvements in the business processes supported by that data, since the effectiveness of any one business process will be a function of multiple factors – many of which may have more direct impacts (see [How to Align Finance's Data and Analytics Strategy to Business Needs With a Driver Map](#)). This indirect connection between data and business outcomes is a big reason why many data and analytics leaders have a misperception that the benefits of master data cannot be measured. However, using these models shows a connection that can be measured, monitored and improved over time.

Figure 3 below outlines an example of how an improvement to master data is expected to drive an improvement in a business process, and the KPIs used on both sides of the equation to establish the connection.

Figure 3. Modeling the Connection Between Master Data Quality and Business KPIs

Modeling the Connection Between Master Data Quality and Business KPIs



Source: Gartner
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Gartner

This model asserts that supplier-related business processes will improve because orders will no longer be rejected or slowed by incorrect data on an order. Building these estimates starts by asking business stakeholders, “How often are orders slowed or rejected because of incorrect data?” From here, IT and business analysts can begin the process of estimating how improving data will drive improved business processes.

Important considerations in creating these models of business impact:

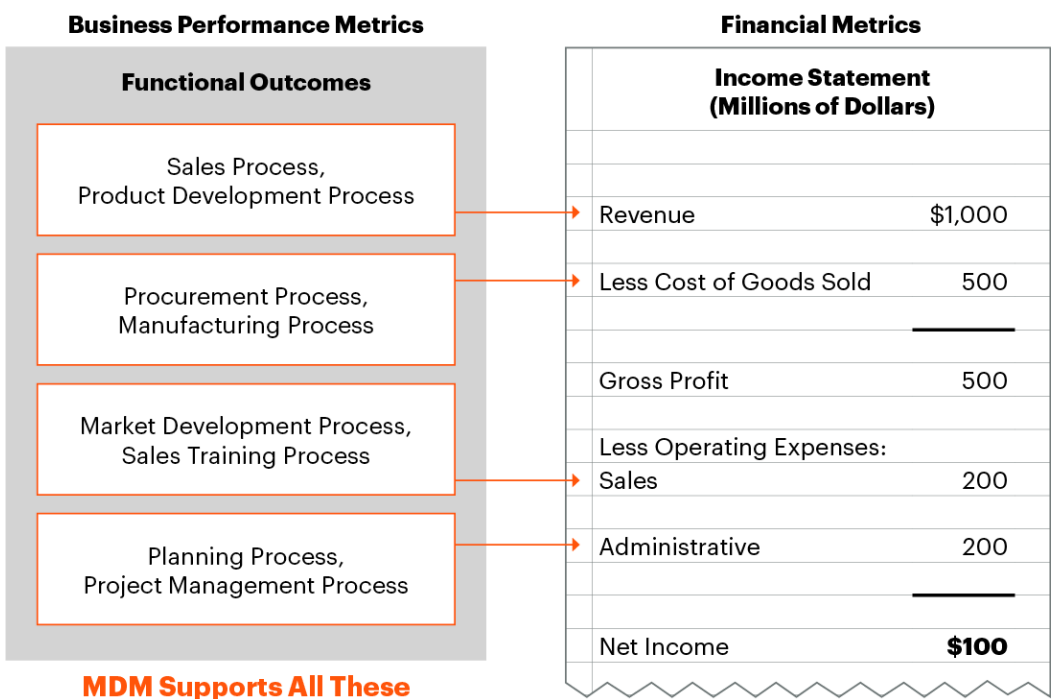
- Find the right people within the business to collaborate with in creating these models. Look for people who may already be managing budget, forecasting, financial planning and similar roles within each functional group.
- These are estimates, and will not be perfect — particularly at the start. It's critical to collaborate with your business partners to make the estimates as defensible as possible.
- Be conservative and keep your scope narrow. For many large organizations, a single MDM KPI could influence hundreds of business KPIs. Focus only on those business KPIs that are already well-measured and well-managed, and are a higher business priority.
- These estimates must be measurable over time from both a business-metric and a data-metric perspective.
- Be iterative. You should fully expect to update and revise these estimates over time.
- Be pragmatic. You may find your business partners more willing to collaborate on modeling the impact of data on some business KPIs, and less so on others.
- These are estimates, and require some understanding of a baseline for KPIs on both sides of the equation. (See [12 Actions to Improve Your Data Quality](#).)
- The policies to define MDM KPIs and related measurements of master data quality are managed within a data governance function. If you don't have a data governance function, or if your policies to define your MDM KPIs don't exist, you'll need to establish some semblance of both. (See [7 Must-Have Foundations for Modern Data and Analytics Governance](#), and [Data and Analytics Governance Requires a Comprehensive Range of Policy Types](#).)
- Third-party data providers may be available to help automate the process of measuring your MDM KPIs, particularly in relation to some master data domains (like customer or location).

Aggregate the Business Impacts

The final step is to aggregate all of the impacts at a metrics level to higher-level business outcomes, where those outcomes were originally identified in the very first step of this process. We would typically expect that these aggregated business outcomes would align to specific financial results, as outlined in Figure 4 below. In the case of the example used in Figures 2 and 3 above, it is expected that the savings related to improved efficiency in supplier management would positively impact “cost of goods sold” on an income statement.

Figure 4. Quantifying the Financial Impacts of MDM

Quantifying the Financial Impacts of MDM



Source: Gartner
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Evidence

The best-practice recommendations collected and described in this research are the compiled anecdotal result of thousands of interactions with Gartner clients and event attendees over the past decade. Gartner’s data and analytics analysts have monitored hundreds of programs that have gone well, and many more that have not. These best practices correspond to an approach to master data and MDM that drives a business-focused outcome.

¹ 2019 Gartner Vendor Survey for the [Magic Quadrant for Master Data Management Solutions](#).

Acronym Key and Glossary Terms

MDM	Master data management
KPI	Key performance indicator

Document Revision History

[Developing the Best Metrics for Successful Master Data Management - 25 April 2019](#)

[Developing Metrics for Successful Master Data Management - 2 November 2015](#)

[Developing Metrics for Successful Master Data Management - 8 August 2011](#)

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

[How to Build a Business Case for Master Data Management Using Business Metrics](#)

[Create a Master Data Roadmap With Gartner's MDM Maturity Model](#)

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