

Create a Dashboard to Measure the Business Impact of Data and Analytics

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Initiatives:[Executive Leadership: AI, Data and Analytics](#) and [1 more](#)

Data and analytics strategies need concrete metrics of success to achieve the desired business goals. Executive leaders should advise their direct reports to ensure these metrics focus on data and analytics programs themselves, business processes they affect and their impact on various stakeholders.

Overview

Key Challenges

- Executive leaders need concrete metrics of success to demonstrate their contribution to business success.
- Few AI, data and analytics (D&A) strategies show measurable metrics of success, instead of listing soft benefits with words such as “more, less, better, faster, higher, lower, easier” and other intangible benefits.
- Management reporting — the original focus of many D&A initiatives — is simply more intangible in nature, but with the focus shifting toward applying D&A to business processes through predictive and prescriptive analytics, measuring business impact becomes doable and necessary.

Recommendations

Executive leaders involved in driving AI and D&A should advise their direct reports to:

- Communicate misconceptions regarding D&A programs that support management decision making and have intangible goals.
- Create concrete metrics of success and treat them with the same rigor as any other business metrics.
- Measure periodic business impact in three areas:
 - Information value (like the cost, quality and speed of their own D&A programs).
 - Business value (contributing to the organization's key performance indicators through better use of D&A).
 - Stakeholder value (by sharing information with customers and other stakeholders).

Introduction

This research is adapted from "Create a Chief Data Officer Dashboard to Measure Your Business Impact" which guides D&A leaders to focus metrics of success on D&A programs, the business processes they affect and their impact on different stakeholders.

Only 15% of D&A strategies mention concrete metrics of success. For the other 85%, either no metrics or intangible goals are mentioned. ¹ These typically include supporting making better decisions, providing the right information at the right time to the right people, reaching a single version of the truth, creating better alignment, fixing data quality and improving agility.

Despite the need to show the business impact of D&A programs, there are multiple reasons why measurement on the strategy level is still a hard topic:

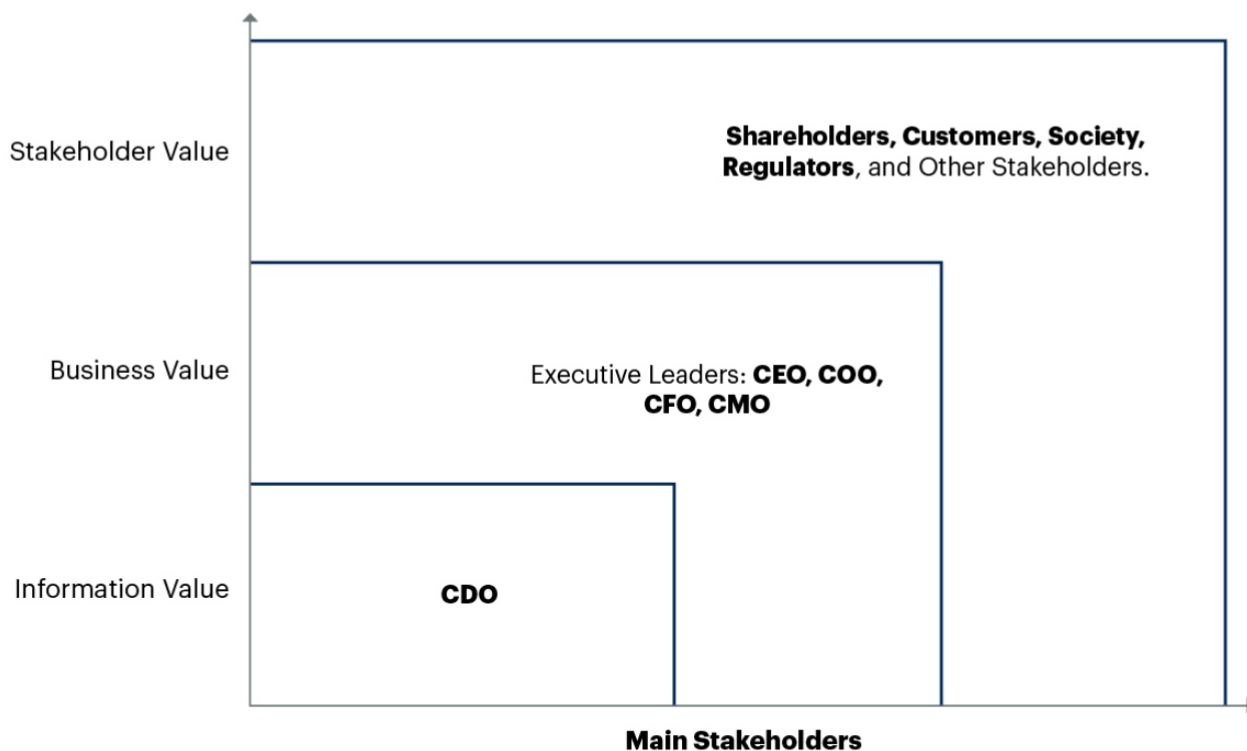
- Most information strategies (and analytics strategies to a much-lesser extent) are developed and implemented by IT or data management professionals, and based on shared-service thinking. The measure of success is in budget management.
- Executive leaders find it hard to come up with the right metrics of success on a more-strategic level, beyond tactical initiatives.
- It takes discipline to do baseline measurements first particularly when there is time pressure.
- For many years, analytics focused on creating management reports for managers to consume and play a part in their decision-making tasks. That is a qualitative exercise by nature. It is only in the last few years that tangible metrics have become achievable through the popularity of predictive and prescriptive analytics.

Executive leaders should strive for a concrete link between the strategy and business impact.

Figure 1 illustrates potential zones of business impact in the D&A dashboard and the key stakeholders involved.

Figure 1: Zones of Business Impact in the Data and Analytics Dashboard

Zones of Business Impact in the Data and Analytics Dashboard



Source: Gartner (June 2020)
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Analysis

Optimize the Data and Analytics Process Itself to Create Information Value

Optimization doesn't necessarily mean making the process cheaper and involving fewer people. More investment in terms of money and people could be the best decision. The main value to focus on is the "potential value of information." This is the value associated with the possible future use of information.

Information that is locked up in a complex and proprietary data schema, and within the business logic of a business application, may have lower potential value than the same data readily accessible in a data warehouse. This problem becomes even bigger with cloud deployments.

Table 1 provides some possible concrete performance indicators, following the two modes of working from “bimodal IT.” Mode 1 represents a classical linear approach to achieve predetermined results and Mode 2 enables a more explorative and iterative approach (please note that these measures are about the D&A process itself, not business impact).

Table 1: Sample Metrics for Optimizing Data and Analytics Processes

	Mode 1 Sample Metrics	Mode 2 Sample Metrics
	<p>Economic minimum principle: Use as little resources as possible to get to the predefined results.</p>	<p>Economic maximum principle: Get as much output out of the limited resources at your disposal.</p>
Cost	<ul style="list-style-type: none"> ■ Projects/initiatives on budget and time. ■ Cost per unit of work (a report, an interface or a data model). 	<ul style="list-style-type: none"> ■ Reduced cost of change management. ■ Reduced TCO in Mode 1 to subsidize Mode 2.
Quality	<ul style="list-style-type: none"> ■ User/usage counts. ■ Improved data quality %. ■ Improved MDM integration %. 	<ul style="list-style-type: none"> ■ Distribution of success (e.g., 50% of activities are discontinued, 35% solve a particular problem and 15% are transformative). ■ User satisfaction with results.
Innovation	<ul style="list-style-type: none"> ■ Extent to which new developments have met the new business requirements. 	<ul style="list-style-type: none"> ■ Number of alternative approaches tried and viable options generated (too few means not innovative, too many means unqualified). ■ Number of new products and services developed by leveraging D&A.

MDM = master data management; TCO = total cost of ownership

Source: Gartner (June 2020)

Use Data and Analytics to Improve Business Processes to Create Business Value

Next to the potential value of information, there is also the realized value. This is the value coming out of using information to improve the business impact of analytics. Descriptive and diagnostic analytics provide insights that help management improve organizational processes and have an indirect link to improving business impact. Predictive and prescriptive analytics, more on an operational level, can be directly linked to improving business impact.

In a typical business, there is investment in multiple business improvement projects and programs at the same time, including customer-facing processes, strategy, operations, procurement and everything else in between. ² Many of them use new sources of information or explore new ways of using information in business.

Figure 2 shows the Gartner Business Value Model, which contains the most relevant metrics across the various business functions.

Figure 2: The Gartner Business Value Model

The Gartner Business Value Model

Business Aspect	Aggregates	Primes			
Demand Management	Market Responsiveness	Target Market Index	Market Coverage Index	Market Share Index	Opportunity/Threat Index
		Product Portfolio Index	Channel Profitability Index	Configurability Index	
	Sales Effectiveness	Sales Opportunity Index	Sales Cycle Index	Sales Close Index	Sales Price Index
		Cost-of-Sales Index	Forecast Accuracy	Customer Retention Index	
Product Development Effectiveness	New Product Index	Feature Function Index	Time-to-Market Index	R&D Success Index	
Supply Management	Customer Responsiveness	On-Time Delivery	Order Fill Rate	Material Quality	Service Accuracy
		Service Performance	Customer Care Performance	Agreement Effectiveness	Transformation Ratio
	Supplier Effectiveness	Supplier On-Time Delivery	Supplier Order Fill Rate	Supplier Material Quality	Supplier Service Accuracy
		Supplier Service Performance	Supplier Care Performance	Supplier Agreement Effectiveness	Supplier Transformation Ratio
	Operational Efficiency	Cash-to-Cash Cycle Time	Conversion Cost	Asset Utilization	Sigma Value
Support Services	HR Responsiveness	Recruitment Effectiveness Index	Benefits Administration Index	Skills Inventory Index	Employee Training Index
		HR Advisory Index	HR Total Cost Index		
	IT Responsiveness	System Performance	IT Support Performance	Partnership Ratio	Service-Level Effectiveness
		New Project Index	IT Total Cost Index		
	Finance and Regulatory Responsiveness	Compliance Index	Accuracy Index	Advisory Index	Cost-of-Service Index

Source: Gartner (June 2020)
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As D&A is one of many impacts on a business process, it is not trivial to separate out its role. In high-volume-transaction businesses, it is possible to use A/B testing, in which you run multiple versions of a process simultaneously, which allows measurement of a more-precise impact. In lower-volume processes, measuring the increase of the business impact (such as conversion rate, customer satisfaction, speed or cost of delivery) compared to before may have to suffice.

Promote Stakeholders to Share Information to Improve Their Business Impact and Create Value

Every organization has information, analytics and algorithms that are better shared than kept. Conversely, customers, partners and other businesses also have information, analytics and algorithms that have value for the organization.

Information yield goes beyond the borders of your own organization — external stakeholders can benefit from your D&A too. In fact, most digital business models are based on sharing data and using automated algorithms in business interactions.

In these cases, D&A has an intrinsic or expected value and the stakeholders have a demand for the D&A, expecting it to be useful.

This expectation can be made more concrete by sharing:

- Data, allowing the stakeholders to do their own analysis.
- Analysis of the data, with tangible recommendations.
- Algorithms that act on the data.

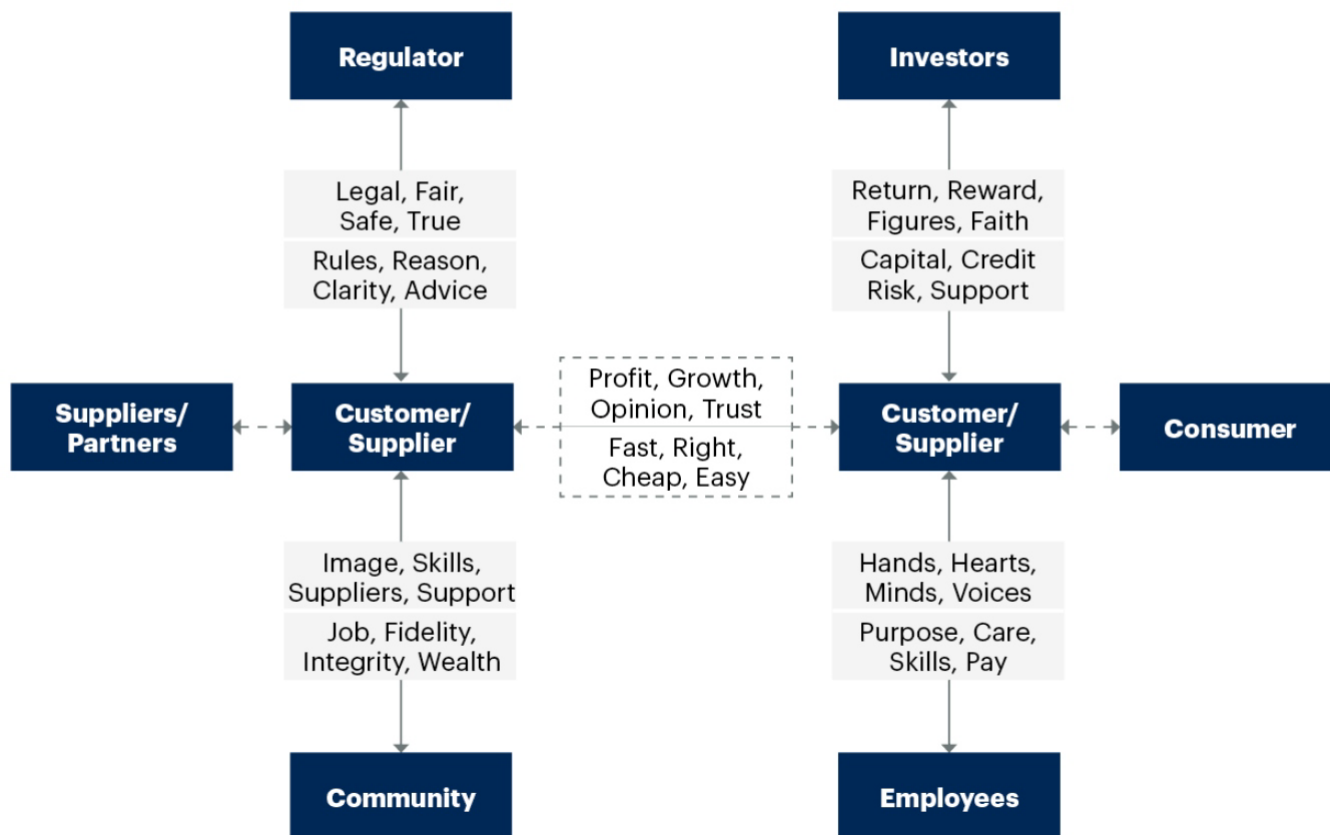
Areas where the organization will find the business impact of sharing D&A include:

- Improving business value in your customer's business. Here you can use the same performance indicators from the Gartner Business Value Model (see Figure 2), but applied to your customer's organization.
- Improving the business relationship between two stakeholders. Different stakeholder requirements and contributions are listed in Figure 3.

Direct monetization (measured in terms of revenue, profit, average subscription length or Net Promoter Score [NPS], for example).

Figure 3: The Performance Prism

Different Business Drivers Are Defined By Different Sets of Stakeholders



Source: Gartner (June 2020)
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Evidence

¹ “Data and Analytics Strategies Need More Concrete Metrics of Success”

² B. McCarthy. “Integrate Analytics Across Your Entire Business.” Harvard Business Review. 3 October 2014.

³ C. Adams, M. Kennerly and A. Neely. “The Performance Prism.” Prentice Hall. 2002.

Recommended by the Authors

How to Craft a Modern, Actionable Data and Analytics Strategy That Delivers Business Outcomes

Recommended For You

How to Communicate the Business Value of Data and Analytics to the Board

Tool: How to Connect Data and Analytics to Business Value

Achieving the Business Value of Data and Analytics

Sequence Your Data and Analytics Investments to Maximize Business Value

Leverage Data and Analytics Efficiently to Improve Digital Business Outcomes

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