

The Gartner Business Value Model: A Framework for Measuring Business Performance

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The value model is a set of the most common business outcomes resulting from IT investments and ongoing IT services. Each metric in the model is mathematically linked to the financial statements, providing CIOs the ability to simulate the impact of IT investments and services on financial results.

Key Findings

- Companies that use leading indicators outperform their competitors in terms of return on equity and return on assets.
- New sources of information from external economic events and internal business processes have dramatically reduced the cost and increased the reliability of leading indicators.
- Most performance management programs rely on lagging indicators. Although lagging indicators are important to managing business performance, they provide little insight on how to exploit opportunities and mitigate risk.

Recommendations

To optimize risk and corporate performance, CIOs should:

- Use this model to explain and prioritize new IT investments and ongoing IT services to business executives.
- Develop performance metrics, keeping in mind that less is more. Limit the number of metrics to five to nine at any single managerial level.
- Use industry standard performance metrics when possible, so that comparisons with other similar organizations are possible.
- Avoid gaps and overlaps in the metrics selected. Use a limited number of metrics that provide a 360-degree view of the activities being measured.

Table of Contents

Analysis.....	6
Introduction.....	6
The Business Value Model Overview.....	8
Target Audience.....	11
Positioning the Business Value Model.....	11
Guiding Principles for Metric Selection.....	12
Applications of the Business Value Model.....	13
Implement the Business Value Model at a P&L Level.....	15
Risk-Adjusted Value Management.....	16
A Word of Caution.....	16
High-Level Business Aspects.....	17
Aggregate Measures.....	18
Prime Metrics.....	19
Business Aspect: Demand Management.....	20
Business Aspect: Supply Management.....	38
Business Aspect: Support Services.....	58
Industry-Specific Extensions: High Technology.....	75
Business Aspect: Demand Management.....	77
Business Aspect: Supply Management.....	85
Industry-Specific Extensions: Mining Industry.....	86
Business Aspect: Demand Management.....	88
Digital Business: Leading Indicators Specific to This Form of Business.....	92
Side 1 — Registered Prospects/Customers.....	94
Side 1 — Growth Rate of Registered Prospects/Customers.....	94
Side 1 — Conversion Rate Between Customers and Platform Providers.....	95
Side 1 — Average Annual Purchasing Frequency Between Customers and the Content Providers.....	95
Side 1 — Average Price per Transaction Between Customers and the Content Providers.....	95
Side 1 — Average Fixed Fee Charged by Platform Providers to Customers.....	96
Side 1 — Average Variable Fee per Transaction Charged by the Platform Provider to Customers	96
Side 1 — Cost per Transaction for Platform Providers When Selling to Customers.....	96
Side 2 — Number of Registered Content Providers on the Platform.....	97
Side 2 — Growth Rate of Registered Content Providers.....	97

Side 2 — Conversion Rate Between the Platform Provider and Content Providers.....	97
Side 2 — Average Annual Purchasing Frequency Between the Platform Provider and Content Providers.....	98
Side 2 — Average Price per Transaction Between the Platform Provider and Content Providers	98
Side 2 — Average Fixed Fee Charged by Platform Providers to Content Providers.....	98
Side 2 — Average Variable Fee per Transaction Charged by the Platform Provider to Content Providers.....	99
Side 2 — Cost per Transaction for Platform Providers When Selling to Content Providers.....	99
Appendix A: Frequently Asked Questions.....	99
Appendix B: Sigma Table for Defects per Million.....	101
Gartner Recommended Reading.....	103

List of Tables

Table 1. Business Value Model Applications.....	14
Table 2. Prime Metrics Are Based on Well-Vetted Measures of Real Value Creation, Not Regulated Definitions.....	17
Table 3. Business Value Model High-Level Business Aspect Definitions.....	18
Table 4. Sigma Table for Defects per Million.....	101

List of Figures

Figure 1. Comparison of Standard Measures of Value to Actual Value in the U.S.....	7
Figure 2. The Gartner Business Value Model.....	10
Figure 3. Positioning the Business Value Model.....	11
Figure 4. Business Value Model High-Level Business Aspects.....	17
Figure 5. Business Value Model Aggregate Measures.....	18
Figure 6. Target Market Index.....	20
Figure 7. Market Coverage Index.....	21
Figure 8. Market Share Index.....	22
Figure 9. Opportunity/Threat Index.....	23
Figure 10. Product Portfolio Index.....	24
Figure 11. Channel Profitability Index.....	25
Figure 12. Configurability Index.....	26

Figure 13. Sales Opportunity Index..... 27

Figure 14. Sales Cycle Index..... 28

Figure 15. Sales Close Index..... 29

Figure 16. Sales Price Index..... 30

Figure 17. Cost-of-Sales Index..... 31

Figure 18. Forecast Accuracy..... 32

Figure 19. Customer Retention Index..... 33

Figure 20. New Product Index..... 34

Figure 21. Feature Function Index..... 35

Figure 22. Time-to-Market Index..... 36

Figure 23. R&D Success Index..... 37

Figure 24. On-Time Delivery..... 38

Figure 25. Order Fill Rate..... 39

Figure 26. Material Quality..... 40

Figure 27. Service Accuracy..... 41

Figure 28. Service Performance..... 42

Figure 29. Customer Care Performance..... 43

Figure 30. Agreement Effectiveness..... 44

Figure 31. Transformation Ratio..... 45

Figure 32. Supplier On-Time Delivery..... 46

Figure 33. Supplier Order Fill Rate..... 47

Figure 34. Supplier Material Quality..... 48

Figure 35. Supplier Service Accuracy..... 49

Figure 36. Supplier Service Performance..... 50

Figure 37. Supplier Care Performance..... 51

Figure 38. Supplier Agreement Effectiveness..... 52

Figure 39. Supplier Transformation Ratio..... 53

Figure 40. Cash-to-Cash Cycle Time..... 54

Figure 41. Conversion Cost..... 55

Figure 42. Asset Utilization..... 56

Figure 43. Sigma Value..... 57

Figure 44. Recruitment Effectiveness Index..... 58

Figure 45. Benefits Administration Index..... 59

Figure 46. Skills Inventory Index..... 60

Figure 47. Employee Training Index..... 61

Figure 48. HR Advisory Index..... 62

Figure 49. Employee Engagement Index.....63

Figure 50. Employee Retention Index..... 64

Figure 51. HR Total Cost Index..... 65

Figure 52. System Performance..... 66

Figure 53. IT Support Performance.....67

Figure 54. Partnership Ratio..... 68

Figure 55. Service-Level Effectiveness..... 69

Figure 56. New Project Index.....70

Figure 57. IT Total Cost Index..... 71

Figure 58. Compliance Index..... 72

Figure 59. Accuracy Index..... 73

Figure 60. Advisory Index..... 74

Figure 61. Cost-of-Service Index..... 75

Figure 62. Performance Metrics Recommended for the High-Tech Industry..... 76

Figure 63. Net Promoter Score..... 77

Figure 64. Customer Interaction Index..... 78

Figure 65. Contract Value Index..... 79

Figure 66. New Customer Index..... 80

Figure 67. Wallet Share Index..... 81

Figure 68. Effective Sales Quota Index.....82

Figure 69. Sales Capacity Index.....83

Figure 70. R&D Funding Index..... 84

Figure 71. Lost Customer Index.....85

Figure 72. Backlog Index..... 86

Figure 73. Performance Metrics Recommended for the Mining Industry..... 87

Figure 74. Total Cost of Exploration..... 88

Figure 75. Total Cost of Acquisition.....88

Figure 76. Time-to-Find Index.....88

Figure 77. Pricing Index..... 89

Figure 78. Product Mix Index..... 89

Figure 79. Life-of-Mine Index..... 90

Figure 80. Total Production Cost per Tonne..... 90

Figure 81. Mine Productivity Index..... 91

Figure 82. Safety Index..... 91

Figure 83. Environmental Impact Index..... 91

Figure 84. A Multisided Platform.....	93
Figure 85. Registered Prospects/Customers.....	94
Figure 86. Growth Rate of Registered Prospects/Customers.....	94
Figure 87. Conversion Rate Between Customers and Platform Providers.....	95
Figure 88. Average Annual Purchasing Frequency Between Customers and the Content Providers.....	95
Figure 89. Average Price per Transaction Between Customers and the Content Providers.....	95
Figure 90. Average Fixed Fee Charged by Platform Providers to Customers.....	96
Figure 91. Average Variable Fee per Transaction Charged by the Platform Provider to Customers.....	96
Figure 92. Cost per Transaction for Platform Providers When Selling to Customers.....	96
Figure 93. Number of Registered Content Providers on the Platform.....	97
Figure 94. Growth Rate of Registered Content Providers.....	97
Figure 95. Conversion Rate Between the Platform Provider and Content Providers.....	97
Figure 96. Average Annual Purchasing Frequency Between the Platform Provider and Content Providers	98
Figure 97. Average Price per Transaction Between the Platform Provider and Content Providers.....	98
Figure 98. Average Fixed Fee Charged by Platform Providers to Content Providers.....	98
Figure 99. Average Variable Fee per Transaction Charged by the Platform Provider to Content Providers	99
Figure 100. Cost per Transaction for Platform Providers When Selling to Content Providers.....	99

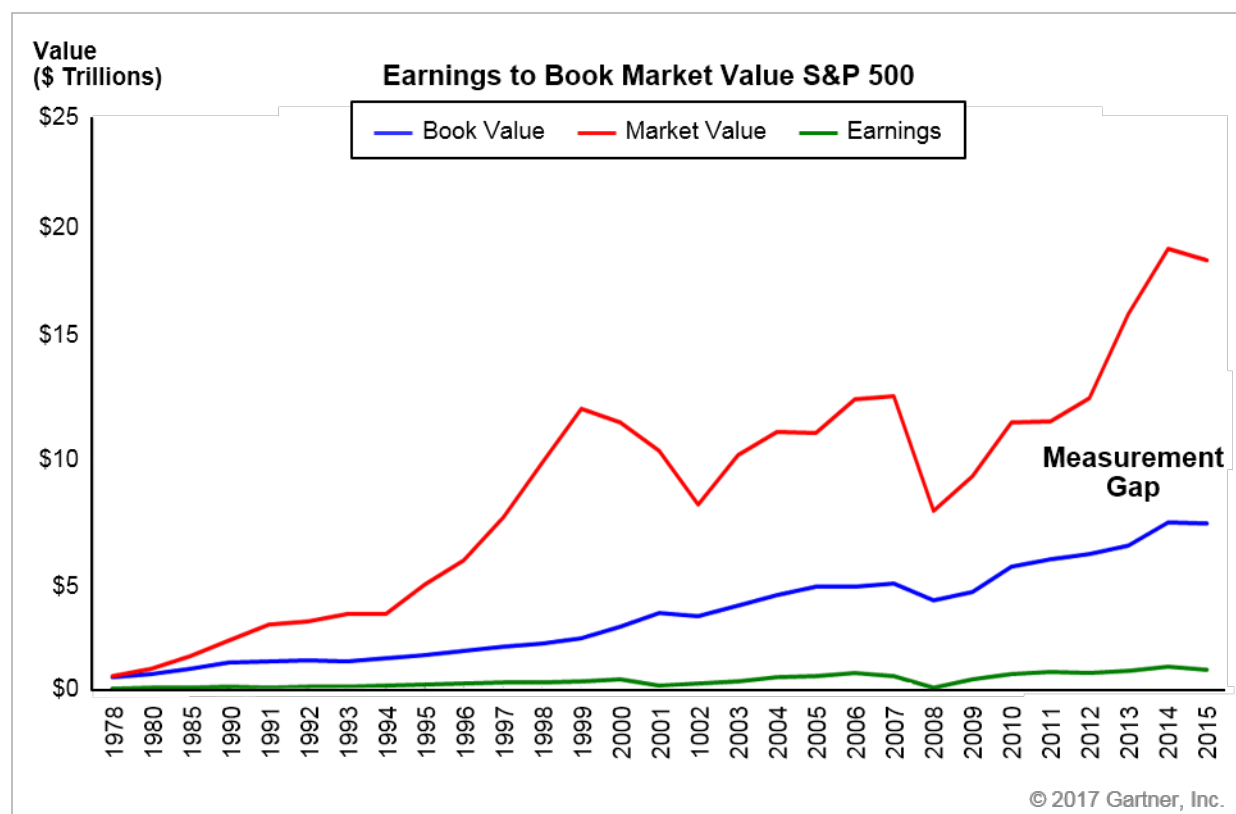
Analysis

Introduction

Business executives and middle managers need broadly adopted and consistently applied measures of value to make informed decisions. This is natural. We communicate by using concepts that have common meaning. As the issues we deal with become more complex, the common concepts we use to communicate should extend to allow greater precision and clearer meaning.

For decades, the broadly adopted and consistently applied measures of business value have been the traditional accounting measures such as net profit, earnings per share and return on invested capital. However, a measurement gap has developed between accounting measures and real business value (see Figure 1).

Figure 1. Comparison of Standard Measures of Value to Actual Value in the U.S.



Source: Gartner (May 2017)

In order to close this measurement gap so that the real sources of business value can be managed more effectively, Gartner and a number of other organizations have embarked on an initiative to extend, not replace, traditional accounting metrics with new measures of business value (see [Gartner/EBRC KPI Initiative](#)).

There are two reasons for this dominance of accounting metrics in reporting and measuring business performance:

- Markets still place a high degree of emphasis on the achievement of quarterly financial targets, primarily revenue, net profit and earnings per share.
- The "numbers" are the only common language for reporting business performance in a company with diversified operations, because there are no standard definitions of nonaccounting metrics, and no way of relating these to the overall impact on business performance. The only way executives can judge the relative performance of different parts of their business on a comparable basis is by using accounting metrics.

Yet, despite the importance of accounting metrics, they are only part of the picture when it comes to understanding business performance. Today's accounting metrics were created during the Industrial

Age and are not able to accurately capture the value created by information age companies with significant intangible assets, such as knowledge, branding, intellectual property and unique business processes. Figure 1 compares the traditional accounting measures of book value (which represents the total value of the company's assets that shareholders would receive if it went out of business) and earnings with market capitalization for the S&P 500. Since 1980, these traditional accounting measures of value have not kept pace with actual value as measured by our capital markets. Consequently, the predominance of accounting metrics does not enable businesses to understand and measure how value is created in their organizations. Although accounting metrics will remain a fundamental measure of value, it is recognized that they only represent lagging indicators of performance. Business managers need a better understanding of the drivers of the business value, the nonaccounting metrics that are the leading indicators of financial outcomes. Leading indicators extend the value of lagging indicators and provide a mechanism for gaining competitive advantage. According to a Wharton research study, companies that build and verify a set of leading indicators earn a 2.95% higher return on assets and a 5.14% higher return on equity. Yet, fewer than 25% of companies attempt this.

To this end, we have defined and organized the metrics in this Business Value Model. This is a structured framework and definition of nonaccounting metrics that can be applied generically to help organizations identify how their business activities will impact financial performance. We sourced the metrics from a number of industry groups and thought leaders, such as the Supply Chain Council (SCC), the Product Development and Management Association (PDMA), American Productivity and Quality Center (APQC), the International Society of Six Sigma Professionals (ISSSP), the Balanced Scorecard Collaborative and the European Foundation for Quality Management.

We believe that the standardization of nonaccounting performance metrics will enhance IT-to-business communication by allowing greater precision and meaning in addressing increasingly complex business value creation issues. The Business Value Model is a set of precisely defined performance metrics and is a useful tool that extends, not replaces, traditional accounting metrics in determining the real drivers of business value and in closing the measurement gap.

The Business Value Model Overview

The model in Figure 2 covers three broad aspects: demand management, supply management (or order to cash) and support services. Each of these business aspects is broken down into three aggregate measures. Under demand management, the aggregate measures are market responsiveness, sales effectiveness and product development effectiveness. For supply management, the aggregates are customer responsiveness, supplier effectiveness and operational efficiency. Finally, under support services, we have human resources responsiveness, information technology responsiveness, and finance and regulatory responsiveness.

Each of the aggregate measures then breaks down further into what we call the prime measures. The metric definitions and calculations are given in the Prime Metrics section. The Business Value Model is configurable — not all metrics are relevant to every business. Companies should become familiar with the metric definitions before selecting which metrics to use under each aggregate. Not all metrics are equally important once final selections are made. Business strategy is the single biggest determinant of which metrics are most important. Finally, the standard metrics listed above

should be augmented with custom prime metrics that are common to your industry (further discussion on this follows). Think of the Business Value Model as kind of a "periodic table of elements," in that it identifies the elements of business value driven by your business strategy and objectives.

Figure 2. 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	Human Resources Responsiveness	Recruitment Effectiveness Index	Benefits Administration Index	Skill Inventory Index	Employee Training Index
		HR Advisory Index	HR Total Cost Index		
	Information Technology Responsiveness	System Performance	IT Support Performance	Partnership Ratio	Service-Level Effectiveness
		New Project Index	Cost Index		
	Finance and Regulatory Responsiveness	Compliance Index	Accuracy Index	Advisory Index	Cost-of-Service Index

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Source: Gartner (May 2017)

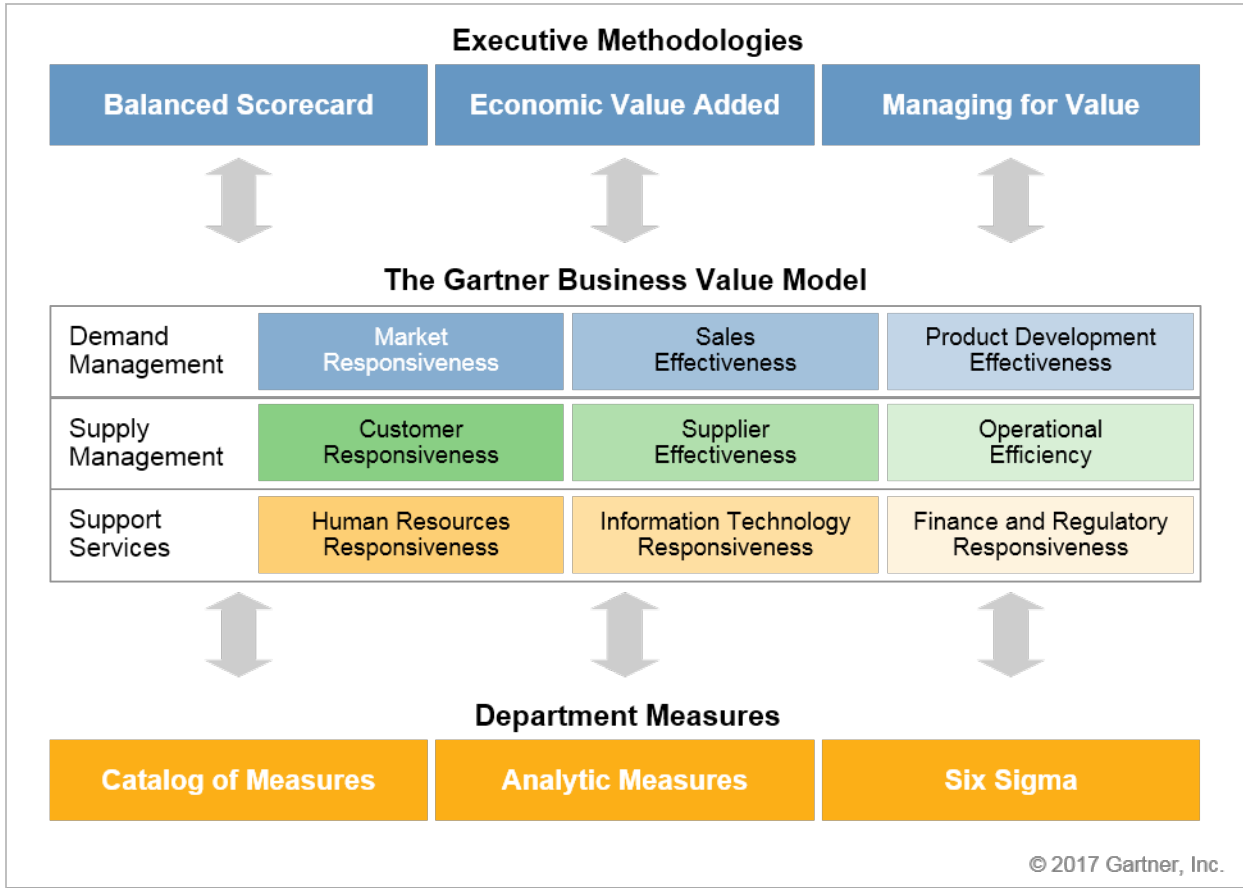
Target Audience

The Business Value Model is designed to allow executives to discuss and agree on an appropriate set of metrics to show how performance of different operational areas impacts the different business aspects and, ultimately, financial performance. It can be used alongside a number of business methodologies (see the Positioning the Business Value Model section below). It can also be used at a departmental level to help IT managers build alignment between IT and the business, prioritize new initiatives, and effectively communicate IT's contribution to the business.

Positioning the Business Value Model

The Gartner Business Value Model sits between strategic methodologies and enterprise-specific measurement tools and capabilities. Positioning the Business Value Model this way will ease acceptance of these extensions to standard, precisely defined measures for business value. The Business Value Model complements, rather than competes with, other widely used methodologies and practices (see Figure 3).

Figure 3. Positioning the Business Value Model



Source: Gartner (May 2017)

Guiding Principles for Metric Selection

More important than the measures themselves is the process for selecting and maintaining them. Gartner's Business Value Model has a number of principles that govern its evolution. The following are the generally accepted principles for the Gartner Business Value Model:

1. All metrics, when used in aggregate, are leading indicators of financial performance. The impact on specific financial measures is described in each metric definition in the Business Value Model.
2. It is recommended that organizations limit the number of selected metrics to seven (plus or minus two) at any given management level.
3. The metrics that make up the Business Value Model should be collectively exhaustive and mutually exclusive with respect to measuring the "actionable activities" of an enterprise (see the note below regarding Principle 3).
4. The Business Value Model should be hierarchical, focusing on the actionable activities within the enterprise that are managed at the executive and middle management levels. The standard Business Value Model need not go down to a detailed process or intradepartmental level, as other department measures (see Figure 3) exist to do this. However, integrating such metrics with the standard Business Value Model should be encouraged.
5. The Business Value Model should be based on standard metrics, foster collaboration, and allow comparison between internal departments and external organizations.
6. Users can integrate their own organization's internal metrics that may not appear at all in the Business Value Model. The Business Value Model should be made flexible by an architecture allowing many groupings of standard and custom prime metrics that can be combined through its hierarchical structure into aggregate measures. We recommend that 70% to 80% of the metrics used in an enterprise implementation of the Business Value Model be standard, and 20% to 30% be custom.
7. The holistic nature of the Business Value Model should capture the cause-and-effect relationships between business functions within the enterprise, to ensure that all the effects of a specific change are considered.
8. The prime metrics should be selected based on general availability of the data required to support them in automated business transaction systems.
9. The Business Value Model should evolve over time, allowing benchmarking to continue throughout.

Note: Principle 3

Principle 3 requires some explanation. "Collectively exhaustive" and "mutually exclusive" are straightforward concepts. However, their implications to performance management are powerful:

- "Collectively exhaustive" means that the set of measures identified explains all the actionable activities within the enterprise. This includes demand management, supply chain management

and support services. In this way, the Business Value Model is limited to the things management can affect. When driving a car, you can control the steering wheel and foot pedals, but you can't control the weather or the direction of the road.

- "Mutually exclusive" means that no two measures overlap one another in the operating events being monitored. This needs to be true as you move both vertically and horizontally throughout the Business Value Model. For example, inventory turns and inventory days of supply are measures that overlap. Examining their definitions, it is clear that they measure the same thing.

Applications of the Business Value Model

The Gartner Business Value Model is intended to provide many useful management purposes, summarized in Table 1.

Table 1. Business Value Model Applications

Application	Description	Advantages
Return on investment (ROI) or business case development	By extending, not replacing, accounting measures, it is possible to quantify what would otherwise be "soft" or "intangible" benefits. Gartner research shows that by quantifying all benefits of an IT-enabled business initiative, the success rate of these initiatives improves.	Provides a complete view of effects of IT-enabled business initiatives.
Linking vision to action	The Business Value Model provides natural support for the balanced scorecard.	Lowers the risk and cost of implementing the business-balanced scorecard by providing the required operational measures.
IT-to-business alignment	Translating vision to action with precise measures establishes the link between business need and technical capabilities.	Provides a common language between business executives and IT professionals.
Improved management reporting	The Business Value Model can be used to create a common set of nonaccounting metrics that will help foster better communication between business managers and senior executives about how the business is performing.	Provides a "common language" to discuss operational performance using nonaccounting measures that are leading indicators of financial performance.
External reporting	Standard, auditable extensions to account metrics provide greater transparency and lower risk in the minds of investors. Obviously, caution is needed with external reporting, but more disclosure lowers perceived risk and adds shareholder value.	Has greater transparency that lowers risk because investors have more visibility into business operations. All things being equal, investors will reward those businesses offering greater transparency.
Strategic alliances	Common use of the Business Value Model between partners provides auditable information to optimize relationships or select new alliances over time.	Has complementary or opposing objectives that are easier to identify. Selecting the right partners and building long-term relationships are easier using standard, objective and verifiable business measures.
Due diligence — mergers and acquisitions	Precisely defined and auditable information allows more rapid and accurate assessments of acquisition targets and makes acquisition candidates more attractive.	Has greater visibility into the operating performance of the business.
Incentive compensation plans	The Business Value Model principles emphasize the distribution of only a few measures to the functional areas managing their results.	Has performance measures, as leading indicators of financial results, which make ideal targets for incentive compensation plans.
Business activity monitoring	Periodic updates on business performance are no longer acceptable in many competitive environments. Monitoring critical business processes for exceptional performance is an emerging response to the need for more agile, cost-effective enterprises.	Provides the necessary measures on which exceptional performance can be monitored.

Application	Description	Advantages
Monitoring service-level agreements (SLAs)	Business process outsourcing requires business-focused measurement for both partners to succeed.	Expands the focus of SLAs beyond tactical to strategic, increasing the long-term success of outsourcing relationships.
Supplier ratings	An auditable set of operational performance measures can similarly be used to rate product and service providers.	Can be used to select suppliers, in addition to forming the basis of SLAs. The Business Value Model suppliers can also use the Business Value Model to differentiate their capabilities.

Source: Gartner (May 2017)

Implement the Business Value Model at a P&L Level

Gartner recommends that the Business Value Model be implemented at a profit and loss (P&L) level. For large corporations, this means that there may be many different instances of the Business Value Model, each driven by the type of business (product and/or service), go-to-market strategy (direct and/or through channels) and operational strategy (outsource or in-house). Configuring the Business Value Model is made possible by its architecture: aggregates and primes. Most businesses will use all nine aggregate measures, but the prime measures will vary based on the selections made from among a group of alternatives. So, depending on the type of business, market and operational strategy in place, the Business Value Model for one P&L may be different from another within the same corporation.

One clarification on the P&L issue in large organizations with several P&L centers is the Business Value Model principles state that 70% to 80% of the primes selected should come from the standard definitions. What this means is that, although business units may configure the Business Value Model based on the nature of the business model (that is, product, service or both), consolidation at the corporate level is still possible because 70% to 80% of the primes are standard.

Think of the Business Value Model as being similar to the periodic table of elements in chemistry. Just as there are many elements, each with its own molecular weight and properties, so are there many primes (54), each with its own value driver. There is no one combination of aggregates and primes that maximizes value creation within an enterprise. Selection should be based on the industry (or industries) your company participates in and driven by the business strategy you have chosen to compete with. As you gain familiarity with the Business Value Model, it will become obvious which primes are best-suited to support a given business strategy.

It is particularly important to be as specific as possible when configuring the demand management prime metrics within the Business Value Model. Differences in the markets you participate in (as defined by the International Standard Industry Classification [ISIC] system — replacement for the Standard Industrial Classification [SIC] codes) and go-to-market strategy (direct or through channels) are more effective at a detailed, rather than at an aggregated level. Implementing the

Business Value Model at a P&L level will usually take care of this issue if your P&L centers map to a single ISIC category.

Risk-Adjusted Value Management

Risk-Adjusted Value Management (RVM) is a methodology that translates vision into action. It engages all the stakeholders of an enterprise to understand:

- How they affect the chosen business strategy
- How to work collaboratively to effectively execute that strategy

RVM differs from previous efforts because it:

- Integrates measurable risk with performance management
- Can be implemented top-down, bottom-up or anywhere along the value chain
- Can be fully implemented in four to six weeks

The key components of RVM are the Business Value Model, the Business Risk Model and the financial sensitivity calculations.

The Business Value Model is used to select the leading performance indicators (LPIs), which measure opportunities for the enterprise (see "The Gartner Business Risk Model: A Framework for Integrating Risk and Performance").

The Business Risk Model is used to select leading risk indicators (LRIs), which measure threats to the enterprise. LRIs are used to adjust LPIs: $LPI - LRI = \text{risk-adjusted performance indicators}$ (see "Using Risk Adjusted Value Management to Close the Strategy Gap and Gain Competitive Advantage").

The financial sensitivity calculations are used to monetize changes in risk-adjusted performance indicators. These calculations tie the indicators back to the income statement or balance sheet (see "Toolkit: Monetizing the Outcomes in the Business Value Model").

A Word of Caution

The Business Value Model has always been a work in progress. Every effort was made to select broadly adopted and consistently applied prime metrics that were based on the guiding principles discussed previously. However, we do not yet live in a perfect world. Most of the 54 prime metrics are calculated as the byproduct of well-vetted, even regulated, data capture points (transactions), such as a purchase order or a letter of employment. However, there are some areas where real value is created, yet there were no well-vetted or regulated data capture points (transactions). In these areas, we did our best to base the metric calculations on commonly performed transactions.

Examples of this are qualifying a sales lead or determining the features and functions of a new product or service offering. In these situations, we provide guidance on how to establish these common transaction points in the metric specifications — for example, using a formal sales management process or system for qualifying sales opportunities, or through the components listed

on a standard bill of materials for capturing new features and functions in product offerings. However, these transaction points are subject to interpretation and require discipline by the company using them.

Prime metrics are used to measure real value creation, but are not based on regulated definitions (see Table 2).

Table 2. Prime Metrics Are Based on Well-Vetted Measures of Real Value Creation, Not Regulated Definitions

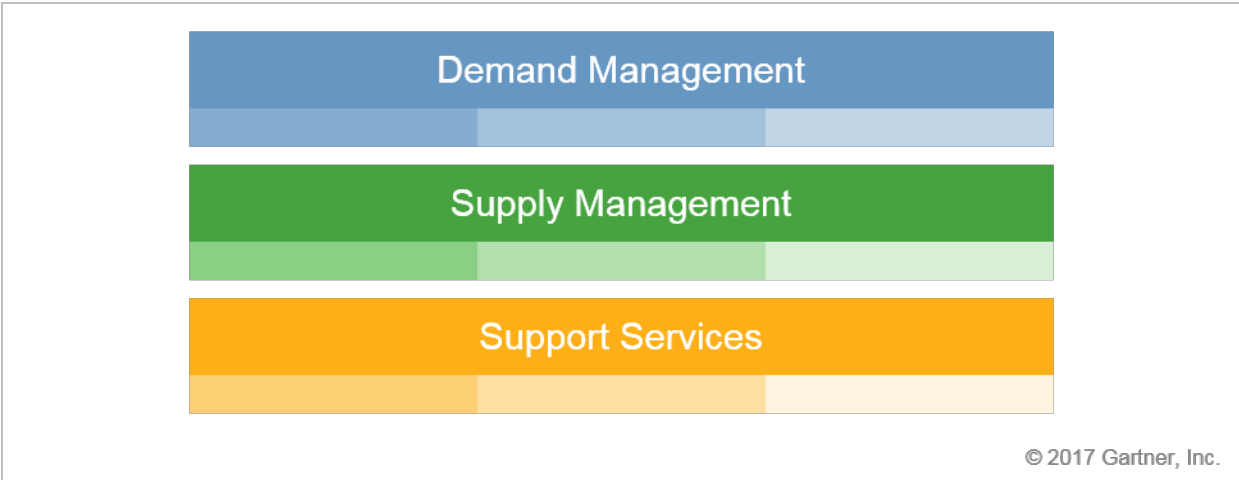
Sales Responsiveness	Sales Opportunity Index, Sales Cycle Index, Sales Close Index
Product Development Effectiveness	Feature Function Index, Time-to-Market Index, R&D Success Index

Source: Gartner (May 2017)

High-Level Business Aspects

The scope of the standard measures contained in the Gartner Business Value Model covers all the controllable activities performed within an organization. These activities center on three broad categories, referred to as business aspects in the Business Value Model description. They are shown in Figure 4 and Table 3.

Figure 4. Business Value Model High-Level Business Aspects



Source: Gartner (May 2017)

Table 3. Business Value Model High-Level Business Aspect Definitions

Demand Management	All the actionable activities involved with generating demand for the products and services offered by the organization.
Supply Management	All the actionable activities directly involved with supplying the products and services offered by the organization.
Support Services	All other actionable activities involved with supporting the organization. These services operate within organizations by providing services to internal clients. They operate on business principles and provide internal services at a cost and quality that are acceptable to their clients when assessed against alternatives.

Source: Gartner (May 2017)

It is necessary to consider all aspects of an organization to determine the effect on business value of specific initiatives.

Aggregate Measures

Each high-level business aspect comprises three aggregate measures. For example, in Figure 5, demand management is made up of market responsiveness, sales effectiveness and product development effectiveness.

Figure 5. Business Value Model Aggregate Measures

Demand Management	Market Responsiveness	Sales Effectiveness	Product Development Effectiveness
Supply Management	Customer Responsiveness	Supplier Effectiveness	Operational Efficiency
Support Services	Human Resources Responsiveness	Information Technology Responsiveness	Finance and Regulatory Responsiveness

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Source: Gartner (May 2017)

Each aggregate measure is, in turn, made up of a number of prime metrics. For example, seven primes aggregate into the market responsiveness measure. Aggregates are numbers formed by multiplying the selected primes together, and in turn, they multiply together to create business aspects. It is the changing values of these measures that give an objective rather than subjective indication of business value — for example, by comparing the values obtained before and after a project, or at the start and end of a time period.

The Business Value Model is applicable to all industries. An organization selects a limited number of prime metrics from those available in the model, which then define their respective aggregate measures.

Prime Metrics

Figures 6 through 81 show the full list of prime metrics in the Business Value Model. Users can regard these as a "pool" from which they select the metrics most relevant to the project and their organizations. Prime metrics improve as they increase, except for three indexes (Sales Cycle Index, Time-to-Market Index and Cash-to-Cash Cycle Time). The latter metrics are industry standards and are left as exceptions, but they are corrected by a simple formula (shown in the definition) when calculating aggregates.

The remaining sections of this research define each prime metric, organized by business aspect and then by aggregate measure, as shown in Figure 2 above.

Business Aspect: Demand Management

Aggregate: Market Responsiveness

Target Market Index

Figure 6. Target Market Index

Definition	The Target Market Index reflects the organization's decisions regarding the size and growth rates of the markets it participates in. ISIC figures are available from IHS Global Insight (www.ihs.com).
Calculation	<p>Target Market Index = Relative Market Size x (1 + Relative Market Growth Rate) where:</p> <ul style="list-style-type: none"> ▪ Relative Market Size = $\frac{\text{Sum (ISIC target market industry revenue)}}{\text{Average ISIC industry revenue}}$ ▪ Target market industries are selected using ISIC codes based on current, plus planned <i>and</i> budgeted, product/service offerings over the next year ▪ Relative Market Growth Rate = Weighted average growth of targeted industries
Example	<p>ABC Computers operates in ISIC 3825 Office and Computing Machinery: Relative Market Size in \$M = $457,322.15 / 451,712.70 = 1.0124$ Relative Market Growth Rate = -0.04, i.e., the market is declining at 4% Target Market Index = $1.0124 \times (1 - 0.04) = 97\%$</p>
Application	Adjusted quarterly, this metric shows the market potential for the products and services offered by the organization. It is significantly influenced by the forecast growth rate of the markets the organization participates in, which set the boundaries for future revenue potential. The income statement account most affected by the Target Market Index is revenue .
Potentially Affected Primes	Market Share Index, Opportunity/Threat Index, Sales Coverage Index, Sales Cycle Index, Sales Close Index and New Product Index
Financial Sensitivity	$(\text{Baseline for Target Market Index}) \times (\% \text{ Improvement from baseline}) \times (\text{Total company revenue/selected industry revenue}) \times (\text{Total net operating income of the company})$

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Source: Gartner (May 2017)

Market Coverage Index

Figure 7. Market Coverage Index

Definition	The Market Coverage Index shows the reach of sales to generate revenue in countries where market demand exists. A physical presence in the country where the sale occurs is not required. Each country is weighted by the size of revenue generated for the markets the company participates in. ISIC figures are available from IHS Global Insight (www.ihs.com).
Calculation	$\text{Market Coverage Index} = \frac{\text{Sum of the total ISIC target market revenue of countries in which organization sells}}{\text{Total ISIC target market global industry revenue}}$
Example	<p>ABC Computers sells PC hardware components in 16 countries. The total ISIC revenue of these 16 countries was \$86,647 million. Total reported revenue in ISIC 3825 Office and Computing Machinery was \$457,322 million.</p> <p>Market Coverage Index = $86,647 / 457,322 = 18.7\%$</p>
Application	Trade agreements and communications technology improvements are broadening economic boundaries, so opportunities to sell in new geographies are increasing. The income statement account most affected by the Market Coverage Index is revenue .
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Opportunity Index, Sales Cycle Index, Sales Close Index, Sales Price Index, Cost-of-Sales Index, Forecast Accuracy, On-Time Delivery and Service Accuracy

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Source: Gartner (May 2017)

Market Share Index

Figure 8. Market Share Index

Definition	The Market Share Index shows the relative strength and influence of the organization in the markets in which it currently participates. ISIC figures are available from IHS Global Insight (www.ihsglobal.com).
Calculation	$\text{Market Share Index} = \frac{\text{Revenue of organization's offered products and services}}{\text{Total revenue of ISIC-code-selected industries}}$
Example	<p>ABC Computers sells \$31,170 million in a sample year, operating in ISIC 3825 Office and Computing Machinery.</p> <p>Market Share Index = 31,170 / 457,322.15 = 7%</p>
Application	Market Share Index is useful for determining important business strategies such as pricing. The income statement account most affected by the Market Share Index is revenue .
Potentially Affected Primes	Opportunity/Threat Index, Sales Cycle Index, Sales Close Index, Forecast Accuracy and New Product Index

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Source: Gartner (May 2017)

Opportunity/Threat Index

Figure 9. Opportunity/Threat Index

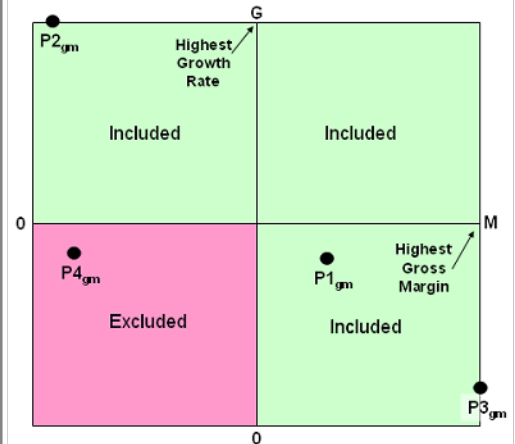
Definition	The Opportunity/Threat Index shows the potential to grow or shrink market share based on the level of competition in the industries in which the organization participates.
Calculation	Opportunity/Threat Index = Sum (Market Share Index for top five revenue leaders) Note that the organization may or may not be one of the top five, so this is more of a "barometer for the industry."
Example	ABC Computers calculates the Market Share Index of the top five ISIC-selected industry players by revenue to be 0.07 (itself), 0.06, 0.04, 0.03 and 0.02. Opportunity/Threat Index = 0.07 + 0.06 + 0.04 + 0.03 + 0.02 = 22%
Application	<p>The Opportunity/Threat Index measures the competitive structure of the industries the organization participates in, and the influence this structure could have on future revenue.</p> <p>The higher the index, the more opportunity. In this case, there are just a few players with large revenue — effectively an oligopoly. In contrast, a highly fragmented market indicates more supply, more price competition, more niche players and, consequently, lower profit margins. This index is therefore useful for marketing questions — for example, whether to enter a market or whether to compete in the market on price.</p> <p>The income statement account most affected by the Opportunity/Threat Index is revenue.</p>
Potentially Affected Primes	Target Market Index, Market Share Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Forecast Accuracy and New Product Index

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Source: Gartner (May 2017)

Product Portfolio Index

Figure 10. Product Portfolio Index

<p>Definition</p>	<p>The Product Portfolio Index identifies and validates current and projected customer needs in existing and targeted markets. This metric shows the product portfolio by size and margin contribution. The underlying assumption is that high-margin products serve customer needs better than low-margin products, and that high growth rates indicate that customer needs are being met. The index combines these factors to create a metric that shows a company's ability to serve customer needs compared with its industry peers.</p>
<p>Calculation</p>	<p>Product Portfolio Index = $\frac{\text{Sum \{Revenue of products where } [(g > G/2) \text{ and } (m > M/2)]\}}{\text{Sum (Revenue of all products)}}$</p> <p>Where: G = product with highest growth rate g = growth rate of each individual product M = product with highest gross margin m = gross margin of each individual product</p>
<p>Example</p>	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 10px;"> <p>ABC Computers has products P1, P2, P3 and P4. Last year, the gross margins (m), growth rates (g) and revenue (r) were in \$M:</p> <p>P1: m = 100, g = 0.05, r = 200 P2: m = 10, g = 0.12, r = 25 P3: m = 150, g = 0.01, r = 180 P4: m = 20, g = 0.05, r = 90</p> <p>P4 is excluded because m and g put it in the lower-left quadrant where (m < M/2) and (g < G/2)</p> <p>$PPI = \frac{200 + 25 + 180}{200 + 25 + 180 + 90} = 82\%$</p> </div> </div>
<p>Application</p>	<p>Adjusted quarterly, this measure is an indication of the organization's ability to determine accurately the changing demands of current and potential customers. Growth and income are what investors look for in organizations.</p> <p>The income statement account most affected by the Product Portfolio Index is gross profit.</p>
<p>Potentially Affected Primes</p>	<p>Market Share Index, Opportunity/Threat Index, Sales Cycle Index, Sales Close Index, Forecast Accuracy and New Product Index</p>

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Source: Gartner (May 2017)

Channel Profitability Index

Figure 11. Channel Profitability Index

Definition	The Channel Profitability Index identifies and evaluates alternative methods to reach and serve customers in current and targeted markets
Calculation	Channel Profitability Index = $1 - [\text{Sum (direct costs)} / \text{company total revenue}]$ where direct costs are, for example, commissions, dealer discounts, finder's fees and internal support costs
Example	<p>ABC Computers distributes its products through two sales channels — a direct sales force and through distributors. The total cost for each channel is:</p> <ul style="list-style-type: none"> ▪ Direct sales force = \$15M ▪ Distributors = \$25M <p>ABC Computers' total revenue = \$125M Channel Profitability Index = $1 - [(15 + 25) / 125] = 68\%$</p>
Application	Adjusted monthly, this measure is an indication of the organization's ability to use the most profitable channels for generating revenue. This is becoming an area of focus with the reduction in cost made possible through self-sufficient Internet channels. The income statement account most affected by Channel Profitability Index is gross profit .
Potentially Affected Primes	Market Share Index, Opportunity/Threat Index, Configurability Index, Market Coverage Index, Sales Cycle Index, Sales Close Index, Cost-of-Sales Index

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Source: Gartner (May 2017)

Configurability Index

Figure 12. Configurability Index

Definition	The Configurability Index shows the company's ability to identify and satisfy the specific needs of customers in current and targeted markets.
Calculation	$\text{Configurability Index} = \frac{\text{Sum of revenue from product options}}{\text{Total company revenue}}$ <p>A "product option" is defined as a feature or function that must be purchased as part of a basic product or service, but is not required for the basic product or service to function.</p>
Example	<p>ABC Computers offers a standard product line for all products except its PC line. The PC line product options during the prior 12 months delivered \$5 million. The total company revenue was \$125 million during this period.</p> <p>Configurability Index = 5 / 125 = 4%</p>
Application	<p>Mass customization has become an effective marketing approach to aligning an organization's products and services with the needs of the customers it serves.</p> <p>The income statement account most affected by the Configurability Index is revenue.</p>
Potentially Affected Primes	Market Share Index, Opportunity/Threat Index, Sales Cycle Index, Sales Close Index, Cost-of-Sales Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy and Sigma Value

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Source: Gartner (May 2017)

Aggregate: Sales Effectiveness

Sales Opportunity Index

Figure 13. Sales Opportunity Index

Definition	The Sales Opportunity Index shows how successfully the organization can cultivate prospects for its products and services.
Calculation	$\text{Sales Opportunity Index} = \frac{\text{Contacts by prospects last month}}{2 \times (\text{12-month rolling average prospect contacts per month})}$ <p>A formal sales tracking process is required to record the activity level of potential customers or "prospects" that have come into contact with the organization; e.g., entered a store, visited the purchasing section of a website, responded to an advertisement.</p>
Example	<p>ABC Computers, last year, implemented a sales force automation system that tracks prospects from initial contact to "sales close" (defined as successful or unsuccessful). The following data is extracted:</p> <p>Prospect contacts in last 12 months = 7,500 (625 average per month) Prospect contacts last month = 800 Sales Opportunity Index = $800 / (625 \times 2) = 64\%$</p>
Application	Sales Opportunity Index is a leading indicator of the level of demand for the company's products and services, and is typically updated monthly. The income statement account most affected by the Sales Opportunity Index is revenue .
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Sales Price Index and Forecast Accuracy

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Source: Gartner (May 2017)

Sales Cycle Index

Figure 14. Sales Cycle Index

Definition	The Sales Cycle Index shows the ability of the sales function to manage the duration of the sales process.
Calculation	A formal sales tracking process is required to record when initial contacts with prospects are made, and also the sales close date (whether successful or unsuccessful). Sales Cycle Index = average duration (in calendar days) between these dates.
Example	ABC Computers uses its sales force automation system to discover that the average length of its sales cycles is 90 days; i.e., Sales Cycle Index = 90 days
Application	The Sales Cycle Index has an industry standard definition and is therefore presented here unmodified. However, it must be converted to a value in the range 0 to 1 where an increase is an improvement, in order to aggregate correctly in the Business Value Model. This is done as follows: Aggregate value = $1 - (\text{Sales Cycle Index} / \text{Upper Time Bound})$ where default Upper Time Bound = 365 days (can be tailored to organizational need)
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Sales Price Index and Forecast Accuracy

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Source: Gartner (May 2017)

Sales Close Index

Figure 15. Sales Close Index

Definition	The Sales Close Index shows how successfully the sales function can turn prospects into customers.
Calculation	$\text{Sales Close Index} = \frac{\text{Successful prospect sales decisions}}{\text{Total prospect sales decisions}}$
Example	ABC Computers conducted 175 sales campaigns last month, of which 100 were successful. Sales Close Index = 100 / 175 = 57%
Application	Sales Close Index is a leading indicator of the level of demand for the products and services offered by the organization. The income statement account most affected by the Sales Close Index is revenue .
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Cycle Index and Forecast Accuracy

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Sales Price Index

Figure 16. Sales Price Index

Definition	The Sales Price Index shows how successfully the sales function can close business without dropping price and, therefore, margin.
Calculation	$\text{Sales Price Index} = 1 - (\text{Total discount revenue} / \text{total list price revenue})$ where "list price" indicates what the revenue would have been if sold without discount.
Example	ABC Computers gave discounts on items (and services) sold last month worth a total of \$1.58 million. Total revenue earned was \$10.42 million. Total list price revenue = \$10.42 + \$1.58 = \$12M Sales Price Index = $1 - (1.58 / 12) = 87\%$
Application	The Sales Price Index is a leading indicator of the level of demand for the organization's products and services. The income statement account most affected by Sales Price Index is gross profit .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Cost-of-Sales Index

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Source: Gartner (May 2017)

Cost-of-Sales Index

Figure 17. Cost-of-Sales Index

Definition	The Cost-of-Sales Index shows how cost-efficiently the sales function can turn prospects into customers.
Calculation	$\text{Cost-of-Sales Index} = \frac{\text{Total sales expenses}}{\text{Total revenue}}$
Example	ABC Computers incurred \$2 million in sales expenses last month. Total revenue for the month was \$10.42 million. Cost-of-Sales Index = 2 / 10.42 = 19%
Application	The Cost-of-Sales Index is a leading indicator of the level of demand for the products and services offered by the organization. The income statement account most affected by Cost-of-Sales Index is gross profit .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Sales Price Index

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Source: Gartner (May 2017)

Forecast Accuracy

Figure 18. Forecast Accuracy

Definition	Forecast Accuracy shows the ability of the sales function to predict accurately the demand for the organization's products and services.
Calculation	$\text{Forecast Accuracy} = \frac{\text{Total weekly forecast items within } \pm 10\% \text{ of actual}}{\text{Total weekly forecast items}}$
Example	ABC Computers made 1,560 forecasts last week, of which 723 were within $\pm 10\%$. Forecast Accuracy = $723 / 1,560 = 46\%$
Application	Forecast Accuracy is perhaps the single most important influence on operational efficiency. The income statement account most affected by Forecast Accuracy is operating expense .
Potentially Affected Primes	On-Time Delivery, Order Fill Rate, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Customer Retention Index

Figure 19. Customer Retention Index

Definition	The Customer Retention Index shows how well existing customer needs are being identified and satisfied.
Calculation	$\text{Customer Retention Index} = 1 - \frac{\text{Existing customers with no purchase in buying cycle}}{\text{Total customer count}}$ <p>Where:</p> <ul style="list-style-type: none"> Buying cycle = baseline buying cycle time for industry in which organization competes
Example	<p>ABC Computers operates in an industry with buying cycle = six months.</p> <p>Total existing customers = 75</p> <p>Customers who made no purchase within the last six months = 30</p> <p>Customer Retention Index = $1 - (30 / 75) = 60\%$</p>
Application	A higher index demonstrates the organization's ability to satisfy existing customer needs, measured by their desire to purchase more products or services. It is cheaper to retain a customer than to have to acquire a new one. The income statement account most affected by the Customer Retention Index is revenue .
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Sales Price Index and Cost-of-Sales Index

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Aggregate: Product Development Effectiveness

New Product Index

Figure 20. New Product Index

Definition	The New Product Index shows the organization's emphasis on adapting its products and services to the changing demands of customers and prospects.
Calculation	$\text{New Product Index} = \frac{\text{Revenue of products and services released in the last 12 months}}{\text{Total company revenue}}$
Example	ABC Computers released three new product lines during the last 12 months, generating \$15 million in new revenue out of total annual revenue of \$125 million. New Product Index = 15 / 125 = 12%
Application	Research shows that a correlation exists between the revenue from new products and company stock price. The income statement account most affected by New Product Index is revenue .
Potentially Affected Primes	Target Market Index, Market Share Index, Opportunity/Threat Index, Product Portfolio Index, Sales Cycle Index and Sales Close Index

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Source: Gartner (May 2017)

Feature Function Index

Figure 21. Feature Function Index

Definition	The Feature Function Index shows the level and extent of the changes found in new products and services offered by the organization.
Calculation	$\text{Feature Function Index} = \frac{\text{New component items for products released last year}}{\text{Total component items for those products}}$ <p>Where:</p> <ul style="list-style-type: none"> ▪ New component items have been added specifically for products released to market during the past 12 months ▪ For services, component items are substituted by skill sets
Example	<p>ABC Computers released three new product lines last year, with a total of 145 component items between them. Of these, 16 were new component items.</p> <p>Feature Function Index = 16 / 145 = 11%</p>
Application	New products can range from simple packaging changes to completely different new products. The Feature Function Index measures where the organization's new products fit within this range. The income statement accounts most affected by the Feature Function Index are revenue and operating expense .
Potentially Affected Primes	Target Market Index, Market Share Index, Opportunity/Threat Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Conversion Cost and Asset Utilization

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Time-to-Market Index

Figure 22. Time-to-Market Index

Definition	The Time-to-Market Index shows the ability of the product development function to release new products and services on a timely basis.
Calculation	Time-to-Market Index = Average (time from approval to launch for each product)
Example	ABC Computers released three new products in the last 12 months, for which approval time to launch time was 2.1 years, 0.5 years and 1.7 years, respectively. Time-to-Market Index = $(2.1 + 0.5 + 1.7) / 3 = 1.4$ years
Aggregate Adjustment	Time-to-Market Index has an industry standard definition and is therefore presented here unmodified. However, it must be converted to a value in the range 0 to 1, where an <i>increase</i> is an improvement, in order to aggregate correctly in the Business Value Model. This is done as follows: Aggregate value = $1 - (\text{Time-to-Market Index} / \text{upper time bound})$ where default upper time bound = five years (can be tailored to organizational need)
Application	Research shows that a correlation exists between the revenue from new products and company stock price. The income statement account most affected by Time-to-Market Index is revenue .
Potentially Affected Primes	Market Share Index, Configurability Index, Product Portfolio Index, Sales Cycle Index and Sales Close Index

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Source: Gartner (May 2017)

R&D Success Index

Figure 23. R&D Success Index

Definition	The R&D Success Index shows the ability of the product development function to bring new products and services to market.
Calculation	$\text{R\&D Success Index} = \frac{\text{New products launched in the past 12 months}}{\text{Development projects due to complete in the past 12 months}}$
Example	ABC Computers released three new products last year out of 10 planned developments due for release in the period. R&D Success Index = 3 / 10 = 30%
Application	Research shows that a correlation exists between the revenue from new products and company stock price. The income statement account most affected by the R&D Success Index is revenue .
Potentially Affected Primes	Market Share Index, Opportunity/Threat Index, Configurability Index, Product Portfolio Index, Sales Cycle Index and Sales Close Index

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Business Aspect: Supply Management

Aggregate: Customer Responsiveness

On-Time Delivery

Figure 24. On-Time Delivery

Definition	On-Time Delivery shows the ability of the organization to meet customer expectations with respect to the time it takes to satisfy a specific order or service request. On-Time Delivery is based on the customer request date, not a negotiated date.
Calculation	$\text{On-Time Delivery} = \frac{\text{Order delivered on time}}{\text{Total orders received}}$ <p>The calculation is performed on a seven-day rolling average basis.</p>
Example	<p>During the past seven days, ABC Computers received 350 customer orders and delivered 330 by the customer's requested date.</p> <p>On-Time Delivery = 330 / 350 = 94%</p>
Application	On-Time Delivery is particularly important for organizations that supply corporate customers because these customers try to manage inventory levels by controlling the timing of material receipts. The income statement accounts most affected by On-Time Delivery are revenue and operating expense .
Potentially Affected Primes	Market Share Index, Configurability Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Order Fill Rate

Figure 25. Order Fill Rate

Definition	The Order Fill Rate shows the organization's ability to meet customer expectations with respect to the quantity of a specific order. Meeting this expectation assumes that no orders were shipped over or under requested quantities.
Calculation	$\text{Order Fill Rate} = \frac{\text{Total number of orders filled correctly}}{\text{Total number of orders}}$ <p>Where:</p> <ul style="list-style-type: none"> ▪ Order is filled correctly if shipment quantity = customer request quantity ▪ Calculation is performed on a seven-day rolling average basis
Example	<p>During the past seven days, ABC Computers received 350 customer orders and shipped 300 with correct shipment quantities.</p> <p>Order Fill Rate = 300 / 350 = 86%</p>
Application	Order Fill Rate can be an indicator of poor stock control, if orders are being shipped with reduced quantities. It is particularly important for organizations that supply corporate customers because these customers look to manage inventory levels by controlling quantities received. The income statement accounts most affected by Order Fill Rate are revenue and operating expense .
Potentially Affected Primes	Market Share Index, Configurability Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Material Quality

Figure 26. Material Quality

Definition	Material Quality measures the overall quality of the materials supplied to the customer and indicates whether the materials were either damaged or defective on receipt. If either condition exists, the order is considered to have a material quality problem.
Calculation	$\text{Material Quality} = \frac{\text{Orders with material quality within agreed tolerances}}{\text{Total orders}}$
Example	ABC Computers fulfilled 350 customer orders, of which 345 had material quality within the agreed specification. Material Quality = 345 / 350 = 99%
Application	Global competition in the 1980s established very high expectations for product quality. Meeting expectations with regard to product specifications is now a requirement for doing effective business. The income statement accounts most affected by Material Quality are revenue and operating expense .
Potentially Affected Primes	Market Share Index, Configurability Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Service Accuracy

Figure 27. Service Accuracy

Definition	Service Accuracy measures the availability and accuracy of the information needed to complete a specific order. This information includes web-based order fulfillment, electronic data interchange information and shipment documentation.
Calculation	$\text{Service Accuracy} = \frac{\text{Orders completed with correct information}}{\text{Total orders processed}}$
Example	ABC Computers received 100 customer orders and fulfilled 97 with the necessary correct information. Service Accuracy = 97 / 100 = 97%
Application	Customers demand available and accurate information to complete their purchase transactions. This is increasingly complex as sales coverage is broadened through the internet. The income statement accounts most affected by Service Accuracy are revenue and operating expense.
Potentially Affected Primes	Market Share Index, Configurability Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Service Performance

Figure 28. Service Performance

Definition	<p>Service Performance measures the organization's ability to complete customer requests within agreed performance objectives. For continuous services, this metric indicates the percentage of time, during expected hours of operation, that the service is usable by the customer. For discrete services, this metric indicates the percentage of incoming customer requests that are adequately responded to and completed. If a customer request is not completed satisfactorily by the organization, service performance is considered unacceptable — for example, the customer could not initiate the request or the customer's experience was degraded by poor execution to the point of abandonment.</p>
Calculation	<p>For continuous request services: $\text{Service Performance} = \frac{\text{Time service is available to the customer}}{\text{Time service expected to be available to the customer}}$</p> <p>For discrete request services: $\text{Service Performance} = \frac{\text{Customer requests adequately responded to}}{\text{Total customer requests}}$</p> <p>Data is for standard hours of operation (defined in Appendix A)</p>
Example	<p>Continuous request service example: ABC Internet provides a web-hosting service. Based on response-time calculations, abandoned-sessions statistics and site-availability information, uptime for the web-hosting service to all ABC Internet's active customers is 98% during standard hours of operation. Service Performance = 98%</p> <p>Discrete request service example: ABC Parcels provides a package-delivery service, and last month, it delivered 3,964 out of 4,236 packages to its customers within the agreed time frame. Service Performance = $3,964 / 4,236 = 93.6\%$</p>
Application	<p>Service Performance is a base measure for all service provider business models. It indicates when a customer received a degraded experience from the service and service provider, putting near-term revenue and long-term relationship at risk. The income statement accounts most affected by Service Performance are revenue and operating expense.</p>
Potentially Affected Primes	<p>Agreement Effectiveness, Transformation Ratio</p>

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Customer Care Performance

Figure 29. Customer Care Performance

Definition	Customer Care Performance measures critical aspects of customer service (problem resolution, questions and unplanned change requests), including response time and resolution time. It shows the ability of the customer care function to complete requests within agreed service-level agreements.
Calculation	$\text{Customer Care Performance} = \frac{\text{Customer care requests within SLA}}{\text{Total customer care requests}}$ <p>Where:</p> <ul style="list-style-type: none"> ▪ SLA = service-level agreement specifying response time and resolution criteria for each separate channel by which requests can be submitted (e.g., phone, email) ▪ Data is for standard hours of operation (defined in Appendix A) ▪ A customer care request failure is counted if it breaches one or more criteria; e.g., a late response followed by no resolution within seven days is counted as a single failed request.
Example	<p>ABC Computers has the following response times in its SLA for email requests:</p> <ul style="list-style-type: none"> ▪ 1-day response for urgent ▪ 2-day response for other nonurgent ▪ 7-day resolution for all requests <p>During standard hours of operation last month, there were 20 customer care email requests, of which three were urgent.</p> <p>Actual response and resolution were as follows:</p> <ul style="list-style-type: none"> ▪ 2 urgent: responded to in >1 day ▪ 5 other nonurgent: responded to in >2 days ▪ 3 unresolved within seven days (one of these also responded to late), i.e., 2 late resolutions <i>not already noted for other SLA breaches</i> <p>Customer care requests = 20 Customer care requests outside SLA = 2 + 5 + 2 = 9 SLA breaches Customer Care Performance = (20 – 9) / 20 = 55%</p>
Application	Customer Care Performance highlights how many customers received a degraded experience when requesting assistance, as these issues put near-term revenue and long-term relationships at risk. The income statement accounts most affected by Customer Care Performance are revenue and operating expense .
Potentially Affected Primes	Agreement Effectiveness, Transformation Ratio, Service Performance

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Source: Gartner (May 2017)

Agreement Effectiveness

Figure 30. Agreement Effectiveness

Definition	Agreement Effectiveness measures the overall effectiveness of service-level agreements (SLAs) in place with the organization's customers. Quarterly surveys are recommended to determine the effectiveness of the SLAs in place. These surveys must be completed by the end users of the service that the SLAs are measuring.
Calculation	$\text{Agreement Effectiveness} = \frac{\text{Existing customers with 90\% or better SLA satisfaction}}{\text{Total number of existing customers}}$
Example	ABC Computers provides outsourcing services. It surveys existing customers to determine the level of satisfaction with its SLAs. Out of 23 corporate customers surveyed, 14 awarded scores 90% or better on those questions dealing with SLAs. Agreement Effectiveness = 14 / 23 = 61%
Application	SLAs have become the most significant factor for the success of a maturing outsourcing relationship. The income statement accounts most affected by Agreement Effectiveness are revenue and operating expense .
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Transformation Ratio

Figure 31. Transformation Ratio

Definition	<p>Transformation Ratio is an indication of the organization's ability to structure SLAs that are "win-win" for both the organization and its customers. It measures the number of engagements or contracts where benefits are:</p> <ul style="list-style-type: none"> A. Evaluated in terms of business value; e.g., in terms of business metrics such as those itemized in the Business Value Model. B. Driven jointly by the organization and its customers; e.g., through a "roles and responsibilities matrix" to hold both the servicing organization and the customer responsible for achieving the projected benefits.
Calculation	$\text{Transformation Ratio} = \frac{\text{Contracts and engagements complying with A and B}}{\text{Total contracts and engagements}}$
Example	<p>ABC Computers jointly develops SLAs with 11 out of 20 of its corporate customers. Of these 11 SLAs, two of them are statements of agreed intent but do not contain meaningful business metrics that enable their results to be evaluated in terms of business value. Without meaningful metrics, there may be subsequent argument about whether the goal was achieved. Therefore, only nine SLAs meet both A and B criteria.</p> <p>Transformation Ratio = 9 / 20 = 45%</p>
Application	<p>SLAs have become the most significant factor for the success of a maturing outsourcing relationship. The income statement accounts most affected by Transformation Ratio are revenue and operating expense.</p>
Potentially Affected Primes	<p>Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Source: Gartner (May 2017)

Aggregate: Supplier Effectiveness

Supplier On-Time Delivery

Figure 32. Supplier On-Time Delivery

Definition	Supplier On-Time Delivery measures the ability of the organization to select suppliers that can meet its expectations regarding the time it takes to satisfy a specific order or service request. The metric is based on the organization's request date, not a negotiated date.
Calculation	Supplier On-Time Delivery = $\frac{\text{Orders received on time}}{\text{Total orders}}$
Example	During the past seven days, ABC Computers received 200 supplier shipments, of which 150 met their requested delivery date. Supplier On-Time Delivery = 150 / 200 = 75%
Application	Supplier On-Time Delivery applies to product and service businesses. It is important as organizations look to manage inventory levels by controlling the timing of material receipts. The income statement account most affected by Supplier On-Time Delivery is operating expense .
Potentially Affected Primes	Time-to-Market Index, On-Time Delivery, Order Fill Rate, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Supplier Order Fill Rate

Figure 33. Supplier Order Fill Rate

Definition	Supplier Order Fill Rate shows the organization's ability to select suppliers that can supply to the order quantity specified.
Calculation	Supplier Order Fill Rate = $\frac{\text{Orders with correct shipment quantity}}{\text{Total orders}}$
Example	During the past seven days, ABC Computers received 200 supplier shipments, of which 180 were fulfilled with the correct quantity. Supplier Order Fill Rate = 180 / 200 = 90%
Application	Supplier Order Fill Rate is particularly important for organizations that supply corporate suppliers, as these suppliers look to manage inventory levels by controlling quantities received. The income statement account most affected by Supplier Order Fill Rate is operating expense .
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Supplier Material Quality

Figure 34. Supplier Material Quality

Definition	Supplier Material Quality measures the overall quality of the materials received from suppliers and indicates whether the materials were damaged or defective on receipt.
Calculation	Supplier Material Quality = $\frac{\text{Orders within specification tolerances}}{\text{Total orders}}$
Example	During the past seven days, ABC Computers received 200 supplier shipments, of which 195 met required material quality specifications. Supplier Material Quality = 195 / 200 = 98%
Application	The quality of the products and services offered by the organization can be no better than the quality of the materials received from suppliers. A declining value over time would highlight a possible supplier problem. The income statement account most affected by Supplier Material Quality is operating expense .
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Supplier Service Accuracy

Figure 35. Supplier Service Accuracy

Definition	Supplier Service Accuracy measures the completeness and accuracy of the information that is needed from the supplier to obtain a specific supplier order or request for service.
Calculation	Supplier Service Accuracy = $\frac{\text{Supplier orders both complete and accurate}}{\text{Total orders}}$
Example	<p>During the past seven days, ABC Computers placed 200 supplier orders. Ten of these were sent purchase order acknowledgments from the supplier with accurate data but some incomplete fields. Fifteen had advanced shipment notifications from the supplier with all fields completed but with some inaccurate data. A further nine orders had packing slips provided with either missing or inaccurate data.</p> <p>Supplier Service Accuracy = $(200 - 10 - 15 - 9) / 200 = 83\%$</p>
Application	<p>Available and accurate supplier information lowers the total cost of doing business with a supplier. With electronic data interchange, examples of electronic documents from the supplier are:</p> <ul style="list-style-type: none"> Purchase order acknowledgment — confirming the order electronically Advanced shipment notification — standard set of electronic preshipment data letting the customer know what items and quantities are coming Packing slip with invoice — all the necessary information to do the required "three-way match" electronically so that no manual labor is necessary. <p>These electronic documents can potentially save huge sums of money, but can create big problems if they are incorrect. The income statement account most affected by Supplier Service Accuracy is operating expense.</p>
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Supplier Service Performance

Figure 36. Supplier Service Performance

Definition	Supplier Service Performance measures the organization's ability to select service providers that can complete customer requests within agreed performance objectives. For continuous services, this metric indicates the percentage of time, during expected hours of operation, that the service is usable by the organization. For discrete services, this metric indicates the percentage of outgoing requests that are adequately responded to and completed. If an outgoing request is not completed satisfactorily by the supplier, service performance is considered to be unacceptable — for example, the organization could not initiate the request or the customer's experience was degraded by poor execution to the point of abandonment.
Calculation	<p>For continuous request services:</p> $\text{Supplier Service Performance} = \frac{\text{Time service is available from supplier}}{\text{Time service expected to be available from supplier}}$ <p>For discrete request services:</p> $\text{Supplier Service Performance} = \frac{\text{Requests to supplier adequately responded to}}{\text{Total supplier requests}}$ <p>Data is for standard hours of operation (defined in Appendix A)</p>
Example	<p>Continuous request service example:</p> <p>ABC Computers uses a web-hosting service. Based on response-time calculations, abandoned-sessions statistics and site-availability information, uptime for the host provider as a service supplier to ABC Computers is 99.3% during standard hours of operation.</p> <p>Supplier Service Performance = 99.3%.</p> <p>Discrete request service example:</p> <p>ABC Computers uses a package-delivery service, and last month, the supplier picked up 190 out of 200 packages within the agreed time frame.</p> <p>Supplier Service Performance = 190 / 200 = 95%</p>
Application	Supplier Service Performance is a base measure for all service provider business models. It indicates when an organization received a degraded experience from the service and service provider, putting near-term revenue and long-term relationship at risk. The income statement accounts most affected by Supplier Service Performance are revenue and operating expense .
Potentially Affected Primes	Supplier Care Performance, Supplier Agreement Effectiveness and Supplier Transformation Ratio

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Supplier Care Performance

Figure 37. Supplier Care Performance

Definition	Supplier Care Performance measures key aspects of a service provider's ability to perform customer service (problem resolution, questions and unplanned change requests) including response time and resolution time. It shows the ability of the service provider's customer care function to complete requests within agreed SLAs.
Calculation	$\text{Supplier Care Performance} = \frac{\text{Supplier care requests within SLA}}{\text{Total supplier care requests}}$ <p>Where:</p> <ul style="list-style-type: none"> ▪ SLA = service-level agreement specifying response time and resolution criteria for each separate channel by which requests can be submitted (e.g., phone, email). ▪ Data is for standard hours of operation (defined in Appendix A). ▪ A supplier care request failure is counted if it breaches <i>one or more</i> criteria; e.g., a late response followed by no resolution within seven days is counted as a single failed request.
Example	<p>ABC Computers has the following response times in its SLA for email requests with a service provider:</p> <ul style="list-style-type: none"> ▪ 1-day response for urgent ▪ 2-day response for other nonurgent ▪ 7-day resolution for all requests <p>During standard hours of operation last month, there were 20 supplier care email requests, of which three were categorized by ABC Computers to its supplier as urgent.</p> <p>Actual response and resolution were as follows:</p> <ul style="list-style-type: none"> ▪ 2 urgent: responded to in >1 day ▪ 5 other nonurgent: responded to in >2 days ▪ 3 unresolved within 7 days (one of these also responded to late); i.e., 2 late resolutions <i>not already noted for other SLA breaches</i> <p>Supplier care requests = 20 Supplier care requests outside SLA = 2 + 5 + 2 = 9 SLA breaches Supplier Care Performance = $(20 - 9) / 20 = 55\%$</p>
Application	Supplier Care Performance indicates when an organization received a degraded experience on support from a supplier, putting its own near-term revenue and long-term relationships at risk. The income statement accounts most affected by Supplier Care Performance are revenue and operating expense .
Potentially Affected Primes	Supplier Agreement Effectiveness, Supplier Transformation Ratio and Supplier Service Performance

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Source: Gartner (May 2017)

Supplier Agreement Effectiveness

Figure 38. Supplier Agreement Effectiveness

Definition	Supplier Agreement Effectiveness measures the overall effectiveness of SLAs in place with the organization's service providers. Quarterly surveys are recommended to determine the effectiveness of the SLAs in place. These surveys must be completed by the end users within the organization who are working with external service providers managed by the SLAs.
Calculation	$\text{Supplier Agreement Effectiveness} = \frac{\text{Service providers achieving 90\% or better SLA satisfaction}}{\text{Total number of existing service providers}}$
Example	<p>ABC Computers sells PCs. Every six months, it surveys its team of internal users that liaises with external service providers, to determine the level of satisfaction with its supplier SLAs for each separate service provider. The team awarded scores 90% or better on those questions dealing with SLAs for three out of five suppliers.</p> <p>Supplier Agreement Effectiveness = 3 / 5 = 60%</p>
Application	As organizations rely on the effectiveness of the relationship with their suppliers, SLAs have become a critical success factor for the success of these supplier relationships. The income statement accounts most affected by Supplier Agreement Effectiveness are revenue and operating expense
Potentially Affected Primes	Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Supplier Transformation Ratio

Figure 39. Supplier Transformation Ratio

Definition	<p>Supplier Transformation Ratio is an indication of the organization's ability to structure SLAs that are "win-win" for both the organization and its suppliers. It measures the number of supplier engagements or contracts where benefits are:</p> <ul style="list-style-type: none"> A. Evaluated in terms of business value; e.g., in terms of business metrics such as those itemized in the Business Value Model. B. Driven jointly by the organization and its suppliers; e.g., through a "roles and responsibilities matrix" to hold both the organization and the supplier responsible for achieving the projected benefits.
Calculation	<p>Supplier Transformation Ratio =</p> $\frac{\text{Supplier contracts/engagements complying with A and B}}{\text{Total supplier contracts and engagements}}$
Example	<p>ABC Computers jointly develops SLAs with nine out of 10 of its suppliers. Of these nine SLAs, three are statements of agreed intent but do not contain meaningful business metrics that enable the suppliers to be evaluated in terms of business value. Without meaningful metrics, there may be subsequent argument about whether the goal was achieved. Therefore, only six SLAs meet the A and B criteria.</p> <p>Supplier Transformation Ratio = 6 / 10 = 60%</p>
Application	<p>Organizations increasingly depend on the effectiveness of SLAs with their suppliers. The income statement accounts most affected by Supplier Transformation Ratio are revenue and operating expense.</p>
Potentially Affected Primes	<p>Market Share Index, Sales Cycle Index, Sales Close Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Aggregate: Operational Efficiency

Cash-to-Cash Cycle Time

Figure 40. Cash-to-Cash Cycle Time

Definition	Cash-to-Cash Cycle Time measures the length of time that cash is used to fund the products and services provided by the organization. Adjusted daily, this measure is an indication of the organization's ability to manage cash efficiently through normal business operations.
Calculation	$\text{Cash-to-Cash Cycle Time} = \text{average days stock in inventory} + \text{average days to sell an item of stock} - \text{average payment period in days}$
Example	ABC Computers maintains an average of 30 days inventory (inventory is replaced approximately once a month). On average, it takes 45 days to sell an inventory item. The company pays its suppliers on average in 50 days, yielding: $\text{Cash-to-Cash Cycle Time} = 30 + 45 - 50 = 25 \text{ days}$
Aggregate Adjustment	Cash-to-Cash Cycle Index has an industry standard definition and is therefore presented here unmodified. However, it must be converted to a value in the range 0 to 1 where an increase is an improvement, in order to aggregate correctly in the Business Value Model. This is done as follows: $\text{Aggregate value} = 1 - (\text{sales cycle index} / \text{upper time bound})$ where default upper time bound = 180 days (can be tailored to organizational need)
Application	One significant indicator of the market value of an organization is free cash flow. Managing cash is an indicator of the health of the business. The income statement account most affected by Cash-to-Cash Cycle Time is interest expense .
Potentially Affected Primes	Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Conversion Cost

Figure 41. Conversion Cost

Definition	Conversion Cost measures the organization's ability to manage procurement costs for all materials and services used to provide the products and services offered.
Calculation	$\text{Conversion Cost} = \frac{\text{Sum of direct materials and services costs}}{\text{Revenue produced by products and services}}$
Example	In the past month, ABC Computers earned revenue of \$2.4 million, and procurement costs for the required inventory to achieve this revenue were \$1.8 million, yielding: Conversion Costs = $1.8 / 2.4 = 75\%$
Application	Procurement costs are generally one of the largest expenditures for businesses, so it is important to keep control of them. The income statement account most affected by Conversion Cost is operating expense .
Potentially Affected Primes	Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Conversion Cost and Asset Utilization

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Asset Utilization

Figure 42. Asset Utilization

Definition	Asset Utilization measures the organization's ability to manage its assets effectively.
Calculation	$\text{Asset Utilization} = \frac{\text{Total product and services revenue last month} \times 12}{\text{Total net assets}}$
Example	ABC Computers earned revenue of \$10 million last month. Its net assets are worth \$50 million. Asset Utilization = $10 \times 12 / 50 = 240\%$
Application	Return on net assets (RONA) is a key measure of business performance used by financial analysts. Asset Utilization is a snapshot view of RONA. The income statement account most affected by Asset Utilization is operating expense .
Potentially Affected Primes	On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Cash-to-Cash Cycle Time and Conversion Cost

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Sigma Value

Figure 43. Sigma Value

Definition	For a product or service, identify its critical-to-quality (CTQ) characteristics. The Sigma Value assesses the failed CTQs as a fraction of the total for any given batch of products/services.
Calculation	<p>Sigma Value = is looked up from DPMO value using the table in Appendix B.</p> $DPMO = \frac{\text{Failed CTQs} \times 1,000,000}{M \times U}$ <p>Where:</p> <ul style="list-style-type: none"> ▪ CTQ = critical-to-quality = inspection criterion ▪ M = total possible CTQs ▪ U = number of units produced from process step ▪ DPU = defects per unit = number of failed CTQs / U ▪ DPO = defects per opportunity = DPU / M ▪ DPMO = defects per million opportunities = DPO x 1 million
Example	<p>ABC Computers produces many PC hardware products. One of these, Product A, has 10 specifications, each of which must be in tolerance (so it is "critical to quality") for a unit to pass inspection. ABC Computers inspects units produced by lot number, with 100 to 200 units per lot. Lot No. 123 contained 150 units of Product A. The inspection revealed 50 defects in 10 units (five failed specifications per unit), yielding:</p> <ul style="list-style-type: none"> ▪ U (number of Units) = 150 ▪ Failed CTQs = 50 ▪ M (total CTQs) = 10 ▪ DPU (defects per unit) = 50 / 150 = 33% ▪ DPO = DPU / 10 = 3.3% ▪ DPMO = DPO x 1 million = 33,333 ▪ Sigma Value = look up on DPMO in Appendix B = 3.35
Application	Most companies in the U.S. perform their most critical operations at a 3.5 to 4.0 sigma level. Mikel Harry and Richard Schroeder have determined that, at this level of performance, most U.S. companies' cost of quality is between 25% and 30% of revenue. At Six Sigma (Sigma Value = 6), the cost of quality drops to less than 1% of revenue. The income statement account most affected by Sigma Value is operating expense .
Potentially Affected Primes	On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Business Aspect: Support Services

Aggregate: Human Resources Responsiveness

Recruitment Effectiveness Index

Figure 44. Recruitment Effectiveness Index

<p>Definition</p>	<p>The Recruitment Effectiveness Index shows the ability of the organization to obtain qualified candidates for open positions, taking into account time and cost.</p>
<p>Calculation</p>	<p>Recruitment Effectiveness Index = Average relative recruitment time x average relative recruitment cost</p> <p>Where</p> <ul style="list-style-type: none"> ▪ Relative recruitment time = $1 - (\text{time from approval to hire} / 365)$ ▪ Relative recruitment cost = $1 - (\text{total recruitment cost} / \text{first-year compensation})$
<p>Example</p>	<p>During the past 12 months, ABC Computers hired 260 employees. The average length of time spent to recruit these employees was 90 days. The average recruiting costs measured as a percentage of first-year compensation were 20%, yielding:</p> <ul style="list-style-type: none"> ▪ Average relative recruitment time = $1 - (90 / 365) = 0.753425$ ▪ Average relative recruitment cost = $1 - 0.20 = 0.8$ <p>Recruitment Effectiveness Index = $0.753425 / 0.8 = 60\%$</p>
<p>Application</p>	<p>Recruitment costs are a significant cost in most organizations. The income statement accounts most affected by Recruitment Effectiveness Index are revenue and operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Benefits Administration Index

Figure 45. Benefits Administration Index

Definition	The Benefits Administration Index shows the ability of the organization to provide employee benefits cost-effectively.
Calculation	$\text{Benefits Administration Index} = \frac{\text{Health benefits costs for past 12 months}}{\text{Employee compensation for the past 12 months}}$
Example	<p>During the past 12 months, ABC Computers paid \$16.8 million in health benefit costs and paid employees total compensation of \$60 million, yielding:</p> <p>Benefits Administration Index = 16.8 / 60 = 28%</p>
Application	Benefits Administration Index is an indication of the organization's ability to manage the cost of health benefits. The income statement account most affected by Benefits Administration Index is operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Skills Inventory Index

Figure 46. Skills Inventory Index

Definition	The Skills Inventory Index shows the ability of the organization to fulfill its employee skills needs in order to complete its business activities. Outsourced business activities are not considered part of these skills requirements.
Calculation	$\text{Skills Inventory Index} = \frac{\text{Total number of skills filled by existing employees}}{\text{Total number of skills required}}$
Example	<p>Last year, ABC Computers began offering service contracts to its customers. Providing this service required that its employees learn many new skills. Based on the skills inventory system in ABC Computers' HR system, 10 new skills were added to the inventory, taking total skills up to 25. Although current employees filled all the previous 15 skills requirements, none had any of the 10 new skills.</p> <p>Skills Inventory Index = 15 / 25 = 60%</p>
Application	Skills Inventory Index is an indication of the organization's ability to move quickly into new lines of business. It is also a factor in the decision to outsource. The income statement accounts most affected by the Skills Inventory Index are revenue and operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Employee Training Index

Figure 47. Employee Training Index

Definition	The Employee Training Index shows the commitment of the organization to invest in its employees as the changing demands of its customers require new knowledge and skills.
Calculation	$\text{Employee Training Index} = \frac{\text{Training days in past year}}{\text{Employee count} \times 225}$ <p>Where Training Day = 8 hours spent in training</p>
Example	<p>During the past 12 months, the 2,000 employees of ABC Computers attended 10,000 training days.</p> <p>Employee Training Index = $10,000 / (2,000 \times 225) = 2\%$</p>
Application	Knowledge management and the management of intangible assets have become significant factors in determining real business value. Attracting and holding superior talent require evidence of commitment on the part of the organization to invest in its employees. The income statement accounts most affected by Employee Training Index are revenue and operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost, Asset Utilization and Recruitment Effectiveness Index

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HR Advisory Index

Figure 48. HR Advisory Index

<p>Definition</p>	<p>The HR Advisory Index measures how much the human resources function is involved with strategic business initiatives, by subjecting projects to two assessment criteria:</p> <ul style="list-style-type: none"> A. Goals and benefits are projected in terms of business metrics B. A roles-and-responsibilities matrix exists that holds both HR and business functions responsible for achieving the projected benefits <p>Risk/reward metrics may also be included to enable HR to evaluate results.</p>
<p>Calculation</p>	$\text{HR Advisory Index} = \frac{\text{Existing and planned HR projects meeting A and B}}{\text{Total existing and planned projects}}$
<p>Example</p>	<p>During the past 12 months, ABC Computers sought the advice of its HR function in three acquisition projects and completed two other corporate projects without HR involvement.</p> <p>HR Advisory Index = 3 / 5 = 60%</p>
<p>Application</p>	<p>HR has a unique understanding of the business and its capabilities, and value is added by leveraging this knowledge rather than seeking outside advice. The income statement account most affected by HR Advisory Index is operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Employee Engagement Index

Figure 49. Employee Engagement Index

Definition	The Employee Engagement Index represents the voice of the employee in measuring the extent to which employees are willing to both apply discretionary effort in order to achieve organizational goals and feel enabled and supported to do their best work.
Calculation	$\text{Employee Engagement Index} = \frac{\text{Total number of employees with high engagement}}{\text{Total number of employees}}$
Example	<p>Each quarter, ABC Computers runs an employee engagement survey. The scores from a predefined set of questions (view on strategic direction, relationship with direct supervisor, understanding what is expected of employees, feeling that there are opportunities for long-term growth) are put together to generate the overall employee engagement index. Some 1,800 of the 2,100 respondent employees provided high scores on these items.</p> <p>Employee Engagement Index = 1,800 / 2,100 = 86%</p>
Application	Employee Engagement Index is an indication of the organization's ability to motivate and engage employees. This intangible asset is seen as a key enabler for increased productivity and has consistently been strongly correlated with increased share price, customer engagement and profitability. It is an indication of long-term viability and the future potential for increased business performance. The income statement accounts most affected by the Employee Engagement Index are revenue and operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Employee Retention Index

Figure 50. Employee Retention Index

Definition	Employee Retention Index measures the capability of an organization to retain employees.
Calculation	$\text{Employee Retention Index} = 1 - \frac{\text{Full-Time Equivalent (FTE) of Voluntary Terminations}}{\text{Average Head Count in FTE}}$
Example	<p>During the past 12 months, 210 of the 2,100 ABC Computers employees resigned and left the company.</p> <p>Employee Retention Index = $1 - (210/2,100) = 90\%$</p>
Application	Organizations with low retention are at risk for meeting business targets. Attrition infers higher recruiting and training costs as well as productivity losses during the offboarding of voluntary leavers and the recruitment and onboarding of replacements. Many organizations estimate the cost of one employee leaving as the equivalent of the average annual on-target earnings. The income statement accounts most affected by Employee Retention Index are revenue and operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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HR Total Cost Index

Figure 51. HR Total Cost Index

Definition	HR Total Cost Index measures the overall cost of providing HR support and advisory services to the organization. Real estate costs are excluded.
Calculation	$\text{HR Total Cost Index} = \frac{\text{Cost of labor and expenses for HR function}}{\text{Total revenue}}$
Example	<p>During the past 12 months, ABC Computers spent \$2.1 million on HR support and advisory services and took revenue of \$125 million.</p> <p>HR Total Cost Index = 2.1 / 125 = 2%</p>
Application	Identifying the existing cost of service establishes the foundation for evaluating business process outsourcing alternatives and shared-service centers. These alternatives must be viewed against the quality of services provided internally. The income statement account most affected by HR Total Cost Index is operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Aggregate: IT Responsiveness

System Performance

Figure 52. System Performance

<p>Definition</p>	<p>System Performance shows the percentage of time that applications, systems and infrastructure supported by the IT organization and its service providers are operating within their performance objectives. This metric indicates the amount of time during expected hours of operation that services are available and usable by the organization. Time outages, poor response time, degraded throughput or other performance-related service-level breaches are counted as unacceptable performance.</p>
<p>Calculation</p>	<p>System Performance = $\frac{\text{Time system is available to the organization}}{\text{Time system expected to be available to the organization}}$ Data is for standard hours of operation (defined in Appendix A)</p>
<p>Example</p>	<p>In a 24/7 IT environment last month, there was a network outage of 1 hour. In addition, slow response (outside SLA) to the customer inquiry application occurred for 4 hours. Third, the external website was unreachable for 2 hours. System Performance = $\frac{(24 \times 7 \times 31) - 1 - 4 - 2}{(24 \times 7 \times 31)} = 99.87\%$</p>
<p>Application</p>	<p>System Performance is usually defined in an SLA between the IT organization and business unit users. It is not appropriate to manage specific system components or to indicate trouble in a particular area, where more system management tools are required. The income statement account most affected by System Performance is operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Source: Gartner (May 2017)

IT Support Performance

Figure 53. IT Support Performance

<p>Definition</p>	<p>IT Support Performance measures the ability of IT support functions to provide organization users with support for problem resolution, questions and unplanned change requests. The metric accounts for the availability of support (time to respond) and performance of support (time to resolve). IT Support Performance shows the percentage of requests completed within SLA. Unacceptable performance would include any time a support request is not completed satisfactorily — for example, the user could not initiate the request, or the user's support falls outside tolerable performance criteria.</p>
<p>Calculation</p>	<p>IT Support Performance = $\frac{\text{Number of IT support requests within SLA}}{\text{Total number of IT support requests}}$ Data is for standard hours of operation (defined in Appendix A)</p>
<p>Example</p>	<p>ABC Computers has the following profile for phone IT support requests:</p> <ul style="list-style-type: none"> ▪ Answer within three rings ▪ Seven-day resolution for all support requests <p>Yesterday, it had 112 requests, of which 100 were answered within three rings, one was abandoned after more than three rings, 11 exceeded three rings and went to voice mail. Of these, four took longer than seven days to resolve. Of the four late, three of them also went to voice mail and have therefore already been counted as outside SLA, so one was uniquely late.</p> <p>IT Support Performance = $(112 - 1 \text{ abandoned} - 11 \text{ in voice mail} - 1 \text{ late})/112 = 88\%$</p>
<p>Application</p>	<p>IT Support Performance is a base measure for all IT support functions. It indicates when a user received a degraded experience while requesting support or assistance for problems or unplanned changes, affecting the users' ability to complete assigned work. The income statement account most affected by IT Support Performance is operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Partnership Ratio

Figure 54. Partnership Ratio

<p>Definition</p>	<p>The Partnership Ratio measures how much the IT function is involved with strategic business initiatives, by subjecting projects to two assessment criteria:</p> <ul style="list-style-type: none"> A. Goals and benefits are projected in terms of business metrics B. A roles-and-responsibilities matrix exists that holds both IT and business functions responsible for achieving the projected benefits <p>Risk/reward metrics may also be included to enable IT and other business functions to evaluate results.</p>
<p>Calculation</p>	<p>Partnership Ratio = $\frac{\text{Existing and planned IT projects meeting A and B}}{\text{Total existing and planned IT projects}}$</p>
<p>Example</p>	<p>The IT department of ABC Computers has three ongoing projects:</p> <p>Sales force automation — where software will be introduced to make salespeople more productive. Sales and IT evaluated software and methodology together, and the IT business case projected productivity increases resulting in additional revenue. Sales awaited implementation, but no one in sales was charged with responsibility to ensure the people or processes were optimized to exploit the software.</p> <p>Server consolidation — IT plans to upgrade server hardware, which will enable the function to consolidate nine physical systems into five.</p> <p>Company website redesign — IT and marketing jointly establish goals to increase two metrics: the size of the web audience and the average customer time spent on the site. IT takes responsibility for ensuring site availability, acceptable response time and the provision of design guidelines to marketing to maximize site performance. Marketing takes responsibility for ensuring freshness and relevancy of the data, driving new requirements for the site and activities to generate visits.</p> <p>Only Project 3 meets Criteria A and B; therefore, Partnership Ratio = 1 / 3 = 33%</p>
<p>Application</p>	<p>Value-based projects often have grand intentions but fail due to confusion over roles and responsibilities, as well as accountability for delivering projected value. The Partnership Ratio gives a broad measure of how many effective touchpoints exist between IT and the business, but more than that — using it tends to increase these touchpoints and results in improved processes. The income statement accounts most affected by Partnership Ratio are revenue and operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Source: Gartner (May 2017)

Service-Level Effectiveness

Figure 55. Service-Level Effectiveness

Definition	<p>Service-Level Effectiveness measures the effectiveness of the expected service levels in place with all the users of IT. To maintain positive working relationships with its users, IT service providers must take a proactive role in ensuring that service levels are delivered effectively. Quarterly surveys to determine service-level effectiveness are recommended. The survey questions should be grouped into three categories:</p> <ul style="list-style-type: none"> ▪ Does the level of expected service meet the organization's needs? ▪ Does the level of expected IT support meet the organization's needs? ▪ Does the level of partnership between IT and business units meet the organization's needs?
Calculation	$\text{Service-Level Effectiveness} = \frac{\text{Surveyed users with } \geq 90\% \text{ satisfaction}}{\text{Total number of surveyed users}}$
Example	<p>ABC Computers' internal IT group provides IT services to internal users, and it surveys them to determine the level of effectiveness of its expected service levels. Last month, 110 users scored 90% or better out of 200 users surveyed.</p> <p>Service-Level Effectiveness = 110 / 200 = 55%</p>
Application	<p>Service-Level Effectiveness has become the most significant factor for the success of a maturing support service relationship. The income statement accounts most affected by Service-Level Effectiveness are revenue and operating expense.</p>
Potentially Affected Primes	<p>Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization</p>

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Source: Gartner (May 2017)

New Project Index

Figure 56. New Project Index

Definition	The New Project Index measures the ability of the IT function to deliver new projects into the organization within budget, time and value objectives.
Calculation	$\text{New Project Index} = \frac{\text{Total IT projects within budget and time and value objectives}}{\text{Total IT projects}}$
Example	<p>ABC Computers' current IT project portfolio has four active projects, of which only one is on time, within budget and delivering projected value.</p> <p>New Project Index = 1 / 4 = 25%</p>
Application	New projects account for a large portion of a company's IT investment. The New Project Index is a leading indicator to whether the value will be generated according to plan and whether the IT function is capable of future project work within plan. The income statement account most affected by the New Project Index is operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

IT Total Cost Index

Figure 57. IT Total Cost Index

Definition	The IT Total Cost Index measures the overall total cost of ownership (TCO) for technology owned, operated or supported by the organization.
Calculation	$\text{IT Total Cost Index} = \frac{\text{Sum of IT-related TCO}}{\text{Total revenue of organization}}$ <p>For full information on TCO, see "Defining Gartner Total Cost of Ownership," G00131837, but a brief summary of costs is as follows:</p> <ul style="list-style-type: none"> • Direct costs: Hardware and software, management, support, application development and integration, and communications fees • Indirect costs (i.e., unbudgeted): End-user IS — cost of end users to support themselves and each other instead of using formal IS support channels; downtime — lost productivity due to system unavailability
Example	<p>ABC Computers has an IT budget of \$2.75 million, estimated further indirect costs of \$1.8 million and annual revenue of \$125 million.</p> <p>IT Total Cost Index = $(2.75 + 1.8) / 125 = 3.6\%$</p>
Application	As IT spending becomes a larger portion of organization spending, it is important to track an IT Total Cost Index over time and benchmark it to similar organizations to ensure that money is spent wisely. The income statement account most affected by IT Total Cost Index is operating expense .
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Forecast Accuracy, Time-to-Market Index, R&D Success Index, On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Aggregate: Finance and Regulatory Responsiveness

Compliance Index

Figure 58. Compliance Index

Definition	The Compliance Index shows the ability of finance and regulatory functions to comply with laws and regulations regarding filings and transactions necessary for normal business operations.
Calculation	$\text{Compliance Index} = \frac{\text{Sum of filings and transactions in compliance}^*}{\text{Total filings and transactions}}$ <p>*Note: "In compliance" excludes events that were late, were incorrect or did not happen.</p>
Example	<p>During the past 12 months, ABC Computers determined that there were 250 legal and regulatory filings and transactions necessary to conduct normal business operations. All but 20 were completed as required, yielding:</p> <p>Compliance Index = 230 / 250 = 92%</p>
Application	Identifying the necessary legal and regulatory filings and transactions establishes the foundation for evaluating business process outsourcing alternatives. The income statement account most affected by the Compliance Index is operating expense .
Potentially Affected Primes	Time-to-Market Index, Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Accuracy Index

Figure 59. Accuracy Index

Definition	The Accuracy Index shows the ability of the finance and regulatory functions to provide accurate and timely information internally.
Calculation	$\text{Accuracy Index} = \frac{\text{Sum of internal financial and regulatory documents in compliance}^*}{\text{Total internal financial and regulatory documents}}$ <p>*Note: "In compliance" excludes documents (both reoccurring and ad hoc) that were requested but were late, required corrections or were not delivered.</p>
Example	<p>During the past 12 months, ABC Computers determined that there were 386 internal requests for information from its finance and regulatory functions, and all but 50 were completed as required, yielding:</p> <p>Accuracy Index = $(386 - 50) / 386 = 87\%$</p>
Application	Establishing effective responsiveness to internal information requests establishes the foundation for evaluating business process outsourcing alternatives. The income statement account most affected by the Accuracy Index is operating expense .
Potentially Affected Primes	Cash-to-Cash Cycle Time, Conversion Cost and Asset Utilization

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Source: Gartner (May 2017)

Advisory Index

Figure 60. Advisory Index

<p>Definition</p>	<p>The Advisory Index measures how much finance and/or regulatory functions are involved with strategic business initiatives, by subjecting projects to two assessment criteria:</p> <ul style="list-style-type: none"> A. Goals and benefits are projected in terms of business metrics B. A roles-and-responsibilities matrix exists that holds both IT and business functions responsible for achieving the projected benefits <p>Risk/reward metrics may also be included to enable finance or regulatory functions and other business departments to evaluate results.</p>
<p>Calculation</p>	<p>Advisory Index =</p> $\frac{\text{Sum of financial and regulatory functions in compliance with A and B}}{\text{Total corporate strategic initiatives}}$
<p>Example</p>	<p>During the past 12 months, ABC Computers sought the advice of its finance function in two strategic acquisitions, working together to establish goals and benefits in financial terms. For each project, roles and responsibilities were agreed between finance and other involved departments, and finance then dedicated resources to complete each of these projects. In all, ABC Computers completed five corporate initiatives, but the other three did not have established metrics to measure their value.</p> <p>Advisory Index = 2 / 5 = 40%</p>
<p>Application</p>	<p>Finance and regulatory functions have a unique understanding of the business and its capabilities, which should be leveraged to add value to the business. The income statement account most affected by the Advisory Index is operating expense.</p>
<p>Potentially Affected Primes</p>	<p>Time-to-Market Index, Conversion Cost, Asset Utilization</p>

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Source: Gartner (May 2017)

Cost-of-Service Index

Figure 61. Cost-of-Service Index

Definition	The Cost-of-Service Index measures the overall cost to provide finance and regulatory support and advisory services to the organization.
Calculation	<p>Cost-of Service Index =</p> $\frac{\text{Total cost* of finance and regulatory support and advisory services}}{\text{Total revenue of organization}}$ <p>*Note: Total cost = labor and expenses but not real estate</p>
Example	<p>During the past 12 months, ABC Computers spent \$3.13 million on finance and regulatory support and advisory services. Total revenue during this period was \$125 million, yielding:</p> <p>Cost-of-Service Index = $3.13 / 125 = 2.5\%$</p>
Application	Identifying the existing cost of service establishes the foundation for evaluating business process outsourcing alternatives. These alternatives must be viewed against the quality of services provided internally. The income statement account most affected by the Cost-of-Service Index is operating expense .
Potentially Affected Primes	Conversion Cost and Asset Utilization

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Industry-Specific Extensions: High Technology

The following section defines the industry-specific metrics developed by financial executives from companies within each industry and the financial analysts from the CFA Institute who cover each industry. These industry roundtables met over a three-month period to define performance metrics that are specific to each industry. These metrics extend, but do not replace, the metrics in the generic business value model shown on the American Institute of CPAs (AICPA) website. The extensions are being placed in the public domain on the AICPA website for feedback and further development (see [Gartner/EBRC KPI Initiative](#)).

Figure 62. Performance Metrics Recommended for the High-Tech Industry

Business Aspect	Aggregates	Recommended Primes				
Demand Management	Market Responsiveness	Net Promoter Score	Customer Interaction Index			
	Sales Effectiveness	Contract Value Index	New Customer Index	Wallet Share Index	Effective Sales Quota Index	Sales Capacity Index
	Product Development Effectiveness	R&D Funding Index				
Supply Management	Customer Responsiveness	Lost Customer Index				
	Operational Efficiency	Backlog Index				

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Source: Gartner (May 2017)

As was recommended by the participants in the high-tech roundtable, these new metrics need to be standardized. This is not an easy task, because the high-tech industry encompasses many different markets. Our advice was to strike a balance between relevance and applicability. Each metric must be defined specifically enough to be relevant while being applicable to as many companies in the diverse high-tech industry as possible.

To help in this effort, we propose the following definitions for "customer" and "product" in high tech:

- Customer** is the revenue, cost or profitability recognized by the reporting legal entity resulting from a separate legal entity in which the reporting entity does not have a reportable ownership position.

Example: Using this definition with the customer acquisition rate, it would be the revenue from new, nonowned legal entities divided by total revenue for the current period.

The reason cost and profitability are mentioned in the definition of customer is because there may be other new metrics that focus on customer cost or profitability in the future.

- Product** is the revenue, cost or profitability recognized by the reporting legal entity resulting from legally defined assets or services. Assets are defined by a product specification in a binding purchase agreement. Services are defined by a statement of work in a binding purchase agreement. New products are assets or services that are different enough to require a new product specification or statement of work.

Example: Using this definition with the New Product Index, it would be the revenue from new products (those with new and unique product specifications or statements of work) divided by total revenue for the current period.

The reason cost and profitability are mentioned in the definition of product is because there may be other new metrics that focus on *product* cost or profitability in the future.

Business Aspect: Demand Management

Aggregate: Market Responsiveness

Net Promoter Score

Figure 63. Net Promoter Score

<p>Definition</p>	<p>Although considered a measure of customer satisfaction, Net Promoter Score (NPS) is the result of a number of factors, including corporate communication, expectation setting and delivering on promises. As we define NPS here, it includes both customers and noncustomers.</p>
<p>Calculation</p>	<p>Companies obtain their Net Promoter Score by asking customers a single question on a 0 to 10 rating scale: "How likely is it that you would recommend our company to a friend or colleague?" Based on their responses, customers can be categorized into one of three groups: promoters (9 to 10 rating), passives (7 to 8 rating) or detractors (0 to 6 rating). The percentage of detractors is then subtracted from the percentage of promoters to obtain a Net Promoter Score. A score of 75% or above is considered quite high. Companies are encouraged to follow this question with an open-ended request for elaboration, soliciting the reasons for a customer's rating of that company or product. These reasons can then be provided to front-line employees and management teams for follow-up action.</p>
<p>Example</p>	<p>The ABC Software Company was interested in knowing its Net Promoter Score to get a sense of how well it was meeting customer expectations. The ABC Software Company contacted the Satmetrix research company to determine its NPS and to compare its score to other high-tech companies. Following the survey, the ABC Software Company determined that its NPS was 75% as compared to its competitors' average score of 70%. Although this was a favorable result, the ABC Software Company began to seek ways to improve its NPS to over 80%.</p>
<p>Application</p>	<p>This, together with client retention, is an indicator of a customer's willingness to purchase the products/services offered by the company.</p> <ul style="list-style-type: none"> ▪ Why do we measure? It is a leading indicator of growth. ▪ What's the value/impact? It is a measure of growth. ▪ What are the financial implications? A good NPS reflects increasing revenue. ▪ What are the cause-and-effect relations? NPS causes revenue. ▪ The income statement account most affected by NPS is revenue.
<p>Potentially Affected Primes</p>	<p>Customer Retention, Sales Opportunity Index, Sales Cycle Index, Sales Close Index, Customer Interaction Index</p>

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Source: Gartner (May 2017)

Customer Interaction Index

Figure 64. Customer Interaction Index

<p>Definition</p>	<p>The Customer Interaction Index represents the propensity of a company to take care of its customers and their future needs before someone else does. Through specific interactions, the vendor gives actual occasions to its customers to voice their needs, frustrations, satisfactions and wishes. It is measured by dividing substantive customer interactions by the total number of active customers (see definition of "customer" following Figure 62).</p>
<p>Calculation</p>	<p>Documented customer interactions are meetings during which a representative of a client provides needs, pain points, issues and satisfactions related to use of the company's products/services. It may also include substantive client feedback through social networking (blogs, wikis or other forms of mass collaboration sites) where the documented product/service suggestions were made to the company. In order for these interactions to be counted, the customer suggestions and responding company actions must be documented. The company must also provide feedback on each suggestion to the client.</p> <p>The sum of these interactions is divided by the existing number of active customers (customers who have purchased a product/service during the previous 12 months).</p>
<p>Example</p>	<p>Thanks to a CRM system, any vendor can track how many meetings or interactions have taken place on this very topic. There should be a category for such meetings/interactions in the CRM system, giving way to some reporting and document authoring.</p> <p>Using its documented customer interactions, the ABC Software Company recorded 50 such interactions on an active customer base of 1,000, resulting in a score of 5%.</p>
<p>Application</p>	<p>This is an indicator of the company's willingness to meet the existing and future needs of its customers.</p> <ul style="list-style-type: none"> ▪ Why do we measure? This indicator is a measure of the company's strategy regarding customer relationships. ▪ What's the value/impact? It is a measure of customer satisfaction. ▪ What are the financial implications? This indicator must be viewed with other related primes (see below), but scores between 5% and 20% are positive for future revenue and profitability; below and above this range are indicators of a lack of customer sensitivity and product development/product quality problems, respectively. ▪ What are the cause-and-effect relations? Customer interaction affects revenue.
<p>Potentially Affected Primes</p>	<p>Product Portfolio Index, Configurability Index</p>

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Source: Gartner (May 2017)

Aggregate: Sales Effectiveness

Contract Value Index

Figure 65. Contract Value Index

Definition	The ratio of booked but unrecognized revenue to total annual revenue for the previous period.
Calculation	Total signed contract value less revenue already recognized during the contract period / Total annual revenue for the most recently reported period
Example	The ABC Company is in the software business and licenses its software products over varying periods of time. In addition to software licensees, MY Company offers software maintenance over three- and five-year periods. The total value of all binding software licenses and maintenance contracts is \$1 billion. Revenue already recognized from these contracts is \$200 million. Total annual revenue for MY Company for the most recently reported period is \$800 million. Contract Value Index (CVI) is $(\$1 \text{ billion} - \$200 \text{ million}) / \$800 \text{ million} = 1.00$.
Application	<p>Most high-tech companies report this number, but there is much variation on how it is calculated. A standard definition would help make this number comparable. It is a leading indicator of revenue:</p> <ul style="list-style-type: none"> ▪ What's the value/impact? It measures the growth of a company. ▪ What are the financial implications? Increasing Contract Value Index reflects a growing company; decreasing CVI reflects a declining company. ▪ What are the cause-and-effect relations? CVI results in revenue.
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Sales Price Index and Forecast Accuracy

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Source: Gartner (May 2017)

New Customer Index

Figure 66. New Customer Index

Definition	Number of new customers acquired during the previous 12 months to total customers (see definition of "customer" following Figure 62).
Calculation	Number of new customers acquired / The total number of customers
Example	The ABC Software Company acquired 100 new customers during the previous 12 months. The ABC Software Company has 1,000 customers, resulting in a New Customer Index of 10%.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? The number of new customers will indicate the effectiveness of marketing campaigns and brand awareness. If an organization is able to add new customers versus repeat customers, there is a greater chance of increasing revenue. ▪ What's the value/impact? An organization will use this information as an indicator of potential changes to its brand, product mix or pricing. An early response to these levers will give an organization a chance to respond before significant negative impacts are realized. Also, it gives an organization an opportunity to take advantage of these levers if they are favorable. ▪ What are the financial implications? Increased revenue or improved alignment of cost structure with decreasing revenue. ▪ What are the cause-and-effect relations? An increase in new customers oftentimes is an indicator of market growth for individual products or services, directly impacting volume forecasts and results. The shift in demand may also drive considerations for changes to pricing conditions on individual products if there are long production lead times or other constraints. The result is increased revenue.
Potentially Affected Primes	Market Share Index, Product Portfolio Index, Sales Cycle Index, Sales Close Index, Sales Price Index and Forecast Accuracy

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Source: Gartner (May 2017)

Wallet Share Index

Figure 67. Wallet Share Index

Definition	Increase in revenue to existing customers (see definition of "customer" following Figure 62).
Calculation	$(\text{Total sales to existing customers in Period 2} - \text{Total sales to existing customers in Period 1}) / \text{Total sales to existing customers in Period 1}$
Example	The ABC Software Company sold \$1.1 billion to existing customers in Period 2 and \$1.0 billion to those same customers in Period 1. Wallet Share Index for Period 2 was 10%.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? Because money spent for new client acquisition yields less and less in the modern marketplace, "share of wallet" has become a more relevant measure of success than "market share." Therefore, keeping and growing customers over time becomes more important than simply acquiring new customers. ▪ What's the value/impact? Building long-term relationships with existing customers will lead to improved profit margins and proves to be a better return on investment than gaining new customers in several high-technology segments. ▪ What are the financial implications? Higher profit margins and revenue growth. Lower SG&A related to acquiring versus retaining customers. ▪ What are the cause-and-effect relations? Increases in wallet share typically drive longer-term growth in revenue by customer.
Potentially Affected Primes	Contract Value, Customer Retention

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Source: Gartner (May 2017)

Effective Sales Quota Index

Figure 68. Effective Sales Quota Index

Definition	The Effective Sales Quota Index measures the quality/relevance of the quotas given to the sales representatives. It indicates how many quotas were achieved and by how much. This is the single most important motivator of a sales force, and a motivated sales force drives revenue.
Calculation	This index computes the percentage of quotas achieved multiplied by the percentage of completion ($\geq 100\%$) less the number of missed quotas weighted by the percentage of underperformance ($\leq 100\%$).
Example	The ABC Software Company set quotas for the sales force at the beginning of Period 1. At the end of Period 1, 80% of the 100 sales reps achieved their sales quotas with an average of 110% of the sales quota. The 20% who missed their quota achieved, on average, only 90% of quota. The Effective Sales Quota Index for Period 1 was $(0.80 \times 1.10) + (0.20 \times 0.90) = 106\%$.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? Quota setting is what motivates a sales organization. Too high or too low will suboptimize sales results. ▪ What's the value/impact? It is what enables visibility and confidence in the forecasts. ▪ What are the financial implications? Better pipeline management. ▪ What are the cause-and-effect relations? Effective Sales Quota Index affects revenue.
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Sales Price Index, Cost-of-Sales Index

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Source: Gartner (May 2017)

Sales Capacity Index

Figure 69. Sales Capacity Index

Definition	Annual sales multiplied by the bookings capacity of existing sales force. The bookings capacity of the existing sales force is determined by multiplying the sales quota by the average achievement of quota for the most recent 12-month period.
Calculation	Number of normalized sales reps x Average quota x Average quota achievement
Example	1,000 sales reps x \$1 million average quota x 90% average achievement of quota = \$900 million in sales/bookings capacity annually.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? Gives an indication of future revenue potential and sales effectiveness based on how the sales operations are managed. ▪ What's the value/impact? Indicator of future sales, view into sales force growth (number of reps), and view into effectiveness (quota increases and average quota achievement percentage). ▪ What are the financial implications? Leading indicator of revenue. ▪ What are the cause-and-effect relations? Knowing the change in the number of reps is a leading indicator of future revenue. Change in quota achievement percentage could show strength of products or better sales operations/talent/training. Change in average quota also shows strength of products, talent levels and growth aspirations, and results in revenue growth.
Potentially Affected Primes	Sales Cycle Index, Sales Close Index, Sales Price Index

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Source: Gartner (May 2017)

Aggregate: Product Development Effectiveness

R&D Funding Index

Figure 70. R&D Funding Index

Definition	The ratio of capitalized product/service development projects currently underway to total annual revenue for the most recently reported 12-month period.
Calculation	The ratio of actual R&D spending for revenue-producing projects to total annual revenue for the most recently reported 12-month period.
Example	The ABC Company has spent \$100 million on R&D for revenue-producing projects during the most recent 12-month period. Total annual revenue for the ABC Company for the most recently reported period is \$800 million. R&D Funding Index is \$100 million / \$800 million = 0.125.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? It is a leading indicator of revenue. ▪ What's the value/impact? It measures the growth of a company. ▪ What are the financial implications? R&D Funding Index should be maintained at a certain level for companies in the high-technology industry to remain competitive with products with short life cycles. ▪ What are the cause-and-effect relations? The R&D Funding Index affects revenue.
Potentially Affected Primes	Product Portfolio Index, Time-to-Market Index

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Business Aspect: Supply Management

Aggregate: Customer Responsiveness

Lost Customer Index

Figure 71. Lost Customer Index

Definition	The ratio of customers who have become inactive in the past 30 days to the total active customers. Active customers are those who have generated revenue for the company within the past 12 months. Inactive customers are those who have purchased products or services from the company, but nothing within the previous 12-month period (see definition of "customer" following Figure 62).
Calculation	Total customers that dropped off the active customer list during the previous 30 days / Total active customers (Active customers are those who have generated revenue for the company within the past 12 months.)
Example	MY Company lost 100 customers (customers who dropped off the active customer list) during the past 30 days. The total number of customers on the active customer list is 1,000. The Customer Acquisition Rate is 0.10.
Application	<p>The Lost Customer Index should be compared with New Customer Index to understand customer loyalty.</p> <ul style="list-style-type: none"> ▪ Why do we measure? It is a leading indicator of revenue. ▪ What's the value/impact? It measures the growth (or decline) of a company. ▪ What are the financial implications? Increasing Lost Customer Index rates reflect a declining business. ▪ What are the cause-and-effect relations? The Lost Customer Index affects revenue.
Potentially Affected Primes	New Customer Index, Customer Retention Index, Contract Value

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Aggregate: Operational Efficiency

Backlog Index

Figure 72. Backlog Index

Definition	The change in the number of sales orders received but not filled.
Calculation	$(\text{Total value of backlog in Year 2} - \text{Total value of backlog in Year 1}) / (\text{Total value of backlog in Year 1})$
Example	The ABC Software Company provides integration services through a group of consultants that it employs. These engagements are scheduled by the company. In Period 2, the total value of these engagements was \$11 million. In Period 1, the total value was \$10 million. Backlog Index was +10%.
Application	<ul style="list-style-type: none"> ▪ Why do we measure? Backlog provides an organization with an estimate of future demand and future revenue. It also measures an organization's ability to add/increase sales orders over time, as well as to help signal the impact of changes in operations or policies. ▪ What's the value/impact? By tracking backlog, an organization will be able to plan production and cash flow and also improve the management of assets. A change in back orders will also provide an indication of increasing or decreasing product demand. This could lead to changes in product mix, advertising, etc. ▪ What are the financial implications? An increase of cost of goods sold could result from production inefficiencies if backlog is not understood. Also, revenue could be lost by not meeting demand in a timely fashion. ▪ What are the cause-and-effect relations? Any change in backlog must be analyzed against internal initiatives as well as financial performance. It may be a result of successful improvement initiatives, or it could signal increased demand in the market, driving revenue.
Potentially Affected Primes	Contact Value, On-Time Delivery, Order Fill Rate, Service Accuracy

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Industry-Specific Extensions: Mining Industry

The following section defines the industry-specific metrics developed by financial executives from companies within each industry and the financial analysts from the CFA Institute who cover each industry. These industry roundtables met over a three-month period to define performance metrics that are specific to each industry. These metrics extend, but do not replace, the metrics in the generic business value model shown on the AICPA website. The extensions are being placed in the public domain on the American Institute of Certified Public Accountants website for feedback and further development (see [Gartner/EBRC KPI Initiative](#)).

This research presents the results of Phase 1 for the mining industry. The roundtable for the mining industry included participants from:

- Financial executives from Barrick Gold, BHP Billiton, Goldcorp, HudBay Minerals, Iluka Resources, Rio Tinto and Sherritt International
- Financial analysts from the CFA Institute and Goldman Sachs
- Gartner and the Enhanced Business Reporting Consortium (EBRC)

Figure 73 summarizes the top 10 standard, nonaccounting KPIs identified in roundtables for the mining industry. Figure 73 is followed by a detailed description of each metric.

Figure 73. Performance Metrics Recommended for the Mining Industry

Business Aspect	Aggregates	Recommended Primes				
Demand Management	Obtain Reserves	Total Cost of Exploration	Total Cost of Acquisition	Time-to-Find Index		
	Sell Product	Pricing Index				
	Develop Product	Product Mix Index				
Supply Management	Extract Ore	Life-of-Mine Index				
	Process Ore	Total Production Cost per Tonne				
	Operate Mine and Rehabilitate	Mine Productivity Index	Safety Index	Environmental Impact Index		

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Source: Gartner (May 2017)

Several of the metrics include reserves in the calculation. There are different methods for estimating reserves.

Classification is governed by [statutes](#), [regulations](#) and [industry best-practice](#) norms. There are several classification schemes worldwide. However, the Canadian [CIM](#) classification (see [National Instrument 43-101](#)), the Australasian Joint Ore Reserves Committee (JORC) Code, and the South African Code for the Reporting of Mineral Resources and Mineral Reserves (SAMREC) are the general standards.

Companies that, using the metrics below, have reserves in the calculation must select the appropriate standard based on the regulatory authority in its location.

Business Aspect: Demand Management

Aggregate: Obtain Reserves

Total Cost of Exploration

Figure 74. Total Cost of Exploration

Definition	<p>Total Cost of Exploration The total cost per tonne of ore discovered by the company within the most recent fiscal year.</p>
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Source: Gartner (May 2017)

Total Cost of Acquisition

Figure 75. Total Cost of Acquisition

Definition	<p>Total Cost of Acquisition The total cost per tonne of reserves acquired from other parties within the most recent fiscal year.</p> <p>Total Cost of Acquisition and Total Cost of Exploration should be reported separately so that comparisons can be made to see if the company is doing enough exploration.</p>
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Source: Gartner (May 2017)

Time-to-Find Index

Figure 76. Time-to-Find Index

Definition	<p>Time-to-Find Index Length of time (measured in years) between initial exploration cost in a particular location (property) and the discovery of material substantive enough to be recognized by one of the reserve estimation standards (e.g., JORC).</p>
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Source: Gartner (May 2017)

Aggregate: Sell Product

Pricing Index

Figure 77. Pricing Index

Definition	<p>Pricing Index Pricing strategies fall into two broad categories:</p> <ul style="list-style-type: none"> ▪ Floating (spot) ▪ Fixed (contract) <p>There are risks associated with both of these strategies, but they are quite different. This difference is important to investors and creditors and should be communicated clearly.</p> <p>The Pricing Index would be used for both reserves and sales contracts.</p> <p>Recommendation: Revenue earned from floating price sales divided by revenue earned from fixed priced sales.</p>
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Source: Gartner (May 2017)

Aggregate: Develop Product

Product Mix Index

Figure 78. Product Mix Index

Definition	<p>Product Mix Index The weighted average percentage of revenue derived from distinct products. Divide the revenue earned from each distinct commodity product (products with significantly different prices per tonne and price volatilities) by total revenue. Square each percentage and sum the squares.</p>
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Source: Gartner (January 2017)

Aggregate: Extract Ore

Life-of-Mine Index

Figure 79. Life-of-Mine Index

<p style="text-align: center;">Definition</p>	<p>Life-of-Mine Index</p> <p>The SEC and other regulators require that reserves are reported. These requirements include the following:</p> <ul style="list-style-type: none"> ▪ Volume of material ▪ Metallurgical content ▪ Production for the year ▪ Life of each mine — (volume of material divided by yearly production) <p>These reserve tables are reported for each mine owned by the company. Once again, we believe that an overarching measure could be used as a proxy for assessing the reserves for an entire company.</p> <p>Recommendation: Aggregated volume of material in reserve (for all locations) divided by current annual production (for all locations).</p>
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Source: Gartner (May 2017)

Aggregate: Process Ore

Total Production Cost per Tonne

Figure 80. Total Production Cost per Tonne

<p style="text-align: center;">Definition</p>	<p>Total Production Cost per Tonne</p> <p>The total cost per tonne to extract and produce the final product. These costs include the cost of capital, but they do not include an offset for the revenue obtained from byproduct materials.</p> <p>The metric is intended to show the total efficiency of the company (financial and operational) to produce its primary product.</p>
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Source: Gartner (May 2017)

Aggregate: Operate Mine and Rehabilitate

Mine Productivity Index

Figure 81. Mine Productivity Index

Definition	<p>Mine Productivity Index Sellable tonnes extracted in the most recent 12 months divided by full-time equivalents (both number of FTEs and total cost of FTEs). Both employees and contracted labor count equally as FTEs based on actual hours worked.</p>
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Source: Gartner (May 2017)

Safety Index

Figure 82. Safety Index

Definition	<p>Safety Index Lost time to injury measured by hours lost to injury divided by total available hours.</p> <p>Companies can quickly cease to exist following a disaster like the explosion at the Pike River mine. Smaller safety issues can also have significant effects on cash flow. Safety records are considered when assessing the risk of investing or loaning capital to a mining company.</p>
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Source: Gartner (May 2017)

Environmental Impact Index

Figure 83. Environmental Impact Index

Definition	<p>Environmental Impact Index Environmental impact is also a significant source of risk for mining companies, but it is very difficult to measure. Various nongovernmental organizations have developed complicated and very specific criteria for assessing environmental impact, but now overarching standards exist. What makes this difficult is the diversity of mining methods, with each having different environmental impacts.</p> <p>One suggestion may be a high-level metric that could be used as a proxy. Complicated and specific measures could still exist, but a simple, broadly applicable measure would serve as a starting point.</p> <p>Recommendation: Remediation cost as a percent of revenue.</p>
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Digital Business: Leading Indicators Specific to This Form of Business

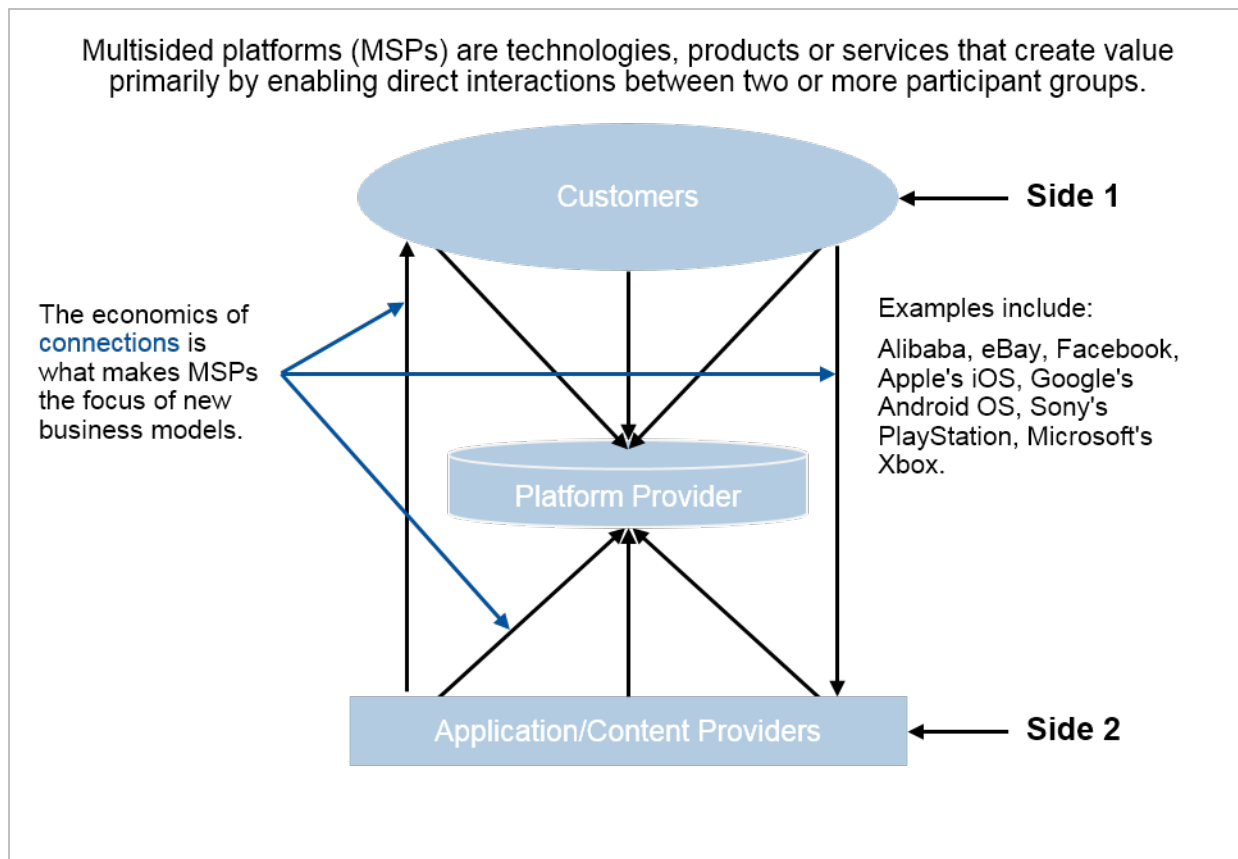
Before we can develop leading indicators for digital business, we must establish a general understanding of what digital business is. Otherwise, it is impractical to assume that an agreement among all the stakeholders can be reached regarding which metrics are the most relevant to assessing and monitoring investments in digital business.

Any framework, model or metric is an abstraction. All abstractions must be assessed carefully because they reduce and eliminate some aspects of what is being represented. Time to consider and question any abstraction should be given to all stakeholders so they can properly understand and apply it. No abstraction is perfect, by many are useful to focus attention and take effective action toward results that benefit all stakeholders.

It is in that spirit that we use the concept of a multisided platform (see Figure 84) to establish a common understanding of digital business. We encourage the reader to consider and question the efficacy of this abstraction for digital business. The authors believe that, although not perfect, this framework exposes what differentiates digital business from traditional business and from e-business without reference to the technologies used. It is important to know what differentiates digital business so that we can describe why new metrics are needed and what these metrics should measure.

Jean Tirole, who won the Nobel Prize for economics in 2014, is credited as one of the pioneers in defining a multisided platform (MSP). The concept is straightforward. A platform provider sets the rules for participation and pricing for each side of the platform. A "side" consists of a group of participants with similar interests. The simplest MSP is a two-sided version that consists of consumers of the platform product or service and content providers to the platform. Uber is an example of a two-sided platform provider. The consumers are the people needing a ride and the content providers are the people with the cars. What makes an MSP different from a traditional retail environment is that the content providers have direct relationships with the consumers. Although it would be theoretically possible to consult an MSP without digital technology, virtually all known MSPs are digital.

Figure 84. A Multisided Platform



Source: Gartner (May 2017)

The MSP framework or model can be used by any traditional business to expand into new markets. For example, suppose your enterprise produces earth-moving equipment for large construction companies that build highways or mine materials for industrial use. Your enterprise could develop an MSP to expand market coverage:

- **Side 1** — Your current consumers (that is, large contractors and mining companies) and potential new customers seeking proactive maintenance for their equipment based on Internet of Things (IoT) capabilities, service providers in their area of operation, OEM parts, and perhaps even RFPs for new equipment
- **Side 2** — Content providers offering maintenance services and authorized parts in locations where your dealers do not currently exist

Note: MSPs can have many sides, each one consisting of a constituency with similar interests (see [LinkedIn](#) below).

The process for developing a platform is not trivial or without risk. Some of the strategic questions that need to be addressed are:

- 1. How many sides to create? ... *more sides mean more complexity*. LinkedIn — five sides: professionals 20%, recruiters 30%, advertisers 30%, plus corporate HR 15%, and developers 5%.
- 2. Multisided design characteristics? ... *motivating each side to participate*. eBay's addition of PayPal to reduce transaction friction, Sony's APIs and development templates for PlayStation 3.
- 3. Pricing structures for each side? ... *free to users, charge content providers?* Consider the price elasticity for each side.
- 4. Governance rules? ... *who is allowed to join, what are the various sides allowed to do?* Match.com versus eHarmony.

Your responses to these questions and the timing for changing your responses as the MSP provider will determine how successful your enterprise will be in the digital era.

Leading indicators are used to help you make these decisions and to know when to change your decisions over time. Here we present a list of potential leading indicators for making MSP decisions.

Side 1 — Registered Prospects/Customers

Figure 85. Registered Prospects/Customers

Definition	<p>Number of Registered Prospects/Customers</p> <p>The number of registered login IDs on the platform as a prospect or customer of what is being offered by the platform provider and/or the content providers.</p>
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Source: Gartner (May 2017)

Side 1 — Growth Rate of Registered Prospects/Customers

Figure 86. Growth Rate of Registered Prospects/Customers

Definition	<p>Growth Rate of Registered Prospects/Customers</p> <p>The percent increase in registered prospects/customers on the platform for the most recent 12-month period.</p>
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Source: Gartner (May 2017)

Side 1 – Conversion Rate Between Customers and Platform Providers

Figure 87. Conversion Rate Between Customers and Platform Providers

Definition	Conversion Rate Between Customers and Platform Providers	The percent of visits resulting in a revenue-generating transaction by customers.
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Source: Gartner (May 2017)

Side 1 – Average Annual Purchasing Frequency Between Customers and the Content Providers

Figure 88. Average Annual Purchasing Frequency Between Customers and the Content Providers

Definition	Average Annual Purchasing Frequency Between Customers and the Content Providers	The number of transactions per year per customer between customers and the content providers.
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Source: Gartner (May 2017)

Side 1 – Average Price per Transaction Between Customers and the Content Providers

Figure 89. Average Price per Transaction Between Customers and the Content Providers

Definition	Average Price per Transaction Between Customers and the Content Providers	The average revenue generated per transaction between customers and the content providers for the most recent 12 months.
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Source: Gartner (May 2017)

Side 1 – Average Fixed Fee Charged by Platform Providers to Customers

Figure 90. Average Fixed Fee Charged by Platform Providers to Customers

Definition	Average Fixed Fee Charged by Platform Providers to Customers	A registration fee for customers.
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Source: Gartner (May 2017)

Side 1 – Average Variable Fee per Transaction Charged by the Platform Provider to Customers

Figure 91. Average Variable Fee per Transaction Charged by the Platform Provider to Customers

Definition	Average Variable Fee per Transaction Charged by the Platform Provider to Customers	This fee is included in the price per transaction between platform providers and customers.
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Source: Gartner (May 2017)

Side 1 – Cost per Transaction for Platform Providers When Selling to Customers

Figure 92. Cost per Transaction for Platform Providers When Selling to Customers

Definition	Cost per Transaction for Platform Providers When Selling to Customers	Total cost of platform providers when selling to customers divided by the number of transactions in a given time period (monthly, quarterly, annually).
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Source: Gartner (May 2017)

Side 2 – Number of Registered Content Providers on the Platform

Figure 93. Number of Registered Content Providers on the Platform

Definition	Number of Registered Content Providers on the Platform	The number of registered independent content providers with at least one transaction on the platform.
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Source: Gartner (May 2017)

Side 2 – Growth Rate of Registered Content Providers

Figure 94. Growth Rate of Registered Content Providers

Definition	Growth Rate of Registered Content Providers	The percent increase in registered content providers on the platform with at least one transaction for the most recent 12-month period.
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Source: Gartner (May 2017)

Side 2 – Conversion Rate Between the Platform Provider and Content Providers

Figure 95. Conversion Rate Between the Platform Provider and Content Providers

Definition	Conversion Rate Between the Platform Provider and Content Providers	The percent of visits resulting in a revenue-generating transaction between platform and content providers.
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Source: Gartner (May 2017)

Side 2 – Average Annual Purchasing Frequency Between the Platform Provider and Content Providers

Figure 96. Average Annual Purchasing Frequency Between the Platform Provider and Content Providers

Definition	<p>Average Annual Purchasing Frequency Between the Platform Provider and Content Providers</p> <p>The number of transactions per year per customer between customers and content providers.</p>
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Source: Gartner (May 2017)

Side 2 – Average Price per Transaction Between the Platform Provider and Content Providers

Figure 97. Average Price per Transaction Between the Platform Provider and Content Providers

Definition	<p>Average Price per Transaction Between the Platform Provider and Content Providers</p> <p>The average revenue generated per transaction between customers and content providers for the most recent 12 months.</p>
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Source: Gartner (May 2017)

Side 2 – Average Fixed Fee Charged by Platform Providers to Content Providers

Figure 98. Average Fixed Fee Charged by Platform Providers to Content Providers

Definition	<p>Average Fixed Fee Charged by Platform Providers to Content Providers</p> <p>A registration fee for content providers.</p>
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Source: Gartner (May 2017)

Side 2 — Average Variable Fee per Transaction Charged by the Platform Provider to Content Providers

Figure 99. Average Variable Fee per Transaction Charged by the Platform Provider to Content Providers

Definition	<p>Average Variable Fee per Transaction Charged by the Platform Provider to Content Providers</p> <p>This fee is included in the price per transaction between the platform provider and content providers.</p>
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Source: Gartner (May 2017)

Side 2 — Cost per Transaction for Platform Providers When Selling to Content Providers

Figure 100. Cost per Transaction for Platform Providers When Selling to Content Providers

Definition	<p>Cost per Transaction for Platform Providers When Selling to Content Providers</p> <p>Total cost of platform providers when selling to content providers divided by the number of transactions in a given time period (monthly, quarterly, annually).</p>
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Source: Gartner (May 2017)

Appendix A: Frequently Asked Questions

Question: Should the time interval and level of detail used in the Forecast Accuracy prime metric be adjusted for vertical markets as experience is gained on its application and use?

Answer: Yes, in fact we have already begun to consider ways of "verticalizing" the Business Value Model. Distinctions such as these may emerge in subsequent versions of the Business Value Model. Note that the Feature/Function Index may also vary by vertical market.

Question: Under the aggregate for Product Development Effectiveness, several of the prime metrics use the term "new" to describe product/service development. Does the term "new" include product enhancements?

Answer: "New" is qualified to mean any product enhancement where R&D or product development is involved. To qualify, the organization must have a function separate from normal product support that is designed to produce these enhancements. Evidence of this function would come from expenses. Support for this could come from tax credits that are often available to organizations that make investments in new techniques for doing business. We can develop audit rules for discerning what qualifies as "new."

Question: What are standard hours of operation?

Answer: Standard hours of operation are defined as one of three categories:

- Global business: 24 hours, 7 days a week
- Regional business: 8 hours, 5 days a week
- Extended business: 12 hours, 7 days a week

Appendix B: Sigma Table for Defects per Million

Table 4. Sigma Table for Defects per Million

Defects per Million Opportunities (DPMO)	Success Rate	Sigma Value
933,000	7%	0.0
919,000	8%	0.1
903,000	10%	0.2
885,000	12%	0.3
864,000	14%	0.4
841,000	16%	0.5
816,000	18%	0.6
788,000	21%	0.7
758,000	24%	0.8
726,000	27%	0.9
691,000	31%	1.0
655,000	34%	1.1
618,000	38%	1.2
579,000	42%	1.3
540,000	46%	1.4
500,000	50%	1.5
460,000	54.0%	1.6
421,000	57.9%	1.7
382,000	61.8%	1.8
345,000	65.5%	1.9
309,000	69.1%	2.0
274,000	72.6%	2.1

Defects per Million Opportunities (DPMO)	Success Rate	Sigma Value
242,000	75.8%	2.2
212,000	78.8%	2.3
184,000	81.6%	2.4
159,000	84.1%	2.5
136,000	86.4%	2.6
115,000	88.5%	2.7
96,800	90.32%	2.8
80,800	91.92%	2.9
66,800	93.32%	3.0
54,800	94.52%	3.1
44,600	95.54%	3.2
35,900	96.41%	3.3
28,700	97.13%	3.4
22,800	97.72%	3.5
17,900	98.21%	3.6
13,900	98.61%	3.7
10,700	98.93%	3.8
8,200	99.18%	3.9
6,210	99.379%	4.0
4,660	99.534%	4.1
3,470	99.653%	4.2
2,560	99.744%	4.3
1,870	99.813%	4.4
1,350	99.865%	4.5

Defects per Million Opportunities (DPMO)	Success Rate	Sigma Value
968	99.903%	4.6
687	99.931%	4.7
483	99.952%	4.8
337	99.966%	4.9
233	99.9767%	5.0
159	99.9841%	5.1
108	99.9892%	5.2
72	99.9928%	5.3
48	99.9952%	5.4
32	99.9968%	5.5
21	99.9979%	5.6
13	99.9987%	5.7
9	99.9991%	5.8
5	99.9995%	5.9
3.4	99.99966%	6.0

Source: Gartner (May 2017)

Gartner Recommended Reading

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

"Toolkit: The Gartner Business Value Model"

"Monetizing the Integration of Risk and Performance Management"

"Toolkit: Monetizing Business Outcomes"

"The Gartner Business Risk Model: A Framework for Integrating Risk and Performance"

"Executive Summary: The Gartner Business Risk Model"

"Toolkit: The Gartner Business Risk Model"

More on This Topic

This is part of an in-depth collection of research. See the collection:

- Realizing the Benefits of Superior Customer Experience: A Gartner Trend Insight Report

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