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# GARTNER/EBRC KPI INITIATIVE

This initiative will identify and develop industry standard measures that are predictive of corporate performance. There is a difference between identifying such measures and establishing them as industry standards this initiative aims to do both. This document provides the standard definitions and calculation formulas for the standard KPIs.

## Standard Key Performance Indicators

The scope of the standard measures contained cover all the ***actionable*** activities performed within an organization. These activities center on three broad categories referred to as ***Business Domains*** in the Framework description. The three business domains are:

**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 satisfying demand for 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 is acceptable to its clients, when assessed against alternatives.

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

The metrics are organized into a Framework that is designed to apply to corporations within a specific industry. This is made possible by a flexible architecture consisting of Aggregate and Prime measures. The Aggregate and Prime Measures used in the Framework are grouped by high-level business Domain: Demand Management, Supply Management, and Support Services.

The following table contains the generic key performance indicators for all industries. Following the table the standard definitions and calculations are provided for each of the Aggregate and Prime Measures.

| Standard Key Performance Indicators for All Industries (common) | | | | | |
|---|---|---|---|---|---|
| **Business Domain** | **Aggregates** | **Prime Metrics** | | | |
| Demand Management | Market Responsiveness | Target Market Index | Market Coverage Index | Market Share Index | Opportunity/ Threat Index |
| | | Product Portfolio Index | Channel Profitability Index | Configure-ability 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 Products Index | Feature Function Index | Time to Market Index | R&D Success Index |
| Supply | Customer | On-Time | Order Fill | Material | Service |

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| | | | | | |
|---|---|---|---|---|---|
| Management | Responsiveness | Delivery | Rate | Quality | 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 | Skills Inventory Index | Employee Training Index |
| | | HR Advisory Index | HR Total Cost Index | | |
| | Information Technology Responsiveness | Systems Performance | IT Support Performance | Partnership Ratio | Service Level Effectiveness |
| | | New Projects Index | IT Total Cost Index | | |
| | Finance & Regulatory Responsiveness | Compliance Index | Accuracy Index | Advisory Index | Cost of Service Index |

# Demand Management

## Market Responsiveness

Definition: Activities measured by this aggregate are entirely contained within the business domain of Demand Management. Activities measured by Market Responsiveness are distinct from the other aggregates within this business domain (see definitions of Product Development Effectiveness and Sales Effectiveness). Activities measured by Market Responsiveness involve identifying and validating customer needs, now and projected into the future, in current and targeted markets (driven by the strategic plan), identifying and validating competitive opportunities/threats in those markets, developing and delivering appropriate messages (branding) to convey the value of the goods and services offered by the organization.

Measurement Guidance: Using our definition of Demand Management – Market Responsiveness, the activities measured by this aggregate affect virtually all the domains of the organization. Driven by the strategic plan for the organization, Demand Management – Market Responsiveness, begins to translate and shape that plan into actionable, measurable activities. Knowing your customers and "keeping your friends close and your enemies closer " is what drives the operational activities of most businesses.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Demand Management – Market Responsiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure

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Value Impact: The value of Demand Management – Market Responsiveness varies by organization and industry. In general, the more competitive or volatile a market is, the more significant Demand Management – Market Responsiveness becomes. An industry example is consumer-packaged goods (CPG). Demand Management – Market Responsiveness may have the single biggest effect on financial performance from among all the aggregate measures for these types of products.

Standard Primes (Generic): Target Market Index, Market Coverage Index, Market Share Index, Opportunity Threat Index, Product Portfolio Index, Channel Profitability Index, Configurability Index

**Target Market Index**

Definition: Target Market Index reflects the organization's decisions regarding the size and growth definition rates of the markets it participates in.

Calculation: Target Market Index = Relative Market Size X (1 + Relative Market Growth Rate) where:

- Relative Market Size = Sum (target market industry revenue) / (Normalized industry revenue)
- Target market industries are selected using ISIC codes based on current, plus planned and budgeted product/service offerings over the next year
- Relative Market Growth Rate = weighted average growth of targeted industries

**Market Coverage Index**

Definition: 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 market(s) the company participates in.

Calculation: Market Coverage Index = (Number of countries organization sells in weighted by size of revenue) / (Target market global industry revenue)

**Market Share Index**

Definition: Market Share Index shows the relative strength and influence of the organization in the definition markets it currently participates in.

Calculation: Market Share Index = (Revenue of organization's offered products and services) / (Total revenue of ISIC-code selected industries)

**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."*

**Product Portfolio Index**

Definition: 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.

Calculation: Product Portfolio Index = Sum {Revenue of products where [(g > G/2) AND (m > M/2)]} / Sum {Revenue of all products}

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

**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 – [Sum (direct costs) ÷ company total revenue] where direct costs are, for example: commissions, dealer discounts, finder's fees, internal support costs.

**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: Configurability Index = (Sum of revenue from product options) / (Total company revenue). 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.

## Sales Effectiveness

Definition: Activities measured by this aggregate are entirely contained within the business domain called Demand Management. Activities measured by Sales Effectiveness are distinct from the other aggregates within this business domain (see definitions of Product Development Effectiveness and Market Responsiveness). Activities measured by Demand Management - Sales Effectiveness involve optimizing all customer (including potential customers and prospects) relationships based on the marketing message and unique capabilities of the organization. Included in these activities, is providing information used to forecast specific customer needs for the products and services offered by the organization.

Measurement Guidance: Using our definition of Demand Management – Sales Effectiveness, the activities measured by this aggregate are required by all organizations offering products and services to independent customers. Customer relationships are the most important relationships in an organization. Managing them effectively in changing environments is essential to the success of the organization.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Demand Management - Sales Effectiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: An acceptable level of Demand Management – Sales Effectiveness is essential in all organizations and industries. Even in a monopoly (such as a local cable company in the US) must be concerned with Demand Management - Sales Effectiveness, because disenfranchised customers will find alternatives at some point. Demand Management - Sales Effectiveness is a necessary condition for organizational success.

Standard Primes (Generic): Sales Opportunity Index, Sales Cycle Index, Sales Close Index, Sales Price Index, Cost of Sales Index, Forecast Accuracy, Customer Retention Index

**Sales Opportunity Index**

Definition: The Sales Opportunity Index shows how successfully the organization can cultivate prospects for its products and services

Calculation: Sales Opportunity Index = (Contacts by prospects last month) / 2 X (12-month rolling average prospect contacts per month)

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 Web site, responded to an advertisement.

**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.

**Sales Close Index**

Definition: The Sales Close Index shows how successfully the sales function can turn prospects into customers.

Calculation: Sales Close Index = (Successful prospect sales decisions) / (Total prospect sales decisions)

**Sales Price Index**

Definition: The Sales Price Index shows how successfully the sales function can close business without dropping price and, therefore, margin.

Calculation: Sales Price Index = 1 – (Total discount revenue ÷ total list price revenue)
where "list price" indicates what the revenue would have been if sold without discount.

**Cost of Sales Index**

Definition: The Cost-of-Sales Index shows how cost-efficiently the sales function can turn prospects into customers.

Calculation: Cost-of-Sales Index = (Total sales expenses) / (Total revenue)

**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: Forecast Accuracy = (Total weekly forecast items within ±10% of actual) / (Total weekly forecast items)

**Customer Retention Index**

Definition: The Customer Retention Index shows how well existing customer needs are being identified and satisfied.

Calculation: Customer Retention Index = 1 – (Existing customers with no purchase in buying cycle) / (Total customer count)
Where Buying cycle = baseline buying cycle time for industry in which organization competes

## Product Development Effectiveness

Definition: Activities measured by this aggregate are entirely contained within the business domain called Demand Management. Activities measured by Product Development Effectiveness are distinct from the other aggregates within this business domain (see definitions of Market Responsiveness and Sales Effectiveness). Activities measured by Product Development Effectiveness involve creating new capabilities, products or services, or reorganizing existing capabilities offered by the organization to meet the changing needs (customer needs are identified under Market Responsiveness) of the customers to be served in new targeted markets or currently being served in existing markets.

Measurement Guidance: Using our definition of Demand Management – Product Development Effectiveness, all organizations must innovate to remain competitive. In free markets, the only constant

is change. An organization's ability to address and sometimes even create changes in the markets it participates in will have a significant effect on its future success.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implications: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Demand Management – Product Development Effectiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Demand Management – Product Development Effectiveness varies by organization and industry. In general, the more differentiated the goods and services within a market, the more value Demand Management – Product Development Effectiveness has. Examples are high technology and pharmaceutical products. Demand Management – Product Development Effectiveness may have the single biggest affect on financial performance from among all the aggregate measures for these types of products.

Standard Primes (Generic): New Products Index, Feature Function Index, Time-to-Market Index, R & D Success Index

**New products Index**

Definition: The New Products Index shows the organization's emphasis on adapting its products and services to the changing demands of customers and prospects.

Calculation: New Products Index = (Revenue of products & services released in last 12 months) / (Total company revenue)

**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: Feature Function Index = (New component items for products released last year) / (Total component items for those products). Where:

- 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

**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).

**R & D Success Index**

Definition: The R&D Success Index shows the ability of the product development function to bring products to market.

Calculation: R&D Success Index = (New products launched in last 12 months) / (Development projects due to complete in 12 months)

# Supply Management

## Customer Responsiveness

Definition: Activities measured by this aggregate are entirely contained within the business domain called Supply Management. Activities measured by Customer Responsiveness are distinct from the other aggregates within this business domain (see definitions of Supplier Effectiveness and Operational Efficiency). Activities measured by Customer Responsiveness are all the activities directly involved with

completing a specific customer order or service and providing visibility into the status of completing a specific order or service. Customer Responsiveness is the point at which Demand Management affects Supply Management. Customer Responsiveness drives the other Supply Management aggregates.

Measurement Guidance: Using our definition of Supply Management – Customer Responsiveness, customer satisfaction is significantly affected by these activities. It is the point at which the organization either meets or fails to meet the expectations of its customers that were established by the Demand Management activities. The level of performance of Supply Management – Customer Responsiveness, can also significantly affect operational costs.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implications: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Supply Management – Customer Responsiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Supply Management – Customer Responsiveness varies by organization and industry. In general, the more competitive a market is, the more significant Supply Management – Customer Responsiveness becomes. Using an earlier example, Customer Responsiveness has tremendous impact in the consumer-packaged goods (CPG) industry.

Standard Primes (Generic): On-Time Delivery, Order Fill Rate, Material Quality, Service Accuracy, Service Performance, Customer Care Performance, Agreement Effectiveness, Transformational Ratio

**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: On-Time Delivery = (Order delivered on time / (Total orders received). The calculation is performed on a seven-day rolling average basis.

**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: Order Fill Rate = (Total number of orders filled correctly) / (Total number of orders). Where:

- Order is filled correctly if shipment quantity = customer request quantity
- Calculation is performed on a seven-day rolling average basis

**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: Material Quality = (Orders with material quality within agreed tolerances) / (Total orders).

**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.

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Calculation: Service Accuracy = (Orders completed with correct information) / (Total orders processed).

**Service Performance**

Definition: 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.

Calculation: For continuous request services:

Service Performance = (Time service is available to the customer) / (Time service expected to be available to the customer)

For discrete request services:

Service Performance =( Customer requests adequately responded to) / (Total customer requests)

*Data is for standard hours of operation*

**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: Customer Care Performance = (Customer care requests within SA) / (Total customer care requests)

Where:

- SLA = service-level agreement specifying response time and resolution criteria for each separate channel by which requests can be submitted (e.g., phone, e-mail)
- Data is for standard hours of operation
- 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.

**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: Agreement Effectiveness = (Existing customers with 90% or better SLA satisfaction) / (Total number of existing customers)

**Transformational Ratio**

Definition: 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:

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: Transformation Ratio = (Contracts and engagements complying with A and B) / (Total contracts and engagements)

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## Supplier Effectiveness

Definition: Activities measured by this aggregate, Supplier Effectiveness, are entirely contained within the business domain called Supply Management. Activities measured by Supplier Effectiveness are distinct from the other aggregates within this business domain (see definitions of Customer Responsiveness and Operational Efficiency). Activities measured by Supplier Effectiveness include all the activities directly involved with completing a specific purchase order and providing visibility into the status of completing a specific order or service. Supplier Effectiveness covers all procurement needs (direct and in-direct materials as well as services).

Measurement Guidance: Using our definition of Supply Management – Supplier Effectiveness, the activities measured by this aggregate can represent the largest category of annual costs for an organization. The difference between profit and loss is driven by Supply Management – Supplier Effectiveness in many industries. Even in industries where procurement activities have less impact, Supplier Effectiveness can be the difference between success and failure with specific engagements.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Supply Management – Supplier Effectiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: As just stated the value of Supply Management – Supplier Effectiveness varies by industry. In general, competitive, commodity product companies and markets are affected most by Supply Management – Supplier Effectiveness.

Standard Prime (Generic): Supplier On-Time Delivery, Supplier Order Fill Rate, Supplier Material Quality, Supplier Service Accuracy, Supplier Service Performance, Supplier Customer Care Performance, Supplier Agreement Effectiveness, Supplier Transformational Ratio

**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 = (Orders received on time) / (Total orders)

**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 = (Orders with correct shipment quantity) / (Total orders)

**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 = (Orders within specification tolerances) / (Total orders)

**Supplier Service Accuracy**

Definition: Supplier Service Accuracy measures the completeness and accuracy of the information which is needed from the supplier to obtain a specific supplier order or request for service.

Calculation: Supplier Service Accuracy = (Supplier orders both complete and accurate) / (Total orders)

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**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: For continuous request services: Supplier Service Performance = (Time service is available from supplier) / (Time service expected to be available from supplier)
For discrete request services: Supplier Service Performance = (Requests to supplier adequately responded to) / (Total supplier requests)
Data is for standard hours of operation

**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: Supplier Care Performance = (Supplier care requests within SLA) / (Total supplier care requests)
Where:

- SLA = service-level agreement specifying response time and resolution criteria for each separate channel by which requests can be submitted (e.g., phone, e-mail).
- Data is for standard hours of operation (defined in Appendix A).
- A supplier 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.

**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: Supplier Agreement Effectiveness = (Service providers achieving 90% or better SLA satisfaction) / (Total number of existing service providers)

**Supplier Transformation Ratio**

Definition: 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:

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: Supplier Transformation Ratio = (Supplier contracts/engagements complying with A & B) / (Total supplier contracts and engagements)

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## Operational Efficiency

Definition: Activities measured by this aggregate, Operational Efficiency, are entirely contained within the business domain called Supply Management. Activities measured by Operational Efficiency are distinct from the other aggregates within this business domain (see definitions of Customer Responsiveness and Supplier Effectiveness). Activities measured by Operational Efficiency are those value-added activities performed internally to create the goods and services offered by the organization including the material requirements planning and optimization of resources. Coordinating and integrating out-sourced business functions is part of Operational Efficiency.

Measurement Guidance: Using our definition of Supply Management – Operational Efficiency, the activities measured by this aggregate define the core competency of the organization. As organizations out-source more of their business functions, the range of activities covered by Operational Efficiency may decline, but the activities surrounding the coordination and integration of these out-sourced functions increases in importance.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Supply Management – Operational Efficiency, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Supply Management – Operational Efficiency varies by organization and industry. In general, the more differentiated and complex the products and services are, the more significant Supply Management – Operational Efficiency becomes. Using an earlier example, Operational Efficiency in the high technology and pharmaceutical industries is among the most significant aggregate measures of financial success.

Standard Primes (Generic): Cash-to-Cash Cycle Time, Conversion Cost, Asset Utilization Index, Sigma Value

**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: Cash-to-Cash Cycle Time = (average days stock in inventory + average days to sell an item of stock) – (average payment period in days)

**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: Conversion Cost = (Sum of direct materials and services costs) / (Revenue produced by products and services)

**Asset Utilization Index**

Definition: Asset Utilization measures the organization's ability to manage its assets effectively

Calculation: Asset Utilization = (Total product and services revenue last month X 12) / (Total net assets)

**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: Sigma Value = is looked up from DPMO value
DPMO = (Failed CTQs X 1,000,000) / (M X U)
Where:

- 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

# Support Services

## Human Resources Responsiveness

Definition: Each of the aggregate measures within the Support Services business domain assumes that the activities covered are managed through Service Level Agreements (SLAs) with internal customers. These SLAs, are based on the Demand and Supply Management issues of the Support Service provided (which effectively defines a business within a business). What is unique to the aggregate measure for each of the Support Services categories is the nature of the services provided. The services measured by Human Resources Responsiveness are distinct from the other Support Services categories (see definitions of IT Responsiveness and Finance & Regulatory Responsiveness). Services measured by Human Resources Responsiveness involve recruitment, training, employee development, organized labor relations and employee satisfaction.

Measurement Guidance: Using our definition of Support Services - Human Resources Responsiveness, the activities measured by this aggregate represent the organization's general ability to deal with changing requirements of its work force.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Support Services - Human Resources Responsiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Support Services - Human Resources Responsiveness varies by organization and industry. In general, the more service oriented the organization is, the more value Support Services - Human Resources Responsiveness has.

Standard Primes (Generic): Recruitment Effectiveness Index, Benefits Administration Index, Skills Inventory Index, Employee Training Index, HR Advisory Index, HR Total Cost Index

**Recruitment Effectiveness Index**

Definition: The Recruitment Effectiveness Index shows the ability of the organization to obtain qualified candidates for open positions, taking into account time and cost.

Calculation: Recruitment Effectiveness Index = (Average relative recruitment time) X (average relative recruitment cost)
Where:

- Relative recruitment time = 1 – (time from approval to hire/365)
- Relative recruitment cost = 1 – (total recruitment cost ÷ 1st year compensation)

**Benefits Administration Index**

Definition: The Benefits Administration Index shows the ability of the organization to provide employee benefits cost-effectively.
Calculation: Benefits Administration Index = (Health benefits costs for past 12 months) / (Employee compensation for the past 12 months)

**Skills Inventory Index**
Definition: The Skills Inventory Index shows the ability of the organization to fulfill its employee skill needs in order to complete its business activities. Outsourced business activities are not considered part of these skill requirements.
Calculation: Skills Inventory Index = (Total number of skills filled by existing employees) / (Total number of skills required)

**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: Employee Training Index = (Training days in last year) / (Employee count X 225)
Where Training Day = 8 hours spent in training

**HR Advisory Index**
Definition: The HR Advisory Index measures how much the human resources function is involved with strategic business initiatives, by subjecting projects to two assessment criteria:
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 Risk/reward metrics may also be included to enable HR to evaluate results.
Calculation: HR Advisory Index = (Existing and planned HR projects meeting A & B) / (Total existing and planned projects)

**HR Total Cost Index**
Definition: The HR Total Cost Index measures the overall cost of providing HR support and advisory services to the organization. Real estate costs are excluded.
Calculation: HR Total Cost Index = (Cost of labor and expenses) / (Total revenue)

## Information Technology Responsiveness

Definition: Each of the aggregate measures within the Support Services business domain assumes that the activities covered are managed through Service Level Agreements (SLAs) with internal customers. These SLAs are based on the Demand and Supply Management issues of the Support Service provided (which effectively defines a business within a business). What is unique to the aggregate measure for each of the Support Services categories is the nature of the services provided. The services measured by IT Responsiveness are distinct from the other Support Services categories (see definitions of Human Resources Responsiveness and Finance & Regulatory Responsiveness). Services measured by IT Responsiveness involve the effectiveness, reliability, enablement of collaborative business relationships, and agility of IT

Measurement Guidance: Using our definition of Support Services - IT Responsiveness, the activities measured by this aggregate represent the organizations general ability to exploit information technology and deal with changing requirements of its IT resources.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Support Services - IT

Responsiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Support Services - IT Responsiveness varies by organization and industry. In general, the higher the volume of transactional activity and the more complex the services are, the more value Support Services - IT Responsiveness can be extracted.

Standard Primes (Generic): Systems Performance, IT Support Performance, Partnership Ratio, Service Level Effectiveness, New Project Index, IT Total Cost Index

**Systems Performance**

Definition: Systems 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.

Calculation: Systems Performance = (Time system is available to the organization) / (Time system expected to be available to the organization)

**IT Support Performance**

Definition: 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.

Calculation: IT Support Performance = (Number of IT support requests within SLA) / (Total Number IT support requests)
Data is for standard hours of operation

**Partnership Ratio**

Definition: Partnership Ratio measures how much the IT function is involved with strategic business initiatives, by subjecting projects to two assessment criteria:

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 Risk/reward metrics may also be included to enable IT and other business functions to evaluate results.

Calculation: Partnership Ratio = (Existing and planned IT projects meeting A & B) / (Total existing and planned IT projects)

**Service Level Effectiveness**

Definition: Service Level Effectiveness the measures 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:

- 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: Service Level Effectiveness = (Surveyed users with >=90% satisfaction) / (Total number of surveyed users)

**New Project Index**

Definition: New Project Index measures the ability of the IT function to deliver new projects into the organization within budget, time and value objectives.

Calculation: New Project Index = (Total IT projects within budget & time & value objectives) / (Total IT projects)

**IT Total Cost Index**

Definition: IT Total Cost Index measures the overall total cost of ownership (TCO) for technology owned, operated or supported by the organization.

Calculation: IT Total Cost Index = (Sum of IT-related TCO) / (Total revenue of organization)
A brief summary of TCO costs is as follows:

- Direct costs: Hardware and software; management ; support ; application development and integration; communications fees
- Indirect costs (i.e., unbudgeted): End-user, cost of end users to support themselves and each other instead of using formal IT support channels; downtime, lost productivity due to system unavailability

## Finance & Regulatory Responsiveness

Definition: Each of the aggregate measures within the Support Services business domain assumes that the activities covered are managed through Service Level Agreements (SLAs) with internal customers. These SLAs are based on the Demand and Supply Management issues of the Support Service provided (which effectively defines a business within a business). What is unique to the aggregate measure for each of the Support Services categories is the nature of the services provided. The services measured by Finance & Regulatory Responsiveness are distinct from the other Support Services categories (see definitions of Human Resources Responsiveness and IT Responsiveness). Services measured by Finance & Regulatory Responsiveness involve transactional activities (non-strategic activities) in the following functions: Finance, Treasury, Travel, Real Estate, Legal, and Regulatory.

Measurement Guidance: Using our definition of Support Services - Finance & Regulatory Responsiveness, the activities measured by this aggregate represent the organization's general ability to deal with administrative requirements cost effectively.

Calculation: Prime1 x Prime2 x Prime3 x ……..Prime(n) In the next section, we will identify candidate Prime measures for each aggregate. It will be from among this pool of Primes that the calculation for each aggregate will be performed. All Primes will be expressed as percentage to perform this calculation.

Financial Implication: Once again this varies by organization and industry. Once an organization has selected the appropriate Prime measures from among the pool available for Support Services - Finance & Regulatory Responsiveness, the business assessment tool can be used to determine the baseline performance and financial impact of changes to this aggregate measure.

Value Impact: The value of Support Services - Finance & Regulatory Responsiveness varies by organization and industry. In general, the more regulated the industry is, the more value Support Services - Finance & Regulatory Responsiveness has. An example would be the pharmaceutical or medical device industry.

Standard Primes (Generic): Compliance Index, Accuracy Index, Advisory Index, Cost of Service Index

**Compliance Index**

Definition: 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: Compliance Index = (Sum of filings and transactions in compliance*) / (Total filings and transactions)

**To comment on these KPIs: email abeers@aicpa.org**

*Note: "In compliance" excludes events that were late, were incorrect or did not happen

**Accuracy Index**

Definition: Accuracy Index shows the ability of the finance and regulatory functions to provide accurate and timely information internally.

Calculation: Accuracy Index = (Sum of internal financial & regulatory documents in compliance*) / (Total internal financial & regulatory documents)
*Note: "In compliance" excludes documents (both reoccurring and ad hoc) that were requested but were late, required corrections or were not delivered.

**Advisory Index**

Definition: Advisory Index measures how much finance and/or regulatory functions are involved with strategic business initiatives, by subjecting projects to two assessment criteria:

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 Risk/reward metrics may also be included to enable finance or regulatory functions and other business departments to evaluate results.

Calculation: Advisory Index = (Sum of financial & regulatory functions in compliance with A and B) / (Total corporate strategic initiatives)

**Cost of Service Index**

Definition: Cost of Service Index measures the overall cost to provide finance and regulatory support and advisory services to the organization.

Calculation: Cost of Service Index = (Total cost* of finance & regulatory support & advisory services) / (Total revenue of organization)
*Note: Total cost = labor and expenses but not real estate

## High Technology Industry Study

The following table contains the key performance indicators for the High Technology Industry. Following the table the standard definitions and calculations are provided for each of the Aggregate and Prime Measures.

| High Technology Specific Standardized Primes | | | | | | |
|---|---|---|---|---|---|---|
| **Business Domain** | **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 Quota Index | Sales Capacity Index |
| | Product Development Effectiveness | R&D Success Index | | | | |
| Supply Management | Customer Responsiveness | Lost Customer Index | | | | |
| | Supplier Effectiveness | | | | | |
| | Operational Efficiency | Backlog Index | | | | |

**To comment on these KPIs: email abeers@aicpa.org**

# Demand Management

## Market Responsiveness

**Net Promoter Score**

Definition: Although considered a measure of customer satisfaction, Net Promoters Score is the result of a number of factors including corporate communication, expectation setting, and delivering on promises. As we define NPS here, it would include both customers and non-customers.

Calculation: 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 (9-10 rating), Passives (7-8 rating), and Detractors (0-6 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

**Customer Interaction Index**

Definition: This 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

Calculation: Documented customer interactions are meetings during which a representative of a client provides needs, pain points, issues, and satisfactions related to the usage of the company's products/services. It may also include substantive client feedback through social networking (blogs, wikis, or other form 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. The sum of these interactions is divided by the existing number of active customers (customers who have purchased a product/service during the previous twelve months).

## Sales Responsiveness

**Contract Value Index**

Definition: The ratio of booked, but unrecognized revenue to total annual revenue for the previous period.

Calculation: Numerator - Total signed contract value less revenue already recognized during the contract period.
Denominator – Total annual revenue for the most recently reported period.

**New Customer Index**

Definition: Number of new customers acquired during the previous twelve months to total customers

Calculation: Number of new customers acquired / Total customers

**Wallet Share Index**

Definition: Increase in revenue to existing customers

Calculation: (Total sales to existing customers in period 2 – Total sales to existing customer in period 1)/ Total sales to existing customers in period 1

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**Effective Quota Index**
Definition: This 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 motivated sales force drives revenue.
Calculation: This index computes the percentage of quotas achieved multiplied by their percentage of completion (> 100%) less the number of missed quotas weighted by their percentage of underperformance (< 100%).

**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 twelve month period.
Calculation: Number of normalized sales reps times the average quota times the average quota achievement

### Product Development Effectiveness

**R&D Success Index**
Definition: The ratio of capitalized product/service development projects currently underway to total annual revenue for the most recently reported period.
Calculation: R&D Success Index= (New products launched in last 12 months) / (Development projects due to complete in 12 months

## Supply Management

### Customer Responsiveness

**Lost Customer Index**
Definition: The ratio of customers who have become inactive in the past 30 to 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 pervious twelve month period.
Calculation: Total customers that dropped off the active customer list during the previous 30 days divided by total active customers. Active customers are those who have generated revenue for the company within the past 12 months

### Operational Efficiency

**Backlog Index**
Definition: The change in the number of sales orders received but not filled
Calculation: Total value of Backlog year 2- Total value of Backlog year 1)/ (Total value of backlog year 1)

# Mining Industry Study

The following table contains the key performance indicators for the Mining Industry. Following the table the standard definitions and calculations are provided for each of the Recommended Measures.

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

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Classification is governed by statutes, regulations and industry best practice norms. There are several classification schemes worldwide, however the Canadian CIM classification (see NI 43-101), the Australasian Joint Ore Reserves Committee Code (JORC Code), and the South African Code for the Reporting of Mineral Resources and Mineral Reserves (SAMREC)[2] are the general standards. Companies using the metrics below that have reserves in the calculation must select the appropriate standard based on the regulatory authority in its location.

| Mining Recommending Measures | | | | |
|---|---|---|---|---|
| Total Cost of Exploration | Customer Interaction Index | | | |
| Contract Value Index | New Customer Index | Wallet Share Index | Effective Quota Index | Sales Capacity Index |

**Total Cost of Exploration**
Definition: The total cost per tonne of ore discovered by the company within the most recent fiscal year.

**Total Cost of Acquisition**
Definition: The total cost per tonne of reserves acquired from other parties within the most recent fiscal year.

*Total Cost of Acquisition and Total Cost of Exploration should be reported separately so that comparisons could be made to see if the company was doing enough exploration.*

**Time-to-Find Index**
Definition: 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 (i.e. JORC).

**Pricing Index**
Definitions: Pricing strategies fall into two broad categories:
1. Floating (spot)
2. Fixed (contracted)

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. The Pricing Index would be used for both reserves and sales contracts.
Calculation: Revenue earned from floating price sales divided by revenue earned from fixed priced sales**.**

**Product Mix Index**
Definition: The weighted average percentage of revenue derived from distinct products.
Calculation: Divide the revenue earned from each distinct commodity product (products with significantly different prices per ton and price volatilities) by total revenue. Square each percentage and sum the squares.

**Life-of-Mine Index**
Definition: The SEC and other regulators require that reserves are reported. These requirements include the following:
1. Volume of material
2. Metallurgical content

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3. Production for the year
4. Life of each mine – (volume of material divided by yearly production)

These reserve tables are reported for each mine owned by the company. Once again we believe that an over-arching measure could be used as a proxy for assessing the reserves for an entire company.

Calculation: Aggregated volume of material in reserve (for all locations) divided by current annual production (for all locations).

**Total Production Cost per Tonne**

Definition: 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 by-product materials.The metric is intended to show the total efficiency of the company (financial and operational) to produce its primary product.

**Mine Productivity Index**

Definition: Sellable tonnes extracted in the most recent twelve months divided by full time equivalents (both number of FTEs and total cost of FTEs). Both employees and contracted labor count equally as FTEs base on actual hours worked.

**Safety Index**

Definition: Lost time to injury measured by hours lost to injury divided by total available hours. Companies can quickly cease to exist following a disaster like Pike River. 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

**Environmental Impact Index**

Definition: Environmental affects is also a significant source of risk for mining companies, but it is very difficult to measure. Various NGO's have developed complicated and very specific criteria for assessing environmental impact, but now over-arching standards exist. What makes this difficult is the diversity of mining methods each having different environmental impact. 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.

Calculation: Remediation Cost as a percent of Revenue