Successful Metrics

Metrics should be defined, gathered and analyzed for each process to gauge the success of process implementation and to provide a basis for Continual Service Improvement. A metric is a standard measure and reported to help manage a process and to assess performance in a particular area. They are a foundation for assessing a process and the basis for any improvement. Metrics need to be consistent and reliable. Metrics can provide a benchmark or baseline for comparison against data from other institutions, best practices or for measuring progress or improvement.

Critical Success Factors (CSFs) represent something that must happen if a something is to succeed. Key Performance Indicators (KPIs) are metrics which are used to measure the achievement of each critical success factor. Many metrics can be measured but only the most important of these should be defined as KPIs to be actively managed and reported. They should be selected to ensure that efficiency, effectiveness and cost effectiveness are all managed. Two to five CSFs per process and two to five KPIs per CSF at any given time is recommended by ITIL (ITIL 2011 edition, Continual Service Improvement, Section 5.5.1)

CSFs and KPIs can help determine the overall health of something. KPIs should help answer four key questions on the quality, performance, value and compliance of following the process. These metrics are used as input in identifying improvement opportunities for each process.

"Leading indicators" are metrics that refer to future events (often in comparison to a present state) while "lagging indicators" refer to past events. "Leading indicators" can help avoid a negative situation before it happens. "Lagging indicators" tell how well you have performed – or how you didn't perform. A successful set of metrics should contain a balance of "leading" and "lagging" indicators.

Metrics can have a variety of themes, for example:

- Component Metrics focus on the performance of individual pieces of the IT infrastructure. Utilization Metrics help evaluate usage and determine if services are operating at optimal capacity levels. (Many component metrics are used solely internally by IT).
- Cost Metrics determine if performance is being achieved at the optimal cost and if services are being delivered efficiently.
- Customer Satisfaction Metrics gauge how customers perceive the performance and functionality of what is being delivered to them or how it is being delivered.
- Performance Metrics help determine if performance is meeting expectations. These may include service disruptions or response time.
- Process Performance Metrics measure what is achieved or delivered by a process. They address what the process is doing; that is, they assess the overall performance in the process areas that are being measured. Performance Metrics are external in nature and are most closely tied to outputs, customer requirements, and business needs for the process.
- Process Diagnostic Metrics measure why a process is not performing up to expectations. They tend to be internally focused and are usually associated with internal process steps and inputs received from process stakeholders. Diagnostic metrics should be considered after Performance Metrics.
- Quality Metrics look at defects and fit for use.
- Service Level Metrics monitor the quality and effectiveness of IT services and determine if customer expectations are being met.

S.M.A.R.T. Metrics

Metrics should be defined to evaluate performance and a mechanism developed for tracking metrics. Metrics should be quantifiable and underlie the concept of success. Metrics should be S.M.A.R.T. ...

<table>
<thead>
<tr>
<th>Specific</th>
<th>Measurable</th>
<th>Achievable</th>
<th>Relevant</th>
<th>Timely</th>
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S - Specific (or Significant) – metrics are specific and targeted to area being measured. For example, What or who is involved? What do I want to accomplish? What are the reasons, purpose or benefits? What are the requirements and constraints? Developing too many metrics
can lead to excessive overhead and inefficiencies.

M - Measurable (or Manageable, Meaningful) – metrics can be collected that are accurate and complete. Is this something we can really measure?

A - Achievable (or Appropriate, Attainable) – desired metrics can be readily measured. Answers this question, “How can this be accomplished?” Metrics should not be developed if one cannot collect accurate or complete data.

R - Relevant (or Realistic, Results-Oriented) – things which are not important are not measured. For example, Is this worthwhile? Does this match our needs? Metrics should be of sufficient complexity to be relevant but simple enough to comprehend.

T - Timely (or Tangible, Tractable) - metrics are those for which data are available when needed. When are these metrics needed?

Metric Elements

Metrics should include certain elements:

- Objective - goal or objective that the metric supports (for example, business process).
- Description - what the metric is about; why the metric is useful.
- Data Source - where the data was obtained (and often by what means); how the metric is calculated; quality of the data.
- Metric Owner - individual responsible for providing the metric.
- Reporting Period - period for which the metric is applicable or relevant
- Reporting Frequency - frequency in which the metric is measured
- Present Value - current or present value of the metric as most recently measured.
- Previous Value - value of the metric from the last measurement period.
- Baseline - normally expected value for a metric (an average for example); may also include lowest and highest possible value for the metric.
- Trend - direction the metric is moving; should indicate if increased or decreased values are better and the progress (improving, getting worse, etc.).
- Thresholds - expected ranges of the metrics; this determines where the metric is with respect to target value or values (determines acceptable values for "green" status) and danger values or values (determines unacceptable values; generally the delineation between "yellow" and "red" status).
### Some Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Balanced Scorecard</td>
<td>BSC</td>
<td>Report often used to keep track of the performance of specific activities with focus on performance objectives and performance targets.</td>
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<tr>
<td>Critical Success Factor</td>
<td>CSF</td>
<td>Factor that represents something must happen to achieve success. For example, effectiveness of Service Desk operations.</td>
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<tr>
<td>Dashboard</td>
<td></td>
<td>A mechanism (generally graphical) to provide at-a-glance views of key performance indicators.</td>
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<tr>
<td>Key Performance Indicator</td>
<td>KPI</td>
<td>Metrics which are used to measure the achievement of each critical success factor. Should be relevant to a specific objective or business process. For example, average incident response time, number of repeated incidents, incidents completed without escalation.</td>
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<tr>
<td>Lagging Indicator</td>
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<td>Metric which refers to past events. For example, number of incidents resolved by the Service Desk within 24 hours.</td>
</tr>
<tr>
<td>Leading Indicator</td>
<td></td>
<td>Metric which refers to future events. For example, number of currently open incidents.</td>
</tr>
<tr>
<td>Metric</td>
<td></td>
<td>A standard, reportable measure and reported to assess performance in a particular area.</td>
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