UNIVERSITAS KOMPUTER INDONESIA

[ITG-Bench] Chap 2

Chapter 8: Metrics, Measure and Benchmarking

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IT Governance Performance

- On one hand, IT must now comply with new rules and legislation and continually demonstrate their compliance through successful independent audits by external organizations.
- On the other hand, IT is increasingly being called upon to do more with less and create additional value while maximizing the use of existing resources. These increasing pressures dovetail perfectly with the basic premise of ITIL: IT is a service business.
- Existing internal IT organizations must transform themselves into effective and efficient IT service providers or they will cease to be relevant to the business and, soon after, cease to exist. This continual and unceasing drive toward greater business value with greater internal efficiency is at the heart of the ITIL Version 3 Continual Service Improvement Lifecycle phase.

Standard and Framework

- PRINCE2 (Project IN Controlled Environment, v2)
- ISO/IEC 2000

- **PRINCE2:** is a structured project management method owned by the OGC. Structured project management means managing the project in a logical, organized way following defined steps.
- A structured project management method is the written description of this logical, organized approach. Individuals can receive certifications verifying their knowledge of each framework.
- Organizations may be assessed against a framework. In many cases the Capability Maturity Model scale is used for these organizational assessments.

- **ISO/IEC 20000: promotes the adoption of an integrated process approach to** effectively deliver managed services to meet business and customer requirements. For an organization to function effectively it has to identify and manage numerous linked activities.
- Coordinated integration and implementation of the service management processes provides the ongoing control, greater efficiency and opportunities for continual improvements. ISO/IEC 20000 is based on the ITIL service management processes.
- **A separate ISO 20000 PowerPoint presentation is available on page 41, within this workbook.**

Capability Maturity Model® Integration (CMMI)

Process Areas

- The CMMI v1.2 contains 22 process areas
- CMMI Causal Analysis and Resolution
- CMMI Configuration Management
- CMMI Measurement and Analysis
- CMMI Organizational Innovation and Deployment
- CMMI Organizational Process Definition
- CMMI Organizational Process Focus
- CMMI Organizational Process Performance
- CMMI Organizational Training
- CMMI Product Integration
- CMMI Project Monitoring and Control
- CMMI Project Planning
- CMMI Process and Product Quality Assurance
- CMMI Quantitative Project Management
- CMMI Requirement Development
- CMMI Requirement Management
- CMMI Risk Management
- CMMI Supplier Agreement Management
- CMMI Technical Solution
- CMMI Validation
- CMMI Verification

Six Sigma

- Pioneered by Motorola in 1986 and originally defined as a metric for measuring defects and improving quality, and a methodology to reduce defect levels below six standard deviation or six sigma
- In 1995 is was implemented by GE and has since become the most widely recognized and accepted quality system in the world

Metrics and Measurement

It is important to remember that there are 3 types of metrics that an organization needs to collect s to support continual service improvement

- Technology Metrics
- Process Metrics
- Service Metrics

Scale of Measurement

- In general, a metric is a scale of measurement defined in terms of a standard, i.e. in terms of a well-defined unit
- The qualification of an event through the process of measurement relies on the existence of an explicit or implicit metric, which is the standard to which measurements are referenced

Business Models

- Metrics used in several business models, including CMMI, are used in Knowledge Management (KM)
- These measurement or metrics can be used to track trends, productivity, resources and much more
- Typically, the metrics tracked are KPIs

How many CSF's and KPI's?

- It is recommended that in the early stages of a project only two or three KPI's for each CSF are defined, monitored and reported on. As the maturity of a service and service management processes increase, additional KPI's can be added
- Based on what is important to the business and IT Management The KPIs may change over a period of time .
- In addition, as service management processes are implemented this will often change the KPIs of other processes

Next Step

- The Next Step is to identify the metrics and measurements required to compute the KPI. There are two basic steps of KPI:
  - Qualitative
  - Quantitative

Qualitative Example:

- CSF = Improving IT Service quality
- KPI = 10% increase in customer satisfaction rating for handling incidents over the next 6 months

Metrics Required

- Original customer satisfaction score for handling incidents
- Ending customer satisfaction score

Measurement

- Incidents handling survey score
- Number of survey score

Quantitative Example:

- CSF = Reducing IT Costs
- KPI = 10% reduction in the costs of handling printer incidents

Metrics required:

- Original cost of handing a printer incident
- Final costs of handling a printer incident
- Costs of the improvement effort

Measurement :

- Time spent on incident by 1st and 2nd level operatives and their average salary
- Time spent on Problem Management activities
- Time spent on training 1st level operation on workaround
- Cost for call to 3rd party vendor etc

KPI's

An important aspect to consider is whether a KPI is fit for use. Key questions could be

- What does the KPI really tell us about goal achievement?
- If we fail to meet the KPI, does it mean we have failing to meet our goals?
- How easy is the KPI to interpret? Does it help us decide on course of action?
- When do we need the information? How often? How will it be made available?
- To what extent is the KPI stable and accurate?
- How easy is it to change the KPI?
- How can we measure the KPI now?

Tension Metrics

The job from any support team is a balancing act of three elements:

- Resources – people and money
- Features – the product or service and its quality
- The schedule

Goals and Metrics

- Each phase of the service lifecycle requires very specific contributions from the key roles identified in Service Design, Service Transition and Service Operation, each of which has very specific goals and how well those sometimes conflicting goals are managed along the way
- Therefore, it is essential that the organization finds away to measure performance – by applying a set of metrics to every goal

Service Quality Metrics

- Organizational or process metrics can be further broken down into product quality metrics and process quality metrics. Product quality metrics are the metrics that support the contribution to delivery of quality product
- Process quality metrics are the quality metrics related to efficient and effective process management

Using Organizational Metric

- To be effective, measurements and metrics should be woven through the complete organization, touching the strategic as well as the tactical level
- To successfully support the key business drivers, the IT Services Manager needs to know what and how well each part of the organization contribution to the final success

Service Measurement

- It is no longer sufficient to measure and report against the performance of an individual component such as server or application. IT must now be able to measure and report against end-to-end service
- There are 3 basic measurements that most IT organization utilize
  - Availability of Service (AoS)
  - Reliability of Service (RoS)
  - Performance of the Service (PoS)

Measuring at Component Level

- Measuring at the component level is necessary and valuable, but service measurement must go further than the component level
- Service measurement will require someone to take the individual measurements and combine them to provide a view of the true customer experience.

Developing a Service Measurement Framework

- A challenge many organizations face is the creation of a Service Measurement Framework that leads to value added reporting
- It can prove difficult at first but the result over time prove that it is worth the effort
- Keep in mind that service measurement is not the end result, in itself. The end result should be to improve services and also improve accountability

Critical Element of Service Measurement Frameworks

For successful Services Measurement Framework the following critical elements are required:

- Integrated into business planning
- Focused on business and IT goals and objectives
- Cost-effective
- Balanced in its approach on what is measured
- Able to withstand change

In addition, Performance Measure that are:

- Accurate and reliable
- Well defined, specific and clear
- Relevant to meet objectives
- Do not create negative behavior
- Lead to improvement opportunites

SMART

- **S**pecific
- **M**easurable
- **A**ctionable/**A**chievable
- **R**elevant to Business Goals& Objectives and **R**esults Oriented
- **T**ime-Bound

Performance Target that are:

SMART

- Defined roles and responsibilities
- Who defines the measures and targets?
- Who monitors and measures?
- Who gathers the data?
- Who processes and analyzes the data?
- Who prepares the reports?
- Who presents the reports?

Benchmarking

Benchmarking is a process used in management, particularly strategic management, in which organizations evaluate various aspects of their processes in relation to best practices, usually within their own sector

This allow organization to develop plans on how to adopt such best practice, usually with the aim of increasing some aspect of performance

Challenge

- Benchmarking may be a one-time event, but is often treated as a continual process in which organizations continually seek to challenge their practices

Benchmarking as a Lever

- Benchmarking is sometimes the only way to persuade organization in to adopting new methods and tools that improve their effectiveness and efficiency. Presenting the facts with the support of proven 'best practice' can combat resistance to change

"We don't need to change, we've always done it this way and its worked fine most of the time

Benchmarking – Steering Instrument

- Benchmarking in a management technique to improve performance
- It provides an ongoing method of measuring and improving products, services and practices against the best that can be found in any industry anywhere.
- It has been defined as 'the search for industry best practices which lead to superior performance'

Benchmarking – Categories

- Benchmarking is a great tool for identifying improvement areas and evaluating improvement implementation activities. Organization can conduct internal or external benchmark studies
- Improving service management can be as simple as ' **are we better today than we were yesterday?**'
- These are incremental improvement

Benchmarking – Value

Benchmarking is the basis for:

- Profiling the quality in the market
- Boosting self confidence and pride in employees as well as motivating and tying employees to an organization.
- Trust from customers that the organization is a good IT Service Management Provider

Benchmarking – Benefits

- Benchmarking reveals quick wins : opportunity for improvement that are easy and cheap to implement, but that will provide substantial benefit e.g. within process effectiveness, reduced costs, staff resourcing
- When benchmarking is used successfully the cost of change will be more than repaid through the improvements implemented

Benchmarking Procedures

Identify problem areas. Because benchmarking can be applied to any business process or function, a range of research technique may be required. They include:

- Informal conversation with customer, employees or suppliers
- Focus groups
- In-depth marketing research
- Quantitative research
- Surveys
- Questionnaires
- Process Mapping
- Financial ratio analysis
- Quality control variance reports

Benchmarking Costs

- Benchmarking is a moderately expensive process, but most organizations find that it more than pays for itself.
- The 3 main types of cost are:
  - Visit cost
  - Time cost
  - Benchmarking database costs

Who's involved?

Within an organization there will be 3 parties involved in benchmarking

1. The customer
2. The user or consumer
3. The internal service provider

There will be also participation from external parties:

- External service providers
- Members of the public
- Benchmarking partners