

IT Service Metrics

Measure What Counts and Manage What Matters

Steve Ingall, Head of Service Management, iCore Ltd

Data is not Information

It is drummed into managers that "If you can't measure it, you can't manage it" which in business is correct; but there are some things where measurement is less tangible and somewhat subjective, e.g. customer satisfaction. Within the IT Service world we need to manage costs, time, and quality, plus risks and customer satisfaction. Through Kaplan and Norton's work many organisations pull all this information into a balanced scorecard to give them an overall perspective of the IT Service delivery.

Why do we need to measure anything? We measure so that our decision making is based upon fact, or upon some analysis of fact to provide us with trends and forecasts. We now seem to measure everything and produce masses of data and reams of reports, but is this information actually helping us to manage anything effectively? A study by CIO Magazine identified that CIOs spend between 7 and 20 hours per week gathering data to help them make decisions, but even then the data is often anecdotal and perhaps not from what might be described as "trusted sources". This is not effective use of the CIO's time. In addition we need to improve the frequency and timeliness of information, so that the information is available when it is needed, i.e. when it can be acted upon.

Having a set of effective metrics can also help with the benchmarking of performance, either internally within the organisations business units, or externally against competitors / peers. Many organisations set themselves 'missions' that they will be "World Class" or "Best in Class" but have nothing against which to measure this. Within the IT Service arena there have been

| Category | Percentage |
|---------------|------------|
| World Class | 2% |
| Best in Class | 13% |
| Industry Norm | 55% |
| Laggard | 30% |

Survey: Center for Information Management

studies done with regard to service management "maturity" which indicate that fewer than 15% of organisations are actually world class or best in class, where this meant that processes, organisation and technology management practices are in general at Level 4 or 5. The majority of organisations conform to the norm, whilst 30% are lagging behind (Level 2 or below).

Seven Metrics of Highly Effective IT Organisations

How much information can we actually manage and how much do we need to make effective business decisions? Social studies tell us that we can only handle seven pieces of information at any one time, and many management gurus imply that by focusing on six or seven aspects of management we can be highly effective (see Steven Covey's "7 Habits of Highly Effective People"). So it would make sense for us to try to focus on fewer metrics expressed at the right management level, to make sure these metrics focus on the important aspects of the IT Service, and that the information is available to us in a timely manner. If we assume that there are three management levels we need to address (i.e. Executive, Managerial, Operational) then we can start to develop the metric hierarchy that would enable us to effectively manage the IT Service.

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NOTE: The three levels are still relevant although an organisation may have outsourced aspects of their service delivery.

The following is not exclusive but it does reflect the metrics that research tells me have proven to be effective:



What would a "highly effective" IT organisation look like?

Taking a sample of the metrics proposed above and using industry studies from Aberdeen Group, Butler Group and ISACA, we can start to lay down some benchmarks for high, medium and low performers.

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Mean Time to Restore Service following a low priority / low impact incident tends to be the same in low, medium and high performing IT organisations, namely about 15 minutes. However, for medium priority / impact incidents the low performing IT organisations take around 300 minutes against 60 minutes for the high performers; and for major incidents this is 600 minutes against 120 minutes. This means that IT service delivery managers who are working to SLAs that have a 2 hour fix for major incidents need to have an effective support operation otherwise they will have several breaches of SLA, which in turn could lead to large Service Credit claims from the clients.

First Time Fix Rate looks at the number of incidents that are resolved on first attempt by the support service (not necessarily by the ServiceDesk). In a high performing operation this will be over 90% and even in a medium operation over 80% of incidents are resolved by support staff at the first attempt. This can mean that the root cause of an outage is quickly traced and remedied, through checking change logs and knowledge bases to identify known fixes or workarounds. This in turn means that a structured approach is taken to diagnosis and we avoid the situation where IT support simply reboot servers until the incident goes away!!

The System Administrator to Server ratio has been a major challenge for numerous years, with organisations like Microsoft constantly being asked "How many system administrators do I need to manage my environment?" and the answer always coming back "It depends". It now appears that high performing organisations are reporting 150:1 ratio for Microsoft platforms and 50:1 for Unix platforms, whilst the low performers are running at 25:1 and 10:1.

This all requires technology standardisation, structured approaches to incident management, rigorous change management, and motivated support staff, which some may suspect would stifle an organisation. However, it would appear that high performing organisations that employ these disciplines are more agile, have fewer outages, have high customer satisfaction, and can handle more change (some reporting up to 50 times more than before they improved service management). Other simply save money by not have their service providers creating and delivering spurious reports measuring the wrong thing, e.g. a large Metropolitan police force saved over £400k in service costs by seriously reducing the number of KPIs that they insisted where reported on, and they had no reported drop in service quality!

Which is it better to have:

1. An IT service that the customer perceives as reliable, effective and value adding?
- or
2. A service that the customer views with scepticism and sees as a cost they should reduce?

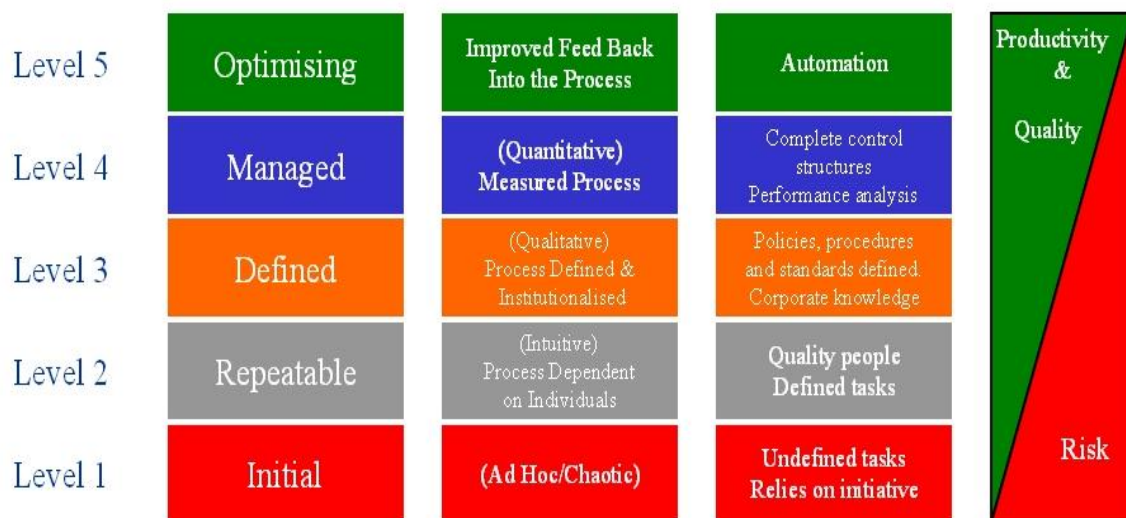
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What's the one thing we can do to start on the journey?

Evidence tells us that the maturity and effectiveness of an IT organisations Change Management is directly correlated to the maturity and effectiveness of the overall IT Management, thus if we want to improve the latter we should improve the former.



What does good look like? If we use any maturity model (CMMI or COBIT) then the characteristics of a change management system that would be classed as "Defined" are:

- The change management process is well developed and consistently followed for all changes, and management is confident that there are minimal exceptions;
- All changes are subject to thorough planning and impact assessment to minimise the likelihood of post-production problems;
- An approval process for changes is in place. Change management documentation is current and correct, with changes formally tracked;
- Configuration documentation is generally accurate;
- ICT change management planning and implementation are becoming more integrated with changes in the business processes, to ensure that training, organisational changes and business continuity issues are addressed;
- There is a consistent process for monitoring the quality and performance of the change management process.

A basic level of change management would be indicated by the reactive nature of change on the IT platform, with no formal processes, simple and uncoordinated change control / scheduling, inconsistent categorisation, and considerable unplanned events associated with change. Importantly, this would also have a considerable amount of unauthorised change taking place and would have a high volume of incidents arising from change. In such an organisation it would be common to find that 80% of incidents come from poor changes, and 80% of the time

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taken to fix an incident is in finding out what changed. In order to improve these situations consider the following:

- Making an unauthorised change is not allowed and is considered a disciplinary offence that will be enforced
- Identify what are standard / pre-authorised changes and establish the workflow for these
- Monitor services for all changes and baseline services to provide checkpoints
- Define Category A services
- All changes must have the authority from the service owner
- All Emergency changes must be tracked to an incident
- Establish change windows, communicate them (preferably in SLAs) and build in some contingency
- Build and publish a key events calendar
- Test all changes pre-production
- Measure change success rates

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