



# **LIES, DAMNED LIES and KPIs**

## **A White Paper on Key Performance Indicators**

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## “Lies, Damned Lies and KPIs”

Okay, I admit it; it’s a play on the immortal musings attributed to Benjamin Disraeli, who is believed to have stated “that there are three kinds of lies, - lies, damned lies and statistics”. Well this paper aims to elaborate on the use of measurements within Service Management and how they can be used to both monitor and manage the performance of people and processes.

Firstly, what is the point of measuring the performance of something? If you don’t know how well something is performing, then how do you know if it’s meeting the intended objectives? If you don’t measure it, how can you plan improvement activities and then monitor their effectiveness?

So what is the difference between a measure and a Key Performance Indicator (KPI)? A measure is a unit of workload or performance, whereas a KPI provides an indication of whether defined and agreed service levels [or outcomes] will be achieved, and how efficiently.

### SERVICE DESK KPIs

There are many aspects of the Service Desk that can be measured, so let’s look at just a few examples:

1	<b>Total number of telephone calls answered</b>
2	<b>Total number of telephone calls abandoned without being answered</b>
3	<b>Average length of time taken to answer the telephone</b>
4	<b>Total number of incidents recorded</b>
5	<b>Total number of service requests recorded</b>
6	<b>Number of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>
7	<b>Average time to achieve incident resolution (without referral to 2<sup>nd</sup>-line support) for each Priority code</b>

Some of the above are not direct performance measures but purely measures of the workload experienced by the Service Desk (e.g. total number of telephone calls answered). Nevertheless, it is important to track these workloads as it can provide a perspective for potentially deficient performance scores when compared to any agreed service levels and targets, and can also provide data to assist investigations as to why volume levels fluctuate.

But whilst these are simply a list of seven measures, when looking at the performance of the Service Desk as an effective and efficient function we can select certain measures to be used as the basis for KPIs, and we can show these in comparison to any agreed service levels that have been captured in documents such as Service Level Agreements and Operational Level Agreements.

For example, a Service Level Agreement may state the following:

- The Service Desk will be available 24x7x365 including Bank Holidays
- Calls will be answered within 60 seconds
- Priority 1 incidents will aim to be resolved within 2 hours, Priority 2 incidents within 4 hours and Priority 3 incidents within 8 hours

We can start to develop some of our earlier measures into key aspects that we want to measure performance for, such as:

1a	<b>Percentage of telephone calls answered within 60 seconds</b>
3	<b>Average length of time taken to answer the telephone</b>
6a	<b>Percentage of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>
7a	<b>Percentage of Priority 2 incidents resolved (without referral to 2<sup>nd</sup>-line support) within 4 hours</b>

Developing a report containing all of this information enables us to start reporting on the overall performance of the Service Desk function as well as the effectiveness of the Incident Management process. All of this data can be represented in a simple report containing information that can be analysed about the Service Desk, and which provides a composite view of performance:

Measures and KPIs	Oct	Nov	Dec
1. Total number of telephone calls answered	1000	1100	1200
<b>1a. % of telephone calls answered within 60 seconds</b>	<b>90%</b>	<b>93%</b>	<b>92%</b>
2. Total number of telephone calls abandoned without being answered	47	69	65
<b>2a. % of telephone calls that were abandoned</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>
3. Average length of time taken to answer the telephone	40 secs	45 secs	35 secs
4. Total number of incidents recorded	500	525	510
5. Total number of service requests recorded	190	205	210
6. Number of incidents resolved by the Service Desk without referral to 2 <sup>nd</sup> -line support	365	430	413
<b>6a. % of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>	<b>73%</b>	<b>82%</b>	<b>81%</b>
7. The average time to achieve resolution by the Service Desk (without referral to 2 <sup>nd</sup> -line support) of Priority 2 incidents	2:09:23 hours	3:29:53 hours	3:10:10 hours
<b>7a. % of Priority 2 incidents resolved (without referral to 2<sup>nd</sup>-line support) within 4 hours</b>	<b>95%</b>	<b>97%</b>	<b>96%</b>

## Performance Management

Having a set of KPIs enables performance to be effectively monitored and managed. This equally applies to the management of both internal and external parties. More and more activities are being outsourced to third parties, and typically the Service Desk operation is one that is commonly chosen to be transferred to a third party supplier.

When a function such as the Service Desk is outsourced, it is crucial that any contracts signed with a third party underpin the SLAs that have been agreed with the customer or end-user. Therefore, it is also extremely important that measures are captured and KPIs put in place in order to monitor and manage the service being delivered by the new provider.

The KPIs that we have already looked at for the Service Desk are equally applicable to both internal and external providers, but quite often an outsourced function sees the introduction of targets alongside the KPIs (together with associated incentives and penalties) in order to ensure that the supplier focuses on the quality of service being delivered.

Introducing targets can assist in ensuring certain expected levels of delivery are maintained or indeed can provide focus to deficient areas of the operation, but it is dangerous to focus solely on the target of a single KPI, as this can be to the detriment of everything else – including the service being delivered to the customer. Therefore it is best to have a number of targets in place, but not too many – preferably between five and eight. If appropriate when setting targets, obtain the involvement of the supplier. This will foster buy-in from the supplier and ensure that both parties are driving towards the same goals.

Let's take a look at a mythical Service Desk that has been outsourced but where the 2<sup>nd</sup>-line support operation remains in-house. In this scenario, the Service Desk may have incentives or penalties aligned to their resolution rates – i.e. the percentage of incidents resolved at 1<sup>st</sup>-line without referring to 2<sup>nd</sup>-line support, otherwise known as the "First Time Fix" (FTF) rate.

But having a single focus on the FTF target can lead to the Service Desk hanging on to an incident for too long, possibly to the detriment of the end-user. So how can we prevent this? One way is to specify a target time window by which if the Service Desk hasn't resolved the incident (and clearly won't be able to) then they need to assign it to a 2<sup>nd</sup>-line support team. This can then be shown as the following KPI:

<b>Percentage of incident records re-assigned to 2<sup>nd</sup>-line support within agreed target time</b>
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So, let's suggest we give this Service Desk a target of 20 minutes within which to resolve the incident. This gives the Service Desk a period of time in which they can investigate and diagnose incidents and resolve them without incurring any penalties.

By taking a percentage score this enables the Service Desk to continue working on an incident beyond the 20 minute target time (if they believe they will resolve the incident when their work has been completed), without it having an adverse effect on the KPI. Also, by being realistic when setting targets, this encourages the Service Desk to take sufficient diagnostics to see whether or not they can actually resolve the incident themselves, rather than passing it immediately on to a 2<sup>nd</sup>-line support team – otherwise known as 'chucking it over the fence'!

If an average time is measured and reported on, care needs to be taken as it only needs a limited number of incidents going excessively beyond the 20 minute timeframe to skew the results. This situation can occur, for example, if a Service Desk analyst forgets to set the status of the incident record to 'resolved'. So it is also wise to review any incident records that have greatly exceeded the target time, investigate the reasons why and then take the appropriate actions.

Other useful indicators that can be considered when measuring the performance include:

<b>Percentage of incident records that get re-opened</b>
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This looks at the volume of records that are first resolved by the Service Desk (without referral to 2<sup>nd</sup>-line support) and then are subsequently re-opened.

This can be used to investigate whether or not the resolution activities are being performed successfully, and can also help to identify where records are being closed in order to meet the 20 minute target time before a resolution has been executed, or before it is known whether or not that execution has been successful.

<b>Percentage of incident records where deficiencies occurred</b>
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This looks at the volume of incident records where the Service Desk have failed on one of their activities, and can be used to look at a number of key areas, such as:

- An incident has been passed to the incorrect 2nd-line support team;
- An incident has been passed to the correct 2nd-line support team but contains insufficient diagnostic information; and
- An incident has been passed to the correct 2nd-line support team but investigation by them has shown that it is something that the Service Desk had the knowledge, skills and/or tools with which to perform the resolution activities required.

When setting targets for KPIs, remember that it is likely that different targets will be necessary for the different priorities of an incident that you have configured within your organisation. You should also consider what effect may occur if an incident record is counted in two or more different measures, as this may affect the overall balance of reporting and in particular the effect it may have on any incentive and penalty schemes.

For example: an incident fails to be re-assigned within the agreed target time, but when it does it gets re-assigned to the incorrect team; should a penalty occur once or twice? Ensure that when formulating a set of KPIs to help manage contractual performance, that they are balanced and are not unfairly weighted in one direction.

Now that we have introduced targets and some additional KPIs, our simple report now takes on a slightly different perspective that enables us to focus on any areas that are deficient:

Measures and KPIs	Target	Oct	Nov	Dec
1. Total number of telephone calls answered		1000	1100	1200
<b>1a. % of telephone calls answered within 60 seconds</b>	<b>95%</b>	<b>90%</b>	<b>93%</b>	<b>92%</b>
2. Total number of telephone calls abandoned without being answered		47	69	65
<b>2a. % of telephone calls that were abandoned</b>	<b>Max. 5%</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>
3. Average length of time taken to answer the telephone		40 secs	45 secs	35 secs
4. Total number of incidents recorded		500	525	510
5. Total number of service requests recorded		190	205	210
6. Number of incidents resolved by the Service Desk without referral to 2 <sup>nd</sup> -line support		365	430	413
<b>6a. % of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>	<b>80%</b>	<b>73%</b>	<b>82%</b>	<b>81%</b>

7. The average time to achieve incident resolution by the Service Desk (without referral to 2 <sup>nd</sup> -line support) of Priority 2 incidents		2:09:23 hours	3:29:53 hours	3:10:10 hours
<b>7a. % of Priority 2 incidents resolved (without referral to 2<sup>nd</sup>-line support) within 4 hours</b>	<b>95%</b>	<b>95%</b>	<b>97%</b>	<b>96%</b>
<b>8. % of incident records re-assigned to 2<sup>nd</sup>-line support within 20 minutes</b>	<b>90%</b>	<b>87%</b>	<b>84%</b>	<b>81%</b>
<b>9. % of incident records re-opened</b>	<b>Max. 5%</b>	<b>2%</b>	<b>3%</b>	<b>2%</b>
<b>10. % of incident records with deficiencies</b>	<b>Max. 5%</b>	<b>4%</b>	<b>6%</b>	<b>5%</b>

Let's take a look at another example, this time with Change Management. An organisation states in an OLA that all new RFCs will be reviewed and either rejected, queried or accepted within one working day. This could be reported as a KPI by showing the percentage of new RFCs that are reviewed within one working day. If there were deemed to be issues in satisfactorily meeting the agreed service level of one working day, then a target percentage could be introduced in order to focus effort to try and improve performance, but as previously stated – if doing this then it is wise to have more than one target being monitored.

## British Airports Authority

I have used the Service Desk, Incident Management and Change Management to show simple examples of measures and KPIs that can be used, and obviously these can be similarly applied to all other Service Management processes; but let's take an example outside of the immediate world of I.T. and look at an example from British Airports Authority (BAA).

Many people reading this will have experienced delays of one sort or another at London's ever expanding and increasingly busier Heathrow Airport. Getting through a myriad of security checkpoints may be a necessity, albeit a tortuous one, for these tormented times that we live in, but BAA's new Spanish owners are aiming to reduce the queuing times for passengers.

Ferrovial have committed to cutting peak-time security queues to five minutes or less, for 95% of the time. The Civil Aviation Authority, who regulate BAA and hence determine the charges that BAA can pass onto the airlines (and in turn the pricing of tickets), believe that this is going to be so instrumental in driving improvement that they are proposing to introduce financial penalties for sub-standard passenger service into the next charging formula.<sup>1</sup>

So in order to monitor and measure this, Ferrovial will have to put in place a system to track the average time it takes to go from the back of the queue to the front of the queue when going through security checks. One can wonder how they would track this 'throughput' but no doubt they have some cameras connected to a computer somewhere, tracking human bodies as they crawl their way through the queues.

I also imagine that they will be tracking other aspects as well, such as:

- The total number of passengers going through security on an hourly basis
- The average number of passengers going through security on an hourly basis
- The average time taken for a passenger to get from point A to point B

<sup>1</sup> Aircraft Illustrated, July 2007

## Tools

The capability of the Service Management tools in use may dictate to a certain extent the capability to extract the right data, and then to turn that data into meaningful information that can then be reported on and hence management decisions made. Some toolsets may be able to produce the right reports, others will provide data that can be fed into applications such as Crystal Reports and Business Objects that allow you to manipulate the data and output the relevant reports for management review.

So a warning here: don't rush out and buy the 'next big thing' in toolsets to support your reporting of measures and KPIs. First review your reporting requirements and then your existing capabilities to produce those reports - then make an informed decision. Where internal performance is being measured, don't be afraid to obtain outside specialist experience to make sure you get the maximum out of your existing reporting capabilities; where a supplier is delivering the service and is therefore responsible for delivering the reports, make sure the right KPIs and the appropriate reporting requirements are stated in the contract.

## Summary

So, KPIs can be utilised to help change the culture within a function such as the Service Desk as well as drive improvements when performance is measured and monitored on a regular basis – particularly where targets coupled with incentives and penalties are included in third party contracts, and hence form part of charging policies.

A key aspect of setting up KPIs is to give yourself sufficient time with which to perform baselining as this enables a level of confidence to be gained at the outset for any targets that are being set. But keep those targets under regular review, especially in the early days of a new contract, to ensure that they are realistic, and don't be afraid to re-negotiate those targets if it is necessary.

Also, don't fall into the trap of spending too much time and effort in producing the reports. It can become very easy to be overwhelmed by large quantities of reports containing endless amounts of information, that then require analysis to be performed ad infinitum before any informed decisions can be made. In situations such as these, it is very easy to lose focus and for any potential benefits to be lost by spending more on resources for reporting on the KPIs than is absolutely necessary, and therefore squandering any likely return on investment that may be achieved.

Finally, be wary when putting in "Percentage increase....." or "Percentage decrease...." in front of a KPI. Whilst this is all well and good to drive improvement, eventually there will come a time when the law of diminishing returns kicks in, whereby the cost of making further improvements far outweighs any benefit likely to be realised. But it doesn't mean that Continual Service Improvement ceases; you just look for other areas to improve upon.



## About Fox IT

Fox IT is a global IT Service Management and Governance company, providing organisations with consultancy, education and technology that help them to align their IT operations with their business strategy to ensure good IT Governance and effective IT Service Delivery.

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## About the Author

Mark Sykes is a highly experienced Service Management professional with over 20 years of experience, performing roles covering service, technical, project and line management duties. His experience includes undertaking a number of key roles covering Incident, Problem, Change and Capacity Management for one of the UK's largest retail organisations, as well as implementing Change and Release Management in large companies both in the UK and US.

Whilst at Fox IT, Mark has fulfilled numerous other roles within the realms of Service Transition, Service Operation and Continual Service Improvement; including Problem Manager for a large leisure entertainment organisation and Service Manager for a large pharmaceutical company. As a Service Management consultant, Mark has also undertaken a number of other key assignments with leading organisations in the public and private sector, both in the UK and abroad. In September 2004 Mark delivered a presentation at the itSMF Conference in Los Angeles.

Mark is an accredited ITIL Trainer and has qualifications in ITIL, ISO20000 and COBIT. His depth of knowledge has seen him involved in a number of important assignments which have required process re-engineering, and as a result is Fox IT's primary consultant in developing the foxPRISM process knowledge base.

For his most recent assignment Mark spent 14 months working with a global investment bank as they adopted a managed service approach and outsourced their Service Desk. Mark was involved in the service transition project setting up measures and KPIs together with the associated reporting mechanisms.