

# **LIES, DAMNED LIES and KPIs**

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

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## “Lies, Damned Lies and KPIs”

Benjamin Disraeli is attributed with saying that “there are three kinds of lies - lies, damned lies and statistics”. In business, as in politics, it’s certainly true that if the wrong measurements, statistics and KPIs are collected, analysed incorrectly or taken out of context, the resulting overall picture can be false and lead to the wrong decisions being made. However, when these metrics are created and analysed in the right way they can give an excellent insight into the current state, enabling you to improve the performance of people, processes and tools and bring IT Services into alignment with the needs of the business as a whole.

So, what is the point of measuring performance in IT Services? Well, in order to assess why a particular outcome has occurred and targets have been reached, exceeded or not met, you need to look at the areas of performance and ascertain where the highs and lows are. Then you can create an improvement strategy and, in turn, monitor its effectiveness and impact on the wider business.

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:

<b>1</b>	<b>Total number of telephone calls answered</b>
<b>2</b>	<b>Total number of telephone calls abandoned without being answered</b>
<b>3</b>	<b>Average length of time taken to answer the telephone</b>
<b>4</b>	<b>Total number of incidents recorded</b>
<b>5</b>	<b>Total number of service requests recorded</b>
<b>6</b>	<b>Number of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>
<b>7</b>	<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. We can then 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:

<b>1a</b>	<b>Percentage of telephone calls answered within 60 seconds</b>
<b>3</b>	<b>Average length of time taken to answer the telephone</b>
<b>6a</b>	<b>Percentage of incidents resolved by the Service Desk without referral to 2<sup>nd</sup>-line support</b>
<b>7a</b>	<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 analyse and evaluate the overall performance of the Service Desk function as well as the effectiveness of the Incident Management process.

<b>Measures and KPIs</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
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>
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## Performance Management

Creating a set of relevant, business driven KPIs enables us to monitor and manage the performance of employees and, as third party sourcing becomes the norm, also that of third party contractors. When a function such as the Service Desk is outsourced, it is crucial that any contracts underpin the SLAs that have been agreed with the customer or end-user. Similarly, it is also extremely important that KPIs are put in place and metrics are captured in order to monitor and manage the service being delivered by suppliers.

The KPIs that we have already looked at for the Service Desk are equally applicable to both internal and external providers. Often an outsourced function sees the introduction of additional targets and associated incentives and penalties set out alongside the KPIs 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. It is inadvisable 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. The ideal number of targets is generally around 5-8 as this is sufficient to reflect the overall goals and service levels while remaining manageable from the point of view of the employees and contractors and the management team analysing them. Where third party suppliers are involved it is a good idea to get them involved in the target setting in order to foster buy-in and ensure that both parties are working towards the same goals.

Let’s take a look at an example in which the Service Desk 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 Line Fix’ (FLF) rate.

But having a single focus on the FLF 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. If the Service Desk hasn’t resolved the incident within the time allotted and at that juncture doesn’t feel that they will be able to solve it at all, 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 them a set period of time in which they can investigate and diagnose incidents and resolve them or decide that the incident needs to be elevated, without incurring any penalties.

Taking a percentage score 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:

**Percentage of incident records that get re-opened**

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 subsequently re-opened.

This can be used to investigate whether or not the resolution activities are being performed successfully. It can also, identify where records are being closed 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.

**Percentage of incident records where deficiencies occurred**

This identifies the volume of incident records where the Service Desk has failed in one of their activities and can be used to analyse several key areas, such as when:

- 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: If an incident fails to be re-assigned within the agreed target time, but when it does get re-assigned it is sent to the incorrect team; should there be one penalty or two? This demonstrates the importance of ensuring that, when formulating a set of KPIs to help manage contractual performance, 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 operation level agreement (OLA) that all new requests for change (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 again, if doing this then it is wise to monitor more than one target.

## Heathrow Airport Holdings

In this instance we look at the Service Desk, Incident Management and Change Management to show simple examples of measures and KPIs that can be used. 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 Heathrow Airport Holdings Limited (HAH), formerly BAA plc.

Many people reading this will have experienced delays of one sort or another at London's ever expanding and increasingly busy Heathrow Airport. Getting through a myriad of security checkpoints is a necessity, albeit a tortuous one, but HAH's new owners are aiming to make it easier for passengers by reducing the queuing times.

HAH has committed to cutting peak-time security queues to five minutes or less, for 95% of the time. The Civil Aviation Authority (CAA) regulate Heathrow Airport, determining such factors as the charges that can be passed onto the airlines, which affects ticket prices and performance related incentives and penalties. The CAA believe that this commitment 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, HAH 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 at the security checkpoints. One may wonder how they would track this 'throughput' but no doubt they have some cameras connected to a computer somewhere, tracking human bodies as they navigate through the queues.

I also imagine it is likely 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

## **The capabilities of the Service Management tools in use will, to a certain extent, impact on the integrity of the data**

### **Tools**

The capabilities of the Service Management tools in use will, to a certain extent, impact on the integrity, relevance and value of the data collected, the analysis and reporting and the final management decisions. 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**

KPIs are a valuable means of monitoring and measuring performance on a regular basis and they can be utilised to help change and improve the culture within a function such as the Service Desk. When these targets are coupled with incentives and penalties, and included in third party contracts, they are extremely useful in shaping the charging policies.

A key aspect of setting up KPIs is to give you sufficient time within which to perform baselining, as this enables a level of confidence at the outset for any targets that are to be established. It's essential to keep those targets under regular review, especially in the early days of a new contract, to ensure that they are realistic and to not be afraid to re-negotiate them, if necessary.

Don't fall into the trap of spending too much time and effort in producing the reports. It is easy to become 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 easy to lose focus and negatively impact potential benefits by wasting resources on reporting and reducing the return on your investment.

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. This doesn't mean that continual service improvement ceases; you just need to look for other areas to improve upon.