

## LA-UR-15-26291

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Title: AskIT Service Desk Support Value Model

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Intended for: To share with other Labs. May be released at a later time for publishing in Information Technology Service Management related journals.

Issued: 2015-08-07

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# AskIT Service Desk Support Value Model

Prepared by: ADBI / Service Innovation / Service Management

08/05/2015

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## Introduction

The objectives of an effective Service Desk value model are:

- Ensure that value model computes the funding to adequately staff the SD.
- Compute funding by service according to demand for support.
- Because support costs are based on the use of the SD, the model must encourage services to operate reliably to contain costs.
- Provide a basis for assessing resource allocation.

The value model discussed herein provides an accurate and simple calculation of the funding required to adequately staff the AskIT Service Desk (SD). The model is incremental – only technical labor cost is considered. All other costs, such as management, equipment, buildings, HVAC, and training are considered common elements of providing any labor related IT Service.

Depending on the amount of productivity loss and the number of hours the defect was unresolved, the value of resolving work from the SD is unquestionably an economic winner; the average cost of \$16 per SD resolution can commonly translate to cost avoidance exceeding well over \$100.

Attempting to extract too much from the SD will likely create a significant downside. The analysis used to develop the value model indicates that the utilization of the SD is very high (approximately 90%). As a benchmark, consider a comment from a manager at Vitalyst (a commercial IT service desk) that their utilization target is approximately 60%. While high SD utilization is impressive, over the long term it is likely to cause unwanted consequences to staff such as higher turnover, illness, or burnout. A better solution is to staff the SD so that analysts have time to improve skills through training, develop knowledge, improve processes, collaborate with peers, and improve customer relationship skills.

## Service Desk Value

**The value model allows the SD to receive full “credit” for all work performed without penalizing those services seeking SD support with a “one size fits all” solution.**

SD support for IT services is in high demand because the support model relieves service providers (e.g., DCS – customer storage, NIE – mobility, and SAE – applications) from resolving all but the most complex of their service defects; this allows service experts to focus on improving service quality. Because the need for information or IT defects affect customer productivity and because SD resolution yields the quickest recovery, first level resolution should be the preferred method of support service. When work is escalated to other support levels

then resolution is delayed because the work must be re-queued and because an appointment with the customer is likely necessary.

Table 1 below shows the cost avoidance of resolving work without escalation to on-site support (a Labwide average hourly labor rate of \$72 is assumed). Customer Productivity Loss represents productive time lost due to an unresolved IT defect or request; 5, 10, 20, or 50% productivity loss are shown in the table. “Defect Unresolved” represents the delay in coordinating and initiating delivery of on-site support. A defect that results in reducing customer productivity by 20% and remains in the work queue for 2 days translates to cost avoidance of \$ 231 if resolved on first call to the SD (see the light blue box in Table 1).

<b>Customer Productivity Loss → Defect Unresolved (hours) ↓</b>	<b>5%</b>	<b>10%</b>	<b>20%</b>	<b>50%</b>
4	\$14	\$29	\$58	\$202
8	\$29	\$58	\$115	\$418
16	\$58	\$115	\$231	\$837
24	\$87	\$173	\$346	\$1,255
32	\$115	\$231	\$462	\$1,659
40	\$144	\$289	\$577	\$2,077

*Table 1- Avoid Costs by Resolving Work without Escalation*

The SD may become a victim of its success if new services are allowed to receive SD support without a commensurate increase in funding for additional staff, equipment, knowledge, and training or if these existing services operate in a manner that significantly increases calls to the SD.

The SD performs numerous tasks, not all of which result in resolving the defect. In attempting resolution, significant amounts of triage, analysis, discovery, and trials are executed; although the resolution may not be concluded, the level of work is equivalent to actual resolutions. Those who receive this escalated work can normally solve the work in less time by virtue of the work performed previously by the SD.

First Level Resolution is a popular SD performance measure, but this measure ignores work the SD may perform prior to escalation; this work has significant value because it creates documentation that is immediately useful to the next support level and may prove useful for future analyses, for generating knowledge, or for problem management.

In no way does this model attempt to allow the SD to assume credit for the work of others. At this time, reporting from the Incident Management system (Remedy) is not sufficiently granular to account for significant work performed by more than a single support provider.

For the reasons stated above, the value model categorizes SD work as:

- **Intakes** (essentially information entry only, culminating in escalation to another support provider) or
- **Resolutions** for any work that exceeds intake.

The value model, as presented below, allows the SD to take credit for all work performed and also provides a method for pricing the service for customers who use the SD in different ways; for example, some services will require more intake work while others will expect a greater percentage of resolutions. Either way, the SD adds value.

## Value Model Common Denominator: Leveled Resolutions

Four different service tasks may be performed by SD Analysts:

1. Intake: Analysts input the required fields in the incident management system.
2. Triage, Analysis, Discovery, Trial Resolution: Through a conversation with the customer or remote control of the computing system, Analysts document the symptoms presented by the defect and abstracts of resolution attempts.
3. Resolution: Using knowledge and experience, analysts resolve the defect to the maximum extent possible.
4. Escalation: The analyst escalates the work ticket to a different support level for resolution completion.

Some customer service work (Level 1) is limited to performing intake and immediately escalating this work to Level 2. Examples include:

- All work requiring on-site presence such as hardware installation.
- Most work on classified networks.

These tasks will be referred to as “**Intakes.**”

A reasonable assumption is that for the purpose of developing the value model, these task combinations are equivalent:

- Intake + Triage, Analysis, Discovery, Trial Resolution(s) + Escalation
- Intake + Triage, Analysis, Discovery + Resolution

These task combinations will be referred to as “**Resolutions.**”

To develop a value model, it is necessary to develop a “leveled” value upon which to base the calculation. The SD derives most of its value to the business by resolving work, so it makes sense to level the value model on resolutions. But the SD also performs Intakes, so this work, while not as important as resolutions, must be accounted for because it consumes SD labor and provides value to the next service level. Intakes must be leveled to a resolution equivalent in order to establish a common denominator for establishing cost.

**Based on present operating experience, 3 Intakes are equivalent to 1 Resolution.** In the future, *request automation* may reduce intakes to be performed by the SD. The value model must (and can) adapt to changing business conditions.

In computing cost per resolution only a single value must be derived: “Intake Rate” – the percentage of work tickets that lack triage and problem solving attempts; this could be accomplished by reviewing a statistically significant sample of “intake only” work tickets.

## Value Model Calculation

- **Average Work Tickets** = average number of work tickets processed per analyst per time period.  
Based on current operating experience.
- **Intake Rate** derived from analysis of actual “intake only” work tickets.
- **Intake to Resolution Factor** = 3  
i.e., 3 intake work tickets are equivalent to 1 resolved work ticket.
- **Average Cost per Analyst** = \$X per time period
- **Leveled Resolutions** =  
 $(\text{Average Work Tickets} * [1 - \text{Intake Rate}]) +$   
 $(\text{Average Work Tickets} * \text{Intake Rate} / \text{Intake to Resolution Factor})$
- **Average Cost per Leveled Resolution** = Average Costs per Analyst / Leveled Resolutions

For example:

Average Cost per Analyst = \$7,000 per month

Average Work Tickets = 500 per month per SD analyst

Intake to Resolution Factor = 3

Intake Rate = 20%

Leveled Resolutions =  $(500 * [1 - 20\%]) + (500 * 20\%/3) = 433$  resolutions per month per SD analyst

**Average Cost per Leveled Resolution = \$16 per resolution**  
(\$7,000/433 resolutions)

## Value Model: Operational Example

In the past, the NIE Telecommunications Service Radioshop received direct calls from customers for support. Calls to the direct call telephone number were significantly reduced by directing customers to the SD, but without additional funding to support the increased demand at the SD; the Radioshop still receives support requests through a published email address and by limited calls to the direct call number.

Table 2 below shows work tickets resolved by the SD and work tickets escalated for January through May, 2015. A small portion of the work ticket count in Table 2 involved Radioshop labor, but because of the aforementioned lack of reporting granularity, the SD was assigned the resolution. The work performed is rightfully dual credit for resolution (SD and Radioshop). This use is consistent with the value model as defined.

	Resolved	Escalated
January 2015	217	22
February 2015	238	19
March 2015	244	19
April 2015	256	19
May 2015	201	18
Total	1,174	97

*Table 2 – Radioshop Resolved and Escalated Work Tickets*

**0.55 FTE per month is needed to process the additional work tickets received.**

**\$ 3,856 per month is needed to process the additional work tickets received.**

The computation to derive monthly cost and equivalent labor to process these additional work tickets by the SD follows:

Average Cost per Analyst = \$7,000 per month

Intake to Resolution Factor = 3

Leveled Resolutions = 433 resolutions per month per SD analyst

Average Cost per Leveled Resolution = \$16 per resolution

Average Work Tickets per month added to SD scope: 254 per month

(1,174 + 97 total tickets / 5 months)

Intake Rate (work tickets where only intake work was performed): 7.6%

(97 work ticket escalations / 1,174 + 97 total tickets)

Leveled Resolutions =  $(254 * [1 - 7.6\%]) + (254 * 7.6\%/3) = 241$  resolutions per month

Estimated Support Cost = Average Cost per Leveled Resolution per month \* Leveled Resolutions

Estimated Support Cost: \$ 3,856 per month

(\$16 per resolution \* 241 leveled resolutions per month)

To state the cost as Full Time Equivalent (FTE) SD Analyst = Estimated Support Cost / Average Cost per Analyst

Full Time Equivalent (FTE) SD Analyst: 0.55

(\$3,856 per month / \$ 7,000 per month per SD Analyst FTE)