The True Cost of Desktop Support: Understanding the Critical Cost Drivers

by Jeff Rumburg

Most companies believe that the cost of desktop support consists entirely of the personnel, technology, and facilities that comprise the desktop support organization. From a pure accounting perspective, this may be true. However, there are many less obvious costs (some would say hidden costs) that must be taken into account when determining the true cost of desktop support, including *defect costs, penalty cost,* and *workload costs.* In this article, Jeff Rumburg will uses benchmarking data to demonstrate that the true cost of desktop support is often much higher than expected.

Three Critical Cost Drivers

The true cost of desktop support must take into account three important cost drivers. These include:

1. The direct costs of the desktop support organization.
2. The cost of defects.
3. Workload costs that are a function of the IT environment itself.

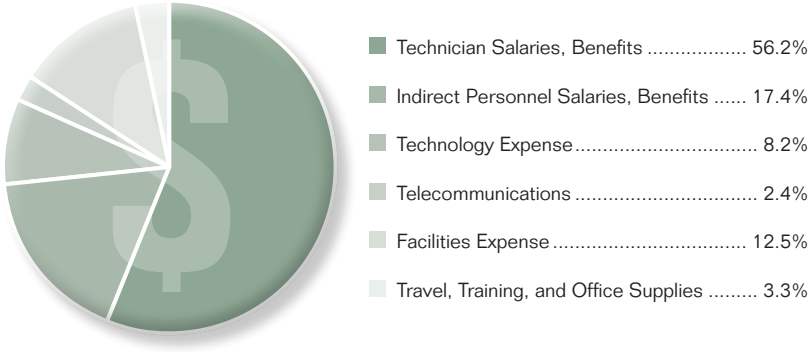
The Direct Cost of Desktop Support

The direct cost of desktop support includes the following components:

- Salaries and benefits for desktop support technicians
- Salaries and benefits for indirect personnel (team leads, supervisors, workforce schedulers, dispatchers, QA/QC personnel, trainers, and managers)
- Technology expenses (computers, software licensing fees, etc.)
- Telecommunications expenses
- Facilities expenses (office space, utilities, insurance, etc.)
- Travel, training, and office supplies

Figure 1 shows the average breakdown of direct costs for North American desktop support organizations in 2009. As you might expect, the vast majority of direct costs for desktop support are personnel-related.

Figure 1: The Direct Cost of Desktop Support



The direct cost of desktop support gives us the pure "accounting cost" of the function. However, the *unit cost* of desktop support is a more useful metric, particularly when comparing or benchmarking the cost of desktop support against industry averages or other organizations. In my previous article, "Best Practices in Desktop Support: The Eight Essential KPIs for World-Class Performance," I made a distinction between desktop support tickets, incidents, and service requests, where tickets are the sum of all incidents and service requests. Just as cost per contact gives us the unit cost for the level 1 service desk, *cost per ticket, cost per incident,* and *cost per service request* give us the unit costs for desktop support. Table 1 illustrates the North American averages and ranges for these cost metrics.

Table 1: North American Desktop Support Costs (2009)

Metric Type	Desktop Support KPIs	North American Statistics		
		Average	Minimum	Maximum
Cost	Cost per ticket	$62	$27	$490
	Cost per incident	$48	$19	$312
	Cost per service request	$113	$41	$556

Each of these cost metrics vary by more than an order of magnitude (10x) from minimum to maximum. Herein lie important clues about other factors driving the true cost of desktop support, specifically, the cost of defects and workload drivers. Let's take a closer look at each of these cost drivers.

The Cost of Defects

One of the eight essential metrics for desktop support is percent resolved level 1 capable. This metric is a proxy for total cost of ownership (TCO) and a critical measure of overall end-user support effectiveness. It is also a measure of defects, since every ticket resolved at desktop support that could have been resolved at level 1 incurs substantial additional support costs.

At an average cost per ticket of $22 for the level 1 service desk, and an average cost per ticket of $62 for desktop support, each ticket that is escalated to desktop support that could have been resolved by the service desk is $62 worth of wasted expense. The sad truth is that more than 20 percent of all tickets resolved by desktop support could have been resolved at level 1.

Defects are not only a function of tickets that are escalated unnecessarily. They are also the result of sloppy practices by desktop support organizations that do not follow a strict SPOC model for end-user support. We have all heard the terms "drive bys," "fly bys," and "snags," which refer to situations where desktop support technician are asked to resolve issues on the spot. The vast majority of these drive bys should be resolved

remotely, by the service desk. By giving in to the user's demands, the desktop support technician is violating the SPOC support model and incurring additional support costs for the organization. Strict enforcement of the SPOC model would require the desktop support technician to tell the user to contact the level 1 service desk to report any computer-related issues.

Table 2 illustrates the severity of this problem (i.e., how much these defects can cost an organization). Even at a best-practice rate of 5 percent resolved level 1 capable, an organization handling 5,000 desktop support tickets per month is incurring defect costs of $15,500 per month. That's $186,000 per year!

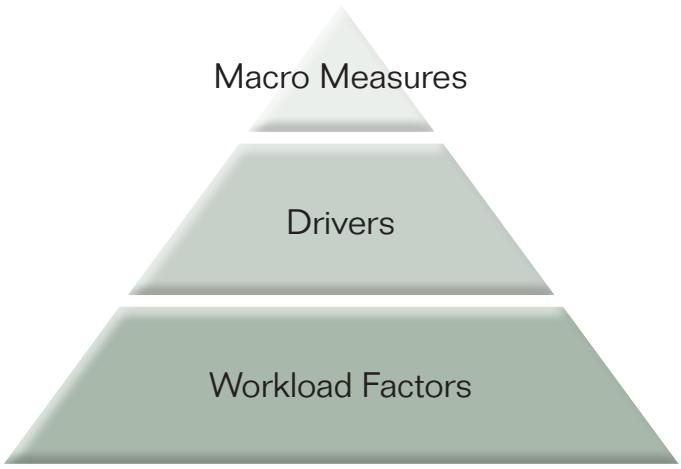
Table 2: The Cost of Desktop Support Defects (2009)

Monthly Desktop Support Ticket Volume	Percent Resolved Level 1 Capable		
	5% (best practice)	22% (industry avg.)	61% (industry high)
1,000	$3,100	$13,640	$37,820
5,000	$15,500	$68,200	$189,100
10,000	$31,000	$136,400	$378,200

Workload Drivers

The final factor that drives the true cost of desktop support is workload. While this may seem obvious, what is not so obvious is how dramatically workload can vary from one company to another, even for organizations that are supporting the same number of users. The list below identifies some of the myriad factors that affect the workload for desktop support.

- Device count and mix
- Mix of desktop and laptop computers
- Mix of service requests and incidents
- Number of mobile devices
- Average age of devices
- Managed/virtualized desktops
- User population density (high-rise, campus, field)
- User work location (office, home, field)
- And many more!



As this list demonstrates, workload is driven by numerous factors that are beyond the control of desktop support. This is part of the reason why the number of tickets, incidents, and service requests can vary so dramatically from one organization to another. Table 3 shows the wide variation in workload volume, measured by tickets, incidents, and service requests per seat per month.

Table 3: Desktop Support Workload Statistics

Metric Type	Desktop Support KPIs	North American Statistics		
		Average	Minimum	Maximum
Workload	Tickets per seat per month	0.78	0.37	3.9
	Incidents per seat per month	0.60	0.21	3.4
	Service requests per seat per month	0.18	0.09	1.1
	Incidents as a percent of total ticket volume	77%	53%	94%
	Ratio of seats to desktop support technicians	164.1	5.5	697.3

One important conclusion we can draw from these workload drivers is that desktop support organizations should not be staffed based upon the industry average ratio of users (or seats) to desktop support technicians. Depending upon workload, the ratio of seats supported to desktop support technicians could be as high as 697:1 (i.e., one desktop support technician for every 697 seats) or as low as 5.5:1 (i.e., one desktop support technician for every 5.5 seats). Staffing decisions should be based on workload—incident and service request volume.

Although workload drivers are often beyond desktop support's direct control, some of them can, in fact, be controlled by other groups or managers within IT, including such things as the average age of the devices being supported (related to the device refresh rate) and the degree of standardization and virtualization of the desktop. As a rule, organizations with a standardized desktop environment (e.g., a limited number of standard images, lockdown safeguards, etc.) will generate far fewer tickets per user, and, therefore, have lower desktop support costs. Likewise, a managed/virtualized desktop has been proven to lower the costs of desktop support, sometimes significantly. These controllable workload factors, and the cost savings that are possible in a well-managed desktop environment, are sometimes enough to justify funding for desktop virtualization and enterprise-wide device refresh projects.

An example of a noncontrollable workload factor would be user population density. Desktop support technicians working in a high-density user environment (e.g., a high-rise office building with lots of cubicles) will be able to handle a larger volume of tickets per month than a technician supporting numerous small work environments that are spread across a large geographical area (e.g., a retail bank with hundreds of branches across the country). Likewise, the mix of incidents and service requests is largely noncontrollable, but it has a dramatic impact on work time per ticket, staffing, and, therefore, cost.

Let's assume, for example, that at ABC, Inc., the cost per incident is $50, while the cost per service request is $100. In addition, 75 percent of ABC's tickets are incidents, while the remaining 25 percent are service requests. The cost per ticket can be calculated (based upon a weighted average) as follows:

($50 × .75) + ($100 × .25) = $62.50

Now, consider XYZ, Inc., which has the same cost per incident and cost per service request as ABC, Inc., but a different ratio of incidents to service requests. At XYZ, only 40 percent of tickets are incidents, while the remaining 60 percent are service requests. XYZ's cost per ticket works out to:

($50 × .40) + ($100 × .60) = $80.00

So, although ABC and XYZ have the exact same cost per incident and cost per service request, their unique ratios of incidents to service requests yields very different costs per ticket. If both organizations were to handle 5,000 tickets per month, XYZ would spend $87,500 more per month on desktop support than ABC, simply because a greater percentage of their tickets are service requests.

Controlling the Costs of Desktop Support

The obvious question now is: What can be done to control and minimize the cost of desktop support? There are two options:

1. The desktop support organization can take steps to minimize the number of defects.
2. IT management can take steps to minimize the number of tickets generated.

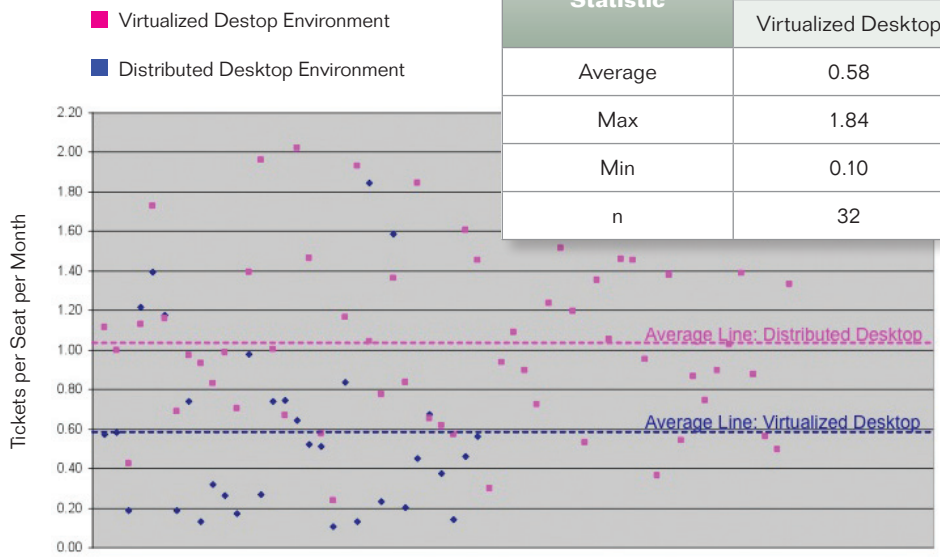
As I've mentioned, the primary KPI for tracking defects is percent resolved level 1 capable. The first step in reducing defects is simply to track this metric. This can be done by creating a box on the trouble ticket that a desktop support technician can check when closing a ticket that could have been resolved by the service desk. Alternatively, some companies sample a number of tickets closed by desktop support each month and estimate the defect rate by dividing the number of tickets that could have been resolved by the service desk by the total number of tickets sampled. By tracking this metric, enforcing a strict SPOC model, and eliminating drive bys, desktop support has the power to greatly reduce defects and lower the cost of desktop support—indeed, the total cost of ownership—for end-user support.

Likewise, IT management is obligated to implement actions that will reduce the number of desktop support tickets, and, thus, the total cost of desktop support. The primary strategies that accomplish these objectives include standardizing the desktop image and virtualizing the desktop environment. Figure 2 illustrates how the total cost of desktop support is substantially lower in a virtualized desktop environment versus the traditional, distributed desktop environment.

Conclusions

The true cost of desktop support is much greater than most companies realize. It goes well beyond the obvious costs of personnel, technology, and facilities. A full reckoning of desktop support costs must include the cost of defects (i.e., tickets resolved by desktop support that could have been resolved by the service desk) as well as the costs associated with the IT environment itself, including the mix of incidents and service requests, the density of the user population, the number of mobile devices, and the standardization of the desktop environment. The benefit to understanding the true cost of desktop support is that the organization can adopt processes and practices that will serve to contain, reduce, and minimize the cost of desktop support. These include tracking and minimizing desktop support defects, following a strict SPOC support model, and standardizing and virtualizing the desktop.

Figure 2: Ticket Volume in Virtualized vs. Traditional Desktop Environments



Statistic	Tickets per Seat per Month	
	Virtualized Desktop	Distributed Desktop
Average	0.58	1.03
Max	1.84	2.02
Min	0.10	0.23
n	32	58

About the Author

Jeff Rumburg is a cofounder and managing partner at MetricNet, LLC. As a leading expert in benchmarking and re-engineering, Mr. Rumburg authored a best-selling book on benchmarking, and has been retained as a benchmarking expert by such well-known companies as American Express, HP, and General Motors. He has more than twenty-two years of industry experience, much of it focused on desktop support.

Jeff received his MBA from the Harvard Business School, his MS *magna cum laude* in operations research from Stanford University, and his BS *magna cum laude* in mechanical engineering. Jeff can be reached by e-mail at **jeffr@metricnet.com**.

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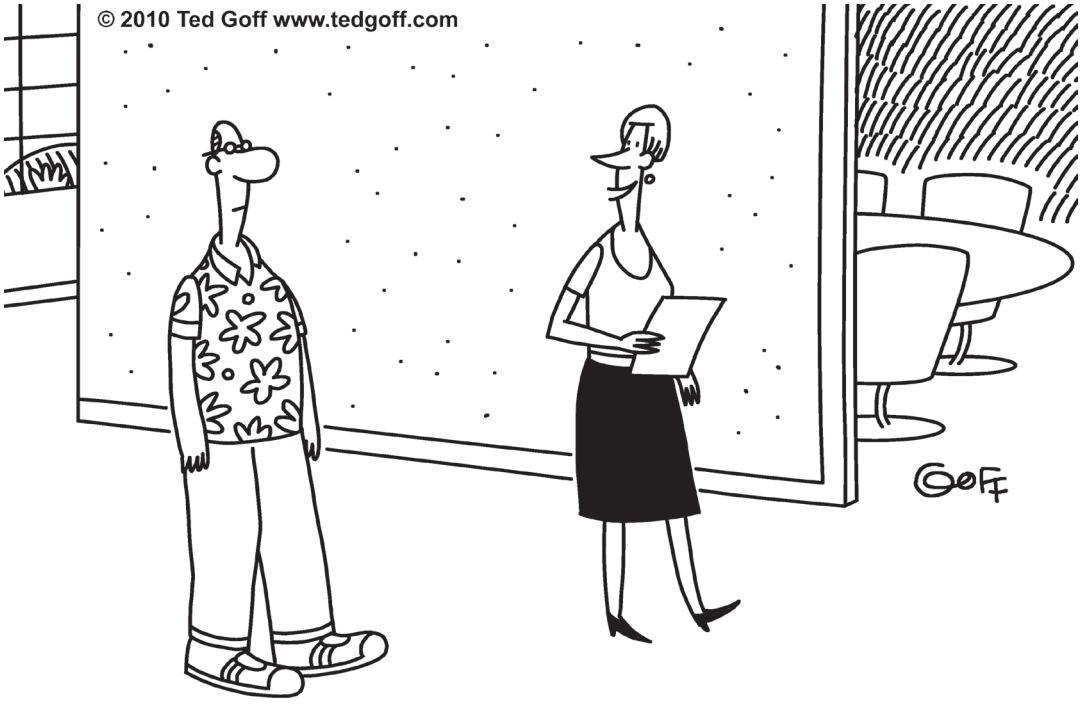

"Quick. What seven things could you do without if I was on my way to an emergency cost cutting meeting?"