The Support Manager's Metrics Primer

by
Robert S. Last
Content Manager, HDI

UBM
TechWeb

Table of Contents

Introduction

No aspects of technical support are more complex, more frustrating, or more prone to error than the selection, analysis, and use of metrics. In the support industry, *metrics* are a measurement of performance, effectiveness, or efficiency; they are based on the statistical, historical, or operational information captured by a service management system, automatic call distributor (ACD), and/or survey tools, and they can be used to improve business procedures

Measurements in support center operations can be useful for identifying required resources for staffing, determining schedules, calculating return on investment, measuring agent and support center performance, justifying needed changes, and understanding organizational productivity. The approach used in defining metrics determines what components of the process will be measured and how the results will be measured, interpreted, and used.

The writers of ITIL v3 argue that metrics:

- **Validate:** Measure the results of the changes/decisions to determine whether the desired results were obtained;
- **Direct:** Measure activities to ensure that targets are met (the most common reason for using metrics);
- **Justify:** Provide factual evidence that something needs to be done (i.e., change) or determine whether the current course of action is needed;
- **Intervene:** Identify when to change or if corrective action is needed.[1]

In addition, section 4.110 of the HDI Support Center Certification Standard (v4.1.4) states that, "regular use of reporting systems and analysis methodologies [is]…crucial to optimizing quality and performance."[2] Remember, metrics don't just indicate whether things are or are not going well; they are critical tools for managing a support operation. However, metrics can be misleading if they are not implemented strategically, taking into account other factors that affect the operations of the support center. For this reason, take care when deciding what measurements to track and how to present them.

Just as one's blood pressure is an indicator of both lifestyle and heredity, so the metrics captured by a support center metrics program are a reflection of the organization's current and historical approaches to service management. It is common to see metrics that are overly focused on call center-related measures (*average speed of answer*, *abandon rate*, or *first call resolution*) at the expense of more telling measures (*first call accuracy* or *mean time to resolution*); the use of telephony metrics for audiences that

[1] "Support Center Metrics and Measurements," an HDI virtual class (HDI, 2008), p. 27.

[2] *HDI Support Center Standard: Best Practices for Service Management*, v4.1.4 (HDI, 2008), p. 30.

don't care about them and the use of entire metrics programs inherited from manager's long departed can lead even the most sincere leader down the road to ruin. In other words, metrics programs should be as sophisticated as the business needs them to be; sometimes they simply "count the beans" for routine support center activities and sometimes they provide multiple audiences with an account of the support center's complex activities.

Metrics don't have to hurt; in fact, collecting and analyzing them should be one of the easiest parts of a support leader's job! At the most fundamental level, they are simply an account of the support center's operations and a record of the success or failure of a business or organization's products, services, and activities. This white paper will give you the tools to build a practical metrics program; we will discuss how to understand, report, and analyze metrics.

Understanding Metrics

Every metric, no matter its subject, begins its life as something else, representing some aspect of the operation of a business or organization. As service and support consultant Rae Ann Bruno observes, "To lay the foundation for measuring and communicating business value, IT must first align its objectives with organizational objectives. By understanding the company goals and the objectives of the primary groups supported, IT can easily set support goals that are aligned. This, in turn, will lead to metrics that validate alignment."[3]

What Is a Metric?

A metric is a measurement of performance, effectiveness, or efficiency. Metrics exist to validate, direct, justify, and intervene. Metrics in the support center can be useful for:

- Identifying staffing needs
- Determining schedules
- Calculating return on investment (ROI)
- Measuring analyst and support center performance towards meeting goals
- Justifying needed changes
- Understanding organizational productivity

Types of Metrics

The foundation of all metrics programs is an understanding of the components that define what is important to a business or an organization. These components are:

- **Vision:** Where you want to be and where you want to go.
- **Mission:** The plan necessary to accomplish the vision. It outlines the business practices the support center will need to implement to achieve that purpose and industry practices that have proven successful in the past. The mission reflects what the support center is to the business or organization and what it does.
- **Goals:** The desired end-point in support of an organization's strategy; goals relate to specific long-range targets and are backed up with facts.
- **Objectives:** The milestones to measure progress toward goals; objectives are quantified, specific statements that identify what a support center needs to accomplish in a given period of time.

[3] Rae Ann Bruno, *Translating IT Metrics into Business Benefits* (HDI, 2007), p. 11.

- **Critical success factors (CSFs):** Key areas (i.e., elements of success) that must be performed well, on a consistent basis, to help the support organization achieve its mission. Critical success factors significantly impact the objectives of the business or the organization; they establish a manageable list of items that must be given priority and require attention.
- **Performance indicators (PIs):** A measure of performance; most of the metrics generated and used in the support center are PIs. These metrics are produced in real time (e.g., daily reports); PIs are leading indicators (see below), but not all PIs are KPIs.
- **Key performance indicators (KPIs):** The actual measures of progress to achieving the goal or objective; KPIs are specific to the goals of the organization. KPIs can be either leading or lagging indicators.
- **Key results indicators (KRIs):** Goals or objectives, such as SLA performance, stock price, cost of support, and customer satisfaction.
- **Leading indicators:** The activities and measures that drive or lead to the performance of lag measures; normally measures intermediate processes and the activities of a performance indicator. They are predictive in nature and allow the organization to make adjustments based on results; they may prove difficult to identify and capture and they are often new measures with no history within the organization. Some examples include:
    - » Average speed of answer (ASA)
    - » Average handle time (AHT)
    - » First contact resolution (FCR)
    - » Number of calls/number of contacts
- **Lagging indicators:** Measures that focus on results at the end of a time period, normally characterizing historical performance; also referred to as key results indicators (KRIs). They are usually easy to identify and capture, but do not reflect current activities and lack predictive power. Examples are:
    - » Total customer calls
    - » Other customer contacts
    - » Total problems

Characteristics of Metrics

In addition to the different types of metrics, metrics also have different characteristics that must be considered for a complete understanding. These characteristics are:

- **Quantitative:** These metrics are based on data and information, reflecting performance that can be measured, and are typically volume or time related. Listed below are a few examples of quantitative metrics:
  - » Average speed of answer (ASA)
  - » Abandon before answer (ABA)
  - » Average handle time (AHT)
  - » Talk time
  - » After-call work (ACW)
  - » Number of password resets
  - » Number of service requests
- **Qualitative:** These metrics measure how well something or someone is performing. Expectations and perceptions drive qualitative metrics. Qualitative metrics measure the difference between expectations and perceptions and are assessed through the use of surveys (event, one-time, or annual). Additional means for assessing qualitative metrics include regular review meetings with customers or consultants. They are typically the result of a quality assurance progress assessment.
  - » Performance indicators (PI), key results indicators (KRIs), and key performance indicators (KPIs) can be either qualitative or quantitative.
- **Efficiency:** A measurement of the resources used to provide the service. Efficiency metrics measure the cost of a service or action to the support center, but may not reflect the cost to the business, so any change or improvement needs to consider the impact to the business, not just the support center or IT. Examples of efficiency metrics include:
  - » Average speed of answer (ASA)
  - » Abandon rate
  - » Within service level
  - » Outside service level
  - » Electronic services response time (i.e., e-mail, chat)
  - » Number of incidents or requests closed
  - » Closed during the first call

- **Effectiveness:** These metrics represent the quality of a service or action. Customer satisfaction and *total cost of ownership* (TCO) are examples of effectiveness metrics. They measure how well a service has met the needs of the business and where in the organization can the service be provisioned. Examples of effectiveness metrics include:
  - » Mean time to restore service (MTRS)
  - » Number of transfers per request or incident
  - » Percentage of correct classifications
  - » Number of tickets documented correctly
  - » Number of contacts per request or ticket

As a support manager, it is critical that you understand the characteristics of the metrics you plan to use when building your support center's metrics program, but it is equally important not to measure something just for the sake of measuring it. That is time-consuming and expensive and does nothing to promote the efficiency and efficacy of the support operation. Metrics should be SMART: Specific, Measurable, Actionable, Relevant, and Timely.

Specific	Be specific about what you are measuring. Only track those metrics that will measure your ability to accomplish the support center's goals and objectives.
Measurable	How will you know if you have met your goals? Define a measure of success for milestones and for accomplishing the support center goals.
Actionable	What steps or actions will be taken to accomplish these goals? Why are you tracking those particular metrics?
Relevant	Metrics should be realistic and relevant to the organizational goals. Do your metrics align with the organization's corporate values?
Timely	When will you measure? Set a time frame for achieving your goals. Allow adequate time to provide qualitative as well as quantitative results.

Using a Data Dictionary to Support a Metrics Program

The data dictionary concept originated in Paul Niven's *Balanced Scorecard Step-by-Step* (Wiley, 2006). It proves useful in understanding the complexity of metrics and provides a single reference for the audiences that will view and use the metrics. As the name suggests, the data dictionary is a set of descriptions for the metrics that are used by the support operation; it documents the characteristics, use, and source of each metric. A good data dictionary must be able to answer the following five questions:

- Why is the measurement required?
- What needs to be measured?
- What is the precision of measurement required?
- How will it be measured?
- What use will the measurement be? To whom?[4]

A sample data dictionary entry is presented below:

Performance Measure Data Dictionary	
Balanced Scorecard Goal:	Customer
Owner:	John Smith, Support Center Manager
Measure Name/Number:	Customer loyalty rating
Strategy:	Revenue growth
Objective:	Increase customer loyalty
Description:	The customer loyalty rating measures the percentage of surveyed customers stating they prefer our products to competitor offerings, and will purchase our products again. Our research indicates that loyal customers make more frequent purchases and tend to recommend our brands to others. Therefore, we believe increasing customer loyalty will help us achieve our strategy of revenue growth.
Lag/Lead:	Lag
Frequency:	Quarterly
Unit Type:	Percentage

[4] Robert S. Last, *The Metrics Reference Guide: A Reference Guide to the Balanced Scorecard Service Model* (HDI, 2007), p. 63.

Polarity:	High values are good.
Formula:	Number of quarterly survey respondents answering yes to survey questions #5, "Do you prefer our products to competitor offerings?" and #6, "Will you purchase our products again?" divided by the total number of surveys received.
Data Source:	Data for this measure is provided by our survey company, "SST." Each quarter they perform a random survey of our customers and provide the results electronically to our Marketing department. Data is contained in the form of MS Excel spreadsheets. Data is available the 10th business day following the end of each quarter.
Data Quality:	High (received automatically from a third-party vendor)
Data Collector:	Jane Smith, Marketing Analyst
Baseline:	Our most recent data received from SST indicates a customer loyalty percentage of 59%.
Target:	Q1: 65%; Q2: 68%; Q3: 72%; Q4: 75%
Target Rationale:	Achieving customer loyalty is critical to our revenue growth strategy. The quarterly increases we're targeting are higher than in past years but reflect our increased focus on loyalty.
Initiatives:	1. Seasonal promotions; 2. CRM project; 3. Customer service training

Building a data dictionary can be time consuming, but it is an undertaking well worth the effort as it indicates a well-thought-out approach to building, using, and understanding metrics. This is the kind of approach that reflects well on a support leader; it not only shows a seriousness of purpose and a degree of expertise, but an appreciation for the concerns of the leaders of the IT department and the parent organization.

Selecting Metrics

Theory and philosophy aside, the matter of which metrics to choose remains a conundrum for many a support leader. Other than general guidance, there is no "one size fits all" approach to selecting metrics for the simple reason that not every metric is applicable to every organization and, even if they were, their performance thresholds would vary considerably. So how does one go about choosing metrics for a support center? As with most complex undertakings, the answer is, "it depends," but here are some suggestions:

- **Align the support center's metrics with the support center's goals and objectives so that you can measure success and progress.** When you define your strategic objectives, you need to determine how you will measure them and how you will define success. Make sure these metrics are being captured and reported properly.
- **Always keep in mind other departments and business units in your organization.** Learn what is important for their profitability or operation (ask them – they'll be surprised and your inquiries will pay off later) and speak in terms that demonstrate how a support problem affects their department, your customers, and the organization's bottom line. Having this perspective will enable you to promote value to the business later.
- **Review every process and situation from the customer's perspective, whether they are internal or external.** Ask questions to discover what your customer's priorities are, and look for proactive ways to implement and identify processes. Your measurements will show whether you have achieved it.
- **Develop a strategic view to align corporate priorities with the needs of the support center.** Support leaders are responsible for helping their teams understand the big picture: what is going on in the company or organization is important for support staff to understand.

Conclusion

Peter Brooks, author of *Metrics for IT Service Management*, once observed that,

> Metrics themselves are not an end. Metrics are an important part of the management system that steers and controls IT in the desired direction. As we will see, metrics must be designed in line with customer requirements, they must be benchmarked to ensure that they are achievable and they must be monitored to ensure that they keep within desired thresholds with action taken to correct any problems. They also are the target of the Continuous Service Improvement Program (SIP), as processes and services are continuously improved, so are the metrics that measure them. It is important to understand what the business' objectives are and ultimately arrange that all measuring, monitoring and control is aligned to attaining these objectives.[5]

Listed below are some of the considerations that should be taken into account when determining which measurements should be used in a support center:

- Link metrics to organizational and support center goals.
- Balance efficiency, efficacy, quality, and quantity.
- Recognize that what is measured and reported will drive behavior (to achieve that measurement), so carefully think through what metrics you choose.
- Determine the audiences for your metrics – the reports that are sent to the CIO and CFO are not the same reports that tier 1 staff will review.

Finally, remember that metrics are the vital signs that tell support leaders the condition of their support operations. They should be indicators of what services in an IT operation are working well and which ones are not. If metrics are used wisely, they can be the difference between identifying small problems before they become big problems; if they are used incorrectly, the paper they are printed on is very good for lining the bottom of bird cages.

[5] Peter Brooks, *Metrics for IT Service Management* (Van Haren Publishing, 2006), p. 15.

Reporting Metrics

Know Your Audience

Kristin Robertson, consultant and writer, points out that, "Reporting is foundational to managing a spectacular support center."[6] You can collect the best metrics in the world, but if they aren't presented in a manner that makes sense to the different audiences that will use them, your efforts will be wasted.

One approach to tailoring your reports to the correct audience is to build a report distribution matrix that will act as a guide in determining how a report will be prepared. An example of a basic report distribution matrix is presented below:

Report Name	
What?	The metric(s) to be presented
Why?	The reason for the report
Who?	The audience that will use it
When?	The frequency of delivery
Where?	The delivery location of the report
How?	The format of the report

Another, more complex, approach is presented on the following page.

[6] Kristin E. Robertson, *Spectacular Support Centers* (Customer Service Press, 2007), p. 122.

Sample Support Center Report Distribution Matrix

Report Title	What? *Description*	Why? *Usage*	Who? *Audience*	When? *Frequency*	How? *Format/Tool*	Where? *Delivery*
Support Center ROI	Trend Report: • First contact resolution rate • Cost per incident • First level resolution rate • Average talk time • Average time to closure • Incident volume • Solution volume	Monitor impact of changes within the support center on key performance	Analysis coaches Management	Monthly	Multiple charts (primarily line charts) Crystal Reports	Intranet Web E-mail
Incident Volume by Channel	Trend Report: • Incident volume by channel (i.e., phone, e-mail, web)	Monitor the shift for assisted service after self-service is released	Analysis coaches Management	Monthly	Line chart MS Excel	Intranet Web
Knowledge Base Investment	Trend Report: • Number of new solutions created • Number of solutions flagged • Number of modified solutions	Identify the volume of incidents/analyst closed using knowledge, required knowledge to be updated or resulted in new solutions	Analysis coaches Management	Monthly	Line chart Crystal Reports	Web
Self-service	Trend Report: • Volume of web visits • Volume of web escalations • Incident volume from assisted service	Monitor the shift in the contact channel for assisted service	Analysis coaches Management	Monthly	Bar chart Crystal Reports	Intranet Web

Identifying the audience(s) for support center reports is a critical part of managing a metrics program. Support center metrics do not exist only for support professionals; the other members of the business or organization also have an interest in what reports they receive. The needs and concerns of these audiences are important and **when** they receive reports, **how** they receive them, and **where** they receive them are critical to building relationships with the other members of the organization. The information in these reports may be the only interaction most leaders and managers in a business or organization have with the support organization, which makes good reporting extremely important.

One approach to an audience-friendly method of reporting is presented in Rae Ann Bruno's *Translating IT Metrics into Business Benefits*. She suggests that metrics should be reported in a manner that shows their business value. One example of this approach is presented on the next page.[7]

[7] Bruno, *Translating IT Metrics into Business Benefits*, p. 18.

IT Metric	Business Benefits
Abandon rate	A low abandon rate could be translated into one of the following scenarios: • Callers are willing to wait because they are confident the analyst will solve their problems • Callers don't need to wait because their calls are being answered quickly In both cases, the business value is that the caller is back to work sooner.
Average speed of answer	If the phone is being answered quickly with an analyst who will solve the issue, then the caller is serviced and back to business sooner. Frustration is also minimized.
First call resolution	Resolving on first call gets the caller back to work sooner and no further calls are needed. This allows the caller to focus on the priorities within his/her job.
Total service events handled: • By application/system • By severity classification • By assignment group	If this information is analyzed and changes are made as a result, the value to the business should be more effective technology that streamlines processes, improves efficiencies, and facilitates cutting costs and generating revenue.
Responsiveness	When an issue isn't resolved on first contact, quick responsiveness from the escalated analyst speeds up the path to resolution and minimizes the non-productive waiting time. It also shows that the support center analyst has the proper sense of urgency in getting the caller back to business.
Resolution time	If published resolution goals are met, then the caller knows how long to expect before the issue is resolved and can plan his/her time accordingly.
Average call duration	If the average call duration is short, then the support team is efficient in resolving issues and the caller's productivity interruption is minimal.

In addition, many support center managers have found that a morning report, an executive dashboard, or a daily support center report work well as the cornerstone of a metrics reporting program. Examples of each of these reports are presented in the following pages.

The Morning Report

The morning report is an operational report for support managers and directors that gives them a daily view of a support center's operation. It allows support leaders to identify and evaluate trends, address critical problems and issues that are impacting the business, or spot violations of service level commitments.

The report should be concise – no more than two pages in length – and include a glossary section explaining acronyms or industry-specific terminology. This is especially important if the report will be distributed to other business units. The metrics on the morning report should be based on the business objective and what is important to that operation. It may include, but should not be limited to, the following individual and team performance metrics:

- Abandon rate
- Average talk time
- Average wait time
- Average after call work
- Average wait time before call abandonment
- Percentage of contacts handled with SLA
- Average speed of answer
- Contact activity by hour
- Number of inbound calls/contacts
- First call resolution
- First call accuracy rate
- Average handle time
- Number of inbound calls
- Age of open cases
- Customer satisfaction rate
- Percentage of cases logged
- List of changes implemented in the last 24 hours
- High impact (priority) incidents
- List of changes scheduled to be implemented in the next 24 hours

Sample Morning Report

Report generated on 4/9/2002 — *Calls received and cases created for 4/7/2002 through 4/8/2002*

YOUR BUSINESS

Calls for 4/7/2002 through 4/8/2002

SLA Answer/Abandon Rate		
Total Calls Received		16
Metric	Total	%
Answered	14	88
SLA Abandoned	0	0
Non-SLA Abandoned	0	0
Voicemail	2	13

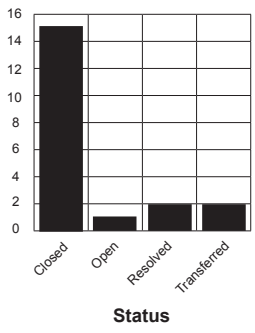
SLA Answer Time		
Total Calls Answered		14
Metric	Total	%
Avg. Speed to Answer	00:11	hh:mm
In 30 sec or less	13	93
31 to 60 secs	1	7
Total Talk Time	00:69	hh:mm
Average Talk Time	04:56	mm:ss

SLA Abandon Time		
Total Calls Abandoned		0
Metric	Total	%
Average Abandon	00:00	hh:mm
15 sec or less	0	0
16 to 30 secs	0	0
31 to 60 secs	0	0
61 secs or more	0	0

Tickets for 4/7/2002 through 4/8/2002

SLA Call Logging Ratio		
Total Calls Answered		14
Metric	Total	%
Cases Created	20	143
CLOSED	*15*	*75*
OPEN	*1*	*5*
RESOLVED	*2*	*10*
TRANSFERRED	*2*	*10*
Closed Same Day	15	75
First Contact Resolution	16	80

Ticket status as of 4/9/2002 only.



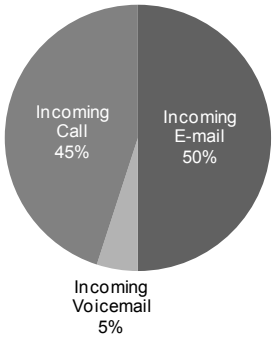
Supplemental SLAs		
Cases Created		20
Metric	Total	%
Incoming E-mail	3	15
0 to 30 MINUTES	*1*	*33*
91 to 180 MINUTES	*1*	*33*
181+ MINUTES	*1*	*33*
Incoming Voicemail	1	5
0 to 30 MINUTES	*1*	*100*

Snapshots

Cases Aging		
Total Cases Open		59
Metric	Total	%
< 24 hours	5	8
24 to 72 hours	1	2
72 hours to 1 week	16	27
> 1 week	37	63

All tickets as of 4/9/2002 only.

Cases Breakdown



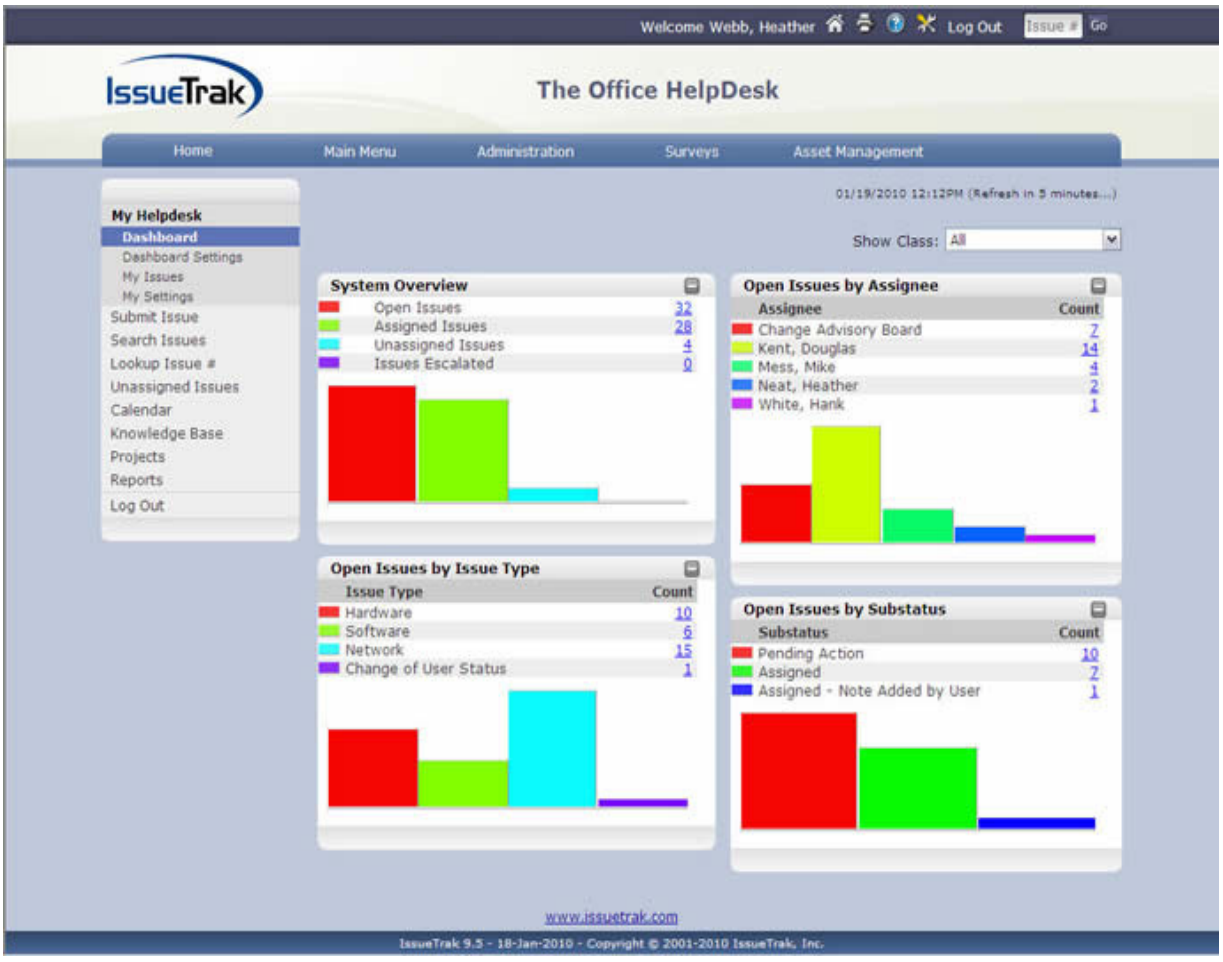
SLA Cases Transferred Ratio		
Cases Created		20
Metric	Total	%
Transfer to Technician	2	10
Average Transfer*	40:03	mm:ss

**Average time between ticket creation and transfer.*

The Executive Dashboard[8]

The executive dashboard is a graphical, one-page summary that highlights key performance indicators and any abnormalities and milestones in the support center's operations. It may be presented in paper form or deployed on an intranet "portal" for a select group of executives to view. It supports management by serving three purposes:

1. Answering fundamentals questions about the business or business units.
2. Alerting management to issues or problems.
3. Helping executives to make decisions that impact the business or organization.



[8] "Executive Dashboard Screenshots," http://www.issuetrak.com/html/executive-screenshots.htm (accessed on May 13, 2010).

It is important that the data and information in the executive dashboard is displayed and presented in such a way that management can easily ascertain what they need to know in order to come to a conclusion and construct a rationale to support the decisions they make. Information on the dashboard may be generated from multiple databases, and should be customizable and offer secure access to meet the needs of the various users. Data may be displayed in charts, graphs, or tables to show relevant information at a glance (as in the example above).

The Daily Support Center Report

The daily support center report should provide a snapshot of the performance of every aspect of the support center and should be available to every business unit contacting the support center. If applicable, the report should always include daily call statistics and performance measurements

The daily support center report can include such metrics as:

- ACD statistics, including ASA, abandonment rates, and abandonment times
- Peak call time statistics, in both tabular and graphical views
- An overview of severity level for each business unit
- The number of new tickets opened, sorted by business unit and support center professional
- The number and percentage of new tickets closed each business day
- The number and percentage of new tickets that were resolved on the first call or contact
- The number and percentage of new tickets that were correctly categorized on the first call or contact
- The number and percentage of business units with critical business disruptions
- Activity aging information for all support center tickets

The daily support center report should be concise – no more than two pages long – and include a glossary section explaining acronyms or industry-specific terms. This is especially important if the daily report is distributed to other units. This information empowers business unit managers to resolve common problems; they are more likely to support the efforts of the support center when they see it is a valuable resource

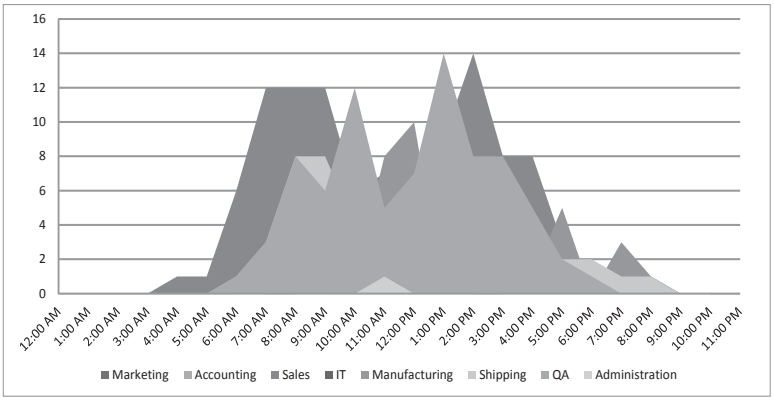
It is also important that any metrics that are performing above or below defined thresholds should trigger an action by support center leaders. Metrics are only useful if they lead to changes in how the IT operation serves its users; metrics without action are useless and a waste of time.

Sample Support Center Daily Report

ACD Information

Department	Total Calls	Total Ans.	Total Abd.	Total Xfer	Avg. Abd.	Avg. Ans.	Avg. Talk	Abandons: SLA > 30 secs	Abandons: SLA % > 30 secs	Abandons: GOAL 15 secs
Marketing	8	8	0	0	0:00	0:11	15:35	0	0%	0
Accounting	13	10	3	0	0:24	0:22	02:55	1	8%	2
Sales	109	98	11	0	0:30	0:17	03:13	3	3%	6
IT	2	2	0	0	4:02	0:26	00:46	1	0%	1
Manufacturing	41	36	2	3	0:44	0:11	03:01	0	0%	0
Shipping	48	45	3	0	0:15	0:29	02:26	0	0%	2
QA	80	71	7	2	0:28	0:17	04:41	2	2%	3
Administration	1	1	0	0	0:00	0:07	22:58	0	0%	0
TOTALS	**302**	**271**	**26**	**5**	**0:35**	**0:18**	**03:52**	**7**	**2%**	**14**

Department	12 AM	1	2	3	4	5	6	7	8	9	10	11	12 PM	1	2	3	4	5	6	7	8	9	10	11
Marketing	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	1	0	1	1	0	0	0	0
Accounting	0	0	0	0	0	0	0	1	2	1	0	5	0	2	0	0	1	0	0	1	0	0	0	0
Sales	0	0	0	0	1	1	6	12	12	12	6	7	7	9	14	8	8	3	1	1	1	0	0	0
IT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
Manufacturing	0	0	0	0	0	0	0	0	0	4	1	8	10	0	5	3	1	5	0	3	1	0	0	0
Shipping	0	0	0	0	0	0	1	3	8	8	4	1	3	2	7	4	1	2	2	1	1	0	0	0
QA	0	0	0	0	0	0	1	3	8	6	12	5	7	14	8	8	5	2	1	0	0	0	0	0
Administration	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	**0**	**0**	**0**	**0**	**1**	**1**	**8**	**19**	**30**	**32**	**24**	**28**	**28**	**28**	**34**	**23**	**18**	**12**	**6**	**7**	**3**	**0**	**0**	**0**



Sample Support Center Daily Report (cont'd)

Today's New Activities

SEVERITY LEVELS									
Department	Total Activities	Closed Activities	Open Activities	% Closed Same Day	Severity Levels				
					1	2	3	4	5
Marketing	7	5	2	71.42%	0	1	4	0	0
Accounting	9	7	2	77.77%	0	4	3	2	0
Sales	101	88	13	87.12%	0	13	87	1	0
IT	2	2	0	100.00%	1	0	1	0	0
Manufacturing	40	33	7	82.50%	0	5	34	1	0
Shipping	48	33	15	68.76%	5	9	29	5	0
QA	74	74	0	98.64%	0	1	57	2	0
Administration	1	1	0	100.00%	0	0	1	0	0
TOTAL	**282**	**243**	**39**	**86.17%**	**6**	**47**	**221**	**11**	**0**

SLA FIRST CALL RESOLUTION				
Department	SLA Activities	Closed Activities	Open Activities	% Closed First Contact
Marketing	2	2	0	100.00%
Accounting	7	6	1	85.71%
Sales	89	82	7	92.13%
IT	1	1	0	100.00%
Manufacturing	31	30	1	96.77%
Shipping	21	20	1	95.23%
QA	38	35	3	92.10%
Administration	1	1	0	100.00%
TOTAL	**190**	**177**	**13**	**93.15%**

ACTIVITY AGING INFORMATION					
Department	All Open Activities	Open < 24 hours	Open 24-72 hours	Open 72 hours to 1 week	Open > 1 week
Marketing	16	3	0	3	10
Accounting	13	2	7	2	2
Sales	1	0	0	0	1
IT	40	12	0	14	14
Manufacturing	34	7	0	18	9
Shipping	13	4	0	2	7
QA	1	0	0	0	1
Administration	1	0	0	0	1
TOTAL	**119**	**28**	**7**	**39**	**45**

The Balanced Scorecard

IT service and support operations have been collecting data from ACDs, problem tracking systems, knowledge systems, e-mail programs, and other such tools for years. As an industry, service and support has been very successful in collecting this data, most of it put into Excel spreadsheets and then presented as "information" to various audiences, where it is discussed, debated, and occasionally even used to make decisions. The trouble with this approach, of course, is that it is very good at generating numbers, but not so good at information that maps back to organizational goals and objectives, much less alignment with the business or organization.

The balanced scorecard (BSC) solves much of this problem because it ties projected performance measures to actual performance measures, then relates this information to the organization's business strategy. It also measures the gap between projected and the actual performance. When used correctly, it gives organizational leaders a reporting capability that directs behavior, evaluates performance against predetermined goals, and provides not only data, but information for adjusting organizational and IT goals by creating a closed-loop feedback process. Organizations and departments using the BSC can distinguish themselves from their competitors.

The four quadrants of the BSC are:

1. **Customer satisfaction**

   The customer satisfaction perspective focuses on such measures as customer satisfaction, loyalty, retention, new customer acquisition, profitability, and market share. Leaders with this perspective must identify the market segments for their existing and potential customers and the value propositions they will deliver to those customers.

2. **Employee satisfaction**

   In any business or organization, the people that deliver services to customers and users should be viewed and treated as critical to this service delivery. As much as some managers wish it were otherwise, service and support is fundamentally an interaction between human beings, and when organizational leaders do not properly maintain their employee's job satisfaction, it affects the quality of the service and support that they deliver. Unhappy employees tend to generate bad service, which generates unhappy customers, which affects productivity and profitability; good service tends to generate positive outcomes.

3. **Cost/productivity**

   All organizations have to concern themselves with the cost of doing business and the challenges of maintaining productivity, if not continuously improving it. Conducting cost/productivity analysis on the support organization eventually boils down to calculating costs in terms of cost per unit of work and cost per incident. One approach to understanding this quadrant of the BSC is presented below. In this example, the variables are the number of customers, the number of incidents, and cost. Keep in mind, however, that these variables will change based on the goals of the organization.

4. **Organizational maturity**

   Of the four quadrants discussed here, organizational maturity is the most strategic and the most subjective. It is focused on the structure, organizational agility, and strategic positioning of the support organization. Organizational maturity enables customer and employee satisfaction within an optimal cost structure.

The balanced scorecard can be used as a strategic management system *and* as a strategic measurement system; it is better used as a strategic management system because it favors the alignment of the support organization with the IT operation and the parent organization. Service and support operations rarely operate in a vacuum; they are tethered to partners and the parent organization in ways that require them to record their activities, present them for examination, and demonstrate improvement.

Sample Balanced Scorecard

Customer Satisfaction Goals		
Total Calls Received/Month		
Projected	*Actual*	*Gap*
Total Calls Answered		
Projected	*Actual*	*Gap*
Customer Satisfaction Rating		
Projected	*Actual*	*Gap*
Completed Surveys		
Projected	*Actual*	*Gap*
Average Speed of Answer (ASA)		
Projected	*Actual*	*Gap*
Abandoned Calls		
Projected	*Actual*	*Gap*
Abandon Call %		
Projected	*Actual*	*Gap*

Employee Satisfaction Goals		
Total Direct Headcount		
Projected	*Actual*	*Gap*
Employee Satisfaction Rating		
Projected	*Actual*	*Gap*
# of Technical Staff Turnovers (Internal)		
Projected	*Actual*	*Gap*
# of Technical Staff Turnovers (External)		
Projected	*Actual*	*Gap*
Training Hours		
Projected	*Actual*	*Gap*
Avg. Training Hours/FTE		
Projected	*Actual*	*Gap*
# of Employee Surveys		
Projected	*Actual*	*Gap*
Time to Employee Proficiency		
Projected	*Actual*	*Gap*

Cost/Productivity		
Ending Customers		
Projected	*Actual*	*Gap*
Total Incidents Closed		
Projected	*Actual*	*Gap*
Average Incidents/Customer		
Projected	*Actual*	*Gap*
Average Cost/Incident		
Projected	*Actual*	*Gap*
Total Closed Incident Direct Labor Hours		
Projected	*Actual*	*Gap*
Average Cost/Customer		
Projected	*Actual*	*Gap*
Average Customers/FTE		
Projected	*Actual*	*Gap*
Closed Incidents/FTE		
Projected	*Actual*	*Gap*

Organizational Maturity Goals		
Executive Support		
Projected	*Actual*	*Gap*
Time to Fill Knowledge Gaps		
Projected	*Actual*	*Gap*
Time to New Product Proficiency		
Projected	*Actual*	*Gap*
Flexibility of Costs to Changes in Workload		
Projected	*Actual*	*Gap*
Diversity		
Projected	*Actual*	*Gap*
Formalization of IT Processes		
Projected	*Actual*	*Gap*
Support Center Certification		
Projected	*Actual*	*Gap*

Analyzing Metrics

Once metrics data has been captured and formatted for reporting, it has to be analyzed and action must be taken based on that analysis. The thought of data analysis tends to send chills up the spines of most support leaders and, for those of us that still struggle with those frustrating pivot tables, analysis can be a challenge. Having said that, it is important to remember several things; first, analyzing data for a support center is not a novel practice. Contact friends, colleagues, and, if appropriate, even your boss to ask for assistance. Second, identify your audience. Just as you had to identify who would receive which report, you have to identify who will care about what data. For example, it if a fairly safe wager that although the CFO will care about the number of incidents received because it influences cost per call, he will be less concerned about the ASA, the number of knowledge articles created, and staff utilization rate. Third, look for trends over time; one bad morning or even two bad mornings is not indicative of a trend. Natural disasters, local disasters (the utility company cutting a phone line, perhaps), and corporate disasters (a "small" beta test, for example), while exhausting, are also not indicative of a trend.

Some Tips on Analyzing Metrics

That said, there are several sets of broad precepts that should be kept in mind when analyzing metrics data. Set number one comes from Lynn Haber, a contributor to EdTech magazine. In her article, "Metrics Aren't All Numbers," she cites Martin Klubeck at the University of Notre Dame, who observes:

> **Tip 1:** If you don't know why you're collecting data or reporting a metric, stop. (Remember the data dictionary? If you have one, you'll always know why you're reporting on a metric).
>
> **Tip 2:** Don't chase data. Determine the question to ask, not the answer you want.
>
> **Tip 3:** It's not enough to ensure you don't misuse data. You must also create an environment of trust around data-reporting.
>
> **Tip 4:** Don't take metrics for absolute truth. Dig deeper.[9]

[9] Lynn Haber, "Metrics Aren't All Numbers: They're the Information That Can Help IT Perform Better," *EdTech: Focus on Higher Education*, http://www.edtechmag.com/higher/may-june-2008/metrics-aren-t-all-numbers.html (retrieved on May 17, 2010).

She also offers some advice on common pitfalls:

1. Focusing on negative customer-survey feedback will cause you to lose perspective.
2. Changing procedures or the way you're doing business based on a small amount of negative feedback. Investigate complaints and evaluate feedback with a level head.
3. Placing too much emphasis on a speedy resolution can lead to inaccurate analysis, which could result in a call back.
4. Deploying front-line technical people who lack people skills. The goal of the help desk should be a timely, accurate, and pleasant.
5. Focusing on the wrong metrics may get you the wrong response.
6. Being too granular with how calls are categorized.
7. Focusing only on specific numbers, such as ticket counts, speed and number of calls handled. They don't tell the whole story.
8. Being a slave to metrics can taint the perception of the customer experience.
9. Failing to test the help-desk operation. Tape-recording help desk/customer interactions is a way to assess performance.
10. Choosing to measure everything, instead of deciding what needs measuring.[10]

Still More Tips on Analyzing Metrics

One of the best, non-technical books ever written on statistical analysis is Michael Lewis' *Moneyball: The Art of Winning an Unfair Game* (W. W. Norton & Co., 2004). The book is not about game theory or baseball; rather, it uses baseball to show how statistical analysis can unearth problems, improve performance, and make even a resource-starved organization successful. *Moneyball* is one of the favorites of the folks at the Metrics Portal; they devoted an extensive post to the book in July 2007. Three of the highlights are listed below:

1. Measurement has to have a purpose beyond the numbers themselves.
2. The "whole" is worth more than the individual pieces.
3. Look beyond the ordinary; improvements won't be attained by sticking to the *status quo*.[11]

This is commonsense advice that every support center leader can practice.

[10] Haber, "Metrics Aren't All Numbers."

[11] David Koenig, "Lessons from Moneyball," from the Metrics Portal Blog, **http://metricsportal.com/blog/2007/07/lessons_from_moneyball.html** (retrieved May 13, 2010).

One More Approach to Analyzing Metrics

Finally, there is an approach that many support center leaders stumble on out of necessity that we call "identifying patterns." This approach is described in Pete McGarahan's article, "How to Survive Call Volume Spikes." In this article, Pete suggests that support center managers experiencing high call volumes first identify their causes, "so that you can head them off at the pass. What are the circumstances, variables and events that drive the peaks and valleys of your call volume? Causes fall under the headings of planned and unplanned."[12] For example:

- Planned
  - » Monthly, quarterly, and year-end financial and operational reporting processing
  - » Technology upgrades (e.g., software, hardware, or operating system upgrades)
  - » Operational, organizational, or process changes (e.g., geographical reorganization in the field)
  - » Time changes
  - » Mondays (e.g., after weekend IT changes, upgrades, etc.)
  - » Holidays and the day after (same problem as on Mondays, plus everyone forgets his password)
  - » System maintenance (e.g., mainframe reboots, router microcode upgrade, backups, etc.)
  - » Promotional product programs (e.g., but one, get one free, free gift with purchase, discounting, etc.)
- Unplanned
  - » Weather
  - » Utility outages (power outage, phone lines down)
  - » Infrastructure failures (e.g., phone systems, dial-up modems)
  - » Departmental communications that say "call the help desk"
  - » Disasters (floods, fire bombing, earthquakes)
  - » All circumstances and variables—if you're not "in the loop"!

[12] Peter McGarahan, "How to Survive Call Volume Spikes," http://mcgarahan.com/article_70_%E2%80%9CHow-to-Survive-Call-Volume-Spikes%E2%80%9D-.cfm (retrieved on May 19, 2010).

While Pete's example deals with unplanned increases in call volume, his approach illustrates how easy it is to examine the sources of calls. Taken to the next level of analysis, a related approach is to analyze service statistics in the following way:

- Service Demographics: Used to identify who is calling and from where.

  If Sunglass Hut Store 234 in the Mall of America is calling seven mornings a week because their point-of-sale system will not boot correctly, it is a good bet that they have a problem that needs attention.

  If Sunglass Hut District 3 has 75% more "how-to" calls than any of the other twelve districts in the United States, the probability is high that the district manager does not place much value on training.

  If Sunglass Hut Region 2 has more reporting errors than any other region in North America, it may be that the regional director has neglected to supervise the regional managers and the store managers.

  - Service demographics provide data about:
    - The number of support incidents received
    - The individuals requesting support
    - The type of request
    - Specific systems involved
    - Service gaps and service level breaches

- Request Patterns: Used to identify trends and commonalities in incidents and service requests.

  If the new WelchAllyn scanners produce an error message on Saturday mornings, in every store in every part of the United States, that is a trend.

  If the same scanners produce another error message, but only on Tuesdays, that is a commonality that requires further investigation.

  - Request patterns provide data about:
    - Physical trends: For example, the same type of equipment, same location, same employee.
    - Timing trends: For example, every Monday morning, every Saturday morning, or only Thursday afternoon.
    - Operational relationships: For example, specific operational conditions, printing, backups, or month-end closings. (These aren't supposed to happen anymore, but in the "real world" of operating IT, we know that they do.)

- Process patterns: Used to identify potential problems in process adherence and IT response.
    - » Are stores submitting service requests through the support center or through their district managers? Are the support center and its users practicing the single point of contact (SPOC) process or is it ignored by selected individuals?
    - » Are the majority of incidents and service requests resolved within service level objectives?
    - » Can patterns in relationships be discovered between complaints received and the type of request? What is the amount of rework for incidents and service requests?[13]

The data gathered in a metrics program is only useful if it is turned into information, which is then analyzed and acted upon.

- Once these meanings are uncovered, appropriate actions must be taken to resolve any related issues and problems.
- Technical patterns should be investigated and tested to uncover potential problems in terms of performance, operation, or capacity.
- Additional training should be provided to obvious knowledge gaps on the part of end-users. These knowledge gasps may be the source of otherwise unnecessary support requests.
- How-to and self-help capabilities should be provided to the end-users to respond to information gaps. These information gaps may be the source of otherwise unnecessary support requests.
- IT policies and procedures should be documented and distributed to ensure that end-users are fully informed on relevant processes (i.e., how to request support, technical standards, security policies, purchasing procedures, etc.)
- IT service procedures should be evaluated to ensure appropriate alignment with organizational characteristics and business needs.[14]

[13] "Service Metrics: Find the Hidden Meaning," http://www.ittoolkit.com/cgi-bin/itmember/itmember.cgi (retrieved on May 20, 2010).

[14] "Service Metrics: Find the Hidden Meaning," p. 3.

Conclusion

The difference between a mature and sophisticated organization and one that figuratively engages in regular self-flagellation can be seen in its metrics program. The sophisticated and mature organization will have a metrics program that is integral to the operation of the business or organization, IT operation, and the service desk. Capturing and using metrics is not just something that the organization does, metrics is a part of how the business/organization operates; metrics become part of the organization's DNA.

About the Author

Robert S. Last is the content manager for HDI. For more than twenty years, Bob has been involved in the IT support industry as a manager, trainer, consultant, and industry analyst. He is the author of dozens of articles, white papers, and HDI Focus Books on a wide range of topics related to all aspects of technical support and is the author of the book, How to Be a Successful Support Center Analyst. He also supports the HDI membership and staff by managing the "Ask the Expert" service.

Bob is a graduate of Cleveland State University and holds a B.A. in urban studies and an M.A. in history. He also holds certificates in disaster recovery planning, management, and instructional design. He is an HDI-certified Support Center Analyst and Support Center Manager.

About HDI

HDI is the world's largest IT service and technical support membership association and the industry's premier certification and training body. Guided by an international panel of industry experts and practitioners, HDI is the leading resource for help desk/support center emerging trends and best practices. HDI provides members with a vast repository of resources, networking opportunities, and the largest industry event, the HDI Annual Conference & Expo. Headquartered in Colorado Springs, CO, HDI offers training in multiple languages and countries. For more information, call +1 719.268.0174 or visit **www.ThinkHDI.com**.

