

Managing Conferencing Services for Success

*The Benefits of Measurement
and Analysis for Process and
Performance Improvement*



Managing Conferencing Services for Success

*The Benefits of Measurement and Analysis for Process and Performance
Improvement*

**Alan D. Greenberg
Ira M. Weinstein
Wainhouse Research**

July 2005



Table of Contents

Introduction.....	1
Performance Measurement via Critical-to-Quality Factors (CTQs)	3
Frequently Utilized Conferencing CTQs	4
Conferencing Success Data	5
Cost Measurements / Savings Calculations.....	8
Service Provider Performance	10
The Benefits of Performance Measurement and Process Improvement.....	11
Options for Data Collection and Analysis.....	13
Option 1: Build Your Own	13
Option 2: Using a Managed Services Provider.....	13
Conclusion	15
About Wainhouse Research	16
About the Authors	16
About SPL Integrated Solutions.....	16

List of Figures

Figure 1: A Typical Multi-Location Meeting	4
Figure 2: Multipoint Audio / Video Usage	5
Figure 3: Meeting Distribution (By Type of Host)	6
Figure 4: Trouble Tickets - Tracked by Closure Code	7
Figure 5: Service Delivery Month-to-Month by Time Allocation	10

Introduction

Measuring and analyzing the performance of conferencing and collaboration solutions is difficult for many enterprises, whether it is a videoconference meeting at a corporation, a distance learning course at a university, a telemedicine session at a hospital, or a generals-only meeting for the military. This is the case because of a number of factors:

- Conferencing costs can be difficult to track; often organizations are unable to gather the data necessary to develop a view into true costs of conferencing.
- The soft benefits of conferencing, such as saved time and productivity gains, are almost impossible to quantify.
- The cost of a failed meeting (in employee time, lost collaboration benefits, lost productivity, etc.) is extremely difficult to measure.
- In many cases, the resources running the conferencing department are more technical than business oriented. As a result their business analysis experience may be limited.
- The definition of and criteria for a “successful” conference (or failed conference) is vague and often subjective.
- Meeting success rates often are an afterthought. Without processes in place for capturing the data necessary to create and analyze reports, the typical organization simply operates by intuition and assumption.
- The majority of organizations do not have the centralized tracking systems and databases in place for automated conferencing data collection. Thus, performance measurement and analysis can be very time consuming and complex.

Ideally, all decisions would be made from a position of knowledge and with the appropriate supporting data in hand. Unfortunately, most conferencing professionals traditionally have been forced to conduct their business in a virtual information and performance measurement vacuum. For example, according to a recent Wainhouse Research WebMetrics survey,¹ fewer than 1 in 5 organizations have actually calculated the return on investment (ROI) for their web conferencing spending; our experience and past surveys tell us that the situation is similar for videoconferencing users, and worse for audio conferencing users.

Many organizations today make strategic conferencing-related decisions without the benefit of performance and usage metrics.

¹ Wainhouse Research, Q4 2004 WebMetrics Report, <http://www.wainhouse.com/webmetrics>

Without the data to help them focus their efforts, many organizations are left unable to identify and complete even minor service enhancements that could increase usage, decrease costs, and drive additional ROI.

Fortunately, effective conferencing managed services providers understand the importance and mechanics of using metrics to monitor service delivery, pinpoint areas in need of attention, measure the impact of process improvements, and track long term performance and usage trends. By taking advantage of currently available device and network monitoring tools, managed services providers (MSPs) are going to great lengths to provide detailed numbers to their clients. The providers see this as more than just another value-add they can provide. It is means to prove the value of their services and help their customers justify additional investments in conferencing, and in some instances it helps differentiate themselves from other MSPs.

This white paper is intended to highlight the benefits of performance measurement and analysis for conferencing services and to provide guidance and insight for end users seeking to obtain and leverage this type of information.

Performance Measurement via Critical-to-Quality Factors (CTQs)

As a term, the concept of “critical-to-quality” has its basis in the world of Six Sigma – the realm of certification that is the gold standard for quality. Manufacturers pursue Six Sigma because the very challenging nature of achieving the certification makes one a member of a very exclusive club – and helps the company differentiate itself from competitors. CTQs consist of key measurable characteristics of a product or process whose performance standards or specification limits must be met in order to satisfy the internal or external customer. In other words, CTQs are customer need and demand driven. They may include upper and lower specification limits, or any other factors related to a product or service. In many cases, defining a CTQ requires manufacturers to translate qualitative customer statements and requests into actionable, quantitative business specifications.

Recognizing the value of this type of quality control, the CTQ concept has been adapted by some service providers to cover not just manufacturing metrics, but also metrics for the delivery of services that support customer requirements.

In the realm of conferencing, CTQs can consist of any of the following:

- Financially-driven goals, such as:
 - Reducing travel expenses by X percent
 - Improving productivity by X percent
 - Speeding time to market by X percent
 - Improving internal communications or customer communications by X percent
 - Reaching a greater number of students or trainees by X percent
- Operationally-driven goals, such as
 - Ensuring that X percent of meetings start on time
 - Achieving an X percent performance satisfaction rating from end users
 - Resolving X percent of problems / issues within Y hours of discovery
 - Ranking in the top X percent of companies as reported by third-party benchmarking and comparison data

Fortunately an organization need not be Six Sigma certified in order to apply Six Sigma / CTQ concepts as a means of improving cost-effectiveness and performance.

Typically CTQs are a means of identifying the key areas in which a manufacturer or product / service provider should focus in order to foster and maximize long-term customer satisfaction. Fortunately an organization (end user, service provider, etc.) does not need to be Six Sigma certified in order to apply Six Sigma / CTQ concepts as a means of improving cost-effectiveness and performance.

Frequently Utilized Conferencing CTQs

Given the desire, proper methodology, and necessary infrastructure and resources, an organization can measure and monitor a variety of conferencing-related metrics and critical-to-quality factors. Depending upon the organization, the necessary data can be obtained through a variety of sources including centralized (or localized) scheduling systems, trouble tracking systems, conferencing endpoints and infrastructure devices (gateways, gatekeepers, audio or video bridges, web servers), conferencing staff members, and from the end users themselves (via surveys and interviews).

Whenever possible, measurement methods should be standardized throughout the enterprise to enable location-based benchmarking. In addition, conferencing managers should strive to benchmark their data against like data from other relatively similar firms. For situations where competitive confidentiality is a concern, third party intermediary firms can gather similar data from various organizations and provide aggregate and anonymous measurement and metric data in the form of a benchmarking report.

Not all metrics will be of interest, or even applicable, to every organization. In addition, the validity (and relative importance) of each metric depends upon various factors including:

- the internal culture of the organization
- the size and global footprint of the user population
- the entity’s general acceptance of technology solutions
- the number of video systems / web clients / audio or video ports deployed per employee in each location

In many cases a specific metric value may be of less interest than the trend of that same metric. For example, the exact number of video meetings hosted last month may be an interesting figure. But, that same information tracked during the last 12 month period provides far greater insight into the usage patterns and trends of the organization.

Consider also that conferences typically involve more than one location. Therefore, a statistic such as “the number of meetings per month” could actually have two different meanings. For example, assume that the following conference was scheduled and conducted:

Date / Time	Locations	Rooms
January 15 th , 2005 9 AM to 10 AM EST	Boston	Room 1A
	Los Angeles	Room 29D
	Detroit	Room 16C
	London	Room 5L
	Frankfurt	Room 16D
	Hong Kong	Room 3E

Figure 1: A Typical Multi-Location Meeting

The above conference could be viewed as a single meeting with six locations or six individual meetings. To avoid this confusion, organizations often differentiate between the number of local meetings (six in this case) and the number of local conferences (which may include many local meetings).

Conferencing Success Data

This section describes some of the metrics that an organization might use to gauge the success of the internal conferencing service. For additional value and insight, managers should consider the trend (year on year, quarter on quarter, etc.) of each of these metrics.

- Hours of Usage per System – Wainhouse Research estimates that the average videoconferencing system is used only 10 to 15 hours each month. If the average usage per system significantly exceeds these estimates, one could consider this to be a sign of success.
- Number of Meetings per System – This measurement provides an indication of how often specific systems are utilized.
- Multipoint Bridge Usage - This measurement, as shown in the following chart, provides an indication of total number of bridged calls (whether audio or video, internal or using an external bridging provider) conducted by the organization.

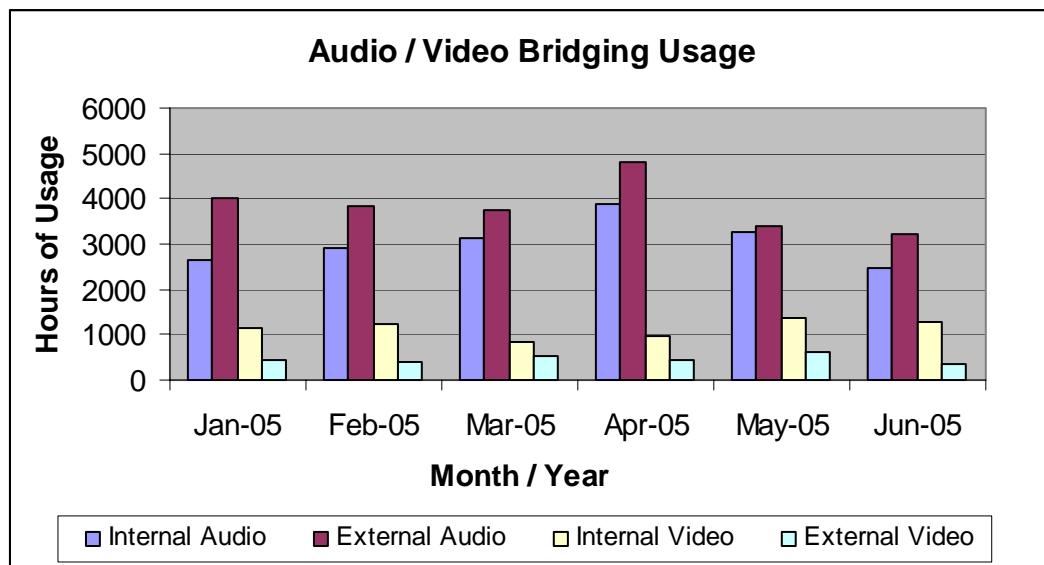


Figure 2: Multipoint Audio / Video Usage

- User Base Penetration – Some organizations measure success by the number and percentage of departments within specific locations that consistently utilize the conferencing services.

- Distribution of Meetings by Priority and Attendee [C]² - Many organizations track the breakdown of meetings by priority and type of attendee. For example, if executives represent 12 % of the employee population, but only 3 % of the video meetings are hosted by executives, one could conclude that the executive acceptance of conferencing needs improvement.

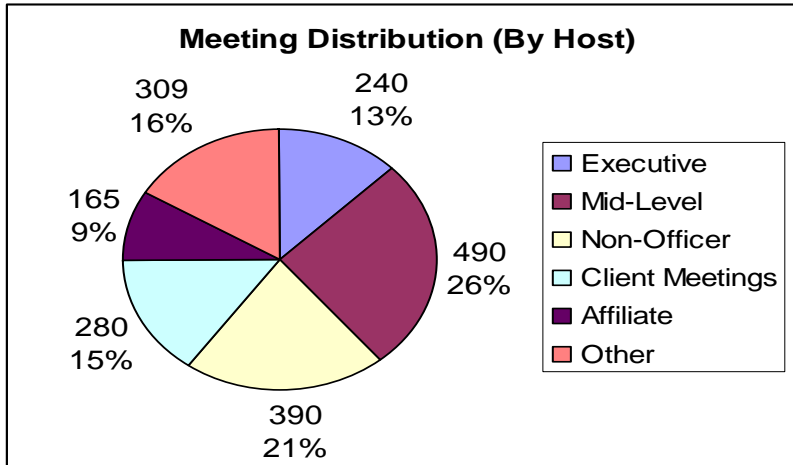


Figure 3: Meeting Distribution (By Type of Host)

- Number of Meetings Scheduled per Month [C] – This metric provides an indication of the popularity of the conferencing service. Note that the trend of meetings scheduled is often more important than a snapshot of the actual number of meetings scheduling during a particular period of time.
- Number of Meetings Actually Conducted per Month [C] – This statistics is similar to the number of meetings scheduled / month, but it is adjusted to reflect meeting cancellations and ad-hoc meetings that were conducted but not scheduled. This data is often available from conferencing gatekeepers and video system call logs or web conferencing server activity logs.
- Percent of No-Show Meetings [C] – Using the prior two metrics, one can calculate how frequently meetings (and resources) are reserved but not used as scheduled. Many organizations use this information to allocate penalty charges to frequent abusers (people or departments).
- Average Meeting Duration [C] – The length of the average meeting (in hours), and specifically the time trend of this statistic, provides an indication of the health of the conferencing environment. For example, if the average meeting duration increases over time, it is reasonable to assume that the user community’s appreciation for the conferencing services is increasing.

² Throughout this section the symbol [C] indicates that this metric could be calculated for conferences, local meetings, or both.

- Average Number of Local Meetings per Conference – Once again, one might find the trend of this metric more useful than the value itself.
- Frequency of “No-Availability” / Over Bookings [C] – A true sign of conferencing success is when demand significantly and consistently exceeds supply. This metric is obtained by tracking (either manually or via the meeting scheduling system) the number of user meeting requests that cannot be fulfilled at the requested location(s), date, and time. Clearly the validity of this metric depends upon the number of systems deployed per location (as a point of reference, most organizations seek to maintain one video system per every 200 to 400 employees).
- Trouble Calls per Meeting [C] – An obvious success measurement relates to the frequency of problems encountered during conferences. Some organizations define a trouble call as any instance that the meeting participants contact the conferencing support team / help desk for assistance during their meeting. Other firms broaden the definition to include any time a meeting does not proceed as planned. Trouble calls can be tracked in many ways, such as through trouble ticketing systems that can provide reports based on the type of failure and an associated closure code (as shown below). The chart on the left highlights the number of trouble tickets closed by closure code, while the chart on the right presents this data on a percentage basis.

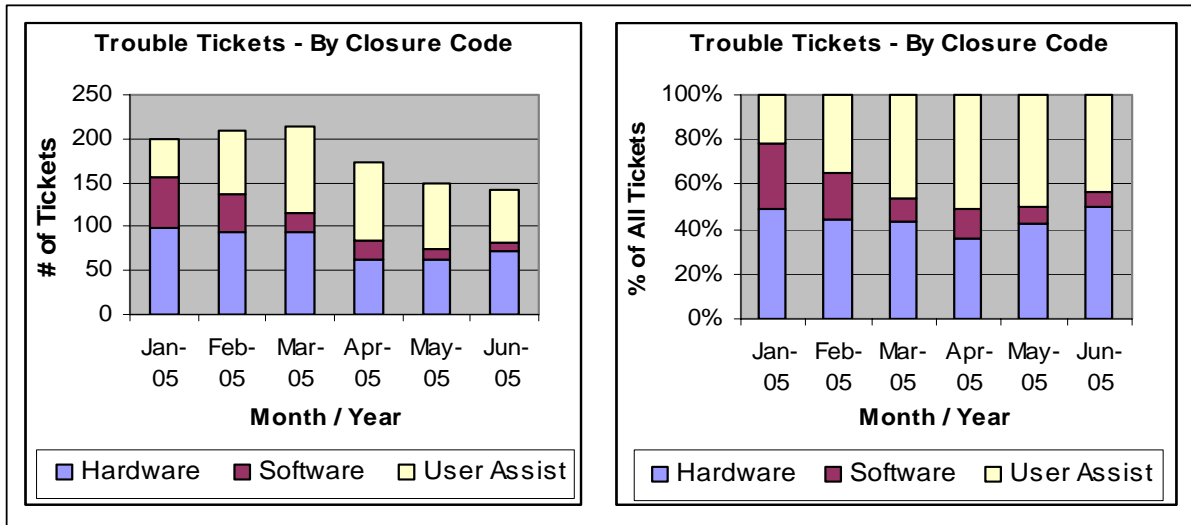


Figure 4: Trouble Tickets - Tracked by Closure Code

- Trouble Calls per Meeting Hour [C] – This measurement expands on the prior metric by providing an indication of the impact of the meeting problems on the meeting participants. For example, an organization may be disappointed to learn that its meeting trouble rate is 0.25 (or 1 in 4 meetings has some kind of problem). This same firm, however, might be pleased to note that this equates to only one problem per eight hours of conferencing or that this trend has been decreasing each month for the last six months.

- Trouble Calls per Location – In addition to measuring the trouble rates for the entire environment, many organizations track service delivery on a per-location basis. This allows the conferencing team to pinpoint problem areas in need of attention and replicate the policies and procedures in use in more successful locations.
- Percent of “Successful” Meetings [C] – This is a relatively soft metric because it requires a clear definition of a successful conference. Some organizations obtain this metric by releasing post-meeting surveys to meeting hosts and participants with questions asking whether the conferencing services performed as expected. Other firms consider any meeting with any type of trouble call to be a failed meeting.
- Perceived Importance of Conferencing – This metric, which is usually obtained via end user surveys, considers the relative importance the end users place on conferencing services. To obtain this measurement, surveys should ask users to quantify, perhaps on a scale of 1 to 10, the value they place on conferencing services. Other surveys might ask users how likely they would be to reschedule their meetings by one hour, one day, or even one week if conferencing facilities were not available at their initially requested data and time.
- Estimated Monthly Cost of Problem Meetings – Some organizations measure the success of conferencing by the calculated costs incurred due to delayed, problematic, or failed meetings. For example, if a meeting including five Director-level participants (each with a fully loaded annual cost to the firm of \$200,000) is delayed for 15 minutes, one can calculate the cost in wasted employee time to be roughly \$95. While this figure may seem trivial, imagine if this 15-minute delay actually impacted 250 Managing Directors (each earning \$5M per annum) at a global investment bank. In this case the calculated problem cost would be more than \$150,000!³

The above list represents only a subset of the commonly tracked conferencing performance metrics.

Cost Measurements / Savings Calculations

Business tools, including conferencing systems, require some degree of financial investment. As a result many organizations are interested in cost and ROI-related measurements including:

- Yearly Cost of Conferencing – Many organizations track the total cost of all conferencing services within the enterprise. This figure includes all equipment purchases / leases, maintenance and repair fees, data line charges (fixed and variable / usage related), support staff costs, external service costs (video bridging, gateway services, etc.) and even the footprint cost for the global meeting rooms. Note that these costs are often distributed throughout various cost centers and locations based on headcount statistics.

³ Some organizations base the compensation of conferencing service resources on these types of success / cost / savings metrics.

- Cost per Location or Facility – Some organizations simplify the above cost calculation by collecting yearly cost data on a per-location basis. In this situation they divide the yearly ownership costs of central resources and infrastructure items by using a readily available data point such as a headcount statistic or frequency of usage. Once this cost is obtained, it is relatively easy to calculate the cost of conferencing per employee for individual locations.
- Monthly Total Cost of Ownership per System – This calculation includes the cost of all equipment (leases, depreciation, etc.), maintenance, support, and usage fees for a particular location. Note that the monthly TCO will depend on location, equipment utilized, local support costs, and more.
- Cost per Meeting [C] – In recent years many organizations have shifted their cost allocation strategies to usage-based models. Such organizations would naturally be interested in the cost per meeting statistic. Managers may opt to calculate this figure globally (by dividing the total cost of conferencing by the total number of meetings) or locally (by dividing the cost per location by the number of meetings for that location). Furthermore, some organizations sub-divide this calculation into the fixed and variable cost per-meeting.
- Cost per Meeting Hour [C] – This statistic is easily calculated from the cost per local meeting and average duration per meeting figures. Alternatively one can calculate this number by totaling the global cost of conferencing and dividing by the number of local meeting hours conducted on a global basis. Note that this statistic is a necessary part of the ROI calculation for conferencing investments. As with the prior statistic, this can be divided into the fixed and variable cost per-hour of conferencing.
- Hard Savings per Meeting Participant – This metric provides an indication of the fiscal benefits that each conference provides the firm. In order to calculate the hard savings, one must calculate the costs associated with a typical business trip and the cost of a single conference. For example, if a typical business trip has a total hard-cost of \$2,000 and a typical conference has a cost of \$250 per hour per location, a conference that allows three employees to avoid traveling saves the firm 3 x \$1,750.
- Soft Savings per Meeting Participant – In order to calculate the soft savings per meeting participant, one must calculate the cost per hour of the average employee (including benefits, bonuses, commissions, etc.) and the number of hours saved by converting a business travel meeting into a videoconference. WR estimates that a typical business trip requires 15 - 20 hours of employee time, and therefore converting that trip into a 2-hour videoconference would save 13 - 18 hours of employee time per employee.
- General ROI on Conferencing Investments – This calculation combines the total yearly cost of conferencing with an estimate of the hard (and perhaps soft) costs saved through the use of conferencing.

- System Usage vs. System Cost – Some firms track system usage compared to the complexity (or purchase, integration, and support cost) of the conferencing room in hopes of calculating the per-room level of spending that yields the best ROI for the firm.

Service Provider Performance

Many of the CTQs described in this section can be adapted to provide an indication of the performance of an organization’s vendors - including external bridging providers and managed service providers. For example, the chart below highlights the hours invested by one managed service provider during a two-month period. As shown, from January to February of 2005, the time invested in certain areas (projects, leave time, training, maintenance, and trouble tickets) decrease, while the time invested in administration, system updates, and event support increased.

Depending upon the specific goals of the end-user organization, these measurements / set of metrics can highlight areas of success and/or areas of failure for the managed service provider.

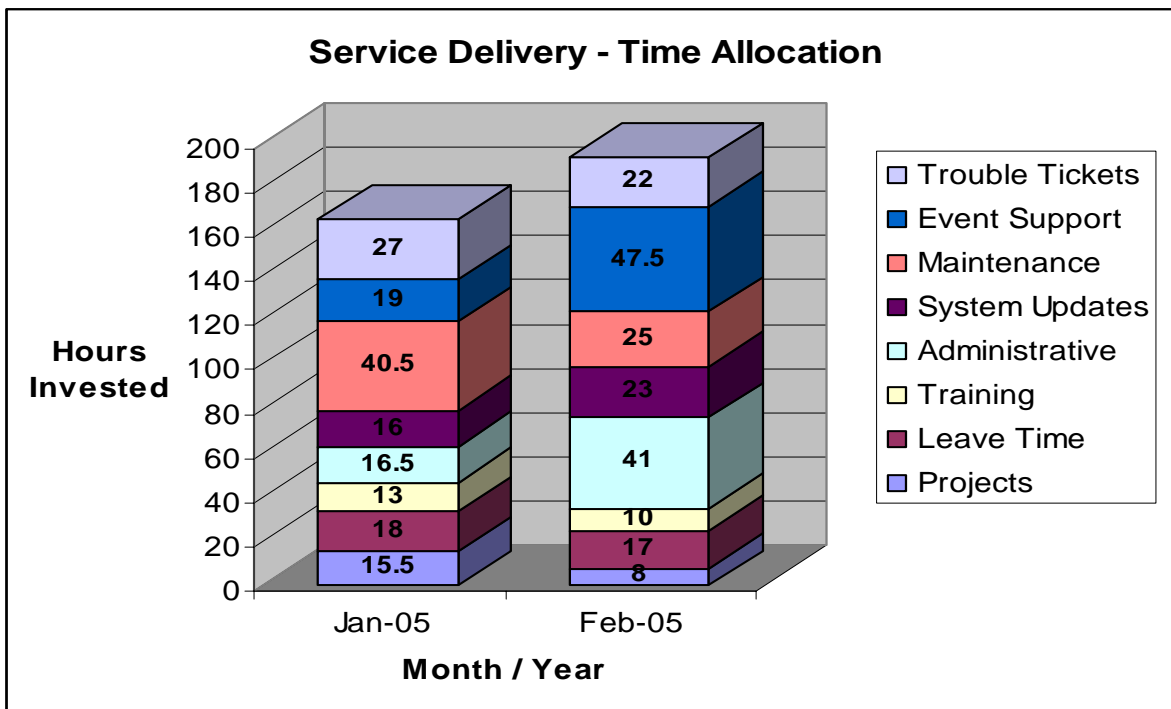


Figure 5: Service Delivery Month-to-Month by Time Allocation

The Benefits of Performance Measurement and Process Improvement

Generating these metrics is not without cost – either in software or employee time. The potential benefits of gathering and analyzing these metrics, however, typically more than justifies the monthly investment and include:

- Tighter quality control – Tracking system and meeting problems can highlight global quality and performance issues and allow conferencing managers to maximize the reliability and performance of their service offering.
- Ability to isolate problem areas / recurring issues – By tracking problem metrics on a per-location and/or per-system basis, managers can isolate problem areas and minimize the impact on the user community.
- Better grasp / control of end user satisfaction levels – By measuring the current value and trend of user satisfaction levels, managers can determine whether the conferencing services are in need of upgrade or enhancement.
- Ability to respond to issues more quickly – By tracking metrics and enhancing procedures, conferencing managers can respond to user issues more quickly and minimize the impact on meeting participants.
- Ability to track the impact of new policies, procedures, etc. on performance – By measuring performance metrics both before and after the implementation of new procedures, one can accurately assess the impact of procedural changes on global performance and user satisfaction. Some organizations beta-test new procedures locally and measure the result before deploying those procedures globally.
- Ensuring best / appropriate use of technology - Usage statistics can illustrate to managers the way in which conferencing services are being utilized on a per-department, per-location, or per-person basis. For example, if a specific department schedules recurring 36-site video meetings, managers might recommend the use of web conferencing, webcasting, or streaming solutions in lieu of videoconferencing.

Additional benefits include:

- Ability to leverage statistical data, performance history, and usage trends during negotiations with service providers and other vendors.
- Improved ability to make strategic sourcing / purchasing / staffing decisions
- Ability to implement usage-based charge-backs / cost recovery
- Improved ability to plan for future requirements (where new systems are needed, etc.)

- Ability to gauge and monitor the activities and “performance” of the user community in terms of scheduling, usage, etc.
- Ability to compare performance to other locations and organizations to ensure best of breed performance
- Tighter cost control / effective use of funds
- Ability to justify additional investments in conferencing
- Ability to verify the performance of contractors / service providers vs. contracts / SLAs

Overall, performance measurements allow conferencing managers to prove and document the benefits of conferencing for the host organization and ensure that the firm enjoys the maximum return on each dollar spent on conferencing. In other words, conferencing performance metrics allow accountable managers to effectively highlight the fruits of their labor.

Options for Data Collection and Analysis

Organizations seeking to enjoy the benefits of performance measurement and analysis for conferencing have two “forward-motion” options: build their own infrastructure or leverage that of a conferencing managed services provider.

Option 1: Build Your Own

Given the desire, funding, and resources (managerial, technical, etc.), virtually any end user organization should be able to conduct at least some degree of performance measurement and analysis. The advantages of this type of approach compared to utilizing a third-party service provider include:

- Ability to maintain confidentiality – Even a trusted external partner is still an external partner. When security must be maintained, the do-it-yourself model may be preferred.
- Avoidance of conflict of interest - Service providers / contractors may leverage performance data, appropriately or not, as a means to justify additional investments.
- Full disclosure – Internal data collection and analysis ensures that all metrics, flattering or not, can be reviewed and analyzed.
- Assurance of 100% familiarity with performance metrics – Collecting and analyzing data internally makes the conferencing team more familiar with the performance results than they would be after reviewing an externally developed document.

The primary disadvantage of the do-it-yourself approach is that organizations must invest and manage resources (data collectors, administrators, clerk typists, analysts) and infrastructure items (scheduling systems, data collection engines, reporting systems). This can be both cost- and resource-prohibitive; especially when conferencing is not the core focus of the organization.

Option 2: Using a Managed Services Provider

An alternative worthy of consideration is the use of an external conferencing managed service provider (MSP) to manage part (or all) of the conferencing environment. In some cases MSPs are used in lieu of internal resources, while in others they augment the internal conferencing team to provide best of breed services to the end user community. The advantages of this approach include:

- A Turnkey Solution – Managed service providers can be responsible for gathering all pertinent performance / success data and providing top-level (minimally) or in-depth analysis, alleviating internal staff from a recurring and time-consuming burden.
- Access to Benchmarking Data – Since MSPs typically service multiple customers, they can aggregate the collected data and provide benchmarking and best practice data to their clients as a means of highlighting areas in need of support or remediation.

- Ability to Leverage Core Competencies – Many MSPs provide these types of management and data analysis services on a daily basis. This means that end user organizations can benefit from an MSP's experience to avoid having to reinvent the processes and procedures for data collection and evaluation.
- Access to Experience – MSPs are experienced at gathering data and creating / implementing process and procedure improvements as required. In addition, MSPs can leverage experience gained from one customer to assist multiple customers.
- Increased Cost Effectiveness – MSPs utilize a common infrastructure to support multiple customers, which results in a lower cost per-customer / per-management element.
- Consistent Delivery – End users can require MSPs to gather and analyze quarterly data in order to receive payment for services. Since payment doesn't flow until this deliverable is met, end users are sure to receive the analysis results in a timely manner.

While true that an enterprise can achieve many of the same goals through its own internal organization, quite often the enterprise is distracted by its own business cycles and needs to focus on areas of core competency, and thus fails to proactively monitor, evolve, and improve upon its conferencing environment. In this context, managed services providers can serve as efficiency and quality consultants who can help at both a strategic and a tactical level. As with all external contractors, managed service providers should be held to as high a standard as possible to ensure the very best conferencing experience.

Conclusion

Ideally, all decisions would be made from a position of knowledge and with the appropriate supporting data in hand. Unfortunately, most conferencing professionals traditionally have been forced to conduct their business in a virtual information and performance measurement vacuum.

The business community spends hundreds of millions of dollars annually attempting to re-engineer processes and improve organizational effectiveness. These organizations, however, rarely focus their attention on scrutinizing the performance of their internal conferencing service or external conferencing service provider(s).

The areas of measurement highlighted in this white paper provide a foundation for the measurement and analysis of conferencing services. While these metrics can be obtained using internal staff, Wainhouse Research has noted that many organizations do not have the internal resources, infrastructure, or procedures in place to gather the necessary data on a consistent basis. By leveraging the support of a *consultative* managed services provider, organizations can achieve their goals without having to shoulder the additional costs and burden of data collection and assessment.

While the specifics surrounding data collection will vary, there is no doubt that performance measurements and analysis warrant more attention than they currently receive within the average enterprise. Wainhouse Research recommends that organizations make the tracking of key performance indicators and metrics a regular part of their proactive conferencing management.

About Wainhouse Research

Wainhouse Research (www.wainhouse.com) is an independent market research firm that focuses on critical issues in rich media communications, videoconferencing, teleconferencing, and streaming media. The company conducts multi-client and custom research studies, consults with end users on key implementation issues, publishes white papers and market statistics, and delivers public and private seminars as well as speaker presentations at industry group meetings. Wainhouse Research publishes Conferencing Markets & Strategies, a three-volume study that details the current market trends and major vendor strategies in the multimedia networking infrastructure, endpoints, and services markets, as well as a variety of segment reports, the free newsletter, The Wainhouse Research Bulletin, and the PLATINUM (www.wrplatinum.com) content website.

About the Authors

Alan Greenberg is a Senior Analyst & Consultant at Wainhouse Research. Alan has worked in the telecommunications, videoconferencing, software and services, and multimedia arenas for more than 20 years, holding marketing positions with VTEL, Texas Instruments, and several Austin, Texas-based startups, and consulting to many organizations. He has conducted research into dozens of management software and managed services deployments, and authored [Video Communications Management Systems 2004](#). Alan's current focus includes distance education and e-Learning, managed services, and 3G visual communications. Alan holds an M.A. from the University of Texas at Austin and a B.A. from Hampshire College. He can be reached at agreenberg@wainhouse.com.

Ira M. Weinstein is a Senior Analyst and Consultant at Wainhouse Research, and a 14-year veteran of the conferencing, collaboration and audio-visual industries. Prior to joining Wainhouse Research, Ira was the VP of Marketing and Business Development at IVCi, managed a technology consulting company, and ran the global conferencing department for a Fortune 50 investment bank. Ira's current focus includes IP video conferencing, network service providers, global management systems, scheduling and automation platforms, ROI and technology justification programs, and audio-visual integration. Mr. Weinstein holds a B.S. in Engineering from Lehigh University and is currently pursuing an MBA in Management and Marketing. He can be reached at jweinstein@wainhouse.com.

About SPL Integrated Solutions

SPL Integrated Solutions is the leading US-based integrator of audio and video systems and a provider of conferencing managed services. From its 19 offices, SPL is helping to increase the productivity at corporations, educational institutions, and government agencies by designing and installing large-display videoconferencing systems and fully integrated multimedia systems, as well as large-scale audio and video systems for large performance venues. SPL's Managed Conferencing Services take clients from system consultation and design through integration, project management, installation, and management of systems, as well as customer training, documentation and planning for new technology. For more information, visit www.splis.com.