

Benchmarking Videoconferencing Success

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Introduction

Exactly what defines a successful videoconferencing session? If a company claims to have a videoconferencing success rate of 95%, exactly what does that mean?

These are questions that have plagued the videoconferencing (VC) industry for more than 20 years. Unfortunately, there is no pre-defined or generally-accepted methodology for measuring videoconferencing success. As a result, it is difficult for enterprise videoconferencing managers to measure their own performance, and compare their company's performance to that of other organizations. In short, there is no videoconferencing success benchmark.

In hopes of clarifying the issues surrounding the measurement of VC success, WR conducted interviews with 20 enterprise videoconferencing managers responsible for global videoconferencing deployments. This document highlights the information learned from these interviews, and provides a set of recommendations and guidelines for organizations to measure and track their videoconferencing success.

Defining a Successful Videoconference

Within the context of a meeting, the term "successful" has several meanings. From the perspective of a meeting participant, a successful meeting is a productive meeting during which the participants were able to conduct the business at hand. For a project manager this might mean that the project's goals were advanced. For a training coordinator, this might mean that meeting attendees learned the subject matter effectively.

Within the context of a videoconferencing meeting, the term "successful" means the technology enabled the meeting participants to conduct their business, and that the technology was a) non-obtrusive and b) did not interfere with the goal of the session itself. From the perspective of a videoconferencing manager, the term "successful" means that the technology performed as designed.

But exactly how should an enterprise videoconferencing manager define a successful meeting? What are the criteria that determine whether a meeting was a success or failure? Does this determination depend upon any non-technical meeting circumstances (e.g. profile of meeting attendees, number of sites involved, topic being discussed during the meeting, etc.)? Is it possible to have a partially successful meeting?

Research / Interview Results

In hopes of understanding how the typical enterprise defines VC success, WR conducted 20 interviews with enterprise videoconferencing managers.

Interviewee Demographics

All of the interviewees represented organizations with at least 2,500 employees with a significant investment in videoconferencing. Although the limited sample set precludes our ability to generate accurate quantitative data, WR believes the sample set to be a good representation of the enterprise end-user community at large.

The participants represented a wide range of vertical markets as shown in the chart below.

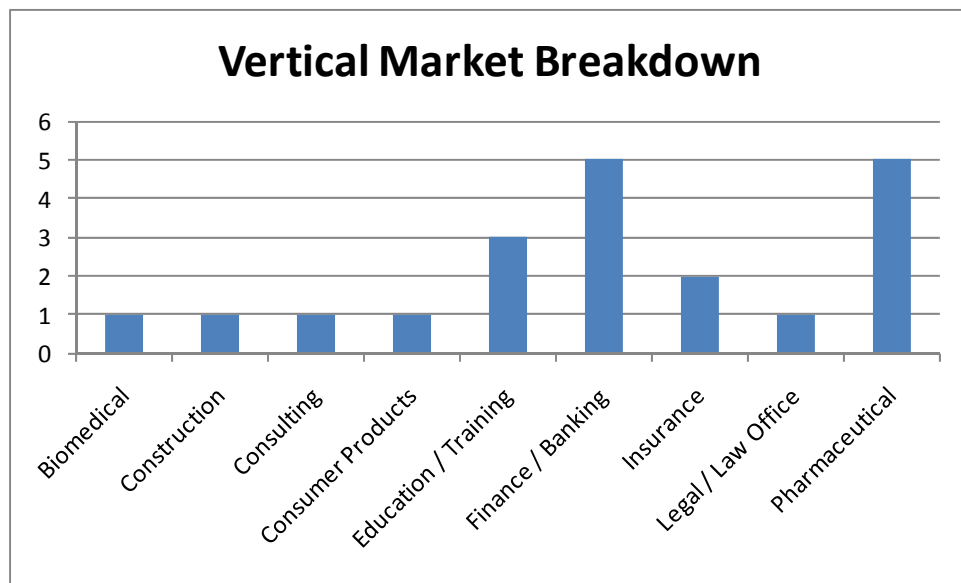


Figure 1: Vertical Market Breakdown

The interviewees reported the use of a variety of videoconferencing systems, with deployments heavily weighted towards the leading vendors (Polycom and Tandberg).

The interviewees represented more than of 5,700 group videoconferencing systems deployed around the world with the regional breakdown shown below.

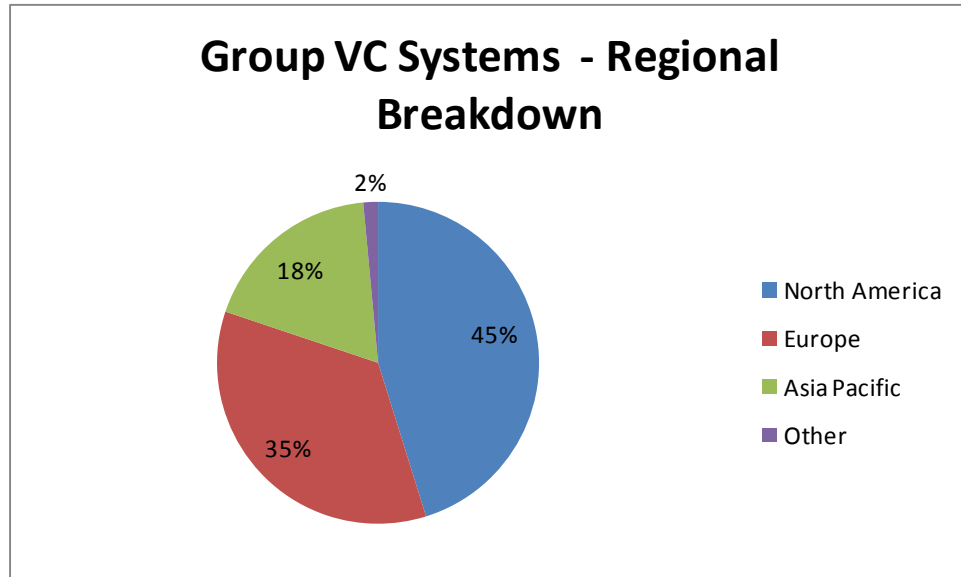


Figure 2: Group VC Systems – Regional Breakdown

In addition, 85% of interviewees indicated that videoconferencing is managed by their information technology (IT) department.

Current Tracking of Videoconferencing Success

Q1 - Do you actively track success and failure metrics for videoconferencing?

Only 50% of our interview participants indicated that they even track success and failure metrics for videoconferencing. Of those who answered NO to this question, the most common reasons given were:

- Belief that measuring VC success is subjective, complicated, or arbitrary
- Management has not requested this information to date
- Inability to track success because VC is decentralized and managed by multiple groups

Several interviewees stated that although they do NOT actively track success metrics, they do survey their users to gauge their level of satisfaction

Q2 - What key videoconferencing success metrics do you track?

The chart below shows the types of success metrics tracked by the ten (10) companies that indicated in Q1 that they do track VC success in some manner.

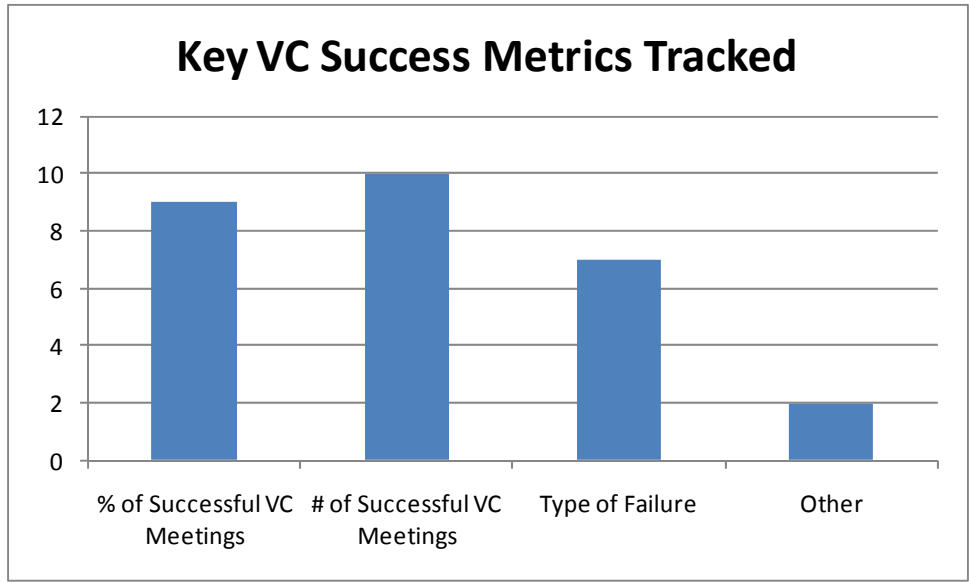


Figure 3: Key VC Success Metrics Tracked by Interviewees

Q3 - What data do you use to determine whether a meeting has been a success or a failure?

The chart below shows the data sources that the ten (10) interviewees who track VC success rely on to determine whether a meeting is a success or failure.

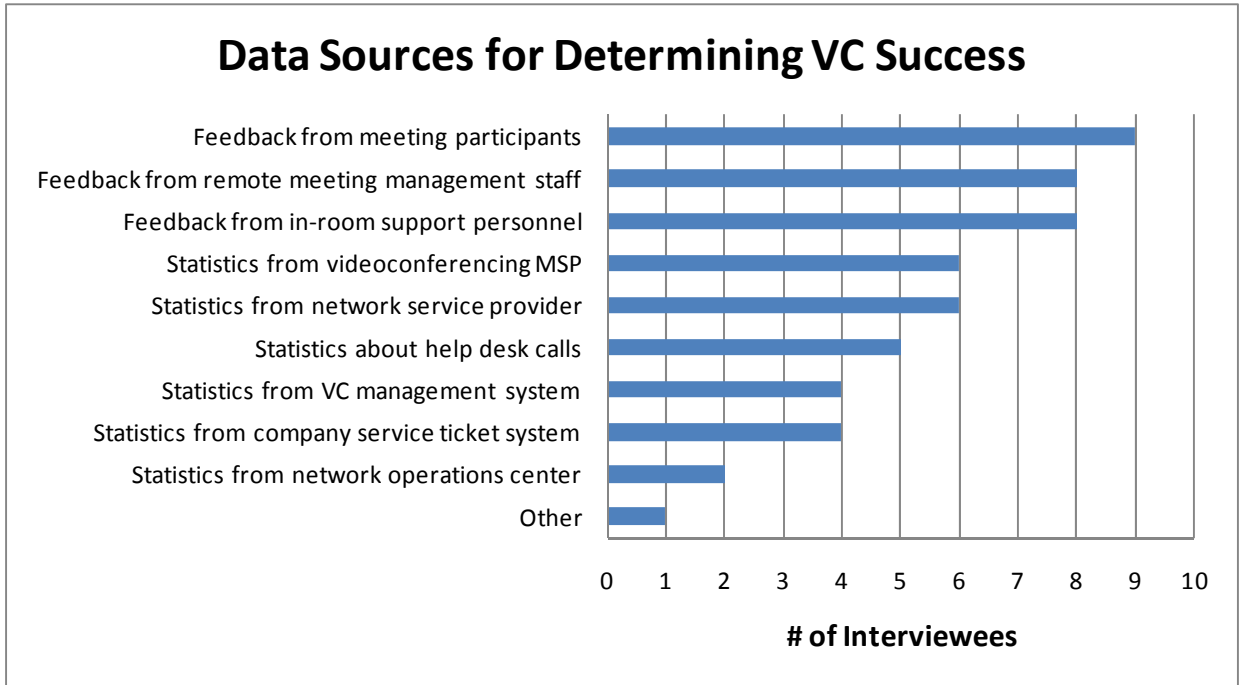


Figure 4: Data Sources for Determining VC Success

Note that only four interviewees leverage data from a VC management system (e.g. Polycom CMA, Tandberg TMS, etc.).

Q4 – Do you track each meeting as “partially successful” or “partially failed” or is each meeting considered either a 100% success or a 100% failure?

As shown below, 4 of the 10 interviewees currently tracking VC success categorized meetings as either a total success or a total failure with no grey area in between.

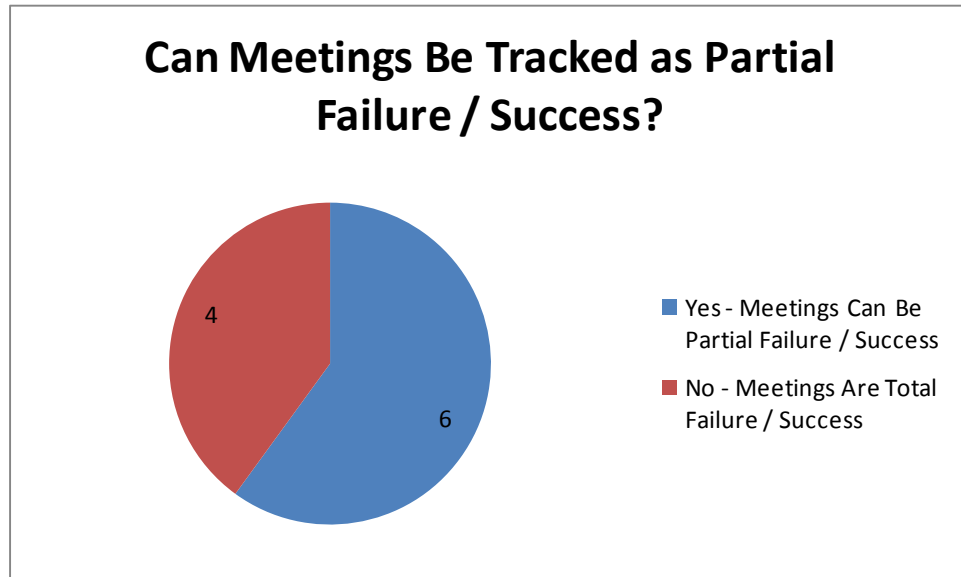


Figure 5: Can Meetings Be Tracked as Partial Failure / Success?

WR believes that the tagging of a meeting as a partial failure is a significant contributor toward the confusion and complexity associated with measuring VC success.

Q5 – Based on your current success / failure tracking method, what is your current videoconferencing success rate?

Of the 10 companies tracking VC success, almost all reported a success rate of 90% or higher. While this may sound impressive, these success rates must be taken with a grain of salt as these companies are all using different yardsticks to measure success. It is entirely possible that the companies reporting higher success rates are simply using laxer (or just different) standards than the companies reporting lower success rates.

Q6 – Which of the following items / issues could potentially motivate you to tag a meeting as a failed meeting?

The vast majority of the interviewees believe that the items in the table have such a significant impact on the meeting experience that they would motivate the tagging of the meeting as a failure.

# of Interviewees	Items Very Likely to Cause a Meeting to be Tagged a Failure
19	Whether any video sites disconnected during the call / unexpectedly
19	Overall audio quality (volume, clarity, delays, artifacts)
18	Whether the video sites connected on time
18	Overall video quality (resolution, frame rate, camera angle)
18	AV functionality issues (defective mics, bad displays, etc.)
17	Problems caused by WAN issues

Figure 6: Items Very Likely to Cause a Meeting to be Tagged a Failure

Many items fall somewhere in between meaning that some companies consider these items to be contributing factors to tagging a meeting as a success or failure, and others do not.

# of Interviewees	Items that May or May Not Cause a Meeting to be Tagged a Failure
15	Staffing issues (mistakes made by support staff, poor customer service, lack of available staff to provide in-room support)
15	Issues caused by videoconferencing equipment interop issues
15	Problems caused by LAN issues
14	Issues outside of your ability to pro-actively monitor (e.g. TV powered off, mic pod stolen, room at remote site locked, etc.)
13	Issues caused by videoconferencing equipment limitations
9	Accuracy of the meeting scheduling process (date, time, sites, layouts)
9	User unable to launch his own ad-hoc call
8	User-related technology issues (disconnects, muting mics, moving camera)
8	Issues outside your control that impact the meeting (e.g. power out in a building, inability to connect to customer / external site)
7	Delays / stress caused by back to back meetings stepping on each other
7	AV design issues (bad lighting, poor room placement)

Figure 7: Items that May or May Not Cause a Meeting to be Tagged a Failure

Only a handful of interviewees believe that these items would motivate them to tag a meeting as a failure.

# of Interviewees	Items Very Unlikely to Cause a Meeting to be Tagged a Failure
6	Delays / stress related to last minute requests (unscheduled meeting, add / remove sites, change screen layouts, etc.)
5	User-related etiquette issues (soft speech, tapping on table, side-bar conversations, small fonts on PPT files, etc.)
4	Room availability issues (requested meetings that cannot be hosted)
3	Venue related issues (wrong room size or room layout)
2	Meeting room related issues (messy from prior meeting, door locked, uninvited people entering room during meeting, etc.)

Figure 8: Items Very Unlikely to Cause a Meeting to be Tagged a Failure

Q7 - Please indicate whether each of these real-world meeting situations below would be considered a success, failure, or partial success / partial failure within your environment.

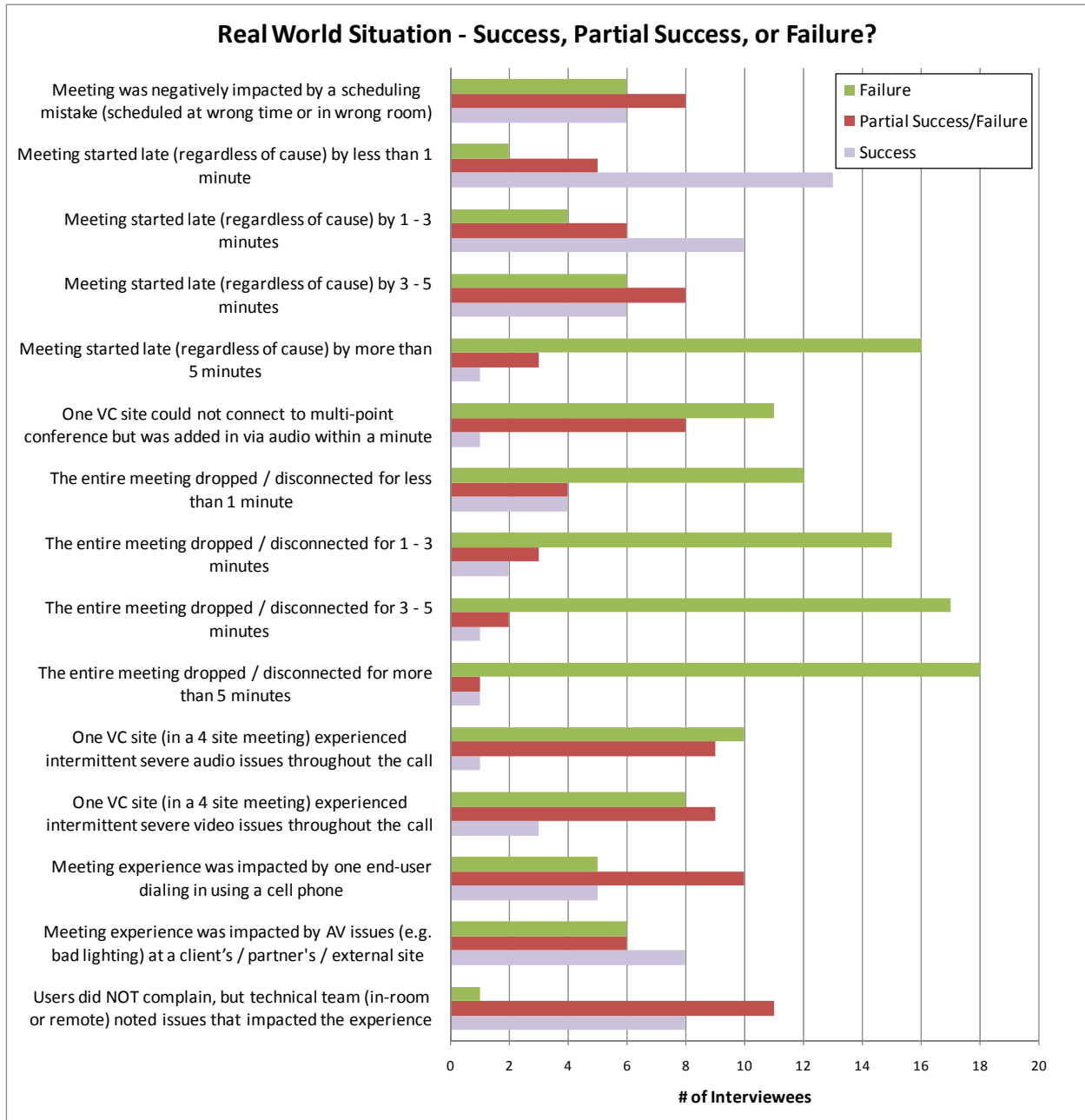


Figure 9: Real World Situations

As shown above, the level of consensus between the interviewees ranged from high (e.g. categorizing a meeting that drops for more than 5 minutes to be a failure) to low (e.g. categorizing a meeting that starts late by 3 - 5 minutes).

Q8 - Would any of the answers you've given so far change if we were talking about telepresence / multi-codec and display systems instead of standard videoconferencing rooms? In other words, would your success metrics / expectations be different for telepresence systems?

Eighteen out of 20 interviewees stated they would hold telepresence to a much higher performance and success standard than traditional videoconferencing.

Analysis of Interview Feedback

Based upon the answers and comments provided by the interview participants, WR identified 4 common themes which bear further discussion.

- 1) What role do fault and/or accountability play in determining whether a meeting is deemed a success or failure (e.g. if a fire alarm goes off and the building is evacuated, is that a failed meeting)?
- 2) Are there levels of success (e.g. successful, partially successful, not successful / failure)?
- 3) What information should a VC manager leverage?
- 4) What role does meeting context (e.g. # of sites, profile of attendees, topic being discussed, etc.) play in determining whether a meeting is deemed a success or failure?

Based on the interviews, WR is able to draw the following top-level conclusions:

Is Fault or Accountability a Factor?

WR believes that in the ideal world, a videoconferencing manager should be held accountable for only items within his control, and that only those items should define his meeting success metric. For the most part, the feedback from the interviewees indicated that this is the case in the typical enterprise today. There are, however, a number of notable exceptions in which a VC manager appears to hold himself accountable for things outside his control. For example, as shown in question 7 above, 12 out of 20 interviewees consider a meeting impacted by AV issues at a client's / partner's / external site, which are clearly items outside of the VC manager's control, to be a partial or total failure. This demonstrates that the VC managers are - either by their own choice or by managerial decree - harder on themselves than may be necessary.

Based on the above, WR believes there should be two success metrics:

- 1) The Videoconferencing Service Success Metric - reflects all issues that impact the VC meeting and are a) within the VC manager's control or area of responsibility, or b) could have been avoided through the due diligence of the VC team.
- 2) The Videoconferencing Meeting Success Metric - reflects any and all issues that impact the audio visual and videoconferencing aspects of the VC meeting regardless of area of responsibility or fault.

For example, a video meeting impacted by an AV problem (e.g. bad microphone) in a VC room under the management of the VC manager should be reflected within both the VC service success metric and the VC meeting success metric. However, if that same problem occurred in a room that was outside of the VC manager's control (e.g. an external client site), the issue itself should only be reflected within the VC meeting success metric.

The example above illustrates another important point; the two videoconferencing success metrics above reflect both videoconferencing AND AV related issues, regardless of whether or not these two disciplines are managed by the same internal (or external) support team. This is a key part of enabling the comparison of VC metrics between various organizations.

	Reflected Within the VC Service Success Metric	Reflected Within the VC Meeting Success Metric
Items within the VC team's control	YES	YES
Items NOT within the VC team's control	NO	YES

Figure 10: Difference between VC Service and VC Meeting Success Metrics

Are There Levels of Success?

The majority of interviewees believe that a meeting can be partially successful, meaning that a meeting can be impacted by one or more issues but still not be considered a total failure. In other words, as illustrated in the responses to question 7 above, there are issues that warrant tagging a meeting less than a total success, but not a total failure.

However, the above methodology would result in a three part metric; 1) % of meetings successful, 2) % of meetings partially successful, and 3) % of meetings failed. Although more informative, a three part metric is not well suited for benchmarking. Ideally, the metric would be a simple success / failure percentage (e.g. 96% success).

WR recommends that all failures, regardless of severity, be considered failures for the purposes of a success / failure metric. Organizations should, however, track the types of failures and reasons behind failures to help them prioritize problems and improve their overall performance.

What Information Should the VC Manager Leverage?

Although hard data, such as the information provided by videoconferencing management systems and network monitoring platforms, is easier to process, VC managers must also consider feedback from various other sources as illustrated in the responses to question 3 above. VC managers will, of course, need to carefully scrutinize all information to determine which items should be reflected in the success metrics. While true that this introduces a certain level of subjectivity to the success metrics, WR believes that videoconferencing managers know quite well which items are worthy of consideration.

What Role Does Meeting Context Play?

Although not shown in the question responses above, a few interviewees indicated that the context of a meeting (e.g. # of sites, profile of attendees, topic being discussed, etc.) does influence the determination of whether a meeting is deemed a success or a failure.

Although WR understands the motivation behind allowing meeting context to influence success / failure determinations (i.e. if the CEO is attending the meeting, there are potential political repercussions if the meeting fails). However, including context as a criteria in determining whether a meeting is a failure adds what WR believes to be an unacceptable level of subjectivity and variability to the equation. For this reason, WR recommends eliminating meeting context from consideration; a position that appears to be in line with that of the majority of interviewees.

Note that the above recommendation does NOT mean that an enterprise should not give high profile meetings some degree of additional attention. It just means that in terms of measuring VC success, all meetings are equal.

Guidelines for Measuring VC Success

Based on the interviewee feedback and WR's experience advising enterprise clients and managing enterprise video deployments, WR makes the following recommendations.

Rules of Thumb for Identifying Failed Meetings

If any of the following issues arise, the VC meeting should be categorized as a failed meeting:

- Meeting delay of > 1 minute due to VC / AV issues
- Inability to connect one or more video sites
- Disconnection of one or more video sites for > 1 minute before reconnection
- Audio issues impacting one or more sites (video or audio) as follows:
 - Two or more times during the meeting
 - For a total of 30 seconds or longer (per site)
- Video issues impacting one or more video sites as follows:
 - Two or more times during the meeting
 - For a total of 1 minute or longer (per site)
- Other AV issues (e.g. defective video display, dead remote, etc.) impacting one or more sites
- User generated issues (e.g. muting mics, moving cameras, etc.) impacting one or more sites
- AV / VC support staff issues impacting the meeting (e.g. no-show, mistake, behavioral)
- Scheduling mistakes caused by AV / VC support team
- Meeting impacted by bad audio from end-user dialing in using a cell phone

The above list represents only a small subset of the problems and issues that could potentially impact a videoconferencing session. In addition, WR specifically structured the above items to be generic enough to include a wide range of specific issues. For example, audio issues would include low volume audio, distorted audio, echo, feedback, etc. caused by A/V issues, network issues, etc.

General Guidelines for Assessing VC Meeting Success

The flowchart below highlights the process to follow for a) determining whether issues not covered above warrant the tagging of a VC meeting as a success or a failure, and b) whether the issue should be reflected in the VC Service Success Metric, the VC Meeting Success Metric, or both.

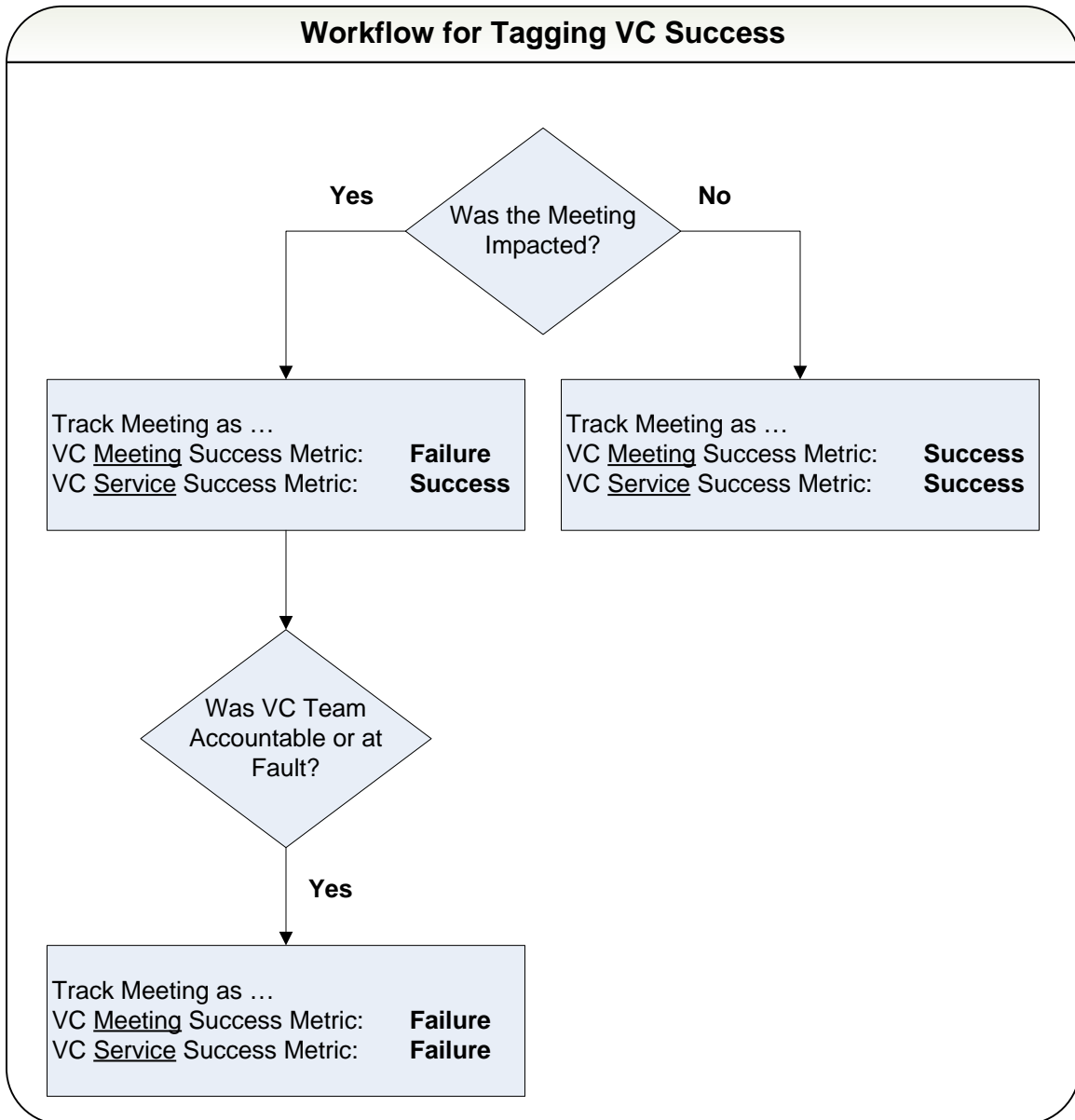


Figure 11: Workflow for Tagging VC Success

In general, in order to be reflected within the VC success metrics, an issue / problem must meet ALL of the following criteria:

- 1) Materially impact the meeting participants' ability to conduct their business
- 2) Relate to the AV or VC portion of the meeting

For example, the following items would NOT be reflected within either of the two VC success metrics because they do not relate to the AV or VC portion of the meeting (even though they would, in fact, impact the user's ability to conduct their business):

- 1) Participant does not show up for the meeting on time
- 2) Participant is not properly prepared for the session
- 3) Meeting is interrupted by a fire alarm, bomb scare, or other similar issue
- 4) Meeting is interrupted by a power outage
- 5) Uninvited people entering the room during the meeting

When in doubt, VC managers should err on the side of tagging a meeting a failure. For example, if a meeting that should have enjoyed high quality video was instead burdened with very low quality video, the VC manager should tag this meeting as a failure – even if the meeting participants did not complain or did not realize that the video quality should have been better.

Videoconferencing vs. Telepresence Meetings

Although WR defines telepresence as a form of videoconferencing, for a variety of reasons (cost, product positioning, etc.) end-users hold multi-camera / multi-display telepresence meetings to a higher performance standard than typical videoconferencing meetings. For this reason, the process outlined within this document should not be applied to telepresence sessions.

Conclusion

Based on the feedback solicited from key enterprise videoconferencing managers and WR's 20+ years of experience within the videoconferencing and A/V domains, WR believes that it is entirely possible for organizations to create and track videoconferencing (VC) success metrics by leveraging the following recommendations / guidelines:

- 1) VC managers should maintain two videoconferencing success metrics as follows:
 - The Videoconferencing Service Success Metric - reflects all issues that impact the VC meeting and are a) within the VC manager's control or area of responsibility, or b) could have been avoided through the due diligence of the VC team.
 - The Videoconferencing Meeting Success Metric - reflects all issues that impact the audio visual and videoconferencing aspects of the VC meeting regardless of area of responsibility or fault.

For example, a typical enterprise could report a VC Service Success metric of 93% and a VC Meeting Success metric of 82% (where the 11% difference represents AV / VC items that impacted the meeting but were not within the control of the VC manager).

These two metrics are referred to collectively as "the VC Success Metrics."

- 2) For the purpose of creating VC success metrics, there is no such thing as a partially successful / partially failed meeting. Any meeting that is NOT a success should automatically be deemed a failure.
- 3) The two Videoconferencing Success Metrics reflect both videoconferencing AND AV related issues, regardless of whether or not these two disciplines are managed by the same support team.
- 4) VC managers should consider both hard data (e.g. call detail records and trouble tickets from management systems) and soft data (e.g. feedback from user surveys) as they determine whether to tag a meeting as a success or failure.
- 5) VC managers should NOT consider meeting context (e.g. # of sites, profile or importance of meeting attendees, topic being discuss during the meeting, etc.) as they determine whether to tag a meeting as a success or failure.
- 6) In general, any meeting that experiences issues that a) impact the user experience, and b) are related to the AV or VC portion of the session, should be considered a failure within the VC manager's success metrics.
- 7) VC managers should actively track the severity and cause of all issues impacting video meetings. This information will enable the manager to prioritize issue remediation efforts and gain a better understanding of their overall performance.

For example, a typical enterprise could report a VC Service Success metric of 93% and further clarify that the breakdown of the 7% tracked failures is as follows; 3% audio issues, 2% video issues, and 2% other A/V issues.

Careful adherence to the above guidelines and suggestions should allow enterprise videoconferencing managers to create meaningful and comparable metrics for the performance of their videoconferencing service and the success of their video meetings.

About Wainhouse Research

Wainhouse Research, LLC (WR) provides analysis and consulting on the market trends, technologies/ products, vendors, applications, and services in the collaboration and conferencing fields. Areas of coverage include hardware, software, and services related to audio, video, and web conferencing, unified communications, and enterprise social networking. The Company publishes market intelligence reports, provides customized strategic and tactical consulting and studies, and produces industry events (conferences). Additionally, the Company operates industry-focused and end user-focused Web sites and publishes a weekly sponsored bulletin for news and analysis. For more information on Wainhouse Research, visit www.wainhouse.com.

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About Bristol-Myers Squibb

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Polycom, Inc. is the global leader in telepresence, video, and voice solutions and a visionary in communications that empower people to connect and collaborate everywhere.

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Collaborating with Polycom solutions has also become a key competitive advantage for leading organizations around the globe. Our customers tell us it makes sense to use Polycom solutions and their existing business applications to communicate and share information in real time over any device and across any network. Polycom's open-standards integration with the leading unified communications (UC) platform vendors makes it possible. Quite simply, it makes good business sense for our customers to rely on the broadest offering of unified communications solutions—from Polycom—so they can improve productivity, reduce their costs, rapidly gain a return on their technology investment—and thrive.

About York Telecom

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York Telecom, headquartered in Eatontown, New Jersey, has 25 years of experience providing state-of-the-art audio and visual collaboration solutions to Global 500 Companies, as well as Government, Education and Medical clients.

Offering turn-key and totally-managed solutions, York Telecom has a proven track record of success in providing technology and services including total managed conferencing services, consultation, custom video room engineering, telepresence, video distribution, distance learning, television broadcast facilities, streaming media, life-cycle video production, 24/7/365 maintenance and help-desk support and providing a full range of audio visual communications support in a global environment.

Since inception, York Telecom has designed, built and currently maintains more than 10,000 video facilities and has over 5000 sites under VNOC managed services in 72 countries. Their years of lessons learned supporting mission critical visual collaboration systems within the Federal and commercial marketplace have been incorporated into their best business practices at the core of our engineering and operational excellence as a full services visual communications provider.