Video Collaboration:
Optimize to Preserve and Increase Business Value
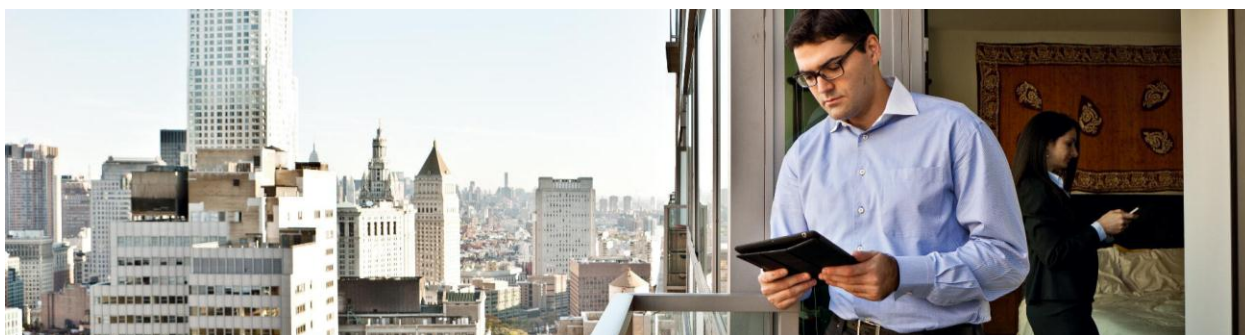
What You Will Learn

Just as a person who achieves a fitness goal will backslide without ongoing attention to diet and exercise, the video collaboration experience degrades without ongoing tuning of technology and processes. This paper, the final in a three-part series on Video Collaboration lifecycle phases, discusses the capabilities you need to:

- Preserve the original user experience as the network environment changes over time
- Increase the business value of the original investment by adding new capabilities
- Optimize efficiency for your IT and video teams and employees who use video collaboration for their jobs

Preserving the User Experience

The primary goal of the optimize lifecycle phase is making sure that the Video Collaboration investment continues to return the expected business value. To protect the investment, the IT team needs to make sure that executives and other users remain as pleased with the video solution several months or years after the deployment as they were at the beginning.

Why might the experience degrade without optimization activities? Experienced services partners refer to "network entropy" or the natural tendency toward disorder without ongoing monitoring and tuning. Some of the factors that can degrade video performance include:

- Addition or removal of network devices
- Addition of video endpoints
- Network refreshes
- Company mergers and acquisitions
- New usage patterns, such as more intercontinental telepresence sessions across a saturated WAN link
- New capabilities, such as multipoint calling or streaming video to mobile devices
- Dial plan changes
- Integration of video into other enterprise applications for collaboration with partners, suppliers, or customers

Video as "Mine Canary"

Because of the real-time nature of video, jitter, delay, and packet loss are often first indicators of network bandwidth problems. If streaming or interactive video is performing as expected, so will your data applications. Therefore, video optimization services pay dividends by helping to protect the performance of all applications that operate on your network.

Paradoxically, one of the main reasons for a degraded user experience is high adoption – the result of an initially excellent user experience. The danger is that even a short interval with a poor user experience can decrease adoption, reducing the business value of the IT video collaboration project. That is, an executive who has an unsatisfactory videoconferencing experience with an important customer is more likely to drive to the customer's office the next time. Therefore, it is crucial to not wait until performance begins to wane before tuning the network and the solution.

Making sure of a consistently high-quality video collaboration experience requires consistent ongoing monitoring and tuning of the underlying network as well as the video solutions delivered over the network (Table 1). Your organization or your services partner needs the experience to know how frequently to perform each of the tuning activities and what types of compromises make good business sense. For example, if budgets were unlimited, the simplest way to preserve the video collaboration experience as demand increased would be to keep adding bandwidth, analogous to adding new lanes on a highway. However, a more cost-effective approach might be to introduce network admission control, analogous to a metering light on a highway.

Table 1.   Video Collaboration Optimization and Network Optimization Activities Are Complementary

Network Optimization Services Examples	Video Collaboration Optimization Services Examples
Periodic network stability audits	TelePresence Analysis and Reporting utilization audits
Software strategies	Periodic telepresence systems stability audits
Change management support	Telepresence software strategies
Security incident management	Telepresence change management support
Operating system upgrades	Telepresence system upgrades
Minimizing inconsistencies in switch operating system, dial plan, quality of service (QoS) parameters, and so on	Auditing dial plan, QoS parameters
Support during network changes, including a backout plan	Support during Telepresence system changes, including a backout plan
	Introducing or optimizing video library management

"It needed to give us a higher return on the high-tech investment than just immersive videoconferencing, vital though that was. The unparalleled expertise and technical knowledge inherent in the Cisco Services team ensured we would meet that objective."

– Nico Hofman, network solution expert in the Philips IT Infrastructure & Platform team

Read about how Cisco Services helped Philips enable strategic decision-making worldwide.

Adding Business Value

The optimize lifecycle phase also involves looking for ways to increase the business value of the original investment by adding new capabilities for communication, collaboration, education, and physical safety and security. This activity triggers a new Video Collaboration lifecycle, beginning with the preparation and planning phases (Figure 1).

Figure 1. The Optimize Lifecycle Phase Yields New Ideas Requiring Preparation and Planning
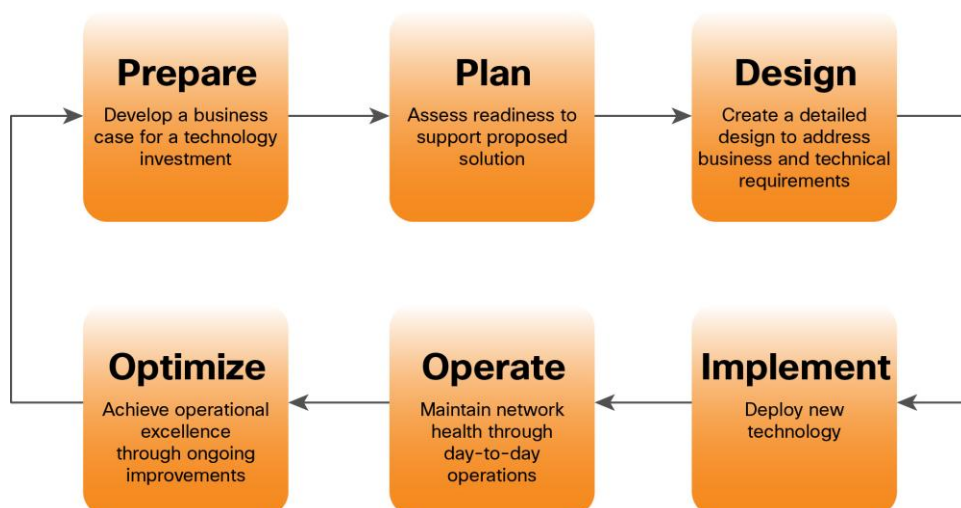

Table 2 lists a few examples of ways organizations might increase ROI from their Video Collaboration investment after the initial deployment. Organizations that do not have the resources to deliver the needed optimization services or prefer to devote internal resources to more strategic projects can engage an experienced services partner.

Table 2. Adding Value to the Video Collaboration Deployment Requires Technology and Business Expertise

New Capability	Optimization Services Needed
Recording telepresence sessions	• Determine needed network and storage capacity • Develop processes and guidelines to avoid unnecessary recording • Storage and archival requirements and planning
TelePresence Analysis and Reporting	• Determine technology requirements • Develop a business case • Once in the network: Report details by endpoint, region, • or connection path to provide detailed knowledge of end point, and network utilization Example: A shopping mall owner that implemented video surveillance for physical security increased ROI by adding video analytics for consumer behavior analysis. Now the mall's retail tenants can pay a fee to receive valuable business intelligence such as which window displays capture customer attention for the longest time. Cisco® Services assisted with technology requirements and a business plan.
High-definition video	• Conduct capacity planning • Develop a business case Example: An enterprise with an ongoing theft problem initially implemented standard-definition (SD) video surveillance cameras, with a few high-definition (HD) cameras for a wider field of view. The customer realized that using digital zoom and HD cameras would enable better tracking of suspects. Cisco Services helped develop the business case, based on reducing the number of guards on rotation.

ROI from Using Collaboration Optimization Services

In a Total Economic Impact (TEI) study commissioned by Cisco, Forrester Research analyzed five companies in a variety of industries in the United States and Europe. The average payback period for engaging collaboration optimization services was almost immediate, with an ROI of 158 percent.[1] Forrester constructed a TEI framework, a composite organization, and an associated ROI analysis. The composite organization synthesized from these results is a diversified financial services organization with more than 10,000 employees and $9 billion in annual revenue, headquartered in the US with regional offices worldwide. Following are a few of the economic benefits of using partner-delivered optimization services identified in the study:

- **Resource augmentation and access to deep Cisco Services knowledge**. By working with Cisco Collaboration Optimization Services, the composite organization was able to avoid hiring an additional two enterprise architects, and saved 75% of full-time engineer and an additional 20% of full-time enterprise architect for design work, for a total savings of $1,548,750 for IT resource augmentation over three years.

- **A shorter time frame for deployment of new network services and ease of rollout of complex solutions and new functionality**. The composite organization was able to reduce the time to deployment for its major projects by four months, which would have increased project expenses by 33%. This leads to a savings of more than $570,000 over three years from the reduced deployment time for complex collaboration architecture solutions.

- **Better user productivity and customer experience with improved stability**. The composite company was able to reduce the downtime by 100%. This reduction in downtime represents an average of 15 minutes per day. Even with the assumption that only 50% of that saved time is used for productive work results, the organization realizes $523,438 in productivity savings over three years due to improved stability.

- **Software and design recommendations as a result of audits leading to cost avoidance savings**. The composite company was planning a building expansion when one of the Collaboration Optimization Services quarterly audits identified a capacity issue for its call manager cluster. Because of silos within the composite organization, the lack of capacity for the expansion was not immediately identified internally. As a result of the recommendations from this audit, the organization was able to implement the necessary changes and resolve the issue prior to the expansion, avoiding a three-week delay that would have affected 200 workers. Savings to the composite organization from software and design recommendations as a result of audits are valued at $346,154 over a three-year period.

To read the full Forrester TEI study, please visit the Cisco Collaboration Services web page at www.cisco.com/go/collaborationservices.

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1. Forrester Research, "Total Economic Impact™ of Cisco Collaboration Optimization Service," 2012.

Organizational Optimization

The optimal way to manage the Video Collaboration solution might change as usage patterns evolve. During the optimize phase, your team or your services partner can look for ways to optimize operational efficiency and better understand the utilization patterns across endpoints, systems and network. For example, in addition to a video streaming team, you might want to form a video management team to focus on managing video storage, managing the video library, and tagging the video so that people can search for relevant frames by keyword. Some organizations conclude they might increase efficiency by consolidating previously separate telepresence and

Cisco WebEx® teams, while others keep separate teams but appoint liaisons. An experienced services partner can advise on the relative advantages of different organizational strategies.

During this phase you also need experienced resources to resolve organizational tensions caused when job descriptions change because of Video Collaboration. For instance, when consideration to include video to more mobile endpoints, ensure the Security IT teams, WLAN and your video team first have a solid optimization approach and strategy before planning or designs begin. This will ensure a review of historical events to discover persistent problems are taken into consideration across the IT operational areas.

Capabilities Needed for Optimization Lifecycle Phase

Unless you plan to keep your network and Video Collaboration offerings static, optimization is an ongoing process. With today's complex networks and multivendor video solutions, the benefits of a single optimization project will probably wane after a relatively short time. Therefore, it is important to decide whether your internal resources have the skills, tools, operational processes, and time to undertake the optimization activities shown in Table 1. If not, you might be better off engaging an experienced services partner. To determine which option is best for you, ask:

- Do your internal IT resources have the needed skills? Whoever takes charge of optimization lifecycle services needs expertise in network optimization as well as video-specific issues. Operating systems and Video Collaboration technology change constantly. Keep in mind that it is risky to learn by trial and error because Video Collaboration applications are highly visible tools used by company executives.

- Do you have the needed management tools and operational processes? Network management tools and processes often require updates since new technology also introduces new fault management and configuration management issues. Network management and tools represent a very large portion of IT budgets, so many organizations can come close to cost-justifying a partner-delivered optimization service by eliminating the costs keeping network management software current. In addition, relieving internal IT staff of repetitive or time-consuming operational tasks frees up time for staff to work on strategic projects.

- Are your resources knowledgeable about new video collaboration use cases in your industry? For instance, financial institutions might want a video contact center to offer a "Remote Expert" for mortgages, small business loans, and so on. Similarly, retailers might want to provide a kiosk that shoppers can use to interact with centralized product experts. An experienced services partner can advise on details such as the number of agents needed in the video contact center.

- Do you have the appropriate tools? Cisco Services, for example, uses a collection device to capture configuration information from all network devices and automatically compare them against best practices learned from thousands of global deployments. A few of the numerous deviations from best practices that Cisco Services sees and mitigates include:
  - Improper Open Shortest Path First (OSPF) protocol configuration, affecting business continuance
  - The presence of unidirectional fiber links that create traffic spirals that block video
  - Nonfunctioning redundant supervisor engine in switches, which can cause a network outage interrupting a critical business video function

- Do your resources have experience with service delivery methodology?

- Do your resources have tools that schedule or provide ad hoc reports which allow for detailed knowledge of end point, and network utilization?

- Do your resources have the knowledge to determine if persistent problems with Video Collaboration are due to utilization of the technology or actual network issues?

- Do your resources have the time? Optimization needs to be ongoing and proactive.

Conclusion

The first phases of the business video lifecycle last months, while the optimize phase lasts for the lifetime of the project, often five years or more. Not only does the optimize phase protect the original investment, it can continually increase the value by identifying operational efficiencies and new capabilities for communication, collaboration, education, and physical safety and security.

Optimization is a resource-intensive job, requiring in-depth knowledge of the underlying network and the business video applications and endpoints, specialized tools, and familiarity with emerging use cases in different industries. Many organizations experience a very rapid return on investment from engaging a partner to deliver business video optimization services. The ROI comes from increased uptime, higher adoption rates, and time savings for the IT team, all of which help your organization accomplish the original objectives of the business video deployment.

For More Information

To find out more about video collaboration services from Cisco Services, visit www.cisco.com/go/services/businessvideo.

To read the other white papers in the "Harnessing Business Video for Business Transformation" series, visit www.cisco.com/go/services/businessvideo/whitepapers.

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