



A Best Practice Guide to Pervasive Video

Introduction

Video collaboration is becoming a transformational force throughout the enterprise and beyond – impacting how, when and where we interact with peers, partners and customers. Realizing the benefits of this strategic communications tool requires an equally strategic approach to video adoption.

This paper can help organizations lay the foundation towards achieving productive anytime, anywhere video collaboration from a business, operational and cultural perspective.

A Transformational Force in How Work Gets Done

Video communication is on the rise and on the move. Once relegated to a conference room or telepresence suite, video calls and chats are now taking place on smartphones, tablets and desktops. Shifting from a many-to-many or one-to-many model, video communication can now be a more personalized experience that can take place virtually anywhere and on any device.

Mirroring the “life in the now” behaviors of the consumer market, this experience no longer needs to be confined by a calendar. Instead of booking a room or an appointment, ad hoc video interactions are taking place and attendees inside and outside the organization are being added on the fly to collaborate in real time.

Further, thanks to advancements in unified communications (UC), these video calls and chats can be launched with one-click connections from the communication, collaboration and business applications we use everyday. And, they can be delivered via the cloud.

In short, we have entered an age of pervasive video: Video meetings are an integral part of how, when, where and with whom we can conduct business.

If you’ve been asked to evaluate video adoption for pockets of discrete business areas or for enterprise-wide use, the challenge is to manage the groundswell of demand from users and line of business managers, as well as the associated risks involved as workers download and exchange programs to enable personal video conferencing without corporate’s approval or protection from potential security threats.

Before you decide on a plan of action, it’s best to start with a clear understanding of how video can be used as a strategic communication and collaboration tool. For example, you will need to ask:

- What business challenges can be solved with video collaboration?
- What are the operational considerations from an IT perspective?
- How will ad hoc, unpredictable video demand impact your network?
- How do you deliver an effortless user experience to drive adoption and increase ROI?

This suggested best practice guide introduces a three-part plan for developing a pervasive video strategy from a business, operational and cultural perspective. The goal is to help you lay the groundwork for understanding, enabling and embracing video as a positive, transformational force across your organization and external ecosystem.

Approach

Business Considerations

During a time when IT budgets are under scrutiny, it can be hard to get funding and support for new technology deployments. These recommendations can help you develop a business rationale for video collaboration, setting the stage for more personal and productive interactions inside and outside your organization.

Pervasive Video Drivers

- Video is becoming an everyday, everyone and everywhere tool
- Unified Communications (UC) is driving increased video adoption
- Cloud is playing a growing role in UC and video service delivery and in managing the ad hoc video trend
- Video is being embedded into key business processes
- Consumer and business video are cross pollinating technically and culturally, producing a groundswell of user demand

Determine the right mix of travel and video.

Face-to-face meetings have many forms, from in-person meetings to telepresence and video meetings on a variety of devices. But how much of your budget do you allocate for each? The simplest way is to compare the cost of video meetings with the cost of travel. In other words, if you save \$5K in travel costs, you can apply those savings to your video budget.

But video conferencing is more than just a travel alternative. It is a way to multiply the number of meetings you have and the number of people who can participate, stretching your face-to-face meeting budget and increasing the efficiency of your investment. In many instances, for example, for the cost equivalent of one airline ticket, you could afford dozens of virtual meetings a month.

However, the true value of video collaboration is in its ability to provide your enterprise with competitive differentiation, which leads to the next step.

The value of video extends far beyond travel replacement to business differentiation.

Define new strategic methods of leveraging video collaboration and develop use cases.

To prove the value of video to users and executives alike, it helps to develop real-life scenarios of how video can be used in everyday transactions and as a competitive differentiator. For example:

- Tap into remote expertise with a video meeting between a call center agent, a customer and a service representative to solve a problem quickly.
- Integrate video into key business processes to accelerate service delivery. For example, use video as a diagnostic tool between doctor and patient. Or integrate live video chat capabilities at the bank ATM to troubleshoot a problem. This can enable a bank to cost-effectively share support resources across multiple locations, while providing personalized service to customers when they need it.

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Look for ways to enhance existing collaboration tools with video presence.

If you think of video collaboration as a standalone solution, it limits the opportunities to merge its capabilities with other forms of communication and collaboration. For instance, think about the ability to:

- Use a single interface to schedule and invite attendees to multiple types of meetings – from audio and web conferences to video meetings using a mobile device, a desktop, a conference room or a telepresence suite.
- Seamlessly escalate from an IM chat with one person to a video meeting with many.

Integrate multi-media content sharing to collaborate and evaluate in real-time.

Web meetings allow you to share documents, 3D objects and other content in a virtual workspace to present, review, update and finalize them in real time. Integrating video into a web meeting helps you:

- Personalize content sharing with visual representations of attendees.
- Get a better “read” on those involved in the decision making: Are their expressions belying their words? Are they really satisfied with the changes?
- See subtle shifts in body language that may reveal unresolved issues, which can be addressed on the spot, rather than prolonging a project.

Explore business-to-business use cases to expand collaboration with your ecosystem.

Think of ways that pervasive video can ease and speed communication and collaboration with partners, customers and suppliers:

- Bring virtual teams of internal and external attendees together in a desktop video meeting to build camaraderie before launching a joint marketing program.
- Use a combination of conference rooms and personal devices to collaborate on a global basis for product development or to share designs and prototypes to speed time to market.
- Help establish closer relationships with face-to-face video meetings between your customers and key members of the team that serves their account.

“One third of all anticipated new video use cases involve external participants, up from less than 5 percent in 2010.”

– Gartner, *Why Reach is the New Quality in Enterprise Video*, April 2012.

Define ROI goals and measurements.

To make the benefits of video collaboration clear to those funding your project, clearly define what you expect the ROI to be, the activities and processes critical to reaching that and how you will track and measure your progress.

Operational Considerations

To ease adoption and get the most from your investment in video technology, it’s helpful to divide your operational approach into four components. The first three represent the needs of the user and how they can schedule a meeting (Arrange), participate in a meeting (Attend), and how they can get support (Assist). Administration is the fourth component and represents the architectural and network considerations needed to support high-quality video collaboration.

A “Four A” Model for Delivering an Effortless Collaboration Experience



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Focus on the front-end user experience.

Employees may not adopt solutions that are hard to learn or cumbersome to use. Here are some ways to help streamline their experiences, from setting up or participating in a video session to seeking support.

Unified scheduling

Productivity may suffer when employees must spend time logging into and out of multiple tools to accomplish a simple task. Your chosen video collaboration solution should provide users with a single, intuitive interface that lets them:

- Schedule meetings using a web-based portal or familiar tools, like Microsoft® Outlook®, or IBM® Notes®.
- Book many types of meetings using the same scheduling tool – including audio, web and video meetings – to take place on a desktop, mobile endpoint or in an immersive suite.
- Extend invitations to external attendees, including customers, partners and suppliers.

Meeting automation

While scheduled meetings have been the mainstay in conferencing, users today also want the ability to launch and attend ad hoc, on demand meetings. Strive to provide video collaboration solutions that automate the experience with:

- Dial-in access for desktop, laptop, tablet and smartphone attendees to join a scheduled video meeting via the Internet, without pre-registration.
- Instantaneous point-to-point video connections for attendees inside and outside the organization using direct dial or one-button “push to dial” options.
- Multi-point connections with dial-in access to virtual meeting rooms across the full continuum of endpoints – from tablets to telepresence rooms – and without making reservations

Meeting support

Once users are connected, it’s important to have a quality meeting experience. Further, if your goal is to deliver anytime, anywhere, any device video collaboration for users inside and outside your organization, your support approach must encompass those same variables. One of the easiest ways to provide this broad-based support is to choose a vendor who can:

- Manage the total video solution, including the hardware, software and network connections, as well as the internal and external voice calling infrastructure.
- Offer a range of support options, including in-meeting assistance.
- Proactively monitor and manage the entire network path, including endpoints, network transport, network infrastructures, as well as cloud resources and external connectivity.
- Provide service level agreements for Quality of Service (QoS) on many devices.
- Support premises and vendor-owned equipment from multiple vendors.

Prepare the back-end infrastructure.

Cloud services

To deliver the optimal front-end user experience, you need to prepare your back-end infrastructure to handle the increased performance pressures of supporting on demand video interactions, as well as the increased traffic flowing between offices and endpoints inside and outside your organization.

Given their potential to reduce IT costs, simplify deployments and scale as needed, cloud services are growing in popularity as a way to deliver both video collaboration and unified communications (UC) services. With cloud-based video collaboration, you can:

- Meet capacity requirements for on-demand video with scalable cloud resources, commonly delivered in a pay-per-use or utility model.
- Provide a backup video collaboration environment for service continuity.

The worldwide market for public cloud services is expected to grow 18% in 2013 to \$131 billion.

Infrastructure as a service (IaaS) continues as the fastest-growing segment of the public cloud services market, growing 41.1% in 2012 and 45.5% in 2013 to \$9.2 billion

– Gartner, *Forecast Overview: Public Cloud Services, Worldwide 2Q2013 Update, August 2013.*

- Help protect existing investments with a hybrid solution that combines a cloud-based infrastructure with your existing on-premises video equipment.
- Ease integration with cloud-based UC solutions for a seamless experience that allows users to smoothly escalate from a chat to a web meeting to an immersive video meeting.
- Benefit from next-generation interoperability between a variety of hardware, software and network providers while providing a common user experience.

Network optimization

The personal, mobile and highly collaborative characteristics of pervasive video may increase demands on your data and network infrastructure. The growth in ad hoc video interactions also makes it hard to predict and manage the added bandwidth demands. This can potentially lead to performance problems and a degraded user experience – from jittery screens and audio lags to dropped connections.

As you plan your network strategy for pervasive video, these can be important questions to ask: Which type of network is best for which use case, how much bandwidth can it provide, and which class of service is needed for each usage scenario? The chart below offers some general guidelines.

Network Type	Use Case	Bandwidth Range	QoS
Broadband	Teleworkers, executives working at home	384kb - 2MB	Ultra available, common Internet. Consider managed Internet services for use cases with higher service requirements.
Mobile	Workers who travel or meet off-site with customers, suppliers or partners	384kb - 2MB	4G LTE network. Consider future QoS offerings for high profile users.
VPN	Traditional video meetings, telepresence rooms and desktops	384kb - 20MB	Private QoS based IP network preferably with SIP trunking.

As you plan, design and optimize your networks, consider these networking technologies to help meet the needs of different users, bandwidth demands and QoS levels:

A common Internet Protocol (IP) Network.

Transitioning to a common IP network to deliver video services can help you:

- Allocate bandwidth across broadband, mobile and VPN networks to address the needs of different endpoints, user scenarios and concurrent connections.
- Prioritize video traffic over other applications that are less impacted by latency or packet loss.
- Converge video with Voice over IP (VoIP) with UC services running on the same IP network to seamlessly switch between communication modes.
- Support video collaboration with external partners and customers.

Multiprotocol Label Switching (MPLS).

Use the QoS attributes and extensive peering capacity of Multiprotocol Label Switching (MPLS) technology to expand the amount of publicly connected/addressable endpoints that can participate in real-time video interactions.

Mobile 4G LTE Network.

With expanded bandwidth capabilities to support real-time video applications, this next-generation mobile technology is designed to offer the same QoS and predictable performance as an MPLS network.

Session Initiation Protocol (SIP) Trunking.

As legacy TDM voice and video infrastructures age, more organizations are transitioning to SIP (Session Initiation Protocol) Trunking. SIP sends multiple signal types (such as voice, video, chat and multimedia) over an IP network, rather than the traditional PTSN network. By sharing the same network as your data, SIP can offer a lower-cost way to deliver video and voice, simplify network management and provide a more flexible, future-ready platform for integrating voice and video with other business applications and processes.

Cultural Considerations

People across the organizational culture can be very resistant to change, even when it is a change for the better. They may not understand the value video collaboration can bring to their everyday work lives, or they may see no reason to change the way they use video today.

Inviting people to lead and take part in the change process may be a good way to break down these cultural barriers. Engaging people at multiple levels in a top-down approach – from executives to users – may also help address their objections and increase adoption. Outlined below are suggested strategies for helping you improve video adoption.

Find an Executive Champion.

To rally support and drive change across the organization, it may be helpful to identify an executive to act as an advocate for your cause. Consider engaging this resource to help you develop a well-defined vision and project plan for the role of video collaboration and to communicate the vision and strategy to stakeholders. It could also be helpful to:

- Use video technologies to engage stakeholders in interactive sessions to gain an understanding of their business, functional and technical requirements.
- Engage stakeholders in developing use case scenarios for video collaboration.
- Target specific use cases for pilot projects for faster proof of concept.

Institute an Internal Marketing Campaign.

Before you implement a video technology or roll out a pilot project, it may be helpful to create an internal communications plan to:

- Generate awareness and excitement in the user community.
- Explain video collaboration benefits and uses to all employees.
- Help minimize the impact of change for employees.
- Drive self-sufficiency with a standard set of processes, tools and resources for all end-user groups to follow.

An online web portal for each deployment can be a good way to provide users with the resources they need, including quick tips, training videos, quick reference and troubleshooting guides and FAQs.

Focus on Continuous Improvement.

To keep up with the pace of technology and organizational change, consider tracking and measuring the adoption of each video deployment on a continual basis. This includes:

- A review of utilization reports to analyze usage rates and video service performance and to spot trouble areas.
- User surveys to track satisfaction and identify areas of improvement.
- Creating a technology roadmap to hasten the adoption of new features or capabilities that may benefit the organization.

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Conclusion

There's no question that pervasive video is changing how, when, where and with whom we conduct business. Yet, you still may have many questions about readying your organization, infrastructure and culture for this transformation.

AT&T can help you prepare for and create rich visual collaboration experiences for your organization. As a leading provider in networking, mobility and communications, our solutions for pervasive video can help you:

Business Value

- Define the business value pervasive video can bring to your organization.
- Align video technologies with targeted business needs.
- Integrate video with other communication and collaboration tools.
- Develop business cases and define ROI goals.

Operational Excellence

- Apply a "Four A" model for effortless end user experiences.
- Leverage cloud and hybrid-cloud solutions to create a flexible, virtualized infrastructure to handle the performance demands of ad hoc video interactions.
- Balance QoS with accessibility and cost to scale video access across your organization and to an extended B2B/B2C ecosystem.

Cultural Adoption

- Identify an executive champion to support video transformation.
- Create a vision and strategy for how video can improve business processes.
- Engage stakeholders in a compelling pilot project to prove value.
- Generate excitement and awareness for video adoption.
- Plan for continuous improvement.

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