How Cisco Connects Executives in a Worldwide Virtual Meeting

Cisco IT integrates video, collaboration, and social tools to reduce event costs, avoid travel, and improve experience

Background

The Cisco Strategic Leadership Exchange (SLX) Forum is the most important annual meeting for the company’s executives, with a focus on Cisco strategies for its upcoming fiscal year.

Previously, the meeting required participants and presenters to travel to a location near Cisco headquarters in San Jose, California. Among the drawbacks of this approach were the travel time and expense, because many participants had to dedicate a day or more to travel internationally. At the meeting, participants had to choose from a few of the many breakout sessions that were scheduled in each time slot, meaning the executives could not easily access all of the presented content.

However, an in-person event offered the advantages of personal meetings and networking exchanges among executives, either during the formal sessions or at meal times. Many participants looked forward to this annual gathering as a way to reconnect with colleagues and to talk with other executives whom they might not meet otherwise.

As the company grew with large numbers of employees located outside of the headquarters in San Jose, California, Cisco was also looking for ways to enable more employee participation in “all hands” meetings. “We wanted to use Cisco TelePresence to create a virtual auditorium that would give all our remote people a front-row seat in a meeting they could never attend before,” says Mike Mitchell, senior director in the Cisco Corporate Communications group.

Additionally, like many enterprises facing the global recession in late 2008, Cisco was looking to dramatically reduce costs across all of its activities. The company was already increasing internal use of collaboration tools to reduce travel by employees while improving their ability to share information at a distance, so the question arose: Why not eliminate travel and reach more people for the SLX meeting by delivering it as a virtual event?

Cisco IT successfully answered this question with the first SLX virtual event in 2009 and subsequent events in the following two years. By 2012, Cisco IT had gained the experience necessary to deliver all the virtual event...
capabilities internally instead of relying on external vendors for registration and virtual environment platforms.

Challenge

For Cisco IT, supporting the first virtual SLX meeting in 2009 meant solving several challenges, including how to:

- Implement the tools and infrastructure necessary to deliver bandwidth-intensive video broadcast, collaboration, and interactive sessions reliably and with high quality to multiple locations worldwide.
- Choose access, presentation, and collaboration technologies to serve the communication needs of meeting presenters and participants, while setting realistic expectations about differences in presentation capabilities compared to an in-person meeting.
- Accommodate employees who would be attending from multiple world time zones and using multiple access methods and devices.
- Help ensure network capacity and configuration to support the performance required for the highly demanding SLX meeting, while not negatively affecting network performance for the rest of the company.

For the 2012 SLX meeting, Cisco wanted to use a greater range of collaboration technologies to enhance the virtual experience beyond the capabilities of in-person meetings. Cisco also wanted to further reduce costs by adapting existing Cisco IT video and collaboration services to deliver the meeting registration system and the virtual environment for viewing and interacting with live presentations. Meeting these goals would offer meeting participants collaboration tools to enhance their engagement in the sessions and also reduce the burden on Cisco IT for supporting virtual events and streamline the user experience.

However, bringing the meeting registration and presentation scheduling in-house presented the complex challenge of tracking a large amount of detailed and interconnected information. In the 2012 SLX meeting, leaders could choose from more than 40 different sessions to attend. "When you do an event that has multiple concurrent sessions, the scheduling and management are much more complex than they are for a single virtual meeting," says Todd West, senior manager for technology in the Cisco Corporate Positioning group. "We needed a way to handle all the changes that happen in presenters, timeslots, and room assignments so the same information was updated for every team and every system."

Solution

For the first three years of virtual meetings, Cisco IT used an online event registration system and a virtual meeting environment from external vendors. For the 2012 SLX meeting, Cisco IT developed new tools in the Cisco® WebEx Social platform for event registration, video streaming, and content access capabilities (see Figure 1).
More than 2900 Cisco leaders participated in the 2012 SLX meeting from around the world by using several Cisco solutions and Cisco IT services. Cisco products used to deliver the SLX meeting included Cisco TelePresence®, Cisco Show and Share® video, Cisco WebEx Social, Cisco MXE 3500 Media Experience Engine, and Cisco Jabber. Cisco IT services included Cisco TV with integrated Cisco Jabber features and an internal implementation of Cisco WebEx Social, where a restricted Strategic Leadership Community was created (Table 1).
Table 1. Cisco Collaboration and Interaction Solutions Used for the 2012 Cisco SLX Forum Sessions

<table>
<thead>
<tr>
<th>SLX Meeting Activities and Content</th>
<th>Technology Used for Virtual Delivery</th>
<th>Interaction Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Registration</td>
<td>Agenda builder and registration portlet in WebEx Social for attendee scheduling</td>
<td>WebEx Social scripts helped enable users to build their own custom agenda, which automatically registered them for events</td>
</tr>
<tr>
<td>General Sessions</td>
<td>Cisco TelePresence viewing rooms at local Cisco offices Cisco TV broadcasts for remote participants supported by Cisco Application and Content Networking System (ACNS) Cisco Digital Signage for live session information WebEx Social portlet for presenter and session scheduling</td>
<td>Live online chat sessions, moderated Q&amp;A, and polling powered by Cisco Jabber</td>
</tr>
<tr>
<td>Breakout Sessions</td>
<td>Presenters using Cisco TelePresence and audience watching Cisco TV</td>
<td>Polling and chat in Cisco Jabber</td>
</tr>
<tr>
<td>Video Archives</td>
<td>On-demand video access from WebEx Social via Cisco Show and Share for viewing before and after event Archive access also supported by Cisco MXE 3500 Media Experience Engine</td>
<td>SLX blog posts, wiki, and discussion forum in WebEx Social Strategic Leadership Community</td>
</tr>
<tr>
<td>Session Documents</td>
<td>WebEx Social Strategic Leadership Community</td>
<td>SLX blogs posts, wiki, and discussion forum in WebEx Social Strategic Leadership Community</td>
</tr>
<tr>
<td>Event Management</td>
<td>Event registration and management tool developed by Cisco IT and integrated with Virtual Event Experience app in Cisco WebEx Social for event management in one place</td>
<td>Event management tool linked to Cisco TV interface</td>
</tr>
<tr>
<td>Event Support</td>
<td>Click-to-chat tool as tab within Cisco TV viewer as well as Strategic Leadership Community within WebEx Social Queue for click-to-chat requests powered by WebEx WebACD</td>
<td></td>
</tr>
</tbody>
</table>

General Sessions

The 2012 SLX Forum encompassed general sessions for all participants and numerous breakout sessions for smaller groups of executives. Each general session was streamed as a live broadcast from a newly built Cisco Virtual Event Center in San Jose. Participants who gathered in Cisco offices watched the live sessions via Cisco TelePresence systems; remote participants watched the sessions as live broadcast streams embedded in a web browser using Cisco TV (Figure 2). Participants who missed a session could watch the video recording posted in Cisco Show and Share, which they could access from within WebEx Social.
By 2012, the Cisco TV team had designed a simpler broadcast architecture for virtual events, with fewer encoders dedicated to each event than in the past. “Supporting only one unicast and one multicast video stream simplifies our broadcast architecture and workflow while also allowing us to support more scalability for large events,” says Adam Hessler, director of Cisco TV engineering. The unicast stream was sent primarily to users who were accessing the session with a wireless device or VPN connection, and was encoded by a Cisco AS8100 Series Media Processor. “The Cisco TV service allows us to focus on the event’s production, not on the technical details of how the video is reaching the viewing room and remote users,” Hessler says.

For the 2012 meeting, 13 percent of participants viewed the sessions in-person in the San Jose Virtual Event Center (see Figure 3). Remote participants (87 percent) viewed the sessions in Cisco TelePresence rooms at the company’s major offices in Research Triangle Park, North Carolina; London; and Bangalore, India; in one of 30 TelePresence rooms in local Cisco offices; or on their laptop computers from home or other remote location.
All of the participants were able to use Cisco Jabber throughout the sessions to join in live chat and Q&A as well as vote in online surveys. The ability to ask questions and make comments in an online chat window proved highly popular among participants, with many sessions generating hundreds of chats. These features also provided valuable feedback to the presenters and event planners about the clarity and usefulness of the session content. Even the people attending in the live headquarters session used the online chat session features to participate in the global virtual event (see Figure 4).

Some presenters broadcast their sessions from the remote sites. To support these sites, the Cisco event team installed racks of Cisco TelePresence systems dedicated to the virtual event in addition to using the existing Cisco TelePresence systems for session viewing.
Breakout Sessions
In 2012, more than 40 separate sessions served between just over 100 and more than 3000 participants each during and after the two-day SLX meeting. In the virtual event, all of these breakout sessions were conducted using Cisco TV and Cisco TelePresence.

Portlet for Session Scheduling
The Cisco event team created a custom WebEx Social portlet for the 2012 SLX Forum to present event information and accept participant registrations (Figure 5). The registration data for individual sessions helped the team determine location and capacity for viewing rooms, where a number of people could get together and watch the Cisco TV event as a group. The session data also helped the speakers tailor their presentations to the interests of the registered audience. To help participants filter through the sessions that would be of interest, the sessions were organized by theater (geographic region) and presenter.
Integration of the portlet with Microsoft Exchange meant that, when a participant registered for a session, the event time and information were entered automatically in that person’s online calendar. The event and registration data in WebEx Social were also integrated with the Cisco TV scheduling system and event administration tool, both developed by Cisco IT. “For the 2012 meeting, we enhanced the Cisco TV service to handle multiple concurrent broadcast sessions and to automatically handle updates to session times and presenters made by the event team,” says West. “By integrating Cisco TV with the participant registration portlet, the session URL would appear in that person’s calendar automatically, so they could click the link to access the session at the right time.”

On-Demand Content and Online Community
Event participants and presenters need easy access to the numerous presentations, video recordings, documents, and other content for all SLX sessions. As an internal social sharing platform, Cisco WebEx Social provided the necessary capabilities for content access before, during, and long after the event. Previously, session content was available only in the external vendor’s virtual environment and only for a limited time after the event ended.

Online access to recorded SLX meeting content allowed participants to view more sessions than would be possible at an in-person event. Any participant who was not able to watch a live session (or who wanted to review a session) was able to watch the video recording on WebEx Social using the Cisco Show and Share streaming video application.

As participant Marisa Chancellor (senior director, Cisco IT) noted in a chat message during a 2012 SLX Forum session, “I am loving the whole interface—video, Jabber, questions, polling—all in one!”
Event Planning
With the experience gained from running many large virtual meetings, the Cisco IT effort to support the 2012 SLX meeting was significantly less demanding than in previous years. Additional reduction in planning effort was due primarily to the use of internal services instead of external vendors for the meeting’s registration system and virtual environment. “External vendors are appropriate for meetings that require very custom capabilities, such as gaming or a participant recognition system, that aren’t necessary for other virtual meetings,” says Maribel Lim, Cisco IT analyst.

In previous years, Cisco IT assigned one employee to work with external vendors for SLX meeting support. For the 2012 meeting, this assignment was not necessary because of the work done by IT to support the event internally. This change not only reduced team headcount and event costs, it also significantly simplified event planning. “Before we were passing around data all the time, both within the team and with our vendors,” says West. “These types of events have a lot of changes during the planning process, so keeping the event management in-house and having a single source of data really help to simplify our efforts.”

Business processes were identified first, then mapped to the appropriate Cisco technologies to address the meeting’s goals and requirements. A critical step in the business process was to create cross-functional work plans, which defined the tasks and roles of all groups that needed to be involved in planning the SLX event. Group members were drawn from Cisco IT and business departments, including network and data center, video collaboration and technology support, internal help desk, corporate security, and executive communications.

The event management tool developed by Cisco IT replaced multiple spreadsheets previously used by the event team. “It was hard to know whether you had the right one and the current version, especially when trying to coordinate with external vendors,” says Wasileh Karaouni, Cisco IT project manager. “Now our tool is integrated with Cisco TV for automated session updates, a single source of truth, and a lot less time needed for everyone to track information.”

Network Planning
Before the 2009 event, Cisco IT gathered data on the work location of participants by country and city. However, the team was not able to determine specific points where participants would access the event, such as from a Cisco office or an employee’s home. Although limited, this data helped the Cisco IT teams prepare for the impact of the event on the Cisco network and on the company’s WebEx infrastructure.

Network planners expected the biggest impact of the SLX meeting would come from Cisco TelePresence, because of its very high-quality audio and video. After analyzing the projected user traffic flows for each site involved in the event, Cisco IT determined that the Quality of Service (QoS) then defined for Cisco TelePresence on the Cisco network would meet SLX session demand.

By 2012, the team needed only to do some capacity planning for the viewing rooms used by participants to watch the session broadcasts, although this planning was informed by experience gained in the previous years’ meetings. Because the SLX event would use Cisco TelePresence systems already in place in the Cisco offices for participant viewing, and a limited number of additional systems for presenters, no additional network engineering was needed for that service.

For remote participants watching the broadcasts from their home or office, the Cisco TV multicast stream requires only 1 Mbps for a wired desktop connection, so network impact for that service was not a concern.
Results

By changing the SLX meeting from an in-person to a virtual event, each year Cisco realizes significant cost reductions, productivity gains from avoided travel, expanded meeting content, and improved access for more participants. These benefits have been realized with very few user support issues and minimal performance impact on the Cisco network.

As a first-time virtual event in 2009, Cisco estimated the SLX meeting cost only US$680 per person, a savings of 75 percent from the cost of $2800 per participant the previous year. Overall, Cisco realized a total $2.8 million cost savings in 2009 due to reduced travel and hotel expense. These expense reductions were achieved even as 600 more employees participated and the meeting was expanded from two days to three days.

In 2012, the SLX Forum meeting returned to a two-day format, with ongoing cost savings from travel avoidance and gains in productive time for participants. Additionally, because of the work done by Cisco IT to develop internal registration and virtual event capabilities, Cisco avoided an additional (approximately) $400,000 in expenses for external vendors. By hosting the meeting internally, Cisco IT was also able to fully manage security of the meeting broadcasts and improve the event team’s productivity because it was not necessary to coordinate activities and information changes with multiple external vendors. And by having built reusable portlet tools within WebEx Social to use for future virtual events, future event costs will come down even further.

Additionally, Cisco has gained significant cost savings from using virtual events to replace other on-site meetings that involve a large number of employees. “Each year we’re hosting multiple virtual events, and each one is avoiding the costs of previous on-site meetings,” says Angela Bhurji, Cisco IT senior manager for video streaming, sharing, and events. “The ability to hold these events virtually makes them not only affordable, but it makes them feasible given the large number of participants, the long-distance travel, and the direct costs and lost productivity of bringing everyone to a single location.”

“The ability to hold these events virtually makes them not only affordable, but it makes them feasible given the large number of participants, the long-distance travel, and the direct costs and lost productivity of bringing everyone to a single location.”

— Angela Bhurji, senior manager, Cisco IT

Virtual meetings have produced other benefits for Cisco. In 2009, participating Cisco executives reported a 90 percent reduction in time spent traveling to the meeting, because for many it meant just a trip to their local Cisco office. The ability to avoid more extensive travel returned an average of 10.86 hours per day to each participant and reduced carbon emissions associated with the meeting by 99 percent.
Data about participation and feedback for the 2012 virtual SLX meeting provided useful insights for event planners:

- Of the 2900 participants, 13 percent attended the event in person, 29 percent virtually from a group viewing room, and 58 percent attended virtually alone at their in-country office or home.

- A post-event survey of SLX Forum participants indicated that holding the meeting as a virtual event did not affect their ability to obtain useful information and inspiration from the content:
  - 87 percent of respondents said the meeting gave them a better understanding of the Cisco vision and strategy for the new fiscal year
  - 78 percent felt the meeting gave them the information they need to take action
  - 76 percent felt inspired by the meeting
  - Overall satisfaction increased (to 4.0 on a scale of 5)

Network and Technology Performance
Throughout the many virtual events that Cisco has carried on its network since 2009, the network designed for everyday video proved that it could handle the event video streams and other meeting traffic without affecting the experience for participants or performance for the rest of the company. In addition to routine network monitoring, Cisco network engineers use a script to monitor QoS-related performance levels at regular intervals. Any drop in QoS would have been an early signal of a network problem. Cisco network engineers prepared for this possibility by being ready to switch the SLX traffic to a higher-priority queue if necessary, but the QoS levels have remained high, and they never had to activate that plan.

In 2009, Cisco IT performed peak-load tests one week before the event, using WebEx Event Center to replicate the participant experience for that meeting and assessing the potential network performance during the SLX virtual event. “Although the short time frame before the SLX meeting meant we were only able to perform this testing once, normally you would run several tests as an iterative process before the meeting to adjust network parameters as necessary in response to increasing participant registrations and changes in meeting plans,” says Dan Price, Cisco IT network engineer.

User Experience
Data from a post-event survey of participants indicated that the 2012 SLX event was very successful in achieving goals for providing information and inspiration around the company’s plans for the new fiscal year. A large number of participants agreed the event allowed them to converse and connect with other Cisco leaders, even though most of these conversations happened virtually.

“For our executives, their preference is increasing for attending the SLX Forum virtually because they are expected to start disseminating the information to their teams quickly, and a virtual event gives them the time to do that,” says Paul Andrews, technical leader, Cisco IT.

The integration of session presentations and related content within the WebEx Social Strategic Leadership Community also makes for a positive user experience. “Having everything in one place is highly useful and makes for a better user experience, instead of having to go to one web page to watch the session and another page to get different types of content,” says Ali Stokes, a Cisco executive communications manager.

Cisco IT Support
In 2009, although Cisco IT created a central support group that was activated during the SLX meeting, very few...
support cases were generated given the scope of the event. The most common questions were about event registration, with only 82 issues related to the presentation technologies or the network. Of these cases, most involved easily answered user questions about starting or joining a virtual session. Overall, the SLX event generated fewer than one (0.72) support case per participant.

For the 2012 event, even fewer support issues were generated (61 cases) related to participant problems in accessing the SLX Forum sessions. This reduction was due in part to no synchronization necessary with services from external vendors and in part to the self-service video checks in the Cisco TV user interface. The 2012 SLX Forum “was the smoothest major internal event that we’ve done because of the core Cisco TV virtual event platform,” says Mitchell. Cisco IT saw a significant reduction in the number of support cases caused by user problems in accessing sessions because of the tight integration between the Cisco TV platform and the Cisco IT event management tool.

Additionally, the click-to-chat feature allowed 2012 SLX participants to easily connect with helpdesk support. “This is the benefit of using meeting technologies that are all designed to work with each other and give us a single source of session information,” says Philip Trease, Cisco IT project manager, virtual events.

**Lessons Learned**

The large scale and complexity of the SLX meeting yielded numerous insights for Cisco IT on how to best prepare for and support future virtual meetings.

**Event Planning**

**Encourage advance registration.** Give meeting participants strong encouragement to register in advance for individual sessions to allow for planning of meeting rooms, network facilities, and equipment. Registration also helps the participants by automatically scheduling each selected session in their online calendar. However, expect that some participants will not register but simply show up in a viewing room or click on a published link for remote access when the event begins.

**Use viewing rooms for virtual events.** Assign specific regional viewing rooms or locations for the event to simplify room planning and preparation as well as equipment and network support. Give local teams a set of standard instructions, configurations, and other meeting preparation tasks to promote accuracy and consistency among sites for presentations and session viewing in the rooms.

**Coordinate with external vendors.** Although Cisco IT no longer uses external vendors for SLX meeting, this is still a valid option for customers who want to hold similar virtual events, especially the first few times. If using external vendors, a critical step is to verify in advance the integration of vendor and internal systems and the vendor’s ability to scale their technology and operations to serve large virtual events.

Alternatively, if you are developing some meeting capabilities in-house, do not try to exactly replicate all of the capabilities offered by external vendors, because they may not be necessary for a particular meeting. “Unlike participants in other types of meetings, executives don’t want to hang out in a virtual environment,” says West. “They just want to get into the session, get the content they want, then get back to their regular schedule.”

**Communicate with assistants.** When working with executives or other participants whose calendars may be managed by assistants, provide additional training and communications to explain why access is strictly restricted to an online event community, sessions, or content. In some cases, the executives may need to do certain things themselves that they would normally delegate to an assistant.
**Plan for future events.** After each virtual meeting, hold a review session with the event team to identify repeatable processes, facilities, and technology implementations that can be applied to future events and make them easier to produce next time.

**Network Preparation**

**Create a network and technology plan.** To determine network capacity requirements, create an audience analysis that identifies participant locations (home office, corporate office) and access methods (VPN or mobile, operating system and browser versions). Also identify the current capacity and configuration of equipment, viewing room facilities, and the network to identify any changes necessary to the infrastructure or event activities. Create focused planning and support teams for each network and technology area.

Develop a single, integrated network and technology plan for the entire event to track the many elements that must cooperate and synchronize. Check event plans against any expected installations or upgrades of network circuits or equipment; accelerate or delay those infrastructure changes as appropriate.

**Test network load and user access devices.** For each virtual event, perform peak-load network testing well before the event date to identify any potential obstructions and access issues. Testing should be conducted for individual meeting sites as well as integrated, end-to-end testing across the network. Verify any differences in configurations, usage instructions, and support requirements for users of Apple Macintosh computers or mobile devices. And because browser versions may change between one event and the next, test the user interface in multiple browser versions before the event to reduce support issues.

**User Experience**

**Encourage in-person participation where affordable.** Allow local participants to be part of the live audience where possible, because that presence contributes to the energy of the session for the presenter and both the in-person and remote audiences. Instead of restricting all travel, allow remote participants to make short trips to a nearby viewing center to be part of the group audience for broadcast sessions. And arrange local social events at the end of each day to encourage continued discussion, in-person meetings, and the personal networking that can be missing from a purely virtual event.

**Encourage remote participation via the online tools.** The online polling and live chat features of Cisco Jabber can transform a passive viewing experience into an interactive session, especially for remote participants. Assign a member of the event team to moderate the online Q&A and live chat windows to make sure this remote participation is fully represented during the session. Also allow participants in the live session room to use their mobile devices to participate in the polling and chat features.

**Presentation Tools**

**Help presenters understand changes needed for a virtual event.** Some technical capabilities that may work well for a small group may not work easily for a very large meeting that involves thousands of participants. Set appropriate expectations among presenters and meeting organizers about the technical capabilities of the virtual meeting solutions so they can adjust their presentation format and style.

Also offer guidance to presenters and session producers about the best way to use polling and online chat features in the virtual event in order to encourage participation and enhance the audience experience. “The collaboration features really help participants in understanding the messages of the sessions and in making the connections with colleagues that help them to start taking action,” says Radhika Narayanan, manager Cisco IT.
Support

**Designate contacts for event support.** Implement a central support center where users can submit questions and support requests using a click-to-chat tool or a dedicated telephone number. Identify a single point of contact at each local site and help ensure that local support teams know to communicate any issues to the central team, because a local issue may have a broader impact on the event.

**Create event-related support documents.** Create a single document or wiki ("playbook") of support procedures, frequently asked questions (FAQs), and contact information for members of the support team. Create online FAQs for event presenters and participants to answer the most common support issues.

**Next Steps**

Cisco IT will use the Cisco TV service, WebEx Social virtual event portlet, and event management tools for future internal virtual meetings. With the tools in place to support economical meetings with a quality experience for everyone involved, “I don’t think we’ll ever go back to entirely in-person events,” says Bhorji.

**For More Information**


Read the case study about the 2009 Cisco IT Virtual Sales event (with 19,000 employees) at: [http://www.cisco.com/web/about/ciscoitatwork/collaboration/global_virtual_sales_event.html](http://www.cisco.com/web/about/ciscoitatwork/collaboration/global_virtual_sales_event.html).

Read a case study about the Cisco WebEx Social Strategic Leadership Community at: [http://www.cisco.com/web/about/ciscoitatwork/collaboration/docs/Strategic_Leadership_Community_Case_Study.pdf](http://www.cisco.com/web/about/ciscoitatwork/collaboration/docs/Strategic_Leadership_Community_Case_Study.pdf).

To read additional Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT [www.cisco.com/go/ciscoit](http://www.cisco.com/go/ciscoit).

**Note**

This publication describes how Cisco has benefited from the deployment of its own products. Many factors may have contributed to the results and benefits described; Cisco does not guarantee comparable results elsewhere.

**CISCO PROVIDES THIS PUBLICATION AS IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

Some jurisdictions do not allow disclaimer of express or implied warranties, therefore this disclaimer may not apply to you.