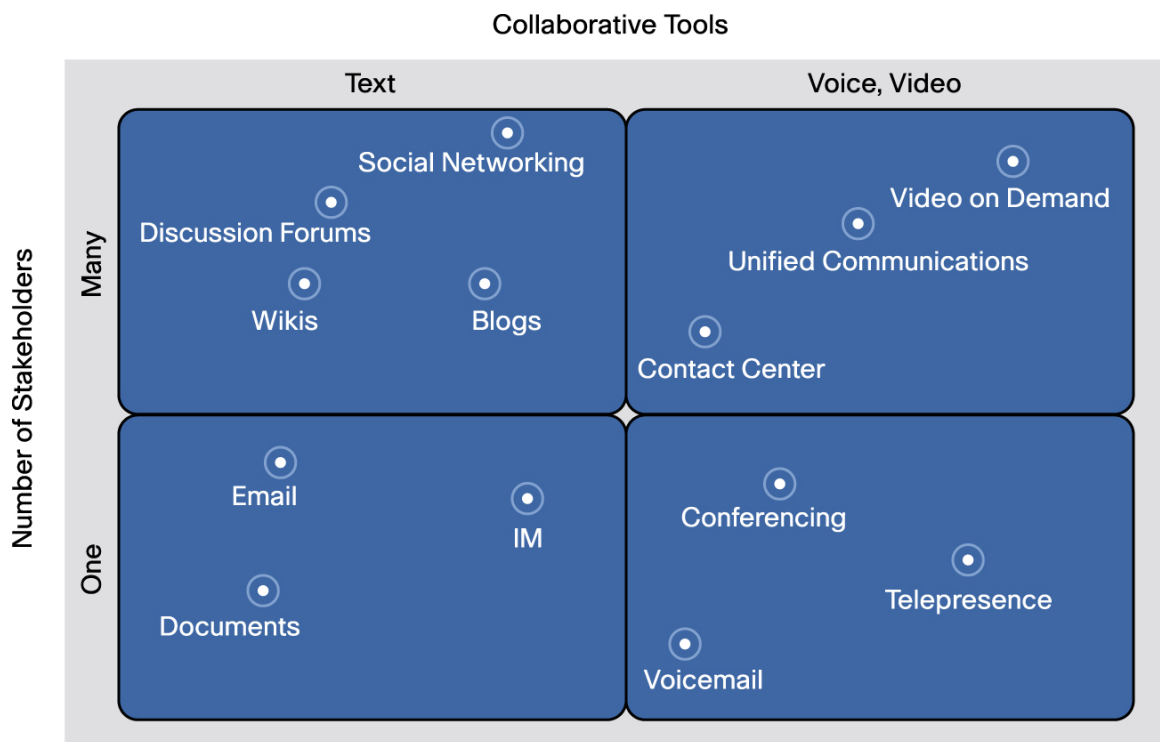


Cisco Collaboration Solutions Differentiated Business Value with Collaboration

The New Normal

Technology-enhanced collaboration is not new. Traditional text- and voice-centric forms of collaboration have been used for years, but increasingly they cannot by themselves address today's business challenges. Today, organizations of all sizes work closely with outside suppliers, partners, or contractors to deliver their own goods and services. Web 2.0 tools such as video portals, podcasts, blogs, wikis, and discussion forums are changing the way in which information is created, published, managed, and consumed. Technology advances and the need to work outside of normal business hours and locations foster an increasingly mobile and distributed workforce. A flood of new devices and applications (Figure 1) is entering the corporate IT environment as employees elect to merge consumer-based tools with standardized communications. Global value chains, information overload, more mobile workforces, and IT consumerization are the new normal - and they require new collaboration capabilities.

Figure 1. Changing the Way We Do Business



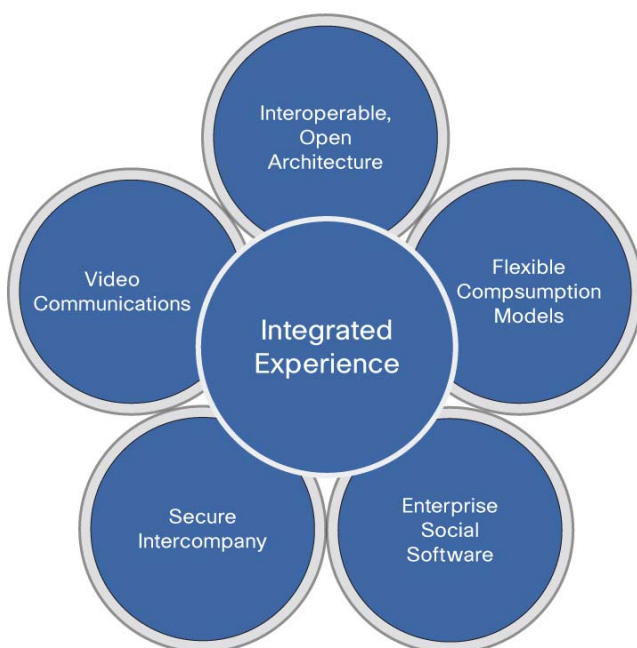
As the number of intra- and intercompany stakeholders increases, the number of collaborative tools and communication formats increases; in other words, the scope of collaboration must be broadened. It must combine document- and text-centric collaboration - such as email messaging, instant messaging (IM), team workspaces, and conferencing - with voice, video, and context to fully support the needs of the business.

Cisco Collaboration Strategic Direction

The Cisco® vision for collaboration focuses on enabling new and better collaboration experiences that translate to tangible and differentiated business value (Figure 2) for your organization. Our strategic direction for our collaboration portfolio is based on the following important principles:

- **An interoperable, open architecture:** As collaboration increasingly occurs across organizations and with people on the move, it is no longer a given that IT can control the devices and applications used in collaborative sessions. Cisco strongly believes that today's environment requires an interoperable, open architecture that allows for any device or application to use a core set of collaborative services. This scenario includes other collaborative applications, business applications, custom applications that our customers or developers build with any of our development tools, and of course any third-party devices such as smart phones.
- **Secure intercompany collaboration:** Organizations will increasingly move from collaboration within functions to intracompany collaboration to intercompany collaboration. In this environment, securely enabling collaboration with partners, suppliers, and customers as if they were behind the firewall is fundamental.
- **Video communications:** Globally dispersed teams and reduced travel are part of "the new normal". Next to a face-to-face meeting, video is the most natural way to communicate. Video will become as easy to use as documents are today - easy to create, publish, search, edit, and repurpose.
- **Enterprise social software:** Today we see the power of social networks in the consumer world - surpassing email messaging as the fourth most popular online activity. It is accelerated by the desire to connect and share with people with like interests. This same power will be harnessed for business productivity, delivering the ease of use, speed, and ubiquity that social networks offer in the consumer world - combined with the security, availability, quality of service (QoS), and reliability required by the enterprise.
- **Flexible consumption models:** IT requires the flexibility to adjust to a dynamically changing business and technology environment. Enterprise and IT architects do not make decisions in the context of on-premises versus on-demand, but seek to couple the robustness, security, and performance of the enterprise network with the openness and flexibility of collaboration through the cloud.

Figure 2. Cisco's Strategic Direction

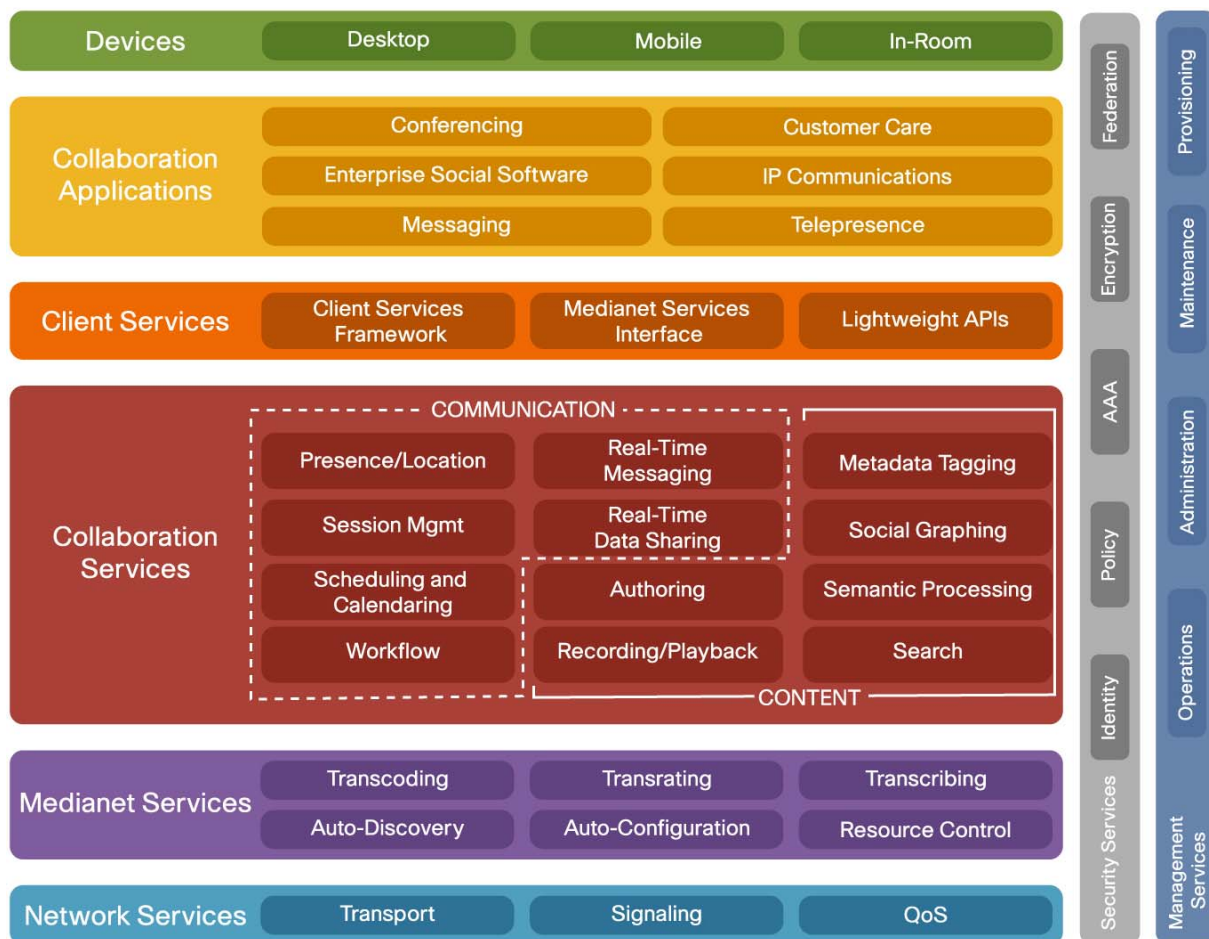


Cisco Collaboration Architecture

Cisco's open, interoperable architecture (Figure 3) powers our collaboration portfolio and is based on these strategic principles. From the beginning, it is constructed to enable boundaryless collaboration - breaking down silos between content formats, between individual tools and devices, between companies, and ultimately between people working toward a common goal. In the industry, its foremost differentiator is that it helps ensure interoperability among existing and new forms of communications and collaboration technologies, further enabling both structured and impromptu business processes. Cisco alone recognizes and can enable the combination of both great software and purpose-built hardware to deliver the experiences that most effectively bring people together. Yet at the same time, the Cisco collaboration architecture is based on the principles that heterogeneity is a fact of life and interoperability, openness, and customer choice are paramount.

The architecture is enabled through a set of flexible deployment models - whether on premises, Software-as-a-Service (SaaS), or a hybrid of the two - to meet the specific needs of the organization. These principles are actively embraced throughout our architecture.

Figure 3. Cisco Collaboration Architecture



The Cisco collaboration architecture consists of the following layers:

- **Network services:** Network services provide end-to-end connectivity, protocol support, signal management, and QoS for rich-media streams.
- **Medianet services:** A critical element of collaboration infrastructure, medianet services format video and other rich media to best match the characteristics and capabilities of a user's specific situation, including bandwidth availability, codec, and device type. These services go beyond QoS to focus on quality of experience (QoE) for video and other forms of rich media and are delivered by a number of network-based products and software components.
- **Collaboration services:** Another critical element of network-based collaboration infrastructure, collaboration services provide open, secure, reusable capabilities that are interoperable across applications and platforms, whether Cisco or third party. These building blocks manage the special needs required to handle rich content and communication in a heterogeneous, real-time environment, and they are designed to operate with true functional integrity, helping ensure their reusability by any application or device that touches the network. Well-defined APIs expose these services to a broad range of both Cisco and third-party collaboration applications.
- **Client services:** Client services provide programmatic access to collaboration services for custom development and integration with traditional environments to further increase interoperability.
- **Collaboration applications:** Collaboration applications streamline workflow and optimize decision making with software and purpose-built hardware. A broad range of both Cisco and third-party collaboration applications uses the collaboration and client services through well-defined APIs.
- **Devices:** Devices provide freedom and flexibility in accessing collaboration tools and services by allowing teams to work in the manner and location that suits them best.

Services that span all layers include:

- **Security services:** Security services protect all layers of the architecture from constantly evolving threats and help ensure identity to enforce policy for intercompany collaboration.
- **Management services:** Management services streamline management across operations, administration, maintenance, and provisioning to enable more flexible consumption models.

Cisco believes that successful delivery of the next-generation collaboration experience is not just a matter of desktop software or the latest social network or smart phone. It requires a full-stack approach and an acknowledgment that the underlying collaboration infrastructure can make the experience more natural and integrated, reduce IT complexity through greater reuse across silos, and deliver the superior reliability, scalability, and robustness expected of a true business solution.

The network is in a unique position to host these infrastructure services and to make them available consistently to all connected applications and devices, rather than in multiple separate implementations, each dedicated to a single purpose. Many business-critical collaboration capabilities - such as the ability to deliver high-quality interactions across and between companies, to transparently span cloud and on-premises delivery models, to translate real-time video and audio content into the right format and quality, to locate expertise and discover information using social networking principles, and many others - are inherently well suited to a network-based architectural approach.

Together, these layers establish a collaboration core that enables compelling experiences both within and among organizations. It offers a consistent experience to end users, regardless of the device or client they use. It accounts for the variability and diversity in the broad range of devices and applications people use to get work done. And, it offers IT the confidence to establish an investment roadmap with the knowledge that the Cisco collaboration architecture provides the flexibility to interoperate with new and future applications and devices.

Cisco Collaboration Solutions

Cisco's collaboration solutions comprise the following categories (note: a selection of products and infrastructure is listed below for illustration; for a complete reference please visit <http://www.cisco.com/go/collaboration>)

Conferencing: Cisco conferencing solutions provide audio, video, and web conferencing, allowing you to hold live multiparty meetings and share applications over IP networks. Delivered on-premises or as a hosted service, these solutions also integrate with IP communications for single-click join.

Software-as-a-Service solutions

- Cisco WebEx™ Meeting Center
- Cisco WebEx Training Center
- Cisco WebEx Event Center
- Cisco WebEx Support Center

Customer-premises solutions

- Cisco Unified MeetingPlace®
- Cisco Unified Videoconferencing
- Cisco TelePresence™ WebEx OneTouch

Collaboration Infrastructure

- Cisco WebEx Node for ASR 1000 Series
- Cisco WebEx Node for MCS with Cisco MeetingPlace
- Cisco Unified Communications Manager
- Cisco WebEx Collaboration Cloud

Customer Care: Customer care delivers intelligent contact routing, call treatment, network-to-desktop computer telephony integration (CTI), and multichannel contact management over an IP infrastructure. It combines multichannel automatic-call-distributor (ACD) functions with IP telephony in a unified solution, enabling your company to rapidly deploy a distributed contact-center infrastructure.

Cisco Unified Contact Center Products

- [Cisco Unified Contact Center Enterprise](#)
- [Cisco Unified Contact Center Express](#)
- [Cisco Unified Contact Center Hosted](#)
- [Cisco Unified Expert Advisor](#)
- Cisco Unified Intelligence Suite
- Cisco Customer Interaction Cloud

Cisco Unified Voice Self-Service Products

- [Cisco Unified Customer Voice Portal](#)
- [Cisco Unified IP Interactive Voice Response](#)

Collaboration Infrastructure

- Cisco Unified Communications Manager

Enterprise Social Software: Enterprise social software integrates communications and collaboration tools with everyday business applications into a single interface. It organizes nonstructured social software tools and information such as wikis, blogs, documents, and videos into enterprise workspaces on the corporate intranet and other platforms.

Social Video System

- Cisco Show and Share

Collaboration Video Capture

- Cisco Prosumer Video

Enterprise Collaboration Platform

- Cisco Quad

Collaboration Infrastructure

- Cisco Pulse™
- Cisco Media Experience Engine

IP Communications: IP communications provides voice, video, mobility, and presence services between IP endpoints, media-processing devices, voice-over-IP (VoIP) gateways, mobile devices, and multimedia applications.

IP telephony

- Cisco Unified Communications Manager
- Cisco Unified Communications Manager Express

Communications endpoints and applications

- Cisco Unified IP Phones
- Cisco Unified Presence - Powered by Jabber XMPP

Unified communications network management

- Cisco Unified Communications Network Management

Hosted or managed unified communications

- Cisco Unified Communications Large Enterprise System
- Cisco Hosted Unified Communications Services

Collaboration Infrastructure

- [Cisco Intercompany Media Engine](#)
- [Cisco Unified Communications Manager Session Management Edition](#)
- Cisco Unified Border Element
- [Cisco Unified Survivable Remote Site Telephony](#)

Messaging: Communicate securely and effectively across and between companies. View real-time presence information and connect with contacts through email, instant messaging, and voicemail. Enhance flexibility with on-premise, Software-as-a-Service, and blended deployment models.

SaaS-based email and enterprise IM

- Cisco WebEx Connect IM - Powered by Jabber XMPP

IP communications enterprise IM

- Cisco Unified Personal Communicator - Powered by Jabber XMPP

Voice and Unified Messaging

- Cisco Unity Connection
- Cisco Unity Unified Messaging
- Cisco Unity Express
- Cisco Unified Survivable Remote Site Voicemail

Collaboration Infrastructure

- Cisco Unified Communications Manager
- Cisco Unified Presence
- Cisco WebEx Collaboration Cloud

Mobile Applications: With Cisco mobile applications, you can increase employee productivity and customer responsiveness by enabling smart phones and other mobile devices to be used for communication and collaboration as an extension of your enterprise network:

Mobile Applications

- [Cisco Unified Mobile Communicator](#)
- [Cisco Unified Mobility](#)
- Cisco WebEx MeetingCenter for Mobile Devices
- Cisco Mobile

Cisco Unified Wireless IP Phones

- [Cisco Wireless IP Phone 7925G](#)

Cisco Desktop Clients

- [Cisco Unified Personal Communicator](#)
- [Cisco IP Communicator](#)

Collaboration Infrastructure

- Cisco Intercompany Media Engine
- [Cisco Unified Communications Manager Session Management Edition](#)
- Cisco Unified Border Element
- [Cisco Unified Survivable Remote Site Telephony](#)

Telepresence: Telepresence enables live, face-to-face experiences using high-quality spatial audio and lifelike video in a specially tuned environment. You can collaborate, meet, share content, create high-quality video recordings and events, consult with experts, and deliver personalized services with an experience that is as good as being there.

Immersive Cisco TelePresence Endpoints

- [Cisco TelePresence 3010 and 3210](#)
- [TANDBERG Telepresence T1 and T3](#)

Multipurpose Cisco TelePresence Endpoints

- [Cisco TelePresence System 1300 Series](#)
- [TANDBERG Profile Series](#)

Personal Cisco TelePresence Endpoints

- [Cisco TelePresence System 500 and 1100](#)
- [TANDBERG Movi, EX90](#)

Collaboration Infrastructure

- Call- and Session-Control Infrastructure
 - [Cisco Unified Communications Manager](#)
 - [TANDBERG Video Communication Server](#)
- Media Switching Infrastructure
 - [Cisco TelePresence Multipoint Switch](#)
- Media Services Infrastructure
 - [Cisco Media Experience Engine](#)
 - [Cisco TelePresence Recording Server](#)
 - [TANDBERG Content Server](#)

Cisco TelePresence Cloud Services

- [Intercompany Cisco TelePresence Services](#)
- [Cisco TelePresence Directory](#)
- Public Cisco TelePresence Suites

Multiple Paths to Successful Collaboration

With Cisco's collaboration solutions, you can start at any point within the portfolio to match your organization's business needs; perhaps it is conferencing to reach more customers with less travel, or customer care to increase customer intimacy. Whatever your requirement, Cisco enables you to begin at any point and move along your collaboration journey at a pace that matches your business needs and priorities.

And when you are ready to add other capabilities, working with Cisco across additional solutions provides you with greater value and capability than if you choose point solutions from individual vendors because of our architectural approach.

For example, perhaps your first business priority is to increase customer reach while reducing travel. This scenario requires an enterprise-level solution for conferencing with customers and partners, so your organization chooses to begin with Cisco WebEx Conferencing.

Next, you might move to IP communications to reduce maintenance costs, secure a voice upgrade path, and gain new capabilities by transitioning from your existing time-division multiplexing (TDM) private branch exchange (PBX). By subsequently introducing the Cisco WebEx Node for the ASR 1000 Series, to take advantage of Cisco ASR 1000 Series Aggregation Services Routers, you can provide the highest level of Cisco WebEx meeting performance for all attendees, optimizing bandwidth and reducing WAN traffic for participants inside the firewall while continuing to use the real-time, global network of the Cisco WebEx collaboration cloud to best advantage through a powerful hybrid solution that blends the advantages of an onsite platform and a hosted solution.

Furthermore, if you later add the Cisco TelePresence system to have the richest, most lifelike meeting capability available with customers and important partners, it takes full advantage of the same call-control capabilities from your initial IP communications investment and integrates into your Cisco WebEx web conferencing solution, shortening the deployment time and lowering IT operating expenses (OpEx) associated with rolling out premium video-conferencing capabilities.

Conclusion

Tools for collaboration come in many forms: wikis, blogs, virtual workspaces, video presentations, IM, social networking sites, and voice and web conferencing are just a few. With this in mind, strategic planners in IT need to ensure they construct a core foundation that supports a rapidly evolving set of applications - one that also optimizes the various media types that comprise today's collaborative experience. The Cisco collaboration architecture defines a set of core collaboration services that you should consider when planning such a foundation - one that suits your organization's specific IT roadmap for delivering collaborative capabilities to the business. It provides IT with flexible consumption models that enable you to deploy solutions as a combination of on-premises and cloud-based services that scale as required. The products that make up Cisco's collaboration portfolio are based on this open, interoperable architecture, and they enable a broad range of solutions designed to match your business needs and priorities as you progress along your collaboration journey at your own pace.

For More Information

Cisco Collaboration Solutions: <http://www.cisco.com/go/collaboration>

Cisco Collaboration Architecture Interactive Flash: http://www.cisco.com/assets/sol/ent/ent_arch/caf/index.html



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
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