► White Paper

Transforming Collaboration Through Strategy and Architecture

Introduction

Communication and collaboration are more critical than ever in today's enterprise, and as collaboration-oriented capabilities continue to advance, new themes are evolving that challenge the way organizations traditionally operate. These themes include:

- Borderless enterprises: In the past, organizations viewed themselves as siloed entities, with a unique enterprise perimeter meant to isolate external and internal operations. Today, however, working across corporate firewalls is business-critical as enterprises look to expand their global and intercompany value chains and achieve a competitive advantage.
- Workplace mobility: The world's mobile workforce will exceed one billion workers in 2010 and grow to nearly 1.2 billion—more than a third of the world's workforce—by 2013.[1] The expectation that enterprise information and collaborative tools are accessible to workers, regardless of location, is changing the workplace culture's reliance on the physical office.
- Consumerization of IT: The proliferation of consumer technology in the workplace has spawned a new age of ubiquitous participation. Web 2.0 tools that were once common only in the consumer space have found their way into the enterprise—many times without the consent of IT. These tools are changing how information is created, published, and consumed, while introducing new privacy and security challenges for CIOs.
- Information proliferation: By 2020, digital data will grow to 35 trillion gigabytes—44 times larger than it was in 2009.[2] Since the vast majority of this data is unstructured, determining how to manage, locate, and effectively use it becomes a significant challenge.

To take advantage of the opportunities presented by this new communications environment, organizations must adopt a holistic architectural approach that focuses on aligning IT with the needs of the business. Successful collaboration initiatives require:

- Clear strategies based on business imperatives, not technology
- Architectural frameworks that evolve with the needs of the organization
- Analysis and understanding of cultural considerations that can affect adoption
- Defined approaches for governance

[1] IDC, *Worldwide Mobile Worker Population 2009-2013 Forecast* (December 2009)
[2] IDC, *The Digital Universe Decade – Are You Ready?* (May 2010)

For CXOs, this is a call to rethink business models, processes, and cultures. Specifically, for CIOs, this represents a unique opportunity to transform the role of IT in the enterprise. By developing a business-led strategy and accompanying architecture with stakeholders across corporate communications, human resources, finance, sales, and other departments, IT can evolve from a service-oriented cost center to a strategic partner that delivers long-term business value to the organization.

Considerations for Collaboration

Collaboration is unique in its potential to affect every employee, business partner, and customer. Although recent advances in collaborative technologies have brought an increased awareness and focus to the discipline, collaboration existed long before personal computers, smart phones, and video solutions entered the workplace. Today's environment, however, provides an extraordinary opportunity to reevaluate and transform the ways in which enterprises collaborate.

- Collaboration is much more than just technology. Collaboration is more than a technical architecture, solution, or product, it is the transformational experience that integrates people, processes, and technology. Collaboration is the catalyst for evolving from merely using technology to rethinking business, changing process, and adapting culture. As a result, holistic collaboration strategy and architecture must account for—and address—not only the technology, but also the effect those solutions will have on an organization's processes and culture.
- Successful collaboration is not a "one size fits all" proposition. Strategies and architectural solutions must be flexible enough to account for the unique communication and collaboration needs of both internal (executives, sales, knowledge workers, and so on) and external (customers, suppliers, vendors, and so on) stakeholders. For example, a highly mobile sales force will likely have a different collaboration profile than traditional, office-bound workers. Organizations should consider the complexities within their given industry. For instance, collaborative solutions that are effective within media and entertainment enterprises might have minimal applicability within the regulated world of financial services. However, best practices that have been established within one industry can be adapted and applied to another.
- User adoption is the primary indicator of collaboration success. Successful collaboration relies on the "network effect," which states that a product or service's value increases as more people use it. Before a collaboration tool can deliver value, it must have active participants. However, without a clear alignment to business imperatives and objectives, collaborative technologies risk becoming isolated silos of functionality. Moreover, if only individual employees or departments adopt the deployed capabilities, anticipated benefits fall short of business expectations, and operational complexity and overhead increase for IT organizations.

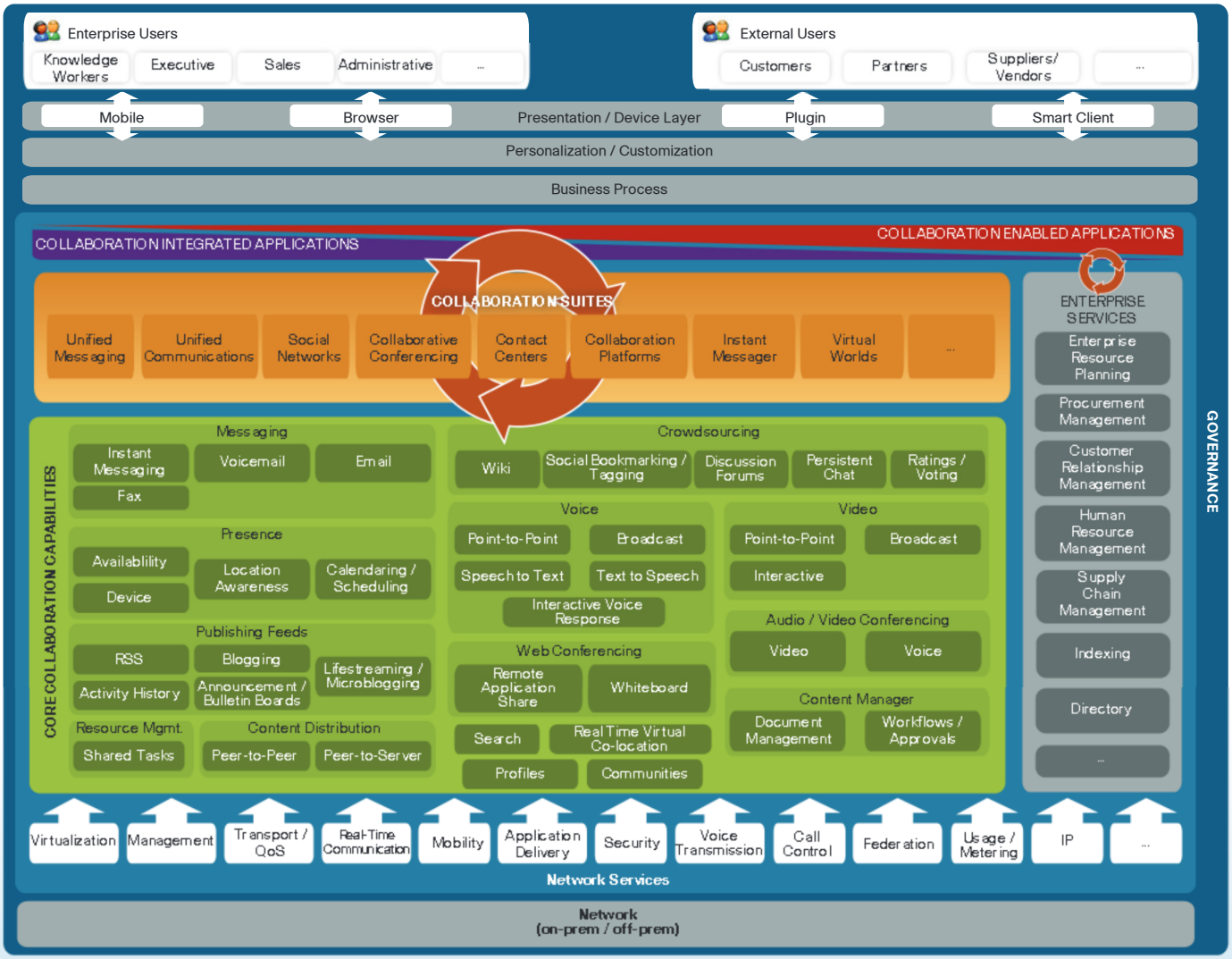
Holistic Collaboration Architectures

Often the terms unified communications, Web 2.0/Enterprise 2.0, and social media are used interchangeably to describe collaboration. However, none of these terms is synonymous with collaboration, because each represents only a subset of the much broader spectrum (see Figure 1). For enterprises to develop and embrace a comprehensive vision, they must make sure the evaluation process extends beyond unified communications or Web 2.0 and consider all collaborative capabilities.

Enterprise collaboration strategy and architecture, however, should not necessarily result in a roadmap for deploying every available collaborative capability. The evaluation process should lead to a collaboration strategy and architecture that are selective, consisting only of those capabilities that help meet identified business imperatives.

Figure 1 illustrates a vendor- and product-independent conceptual collaboration architecture. It is designed from the perspective of the enterprise and provides a structured framework for evaluating collaboration needs. The diagram also identifies a comprehensive list of collaboration capabilities and defines a holistic view of the architectural components an enterprise must consider when evaluating collaboration initiatives.

Figure 1. Conceptual Collaboration Architecture



The components depicted in Figure 1 are defined as follows:

- Network/network services: The network platform enables collaboration functionality to be extended and managed across and outside the enterprise.
- Core collaboration capabilities: These are the foundational building blocks for all collaboration solutions. Capabilities are updated as needed when new core technologies emerge.
- Collaboration suites: These aggregated sets of two or more core collaboration capabilities are dedicated strictly to collaborating; instant messenger applications, for example, provide some combination of the following core collaboration capabilities::
  - Instant messaging
  - Availability presence (away, busy, do not disturb)
  - Device presence (on hook/off hook)
  - Point-to-point video
  - Point-to-point voice
- Enterprise services: These business-critical systems and data are used to implement and manage the business but do not necessarily facilitate collaboration. Examples include enterprise resource planning, human resource management, and so on.
- Collaboration-integrated applications: These tools encompass a mix of core collaboration capabilities, collaboration suites, and enterprise services into an entirely new application. An example is a collaborative mashup that combines availability and device presence with enterprise directory information and enterprise search to create an expertise location application.
- Collaboration-enabled applications: These tools use core collaboration capabilities and suites to extend the functionality of a base application with collaboration features.[3] An example is providing availability presence within a customer relationship management application.
- Business processes: Both formal and impromptu business processes promote collaborative interactions. To provide relevance, a collaboration architecture must recognize and support the needs of all business processes.
- Personalization/customization: These characteristics allow the architecture to dictate collaborative capabilities based on user role, while giving users the ability to customize their collaboration experience based on individual preferences.
- Presentation/device layer: This architectural layer offers various interfaces for customizing collaboration processes and data that recognize, for example, the different collaboration experiences on a mobile device versus a desktop computer, optimizing around these differences.
- User profiles (enterprise/external): These profiles address individual users' unique communication and collaboration needs to help ensure the business and technical relevance of the architecture.
- Governance: The structured use of people and processes supports effective, long-term management and growth of collaborative solutions.

[3]Also referred to as contextual collaboration

The end result of any collaborative architectural analysis should identify initiatives that fall into one or more of the following categories:

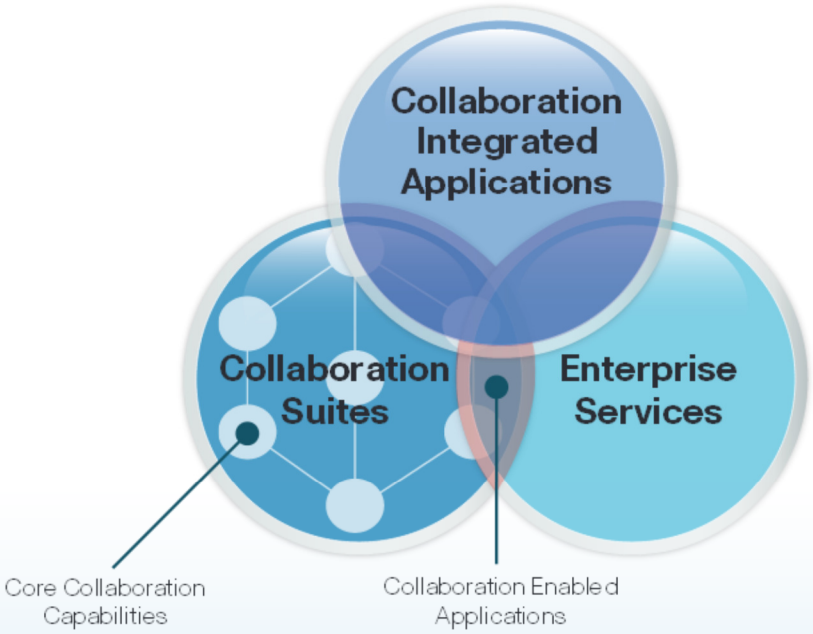
- Deployment/modification of core collaboration capabilities
- Deployment/modification of collaboration suites
- Deployment/modification of collaboration-enabled applications
- Deployment/modification of collaboration-integrated applications

Enable vs. Integrate

Collaboration-enabled applications provide collaborative capabilities within the context of an existing business application (see Figure 2). End users view these capabilities as an enhancement, rather than a replacement, of the original application. Although some training might be needed to take full advantage of the added collaborative features, users will not require wholesale training because they still understand the original business application.

Conversely, collaboration-integrated applications introduce completely new applications by creating mashups. End users do not have the benefit of understanding the application's prior purpose and use, making user adoption—and achieving positive business effect—more challenging. They often need formal training and communications to learn why, how, and when to use the application. New solutions generally warrant separate application and operations support procedures as well, requiring more time and resources to achieve the desired results.

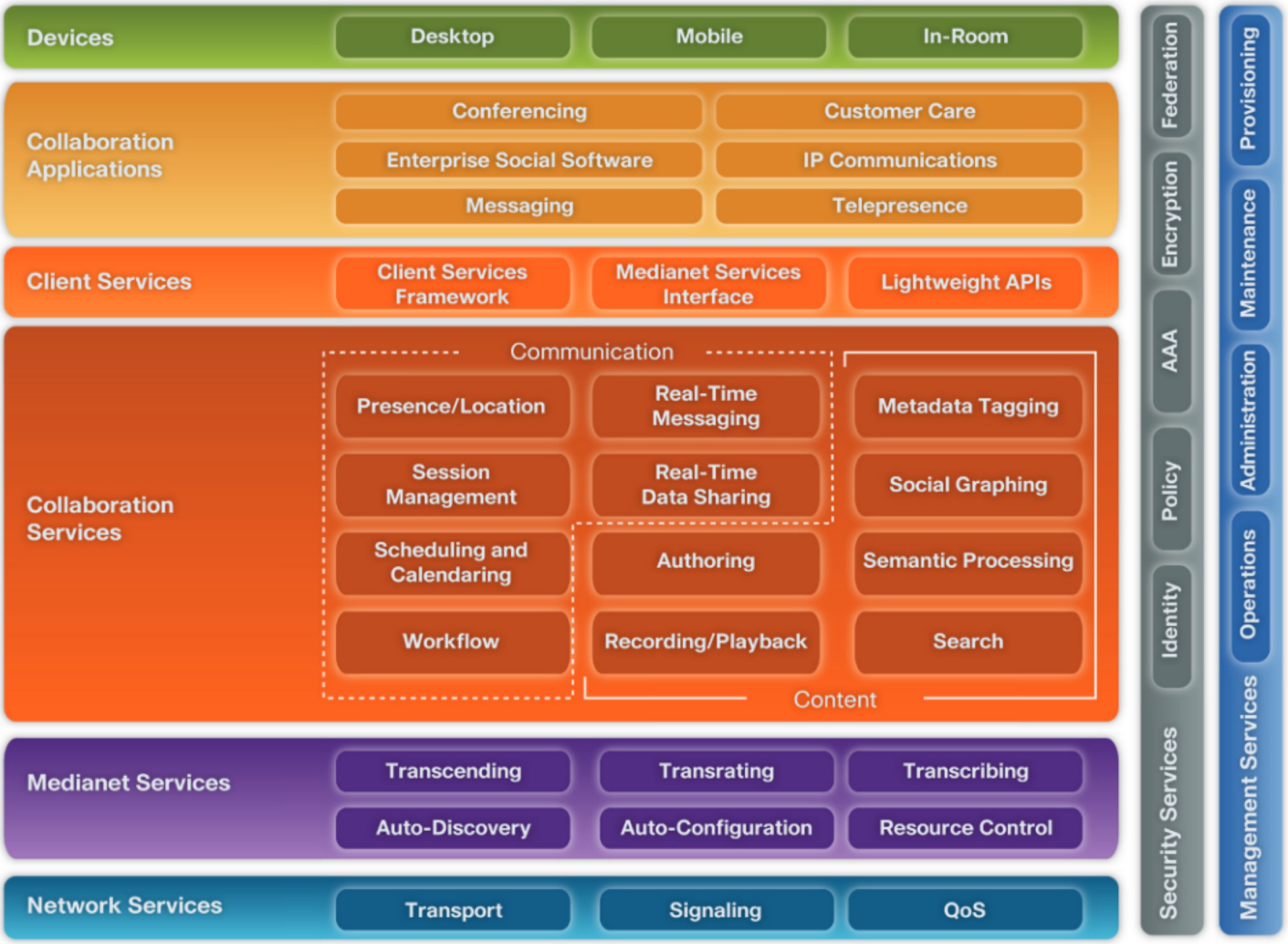
Figure 2. Approach for Developing Collaboration Strategies



Vendor-Specific Architectures

In contrast to the conceptual collaboration architecture shown in Figure 1, vendor-specific architectures, like the Cisco® example depicted in Figure 3, are used to communicate (and differentiate) a product portfolio's capabilities and overall value proposition.

Figure 3. Cisco Collaboration Architecture



Cisco's collaboration architecture[4] emphasizes interoperabilty and openness, allowing any device or application to use core collaboration services enabled through a set of flexible deployment models—on premises, software as a service (SaaS), or a hybrid of both.

Models such as these help enterprises understand a vendor's architectural approach, establishing, for example, whether the approach is network-centric, application-centric, or a combination of the two. However, in order to determine the relevancy and applicability of a given vendor's collaboration architecture, enterprises should first identify what capabilities are required within the context of a collaboration strategy.

Essential Architectural Evaluation Criteria

Assessing collaboration within the context of architectural capability is critical to maximizing the long-term viability and strategic relevance of any collaborative infrastructure decision. As considerations such as extensibility, scalability, and integration flexibility become more integral to delivering strategic objectives, enterprises should look beyond product demonstrations and advertised feature lists.

Organizations should ask themselves questions such as:

- Will requirements dictate that collaborative capabilities be exposed or embedded within other applications and/or services?
- As the enterprise grows, must the desired collaborative capabilities scale to meet the projected need?
- What types of collaboration does the enterprise require (for example, process-centric, activity-centric, community-centric, network-centric, and so on)?

Making vendor selections without understanding the architectural implications posed by such questions can severely limit a collaboration architecture's ability to address present and future business needs.

Developing a Collaboration Strategy

A collaboration strategy promotes the alignment of applications, services, devices, and content into a cohesive, unified architecture that optimizes business and organizational processes and facilitates innovation. Enterprise organizations should orient the strategy toward a business-centric focus, allowing business requirements, not technology, to define collaboration initiatives.

[4] For more detail about the Cisco Collaboration Architecture, visit www.cisco.com/en/US/solutions/ns340/ns858/collab_framework.html

Business factors such as borderless enterprises, workplace mobility, consumerization of IT, and the rapid proliferation of information are placing transformational pressures on organizations. Success depends on the alignment of business and IT objectives through a comprehensive, strategic approach. Without an overarching strategy, the approach becomes fragmented, leading to:

- Excess costs
- High failure rate for technology solutions
- Challenges with interoperability between systems and across business units
- The inability to rapidly adapt to changing collaborative needs
- Overlaps in tools and processes
- Security and regulatory compliance issues

A comprehensive approach to developing a collaboration strategy should consist of three core phases (Figure 4).

Figure 4. Approach for Developing Collaboration Strategies

In the business alignment phase, stakeholders across IT and the business focus on identifying the primary collaboration requirements based on business need. They can then establish a strategic collaboration vision, which serves as the reference for further collaborative technology analysis.

During the process and organizational analysis phase, thought leaders analyze the enterprise's existing collaboration environment to determine the extent of collaborative technology and functionality present (also called collaboration mapping). In this phase of strategic development, it is critical for stakeholders to understand which existing investments they must incorporate into the desired end state and determine where they can consolidate redundant capabilities (such as multiple wiki platforms). An assessment of user roles, cultural analysis, and existing governance helps determine gaps that might prevent the organization from achieving desired end state capabilities.

During the target business initiatives phase, thought leaders develop and refine value propositions based on the analysis of supporting collaborative business cases. This process leads to a prioritized, strategic, architectural roadmap that supports identified business initiatives.

Table 1 illustrates common activities associated with developing collaboration strategies.

Table 1. Common Collaboration Strategy Activities

Phase	Activities
Business alignment	· Conduct the collaboration discovery session with business and IT stakeholders · Identify and prioritize collaborative areas of focus · Capture business imperatives across in-scope organizations
Process and organizational analysis	· Inventory existing collaboration technologies and business processes · Assess organization's collaboration capability (internal and external), current state, and desired future state
Target business initiatives	· Identify effect zones · Define strategic collaborative opportunities · Define tactical collaborative opportunities · Design to-be collaboration process/technology architecture · Create high-level to-be collaboration use cases · Estimate business effect and cost

Conclusion

Gartner, a leading IT research and advisory company, forecasts that through 2012, more than 70 percent of IT-influenced social media collaboration initiatives will fail.[5] Business requirements, not technology, shape successful collaboration initiatives. As collaboration becomes increasingly strategic to overall enterprise success, IT organizations must transition from deploying technology to deploying business-relevant technology solutions.

This shift requires that stakeholders from across the organization align to develop a cohesive collaboration vision that emphasizes capabilities, not products.

Cisco Collaboration Services employs a business-centric, product-independent approach to define collaboration strategies and architectures for companies that are relevant in terms of technology and business goals. Cisco's holistic perspective on collaboration, combined with a deep understanding of the underlying technologies, allows organizations to maximize the benefits of collaboration on the network platform.

For more information about Cisco's Collaboration Services and how we help our customers develop collaboration strategies and architectures, **click here**.

[5]Gartner, Predicts 2010: *Social Software Is an Enterprise Reality* (December 2009)

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

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

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.