



On-Demand Vs. On-Premises Collaboration:

Weighing TCO Against Business Value

WebEx Communications Inc.

3979 Freedom Circle, Santa Clara, CA 95054, U.S.A.

Corp.: +1.408.435.7000 **Sales:** 1.877.509.3239

www.webex.com

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Executive Summary

As collaboration gains adoption within enterprises of all sizes, it's fast becoming a valuable tool for the productive knowledge worker. Organizations now recognize the compelling value of interacting any time and anyplace with peers, customers, and partners, and seek to round out their collaboration solutions with integrated instant messaging and asynchronous workspaces as well as on-demand system management.

Accelerating interactions while boosting productivity means organizations accomplish more in less time—and for lower cost. Once an enterprise realizes obvious gains from web collaboration, it first becomes an initiative, then a mandate. Extending the ability of employees to reach global colleagues, customers, and partners via a hosted collaboration model ensures that productivity will increase substantially.

The evaluation and final decision for choosing between a hosted service or an on-premise, self-managed model usually falls to the IT department. The key considerations for making this decision encompass architecture, infrastructure, manageability, and total cost of ownership. Organizations must typically develop a full cost-profile of choices, not just purchase price. This white paper lays the foundation to help you clarify your options.



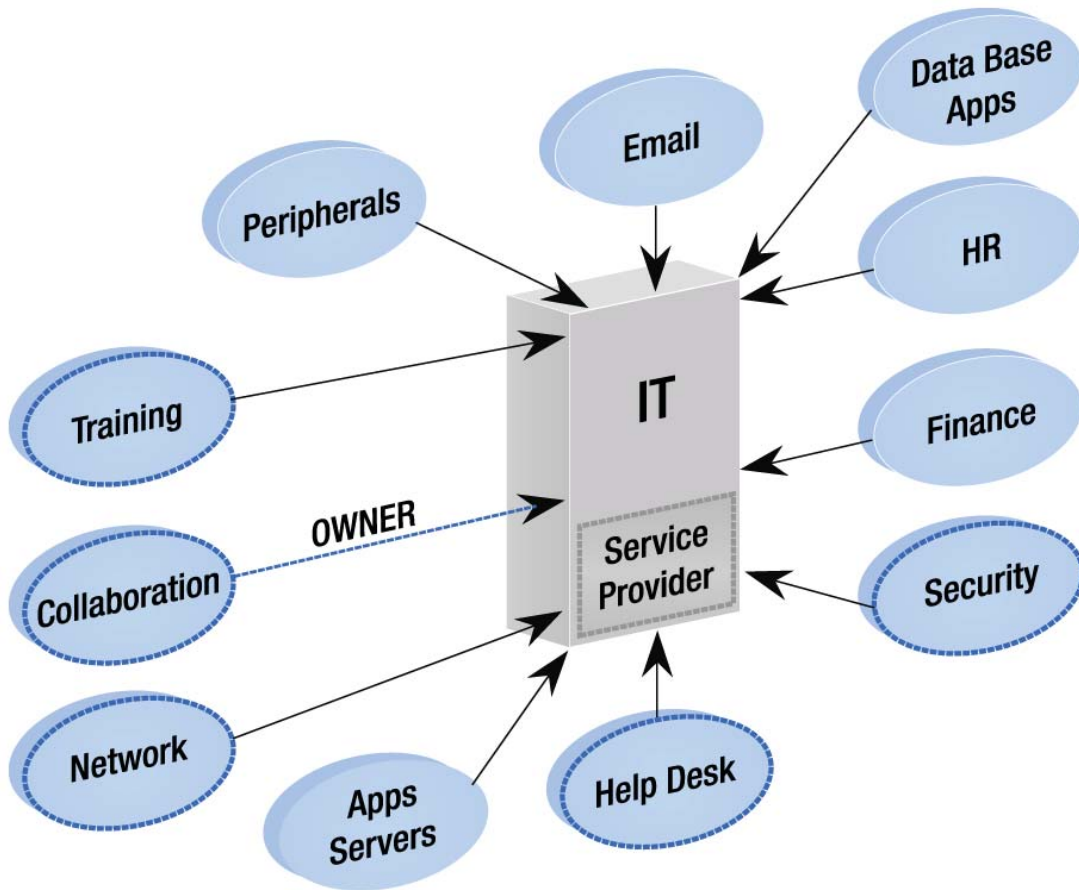
Hosting Collaboration

The complexities of architecting a real-time communications technology is a complex endeavor that lends itself to the on-demand delivery model. The service provider model provides high availability, which requires dedicated support teams and staff available to customers on short notice. Along with this personnel comes reserve capacity to handle any spikes in usage, outages, or network mishaps continuously, globally, and securely.

The on-demand software as a service model delivers business applications anywhere, any time as hosted service. The WebEx collaboration platform was developed from the start to host on-demand business applications on a dedicated infrastructure, outside the enterprise—eliminating the overhead of network provisioning, customer service, and maintenance from the enterprise IT department. The following illustration shows the portion of IT time and resources returned to IT (blue-dashing) when employing the on-demand approach. Finally, working through a provider can also be the most cost-effective way for companies to obtain the latest technologies

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Figure 1. I.T. Task ownership (Collaboration related in dashed ovals)



Organizational Requirements of Hosting Your Collaboration Solution

Deploying a full-featured collaboration suite that addresses the needs of several departments calls for a single point of administration. Because IT frequently administers collaboration, well-architected, managed solutions requiring minimal time and resources are favored.

Table 1. Short-list for selecting a collaboration solution.

Organization Need	I.T. Issue	Solution
100% Service access	No downtime	High availability, redundancy
Ease of use	Minimal support	Online training (live/archived)
Good performance	Performance complaints	Low-latency service
Confidentiality of information	Information security & privacy	SSL, AES encryption, complex passwords, access restriction
Loss of time, data, setups	Crashes, interruptions	Global backup capability
Expanded use as a result of growth	More stuff to manage	Managed scalability, over-provisioning at the ready
Global reach	Connectivity	Global data centers, private fiber
ROI	Usage monitoring	Self-service monitoring, Back-end stats

If Table 1 represents the typical 'short-list' for selecting a collaboration solution, how are these requirements met? What must the implementation include in order to address these necessities?

- Service-based infrastructure.
- Dedicated backbone spanning the globe.
- High bandwidth, optimized route, Internet peering.
- High-availability servers and switches.
- Operational Support System with 24x7x365 global visibility.
- Global mirroring and backup facility.
- Integrated VOIP, Video and telephony.
- Integration with standard platforms and enterprise applications.
- Over-provisioned, scalable bandwidth and capacity.



Increasing the number of users may raise the base cost of the package as a result of additional hardware server deployments and IT support.

- Encrypted user data and meeting credentials.
- Adaptive document encoding and compressed data transmission.
- Firewall traversal in a secure manner for all functions.

Running Your Collaboration Solution On-Premise

Traditional software applications are based on a large up-front licensing with annual evergreen support model. Important functions of the package are often optioned in a front-loaded licensing arrangement with annual renewal for upgrades and support. Increasing the number of users may raise the base cost of the package as a result of additional hardware server deployments and IT support.

A typical enterprise software package requires costly hardware deployment, servers, backup, and network provisioning in order to accommodate the number of users on and off-campus. Further, protecting this resource from unauthorized access may severely tax security architecture.

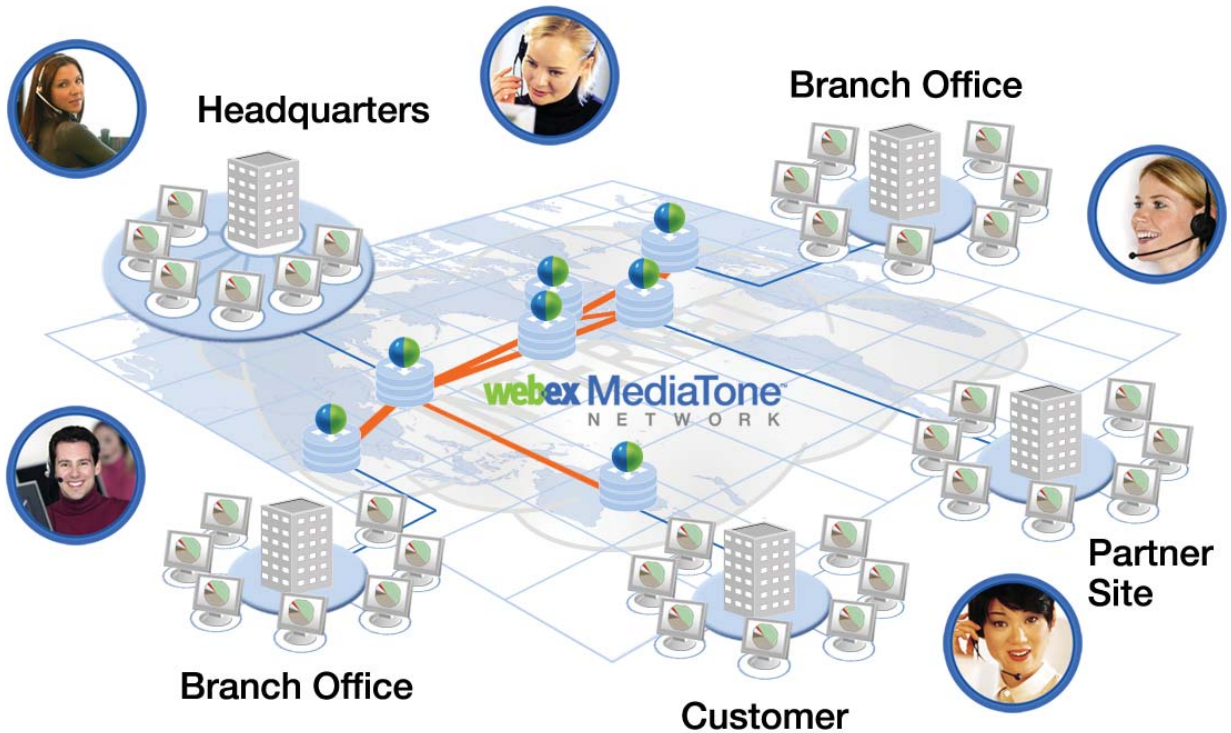
On-Premises Infrastructure Considerations

Busy and over-taxed IT staff often don't treat web collaboration as mission-critical when weighed against the importance of the payroll system, email, or CRM. Any network problems affecting all internal applications directly affect collaboration, both internally and externally. Capacity, global reach, and availability now push collaboration into the realm of vital telecommunications. With the almost-immediate benefits of collaboration come proportional support issues, training, and assistance. Servers housing on-premise applications require maintenance, provisioning, and configuration. This exercise is one layer removed from the actual operation of the application at the user level. Providing external access to the servers requires placement from within the enterprise onto the public internet space where it lacks the protection afforded by the corporate firewall.

Managing these facilities requires a specialized toolset designed for a dedicated infrastructure with global reach.



Figure 2. The WebEx MediaTone Network infrastructure.



As can be seen in Figure 2 above, the on-demand service provider extends its global, private network atop the Internet peers without using the public portion to transmit session data or content. Initial access to this dedicated, private backbone requires one or two hops through the Internet until it reaches the WebEx MediaTone infrastructure, shown with blue switch and orange fiber icons. Service access starts at the endpoint and makes a short hop over the last-mile to the ISP, where the MediaTone infrastructure peers at the largest network access points.

Converging Services

The on-demand, hosted approach, employs a Software-as-a-Service model. One of the benefits of multi-tenancy (as opposed to the single-tenancy approaches of the failed ASP model) is the ability to serve large numbers of concurrent users with thin client applications over the Internet. Designing applications from the start using this architecture, provides a natural extension to mash-up related applications on shared APIs and databases in order to solve business process issues. Two such applications from the support and IM arenas are mentioned below.



Obtaining global reach for IM participants that often include partners, customers, and colleagues in addition to employees, requires a big-footprint service-provider model and a dedicated network. This infrastructure delivers global connectivity, directory federation, and optimal availability without burdening enterprise IT resources.

Enterprise Instant Messaging

Instant messaging is emerging as a critical tool for organizations of every size. From a business standpoint, any tool that helps knowledge workers to produce more, work effectively, and stay in touch on a timely basis with co-workers, customers, and partners comes out a winner. WebEx recognized this and, through its partnership with AOL, has brought a business-class IM solution to the marketplace. The company delivers clients and administers the service through its MediaTone platform. The addition of WebEx collaboration features makes this ubiquitous IM client more powerful. Just as every other WebEx application is subject to a host of reliability and security measures, the WebEx AIM Pro Business Edition follows suit and converges tightly to round out our collaboration suite.

Comparing Hosted and On-Premises Instant Messaging

For SMB and Enterprise IT departments to take instant messaging (IM) seriously, it must have all the qualities required of any serious business application—scalability, reliability, security, ease of use. Choices are also driven by function-set and cost. IM is somewhat challenging to enterprises if not managed and provisioned on behalf of the organization rather than being left to carelessly free-run.

Obtaining global reach for IM participants that often include partners, customers, and colleagues in addition to employees, requires a big-footprint service-provider model and a dedicated network. This infrastructure delivers global connectivity, directory federation, and optimal availability without burdening enterprise IT resources. Additionally, network-based archiving, centrally and securely on a worldwide basis would also be a pre-requisite function of business instant messaging solution.

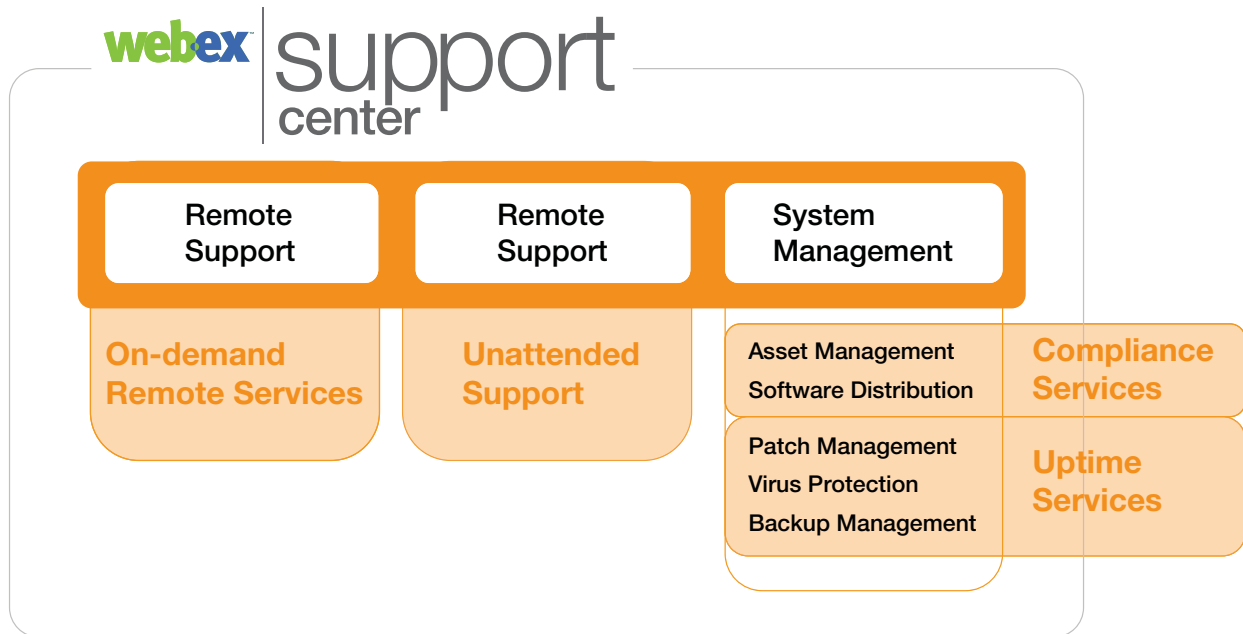
Built-in software VoIP and video conferencing, intrinsic to enterprise IM provides a bridge to Internet-based collaboration without compromising the investment in a reliable PBX telephony system.



System Management

Managing remote PCs over the Internet is of great benefit to any organization. Traversing the Internet through firewalls while maintaining privacy and security are a requirement for any software as-a-service solution.

Figure 3. Support Center and System Management



WebEx offers an on-demand system management solution as part of the WebEx Support Center package. On-premises system management solutions require servers, IT maintenance personnel, and are often limited to the campus network. Having developed the MediaTone network to deliver software-as-a-service since its inception, system management stands on our platform, and delivers all of the requirements of a hosted, secure solution with global reach.

Comparing Technologies of Hosted vs. On-Premise Collaboration

The architecture of any software delivered as a service have commonalities that transcend applications. On-premises solutions are generally chosen to provide a sense of tighter security to the organization at the expense of reach and costly IT support—both of which are of paramount importance to the company. On-demand services provide intense, standards-based security shielding without compromising reach. With service monitoring



An important distinction between hosted and on-premise collaboration is that both collaboration and conferencing have attained 'utility' status due to widespread adoption in everyday business processes.

available to collaboration administrators, the company relying on hosted solutions need only manage access. In the case of an on-premises system, there is regular software change control, plus server and network provisioning, that come into play both internally and externally. Support and trouble ticket response is tied to the enterprise IT resource since the service is provided internally.

An important distinction between hosted and on-premise collaboration is that both collaboration and conferencing have attained 'utility' status due to widespread adoption in everyday business processes. Providing such a communications utility, not only internally, but also externally—tying partners, customers, and remote employees together—could place a huge burden on IT staff. These features must persist in addition to meeting expectations for service, performance, and privacy.

Let's drill a little deeper into the value comparison by major function:

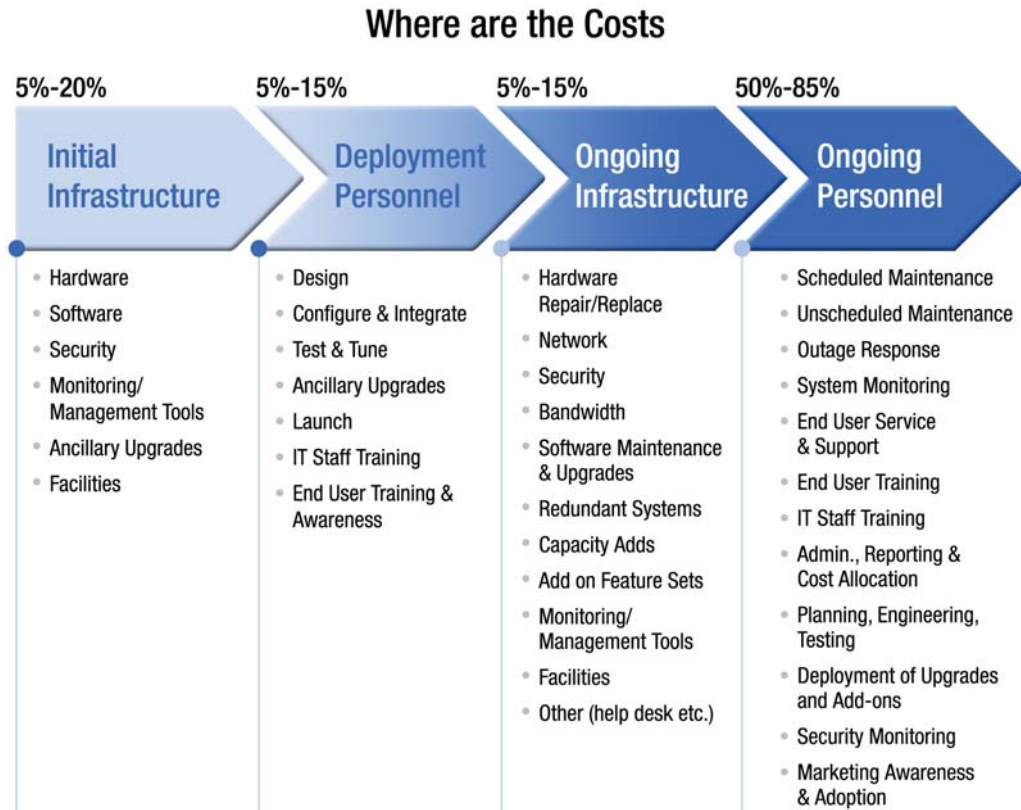
Table 2. Comparing functions of host and on-premise solutions.

On-Premises Attribute	Benefit Impact
Control over servers and applications	Security, reliability
On-premises access control	Privacy
Physical Security and placement of servers	Intrusion, threats, stability
LAN network policy control	Provisioning, traffic and b/w mgmt
Local backup and fail-over systems	Reliability, availability, disaster recovery
Integration with local directory	Interoperability, workgroup
Hosted Attribute	Benefit Impact
Service providers offer substantial economies of scale	Trusted to deliver piece of mind
Highly interactive and available, real-time, low-delay and globally accessible	Highly available service, lower outages
Platform independence, highly interoperable	PC, MAC, SUN, Unix/Linux
Diverse content support, multiple media types	All media capable
Consistent network performance across the globe	All attendees and hosts have homogeneous experience
Easier deployment and maintenance	Lower impact on internal IT resources
More advanced features made available	Easy to upgrade and benefit by new features
Integration with directories	Enterprise integration, adding new users
Integration with enterprise applications such as CRM, email and I.M.	Stable, proven customization path
Self-service management portal	Enterprise collaboration manager visibility



Table 3 shows the percentage of total cost of infrastructure, deployment personnel, ongoing infrastructure and ongoing personnel when deploying applications on premises.












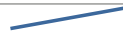
Table 3. On-Premise deployment cost.



Source: IDC

The table above illustrates that a substantial part of the cost of self-deploying is for the care and feeding of both the solution and the user base.

Table 4. On-Demand and On-Premise issues/costs.

On-Premises Issue	On-Premises Approach	On-Premises I.T. Burden	On-Premises Cost
Scaling up the number of hosted sessions	Rack and Stack servers and maintain them		Increasing 
Network Congestion & maintenance	Network & Telecom Staff + Infrastructure		Variable 
User assistance	Internal I.T. Helpdesk		Increasing 
On-Demand Issue	On-Demand Approach	On-Demand I.T. Burden	On-Demand Cost
Scaling up the number of hosted sessions	Order more capacity from service provider – named hosts	None 	Incremental 
Network congestion & maintenance	Over-provisioned by service-provider	None 	Incremental 
User assistance	24x7 service provider assistance	Minimal 	Incremental 

In the on-demand case, the cost of scaling is absorbed by the service provider. The service is always overprovisioned in order to have capacity available, and there are no additional IT costs for adding users.

Table 4 above shows that the three concerns most important to organizations are:

1. Scaling up the number of sessions

In the on-premise case, scaling involves adding servers and increasing IT headcount. The additional hardware cost plus the capital expense and incremental IT headcount creates a stair-step increase in cost. In the on-demand case, the cost of scaling is absorbed by the service provider. The service is always over-provisioned in order to have capacity available, and there are no additional IT costs for adding users.

2.Reducing network congestion and maintenance

An on-premise solution requires that all network congestion, application provisioning, and bandwidth management be handled by IT and telecom services within the enterprise. This may involve firewall filtering, access-control lists (ACLs) in routers, and other network infrastructure configuration and monitoring exercises. In the on-demand scenario, all of these issues are managed as a service. WebEx provides global bandwidth, eliminating most of the Internet traffic issues for the organization. All web meeting attendees congregate on networks outside in the service-provider's infrastructure instead of the local area network.



3. Assisting users

As collaboration usage grows in the enterprise, hosts and attendees often ask for assistance. This support is more readily given by the service provider that maintains over-provisioned customer service resources. This eliminates the bottlenecks normally associated with internal IT teams fighting fires in favor of a scalable, 24x7x365 support team, that's well trained and ready to move users forward.

The Checklist

There are several important items to consider when evaluating an on-demand collaboration solution vs. an on-premises collaboration solution, including:

- How much work will my IT teams have to perform?
- What will the support desk impact be?
- How do I scale the solution when my organization grows?
- Will the service provider be more reliable than a self-built, on-premise solution?
- Do a global network and dedicated backbone make a difference for my worldwide operation?

Consider the future of the 'web workplace' and how an on-demand, integrated collaboration solution plays a part:

1. We expect a well designed integration with email, calendaring, instant-messaging, and web conferencing.
2. We expect the service provider to deliver the highest quality and availability at a reasonable cost.
3. We expect the service provider to be responsible for securing sessions and any data we choose to archive.
4. It should be easy for me to view organization-wide collaboration statistics and to rapidly estimate TCO and ROI.
5. The best-of-breed provider should keep my organization ahead of the business curve if we are to rely on as important a communication solution as on-demand collaboration.



The on-premise approach will require significant up-front and ongoing efforts by the IT and training departments. The hosted, on-demand approach alleviates these efforts and shifts the responsibility and resource expenditure onto itself, freeing the organization to realize the benefits of widespread collaboration use across all business processes.

Conclusion

Hosting vs. on-premise collaboration both provide great benefits for organizations needing to connect with global partners, customers, and employees. Each approach has associated requirements that weigh against benefits, but are tempered by cost. Organizations must weigh the value of a solution by balancing the total cost of ownership against mission-criticality and the timing of return on investment.

Time then, becomes the most valuable commodity, followed closely by IT resources. How much time is required to deploy? (IT efforts) How long before users adopt the solution? (Training ramp-up) When will we experience process time reduction? (Adoption and proficiency) How much downtime will we experience? (Availability, scalability) How quickly can problems be resolved? (Support, service) Will communications remain totally private? (Security, threat detection)

Quantifying people's time shows clearly the costs with which IT must contend. Knowledge-workers who use the collaboration system consistently and proficiently will attain rapid benefits through accelerated results and abbreviated business process.

The on-premise approach will require significant up-front and ongoing efforts by the IT and training departments. The hosted, on-demand approach alleviates these efforts and shifts the responsibility and resource expenditure onto itself, freeing the organization to realize the benefits of widespread collaboration use across all business processes. With a multi-tenant architecture, dedicated global network, and highly available services designed to scale to a large number of concurrent users, the hosted service provider will deliver a return on investment much faster than with an on-premise solution.

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Worldwide Sales Offices:

Americas & Canada

Tel: +1.877.509.3239

AmericasInfo@webex.com

Europe, Middle East & Africa

Tel: + 31 (0)20.4108.700

europa@webex.com

United Kingdom

Tel: 0800.389.9772

europa@webex.com

Australia & New Zealand

Tel: + 61 (0)3.9653.9581

AsiaPacInfo@webex.com

China (HK)

Tel: + 852.8201.0228

AsiaPacInfo@webex.com

India

Tel: 080.2228.6377/17030 9330

sales@cyberbazaarindia.com

Japan

Tel: + 81 3 5501 3272

JapanInfo@webex.com

