

Cisco® Cius: Transforming the Power of Participation for Businesses

What You Will Learn

To be competitive in the information economy requires robust communications and collaboration capabilities. These capabilities will redefine the way people work and change service, sales, and business models by:

- Extending the power of participation to everyone - even when they are mobile
- Enabling teams to securely and reliably share information anytime, anywhere
- Increasing the size, scope, and number of projects a company can accept
- Accelerating the speed of implementation

This paper outlines critical purchase considerations for collaborative business tablets and shows how Cisco® Cius and Cisco's unique, network-based approach to collaboration can help your company capitalize on important technology transitions while building productivity, operational efficiency, and strategic advantage (Figure 1).

Figure 1. Important Market Transitions Include Mobility, Video, Collaboration, and Cloud Computing



The New Normal

Doing more with less is the new economic reality - a reality made more challenging by globally dispersed teams, information overload, and the consumerization of IT. This "new normal" is further complicated by a convergence of major market transitions:

- Mobility has become business-critical: With so many mobile employees, the need for anywhere, anytime access to computing, communications, and collaboration has become imperative. Giving your mobile employees the tools they need provides ubiquitous access, accelerates their decision making, and fosters teaming in new ways that are more interactive and productive.

“By 2012, mobile users will make up 73 percent of the enterprise workforce.”

— Michele Pelino, Principal Analyst at Forrester Research

- Video is becoming pervasive: You can confirm proof of this reality by simply examining the proliferation of video in our personal lives, with social networking sites like YouTube, Facebook and Twitter taking advantage of video. The growing preference for video communications is understandable and video is boldly making its way into the workplace. Adopting video in the workplace will make it possible for employees to effectively and efficiently share ideas and expertise, while reducing corporate operating expenses.

“By 2015, two hundred million workers worldwide will run corporate-supplied video conferencing from their desktops, compared to 7 million in 2008.”

— Gartner Group, 2010

- Collaboration is the next productivity frontier: Research by industry analyst Chadwick Martin Bailey proves that by extending collaboration and unified communications across an organization, companies can obtain up to 2 hours of more productive work from employees every day. These productivity improvements are especially important for organizations that are geographically dispersed and struggling to keep up with an influx of information.

“Raising the productivity of employees whose jobs can't be automated is the next great performance challenge. Companies that get it right will build complex, talent-based competitive advantages that competitors won't be able to duplicate easily - if at all.”

— McKinsey & Company, *The 21st Century Organization*, 2005

- Desktop virtualization: Services are moving to the cloud. Using the network for on-demand delivery of anything as a service (XaaS) enables organizations to flexibly deploy applications and rapidly provision capacity and redundancy - all while reducing costs at the desktop.

“By 2012, forty percent of businesses will meet their communications needs by using a blend of premises-based services and Internet or cloud-based services, compared to an estimated 3 to 5 percent of businesses in 2009.”

— Daniel O'Connell, Research Director, Gartner Group, (*ComputerWeekly.com*, January 14, 2010)

Figure 2. Communications and Collaboration-Enabled Tablets Will Change the Way We Work



Business Tablets Can Reduce IT TCO While Increasing User Productivity

Business tablets can help address these market transitions (Figures 2 and 3) - **but only** if they have the right attributes for:

- **Users:** Business tablets should be designed for the needs of business users with focus on the user experience. They should enable employees to bring their productive desktop experience with them, wherever they go, without compromise. Tablets must also be easy-to-use, while delivering reliable and secure connectivity, so users can effectively compute, communicate, and collaborate everywhere with confidence.
- **Computing capability:** For business use, a tablet must be able to handle much more than simple content consumption and sharing. The tablet must have enough processing power to enable the creation and editing of content. In addition, a business tablet should be capable of delivering a full desktop experience with opportunities to consolidate devices at the desktop, based on the strategic objectives of the organization and its user preferences.
- **Business strategy:** To justify their purchase, business tablets must dramatically improve mobile productivity. They must provide access to a wide variety of productivity-building applications, such as video conferencing, virtual teaming, and real-time document sharing and file exchange. Companies should also be able to develop custom applications. This flexibility (enabled by the tablet operating system) will increase its business value - and the competitiveness of the business - exponentially.
- **IT:** How a tablet fits into the IT environment is a critical purchase consideration. To deliver exceptional value, a tablet should be able to integrate transparently into a company's existing infrastructure. An important part of the selection criteria should also be the ability of the tablet to simplify administration and management by retaining a common dialing plan, ensuring interoperability with other user devices, and bulk provisioning. And, of course, security must be business-grade.

Figure 3. The Short List of Business Tablet Purchase Considerations

- 1 A "no-compromise" experience in and out of the office **and** constant connectivity
- 2 Business-class productivity apps **and** custom apps
- 3 Simplified administration **and** comprehensive interoperability
- 4 Desktop consolidation **and** business-grade security

Are Consumer Tablets the Right Solution for Business?

If your organization is evaluating consumer tablets as a possible communications and collaboration device, consider an analysis from InfoWorld by Galen Gruman. In a recent article, he concluded that "[the leading consumer tablet] at work... is a work in progress". He also indicated that it was not a perfect replacement for a laptop (or desktop PC).

"The connectivity issues create hassles that will slow workplace adoption, and the constrained data exchange and poor cloud-apps compatibility will restrict business usage."

— Galen Gruman, InfoWorld, Mobile Edge, August 17, 2010, <http://www.infoworld.com/print/133611>

Also worth considering, the article cited additional challenges for the leading consumer tablet, including:

- **Limited interoperability:** There is an incompatibility between web apps and the mobile browsers, which do not support all HTML attributes. Thus the use of Internet and cloud-based applications is rather difficult. The lack of support for Java or Adobe Flash inhibits streaming video playback.
- **Limited network connectivity:** With no **wired** network connectivity, the leading consumer tablet cannot plug directly into your company network. Its only option is wireless, but if your office has no Wi-Fi, the tablet still cannot access your corporate network. For calls, it can use third-generation (3G) technology, but must use a different dialing plan than the managed devices in your organization.

- **Difficult to support:** As a non-integrated IT device, the leading consumer tablet cannot be centrally provisioned and managed. As a result, controlling them adds complexity and management costs for IT.
- **Data access is constrained:** Because the tablet is app-centric by design (instead of file-centric like a PC), files and other data cannot be shared in the same easy way that business people are used to. Support for zipped files is lacking. To access or share data, you must go through a service such as Box.net or Dropbox, or you must use email or a special wireless (Wi-Fi) file-sharing application. Wi-Fi file sharing requires the tablet and the PC to be on the same wireless network. This scenario may present a problem with firewalls, VLANs, and other security policies.
- **Lack of peripheral connectivity:** The lack of a built-in USB port limits extensibility. You can use only one wired peripheral at a time. The tablet offers no ability to print, no wireless keyboard that can easily connect to a larger screen, and no mouse support, making fine control difficult when creating complex documents, spreadsheets, or presentations.

Cisco Cius: A Mobile Collaboration Tablet Designed Specifically for Business

Cisco Cius defines a new category of tablet by combining industry-leading collaboration applications, including high-definition (HD) video with resident computing power, support for virtual desktop integration (VDI), and cloud economics (Figure 4).

Figure 4. Cisco Cius: Desktop Video, Touch-Based Collaboration, Virtual Desktop Integration, and More



In addition, this innovative device:

- Delivers a full desktop experience and mobile collaboration capability
- Provides support for third-party applications from the Cisco Developer Network
- Delivers access to the expanding Android developer ecosystem
- Allows companies to customize applications

“A global study found that collaboration tools were most impactful within the areas of the business where the largest numbers of people interact. The study also found that companies deploying advanced tools see far greater benefits and return on investment than those focused simply on the basics.”

— Frost & Sullivan, Meetings Around the World II: Charting the Course of Advanced Collaboration

http://www.verizonbusiness.com/resources/whitepapers/wp_meetings-around-the-world-ii_en_xg.pdf

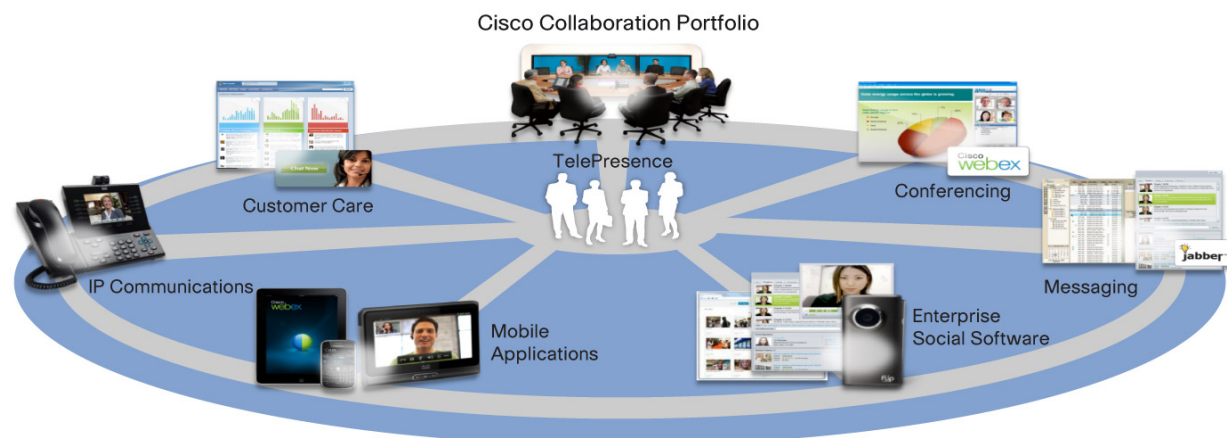
With Cisco Cius, we have taken our core competencies in voice and video and extended them into a platform that will change the way people work. With Cisco Cius you can securely share network content in real time and access network services from wherever your work takes you. This feature makes Cisco Cius an ideal solution for organizations that want to:

- Fully enable employees, wherever they are: With wired, wireless, and cellular data network support, Cisco Cius can be flexibly used both in and out of the office.
- Take advantage of HD video communications: With robust business video and collaboration capabilities, Cisco Cius can increase customer “face time”, reduce travel costs, and speed decision making across geographically dispersed work groups.
- Take advantage of local and cloud capabilities: Applications can be stored locally in the 32-GB flash memory of the tablet, stored on secure digital input-output cards, or accessed in the cloud. Thus IT departments can begin consolidation of hardware at the desktop, such as IP phones and personal computers, based on their strategic objectives and user preferences - reducing desktop hardware costs and accelerating collaborative desktop deployment. This can result in total-cost-of-ownership (TCO) savings from reduced administration costs and hardware and software investments over time.

Integrated Access to a Full Suite of Collaboration Applications

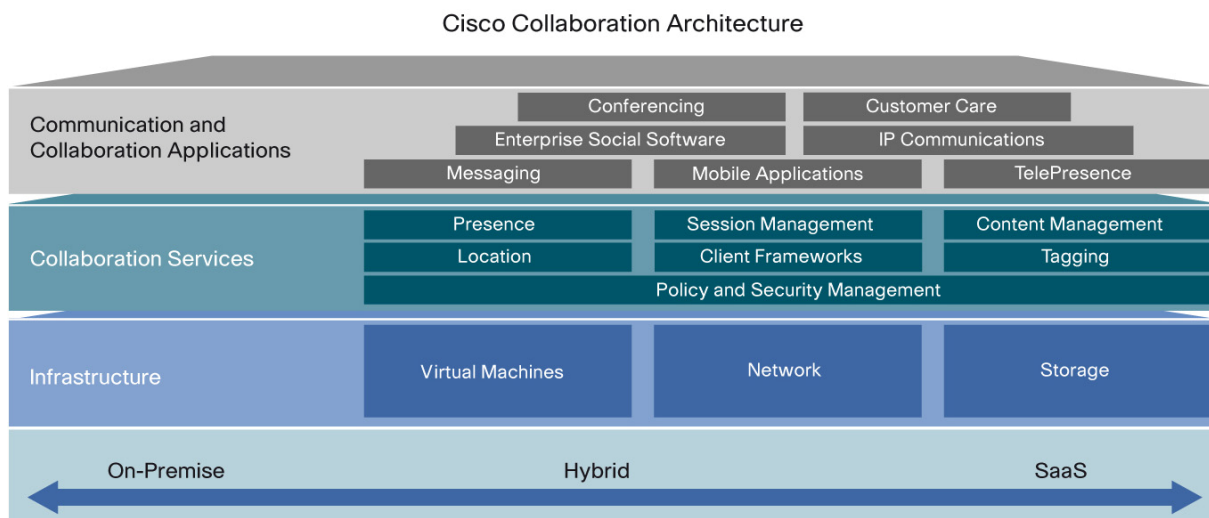
True collaboration must embrace richer forms of communications such as video. With multiparty HD video capability, Cisco Cius is designed to provide interoperability with Cisco TelePresence™ Solution systems for a more immersive video experience. It also integrates other collaboration capabilities such as business-grade voice communications, conferencing in all forms, Instant Messaging (IM), presence, email, and virtual teaming. In short, from a single mobile device, an organization and its users can take advantage of the power of the entire suite of Cisco Collaboration applications (Figure 5).

Figure 5. Cisco Cius Delivers Integrated Access to A Full Suite of Collaboration Applications.



Part of a Secure and Reliable End-to-End Architecture

One of the biggest considerations when deploying a tablet is how it will fit into your existing infrastructure. Because Cisco Cius is enabled by the Cisco Collaboration Architecture, it can flexibly interoperate with other Cisco collaboration technologies. This interoperability facilitates greater participation and productivity and provides exceptional value because Cisco Cius works with the products you have already installed (Figure 6).

Figure 6. Cisco Cius Takes Advantage of the Cisco Collaboration Architecture to Maximize ROI and Productivity

Cisco Cius will become a natural extension of your collaboration infrastructure. Using the network as a platform for collaboration provides many benefits, including consistent quality of service (QoS); streamlined collaboration; and centralized provisioning, management, and security. With Cisco Cius your organization can:

- Retain open or restricted access to the Android Marketplace for application downloads and bulk provision applications after they have been “vetted”
- Protect the hardware foundation with secure boot, secure credential storage, image authentication and encryption, random bit generation, and hardware cryptographic acceleration
- Enable wired network security through IEEE 802.1x and wireless network security through Wi-Fi Protected Access 2 (WPA2) (Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling [EAP-FAST])
- Secure media and data through Transport Layer Security/Secure Real-Time Transport Protocol (TLS/SRTP) and Secure HTTP (HTTPS) for clients

Secure enterprise access is provided through the Cisco AnyConnect VPN Client, which comes standard with Cisco Cius. Mobile security capabilities include remote wipe, if the tablet is lost, stolen, or taken by employees when they leave the organization. This business-grade security sets Cisco Cius apart from consumer tablets.

As with all Cisco Collaboration solutions, you can:

- Implement Cisco Cius on site to take advantage of existing infrastructure
- Offer Cisco Cius as a hosted software-as-a-service solution
- Deploy Cisco Cius as a combination of the two

Ready for Business Users

Although the media has drawn many comparisons between Cisco Cius and consumer tablets, it is really like comparing apples and oranges (Table 1). Cisco Cius is an ultra-portable platform that mobilizes desktop capabilities and extends the productivity benefits of Cisco Collaboration and Android Marketplace applications to users, whether they are in or out of their office, or on or off campus. A new contacts-directed user experience simplifies collaboration, enabling you to quickly reach important contacts.

Table 1. Corporate User Considerations for Tablets

| User Considerations | Cisco Cius | Leading Consumer Tablet |
|-----------------------------------|---|--|
| Media station | An optional HD media station provides a traditional telephony experience, if desired | Simple charging or keyboard docking station |
| Wired network connectivity | Supports 10/100/1000 (Gigabit) Ethernet | No support for wired Ethernet |
| Peripheral connectivity | Micro USB port for keyboards, mouse, and headsets - media station provides three additional USB ports | No mouse support; support for headphones, wireless keyboard, and connector for digital camera to import photos |
| Portability | 7-inch screen and weighs 1.15 lb - it is small and lightweight and you can hold it in one hand | 9.7-inch screen and weighs 1.5 lb - its size and weight may require two hands to hold it |
| Battery serviceability | Battery is detachable, serviceable, and rechargeable | Battery is not detachable |
| Dual-port display | Integrated support for a external display | Limited app support for external display |

Content can be stored locally - Cisco Cius has 32 GB of local storage - or securely in the cloud, delivering a transparent user experience that is comparable to local computing. This ability to easily access and share content from any place on the network is in stark contrast to consumer tablets. Following are other significant differentiators:

- **Media station:** You can dock Cisco Cius to its HD media station, which powers and charges the tablet when at a desk. The tablet has an HDMI port, so you can push high-definition video and business productivity applications from the 7-inch display to an adjacent, larger LCD monitor.
- **No connectivity restrictions:** With support for Gigabit Ethernet, IEEE 802.11, 3G, and future fourth-generation (4G) connectivity, Cisco Cius provides the ubiquitous anytime, anywhere access today's highly mobile workers need.
- **Built-in peripheral connectivity:** Cisco Cius has a micro USB port for external drives and a mini standard-definition (SD) card slot for secure digital I/O card storage. Native support for both USB 2.1 and Bluetooth keyboards, mouse, and headsets means you can enjoy a more traditional desktop experience when you want or need to.
- **Ultra-portable:** Cisco Cius weighs just over 1 pound (0.52kg), with a 7-inch screen, providing the business user with an optimum size. It is large enough to consume, edit, and share content, but small enough to hold up to your ear when making a phone call. You can hold Cisco Cius in one hand while your other hand interacts with the touchscreen for a productive experience while mobile. Its peripherals support enables the ability to create content easily as well.
- **High-quality video:** Cisco Cius features a front-mounted 720p HD camera, which refreshes at up to 30 frames per second. A rear-facing 5-megapixel camera can capture still images and transmit streaming 640 x 480 VGA video. You can use the tablet display as a viewfinder when capturing video with the rear camera.

Ready for Virtualization

Desktop virtualization extends the many benefits of virtualization - better performance, lower TCO, higher security, and greater flexibility - to the desktop. To obtain these benefits, IT organizations are evaluating a range of thin clients, including mobile thin clients such as Cisco Cius (Table 2).

Table 2. IT Considerations for Business Tablets

| IT Considerations | Cisco Cius | Leading Consumer Tablet |
|-----------------------------|--|---|
| Video output to LCD | Users can easily push the virtual desktop to a separate LCD monitor and all apps are supported | No ability to share or mirror desktop to external display; the virtual desktop cannot easily be pushed to a separate LCD monitor and only a handful of apps are supported |
| Device consolidation | Cisco Cius can replace the business desk phone, laptop, and desktop PC | A potential laptop replacement for consumer and home use |
| Application control | Policy control through Cisco Unified Communications Manager | No enterprise-grade policy control** |

| IT Considerations | Cisco Cius | Leading Consumer Tablet |
|-----------------------------------|---|--|
| Infrastructure integration | Easily integrates into existing Cisco and other IT environments | No Power over Ethernet (PoE) support and no wired Ethernet support, so there is no corporate IT integration to existing LAN switching infrastructure |
| Security | Supports anti-jailbreaking, which prevents unlocking the OSs to install unapproved apps | Been subject to reports of jailbreaking ^{***} |
| Device management | Centralized provisioning and management | No enterprise-grade centralized management |

^{*} <http://www.infoworld.com/print/133611>

^{**} <http://www.eweek.com/c/a/Mobile-and-Wireless/Apples-iPhone-Configuration-Utility-Disappoints/>

^{***} http://www.pcworld.com/article/196492/jailbreaking_the_ipad_what_you_need_to_know.html

Mobile thin clients:

- Reduce software licensing costs: Thick clients require every desktop and laptop to locally run business applications. Thin clients do not have this requirement because applications reside in the data center and are accessed from the cloud.
- Lower hardware costs: Cisco Cius is not just another portable device. Based on your user preferences and the strategic objectives of your organization, Cisco Cius can act as your desktop phone, soft phone, a replacement for a laptop PC, and even as an alternative to your desktop PC. This device consolidation can help reduce administration costs and dramatically lower the cost per user for provisioning new collaborative experiences.
- Enhance security, availability, and efficiency: With Cisco Cius, IT organizations can flexibly and securely host software applications in the data center, using the network to deliver those applications as a service anytime and anywhere. Centralizing applications in the data center (instead of deploying them locally on clients) can help reduce security maintenance concerns and the risk of intellectual property loss, while increasing business agility with faster deployment of new applications.
- Deliver more flexible access to computing capabilities: Getting real-time, on-demand access to business applications and the latest versions of shared documents enables anytime, anywhere collaboration.

Cisco Cius supports market-leading virtual desktop client applications, so it can act as a thin client on your Cisco Collaboration Architecture (Figure 3). An installed virtual desktop client application gives you access to the productivity tools you need on your desktop cost-effectively, securely, and efficiently.

- Cisco Cius can act as a virtual desktop in wired or wireless mode.
- With support for a second display, keyboard, and mouse, Cisco Cius functions like a desktop PC with video conferencing and email capabilities.
- Video and voice applications run locally instead of through the data center to optimize QoS.

Ready to Take Your Business to New Levels of Productivity

Cisco Cius focuses strongly on productivity. The combination of applications and flexible computing, communications, and collaboration options provides a compelling alternative to today's paradigm of a **PC-on-every desktop** (Table 3).

Table 3. Strategic Business Considerations for Tablets

| Business Considerations | Cisco Cius | Leading Consumer Tablet |
|---|--|---|
| Mobile and office use | Designed for mobile and desktop docking and tightly integrates into an organization's end-to-end IT architecture | Lacks tight integration into organization's end-to-end IT infrastructure; external LCD primarily supports home entertainment apps like YouTube and photos |
| Focus on productivity | Purpose-built for business with integrated support for unified communications and collaboration apps | Designed for consumer use |
| PoE | Offers full PoE support (802.3at) or local AC power (optional HD media station only) | No PoE or any kind of Ethernet support |
| Integration with Existing Infrastructure | Easily integrates with existing Cisco and third-party products | Not easily integrated with existing office products |

Cisco Cius:

- Includes industry-leading productivity applications: Cisco Cius users have access to Cisco Unified Communications and Collaboration applications including Cisco WebEx™ meeting applications, Cisco TelePresence collaboration systems, Cisco Quad, and Cisco Show and Share.
- Is ready to put video to work in your organization: With front and rear-facing cameras, you can record video, place video conference calls, and attend Cisco TelePresence Solution meetings.
- Provides access to business-class applications: With Cisco Cius, your business can tap into the growing Android developer community that is building business-class productivity applications with appropriate IT controls. Or, your business can also develop its own custom applications.
- Protects your technology investment: Cisco Cius integrates into your existing infrastructure, extending and increasing the value of that investment.

“Cisco is one of the only firms that has a significant collaboration software presence in the corporate market. That could be one of the most important elements in the success of the device.”

— Channel Insider, Cisco Cius Tablet: 10 Ways It Beats the iPad in Business, July 6, 2010

Build Competitive Advantage with Cisco Cius

Companies around the world are finding ways to take advantage of collaboration and create competitive advantage in the process. If you are thinking about deploying tablets in your business environment to enhance collaboration, make sure you evaluate tablets on these criteria:

- 1 A “no-compromise” experience in and out of the office **and** constant connectivity
- 2 Business-class productivity apps **and** custom apps
- 3 Simplified administration **and** comprehensive interoperability
- 4 Desktop consolidation **and** business-grade security

Cisco Cius provides a clear advantage in every area. It is a powerful on- and off-campus device that provides unrestricted connectivity. You can deploy it flexibly to suit your unique business needs. And Cisco Cius gives the most important people in your organization access to productivity-building applications wherever they are, so they can remain productive whether they are working in their offices or away.

For More Information

For more information about Cisco Cius, please visit: <http://www.cisco.com/go/cius>.

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