

Business Transformation Through Architectures

Transforming Employee Engagement

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Corporate Strategy

Today it is rare to see a corporate vision and mission statement that does not refer to employees as being the core of a given business. Employees make all the difference, and there cannot be a moment in the history of corporations when this has not been more relevant. A growing service economy that has its roots in knowledge-based areas is making employee engagement the cornerstone of a company's success. However, this poses several challenges to enterprises in balancing employee work-life expectations with workforce productivity. Layered on top of that, organizations are constantly challenged with aligning their technology investments to solve business needs.

Organizations are constantly challenged with aligning technology investments to solve business needs. This article highlights the importance of integrating business strategies and technical architectures to achieve business transformation. It discusses general industry challenges and trends about employee engagement, and Cisco's internal experiences with related specific business opportunities and challenges.

Millennials, the Consumerization of IT, and other Workforce Trends

As a Fortune 500 Global enterprise, Cisco's business success relies on excellence in employee engagement. Cisco has consistently made it to the Fortune 100 best companies to work for list largely because telecommuting is a cornerstone of Cisco's culture. During the past five years Cisco has ranked #1 or #2 in the telecommuting category. Key findings of a recent Cisco employee study include:

- Cisco employees spend about 63 percent of their time communicating and collaborating.
- 40 percent of Cisco employees say they are not located in the same city as their manager.
- The average Cisco employee telecommutes 2.0 days per week.
- 60 percent of the time saved by telecommuting is spent working and 40 percent is spent on personal time.

The flexible work option of telecommuting is only one significant workforce trend, however. With the influx of Gen Y and Millennials in the workforce, corporations are forced to rethink the way they engage with their employees. For example, this generation rarely uses email as the primary communication medium in their personal and academic life. Many of them do not own a home phone and rely on their mobile phone instead (which is much more than just a phone for them!). Social collaboration tools, text messaging, microblogging are simply the way of life for this generation. Increasingly, enterprises are realizing the value of many of these collaboration tools in the workplace. The challenge for enterprises is embracing these changes through technology while ensuring that their entire workforce is integrated into the company culture and there are business processes in place to maximize the benefits of collaboration.

Additionally, the last decade has seen a revolutionary trend toward consumerization of IT solutions. In the '80s and '90s, employees typically got their first chance to use cutting-edge technologies in an enterprise environment before they could use them in their personal lives (with the exceptions of geeks and early adopters). The second half of the 2000s saw general consumers obtaining a greater knowledge of technology, and then bringing their knowledge and desire to use that technology into the workplace. This trend has put pressure on corporations to figure out the right balance of technology to offer their employees. Cisco allows employees to bring their own technology to work to perform their daily business. This strategy is integrated with checks and balances by the IT teams to ensure that appropriate security, policy, and governance measures are enforced.

Cisco's employee engagement strategy has yielded several benefits through the use of collaboration tools. For example, the quarterly company meeting has gone through a total transformation. In the past, Cisco held the company meetings in a physical location, usually a local convention center near the headquarters in San Jose, California. Today the quarterly company meetings are virtual. Through the use of video and collaboration technologies, employees globally can participate in these meetings and interact with senior executives through a live chat (using Cisco Jabber® technology). The entire event is recorded (along with chat transcripts and other documents) and shared with all employees. This approach has increased employee participation and provided a new venue for rich interaction between employees and senior executives, all of which have boosted overall employee satisfaction. Cisco uses a virtual format for other events as well such as the annual global sales experience (20,000-plus attendees) and strategic leadership offsite (3000-plus senior leaders).

- Attract and retain the best and brightest
- Improve corporate productivity while enhancing work-life balance
- Balance the technology needs of different employee generations
- Enhance employee health while reducing corporate healthcare costs

More than ever employees are conscious of their health and wellness, while employers are looking for ways to provide employees with high-quality healthcare options while keeping their costs under control. Cisco opened a state-of-the-art HealthCenter in San Jose for employees and has followed with centers at other sites. Through the use of technologies such as HealthPresence® and unified communications, Cisco employees have access to some of the best healthcare systems around the world.

Business Operations and IT Executive Considerations

One of the most important steps toward adopting a collaborative environment is accepting the fact that the collaboration shift is inevitable. In enterprises that do not support collaboration capabilities for their employees, several cases have been identified where users take things into their own hands, resulting in the creation of Internet-based social networking platforms that they are familiar with as consumers. This rogue user approach can produce security, intellectual property, and compliance issues for the enterprise. Cisco IT made some considered decisions to embrace the power of collaboration, while being open to new ideas that spring from users. For instance, Cisco's program called Idea Zone, or I-Zone, started as a way for the Emerging Technologies Group to collect and validate employees' ideas for new products and business process improvements using a variety of collaboration tools. Best practices from this program were later applied to Cisco's enterprise collaboration strategy.

CIOs are also challenged to offer communication and collaboration solutions that balance the needs of the entire employee population. While many in the traditional workforce do not want to think about operating without a hard phone, newer employees accept (and many times prefer) a more mobile communications experience such as

Cisco IP Communicator (softphone that runs on computers) and integrated mobile technologies such as dual-mode phones (connected to the cellular network when out of enterprise Wi-Fi range and seamlessly moving throughout the work or home office environment when in enterprise Wi-Fi range). The Cisco Connected Workplace strategy, the fruit of a partnership between Workplace Resources and Cisco IT, has enabled an open, collaborative work environment that is anchored around the needs of employee mobility.

While telecommuting is a great business benefit, if not implemented properly, telecommuting solutions can significantly increase total cost of ownership (TCO) for IT, and could quickly become a CIO's nightmare. When the Cisco Virtual Office solution (formerly called Enterprise Class Teleworker) was introduced at Cisco, our CIO mandated the requirement for "touchless" configuration.

Cisco IT had seen huge operational challenges with previous home office solutions delivered through legacy technologies such as Frame Relay and ISDN during the 1990s. So with Cisco Virtual Office, the senior IT leadership made it especially clear that routers meant for the home office should not have to be physically "touched" by an IT engineer during deployment. The labor involved in this process happens to be one of the biggest contributors to the TCO for a home-based telecommuting solution. Cisco IT worked closely with the product teams to create the Cisco Virtual Office solution. The simplified deployment of this architecture allows the devices to be directly shipped from manufacturing to users' homes.

With Cisco management and operations tools, Cisco IT ensures that the "touchless" configuration and maintenance is achieved. This process has helped Cisco keep TCO in check while improving productivity and employee satisfaction. The number of employees using Cisco Virtual Office has scaled to more than 22,000.

- Provide remote working capabilities
- Enable collaboration and video for increased productivity
- Explore cost accounting and ITaaS models for service enablement (video, remote access, etc.)
- Support contingent workforce while keeping costs under control

Another challenge for IT executives is providing a superior experience for contingent workers and guests. Cisco IT provides access to the corporate network for both guests as well as contingent workers that do not have enterprise identity credentials. Cisco's future bring your own device (BYOD) deployment will enable next-generation borderless services for contingent workers through enhanced identity services, virtual desktops, and collaboration.

Finally, IT executives want employee productivity offerings to be tied to the larger service management strategy including appropriate entitlement programs, chargeback systems, and service-level agreement (SLA) management. As Cisco IT is moving toward an IT as a Service (ITaaS) model, individual teams are empowered to make technology choices based on their requirements, and there is a corresponding chargeback system. For instance, the vice president of a business unit can decide the right balance between software VPN versus Cisco Virtual Office, or Movi™-based video versus immersive telepresence for his or her employees based on the business and productivity needs and budget controls within the business unit.

Technical Architectures and Solutions

Technology is the primary enabler of communication, collaboration, and video technologies. IT practitioners focused on deploying technologies to solve related business challenges have to look at architectures that can adapt to the changing needs of corporate culture and employee productivity requirements. Through an architectural approach, Cisco IT has seen tremendous success in the area of employee engagement. While the journey continues, and there are lessons learned every day, the business and technical benefits of an architectural

approach to collaboration and video solutions and the underlying network infrastructure have been very tangible within Cisco.

Communities are the core of the collaboration business architecture. When integrated with the technical architecture components that are offered by Cisco Quad™, Cisco's collaboration solution, communities integrate people, their business requirements, and the outputs in a measurable way that benefits the enterprise. By 2015 video is projected to be 90 percent of the consumer Internet traffic, and is already having a deep impact on enterprise environments. To date, Cisco IT has deployed more than 10,000 video endpoints, including 1200 immersive telepresence systems, and the total number is projected to reach 30,000 in the next 12 to 18 months. This type of large-scale video deployment can quickly get out of control for a network team that has been tasked to make the right investments and provide the right tools for a high-quality video experience. The Medianet architecture helps Cisco IT roll out the required network foundations in a phased manner, which includes components such as auto configuration, operations and management tools, and capacity planning.

Cisco IT's telecommuting solution integrates multiple products and services in an architectural offering that provides Cisco employees with a seamless end-user experience. The Cisco Virtual Office solution caters to the needs of telecommuters (full timers, executives, and business-critical staff) and day extenders (hybrid telecommuters). The Cisco AnyConnect® software VPN provides always-on, secure connectivity for employees' on-the-move remote access requirements.

- Deliver anytime, anywhere, any device mobility for employees
- Enforce employee trusted security policy; provide IT checks and balances
- Improve work experience for remote employees (on the road, home, branch office)

Unified communications architectures have evolved within Cisco IT over the past decade and form the fundamental baseline for collaboration and video technologies. Choice of phones, integration with call control management, contact centers, and unified messaging continue to have a significant impact on employee engagement and user productivity. For example, emergency services are an important part of workplace safety and security. An architectural approach is needed to drive the appropriate solution for a given telephony application such as hard phones, extension mobility, and Cisco IP Communicator.

Cisco IT's private cloud program, Cisco IT Elastic Infrastructure Services (CITEIS), has triggered core fundamentals of the ITaaS strategy. Service catalogue, service provisioning, and chargeback and billing systems are integral to this solution. With the self-service model that is implemented as part of CITEIS, IT and business systems owners now have the flexibility of choosing services based on their business needs and budget considerations. As Cisco IT is extending the service management applications to other end-user processes such as mobility and virtual desktops, the initial feedback from users has been positive, while also resulting in lower costs for IT.

The rollout of Cisco's Any Device program is also gathering momentum. Cisco IT is deploying a series of architectural components to provide employees with a BYOD solution. An identity management strategy is at the core of this architecture, while implementing controls at the network layer is paramount to the success of the program. Cisco's unified access strategy that combines cross-architectural components from wired and wireless infrastructures has resulted in a superior employee experience.

Products and Services

Cisco Virtual Office is deployed through the use of Cisco ISR G2 891 Series Routers at employees' homes and ASR 1000 Routers for aggregation at the headend. The Zero-Touch Deployment feature greatly minimizes the need for IT engineers to physically touch and configure the routers. A combination of management products are used for configuration as well as ongoing support and operations.

To provide exceptional user experience, next-generation wireless deployment is under way at Cisco with an upgrade to 802.11n standards and the implementation of Cisco CleanAir® technology. CleanAir, for example, optimizes the wireless network by first detecting radio frequency interference that other systems cannot see, identifies and locates the source, and then automatically adjusts the coverage around the interference.

Quad provides the core of Cisco's enterprise collaboration for employees, and video and Cisco WebEx® conferencing enhances the collaboration experience. The use of video has transcended original conferencing requirements. With Show and Share®, video is used within Cisco to disseminate corporate information. Streaming video technologies are driving virtual events, training, and corporate meetings. Instant messaging technology using Jabber for interaction with senior executives during company meetings also enhances the employee experience. Jabber is used for various other communications including integrated presence capabilities, desktop sharing, and voice messaging.

The Cisco Intelligent Automation for Cloud solution that comprises technologies from Tidal Software and newScale® has given Cisco IT the right toolset for service management. As these tools are extended to workforce applications, they will further contribute to providing employees with an exceptional user experience. Similarly, Cisco's extended deployment of Wide Area Application Services (WAAS) is also enhancing the user experience, and reducing bandwidth costs for IT as well.

Cisco's network operations and management will be enhanced by the use of Cisco Prime™ management solutions, which will be especially critical for supporting the tens of thousands of video endpoints. Cisco IT will have the right toolsets to troubleshoot an IT case that could just mention "bad video quality" between two disparate endpoints separated by several network hops. This capability will result in faster resolution of cases and proactive monitoring leading to better overall user experience.

To help solve business problems, an architectural approach that looks at the end-to-end enterprise value can bring business and financial results that far exceed a company's investments. A structured process has to be in place to align business requirements with the right technical architectures, with a strong connection to business and IT processes. Integrating business strategies with technical architectures, and implementing associated IT best practices, can go a long way toward transforming employee engagement. This integration can also lead to other significant business transformations. We will continue to share information on the topic of business transformation through architectures with lessons learned from Cisco's own experience.

- Cisco Quad and WebEx enable superior collaboration experience
- WAAS solutions for better user experience and reduced bandwidth costs
- Home video conferencing: Cisco TelePresence® and Tandberg®
- Registered Any Device design for access from all devices (Blackberry, iPhone, Android, tablets, Cius™)

For More Information

To read Cisco IT case studies on a variety of business solutions, visit Cisco on Cisco: Inside Cisco IT
www.cisco.com/go/cisquito

Note

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