

Digital Transformation at Cisco

Digital Business Transformation

Digital transformation is disrupting business in every industry. Smart organizations are applying technology to build new business models, processes, software, and systems that bring connectivity and visibility into every aspect of their organization. And they're harnessing these new connections and insights to optimize internal processes, enhance customer experiences, and empower employees.

Cisco has been working to weave together all aspects of technology, solutions, and strategy to successfully navigate the journey to a digital business. We provide a technology foundation that integrates connectivity, security, automation, collaboration, and analytics across the entire business value-chain. We build on this foundation through outcome-oriented digital solutions and a developer environment supported by a global ecosystem of partners.

As a leading digital company, Cisco focuses not only on delivering new value for our customers, but on driving digital transformation in our own organization. Our initiatives will unlock billions in trapped value in the form of new revenue and cost savings. Our digital transformation strategy at Cisco focuses on three broad areas:

- **New Customer Experiences:** In a world of always-on digital services at your fingertips, customer expectations are soaring. Providing a seamless omni-channel experience to each customer across every channel of interaction lets digital businesses strengthen customer loyalty. At the same time, it lets them gain deep insight into their customers and their behavior, so they can improve products and services and predict future purchases.
- **Innovative Business Models:** As more and more devices get connected, companies have the potential to connect to and collect data from every extremity of their value chain. It sets the stage for new ways of doing business and enables them to disruptively transform existing business models. The result is faster time-to-market, leaner operations, and greater agility to respond to market changes.
- **Empowering Workforce Innovation:** Digital businesses are giving employees the tools to be more connected, engaged, and mobile. A digital workforce requires nonstop connectivity, rich collaboration to support deeper engagement, and security everywhere. With these capabilities in place, organizations can increase productivity and improve their ability to attract and retain the best people.



Digital Transformation at Cisco

Accelerating Value Exchange

Every business transaction requires a mutual exchange of value. Cisco is focused on providing superior value and enabling customers to apply it to their business faster. As Cisco accelerates and increases this value exchange, all of our constituents benefit—customers, employees, partners, and shareholders.

Cisco customers are looking to apply technology to build new business models, processes, software and systems that results in more profitable revenue, greater competitive advantage, and higher efficiency. This value is defined through:

- **New Customer Experiences:** Delivering delightful customer experiences is key to winning and retaining business, strengthening loyalty, and maintaining credible sustained differentiation.
- **New Business Models:** New business and operating models, enabled by data flows and analytics, allow companies to “reimagine” the value they generate for customers and themselves.
- **Employee Empowerment:** Transforming the workplace into a flexible, collaborative environment empowers a digital workforce by increasing employee engagement and productivity, while enhancing innovation. Digital businesses are giving employees the tools to be more connected, engaged, and mobile.
- **Security Everywhere:** Securing everything and providing continuous policy-based threat protection across devices at the edge of the network, across the infrastructure, and through the data center and the cloud helps keep business-critical assets and communications safe.



Digital Transformation at Cisco

Cisco provides the products, solutions, and services needed to transform our customers' business. Our product portfolio brings together critical capabilities needed to connect people business and things while our solutions and services help accelerate digital transformation. This delivered value includes:

- **Insights:** The value you realize from digital transformation is directly tied to your ability to collect more data from more places and analyze it consistently. Cisco provides data flows from devices, networks, users, applications, and threats that can be converted into actionable insights.
- **Simplicity and Agility:** Cisco is removing complexity from its solutions, making it easier for our partners and customers to adopt digital business technology.
- **Risk Mitigation:** Cisco offers digital solutions - specially created packages of hardware, software, and services that deliver business outcomes like increasing revenue, improving customer experiences, engaging employees, lowering costs, and mitigating risk.
- **Continuous Innovation:** Cisco has adopted continuous delivery methodologies in our software development, resulting in twice as many delivered capabilities, a 60 percent reduction in vulnerabilities, and 92 percent increase in quality.



Digital Transformation at Cisco

Digital Transformation is Enabled by Technology

Driving digital transformation in a company is not easy. Line of business leaders are looking to transform their business processes and achieve tangible business outcomes. To do this, they need to collaborate closely with IT leaders to develop the environment, resources, and technology solutions required for digital business.

To enable new business models, Cisco aligned its internal IT processes by focusing on five key areas:

- **Security:** Deploy an end-to-end, policy-driven security approach to better secure every aspect of our value chain.
- **Simplification:** Simplify everything and deliver IT as-a-service. Moving to a simplified, automated supply chain improves productivity, efficiency, and visibility with accurate demand planning, real-time inventory management and reliable fulfillment.
- **Automation:** Leverage modular IT and automate processes from the network edge to the data center and cloud, to reduce costs and accelerate speed of change.
- **Monitor and Adapt:** Bring data closer to decision-makers, self-service and in business language, to enhance insight and support better real-time business decisions.
- **Continuous Innovation:** Accelerate continuous delivery to bring our stakeholders more capabilities, reduced vulnerabilities, and better quality tied to business value.

Cisco Operating Model Enabled by Cisco IT



Simplification

IT as a Service
Simplify Everything



Automation

Modular IT
Extend the Cloud



Security



Monitor &
Adapt

Insightful Data
Self Service



Continuous
Innovation

Continuous
Delivery

Enable New Business Model

Digital Transformation at Cisco

Workforce Digital Transformation at Cisco

Digital transformation starts with people and an organizational culture that's aligned toward a unified vision of business transformation. Creating a more virtual, collaborative, flexible, and productive workforce is very important to become a digital business. If we're going to attract and retain the best people, we need to create a work environment that empowers them to feel engaged, productive, satisfied, and valued in an increasingly digital, global, and mobile workforce.

Cisco is making its workforce more digital and transforming the way its employees work. Three areas where we can showcase workforce digital transformation include:

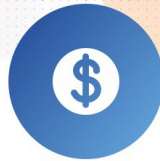
- Increase employee productivity
- Reduce space and operating costs
- Make Cisco a great place to work

Cisco on Cisco: Digital Workforce Transformation



Increase Employee Productivity

Respond to Customers Faster
Value Reimagined



Reduce Space & Operating Costs

Improve Shareholder Return



Be a Great Place to Work

Increase Wellbeing and
Employee Engagement
Work Reimagined

Digital Transformation at Cisco



Increase Employee Productivity

Cisco is increasing employee productivity so that they can respond to customers faster and provide value to them. However, to be more productive, employees need to be enabled with excellent technology services and tools. Cisco IT is partnering with business units to provide better tools to employees and consumerizing the work environment. It is also optimizing investments provided by businesses and securing the workplace. Cisco IT is providing the following tools and services to employees:

- **Spark-Based Customer Service:** Within a case, a Spark room can be opened that allows the technical support agent to bring in the appropriate subject matter experts into that room to help solve problems. If necessary, technicians can also initiate a real time video call and work with sales, engineering, or anyone else to address the customer's needs. All this helps to bring together insightful data to create more collaborative customer experiences.
- **dCloud Customer Demos:** Cisco partners can use the Cisco dCloud self-service platform to run more than 200 different labs, demos, and sandboxes of Cisco solutions virtually, from the cloud—instead of needing weeks to build them out at a customer site.
- **Cisco Maps:** Some Cisco buildings have Cisco Maps kiosks right when people walk in the door, and outside elevators on every floor. Employees can browse a 3D interactive map to find the person, room, or resource they're looking for, with real-time availability and directions. A mobile wayfinding application guides them to their destination, and on arrival, the workspace recognizes them and brings up their voice or video meeting and collaboration applications.
- **Digital Ceiling Personalizing the Workspace:** In some Cisco buildings, we now control lighting systems with the IP network. Employees can adjust the temperature, color, and intensity of the light in their workspace or meeting room from their smartphones. With the ability to approximate natural light, employees feel better and are more productive (by up to 16 percent, according to some studies). At the same time, the digital ceiling lowers our energy consumption and power costs.



Reducing Space and Operating Costs

Flexibility is important for today's employees. Many employees choose to work from home, while maintaining a dedicated office space. This costs money. Cisco is optimizing real estate assets and planning for an increasingly mobile and digital workforce. This is helping to reduce and control facilities-related operating expenses.

- **Work Where and When Life Requires:** Cisco employees have the flexibility of working from home or commuting during off-hours into their local office. Cisco provides the digital collaboration tools they need to securely connect with their colleagues and content. Flexible work has enabled Cisco to improve employee retention and is saving \$277 million each year.
- **Connected Workspace:** We use new digital tools to align our physical spaces with the ways our employees actually work. We make a variety of spaces available—reservable temporary workspaces, “huddle” rooms for ad hoc brainstorming sessions, conference rooms, and training spaces. Each space has all of the technology required, pre-integrated and ready to go. Instead of juggling devices and sifting through cables, employees can start a WebEx meeting, video-conference, or whiteboard session in seconds. 78 percent of employees report better well-being and comfort, 67 percent say they are more productive. And Cisco has cut its real estate costs by 40 percent.
- **eStore for IT Services:** Every Cisco employee can order, provision, and make changes to IT services and software from an automated, self-service eStore. Our developers can provision cloud-based services with the physical and virtual resources to support their initiatives. Provisioning times for developer resources have gone from weeks to minutes, and Cisco is projecting 77 percent cost savings over the next two years.

Digital Transformation at Cisco

Be a Great Place to Work

A digital workplace is key to increasing wellbeing, engaging employees, attracting and retaining talent, and enabling an organizational culture that boosts the pace of innovation.

- **Child Care Center:** Cisco provides convenient on-campus childcare in San Jose and additional global locations during working hours. The state-of-the-art center includes Cisco surveillance video streaming, so parents can keep up on their child's daily activities.
- **Employee Health Center:** Cisco provides onsite concierge health care for employees and their families. The state-of-the-art facility with comprehensive dental, vision, pharmacy, lab, and X-ray also includes telemedicine capabilities to bring in remote health experts, such as dermatologists.
- **Rideshare Program:** In San Jose and the Bay Area, Cisco partners with the rideshare program Scoop. Employees can find co-workers and neighbors with similar commutes from their smartphones and arrange carpools. They save time and money, while helping the environment. Through this program, Cisco saves employees commute costs, and has removed 400 cars per day from bay area traffic.
- **Electric Vehicle Charging:** Cisco provides over 220 electric vehicle charging stations across five countries. Employees are charging over 800 cars per day, and have access to a mobile application to find or reserve a station, as well as track their usage over time. Through this program, we saved over 350 tons of CO2 from January to May 2016.

Process Digital Transformation at Cisco

In addition to transforming our workforce, Cisco is also focusing on transforming key business processes. Cisco has tens of thousands of processes operating across our enterprise at any given time. We're using digital tools, insights, and analytics to do things faster, more efficiently, at a lower cost, and with better outcomes. Some examples of our digital process transformation include:

- **Machine Learning:** Cisco is using adaptive testing in manufacturing processes using historical production and component test data. This helps to determine which tests need to be added, modified or eliminated. Machine

learning is also helping us move from predictive to perspective analytics. All this results in approximately 19 percent shorter test times and more than \$10 million in cost savings.

- **Supplier Collaboration:** Cisco has built a cloud-based platform to connect with all its suppliers, encompassing all supply and inventory management processes worldwide. This helps provide more visibility into supply and demand at any given moment, and helps ensure suppliers have the tools they need to be more responsive. Supplier collaboration has led to seven percent increase in product lead time and helps us close material shortage cases 35 percent faster.
- **Agile IT:** Cisco has adopted open environments including Docker Containers, OpenShift, and Big Data. This has accelerated our transition from waterfall to agile development, releasing features faster. Over the last 18 months, Cisco has transitioned from 23 percent to 73 percent of services being released through a continuous delivery model. It has resulted in 100 percent increase in delivered capabilities, 60 percent reduction in vulnerabilities, and 94 percent increase in quality.
- **Sales Productivity:** Cisco has developed a digital lead generation platform by integrating Salesforce, LinkedIn, WebEx, and Twilio. This has helped to generate better sales insights and analytics and has transformed the forecasting process. Our new self-service SaaS offer generation process has helped to reduce time to offer from 45 days to two days (a 96 percent improvement). Cisco has also automated enterprise license fulfillment process leading to 90 percent reduction in cycle times.
- **IoT for Energy Management:** Cisco has launched a "Factory of the Future" pilot with its partner Flextronics, in Penang, Malaysia. We have connected 1300 sensors across the factory floor that generate insights that enable monitoring, visualization, and alerts. Cisco is also using a cloud-based solution measure, monitor and manage power consumption to operate a cleaner factory with reduced carbon footprint. Now Cisco we're expanding this model to factories worldwide. We anticipate a 20 to 30 percent reduction in power consumption and greenhouse gas emissions, and more than \$1 million in projected annual power cost savings.

Digital Transformation at Cisco

Cisco on Cisco

Simple, Automated, Efficient Processes and Business Models



Machine Learning

Adaptive Testing in Mfg. Use Historical Production & Component Test Data

Determine Tests to be Added, Modified, or Eliminated

Transition from Predictive to Prescriptive M2M Analytics

5-19% Test Time Savings
\$10+ Million Cost Savings



Supplier Collaboration

Supplier Collaboration Platform Cloud Based Platform for All Suppliers

All Supply and Inventory Management Processes

Supply & Demand Visibility, Supplier Responsiveness

7% Better Product Lead-time

35% Faster Material Shortage Cases Closed



Agile IT

Agile Development Open Environment – Docker Containers, OpenShift, Big Data

Transition from Waterfall to Agile Development

82% Of Releases Happen Through Continuous Model

97% Increase in Number of Capabilities Delivered



Sales Productivity

Sales Management Insights Forecast Transformation & Sales Analytics

Digital Lead Generation SFDC, LinkedIn, WebEx, Twilio Integration

Self Service SaaS Offer Generation

96% Reduced Time to Offer, From 45 to 2 Days

Automated Enterprise License Fulfillment

90% reduction in cycle time



IoT for Energy Management

Factory of the Future Pilot with 1,300 Sensors In Penang, Malaysia Factory

Cloud-based Solution to Measure, Monitor, and Manage Consumption

Modeling, Visualization, and System Alerting

12% Energy Reduction

On Path to 20% Savings and Global Deployment

Cisco Can Help You Transform Your Business

Cisco has accomplished much on its digital business journey, and is continuing to build new capabilities every day. We're ready to apply the lessons we have learned to help our customers transform their own organizations.

No matter where you are in your digital transformation journey, Cisco can help you build a smarter, faster, more competitive business. Our solutions and services provide connectivity, security, collaboration, automation, and analytics

across your entire value-chain. Let Cisco help you reimagine your business and accelerate your organization's digital business transformation.

Take the next step in your digital journey today. Read the Cisco Digital Business Transformation IT Blueprint, and ask your Cisco account representative for a personal briefing.

Visit <http://www.cisco.com/go/digital> to learn more.



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