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The Business Value of Creating Digital-Ready Networks with Cisco DNA Solutions

EXECUTIVE SUMMARY

Organizations across the world are engaged in digital transformation (DX), transforming how every business function operates and elevating the already important role of the enterprise network. The network is becoming the core enabler of organizations delivering on their DX missions. New networking architectures and paradigms such as cloud and software-defined networking (SDN) are key lynchpins in providing new tools and capabilities to meet these challenges, and enterprise IT faces urgent questions about how to best deploy these new technologies and architect networks to best meet the challenges brought forth by DX.

Cisco's Digital Network Architecture (DNA) is a new, open software-driven architectural model that seeks to address these challenges through SDN, virtualization, automation, analytics, and cloud. To understand the impact that early DNA deployments are having on networking and business operations, IDC interviewed eight organizations using Cisco DNA solutions. These interviews revealed that these Cisco customers are already capturing significant value through efficiencies and business enablement with network architecture upgrades such as Day 0-1 automation, security, and network and user analytics. IDC projects that based on these benefits of upgrading their networks with Cisco DNA solutions, these organizations will generate value worth an average of $48,117 per 100 users per year ($3.10 million per organization) over five years, which would mean a five-year ROI of 402%, by:

Business Value Highlights

402%
five-year ROI

9 months
to break even

$48,117
average benefits per year

28%
more efficient IT networking staff teams

17%
faster delivery of applications

42%
faster WAN branch deployments

» Leveraging network automation and reducing configuration errors, which enables more efficient IT networking staff operations

» Preventing network-related outages and security breaches and resolving them faster, which limits their impact and potential impact on users and the business

» Gaining agility in deploying network-related equipment as well as WANs and quality-of-service (QoS) upgrades at branch locations

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» Earning more revenue, reducing operational costs, and enabling employees through improved network performance and agility as well as insights generated by network analytics

Although several of these organizations' Cisco DNA deployments are in relatively early stages, these interviews suggest the extent to which these types of network upgrades can help them address challenges and opportunities created by the increasingly digital environment in which they operate.

Situation Overview

DX is elevating the role of the network for organizations across all sizes and verticals. The proliferation of 3rd Platform technologies including mobility, cloud-hosted enterprise applications, and next-generation analytics is also helping revolutionize the role of the network from being a supporting function within enterprise IT to becoming the backbone of day-to-day business operations.

What might this look like in your organization? For customer experience in retail or hospitality, it may entail location-based services on mobile devices that improve customer experience through personalized service. For a financial institution, it may entail faster and more secure digitization through automated provisioning and application of security policies. For operational technology in any organization, the elevated network may entail smart lighting and climate control solutions enabled through IoT sensors that result in cost savings that can be funneled into strategic, mission-oriented initiatives. While intriguing, we must remain mindful that to bring these and other promising applications to fruition, a modern, DX-ready network infrastructure has to be in place.

> IDC research supports that organizations have strong positive intent to make their networks more digital ready.

IDC research supports that organizations have strong positive intent to make their networks more digital ready. In fact, 45% of global organizations plan to progress to advanced stages of digital network readiness within the next two years, an increase of over three times current readiness levels (IDC's Digital Network Readiness Survey, 2016, n = 2,054).

Accordingly, the need for a new network architectural paradigm based on virtualized and software-defined technology is becoming more urgent. With mobility, IoT, cloud, and other DX vectors enabling new business initiatives, the network must rise to a new level of agility and evolve more quickly. Scalability must be flexible and easily achieved, with seamless ability to make moves, adds, and changes as specific network demands shift. Similarly, networks must be designed to seamlessly integrate with and support business applications and operational technology. On any given day, the network needs to operate at a capacity that

comfortably supports its application environment but also be agile enough to elastically align to changing needs.

Given the increasing synergy between IT and line of business (LOB) in terms of their relationship to the enterprise network, it makes sense that networking decision makers should seek an architectural solution that enables IT to move from "keeping the lights on" to spending more time on strategic initiatives involving the network. New network architectures that include automation and programmability capabilities allow for just that. Manual provisioning and configuration tasks can be automated and save network administration tremendous amounts of time. This time saving can be further enhanced by data-driven remediation. Likewise, unprecedented capabilities in network analytics enable increasingly automated remediation, setting the stage for greater levels of self-healing. Network analytics go beyond fixing problems with network performance — they also show great potential in detecting security anomalies and identifying customer behavior patterns that can inform customer experience initiatives.

Next-Generation Security Landscape

As the network takes on a greater role in every corner of the enterprise, the importance of network security becomes even more apparent. This is amplified by the fact that emerging digital demands raise new challenges that are best addressed through the network. In addition to gaining access to sensitive organizational and customer data living throughout the enterprise network, malicious actors that breach enterprise networks can also take down mission-critical systems and applications. In the past, security tools were often deployed and managed disparately from the underlying network infrastructure. For some organizations, this disparate management led to gaps and misalignment between networking technologies and security coverage and security tools.

In addition, legacy network security solutions treated the enterprise network as an insular entity —assuming that as long as the network was sealed off from the outside, it would be protected. This made sense in previous eras. However, with the proliferation of public cloud–hosted applications, BYOD, and remote workers, threat vectors can find pathways into the network from the outside; it is therefore imperative for network security to take a 360-degree outside-in approach.

Given these factors, there is greater recognition that network security solutions need to be tightly intertwined with the network infrastructure in order to protect against today's internal and external threat vectors. Next-generation network security is built upon the concept of "foundational security," meaning that security tools and functionalities are tightly integrated with every piece of the network infrastructure, evolving in lockstep with the network and

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arming the network to protect itself holistically in a digital era where the threat landscape is more dynamic. Analytics capabilities allow security tools to establish baselines for a normal security environment and can provide automated alerting and, in some cases, remediation, when the network security environment shows an anomaly. This use of the network as a security sensor can reduce MTTR, preventing disruption to the business.

Implementing a network architecture based on the principles and needs of DX, including foundational security, has the potential to generate tremendous business value. In the next section, we explore the experiences of organizations that have adopted a next-generation network architecture (Cisco DNA) built upon software-defined networking, virtualization, and cloud technologies. We also examine the resultant business value of implementing Cisco DNA.

Cisco Digital Network Architecture Solutions

Cisco Digital Network Architecture is an open and extensible software-driven architecture that simplifies and accelerates enterprise network architecture (see Figure 1). It is cloud enabled to deliver secure management and network services from private, public, and hybrid cloud environments. Leveraging the benefits of programmability, automation, and analytics, Cisco DNA can benefit IT staff by allowing them to spend less time on manual, repetitive, and reactive network configuration and troubleshooting tasks, instead focusing on proactive, future value-creating strategic initiatives that better align the network to business outcomes.

FIGURE 1

Cisco Digital Network Architecture
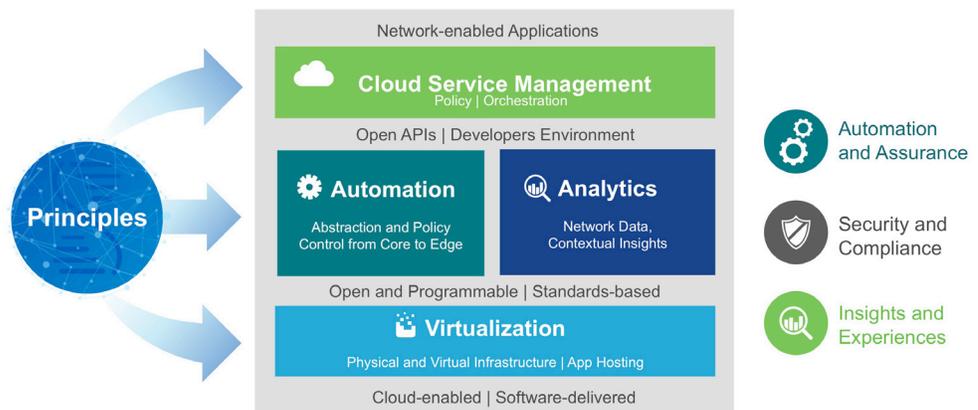
Source: Cisco, 2016

Cisco DNA is designed with foundational security in mind, reducing gaps between network infrastructure and security tools and also allowing network security staff to spend less time on reactive and remedial tasks. Cisco DNA also provides deep visibility for IT and the business on users, devices, and applications that provide insights for better business decisions.

The components of Cisco DNA are:

» DNA Ready Infrastructure (routing, switching, wireless) that can support virtualization and programmability through IOS XE software

» A controller-based architecture to support policy-based automation (APIC-EM)

» Embedded/built-in security (Network-as-a-Sensor and Enforcer) to provide complete threat visibility and protection

» Network, application, security, and user analytics through embedded network intelligence

» Flexible consumption model through software licensing

Cisco DNA is delivered through Cisco ONE Software, which provides simplified, high-value solutions with license portability and flexibility.

The Business Value of Cisco Digital Network Architecture Solutions

Study Demographics

IDC interviewed eight organizations that have deployed at least one product or service that make up a part of Cisco's DNA solutions. On average, these organizations had just under 7,000 employees, although several of the organizations have truly global operations. The extent to which these organizations rely on IT is demonstrated in terms of both IT staff count and the number of IT users, with the average IT staff size of more than 1,000 evincing their reliance on their IT teams to innovate and create new use cases and services to support their employees and customers (see Table 1).

TABLE 1

Demographics of Interviewed Organizations

	Average	Median
Number of employees	6,944	5,750
Number of IT staff	1,143	500
Number of IT users	6,449	5,363
Number of business applications	293	200
Countries	United States, Canada, Germany, India	
Industries	Financial services, higher education, IT services, technology consulting, transportation	

n = 8
Source: IDC, 2016

These organizations have deployed Cisco DNA solutions to support diffuse operations in terms of both the number of sites and network equipment. Despite the significant scale of their environments already supported by Cisco DNA, several organizations noted that they are still relatively early in their use of Cisco DNA solutions and expect to extend the use of existing solutions and adopt new ones (see Table 2).

TABLE 2

Cisco DNA Environments of Interviewed Organizations

	Average	Median
Number of sites	303	24
Number of network switches	1,997	326
Number of network routers	995	60
Number of IT users	5,347	4,300
Number of business applications	180	49

n = 8
Source: IDC, 2016

Creating Digital-Ready Networks and Cisco DNA Use Cases

Interviewed organizations reported using a mix of Cisco DNA solutions, with each having a unique use case of solutions centered on providing automation, security, and analytics. Despite diversity in use cases, these organizations expressed common themes in their perception of using Cisco DNA solutions to transform their network architectures to support digital transformation:

» *"We're using Cisco DNA to support digital transformation, an initiative to build efficiency, optimization, and business productivity. The goal is to change the user experience for both our customers and our internal users. We want to create new business opportunities and revenue sources. Cisco DNA will help lay the foundation for these changes and developments."*

» *"Our Cisco DNA network builds on new capabilities for future applications that our old network didn't have, because it was focused on a specific application or two…. The legacy network couldn't address the many applications that we are seeing or needing to be able to support…. This is why we created and are extending the DNA network."*

Of the eight interviewed Cisco customers, four each reported using the Cisco DNA controller, APIC-EM (automation), next-generation Cisco network security solutions, and Cisco Connected Mobile Experience (analytics). Most of the interviewed organizations described using Cisco DNA solutions to support internal IT and operational technology applications, and half of the organizations are supporting customer-facing services.

Use Cases for Cisco DNA

Interviewed organizations reported using Cisco DNA solutions to achieve a variety of objectives and benefits, including the following:

» **Network automation:**

- Automating the deployment of networking equipment and configuration

- Rolling out software-defined WAN and QoS upgrades at branch locations

- Getting new branches up and running faster and providing on-demand services at branch locations

"Our Cisco DNA network builds on new capabilities for future applications that our old network didn't have, because it was focused on a specific application or two…. The legacy network couldn't address the many applications that we are seeing or needing to be able to support…. This is why we created and are extending the DNA network."

» **Network security:**

- Enhancing security related to confidential customer information and limiting the chance of a data breach occurring

- Obtaining consistent visibility into network performance and behavior and increasing network uptime

- Automating network user authentication

» **Network analytics/intelligence:**

- Developing an application based on network traffic data provided by the WiFi infrastructure that permits more efficient HVAC use

- Creating a customer-facing service based on real-time user behavior on their network with actionable insights

- Enabling the development of mobile, data-focused services and applications across disparate business locations

These use cases for Cisco DNA solutions are helping these organizations realize the promise of digital-ready networks, including delivering improved performance levels across their wired and wireless networks, leveraging the potential of network-driven insights, and supporting more efficient network operations while enabling line-of-business users.

Business Value Analysis

On average, IDC calculates that these Cisco customers will achieve value worth $48,117 per 100 users per year ($3.10 million per organization) over five years in the following areas.

Interviewed organizations have been able to translate their Cisco DNA-enabled use cases described previously into significant value, even though several of them are still relatively early in their efforts to digitize their network architectures. Several interviewed organizations noted that they expect to extend benefits currently being achieved and potentially realize additional benefits as their use of Cisco DNA matures alongside their digital network strategies. On average, IDC calculates that these Cisco customers will achieve value worth $48,117 per 100 users per year ($3.10 million per organization) over five years in the following areas (see Figure 2):

» **IT staff productivity benefits.** IT networking teams are more efficient as the result of automation, more reliable network architectures, and more effective application development efforts. On average, IDC projects that interviewed organizations will realize value worth $24,052 per 100 users ($1.55 million per organization) over five years in IT staff time savings and productivity gains.

» **Business productivity benefits.** Organizations can better address business opportunities and deliver more impactful applications to employees with more agile networking environments. IDC calculates that they will achieve net revenue gains and higher employee productivity with a value of $14,347 per 100 users ($925,200 per organization) over five years.

» **IT infrastructure cost reductions.** Networking-related costs are optimized by deploying new technologies across disparate operations in significantly less time. On average, IDC projects that these Cisco customers will save $5,773 per 100 users per year ($372,300 per organization) over five years.

» **Risk mitigation — user productivity benefits.** Organizations benefit from having a more robust network architecture that prevents security breaches and minimizes their potential impact. IDC puts the value of productive employee time saved and revenue losses avoided at $3,945 per 100 users per year ($254,400 per organization) over five years.

FIGURE 2

Average Annual Benefits per 100 Users
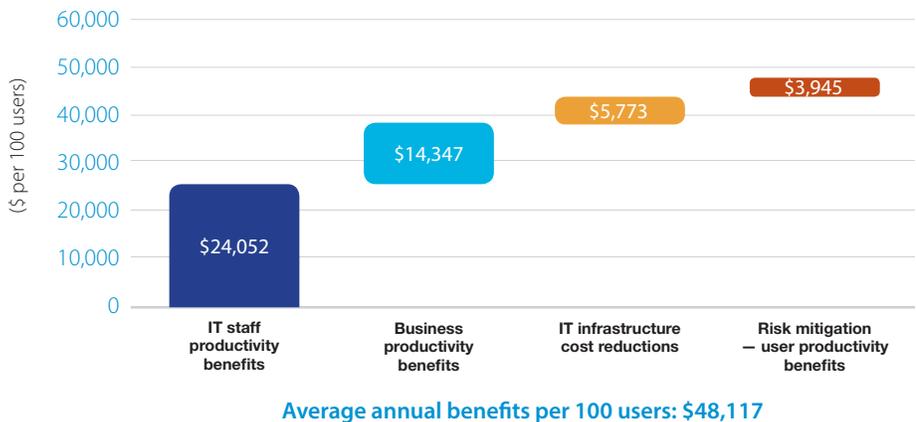
Source: IDC, 2016

"Automation with APIC-EM and Cisco security solutions streamlines operations and creates efficiencies for our IT department, where we are redeploying staff to improving communications between branches and standardizing the infrastructure in all our locations."

IT Staff Productivity Benefits

A core benefit for interviewed organizations of their Cisco DNA deployments has been making their IT networking teams significantly more efficient and productive. In particular, these teams, which are responsible for managing network operations across disparate operations, benefit from automation that reduces the amount of time they must devote to deploying, configuring, and maintaining network equipment. Further, both automation and Cisco DNA security solutions contribute to reduced frequency of network-related errors and problems, meaning that less staff time is needed to remedy such issues. One interviewed organization discussed the impact of Cisco DNA solutions on its IT networking operations: *"Automation with APIC-EM and Cisco security solutions streamlines operations and creates efficiencies for our IT department, where we are redeploying staff to improving communications between branches and standardizing the infrastructure in all our locations."* Overall, IT networking teams at these organizations are realizing average efficiencies of 28% as a result of enhanced capabilities of Cisco DNA solutions (see Figure 3).

Interviewed organizations provided specific examples of the impact of automation, enhanced security, and agility on their IT networking staffs:

» Reducing the frequency of device-related security breaches has resulted in the reallocation of two full-time staff members for one organization.

» Deploying enhanced QoS capabilities in days rather than months saves the time of several network engineers for one organization.

» Installing network equipment faster and without errors means more effective and efficient IT networking staff operations for a Cisco partner's customer.

Most interviewed Cisco customers — like many organizations — are supporting expanding business operations with static staff resources. As a result, these interviewed organizations tied IT networking staff efficiencies being achieved with Cisco DNA to service and business enablement; according to one Cisco customer, *"IT staff efficiencies are all about new initiatives and services for our customers."* This positions IT staff efficiencies being achieved with Cisco DNA solutions as core contributors to these organizations' broader digital transformation efforts.

IT Networking Staff Team Efficiencies
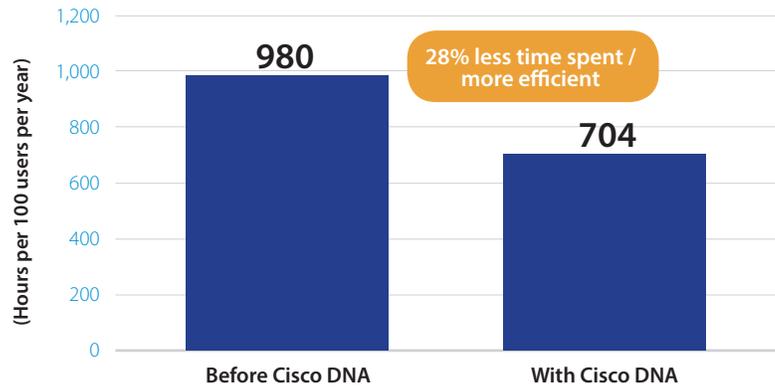
Source: IDC, 2016

"Our entire Cisco DNA story and what is already possible with DNA is creating and deploying new workloads and services for our branch operations that we could not previously."

Interviewed organizations also attributed more effective and efficient application development efforts to their use of Cisco DNA solutions. They noted that enhanced network agility and performance with Cisco DNA has helped shave time off their development processes (17% on average), with the impact especially noticeable in terms of actual deployment of applications (see Table 3). Network modernization and digitization with Cisco DNA is also supporting a more fundamental shift in how some organizations support their customers and employees. One organization explained: *"Our entire Cisco DNA story and what is already possible with DNA is creating and deploying new workloads and services for our branch operations that we could not previously."*
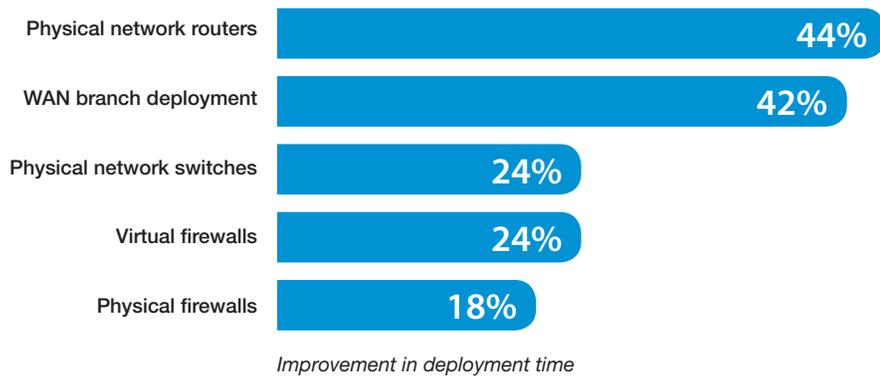
TABLE 3

Application Development KPIs				
	Before Cisco DNA	**With Cisco DNA**	**Difference**	**Benefit (%)**
Time to deliver per application (weeks)	10.9	9.2	1.7	17
IT application development (staff hours per 100 users per year)	806	749	57	7
Business application development (hours per 100 users per year)	3189	3063	126	4

Source: IDC, 2016

Business Productivity Benefits

Cisco DNA solutions are also helping interviewed organizations create more value for their businesses and employees. For interviewed organizations, a core driver of operational and business value they are achieving with Cisco DNA stems from improved network agility (see Figure 4). In particular, Cisco DNA enables them to support business operations and application development efforts with core network equipment in less time and to deliver equipment and connectivity to branch locations sooner. One organization described Cisco DNA as "being designed for automation" and spoke about how it can now deploy network equipment and resources in much less time. For interviewed organizations, this helps them extend and upgrade their networks at the speed needed to meet evolving demand from their employees and customers. Another interviewed organization described how Cisco DNA enables its business operations through network agility: "The most significant benefit for us of Cisco DNA is the agile distribution of applications and services. Our customers may need services at a location, and we are able to push those out using DNA capabilities. When they have a peak time at a site, we can address those needs quickly. That agility is very important to us and our customers."

FIGURE 4

Networking Agility KPIs

Physical network routers	44%
WAN branch deployment	42%
Physical network switches	24%
Virtual firewalls	24%
Physical firewalls	18%

Improvement in deployment time

Source: IDC 2016

As a result of this agility — as well as improved network performance and analytics-driven insights — interviewed organizations are achieving value through increased revenue, higher employee productivity, and operational cost reductions. Although these efforts are still in relatively early stages at several interviewed organizations, there are already tangible impacts that Cisco DNA solutions are having for these Cisco customers (see Table 4).

Interviewed Cisco customers provided specific examples of how Cisco DNA solutions are enabling their business operations, employees, and cost efficiencies:

» The agile delivery of services to a diffuse customer base enables one organization to better support and serve its customers.

» The use of Cisco APIC-EM to deploy Intelligent WAN (IWAN) in much less time provides network capabilities needed to address business opportunities, pushing forward its ability to win business.

» The development of an application that enables more efficient HVAC operations through the use of data about network user number and location.

TABLE 4

Business Operations Impact

Revenue Impact	Per Organization	Per 100 Users
Additional revenue per year	$1.96 million	$30,416
Assumed operating margin	15%	15%
Higher operating margin per year	$294,200	$4,562
User Productivity Impact		
Number of users impacted	157	2
Average productivity gain	8%	8%
Additional productive hours	16,911	262

Source: IDC, 2016

> "It's allowing us to redesign our WAN infrastructure, which is helping us innovate in the sense of coming up with a better solution that gives our end users more bandwidth at a lower cost."

IT Infrastructure Cost Reductions

Interviewed organizations reported being able to optimize some networking-related costs by reducing the time to deliver new technologies and making more efficient use of networking equipment with Cisco DNA solutions. Thus even though their Cisco DNA deployments were generally additive from the perspective of bringing their networks new capabilities, this new functionality can help create more efficient network architectures. For example, one organization explained the link between rapid deployment of Cisco IWAN with Cisco APIC-EM and potential bandwidth efficiencies: *"It's allowing us to redesign our WAN infrastructure, which is helping us innovate in the sense of coming up with a better solution that gives our end users more bandwidth at a lower cost."*

Risk Mitigation: User Productivity Benefits

A number of interviewed organizations noted that their deployment of Cisco DNA solutions was driven at least in large part by their need to minimize their exposure to risk, particularly to security breaches. They reported achieving this objective with Cisco DNA, both in qualitative and in quantitative terms. These Cisco customers have not only reduced the impact of network-related outages and breaches, as shown in Table 5, but also expressed confidence that they have taken an important step in ensuring the robust and secure network environments their businesses and operations require. One organization commented: *"Improved security has been a real benefit with Cisco DNA. We can now publish policies and have the policies manage network security. I want even more of our security [to] be policy driven…. Higher reliability has had a positive impact by helping lay the foundation for our expansion."* Another organization recounted how performance-based routing with Cisco helps it: *"Our DNA network provides the enhanced application stability our customers need…. We had what could have become a security breach, but I know our customers weren't impacted because of DNA's capabilities around performance-based routing. The network recognized that there was an issue, and it immediately switched to an alternative path, which is why we went with DNA."*

TABLE 5

Risk Mitigation: Unplanned Downtime and Security Breaches

	Before Cisco DNA	With Cisco DNA	Difference	Benefit (%)
Unplanned downtime: Productivity impact				
Number of instances of unplanned downtime per year	0.6	0.3	0.3	45
MTTR (hours)	11.5	0.9	10.6	92
Productive hours lost per 100 users per year	96	72	24	25
Unplanned downtime: Revenue impact				
Total revenue impact per year ($)	275,000	235,700	39,300	14
Security breach impact				
Number of impactful security breaches per year	0.4	0.3	0.1	20
MTTR (hours)	24.0	8.0	16.0	67
Productive hours lost per 100 users per year	429	343	85	20

Source: IDC, 2016

ROI Analysis

IDC interviewed eight organizations that have upgraded their network architectures with Cisco DNA solutions. Based on these interviews, IDC has calculated the benefits and costs to these organizations of these Cisco DNA solutions by asking their business and operational impact. IDC used the following three-step method for conducting the ROI analysis:

1. **Gathered quantitative benefit information during the interviews using a before-and-after assessment of the impact of Cisco DNA solutions.** In this study, the benefits included staff time savings and productivity benefits, increased revenue, and IT-related infrastructure cost reductions.

2. **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the initial and annual costs of deploying Cisco DNA solutions and can include additional costs related to migrations, planning, consulting, configuration or maintenance, and staff or user training.

3. **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of Cisco DNA solutions over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

Table 6 presents IDC's analysis of the total-five year discounted investment costs and benefits associated with interviewed organizations' use of Cisco DNA solutions. On average, IDC calculates that these Cisco customers will invest $34,159 per 100 users ($2.21 million per organization) and achieve benefits with a value of $171,430 per 100 users ($11.06 million per organization) over five years. This level of investment and benefits would result in a five-year ROI of 402%, with breakeven in their investment occurring in an average of nine months.

TABLE 6

Five-Year ROI Analysis

	Per Organization	Per 100 Users
Benefit (discounted)	$11.06 million	$171,430
Investment (discounted)	$2.21 million	$34,159
Net present value (NPV)	$8.85 million	$137,271
Return on investment (ROI)	402%	402%
Payback period	9 months	9 months
Discount rate	12%	12%

Source: IDC, 2016

Challenges and Opportunities

Cisco DNA is a promising technology with regard to building a network equipped for DX. Its next-generation software-defined and virtualized capabilities will drive many opportunities and show a marked difference from legacy networking paradigms. For organizations that seek to make such a large-scale transition, it can be difficult to ensure stakeholder buy-in. However, DX is a phenomenon affecting all organizations, and the move to software-defined and virtualized architectures is an industrywide transformation. As a result, new skills must be learned, and some stakeholders may fear the displacement of their jobs because of the new technology, especially when its involves automation. In addition, some verticals will resist moving away from traditional physical, on-premise infrastructures because of concerns around data. IDC believes that with proper education on SDN, virtualization, and cloud, these concerns can be mitigated.

Also, IDC believes that the DX opportunities associated with Cisco DNA outweigh the challenges. Implementing a network architecture built upon IT and LOB alignment will create a number of opportunities to reposition the enterprise network from a cost center to a

profit center and from the more robust capabilities of customer engagement platforms such as Cisco CMX Cloud to the ability to more agilely add new network resources as business demand increases. It is worth mentioning again the opportunity inherent in automation: repurposing time away from "keeping the lights on" to more strategic, business value–adding tasks. A software-defined, virtualized network architecture such as Cisco DNA also can improve the convergence of network elements, streamlining management and providing better visibility of network management and security. Finally, automation and convergence, along with analytics, reduce time to remediation of security gaps.

Summary and Conclusion

As the momentum behind DX will continue to build, IDC expects the benefits of a virtualized, software-defined architecture such as Cisco DNA will increase in scope in the near term.

DX relies upon the enterprise network to play an expanded role in every realm of business operations. Concurrently, innovations in software-defined networking and virtualization are creating new agility in the network, setting the stage for enterprise networks that can nimbly align to business objectives. An architectural solution set such as Cisco DNA can provide enterprise networks with automation, foundational security, and analytics capabilities that empower a true digital transformation. In studying eight end-user organizations that have implemented elements of Cisco DNA, IDC found substantial quantifiable business value benefits in the areas of IT staff productivity, business staff productivity, IT infrastructure cost reductions, and risk mitigation. As the momentum behind DX will continue to build, IDC expects the benefits of a virtualized, software-defined architecture such as Cisco DNA will increase in scope in the near term.

Appendix

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of Cisco DNA solutions as the foundation for the model. Based on interviews with eight organizations using Cisco DNA solutions, IDC performs a three-step process to calculate the ROI and payback period:

» Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support) and increased user productivity over the term of the deployment compared with their previous infrastructure environments.

» Ascertain the investment made in deploying Cisco DNA solutions and the associated migration, training, and support costs.

» Project the costs and savings over a five-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

» Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings.

» Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.

» The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.

» Lost productivity is a product of downtime multiplied by burdened salary.

» The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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