Enhancing Business Value with HP Wireless Networking Solutions

Sponsored by: HP
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EXECUTIVE SUMMARY

The mobile device revolution is transforming the enterprise. One of the four major pillars supporting the 3rd Platform of computing – along with cloud, Big Data, and social technologies – mobile technology is helping organizations realize new sources of competitive advantage and making employees more productive by enabling them to access critical corporate applications anywhere, at any time. But it is also increasing the management and security burden for network administrators.

It is no longer acceptable for the wireless network to simply be an add-on or overlay to the wired network; employees demand a seamless end-to-end experience. And IT departments demand the same levels of security, management, and control in their wireless network as they have been accustomed to with their wired network. HP offers a holistic, end-to-end networking portfolio encompassing both wireless and wired LAN solutions and single-pane-of-glass management.

To determine the business value of implementing HP wireless networking solutions as part of a holistic end-to-end network, IDC interviewed six midmarket customers in the United States and Europe that have been using HP wireless networking solutions in production environments. These customers are happy with their solutions and told IDC of operational improvements as a result of improved bandwidth and coverage and improved user productivity as a result of increased network uptime, as well as infrastructure cost reductions and improved IT staff productivity. One U.S. four-year university said, "We have a smokin' [wireless] network, and everyone knows it."

Overall, organizations achieved a 567% return on their investment, with an average annual benefit of over $16,000 per 100 users and a payback period of 7.7 months.

Business Value Highlights

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Average annual benefit per 100 users</td>
<td>$16,161</td>
</tr>
<tr>
<td>Reduced time to deploy new services</td>
<td>83%</td>
</tr>
<tr>
<td>Reduced downtime</td>
<td>55%</td>
</tr>
<tr>
<td>ROI</td>
<td>567%</td>
</tr>
<tr>
<td>Payback period</td>
<td>7.7 months</td>
</tr>
<tr>
<td>Reduced network TCO</td>
<td>47%</td>
</tr>
</tbody>
</table>

"We have a smokin' [wireless] network, and everyone knows it."
METHODOLOGY

IDC based its ROI analysis on interviews with six customers that are using HP wireless networking solutions in production environments. Some are new deployments, while others are upgrades or significant network expansions by long-term HP customers. All have been running for a sufficient period of time to provide perspective on how the product has made an impact on their bottom line.

The organizations interviewed are located in the United States and Europe and are predominantly midmarket businesses. They have an average of 2,000 employees, 1,608 internal users, and 24,134 external users (see Table 1). These organizations support 21,296 access points on average, with 723% access point growth after deploying HP and 20% annual growth in mobile apps over the same time frame. Industries covered include the animation, education, and service provider segments.

TABLE 1

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>2,000</td>
</tr>
<tr>
<td>Internal users</td>
<td>1,608</td>
</tr>
<tr>
<td>External users</td>
<td>24,134</td>
</tr>
<tr>
<td>Number of devices per user</td>
<td>2.1</td>
</tr>
<tr>
<td>Access point growth with HP</td>
<td>723</td>
</tr>
<tr>
<td>Mobile apps growth (%)</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: IDC, 2013

These interviews were supplemented by information from the IDC Business Value database with information collected from over 3,000 companies in 43 countries and over 25 industries. The information from the IDC Business Value database was used to validate these interviews to extrapolate the business value drivers to a general business audience.

SITUATION OVERVIEW

Growth in BYOD and Enterprise Mobility

Mobility – along with cloud computing, Big Data, and social technologies – is one of the four pillars of what IDC refers to as the 3rd Platform of computing, a core set of technologies that are forming a new platform for industry and enterprise innovation and growth. Companies in a wide variety of industries around the globe are using mobile technologies to develop new sources of competitive advantage, make employees happier and more productive, and interact with their customers in new and innovative ways.
IDC data underlines the impact of the mobile device revolution. In 2012, worldwide mobile device shipments amounted to 884 million (722 million mobile devices plus 162 million tablets), dwarfing the 515 million shipments of PCs and notebooks. IDC forecasts that by 2015, shipments of media tablets alone will surpass PC shipments for the first time — 345 million to 323 million.

Mobile devices have fundamentally changed the way employees work. In a trend widely referred to as bring your own device (BYOD), smartphones and media tablets originally designed for and marketed to consumers are now in widespread use within the enterprise. And with BYOD, gone are the days in which IT could dictate the mobile devices their employees use at work; now it is expected to handle a broader range of devices it no longer has complete control over. IDC studies show that in 2012, 68% of the smartphones used to access business applications are employee owned (BYOD), up from 45% in 2010 (see Figure 1).

FIGURE 1

Employee-Owned Devices Used to Access Business Applications, 2010-2012

Note: For more details, see Worldwide Business Use Smartphone 2012-2016 Forecast Update (IDC #237835, November 2012).

Source: IDC, 2013

The Need to Improve Wireless Application Service While Reducing Operational Cost

Growth in mobility and BYOD is causing a number of challenges for corporate IT departments. IT must support users’ demands to provide access to corporate data and applications in the manner that users want, but IT departments must also maintain control over their enterprise network without compromising security or compliance requirements.

Legacy networks are ill-prepared to support BYOD. Most have separate wireless and wired networks with separate management and control functions, and many have limited mobile device management (MDM) and application management and control features and functionality. Organizations need to rethink their network architectures to provide unified wired and wireless network and management and to introduce BYOD-specific features to streamline mobile device onboarding and provisioning as well as ongoing monitoring.
Unfortunately, many IT organizations must solve these challenges in the face of ongoing budgetary constraints. While the global economy continues to limp along, many IT departments are feeling the squeeze. And yet they must fulfill their mission to support the installed base of equipment already in their infrastructure; the result is that the majority of IT budgets are dedicated to ongoing maintenance and support—what is required to merely "keep the lights on." Freeing up budget to focus on strategic IT activities requires figuring out ways to reduce ongoing operational costs. This was a very real issue for the customers we interviewed. "Basically, we were trying to keep the lights on before. That was the job," stated one U.S. four-year university. "Now, less than half of our job is keeping the lights on."

Enterprise WLAN Investment Drivers

Pressures to support mobility are forcing IT organizations to rethink their network approaches, especially with regard to their WLAN deployments. Some of the key drivers influencing wireless network investment decisions are discussed in the sections that follow.

Improve Infrastructure to Enhance Worker Flexibility

Enabling workers to be more productive increasingly means allowing them to work remotely via mobile devices. Laptops, tablets, and smartphones enable employees to conduct business from any location, at any time. Employees must be able to access the latest interactive video, social media, and unified communications tools required for their job functions. Organizations need network architectures that enable them to deliver WLAN services that support these devices with an improved user experience while minimizing IT cost and complexity.

Seamless Connectivity Between Wired and WiFi Networks

Users are choosing to connect to the corporate LAN with mobile devices over WiFi rather than Ethernet, even when they are on the corporate campus. This places pressure on WiFi networks to offer the same levels of performance, security, and control that are available over traditional wired networks. Organizations no longer can consider wired and wireless networks as different entities, or treat the wireless network as an add-on overlay. They must rearchitect their networks in a holistic manner that optimizes the end-to-end experience for the user but still enables the IT department to maintain control.

Enhance Network Performance Through Flexible Deployment Options

Using legacy architectures to provide access over both secured and unsecured wired and wireless networks is very complex and costly for IT organizations. User requirements change regularly, and organizations must maintain the ability to quickly respond. IT departments require network solutions that have the flexibility to start small and grow as their needs change not only in terms of scaling the number of users but also in terms of network services delivered.

Enable Mobile VoIP, Video, and Other Rich Media Apps

Workers increasingly require the use of video and rich media collaboration applications as part of their everyday experience. The rise of IP voice and video is driving the need for greater levels of bandwidth and availability in the wireless network, as well as management and optimization services to provide users with the best possible experience.
Intelligent Network Management

Introducing additional management platforms to address mobile device and infrastructure management needs adds more complexity to the IT organization's already complicated toolkit. It increases the IT department's operational burden, not to mention the investment costs and maintenance of the additional tools. Instead, organizations require tools that reduce their burden by providing management, control, and/or policy through an integrated but simplified, single-pane-of-glass platform.

Easy, Secure Mobile User Access

Even as companies look to provide easy access to corporate applications via mobile devices, security remains a key consideration. When employees connect their own devices to the network, the health and status of those devices are unknown, and any risks they may introduce must be contained. Mobile devices typically travel outside the firewall and can be easily lost or stolen, making them even greater security risks than more traditional devices such as laptops.

HP WIRELESS NETWORKING SOLUTIONS

HP's wireless networking solutions are designed to enable the mobile workforce. The HP portfolio spans switches, security products, and management products, which are delivered in both hardware and software form factors. This portfolio is built upon the HP FlexNetwork architecture, a key component of the HP Converged Infrastructure vision. HP FlexNetwork is designed to enable networks to be open, scalable, and agile and to provide a consistent network environment from the datacenter all the way to the campus and branches. It provides a unified network experience across both wired and wireless networks, providing a consistent user experience regardless of type of device used or connection method.

HP Intelligent Management Center

One of the primary offerings in the HP wireless networking product portfolio is the HP Intelligent Management Center (IMC). The HP IMC offers single-pane-of-glass management across the entire enterprise network, from the datacenter to the network edge. It enables management across wired and wireless networks, both physical and virtual, and allows organizations to apply the appropriate security policies to users and devices accessing the network. It can be delivered as a standalone platform or as a Smart Connect Virtual Appliance to speed installation and make it easier to use. One of the key differentiators of the IMC is that it is component vendor agnostic and can be used to manage a network consisting of heterogeneous products from multiple vendors. Several respondents in the study commented on the value of the IMC. "Now that we have IMC as the network management platform, we can do all of our move/add/change work inside the network management platform," said one U.S. four-year university. "And we probably have 100 changes per month."

"Now that we have IMC as the network management platform, we can do all of our move/add/change work inside the network management platform. And we probably have 100 changes per month."
HP FlexNetwork Unified Wired-Wireless Network

HP FlexNetwork is a converged networking architecture that extends from the datacenter to the workplace, providing cloud, multimedia, and mobility support with integrated security. FlexFabric is used at the datacenter/network core, with FlexCampus and FlexBranch at the network edge. This architecture enables the construction of unified networks that support desktops and mobile devices, wired and wireless access points, and a unified wired-WLAN switch infrastructure.

HP has a number of products already on the market that support this architecture, including:

- WA262X access points
- WX5004 WLAN
- RF Manager
- MSM 4xx access points
- MSM720 and MSM760 Premium Mobility and Access Controllers
- MSM765zl Premium Mobility Controller

New HP WLAN Networking Offerings

In addition to the solutions listed previously, HP recently launched a number of new WLAN products and services into the market. The following offerings can provide additional benefits to customers looking for an improved approach to their WLAN:

- **Switches.** New WLAN switches include the HP 830 Unified Wired-WLAN Switch and the HP Integrated 10500/7500 Unified Wired-WLAN Module. Each of these switches is 802.11ac ready.

- **Software-defined networking (SDN) capabilities.** HP is working to incorporate SDN technology into its products. SDN brings new levels of programmability, flexibility, and automation to networking technology, and with its SDN offerings, HP provides an end-to-end solution to automate the network from the datacenter to the campus branch.

- **WiFi Clear Connect.** HP WiFi Clear Connect firmware uses radio resource management (RRM) to automatically monitor and tune the performance of the WLAN and adjust to changing RF conditions present in the environment. WiFi Clear Connect detects, classifies, and automatically mitigates interference, and it balances the client load across access points in dense client environments. This is designed to make it easier to deliver the WiFi experience that users have come to expect.

- **Lifetime Warranty 2.0.** The HP Lifetime Warranty 2.0 builds on HP’s previous Lifetime Warranty offering with the addition of 24 x 7 phone support for HP FlexCampus, HP FlexBranch, and small business products for up to three years. It is included in the purchase price of covered products at no additional cost.
BUSINESS VALUE OF HP WIRELESS NETWORKING SOLUTIONS

To assess the benefits of implementing HP wireless networking solutions, IDC interviewed customers that have deployed and are using HP WLANs, often in conjunction with other HP wireless networking solutions, in production environments. Overall, IDC determined that these customers achieved $16,161 in average annual benefits per 100 users, broken down into the following areas (see Figure 2):

- IT staff productivity
- Infrastructure cost reduction
- Business productivity: increased revenue
- Business productivity: operational cost reductions
- User productivity

Each of these benefits is discussed in more detail.

FIGURE 2

Average Annual Benefits (per 100 Users)

Source: IDC, 2013
Table 2 displays a number of IT service management key performance indicators (KPIs), the value of those KPIs with the previous non-HP solution and with the HP solution, and the improvement realized. Organizations were able to achieve 92% improvement in their application utilization rate; 88% reduction in mean time to install, configure, test, and deploy new networking equipment; 83% reduction in mean time to deploy new services; and 34% reduction in time required for tasks merely to "keep the lights on."

**TABLE 2**

**IT Service Management KPIs**

<table>
<thead>
<tr>
<th>KPI</th>
<th>Other</th>
<th>HP</th>
<th>Value</th>
<th>Advantage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to deploy networking equipment (hours)</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Time spent keeping the lights on (%)</td>
<td>59</td>
<td>39</td>
<td>20</td>
<td>34</td>
</tr>
<tr>
<td>Mean time to deploy new services (weeks)</td>
<td>12</td>
<td>2</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Mean time to install, configure, test, and deploy new networking equipment (hours)</td>
<td>8</td>
<td>1</td>
<td>7</td>
<td>88</td>
</tr>
<tr>
<td>Percentage of environment managed centrally</td>
<td>50</td>
<td>90</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Application utilization rate —actual users/potential users (%)</td>
<td>50</td>
<td>96</td>
<td>46</td>
<td>92</td>
</tr>
<tr>
<td>Application time to adoption (weeks)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: IDC, 2013
Infrastructure Cost Reduction

Another benefit included the reduction in infrastructure costs by switching to HP wireless networking equipment. The bulk of the savings in this regard was associated with reduced costs for servers, representing nearly half of the total, followed by reduced costs for lifetime warranty for the equipment, software licensing, switch hardware, and initial investment. As one U.S. four-year university put it, "You don't have to buy the servers." A complete breakdown of the infrastructure cost reduction per 100 users is illustrated in Figure 3.

FIGURE 3

Average Annual Infrastructure Cost Reduction (per 100 Users)

Source: IDC, 2013

"You don't have to buy the servers."
User Productivity

End-user productivity is a critical ROI driver. By being able to work whenever they want, from wherever they want across a secure, reliable connection with sufficient bandwidth to support their needs, users are able to work more productively and efficiently. Improved network uptime and quality of service are key to being able to provide increased productivity. Overall, respondents told us that their network uptime improved after implementing their HP wireless networking solution. "It gives us visibility if we have issues with ports. And so we're able to better troubleshoot if there is a problem with a system," stated one U.S. postsecondary school. "That reduces downtime." Or as a European nongovernmental organization said, "People are more productive for this." On average, the number of incidents dropped by 47%, while the hours of downtime per user per year (and corresponding lost hours per user per year) declined by 55% (see Table 3).

TABLE 3

<table>
<thead>
<tr>
<th>Quality-of-Service KPIs</th>
<th>Other</th>
<th>HP</th>
<th>Value</th>
<th>Advantage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unplanned downtime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incidents per year</td>
<td>68.08</td>
<td>35.93</td>
<td>32.15</td>
<td>47</td>
</tr>
<tr>
<td>Hours per incident</td>
<td>2.53</td>
<td>2.17</td>
<td>0.36</td>
<td>14</td>
</tr>
<tr>
<td>Hours of downtime per year</td>
<td>172.10</td>
<td>77.85</td>
<td>94.25</td>
<td>55</td>
</tr>
<tr>
<td>Hours per user per year</td>
<td>23.44</td>
<td>10.60</td>
<td>12.84</td>
<td>55</td>
</tr>
<tr>
<td>Time lost to moves, adds, and changes (hours)</td>
<td>–</td>
<td>–</td>
<td>7.68</td>
<td>–</td>
</tr>
<tr>
<td>Average annual value per 100 users ($)</td>
<td>–</td>
<td>–</td>
<td>3,745</td>
<td>–</td>
</tr>
</tbody>
</table>

Source: IDC, 2013
**IT Staff Productivity**

Customers described several ways that HP wireless networking solutions enabled them to realize greater IT staff productivity. These included reduction in time required to perform network management and server management, respond to downtime, and do initial deployments. Nearly all respondents commented on the manageability benefits of the HP IMC solution, with one U.S. media company saying, "It's really set it and forget it." A U.S. four-year university said, "It worked. I wasn't out there rebooting switches. I wasn't out there reloading configurations." The average IT staff productivity benefits per 100 users are displayed in Figure 4.

**FIGURE 4**

Average Annual IT Staff Productivity Benefits (per 100 Users)

Source: IDC, 2013
Business Productivity: Operations

Our interviews uncovered three primary areas in which HP wireless networking solutions enabled organizations to improve productivity in business operations: higher bandwidth, resulting in faster network service; productivity increases from greater campus wireless network coverage; and reduced costs to the organization by enabling employees to use their own mobile devices so the organization doesn't have to buy them. One U.S. postsecondary school pointed to the benefits of increased coverage, stating that "wireless coverage enables us to utilize, in this case, the student information systems apps." The productivity benefits per 100 users are shown in Figure 5.

FIGURE 5

Business Productivity – Operations (per 100 Users)

Source: IDC, 2013
Business Productivity: Increased Revenue

Customers described ways that implementing HP wireless networking solutions contributed directly to their revenue. Service-oriented businesses such as hospitality chains and educational institutions realized improvements in user/customer satisfaction and were able to reduce the risk that customers could take their business elsewhere if they are not provided with good connectivity. On average, respondents credited these solutions with contributing $128,926 in new revenue per year. To determine the impact to an organization's bottom line, IDC assumed a 20% operating margin, implying that companies were able to realize a $25,785 operating margin benefit, which amounts to $107 per 100 users (see Table 4).

### TABLE 4

<table>
<thead>
<tr>
<th>Revenue Benefits</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Annual revenue increase</td>
<td>$128,926</td>
</tr>
<tr>
<td>Operating margin</td>
<td>20%</td>
</tr>
<tr>
<td>Realized revenue benefits</td>
<td>$25,785</td>
</tr>
<tr>
<td>Benefit per 100 users</td>
<td>$107</td>
</tr>
</tbody>
</table>

Source: IDC, 2013

### ROI Analysis Summary

The bottom-line analysis that all companies should perform when considering changing or upgrading their network infrastructure is whether the economic benefits of the investment will outweigh the costs associated with implementing the new infrastructure. In this white paper, IDC found that customers that implemented HP wireless networking solutions were able to realize a 567% return on their initial investment, achieving a five-year (discounted) benefit of $56,254 per 100 users and payback in 7.7 months (see Table 5).

### TABLE 5

<table>
<thead>
<tr>
<th>Five-Year ROI Analysis per 100 Users</th>
<th></th>
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<tbody>
<tr>
<td>Discounted benefit</td>
<td>$56,254</td>
</tr>
<tr>
<td>Investment</td>
<td>$8,429</td>
</tr>
<tr>
<td>Net present value</td>
<td>$47,825</td>
</tr>
<tr>
<td>ROI = NPV/investment</td>
<td>567%</td>
</tr>
<tr>
<td>Payback</td>
<td>7.7 months</td>
</tr>
<tr>
<td>Discount factor</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: IDC, 2013
Figure 6 illustrates the costs and benefits of the HP wireless networking solution over time. Note that the cumulative net benefit is positive beginning in year 1.

FIGURE 6

Cash Flow Analysis

Initial Year 1 Year 2 Year 3 Year 4 Year 5

Investments $4,781 $786 $1,087 $1,087 $1,087 $1,087

Benefits $8,274 $16,824 $17,411 $18,115 $20,353

Cumulative benefits

Source: IDC, 2013

OPPORTUNITIES AND CHALLENGES

IDC sees a number of opportunities and challenges for HP as it continues to roll out its WLAN products as part of a unified networking portfolio.

Opportunities include:

- **Articulate the value of single-pane-of-glass management with the HP IMC.** Using multiple tools, often from multiple vendors, to manage all the aspects of a wired and wireless network is a major pain point for network administrators. With IMC, HP offers a solution that provides integrated wireless and wired management through a single pane of glass and can be used not only in HP-only networks but also where other vendors’ equipment may be part of the infrastructure.

- **Emphasize the value of automation to the enterprise network.** As IT is being asked to do more with less, it must look to solutions that leverage existing infrastructure and allow it to bring new levels of automation into integration, provisioning, and management tasks, especially as enterprises look to integrate more of their wired and wireless infrastructure. HP should position its unified portfolio as a way to help businesses meet that requirement.
Challenges include:

- **Gaining mindshare in wireless networking.** Since its acquisition of 3Com, HP has worked hard and garnered significant mindshare in the wired network market. HP’s current challenge is to demonstrate the same strength of offerings on the wireless side and to gain levels of market awareness similar to those it enjoys with its wired products.

- **Competing against niche and vertical-specific players.** HP is a broad-based networking solution provider and as such targets practically every vertical segment and market niche; however, it must also compete with smaller, pure-play wireless LAN providers that focus on particular industries. By focusing on the needs of those segments in a highly targeted manner, it can offer differentiated solutions that can be challenging to compete against. HP must articulate the value it brings as a full-solution provider with its breadth and depth of resources and how that value proposition makes it worthwhile to invest in HP rather than a specialized provider.

**CONCLUSION**

Mobility is here to stay, and it is transforming the enterprise, with IT expected to provide ubiquitous wireless (WLAN) coverage. As employees increasingly choose to use their own mobile devices to access corporate information, this creates new challenges for IT organizations. Already under pressure to do more with less, IT must identify innovative ways to provide a holistic, unified wireless and wired networking experience while incorporating new levels of automation and control to reduce its management burden.

HP offers a complete line of wireless and wired networking solutions, designed to provide a seamless end-to-end user experience and simplify network administration with single-pane-of-glass management. In a study of U.S. midmarket customers that have implemented HP wireless networking solutions, IDC determined that these solutions provided economic benefits spread across the following key areas: IT staff productivity, infrastructure cost reduction, business productivity in terms of both increased revenue and operational cost reductions, and improved end-user productivity. IDC estimated that the organizations' ROI was 567%, with a payback period of 7.7 months.

**APPENDIX: IDC’S ROI METHODOLOGY**

For this ROI project, IDC worked with HP to determine the interview process and guide. HP provided the names of the companies to interview.

IDC uses a three-step methodology for conducting ROI analysis:

- **Measure the benefits** from the following areas:
  - **IT infrastructure cost reduction:** Direct costs that include IT staff labor reduction, hardware cost reductions (for purchase and deployment of incremental network infrastructure components), and reduction in service and support licensing costs
- **IT productivity increases**: Time savings from more efficient IT operations, which enable the reallocation of IT staff time from support tasks (network troubleshooting and maintenance) to higher-value activities such as supporting new business applications or technology initiatives.

- **End-user productivity increases**: Increases resulting from the decrease in network downtime due to fewer downtime incidents and improved mean time to resolution (MTTR).

- **Ascertain the investment profile**: made in the purchase and implementation of the solution and the associated training and maintenance costs. To get an accurate assessment of the investment in deploying HP WLAN solutions, IDC asked for the deployment, setup, upgrade, and maintenance costs, as well as the total cost of the services and training. This investment included the loaded costs of any incremental staff required.

- **Calculate the payback period and ROI**: for the deployed solution by conducting a depreciated cash flow analysis of the benefits and investments over a five-year period. From the results of the interviews, IDC was able to calculate the average payback period and rate of return from investing in the HP WLAN solution, as well as the net present value of the savings. IDC bases its calculations on a number of assumptions:
  - IDC uses a 12% discount rate in the ROI analysis to account for risk and to ensure a conservative analysis.
  - 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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