The Financial Impact of BYOD

A Model of BYOD's Benefits to Global Companies

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Executive Summary

"Bring your own device" (BYOD) is the new mantra of employees who are empowered to innovate the way they work, using the technology tools they prefer. This growing trend has been well-documented. In our original research on BYOD, described in "BYOD: A Global Perspective," the Cisco® Internet Business Solutions Group (IBSG) interviewed nearly 4,900 business leaders and IT decision makers in nine countries from January to July 2012.[1] The study revealed that an astounding 89 percent of companies are enabling their employees to use their own devices – specifically, mobile devices such as laptops, smartphones, and tablets – for work purposes. The study also showed that 69 percent of IT decision makers (up to 88 percent in some countries) feel that BYOD is a positive development for their organization.

An astounding 89 percent of companies are enabling their employees to use their own devices for work purposes.

Recently, however, there has been skepticism about the benefits companies can expect when they embrace BYOD. While BYOD promises tantalizing value – such as greater employee productivity – some fear that security risks and the complexity of managing devices on multiple platforms could outweigh the benefits.[2] Companies have a dilemma: Executives[3] and knowledge workers want to use the devices, applications, and cloud services of their choice,[4] and are demanding corporate network access and IT support. Companies are obliging them, but are uncertain whether or not BYOD is worth the risks and costs.

To help companies determine the current and potential value of BYOD, Cisco IBSG conducted a detailed financial analysis of BYOD in six countries. Our findings show that, on average, BYOD is saving companies money and helping their employees become more productive. But the value companies currently derive from BYOD is dwarfed by the gains that would be possible if they were to implement BYOD more strategically.

Together, our surveys and additional research provide a clear picture of the financial impact of BYOD on a "typical" company across the six countries we analyzed.

Study Methodology

To inform its financial model, Cisco IBSG surveyed more than 2,400 mobile users[5] across 18 industries in six countries: the United States, United Kingdom, Germany, India, China, and Brazil.[6] Respondents came from both midsize companies (500–999 employees) and enterprises.[7] Our financial model also used as inputs a Cisco IBSG survey of 135 IT decision makers,[8] extensive secondary research, and data on Cisco's own BYOD experience. Together, our surveys and additional research provide a clear picture of the financial impact of BYOD on a "typical" company[9] across the six countries we analyzed.

The financial model calculates the costs and benefits of BYOD in two scenarios:

- "Basic BYOD" is the way BYOD is typically implemented in companies today, with an incomplete patchwork of capabilities and policies. This scenario could also be viewed as the median level of BYOD capabilities across companies.
- "Comprehensive BYOD" refers to a more strategic approach to BYOD, and features eight core capabilities companies need to harness BYOD effectively. We will describe Comprehensive BYOD more fully below.

This approach enabled us to look at the full BYOD journey, and to examine the benefits at each stage: from no BYOD at all, to Basic BYOD, and then to Comprehensive BYOD.

We used our survey findings and Cisco internal data to estimate the productivity impact of these different transitions across seven categories – availability, collaboration, efficiency, new ways of working, avoided distractions, reduced downtime, and reduced administration – as well as the potential cost savings in hardware and telecommunications. We looked at these benefits for each of the following cases:[10]

- Mobile employees moving from corporate devices to BYOD
- Mobile employees moving from corporate-paid data plans to employee-funded plans
- Mobile employees who have already adopted BYOD
- Employees adopting BYOD to gain the benefits of mobility for the first time

We also evaluated the IT costs of transitioning to the different BYOD levels. Cost categories included:

- Software (including additional collaboration tool licenses)
- Support and training (including help-desk support and self-support)
- Policy and security (including policy management and mobile device management)
- Telecommunications (end user and corporate WAN)

For companies in all countries, however, the lion's share of the value of BYOD comes from a more strategic approach to the way they provision devices, provide IT support, and develop mobile policies.

- Network and operations (Wi-Fi access points, network management, maintenance)

We then calculated the benefits and costs a typical enterprise could expect under these two BYOD approaches. All figures have been rounded to the nearest $50 for simplicity.

Key Findings

Companies in all countries we surveyed have been reactive in developing their BYOD capabilities and policies, yielding to demands for a wider variety of devices and applications rather than executing a vision for greater flexibility and cost savings. Some have been more successful than others in garnering value from this patchwork of capabilities, which we call Basic BYOD. For companies in all countries, however, the lion's share of the value of BYOD comes from a more strategic approach to the way they provision devices, provide IT support, and develop mobile policies — an approach we call Comprehensive BYOD. With Comprehensive BYOD, companies that are already successful in reducing costs and increasing employee productivity will see their gains increase substantially. Those that have struggled to generate significant value can use Comprehensive BYOD to approach, and even surpass, the gains made by firms in the most successful countries to date.

Following are some of the top insights derived from the study:

Without exception, the typical company in each country we studied could post strong financial gains by moving to Comprehesive BYOD.

With Basic BYOD, companies around the globe are making productivity gains. Even given the limitations of Basic BYOD, companies are saving money and employees are more productive. But companies are not benefiting equally across countries. The average BYOD user (or "BYOD-er") across countries saves 37 minutes per week thanks to using his or her own device, with a high of 81 minutes per week in the United States and a low of 4 minutes per week in Germany. On average, Basic BYOD generates $350 of value annually per mobile user (including both BYOD and corporate device users).

Companies can gain an additional $1,300 annually per mobile user with Comprehensive BYOD. Being reactive — rather than strategic — in deploying BYOD capabilities means companies across our six countries are leaving an average of $1,300 on the table. Without exception, the typical company in each country we studied could post strong financial gains by moving to Comprehensive BYOD.

Comprehensive BYOD sparks employee-led innovation in developed countries, and reduces productivity losses in emerging markets. By implementing Comprehensive BYOD, companies can improve the productivity benefits that BYOD brings. In developed markets (the United States, United Kingdom, and Germany), we found that the greatest productivity gains when moving from Basic to Comprehensive BYOD occur by enabling mobile users to innovate how they work. In emerging markets (India, China, and Brazil), the biggest gains come from reducing mobile users' drags on productivity, such as distractions and downtime, and increasing their availability (ability to work outside standard office hours and locations).

In the six countries we analyzed, the number of BYOD devices will soar 105 percent between 2013 and 2016, reaching nearly 405 million.

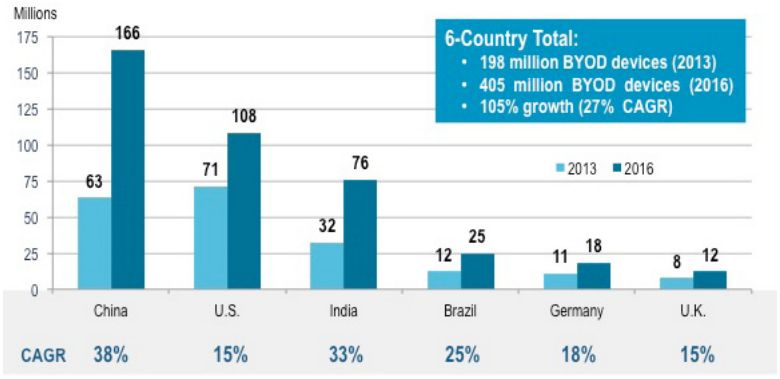
Comprehensive BYOD pays for itself. In addition to the potential productivity gains, Comprehensive BYOD pays for itself in hard cost savings. The major cost savings occur in three areas:

- **Hardware costs:** Employees purchase devices previously bought by the company.
- **Support costs:** Companies can actually reduce support costs with BYOD, as Cisco did, by implementing community support, wikis, forums, and other streamlined support options.
- **Telecom costs:** By migrating some mobile users from corporate data plans to self-funded plans, companies can cut telecom costs. Companies have reported being able to migrate about 20 percent of corporate users to self-funded plans in this way.

BYOD Is a Growing Phenomenon, Offering Big Productivity Gains

Cisco IBSG's latest survey and analysis confirm the conclusions of our earlier global study: BYOD is a huge and growing phenomenon. In the six countries we analyzed, the number of BYOD devices will soar 105 percent between 2013 and 2016, reaching nearly 405 million, a compound annual growth rate (CAGR) of 27 percent. China will top all countries by 2016, with 166 million BYOD devices, followed by the United States and India at 108 million and 76 million, respectively. Companies in Brazil, Germany, and the United Kingdom will also experience a significant expansion of employee-owned devices in the next three years (see Figure 1).

Figure 1. Estimated BYOD Devices in Workplaces, by Country.

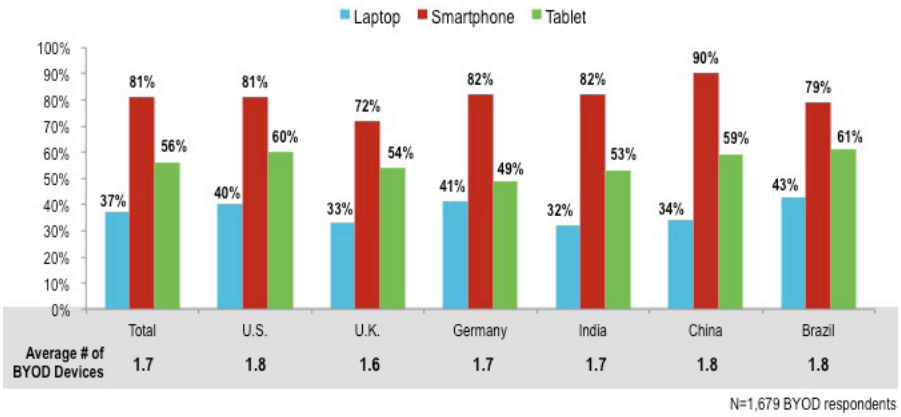


Sources: EIU, Strategy Analytics, Cisco IBSG, 2013

Interestingly, the need for greater mobility is not a major factor in why employees choose to use their own devices for work.

Mobile users who use their own devices for work own an average of 1.7 BYOD devices. The smartphone is the overwhelming device of choice for BYOD-ers, but tablets are rapidly gaining ground. Fifty-six percent of BYOD users across all countries use their own tablet for work, showing how vital these devices have become (see Figure 2). The percentage of mobile users who use their own laptops for work was also high (37 percent) and well-established across all countries.

Figure 2. Percentage of BYOD-ers Who Bring Laptops, Smartphones, and Tablets to Work.



Source: Cisco IBSG, 2013

So why do BYOD-ers choose to use their own devices for work? There are three main reasons, which are consistent across countries and devices: productivity, flexibility, and initiative.

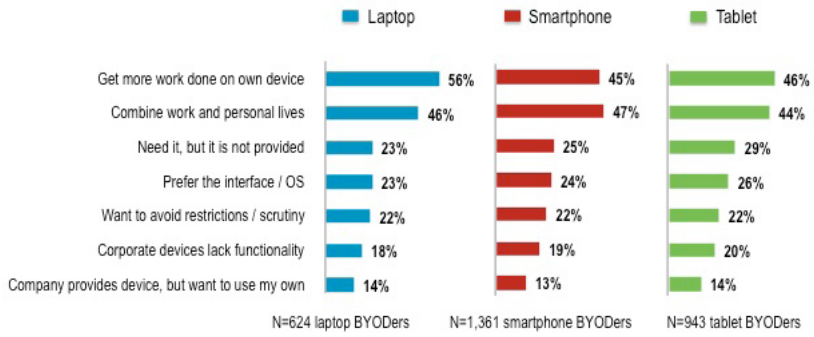
Interestingly, the need for greater mobility is not a major factor in why employees choose to use their own devices for work. Mobile users who BYOD and those who use only corporate devices ("corporate users") spend the same percentage of their work day at a desk or fixed location — 70 percent.

So why do BYOD-ers choose to use their own devices for work? There are three main reasons, which are consistent across countries and devices: productivity, flexibility, and initiative.

First, BYOD-ers accomplish more by using their own devices (see Figure 3). This was the top reason by far that BYOD-ers use their own laptops for work, and likely accounts for the surprisingly high rate of BYOD laptops. The laptop is the main work productivity device for most mobile users, at least when they are working from a desk or fixed location.[11] As we shall see, "BYO-laptop" should be an important strategy for companies looking to expand the benefits of BYOD. It is important to note that productivity improvements come from the device and the software, mobile apps, and cloud services used on these devices. BYOD-ers highly value the ability to use the applications and services of their choice, rather than being limited to what their companies offer.[12]

BYOD-ers also value the flexibility to move seamlessly between their work and personal lives throughout the day – in fact, it is nearly as important as their increased productivity.

Figure 3. Top Reasons BYOD-ers Use Their Own Devices for Work.



Source: Cisco IBSG 2013

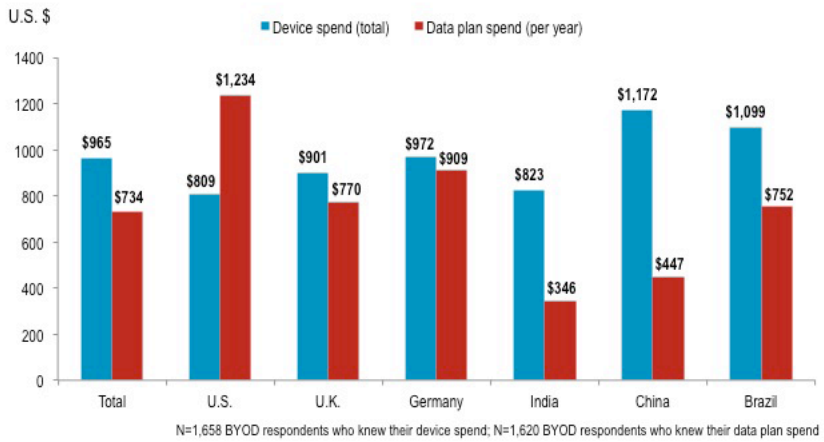
BYOD-ers also value the flexibility to move seamlessly between their work and personal lives[13] throughout the day – in fact, it is nearly as important as their increased productivity. This flexibility includes the freedom to use applications and services that are not work-related (such as social networking sites) during work hours, and to attend to personal matters while "on the clock." As we shall see below, for most BYOD-ers, the ability to mix work and personal activities leads to greater net productivity. Because they perform both personal and work tasks on the same device, they can keep in touch with friends and family, do their banking, arrange schedules, and then quickly get back to work.

Finally, depending on the device, between 23 and 29 percent of BYOD-ers bring their own devices because they feel they need them for their work, even though their companies do not provide devices to employees. These employees are taking the initiative to increase their productivity – and spending their own money to do so. BYOD users spend an average of $965 (U.S. dollars) purchasing their own devices for work. They spend an additional $734 per year on mobile voice and data plans for their BYOD devices. The cost of these plans varies widely across countries, from more than $1,200 in the United States to under $400 in India (see Figure 4).

What does not change from country to country, however, is that BYOD-ers are not concerned about their personal expenditures for devices and data plans used for work. When we asked BYOD-ers which measures would increase their productivity on work devices, only about 20 percent answered that subsidizing the costs of their device or mobile plan would have an effect. This shows that BYOD users are willing to pay for the devices and plans they need to be effective at work.

The United States leads by far in terms of current productivity gains per BYOD user, with 81 minutes per week, followed by the United Kingdom at 51 minutes.

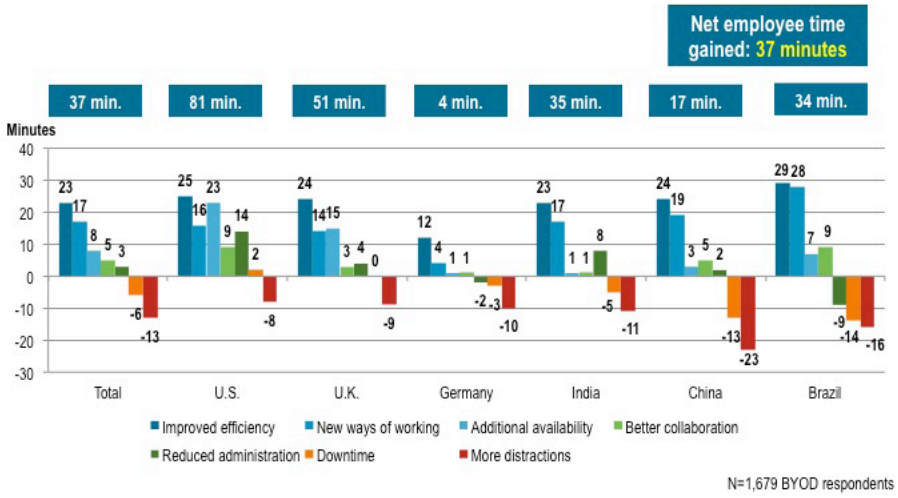
Figure 4. Average Out-of-Pocket Spending per BYOD User on Devices; Yearly Spending on Data Plans.



Source: Cisco IBSG, 2013

The ability to defray the costs of provisioning devices through BYOD is attractive for companies and, as we will see below, can help BYOD pay for itself. But a much larger, more strategic benefit of BYOD is increased employee productivity. BYOD-ers save an average of 37 minutes per week with BYOD as it is currently implemented in their companies (see Figure 5). The United States leads by far in terms of current productivity gains per BYOD user, with 81 minutes per week, followed by the United Kingdom at 51 minutes. In both of these countries, BYOD-ers posted impressive gains by working more efficiently and being more available to their colleagues and managers.

Figure 5. Basic BYOD: Sources of Productivity Gains and Losses, by Country.

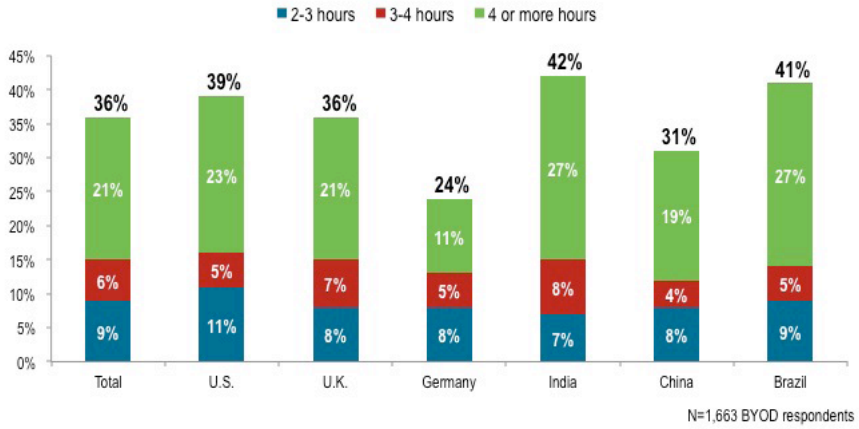


Source: Cisco IBSG, 2013

Perhaps the most significant productivity findings have to do with employees using their own mobile devices, software, apps, and cloud services to find new ways of working.

A significant share of BYOD users – 36 percent overall – are "hyperproductive," saving at least two hours per week by using their own devices for work. Twenty-one percent save at least four hours per week. These highly productive employees[14] can be found in every country in our study, but Germany and China lagged behind the leaders (see Figure 6).

Figure 6. Percentage of BYOD-ers Who Have Saved Two or More Hours per Week Using BYOD Devices.



Source: Cisco IBSG, 2013

As companies develop more Comprehensive BYOD capabilities, the potential for bottom-up innovation will increase.

Perhaps the most significant productivity findings have to do with employees using their own mobile devices, software, apps, and cloud services to find new ways of working. An astounding 53 percent of BYOD workers have increased their productivity through employee-led innovation,[15] and 38 percent are saving 30 minutes per week or more. With the exception of Germany, BYOD-ers in all countries boast impressive gains in this area. BYOD can help companies unlock a potent source of value as knowledge workers use their own devices and tools to change the way they work. This transformation can extend beyond merely doing their current jobs faster. With inexpensive, sophisticated devices, ubiquitous high-speed access, innovative (and often free) cloud services, and enterprise-class mobile apps, knowledge workers have the tools for constant innovation readily at hand. As companies develop more comprehensive BYOD capabilities, the potential for bottom-up innovation will increase.

The limitations of Basic BYOD are clearly blunting productivity gains in several countries, however. In Germany, BYOD-ers report negligible overall productivity gains, and there is a lower percentage of "hyperproductive" BYOD-ers than in any other country. Clearly, the current implementation of BYOD is not empowering German employees to work more effectively. In China and Brazil in particular, impressive increases in efficiency and new ways of working are offset by the time BYOD-ers lose to troubleshooting their devices, and by distractions caused by personal activities such as social networking. And with the exception of the United States and the United Kingdom, BYOD-ers are not improving their efficiency through greater availability.

BYOD puts companies in an enviable position: employees are willing to pay for their own devices, which enable them to become more productive and innovative in their job roles.

Overall, BYOD is a positive development for companies around the world, justifying the excitement expressed by IT decision makers in our original study.[16]

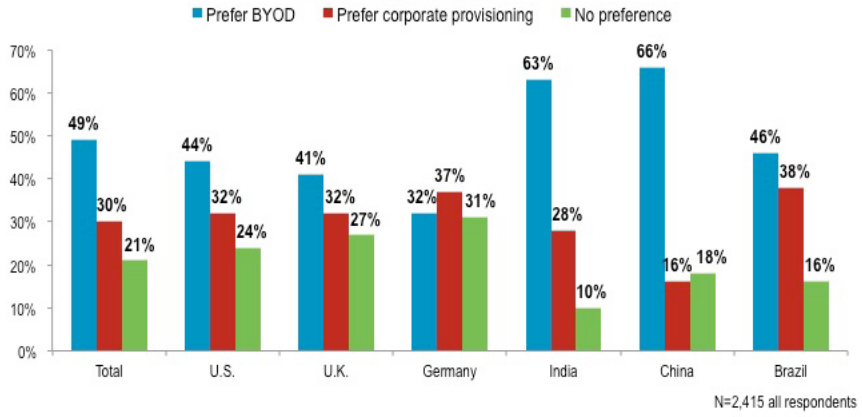
BYOD Is the Right Policy for Most – but Not All – Mobile Users

BYOD puts companies in an enviable position: employees are willing to pay for their own devices, which enable them to become more productive and innovative in their job roles. This does not mean, however, that companies should necessarily *require* mobile users to bring their own devices.

Across all countries, 30 percent of mobile users said they would rather use corporate-provisioned devices (see Figure 7), ranging from 37 percent of Germans surveyed to only 16 percent of those in China. Moreover, their preference for using company-provisioned devices is strong, as is the desire among BYOD-ers to use their own devices.

When asked how much of a "signing bonus" would be required to persuade respondents to take a competing offer from a company that disallows their preferred device provisioning, the average amount was just over $2,200.[17] Most interesting, while there was some country-level variation, on average there was little difference in the desired bonus amount between those who want to bring their own device ($2,086) and those who do not ($2,419).

Figure 7. Device Provisioning Preference, by Country.



Source: Cisco IBSG, 2013

Companies should identify corporate users who feel they would benefit from BYOD. Thirty-six percent of corporate users say they would rather BYOD. The top reason cited by corporate users for why they do not BYOD is that the company requires them to use corporate devices.

By enabling BYOD for those who want it, and providing company-owned options for those who do not, companies can help BYOD workers increase their productivity, while allowing others to work the way they are most comfortable.

Companies should also determine which employees who currently BYOD would either prefer to use a corporate device or are not good BYOD candidates, regardless of their preference. One-quarter of current BYOD-ers would rather have a company-issued device. Moreover, 15 percent of BYOD-ers are very unproductive using their own devices for work. These "problem BYOD-ers"[18] average more than four hours in lost time per week due to using their own devices for work. In India, China, and Brazil, about 20 percent of all BYOD-ers are problem users, twice the rate as in the United States, United Kingdom, and Germany. Because they lose so much time using their own devices for work, problem BYOD-ers in these countries have a negative impact on the overall productivity of BYOD.

Twenty-nine percent of problem BYOD-ers would prefer to be provisioned with a corporate device and the accompanying IT support, and companies would be well-served to give them their first choice. However, for these and other problem BYOD-ers, it may be that with the right level of support, training, and access to corporate resources, they could become more productive, innovative employees. Comprehensive BYOD policies and capabilities can mitigate distractions and give employees the kind of BYOD experience they might expect from a corporate device.[19]

The message is clear: Until companies are able to establish strategic and comprehensive BYOD policies and capabilities, BYOD must be an option, not a mandate. By enabling BYOD for those who want it, and providing company-owned options for those who do not, companies can help BYOD workers increase their productivity, while allowing others to work the way they are most comfortable.

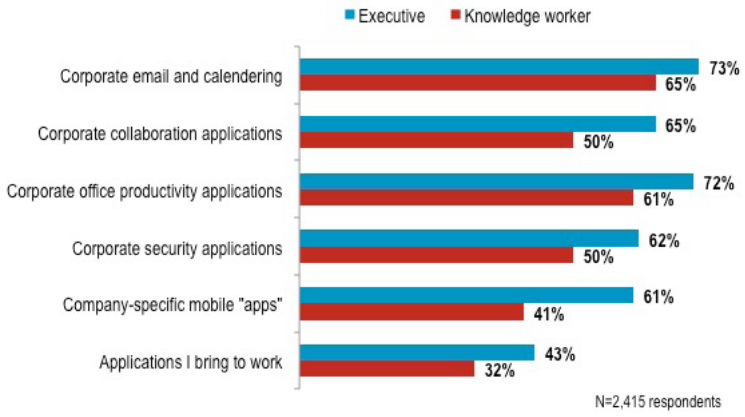
Ad-Hoc Approach Limits BYOD Benefits

For those who choose to bring their own device (49 percent prefer this option), companies must have policies and capabilities that can maximize the value of BYOD, while minimizing its costs and complexity.

Unfortunately, our study shows that most companies have been reactive, rather than strategic, in implementing BYOD. Many have developed ad-hoc access to corporate networks and applications, often in response to demands from executives. The good news is that, according to our global study of IT decision makers, 89 percent of companies enable BYOD to some extent, with 71 percent providing at least some IT support for BYOD devices.[20] The bad news is that they have not been systematic in determining which BYOD capabilities to provide – and which employees to include – to optimize the reach and impact of BYOD. For example, since executives have been the driving force for BYOD in many companies, they have access to a much broader range of applications than their direct reports (see Figure 8).

If BYOD is viewed strategically — as a source of opportunity — by a company, significant performance gains and even bottom-line margin gains are possible, dispelling the myth that good BYOD policy is necessarily more expensive than traditional corporate provisioning.

Figure 8. Applications Permitted on Employee-Owned Devices.



Source: Cisco IBSG 2013

The lesser BYOD coverage offered to knowledge workers negatively impacts productivity. While BYOD may have started as an executive-led trend, knowledge workers followed quickly, leaving companies scrambling to keep up.

The Journey Toward "Comprehensive BYOD"

If BYOD is viewed strategically — as a source of opportunity — by a company, significant performance improvements and even bottom-line margin gains are possible, dispelling the myth that good BYOD policy is necessarily more expensive than traditional corporate provisioning. In order to measure the effectiveness and maturity level of current BYOD plans, and to place a value on a hypothetical ideal BYOD "ecosystem," Cisco IBSG developed a concept that we call "Comprehensive BYOD," which is defined by the following capabilities:

- Ability to monitor and remotely "wipe" corporate data
- Automatic application and enforcement of corporate access and use policies, based on company-defined criteria
- Dual persona and device configuration
- Ability to move among networks seamlessly and securely
- Ability for users to log in using multiple devices simultaneously
- Corporate collaboration tools that work on all end-user device types and brands
- Simple and user-friendly authentication for all devices
- Secure access to the corporate network through wired, Wi-Fi, remote, and mobile means

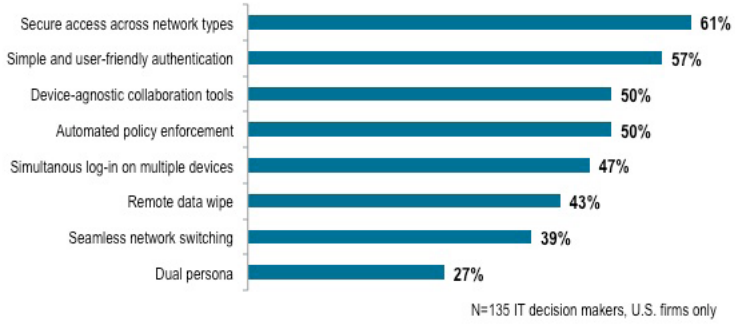
Even advanced companies have not implemented the Comprehensive BYOD concept in its entirety, showing that there is room for improvement, even among the best companies.

The vast majority of companies in our study, 74 percent, do not have capabilities that even approach Comprehensive BYOD. Generally, even advanced companies have not implemented the Comprehensive BYOD concept in its entirety, showing that there is room for improvement, even among the leading firms.

To understand the expected cost implications of Comprehensive BYOD, we asked a panel of IT decision makers how close they were to supporting each of these capabilities, and the estimated incremental cost if the entire package were deployed across their workforce. We also asked mobile users their opinion of the Comprehensive BYOD concept to understand how it would affect their productivity.[21]

We found that some BYOD capabilities are typically deployed first, while others tend to come later in a firm's BYOD evolution. Secure access across network types and simple, user-friendly authentication have the highest rates of adoption overall, indicating that they are considered essential by all companies – even those that have almost no other BYOD capabilities (see Figure 9). Dual persona and seamless network switching are "higher-order" capabilities, with the lowest levels of implementation overall.

Figure 9. While Each Company Deploys BYOD Capabilities Differently, Some Capabilities Rise to the Top (U.S. Example).

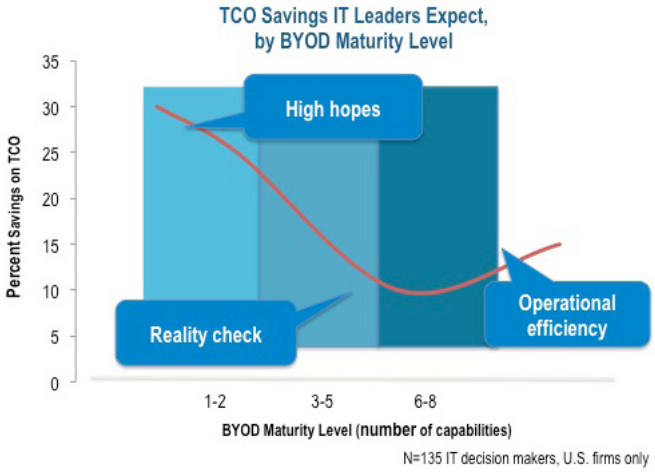


Source: Cisco IBSG, 2013

When it comes to expected cost savings, the BYOD journey can feel like a roller-coaster ride (see Figure 10). Companies that have just started with BYOD, and have implemented only one or two capabilities, are perhaps overly optimistic, expecting cost savings on the order of 20 to 30 percent (the "high hopes" phase). Firms that are further along in their BYOD programs, with three to five capabilities, have obviously wrestled with a fuller set of issues and tend to be more pessimistic about the impact on total cost of ownership (TCO), dropping expectations to about 10 percent (the "reality check" phase). As firms establish more systematic capabilities, automation, and policies, their expectations level off at about 15 percent (the "operational efficiency" phase).

While Basic BYOD can get a company started, a more robust, strategic approach to implementation delivers much greater total value.

Figure 10. Companies with Advanced BYOD Capabilities Expect Significant Savings.



Source: Cisco IBSG 2013

Respondent data demonstrates that the cost benefits of BYOD are real, but that reaching a "critical mass" of BYOD capabilities is required to create sustained long-term value. While Basic BYOD can get a company started, a more robust, strategic approach to implementation delivers much greater total value. Having a vision to guide management through the tough intermediate stage is critical.

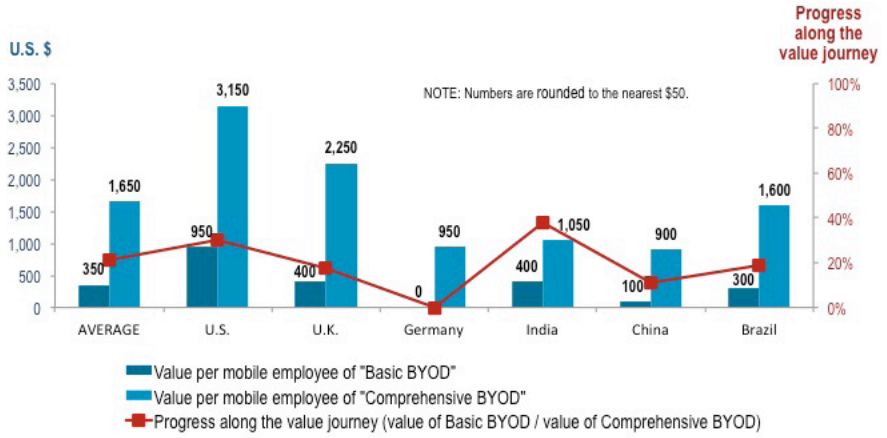
Cisco IBSG wanted to go beyond the survey data on basic implementation and costs, however, to understand what it would take for a "typical" company — which we define as being about halfway along the BYOD implementation pathway — to implement BYOD more fully. Specifically, we wondered how large an investment would be required, in which areas, and what the expected return would be on the top line in terms of employee productivity and innovation. To investigate these questions, we created a financial model, drawing from our survey data, publicly available statistics, and Cisco's own experience (see the Appendix, page 21, for details on the financial model). The section below details our analysis of the predicted costs and value to a typical company moving from Basic to Comprehensive BYOD.

Benefits Far Outweigh Costs of Comprehensive BYOD

Cisco IBSG's analysis shows that on average, a firm with a typical BYOD implementation has completed only 21 percent of the known "value journey," as shown in Figure 11. (Again, a "typical" company has implemented about four of the eight capabilities that make up Comprehensive BYOD.) For the typical company, getting to this Basic state will have generated average net annual benefits of about $350 per mobile employee (this is the average across all mobile employees, both corporate-provisioned and BYOD).

There is still $1,300 on the table that can be gained by moving to a Comprehensive BYOD policy.

Figure 11. Annual Value per Mobile Employee Derived from Basic and Comprehensive BYOD Programs.



Source: Cisco IBSG, 2013

While those benefits may seem attractive already, a Comprehensive BYOD approach would more than quadruple them, yielding net annual gains of $1,650 per mobile employee.[22] In other words, there is still $1,300 on the table (annually per mobile user) that can be gained by moving to a Comprehensive BYOD policy. Companies that think they are already enabling BYOD are actually just getting underway.

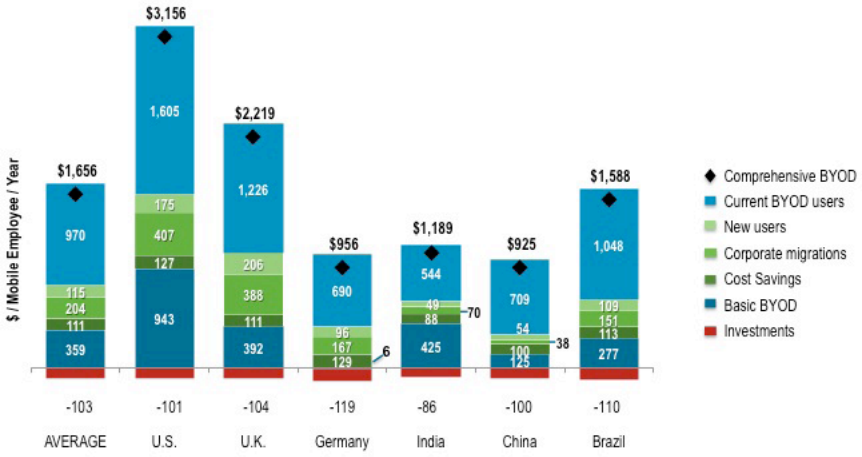
The starting point for a typical company, and the potential value companies can gain through Comprehensive BYOD, vary widely from one country to another. The typical U.S. company is gaining the most value from Basic BYOD, at $950 per mobile employee per year, but can realize an impressive $3,150 by implementing Comprehensive BYOD. On the other end of the spectrum, typical German and Chinese companies are getting little to no value from BYOD per mobile employee now, but can gain $900 or more per mobile employee annually with Comprehensive BYOD.

Where does this value come from? While there are some cost savings, these are dwarfed by the ability of Comprehensive BYOD to raise employee productivity, enabling mobile employees to contribute more value.

While most of the value will come from helping current BYOD-ers become even more productive, other employee types will benefit as well (see Figure 12). Removing adoption barriers will also encourage usage for some corporate users,[23] accounting for the second-most-significant impact.

By "doing BYOD right," companies can succeed in moving corporate users to BYOD and help them become happier and more productive.

Figure 12. Impact of Moving from Basic to Comprehensive BYOD.



NOTE: In the text and in Figure 11, numbers for Basic and Comprehensive BYOD value were rounded to the nearest $50. This chart shows exact figures.

Source: Cisco IBSG, 2013

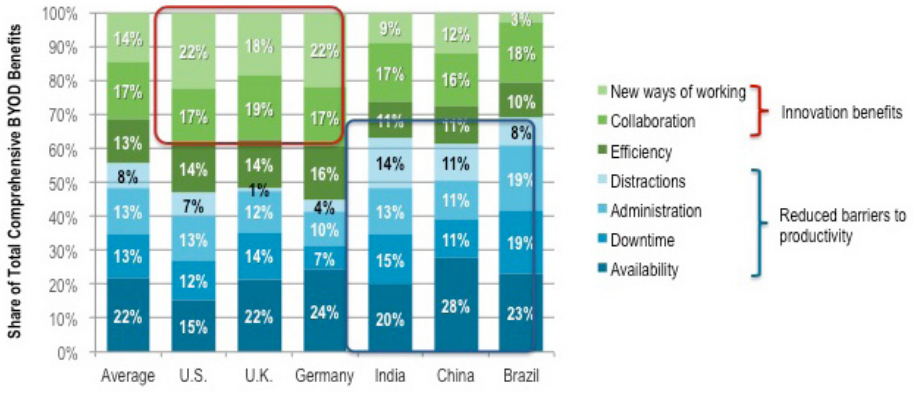
Compared with Basic BYOD, Comprehensive BYOD provides significantly improved access to corporate networks and applications, as well as more options for IT support. When we asked corporate users why they prefer to use company devices, better access to the company network (51 percent), superior IT support (50 percent), and improved access to company applications (49 percent) were among the top reasons. By "doing BYOD right," companies can succeed in moving corporate users to BYOD and help them become happier and more productive.

Finally, companies can derive additional value from employees who use their own devices to take advantage of mobile working for the first time.

When we examine the ways in which Comprehensive BYOD makes mobile users more productive than they are with Basic BYOD, three main findings emerge (see Figure 13). In developed markets (the United States, United Kingdom, and Germany), one-fifth of all productivity gained by moving from Basic to Comprehensive BYOD comes from enabling new ways of working – employee-led innovation of job roles. In our earlier discussion of productivity gains, we noted the vital importance that such innovation could have as a source of competitive advantage. Comprehensive BYOD amplifies the gains in this area, giving companies in these countries added incentive to improve their capabilities and policies beyond the basics.

An impressive 17 percent of the gains come from improved collaboration, as mobile users feel they would be better able to use collaboration tools to work with their managers and colleagues.

Figure 13. Productivity Value Realized as Companies Move from Basic to Comprehensive BYOD.



Source: Cisco IBSG, 2013

We can also see that in India, China, and Brazil, the biggest gains come through reducing barriers to productivity, such as personal distractions and downtime, and by improving employee availability. As a single source of productivity gains, increased availability accounts for at least 20 percent of the improvement in these countries, as mobile users can get more done away from their place of work, and after business hours. As it is currently implemented, BYOD in China, India, and Brazil fails to provide the corporate network access, ability to use collaboration solutions, and IT support mobile users need to be productive.[24] We found that these countries have a disproportionate percentage of "problem BYOD-ers" who are less productive using their own devices. Moving from Basic to Comprehensive BYOD reduced lost time by 67 percent among this group.

Finally, the move from Basic to Comprehensive BYOD improves the ability to collaborate across all countries. An impressive 17 percent of the gains come from improved collaboration, as mobile users feel they would be better able to use collaboration tools to work with their managers and colleagues. Along with new ways of working, the ability for employees to collaborate with colleagues and experts – anytime, anywhere – increases a company's capacity for innovation.[25]

As firms upgrade from Basic BYOD to a Comprehensive approach, knowledge workers will account for 88 percent of the total value created.

Greatest Value of BYOD Will Come from Knowledge Workers

BYOD may have started with executives demanding use of their personal tablets in the boardroom, but it will not end there. As BYOD matures, the greatest value will be derived from knowledge-worker enablement. As firms upgrade from Basic BYOD to a Comprehensive approach, knowledge workers will account for 88 percent of the total value created. This is because the initial wave of BYOD has already catered to the needs of executives, leaving somewhat less upside available.

When firms move from Basic to Comprehensive BYOD, knowledge workers stand to gain 90 minutes of productivity benefits per week, versus only 41 minutes for executives. This includes employee-led innovation: on average, knowledge workers increase in this area from 15 to 30 minutes per week. The implication here is that business leaders should work with IT to enable BYOD access and functionalities as the rule – not as the exception – across the employee base.

Clearly, Comprehensive BYOD can help mobile workers become more innovative and productive. By building on their network investments and early efforts to enable BYOD, companies can unlock a latent source of value. In a competitive environment where any advantage over the competition is precious, corporate and IT leaders should view the delivery of Comprehensive BYOD as a strategic, rather than tactical, initiative.

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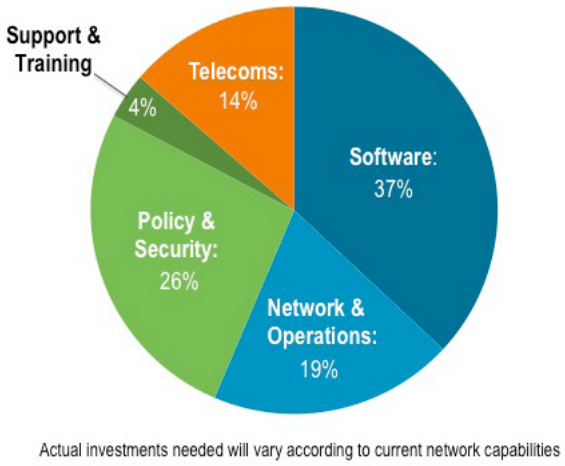
Getting to Comprehensive BYOD Will Require Investment

Just about every company, no matter where it is along the spectrum of BYOD capabilities, will need to make additional investments to enable a comprehensive, strategic BYOD program (see Figure 14). A typical company will require relatively low investments to facilitate Comprehensive BYOD. The main cost areas include software (primarily collaboration tools), network and operations, access policy and security, and wide-area network telecommunications costs. These costs are remarkably consistent across countries. The specific investments required will depend on the company's BYOD vision and the technology it already has. However, an architectural approach to BYOD – developing reusable building blocks to support mobile computing across the entire network – will reduce costs in the long run, making BYOD worth the investment, at whatever maturity level a company begins its journey.

In general, the introduction of BYOD provides an opportunity to move from traditional help-desk approaches to more reliance on self-service and community support through the use of wikis, discussion forums, and the like.

Figure 14. Typical Cost Distribution of Upgrade from Basic to Comprehensive BYOD.



Source: Cisco IBSG, 2013

It is worth noting that we expect support costs to fall, with savings from reduced IT help-desk requirements being significantly greater than the cost of implementing alternative community-support models. In general, the introduction of BYOD provides an opportunity to move from traditional help-desk approaches to more reliance on self-service and community support through the use of wikis, discussion forums, and the like. Strictly speaking, these techniques could be implemented without a change in BYOD approach. In practice, however, we observe that BYOD creates a unique opportunity to rethink mobile policy and support.

Hard Cost Savings

As we noted before, BYOD is really all about productivity gains. That is where the greatest benefits are to be found. However, we know that many companies want to ensure there are hard cost savings – apart from whatever productivity benefits there may be. The good news is that for our typical company, BYOD pays for itself simply based on hard cost savings (see Figure 15).

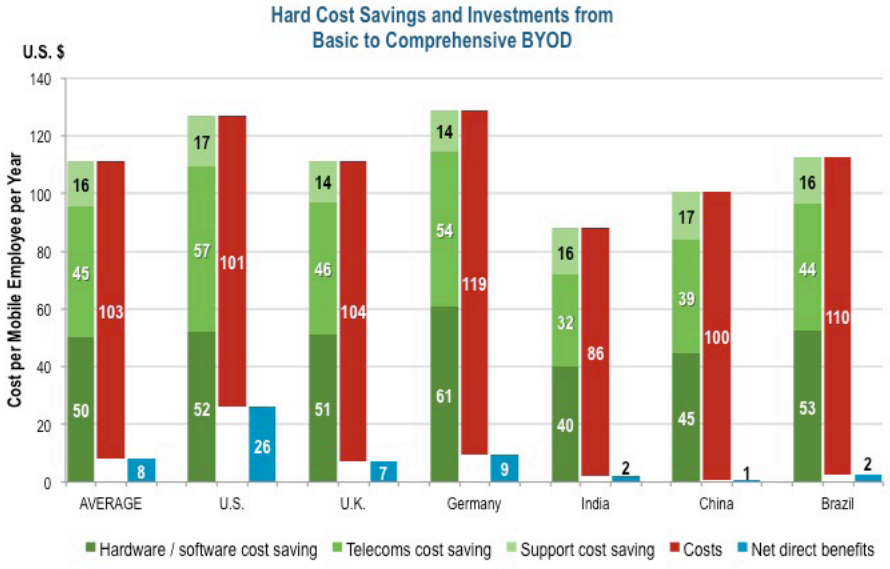
The major hard cost savings occur in three areas:

- **Hardware costs:** Employees purchase devices previously bought by the company.
- **Support costs:** Implementing Comprehensive BYOD provides a great opportunity to rethink support and to develop community support, wikis, forums, and other streamlined support options. Cisco is one company that has reduced support costs in this way.
- **Telecommunications costs:** Although we assume that the enterprise might lose some degree of purchasing power on telecom contracts, this is balanced by

BYOD is not just a tablet and smartphone phenomenon: "BYO-laptop" should also be a core feature of any Comprehensive BYOD strategy.

the ability to migrate a certain population of users from corporate data plans to self-funded plans. Some companies have reported being able to migrate about 20 percent of corporate users to self-funded plans in this way. The rationale for terminating corporate payment of the data plans is that those users might be able to do their jobs perfectly well with Wi-Fi access, for example, rather than full cellular data access.

Figure 15. The Move from Basic to Comprehensive BYOD Pays for Itself in Hard Cost Savings Alone.



Source: Cisco IBSG, 2013

The Importance of "BYO-Laptop"

Companies should consider the relative gains achieved on different device form factors, in addition to gains by employee type. Our analysis in this phase of the research found that BYOD is not just a tablet and smartphone phenomenon: "BYO-laptop" should also be a core feature of any Comprehensive BYOD strategy. When looking at the potential gains of Comprehensive BYOD by device type, Cisco IBSG estimates that laptops contribute more than half of the potential future gain in annual value per mobile employee (about $750 of the estimated $1,650). For most knowledge workers, the laptop remains the primary productivity tool, and the ability to use a preferred laptop, operating system, or set of applications will have a significant productivity benefit.

Once IT and business leaders see the strategic gains in employee productivity that BYOD offers, they should move from rationalizing it as a cost-saving method to seeing it as a trend with the potential to reinvent the nature of work itself.

Next Steps: How To Optimize BYOD Benefits

When corporate IT departments support and encourage employees to use the devices and tools that work best for them, companies can gain a significant competitive edge. To reach this state, however, IT needs to develop a Comprehensive BYOD strategy for secure, cost-effective implementation, based on policy-enforced, secure, and seamless connectivity; widespread access to collaboration tools; and streamlined operations.

Moreover, organizations need to rethink how technology adoption will work in the future. Rather than forcing users to adopt new technology through centralized programs, there is significant value in allowing employees to innovate, and in providing social tools that enable employees to "go viral" by sharing their successes with each other.

BYOD should not be a battle of wills between IT and employees. Once IT and business leaders see the strategic gains in employee productivity that BYOD offers, they should move from rationalizing it as a cost-saving method to seeing it as a trend with the potential to reinvent the nature of work itself. This makes BYOD a business issue meriting an executive sponsor from outside the IT organization.

To reap the full potential of BYOD, companies need to create a robust mobility policy, with employee choice and enablement at the center. Employees will innovate and collaborate best when they are given the freedom to work their way. In this model of decentralized control, information security becomes extremely important. Thus, an effective BYOD policy does not just mean employee choice; it must ensure that through virtualization, cloud applications, and other technologies, the company controls where and how its data is stored and accessed.

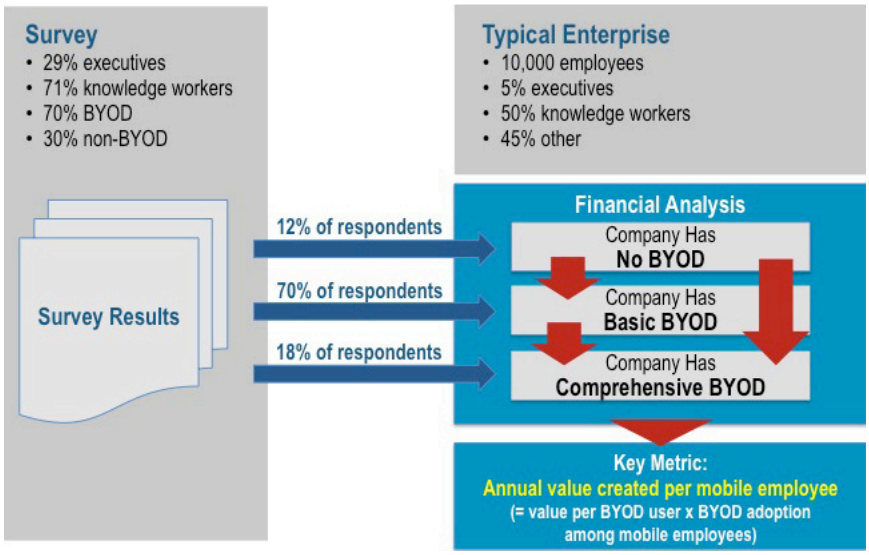
While top-line gains are overwhelmingly the big benefits of BYOD, all associated costs to the company can — and should — be controlled. The good news is that when BYOD is rolled out strategically, rather than as a series of stop-gap measures, the benefits surpass the costs of investing in a Comprehensive BYOD ecosystem. Indeed, this ability to generate hard cost savings is a key factor in favor of BYOD, as opposed to simply providing a "choose your own" corporate device policy. It is important, however, for companies to use the transition to BYOD as an opportunity to reimagine mobile support approaches and data plan entitlement policies to ensure effective use of resources.

If executed with the right degree of planning and support, BYOD will be a win-win for the company and employees.

Appendix: The Financial Model

The financial model we developed examines the value of three levels of BYOD adoption in a company: no BYOD implementation, Basic BYOD, and Comprehensive BYOD (see Figure 16).

Figure 16. Financial Analysis: Survey Informs Analysis of Gains as Firms Move Toward Better BYOD.



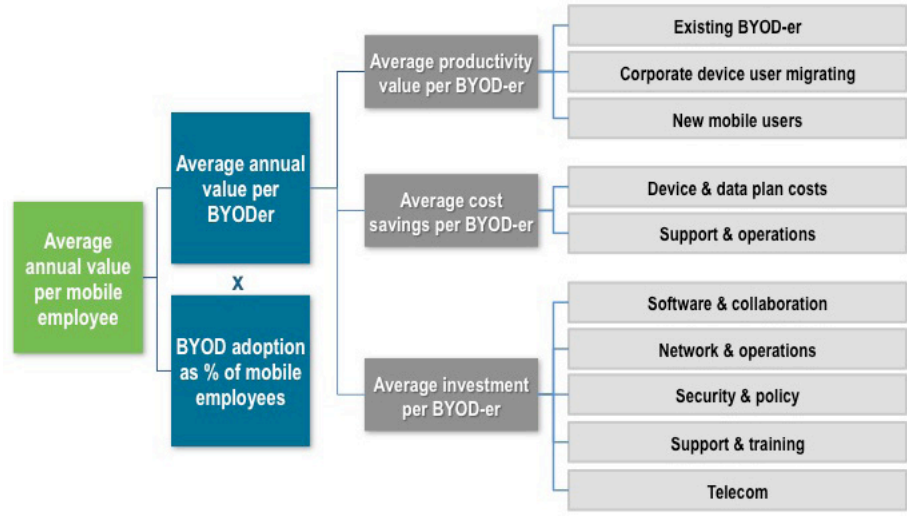
Source: Cisco IBSG, 2013

We incorporated the primary research results into the financial analysis by dividing the survey data according to the level of BYOD adoption, and feeding the resulting data into the corresponding section of the model. We also adjusted the survey data to account for the difference between the mix of executives and knowledge workers in our typical firm (5 percent executives, 50 percent knowledge workers, 45 percent other workers) and the combination provided by the survey (29 percent executives, 71 percent knowledge workers).

We assumed that our "typical" company has 10,000 employees over several sites, although the exact number of employees does not materially impact the model results because we present all results on a per-employee basis, and the impact of fixed costs on these per-employee results is low. The model results can therefore be usefully applied to smaller companies.

We present the results as an *annual value per mobile employee* (see Figure 17), which is the annual value per BYOD user multiplied by the BYOD adoption rate among mobile employees. This approach should allow companies to quickly multiply the results by the number of mobile employees in their organizations to get a broad estimate of the value at stake for their company.

Figure 17. Valuing BYOD: Comprehensive Financial Model.



Source: Cisco IBSG, 2013

Endnotes

1. See Cisco IBSG's recent study, "BYOD: A Global Perspective," September 2012, http://www.cisco.com/web/about/ac79/docs/re/BYOD_Horizons-Global.pdf
2. A recent iPass/MobileIron study reported that 68 percent of IT decision makers believe their mobility costs will rise in the next year, mostly due to trends driven by BYOD: the increase in mobile users, and the growing use of multiple devices by employees. Source: The iPass/MobileIron, Mobile Enterprise Report, 2013. In addition, a 2012 Aberdeen Research report concluded that a corporate-owned device costs 14 percent less to manage than an employee-owned device.
3. Both anecdotal evidence and data analysis suggest that BYOD was initially an executive-driven phenomenon. Executives who wanted to use their own laptops and tablets instructed IT leaders to "make it happen." See "Why IT Leaders Should Reconsider BYOD," *CIO* magazine, October 12, 2012. Cisco IBSG analysis shows that executives have a greater range of BYOD capabilities than knowledge workers, perhaps because BYOD was an executive-driven priority, rather than an IT-led strategy.

4. Cisco IBSG found that employees' desire to use the software applications and cloud services of their choice was a driving force behind BYOD. Fifty-two percent of IT global decision makers (and more than 65 percent in some countries) said that nonapproved applications (i.e., those not specifically approved and provisioned by IT) were more prevalent than two years ago. IT leaders also mentioned that the desire to avoid the usage restrictions of corporate-owned devices was a top BYOD motivator for employees. These findings have been corroborated by other studies. Osterman Research found that while 14 percent of employees were using cloud-based services such as Dropbox with corporate IT's permission, 44 percent were doing so without permission.
5. "Mobile users" were defined as white-collar roles that use one or more mobile devices (laptop, smartphone, or tablet) for work. Twenty-nine percent were executives (i.e., executives or senior management), and 71 percent were knowledge workers (i.e., midlevel managers, supervisors, professionals, technicians, sales, customer service, and administrative staff).
6. Respondents came from both midsize firms (500–999 employees) and enterprises (1,000 or more employees) in the United States, the United Kingdom, Germany, India, China, and Brazil. There were approximately 400 respondents per country. This data includes a survey of 322 U.S. mobile users in August 2012. An additional 81 U.S. respondents, and all respondents from other countries, were surveyed in February 2013. All other respondents were surveyed in February 2013.
7. The respondent breakdown by company size was 27 percent midsize (500 to 999 employees) and 73 percent enterprise (1,000+ employees).
8. This survey of U.S. IT decision makers, designed specifically to produce inputs for Cisco IBSG's financial model, was launched in August 2012. The IT decision makers in this survey had authority over their company's mobility issues.
9. Throughout this paper, we use the word "typical" to mean a firm with the median level of BYOD capabilities for both executives and knowledge workers.
10. Note that although the financial model considered a typical firm to have three classes of employees (executives, knowledge workers, and all other employees – namely, blue-collar workers), since the majority of business benefits accrue to executives and knowledge workers, we focus on these in this paper.
11. In a separate study of mobile device users, Cisco IBSG found that the laptop is by far the most valuable work productivity device for workers when they are at their desk or fixed location, and is used for many vital functions, such as writing and editing, when mobile employees are on the road.
12. The top overall reason for BYOD, "Can get more done with my own device and applications," combines the attributes "I can get more done with my own device (it's faster / better / newer)" and "I can get more done with the software / mobile apps."

13. The second overall reason for why mobile employees choose to BYOD, "Want to combine work and personal matters," includes the attributes "I want to access nonwork-related applications during work time" and "I want to perform personal activities during work hours."
14. Generally speaking, these highly productive employees work in enterprise-size companies, especially outside the United States (U.S., 59 percent; U.K., 84 percent; Germany, 83 percent; India, 83 percent; China, 91 percent; Brazil, 79 percent). In Europe, they are more likely to be manager-level (in the United Kingdom, executives represented 47 percent of hyperproductive BYOD-ers, and in Germany they represented 41 percent). In the United States and emerging countries, they are more likely to be knowledge workers (U.S., 67 percent; India, 86 percent; China, 83 percent; and Brazil, 68 percent).
15. This finding confirms what we said in "BYOD: A Global Perspective," in which the potential for employee-led innovation was first identified.
16. See Cisco IBSG's recent study, "BYOD: A Global Perspective," September 2012 (http://www.cisco.com/web/about/ac79/docs/re/BYOD_Horizons-Global.pdf). An average of 69 percent of IT decision makers said they felt BYOD was a positive development for their organizations. Interestingly, only 52 percent of German IT decision makers were positive about the trend. Their reluctance to embrace BYOD could be limiting the benefits they receive.
17. Change in first-year pay acceptable in order to work for a company that offers the desired provisioning style (be it BYOD or corporate).
18. We define "problem BYOD-ers" as those who lose at least 30 minutes per week due to downtime, plus 30 minutes due to distractions.
19. Problem BYOD-ers in India and Brazil say that better IT support would significantly improve their productivity, while those in China cite better access to the corporate network.
20. Cisco IBSG, "BYOD: A Global Perspective," September 2012, http://www.cisco.com/web/about/ac79/docs/re/BYOD_Horizons-Global.pdf
21. Base: knowledge workers. Question: "Imagine that your company instituted a policy that allowed you to use any mobile device of your choice, such as a laptop, e-reader, smartphone, etc., for work purposes. This would include: full access to the company network and applications in or out of the office; full integration with company collaboration tools (IM, email, video, directory…); encouragement and permission to use your devices to innovate how you accomplish your work (e.g., by downloading third-party apps); full IT support of the applications provided by the company; access to internal forums and wikis to share best practices and support tips; the same voice and data plan coverage as for company-owned devices."
22. See Appendix for details.

23. Developing a Comprehensive BYOD strategy is a good opportunity to evaluate which mobile users should qualify for corporate-sponsored mobile devices and data plans. As consumer mobile device ownership continues to rise, more employees than ever can be migrated from corporate to BYOD provisioning. While saving on device and data plan costs, the company could leverage economies of scale to offer the same level support for these users, making BYOD more attractive for them. Cisco IBSG estimates that up to 20 percent of employees can typically be migrated in this way.
24. In India, China, and Brazil, mobile users were more likely than their counterparts in the United States, United Kingdom, and Germany to say that an improved ability to access the corporate network, collaboration solutions, and IT support would increase their productivity. This was true of both BYOD-ers and corporate users, although BYOD-ers were more likely to cite connectivity issues than corporate users.
25. In another Cisco IBSG Horizons study, entitled "Decision-Driven Collaboration," we found that collaboration can help foster innovation through improved decision-making capabilities, particularly when it is accompanied by the right technologies and business processes. Employee-led innovation is one of the potential benefits of Decision-Driven Collaboration. (http://www.cisco.com/web/about/ac79/docs/re/DDC_IBSG-Horizons.pdf)

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Horizons is a multimodal research and analysis program designed to identify business transformation opportunities fueled by technology innovation. Horizons' multimodal approach focuses on three core areas: (1) primary research such as customer surveys, focus groups, and subject-matter-expert interviews; (2) in-depth secondary research from market leaders and influencers; and (3) the application of predictive analytics to garner insights about technology innovations and quantify their impacts.

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