BYOD: A Global Perspective
Harnessing Employee-Led Innovation

August 2012

China

Cisco IBSG
Horizons

- Companies are now in a post-PC world, where the network must accommodate new choices at every layer of the stack. These include traditional, mobile, and social applications; multiple operating systems; various server architectures; and mobile devices ranging from tablets to smartphones and other mobility tools.

- The Cisco Internet Business Solutions Group (IBSG) has conducted extensive research and analysis to uncover key insights about the various devices entering the network and how companies are dealing with them.

- In this study, we use the term "bring your own device" (BYOD). You will also hear the terms "consumerization" or "consumerization of IT." BYOD and consumerization both refer to the use of personal mobile devices connected directly or remotely to an enterprise network.

- The study was global in scope, covering nine countries across four continents. This presentation includes the global data, with an emphasis on China.

- The presentation is modular. Please use any of these slides in other presentations, or reorder them to fit your needs.

Cisco IBSG Horizons Program

- Ongoing program of research and analysis to examine key technology innovations that will impact our customers over the next 24 months

- Other areas of investigation include video, collaboration, cloud, and mobility

- Focus on customer behavior and economics: adoption patterns, use cases, drivers, inhibitors, perceived benefits, delivery models
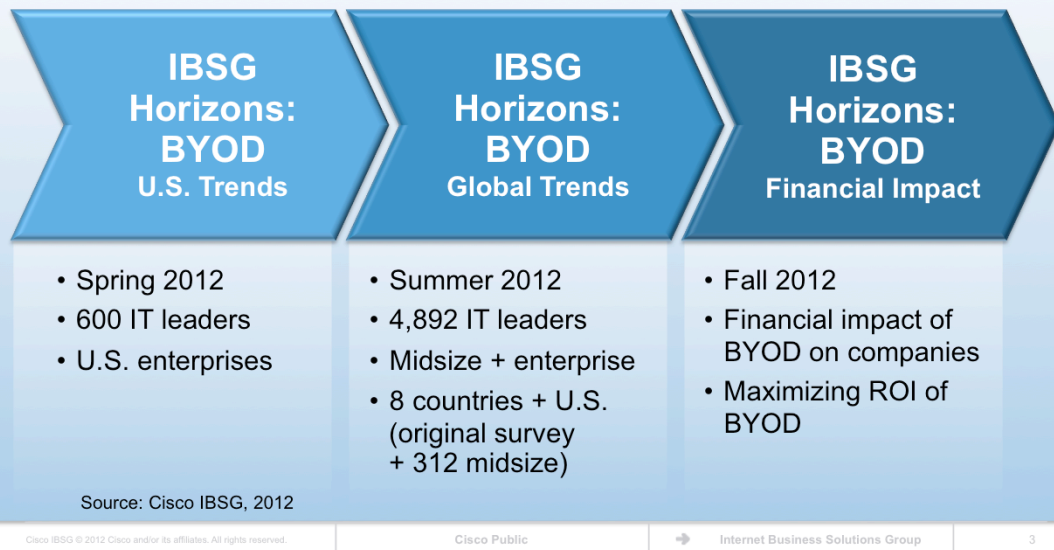
Source: Cisco IBSG, 2012

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- This study is part of the Cisco IBSG Horizons program, an ongoing research and analysis program designed to identify business transformation opportunities fueled by technology innovation.

- In addition to "bring your own device" (BYOD), we are looking at enterprise video, collaboration, and cloud computing, and examining trends, use cases, adoption patterns, lessons learned, and financial impacts.

- Focusing on the link between a customer's technology environment and business strategy, the Horizons program accelerates the success of Cisco customers by identifying transformative, network-enabled strategies and analyzing their economic underpinnings.

IBSG Horizons BYOD Study Waves:
Global State of BYOD and Its Implications

Current Wave

IBSG Horizons: BYOD **U.S. Trends**	IBSG Horizons: BYOD **Global Trends**	IBSG Horizons: BYOD **Financial Impact**
• Spring 2012 • 600 IT leaders • U.S. enterprises	• Summer 2012 • 4,892 IT leaders • Midsize + enterprise • 8 countries + U.S. (original survey + 312 midsize)	• Fall 2012 • Financial impact of BYOD on companies • Maximizing ROI of BYOD

Source: Cisco IBSG, 2012

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• This study is the second of three planned waves of Cisco IBSG Horizons BYOD research.

• In the spring of 2012, we surveyed 600 IT decision makers in U.S. enterprises to determine how prevalent BYOD is in enterprises, and how corporate IT departments are handling these new devices in terms of support, network access, and security. We also wanted to know whether corporate IT is supportive, indifferent, or hostile toward BYOD.

• When we saw the surprising degree to which U.S. enterprises had embraced BYOD, and their expectations for greater employee productivity and employee-led innovation, we wanted to know whether other countries, as well as smaller companies, were responding in the same way.

• So Cisco IBSG expanded its original study to include IT decision makers in both enterprises (1,000 or more employees) and midsize companies (500-999 employees) in eight countries across three regions. We also added over 300 IT decision makers from U.S. midsize firms to our initial 600 enterprise respondents. This is the current wave of research.

• In the fall of 2012, we will release a third wave of Horizons BYOD research that will focus on the financial impact of BYOD on companies, and opportunities for maximizing the benefits of BYOD.

IBSG Horizons BYOD Study:
Global Results

4,892
IT Leaders

18
Industries

- Expansion of original U.S. study from spring 2012
- Nine total countries
- 70% enterprise (1,000+ employees), 30% midsize (500-999 employees)
- 69% director or above (29% CXO), 31% manager
- Decision makers or influencers for mobile solutions

Source: Cisco IBSG, 2012

- Overall, we surveyed nearly 4,900 IT leaders who were decision makers or influencers of their companies' mobility solutions.
- Our respondents represented:
  - CIOs, senior vice presidents, vice presidents, directors, and managers
  - About 70 percent were director or higher
- These leaders came from 18 industries, including:
  - Banking and financial services, construction, education, public sector, healthcare, hospitality, information and media, insurance, manufacturing, oil and gas, life sciences, professional services, retail, technology, telecommunications, transportation, utilities, and wholesale distribution

IBSG Horizons BYOD Study: Regional Breakdown

Source: Cisco IBSG, 2012
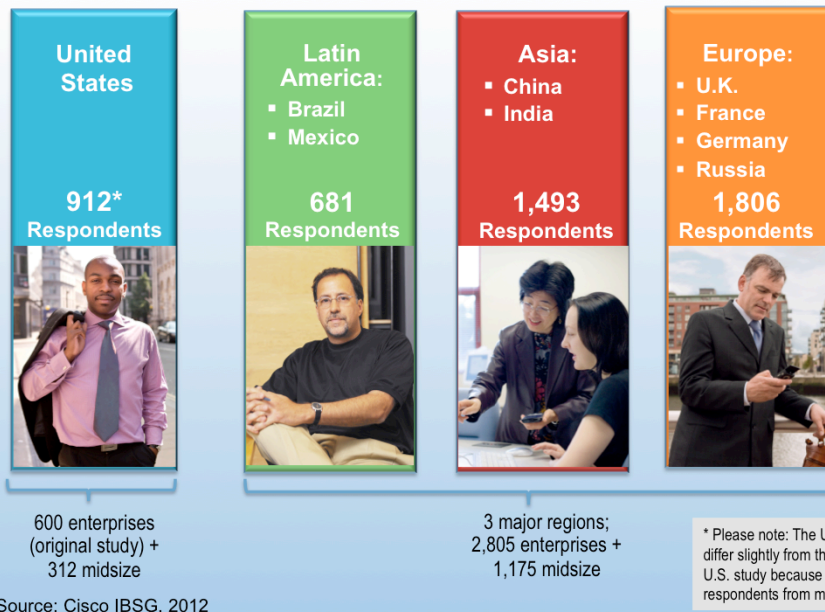
- The study's respondents came from the following regions and countries:
  - The United States
  - Latin America: Brazil and Mexico
  - Asia: China and India
  - Europe: the United Kingdom, France, Germany, and Russia
- This range of countries – and the number of and seniority of respondents – was selected to determine whether BYOD is a trend that crosses geographies and cultures. We also wanted to detect any meaningful regional differences.

IBSG Horizons BYOD Study: Top Research Findings

- BYOD is a global phenomenon: strong evidence of employees everywhere using own devices for work

- Transformative potential of BYOD is employee-driven innovation, empowering employees to decide **how**, **when**, and with **which tools** work is done

- Few differences between midsize companies and enterprises

- BYOD has regional flavor: Asia and Latin America see and encourage extensive BYOD, while Europe is more restrictive

- U.S. leads in BYOD and virtualization, with most comprehensive usage and policy

- BYOD increases mobile cost and complexity, and companies quickly develop robust mobile policy, cost-reduction strategies

- Global IT leaders are aware of desktop virtualization, but do not feel it applies to most knowledge workers, so implementation is low

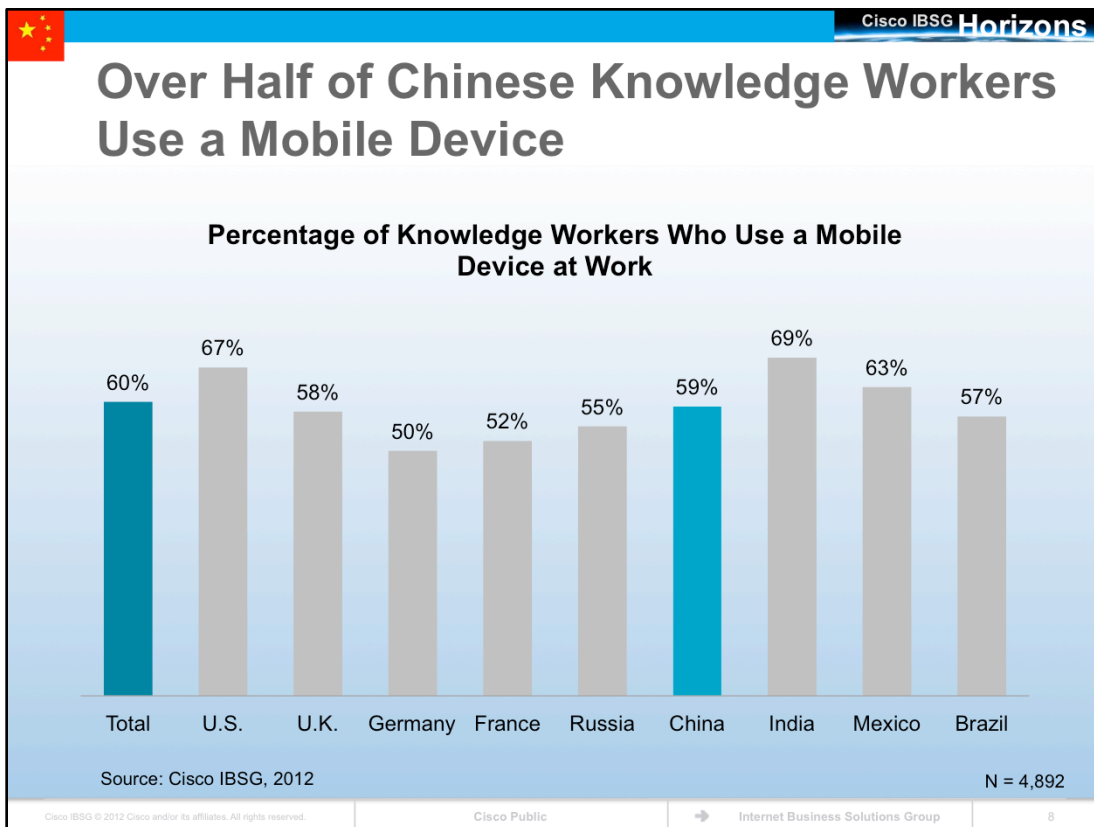Source: Cisco IBSG, 2012

- Our study confirmed that BYOD a global phenomenon: Consistent with the original U.S. study, we found strong evidence of employees using their own devices for work around the world.

- We found that BYOD is not simply about device usage, but freedom and innovation. BYOD empowers employees to innovate using the tools with which they are most comfortable—how and when they want to work.

- There are few differences between midsize companies and enterprises in the rate of adoption or perceived benefits of BYOD.

- Attitudes toward BYOD vary significantly by region: countries such as Brazil, China, India, and Mexico see—and encourage—extensive BYOD, while Europe is more cautious and restrictive.

- We also found that as BYOD becomes more commonplace, companies need to respond with more robust mobile policies and cost-containment strategies, or escalating complexity and costs could threaten some of the gains.

- BYOD also implies new challenges in security.

- We also wondered if desktop virtualization would keep pace with the growing BYOD trend. We found that global IT leaders are aware of desktop virtualization, but implementation is lagging, perhaps because respondents were much more uncertain about its applicability to knowledge workers than in the United States.

Around the World, Mobility Is Pervasive

60% Knowledge workers who use a mobile device for work

47% White-collar roles that require mobility

41% Employees who telecommute at least once per week
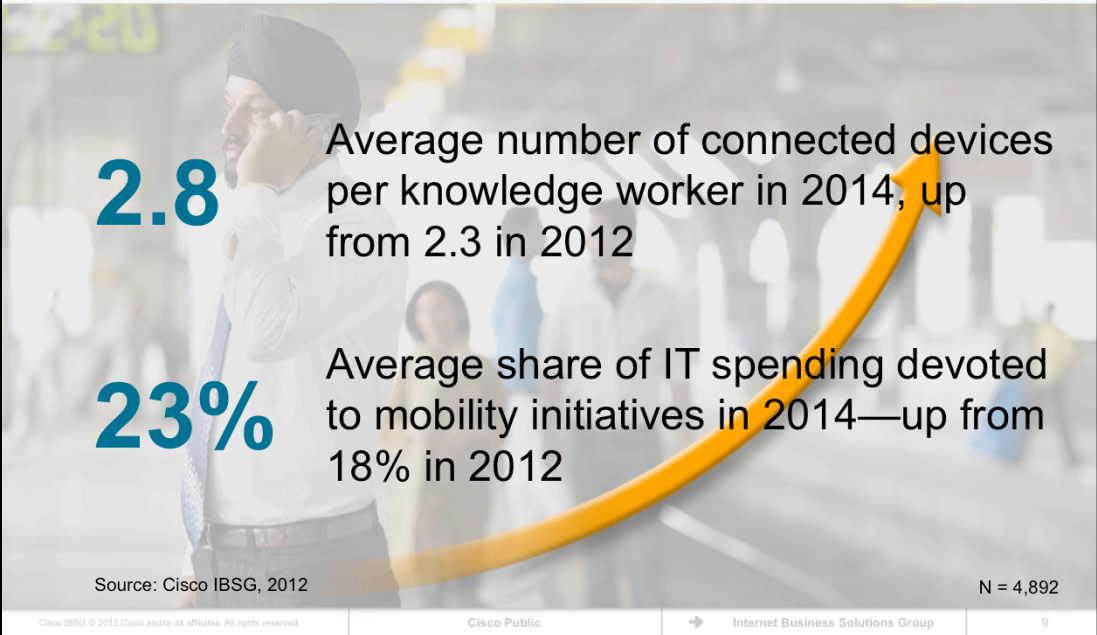
Source: Cisco IBSG, 2012

N = 4,892
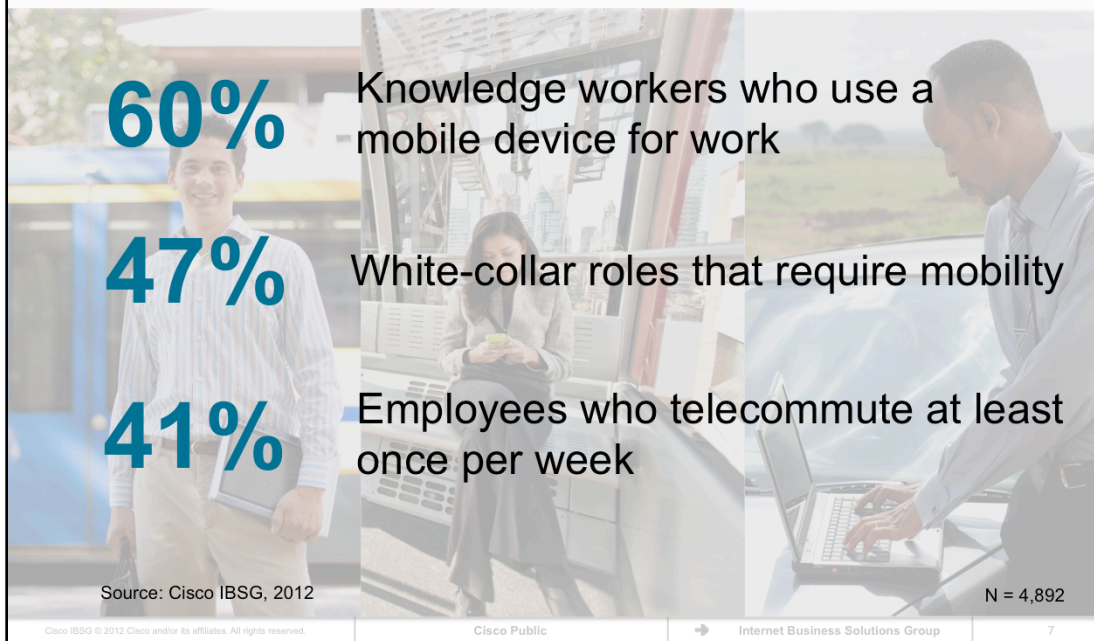
- Mobility means to work away from a traditional office or fixed location on a regular basis.

- Because mobility is pervasive in companies today, the reality is that mobile devices are becoming necessary tools for employees to get their work done.

- 60 percent of employees—by which we mean knowledge workers or white-collar workers—in the companies Cisco surveyed use mobile tools to accomplish their work. These include laptops, smartphones, tablets, and other wireless devices.

- Interestingly, only 47 percent are officially designated as "mobile workers." Companies are finding that their employees want to use mobile devices to perform their work, even if these devices are not strictly needed for their job roles. In other words, mobility is becoming vital for a wider range of jobs.

- In addition, more than 40 percent of all employees telecommute at least one day per week. The flexibility to move from home to office, and stay connected on the road, is provided by mobile devices.

Over Half of Chinese Knowledge Workers Use a Mobile Device

Percentage of Knowledge Workers Who Use a Mobile Device at Work

Source: Cisco IBSG, 2012

N = 4,892

- The United States and India lead other countries in the percentage of knowledge workers who use mobile devices, but China and Mexico are not far behind.

- On the other hand, in Germany and France, just over half of knowledge workers use mobile devices. We shall see throughout the research findings that European nations, while they see strong usage of mobility in general and BYOD in particular, are behind other countries in perceiving and embracing these trends.

Growth of Mobility Is Having a Global Impact on IT

2.8 Average number of connected devices per knowledge worker in 2014, up from 2.3 in 2012

23% Average share of IT spending devoted to mobility initiatives in 2014—up from 18% in 2012
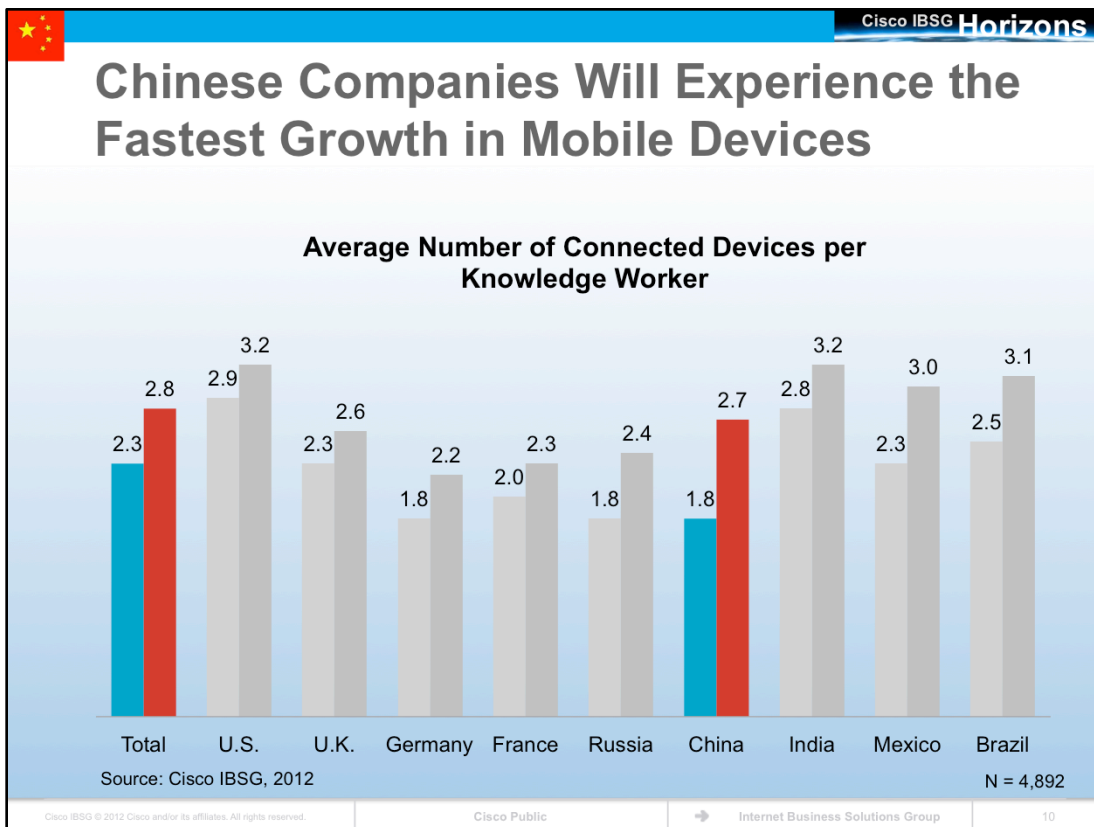
Source: Cisco IBSG, 2012

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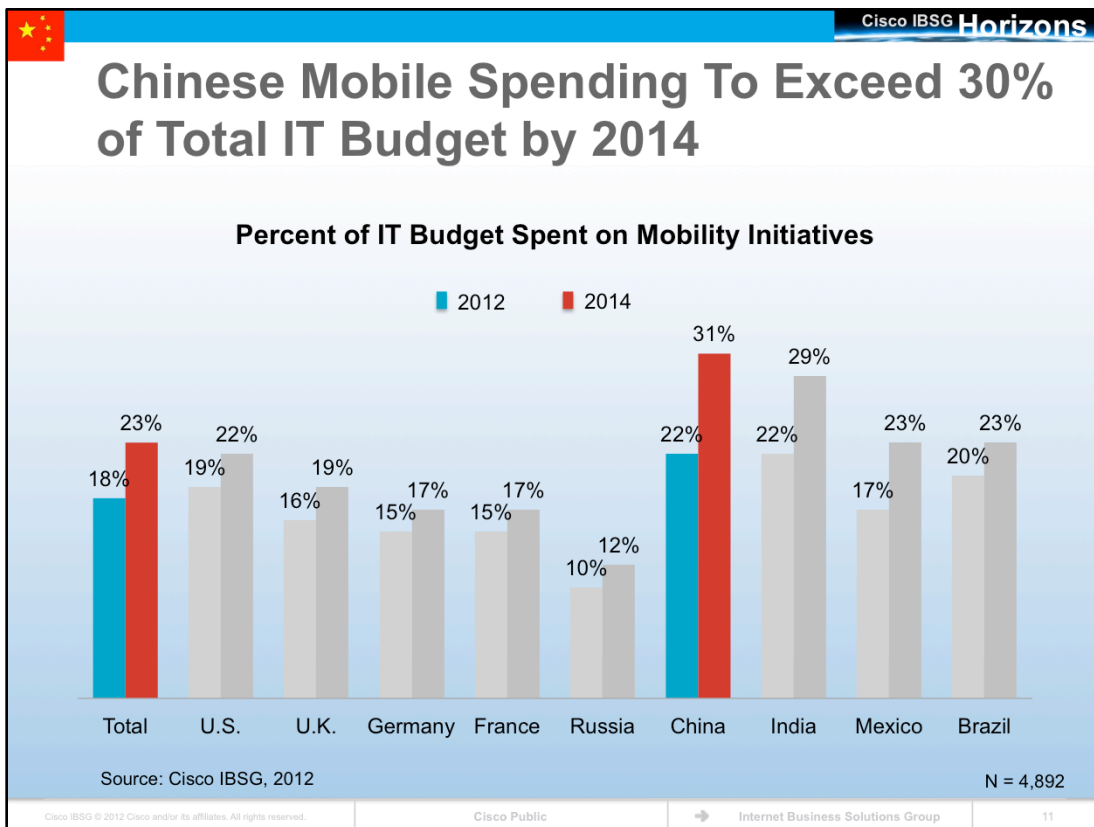Cisco Public Internet Business Solutions Group 9

- Employees' need or desire to be mobile and connect to the company network remotely is driving the growth of smartphones, tablets, and other mobile devices.
- The proliferation of these mobile devices in companies is a fact of life, and this means IT needs to change the way it manages devices. This growth in mobility affects data security, access control, platform maintenance, application support, and much more.
- In 2012, knowledge workers had an average of 2.3 devices connected to the network, including smartphones, laptops, tablets, desktops, and so on.
- By 2014, this number will rise to 2.8 mobile devices per knowledge worker.
- This growth in mobile devices will have a profound impact on IT support and network loads. The IT leaders in this study expect the share of IT spending on mobile devices to grow from 18 percent in 2012 to 23 percent by 2014.

Chinese Companies Will Experience the Fastest Growth in Mobile Devices

Average Number of Connected Devices per Knowledge Worker

Source: Cisco IBSG, 2012

N = 4,892

- Chinese companies will witness a 50 percent growth over the next two years in mobile devices per knowledge worker connecting to the network—the fastest growth of all countries interviewed.

- Mobile devices per employee will jump from 1.8 in 2012 to an estimated 2.7 by 2014. While several countries will have more devices per knowledge worker in 2014, it is clear that China is making up ground quickly.

- The rapid growth of connected mobile devices could put a strain on corporate networks.

Chinese Mobile Spending To Exceed 30% of Total IT Budget by 2014

Percent of IT Budget Spent on Mobility Initiatives

- The number of mobile devices connecting to corporate networks in India, Brazil, Mexico, and China by 2014 will have profound effects on mobility budgets. China and India already spend a high percentage of their IT budgets on mobility. Nevertheless, mobility as a share of IT will increase to 31 percent and 29 percent, respectively.
- On average, mobility as a percentage of IT spending is slated to reach 23 percent.

BYOD Is Here, Now

42% Employees who own the smartphones they use for work

63% Companies that expect the share of employee-owned devices connecting to company networks to increase somewhat to significantly over the next two years
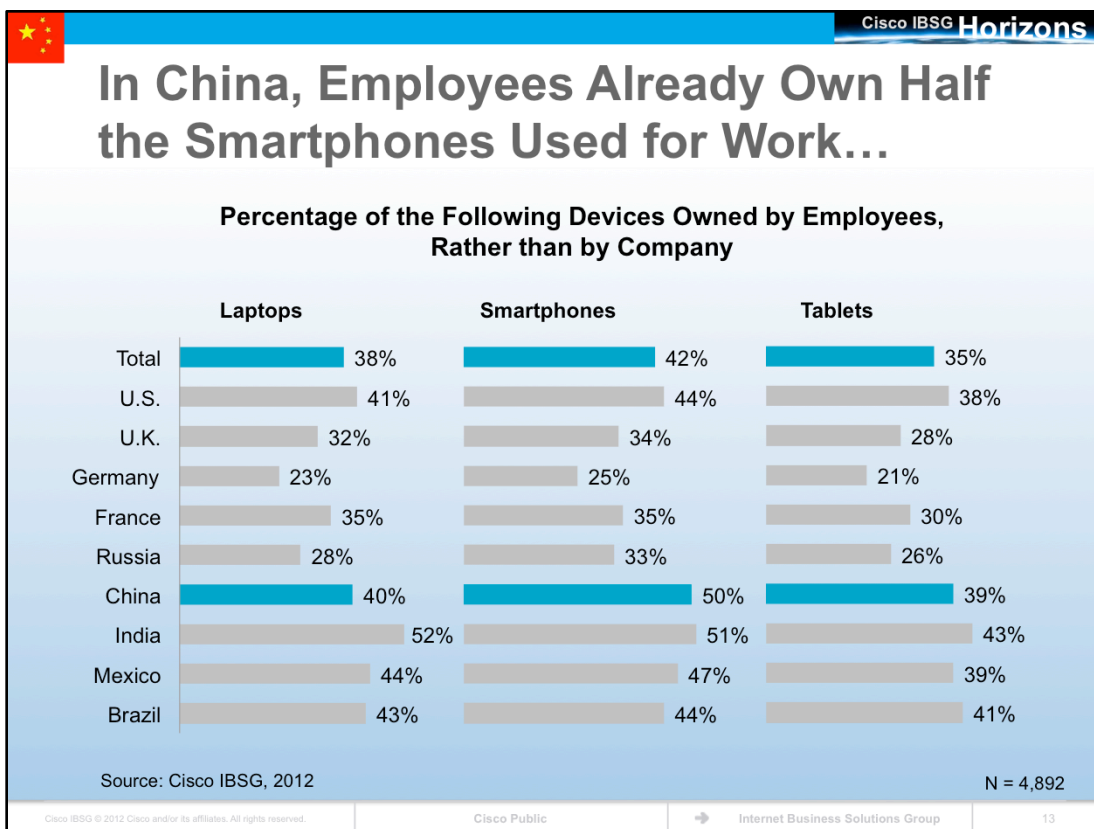
Source: Cisco IBSG, 2012

N = 4,892

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- A large and growing share of the mobile devices employees use for work are owned by employees personally. For example, 42 percent of smartphones and 38 percent of laptops are employee-owned. This shows that BYOD, far from being an emerging trend, is already well-entrenched in corporations throughout the world.

- And IT leaders see strong growth for BYOD in the next two years, with 63 percent saying they expect the percentage of employee-owned devices to increase.

In China, Employees Already Own Half the Smartphones Used for Work…

Percentage of the Following Devices Owned by Employees, Rather than by Company

	Laptops	Smartphones	Tablets
Total	38%	42%	35%
U.S.	41%	44%	38%
U.K.	32%	34%	28%
Germany	23%	25%	21%
France	35%	35%	30%
Russia	28%	33%	26%
China	40%	50%	39%
India	52%	51%	43%
Mexico	44%	47%	39%
Brazil	43%	44%	41%

Source: Cisco IBSG, 2012

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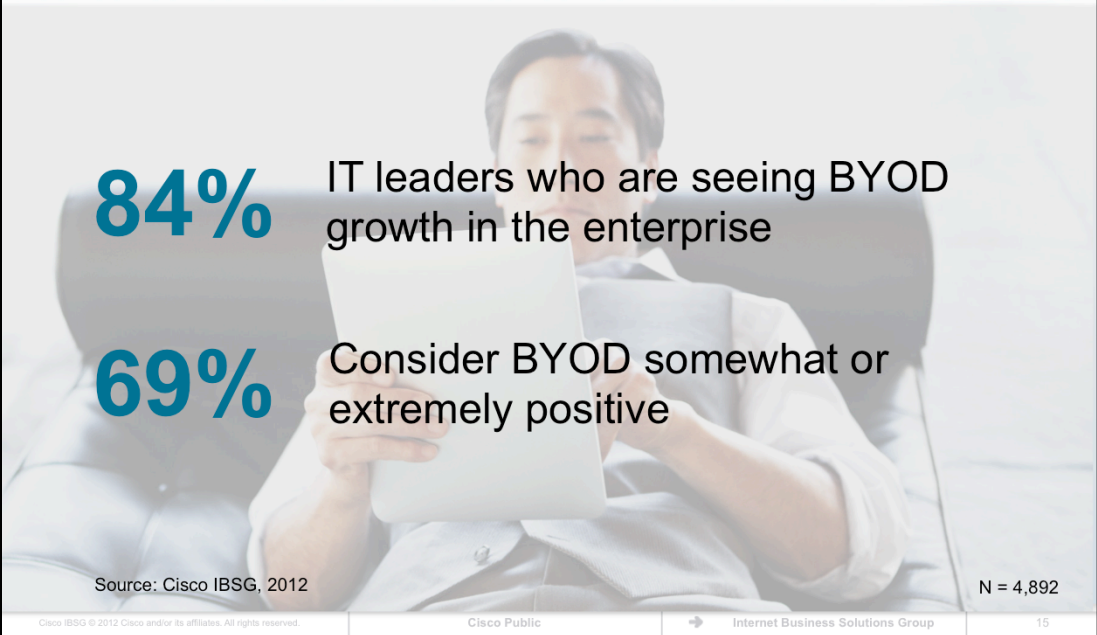
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- In China, 40 percent of laptops, 50 percent of smartphones, and 39 percent of tablets are employee-owned. The BYOD trend is strongest in India, while Mexico and Brazil have a share of employee-owned devices similar to China.

- In comparison, European countries are far behind. In Germany, for example, IT leaders see only about half of the percentage of employee-owned smartphones as China. As we shall see, the wariness of European IT leaders and more restrictive IT policies among European companies, including prohibitions on BYOD or lower levels of support, explain some of the difference.

…And the Share of Employee-Owned Devices Is Expected To Grow Rapidly

Percent of Companies That Expect Share of Employee-Owned Devices To Increase in Next Two Years

■ Increase somewhat   ■ Increase significantly

	Total	U.S.	U.K.	Germany	France	Russia	China	India	Mexico	Brazil
Total	63%	73%	51%	43%	44%	43%	76%	72%	75%	73%
Increase significantly	20%	26%	10%	9%	12%	8%	20%	35%	21%	29%
Increase somewhat	43%	47%	41%	34%	32%	35%	56%	37%	54%	44%

Source: Cisco IBSG, 2012

N = 4,892

- 76 percent of IT leaders in China expect that employee-owned devices will continue to replace company-issued ones for use in the workplace, the highest growth of all countries surveyed. This trend is affirmed in other non-European countries as well.

- High levels of BYOD penetration, combined with rapid growth, means that the majority of mobile devices in Chinese companies will soon be employee-owned.

IT Leaders Acknowledge and Embrace BYOD

84% IT leaders who are seeing BYOD growth in the enterprise

69% Consider BYOD somewhat or extremely positive

Source: Cisco IBSG, 2012
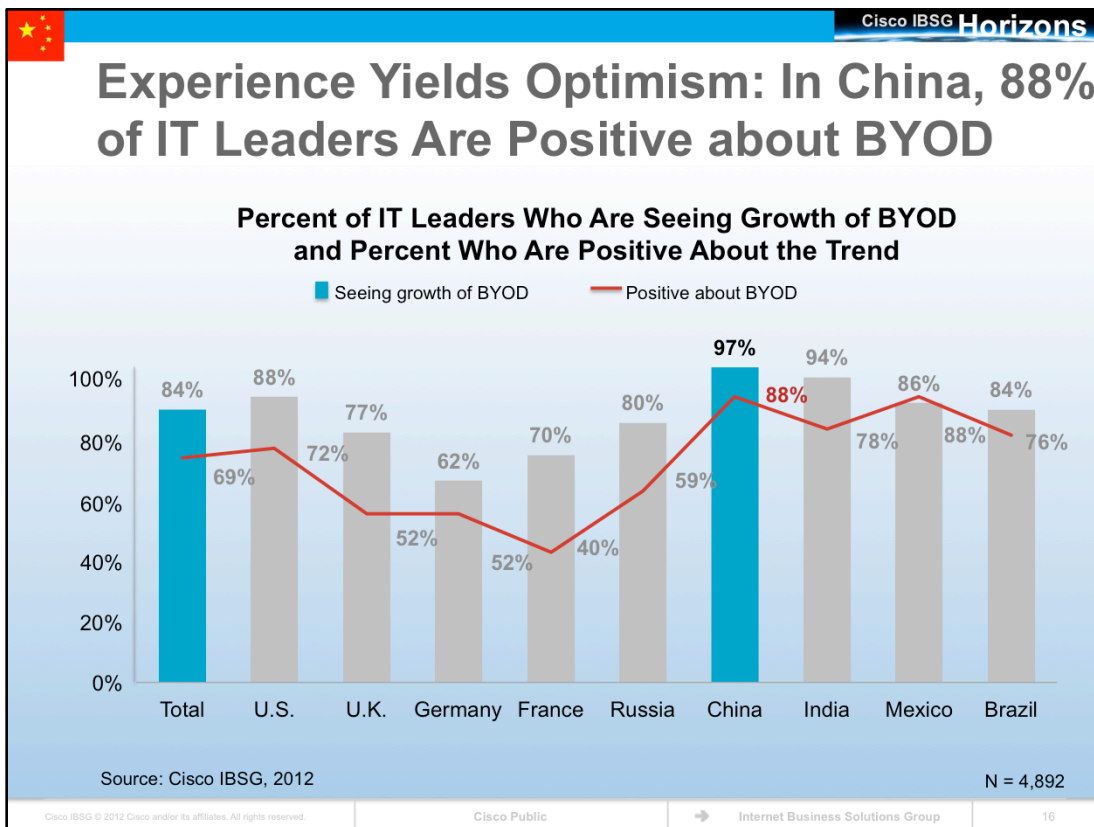
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- Eighty-four percent of the IT leaders in this study say they are seeing BYOD growth in their companies.

- Although this poses challenges for these IT leaders, 69 percent say they consider BYOD to be somewhat to very beneficial for their IT departments.

Experience Yields Optimism: In China, 88% of IT Leaders Are Positive about BYOD

Percent of IT Leaders Who Are Seeing Growth of BYOD and Percent Who Are Positive About the Trend

- 97 percent of Chinese IT leaders acknowledge that work devices are becoming "consumerized," meaning that employees expect to use the same devices in their personal lives and at work. This is another term for BYOD. And 88 percent of them feel that it's a positive development.

- In China, both the visibility of BYOD and the positive reception of it were highest of all of the geographies surveyed.

- BYOD is clearly a global trend. Even in Europe, where there is greater resistance to BYOD, 72 percent are seeing growth.

- It is in the sentiments of IT leaders that we see the greatest gulf. In Europe, particularly the United Kingdom, Germany, and France, IT leaders are far less positive about the impact of BYOD than in the rest of the countries we surveyed.

Benefits BYOD Brings to Companies

#1 — Improved employee productivity, more opportunities to collaborate

#2 — Preferred device means greater job satisfaction
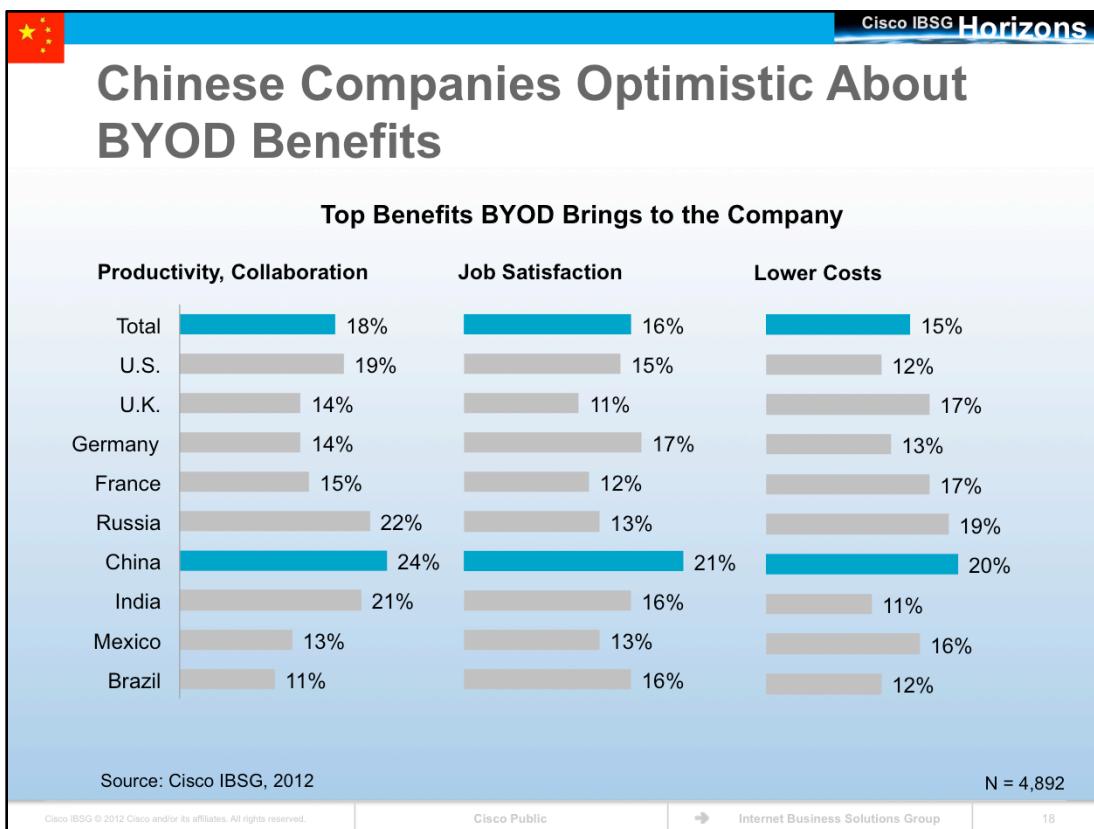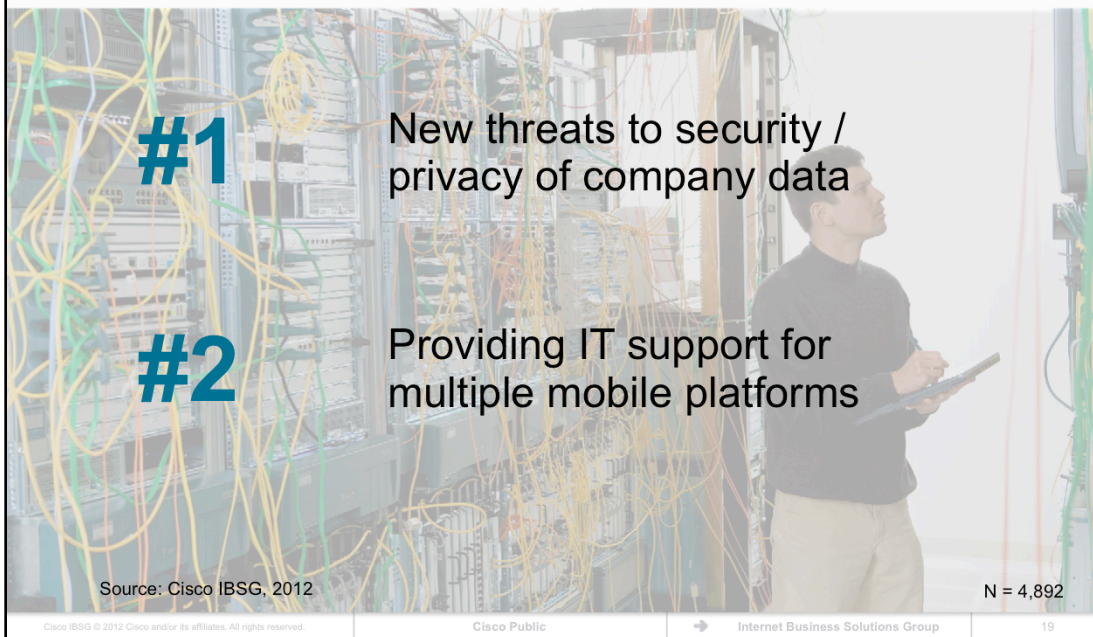
#3 — Lower costs

Source: Cisco IBSG, 2012

N = 4,892

- The top benefits of BYOD for companies are:
  - **Productivity:** Employees become more productive, and they can collaborate with each other and those outside the company more easily.
  - **Job satisfaction:** Employees want to use the same devices for work that they use in their personal lives. When employees can choose their own devices, they are happier and more satisfied in their work.
  - **Lower costs** when employees pay for their devices.

Chinese Companies Optimistic About BYOD Benefits

Top Benefits BYOD Brings to the Company

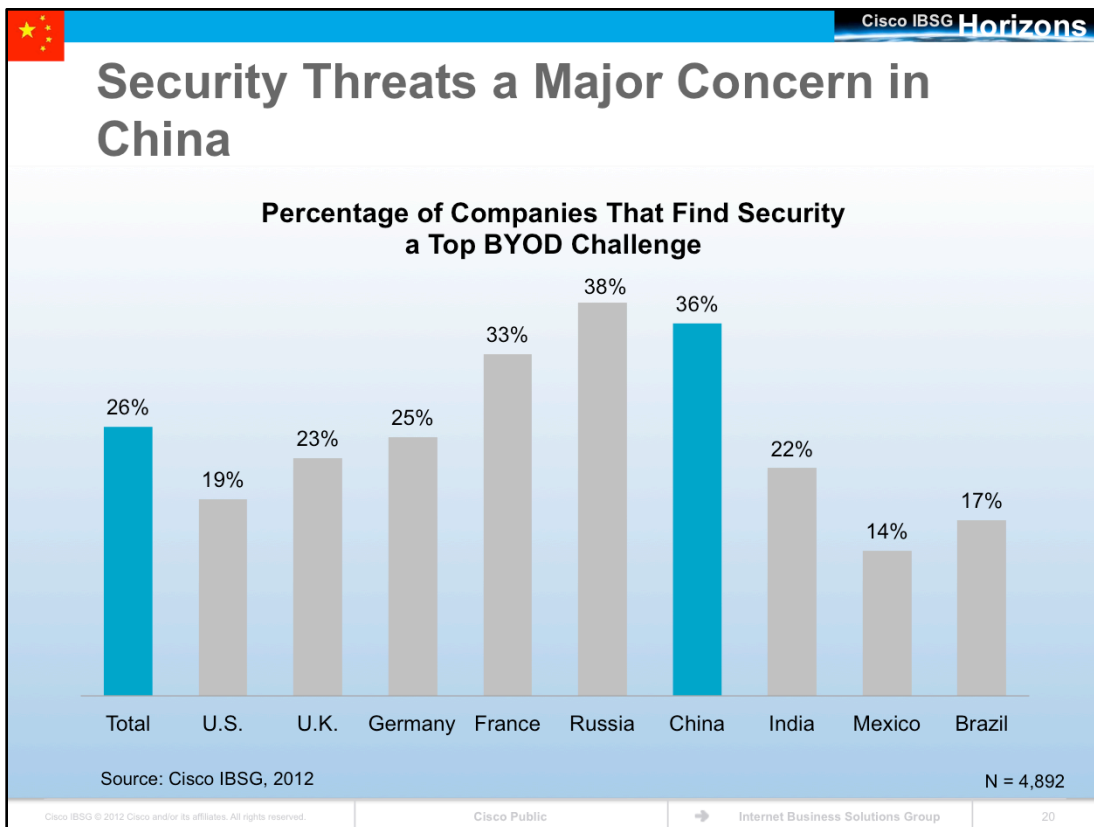|	Productivity, Collaboration	Job Satisfaction	Lower Costs
Total	18%	16%	15%
U.S.	19%	15%	12%
U.K.	14%	11%	17%
Germany	14%	17%	13%
France	15%	12%	17%
Russia	22%	13%	19%
China	24%	21%	20%
India	21%	16%	11%
Mexico	13%	13%	16%
Brazil	11%	16%	12%

Source: Cisco IBSG, 2012

N = 4,892

- Chinese IT leaders said that the number one benefit of BYOD is improved productivity and collaboration (24% percent). This is an important finding, because fears that employees would be distracted by personal applications and content (such as using social networks, playing games, using unauthorized sites for personal business and entertainment) have been an argument against BYOD.

- Two other benefits—higher job satisfaction (21 percent) and lower costs (20 percent)--were not far behind.

BYOD Does Bring Complexity: Top Concerns

#1 New threats to security / privacy of company data

#2 Providing IT support for multiple mobile platforms

Source: Cisco IBSG, 2012

N = 4,892

- The international results are consistent with what we found in the United States regarding the main drawbacks of BYOD. The top concerns according to the IT leaders in this study are:
  - **Security—**How do companies ensure their data, and the data of their customers, is secure?
  - **Support—**How do IT departments support multiple devices, platforms, and applications?
- Additionally, IT leaders are concerned about access: Since mobile devices open new paths of intrusion, how do IT departments enforce policies to ensure that only authorized people have access to sensitive information, and how do they maintain regulatory compliance?

Security Threats a Major Concern in China

Percentage of Companies That Find Security a Top BYOD Challenge

Source: Cisco IBSG, 2012
N = 4,892

- IT leaders in China indicated that security is by far the top BOYD challenge. Interestingly, the concerns over network security have not made Chinese companies reluctant to embrace BYOD, since they believe the benefits far outweigh the potential costs.

- In contrast, the perceived danger of BYOD to corporate network security is likely a major reason that companies in Europe have not embraced the trend as fully as others.

IT Support: Most Companies Enable BYOD, but Europe Hesitant

89% Companies that enable BYOD in some form, from allowing employees to connect their own devices to company network, to full support for all employee-owned devices

71% Companies that provide IT support for either select employee-owned devices or all devices

19% European companies that prohibit BYOD, compared to 6% for non-European countries

Source: Cisco IBSG, 2012

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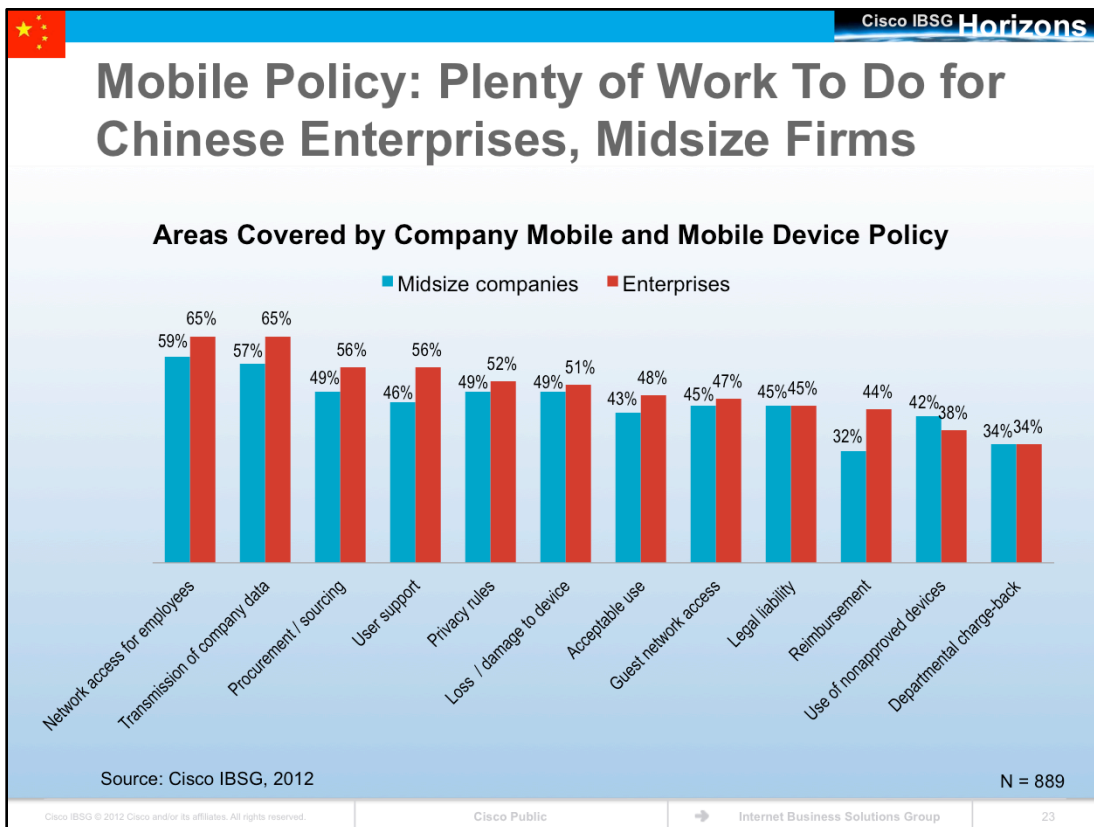
- Overall, there is strong support for enabling BYOD among corporate IT leaders. Nearly 90 percent of companies accept BYOD in some form, ranging from simply allowing employee-owned devices on the corporate network to full IT support for any employee-owned device. This proves once again how universal the BYOD trend has become.

- And 71 percent encourage IT by providing some level of IT support.

- European companies, however, are much less accommodating of employee-owned devices in the workplace.

Chinese Companies Strongly Support BYOD

Company IT Support for Employee-Owned Devices

Source: Cisco IBSG, 2012

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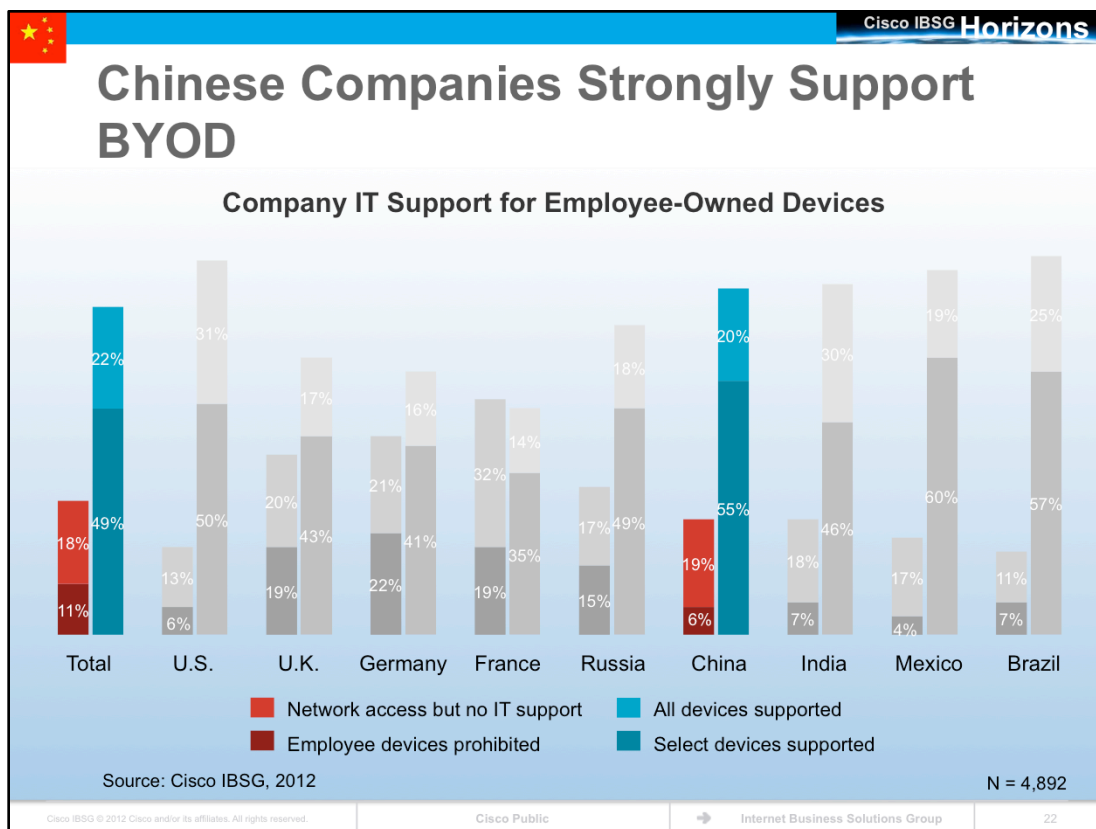
- The United States and India provide the most comprehensive support for employee-owned devices, with about 30 percent of companies offering IT support for all devices.
- Brazil has the overall least restrictive policies, with 82 percent of companies supporting either select or all employee-owned devices.
- Chinese companies that support BYOD outnumber those that limit it by a three-to-one margin.
- 20 percent of Chinese companies support all employee devices. Interestingly, there is almost no difference in support between midsize and enterprise companies: 73 percent of midsize firms are supportive, versus 75 percent of enterprises.
- The countries in which IT leaders were least positive about the impact of BYOD – France, Germany, and the United Kingdom – have the most restrictive policies. In France, for example, a higher percentage of companies either prohibit employee-owned devices in the workplace or offer only network access, with no other forms of support.

Mobile Policy: Plenty of Work To Do for Chinese Enterprises, Midsize Firms

Areas Covered by Company Mobile and Mobile Device Policy

Source: Cisco IBSG, 2012

N = 889

- Another area that has the potential to restrict the potential benefits of BYOD is a lack of clarity around mobility policy, both as it pertains to BYOD and in general. Regarding the maturity of corporate mobile policy, enterprises have implemented more comprehensive policies in most areas than midsize firms. While this finding is not surprising, it speaks well for midsize firms that in many areas, the differences between them and enterprises are modest.

- On the negative side, for both corporate and midsize firms, there is plenty of work to be done before mobility policy can be considered robust.

Employees Want Freedom To Reinvent Their Work Style Through BYOD…

#1 Employees want an any-device, anywhere work style (37%)

#2 Employees want to do personal activities during work and work activities during personal time (35%)

#3 Avoid usage restrictions of company-owned devices (31%)

Source: Cisco IBSG, 2012

N = 4,892

- Employees are turning to BYOD because they want more control of their work experience, thus improving productivity and job satisfaction.
- Their first desire is device choice. They want to work on the device with which they are most comfortable, and they want to work wherever they need to be.
- Their second desire is to choose when they do what. They want the flexibility to undertake personal activities while at work and to do their work during nontraditional work periods such as nights and weekends.
- Finally, they want freedom to use the device the way they see fit, including which apps to download.

…Which Can Foster Employee-Led Innovation

- BYOD enables employees to deliver consistent, bottom-up innovation by transforming how they work, and what they do

- By giving employees freedom to choose the devices, applications, and cloud services they use, companies help employees find the best ways to get the job done and add more value, such as:

  - Using cloud-based services to analyze and visualize data on mobile devices

  - Discovering the perfect tool for managing complex workflows

  - Recording video meetings to improve execution when decisions are made

- The tools for employee-led innovation are ready at hand: inexpensive, enterprise-grade applications; easy customization; and powerful devices

- Companies that embrace BYOD as a source of innovation could unlock a latent – and potent – source of competitive advantage

Source: Cisco IBSG, 2012

N = 4,892

- By giving employees freedom to choose the devices, applications, and cloud services they use, work processes can be redefined. Employee-led innovation extends far beyond when and where to work.

- Through BYOD, employees can continually innovate in a multitude of ways, such as using cloud-based services to analyze and visualize data on a mobile device, discovering the perfect tool for managing complex workflows, or recording video meetings to improve execution when decisions are made.

- The potential for consistent bottom-up innovation is tremendous, and the tools are readily at hand: increasingly inexpensive, powerful devices; thousands of mobile applications with enterprise-level power and sophistication that cost only a few dollars; and application-development tools that nonexperts can use to quickly design their own custom applications.

- Along with the growth of employee-owned devices, 52 percent of IT leaders say that nonapproved software applications and cloud services are "somewhat" or "much more" prevalent today than two years ago. It makes sense that nonapproved applications would increase, since employees do not simply want to use the device of their choice, but also the software and cloud services they prefer.

- European countries are seeing far less growth, perhaps because of policy restrictions that discourage them.
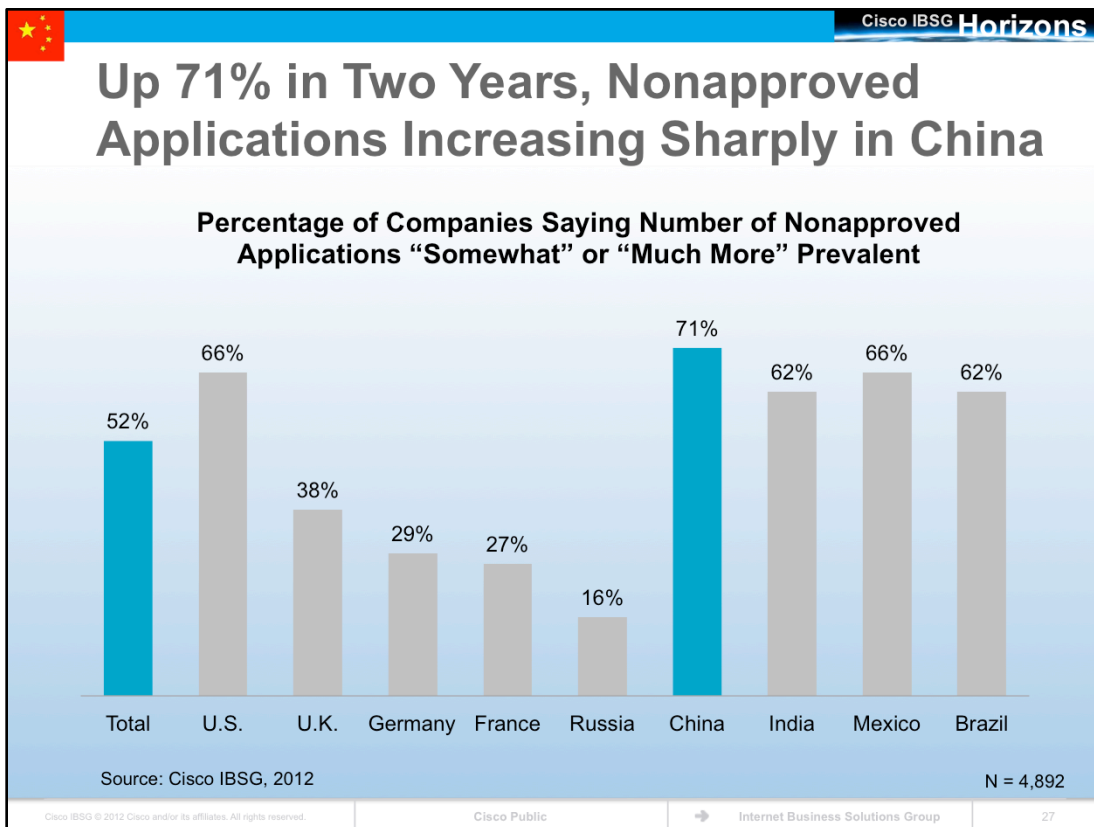
- Over 70 percent of Chinese companies are seeing increases in the percentage of nonapproved applications on corporate networks, the highest in our survey.

- Chinese employees are using applications that feature rich media, such as social networking (56 percent) and media players (41 percent), and streaming media sites (38 percent). The added load on corporate networks could be considerable, given the fast growth of employee-owned devices anticipated over the next two years.

- As we can see, there is a stark difference in the prevalence of nonapproved applications between European countries and all other countries in our study. In Russia, for example, only 16 percent of IT leaders say they have seen more nonapproved applications.

- We may be seeing both *virtuous* circles (positive impressions of BYOD, resulting in more favorable policies, thereby producing enhanced benefits and increasing enthusiasm) and *vicious* circles (suspicion of BYOD, resulting in restrictive policies and muted impact, reinforcing the initial skepticism) at play.

Desktop Virtualization Is on the Rise — In Some Countries

91% IT leaders who are somewhat or very aware of desktop virtualization

44% Agree that a majority of knowledge-worker roles are suitable for desktop virtualization, with U.S. much higher at 64%
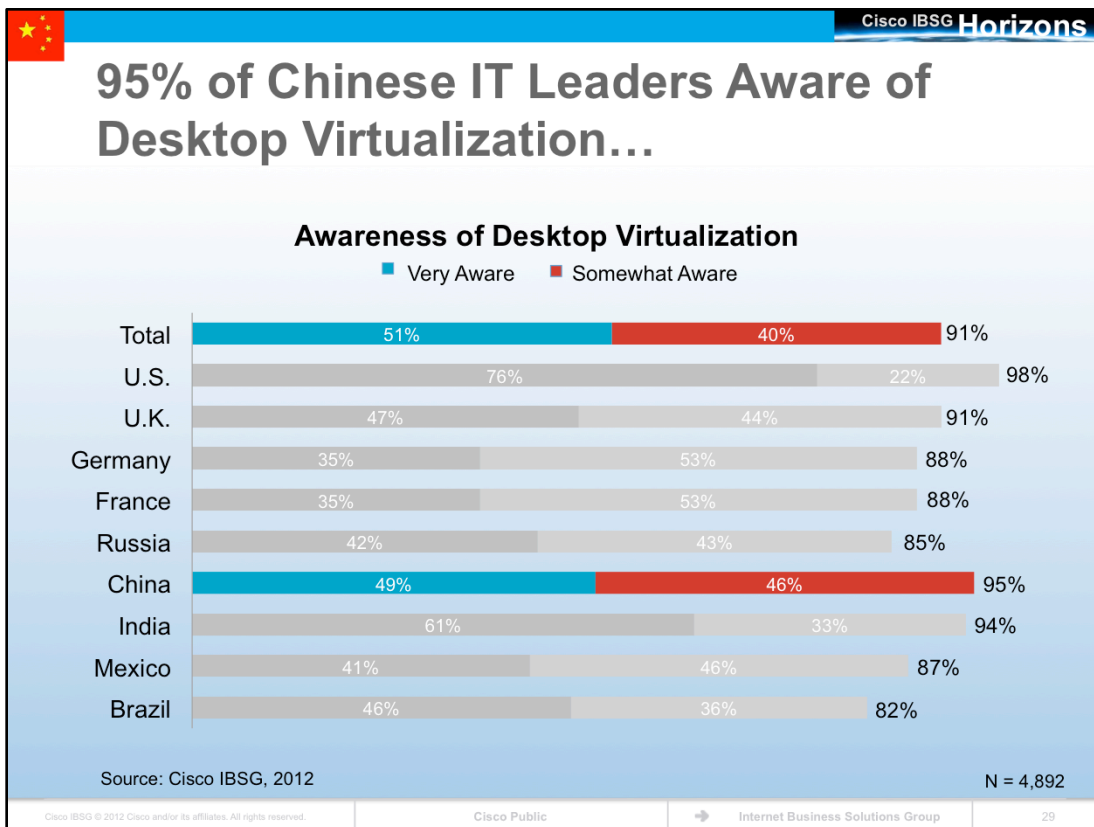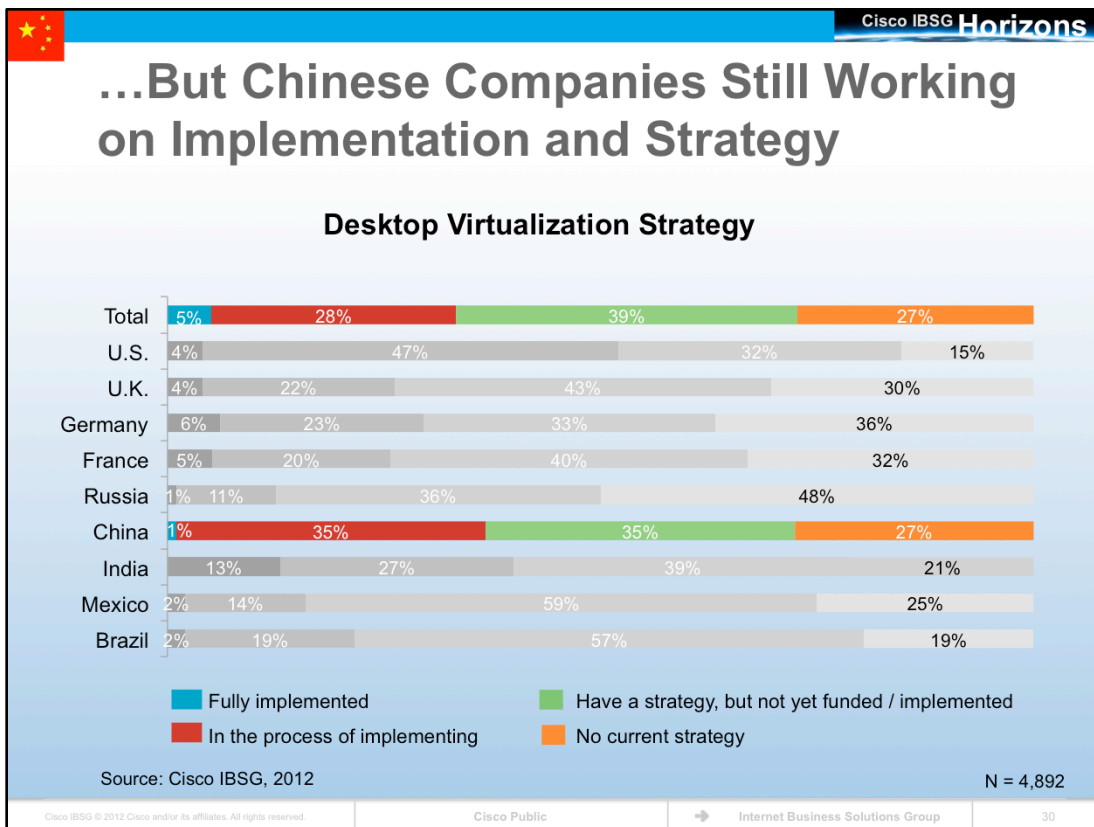
Source: Cisco IBSG, 2012

N = 4,892

- This study also explored desktop virtualization, which is becoming increasingly popular—and which could potentially fit nicely with the BYOD trend.
- Desktop virtualization separates the desktop environment from the device and enables employees to get the same or similar experience regardless of where they are or which device they are using.
- This study found that desktop virtualization is very much on the minds of IT leaders. Of the IT leaders polled in this study, 91 percent are very or somewhat familiar with desktop virtualization.
- However, outside the United States, where 64 percent of IT leaders believe a majority of knowledge workers could benefit from desktop virtualization, companies feel virtualization has limited applicability for knowledge workers.
- Desktop virtualization is also sometimes called:
  - Virtual desktop infrastructure (VDI)
  - Hosted virtual desktop (HVD)
  - Desktop as a service (DaaS)
  - Server-based computing

95% of Chinese IT Leaders Aware of Desktop Virtualization…

Awareness of Desktop Virtualization
■ Very Aware ■ Somewhat Aware

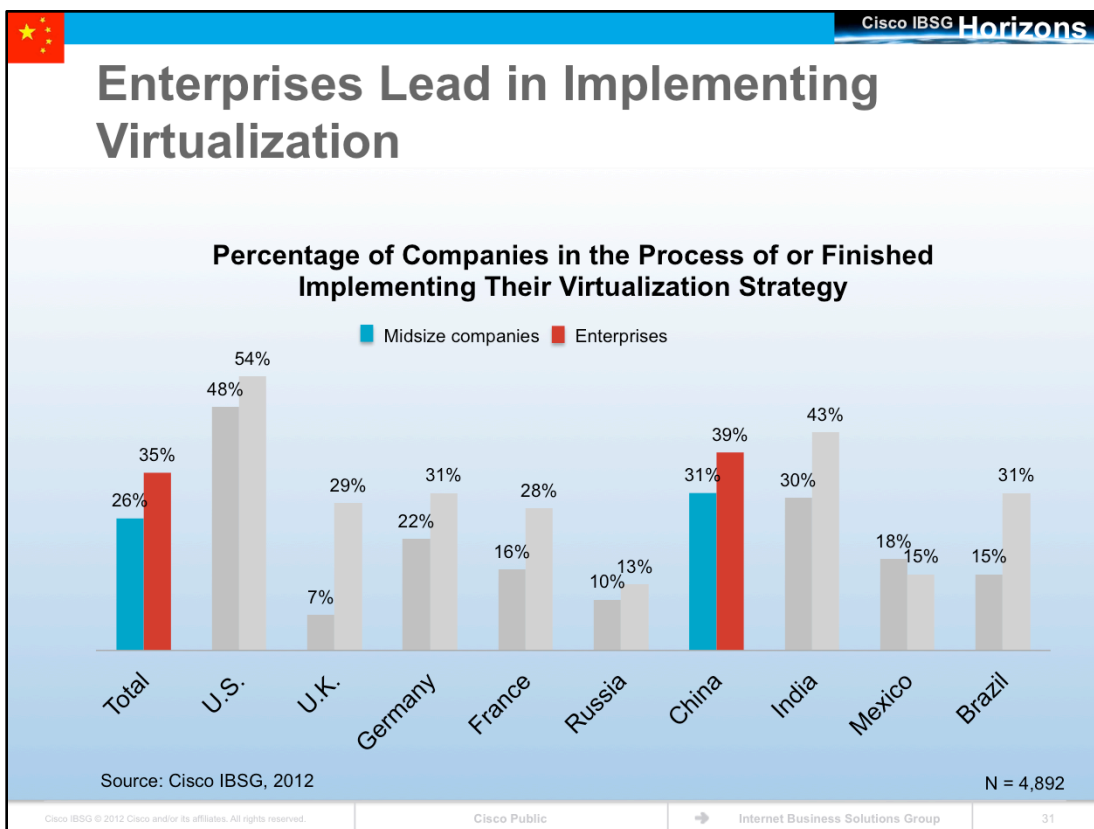|	Very Aware	Somewhat Aware	Total
Total	51%	40%	91%
U.S.	76%	22%	98%
U.K.	47%	44%	91%
Germany	35%	53%	88%
France	35%	53%	88%
Russia	42%	43%	85%
China	49%	46%	95%
India	61%	33%	94%
Mexico	41%	46%	87%
Brazil	46%	36%	82%

Source: Cisco IBSG, 2012

N = 4,892

- Virtually all of Chinese IT leaders are familiar with the concept of desktop virtualization, with 46 percent being "somewhat aware" and 49 percent being "very aware".

- IT leaders in the United States and India are also well aware of desktop virtualization. Elsewhere, only around 40 percent are "very aware," although nearly all have some familiarity.

…But Chinese Companies Still Working on Implementation and Strategy

Desktop Virtualization Strategy

	Fully implemented	In the process of implementing	Have a strategy, but not yet funded / implemented	No current strategy
Total	5%	28%	39%	27%
U.S.	4%	47%	32%	15%
U.K.	4%	22%	43%	30%
Germany	6%	23%	33%	36%
France	5%	20%	40%	32%
Russia	1%	11%	36%	48%
China	1%	35%	35%	27%
India	13%	27%	39%	21%
Mexico	2%	14%	59%	25%
Brazil	2%	19%	57%	19%

- Fully implemented
- In the process of implementing
- Have a strategy, but not yet funded / implemented
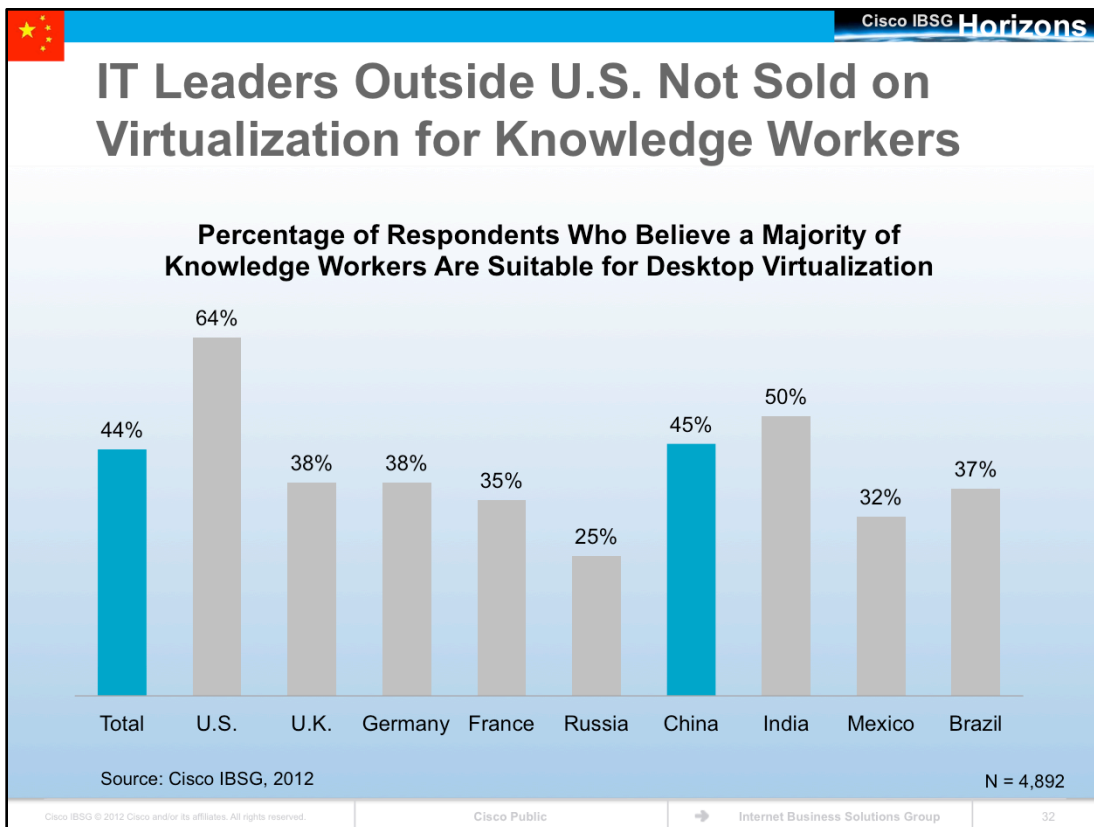- No current strategy

Source: Cisco IBSG, 2012

N = 4,892

- While awareness of desktop virtualization is high, implementation is another matter. Only in the United States have a majority of companies implemented desktop virtualization, or are in the process of implementing it.
- There are some bright spots. In India, 13 percent of companies have fully implemented desktop virtualization, and in China, it is on the radar, with 35 percent in the implementation process.
- For several other countries, though, such as Russia and Mexico, desktop virtualization is a lesser priority.

Enterprises Lead in Implementing Virtualization

Percentage of Companies in the Process of or Finished Implementing Their Virtualization Strategy

- Chinese midsize firms are ahead of most of their counterparts in terms of desktop virtualization, behind only the United States.

- 31 percent have completed or are in the process of implementing their strategy, compared to 48 percent in the United States, 30 percent in India, and less than 20 percent on average in the rest of the world.

- Chinese enterprises are also somewhat ahead of others, with 39 percent having completed or in the process of implementing desktop virtualization, compared to 54 percent in the United States, 43 percent in India, and all others on average below 30 percent.

IT Leaders Outside U.S. Not Sold on Virtualization for Knowledge Workers

Percentage of Respondents Who Believe a Majority of Knowledge Workers Are Suitable for Desktop Virtualization

Source: Cisco IBSG, 2012

N = 4,892

- 45 percent of Chinese respondents said that half or more of their workforce was suitable for desktop virtualization, far below the U.S. response of 64 percent.
- Perhaps IT leaders in these countries are "behind" in implementing desktop virtualization because they believe it to be less applicable to knowledge workers than do their counterparts in the United States.

Top Desktop Virtualization Drivers

#1: Data Protection—31%

#2: Mobility for Employees—28%

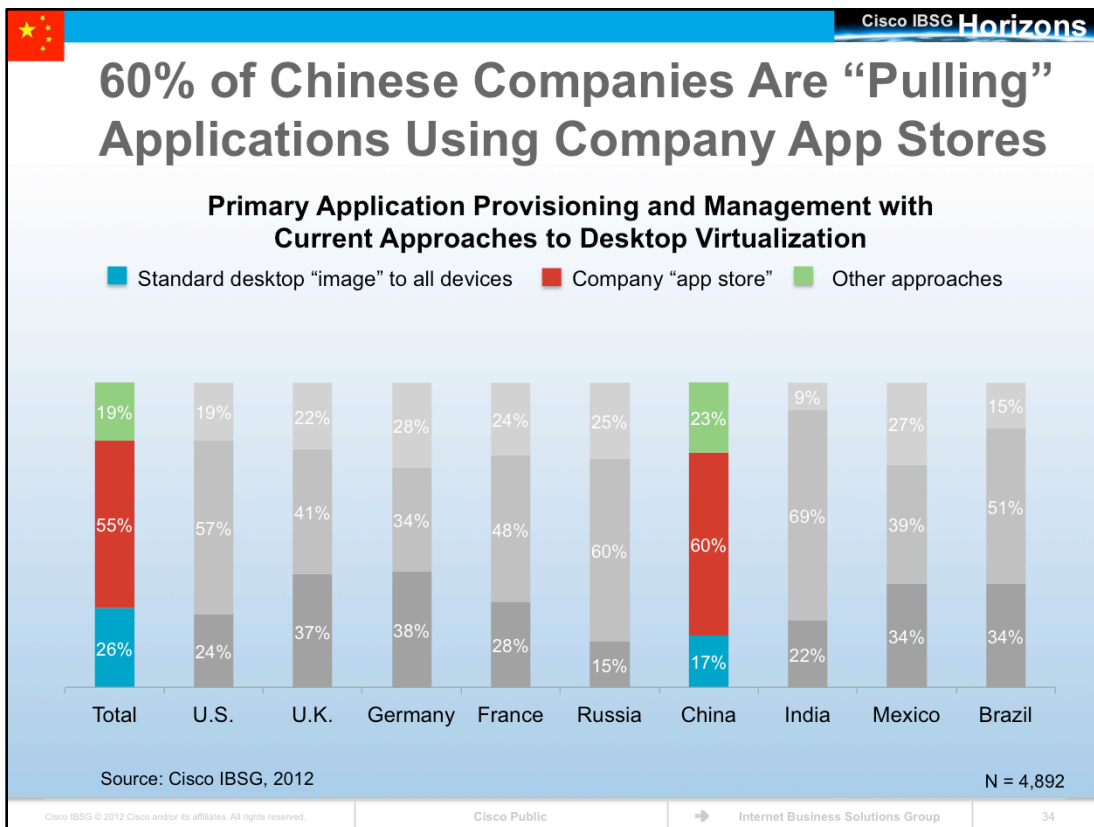**#3: Business Agility—27%**

Source: Cisco IBSG, 2012

N = 4,892

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- Most IT leaders recognize that employees in their organization could benefit from desktop virtualization (44 percent believe half or more of their employees could benefit), but desktop virtualization poses challenges. The top three concerns are:

  - **Data protection:** How does the enterprise ensure only the right people have access to sensitive company and customer data?

  - **Mobility for employees:** Enabling employees to work from wherever they are, rather than being constrained to a desk or campus, including telework.

  - **Business agility:** The speed with which companies can roll out software updates and platforms.

60% of Chinese Companies Are "Pulling" Applications Using Company App Stores

Primary Application Provisioning and Management with Current Approaches to Desktop Virtualization

- IT leaders are accustomed to pushing approved devices and applications on to employees—when a new employee starts, he or she has a laptop and a standard set of office applications set up and ready to use. But with employees bringing their own devices, IT departments are changing the way they provision and manage devices.

- IT leaders who accept this sea change are embracing it by supporting nonstandard applications and distributing them through a corporate app store. China is among the leaders in this regard, with 60 percent of companies using an app store model.

Key Takeaways: China

- BYOD is not an emerging trend but a *fact* across geographies, different company sizes

- Employee-driven **innovation**, rather than cost containment, is the real BYOD opportunity

- Chinese companies are enthusiastic about BYOD, and are enabling it with supportive IT policies – leading to high, and growing, BYOD adoption

- Mobility budgets are rising quickly for Chinese companies, and will approach one-third of all IT costs: Firms may be missing opportunities to optimize spending, without restricting access

- BYOD also implies new challenges in security and support – with security a serious issue for Chinese companies

- Mobile policy still immature for many firms in China and globally

- Chinese companies beginning to implement desktop virtualization, but behind the United States and India

Source: Cisco IBSG, 2012

- As we have seen, BYOD is happening in companies across the world, at both midsize companies and enterprises. It is not an emerging trend, but a fact.

- There are varying degrees of support and enthusiasm, however. The United States, Asia, and Latin America are bullish on the prospects of BYOD, and are willing to give employees more control.

- By giving them control, companies can allow employee-led innovation to unfold, as knowledge workers find better ways of performing their typical tasks, and even expand into higher-value work. For example, the ability to download powerful data analytics applications that formerly were provided only to specialists can now help any employee add value in new ways.

- Companies must guard against rising mobility costs.

- They must also face new challenges in how they secure their networks and support mobile devices in a BYOD environment.

- For many companies, better, more comprehensive mobile policies could help deliver BYOD with greater security at a lower cost.

- Desktop virtualization could also help. But IT leaders outside the United States see desktop virtualization as less applicable to knowledge workers, and are not implementing it as extensively.

For more information…

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