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Growing the Digital Business: Accenture Mobility Research 2015

Spotlight on China

High performance. Delivered.

Introduction

The emergence and adoption of digital technologies has rapidly transformed businesses and industries around the globe. Mobile technologies have been especially impactful, as they have enabled companies to not only streamline their operations, but also engage more effectively with customers and tap into new sources of revenue.

A key source of information on the impact digital technologies are having on business is Accenture's 2015 Global Mobility Study, which provides insights into digital technology trends among large companies around the world. This year's study encompasses three areas of focus:

- How companies are adopting and deploying mobile and other digital technologies to enhance their business.

- How companies view the emerging Internet of Things and the ways in which it will benefit them.

- Where companies are deploying mobile applications and the challenges they face in designing and maintaining them.

The study is based on a combination of online and telephone interviews, conducted in December 2014 and January 2015, with 1,925 senior decision makers for digital strategy and technologies—of whom, 225 were based in China. Participating Chinese companies each had more than US$1 billion in revenue.

In this report, we explore the progress Chinese companies have made to date in adopting mobile, social media, analytics, and cloud technologies—with a particular focus on the Internet of Things and mobile apps—and how Chinese companies are benefiting from their use. We also highlight how Chinese companies' experience compares with that of companies in other countries, and illustrate some ways Chinese companies are capitalizing on digital technologies to improve business performance.

China's Aggressive Push Into Digital and Mobile Technologies
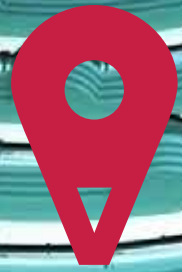
In the past decade, China as a country has aggressively embraced digital technologies, with the uptake being driven primarily by consumers and supported by the Chinese government and increasing adoption by businesses.

China has the world's largest population of digital consumers, with more than 600 million Internet users, 500 million of which are mobile Internet users.[1] The country's network infrastructure is continually improving, with rapid adoption of 3G and 4G networks introduced in early 2014. The phenomenal growth has been consumer led, and innovative start-up companies have responded. Three companies, in particular—Baidu, Alibaba and Tencent, collectively known as BAT—have grown quickly by fulfilling Chinese consumers' demands for digital services—something the large state-owned enterprises have been slow to do. BAT dominates the marketplace for digital services in China—from social media apps, including messaging and chat functions; search engines; online auction portals and cloud services to eCommerce, including mobile payment capabilities. As a result, Chinese consumers' way of life is increasingly digital. They engage in mobile shopping anytime and anywhere, use social media to express themselves, switch between multiple screens frequently, experience seamless shopping in both online and offline channels, and are more willing than ever to change suppliers if they find their experience lacking.

The Chinese government has supported the development of the information and communications technology industry and the uptake of digital technologies. For instance, the State Informatization Development Strategy has set out the nation's long-term direction for the digital economy.[2] A core aim of the strategy is the development of an internationally competitive information and communications technology industry and, as a result, the entire Chinese economy, through informatization.

The government also has designated the ICT industry as one of China's strategic industries, and has lent particular state support for developing technologies such as cloud computing and the Internet of Things. For example, the government has invested in several hundred "smart city" pilot projects, which use large databases and sensor networks to collect, store and analyze information related to transportation, electricity and public safety.

Perhaps the government's most ambitious effort to date is its "Internet Plus" strategy, unveiled in early 2015, which is designed to "integrate mobile Internet, cloud computing, big data and the Internet of Things with modern manufacturing, to encourage the healthy development of e-commerce, industrial networks, and Internet banking, and to help Internet companies increase their international presence" said Premier Li Keqiang.[3]

This year, our Mobility Research 2015 study reinforces and amplifies what is happening in the Chinese market:

- Chinese executives remain highly enthusiastic—in most cases, far more than their global counterparts—about the potential of digital technologies, and mobile in particular, to transform their businesses and drive growth.

- They also are more likely than executives globally to report having made considerable progress toward becoming a digital business and in adopting the Internet of Things and mobile apps.

- However, they recognize they need to do much more to accelerate their adoption of digital, and that starts with overcoming the considerable challenges they and other companies face in putting these powerful technologies at the core of the business and growth agenda.

In summary, businesses competing in China are exploring how they can capitalize on the digital trends sweeping their economy. Most Chinese executives recognize that the future success of their companies will be based largely on their ability to pursue non-conventional and digitally enabled growth strategies.

Digital Technologies:
The Pathway to Growth

Becoming a digital business—which we define for this research as an organization that incorporates a combination of two or more digital technologies—is critical to the success of any company.

In fact, Accenture research on "digital density" has uncovered empirical evidence that deep and broad penetration of digital technologies in businesses and economies leads to quantifiable improvements in productivity that can accelerate competitiveness and economic growth.[4]

Chinese executives are aware of the value of digital technologies and what they can do for a business. Ninety-five percent of Chinese executives in our survey said their organization has clear expectations for how digital technologies can enhance their business. For the largest percentage of executives, anticipated outcomes of combining multiple technologies center on growth and customers (Figure 1). In fact, Chinese executives were much more likely than participants from any other country to identify a wide range of outcomes they expected from the use of digital, especially:

- Increasing the speed of product development and time to market

- Supporting rapid responses to customer demands

- Creating new revenue opportunities

- Enabling the penetration of new markets

- Boosting customer engagement

Analytics and cloud were cited most frequently by Chinese executives as vital to achieving these outcomes. Each was ranked as the most-critical digital technology area by 36 percent (slightly higher than the global average)—compared with 18 percent for mobile.

Furthermore, Chinese executives are united in their belief that their companies have made progress toward becoming digital businesses. Virtually all—96 percent—said their company has made "significant inroads" in leveraging digital technologies in the past year. That is nine points higher than the global average.

Finally, as shown in Figure 2, an overwhelming majority of Chinese executives reported that their company had taken steps to formalize governance and decision making regarding digital technologies. Virtually all respondents indicated they have a clear chain of command for making decisions about digital technologies, and that they have a single, holistic strategy for becoming a digital business. Just under nine in 10 said they have a chief digital officer who oversees the use of digital technologies across the enterprise.

Figure 1: Expected outcomes of using digital technologies

Increase the speed of product/service development and time to market
- China: 68%
- Global: 46%

Enable rapid responses to customer demands
- China: 64%
- Global: 45%

Create new revenue opportunities
- China: 63%
- Global: 48%

Enable penetration of new markets
- China: 63%
- Global: 45%

Increased customer engagement
- China: 58%
- Global: 46%

Enable us to move from being just product-oriented to also become service-oriented
- China: 56%
- Global: 35%

Transform the way our company operates
- China: 53%
- Global: 40%

Streamline our operations
- China: 53%
- Global: 41%

Threaten the future of our business
- China: 13%
- Global: 17%

Legend:
- ● China
- ● Global

Figure 2: Progress companies have made in formalizing digital governance and decision making

Our company has a clear chain of command for making digital technology decisions
- China **97%**
- Global **87%**

We have one, holistic strategy for moving toward becoming a digital business
- China **95%**
- Global **80%**

We have a chief digital officer or comparable role to oversee the use of digital technologies in the enterprise
- China **86%**
- Global **80%**

● China
● Global
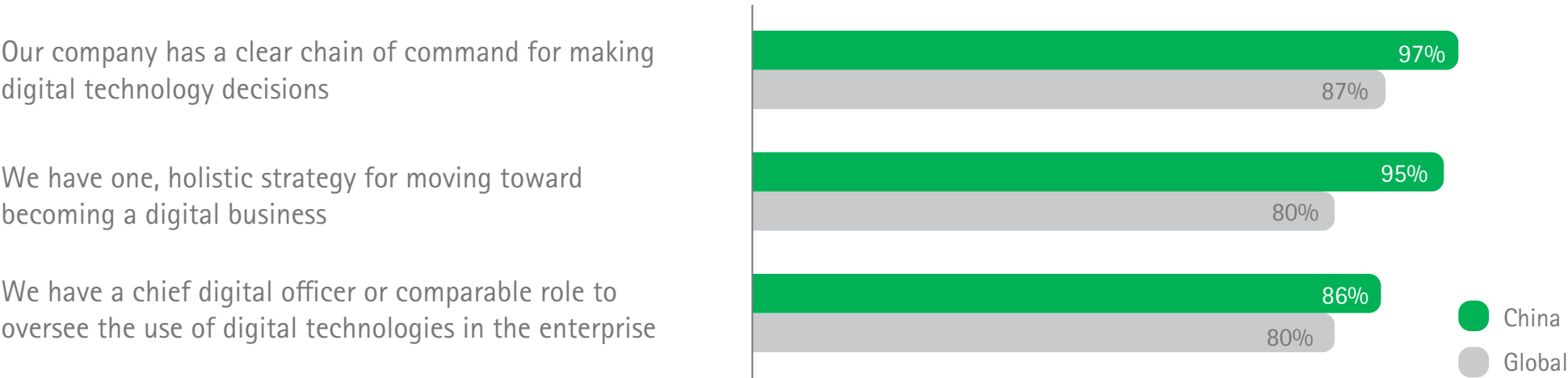
However, despite this progress, more work remains to be done to accelerate digital technology adoption.

One of the biggest challenges is that the pursuit of digital in most companies appears to be not well integrated. For instance, 83 percent said their companies have separate teams that own different parts of digital strategy, and

90 percent reported that ownership of digital technology strategy exists within each function rather than across the enterprise. In other words, most Chinese organizations do not yet have a centralized team that fully drives and owns the strategy as well as the budgeting and implementation of digital technologies.

Additionally, the presence of a chief digital officer doesn't necessarily mean that person is the official "digital czar" empowered to make critical, strategic decisions about the digital direction of the organization. In fact, our interviews suggested the role's seniority and responsibilities differ considerably from firm to firm.

Executives also cited a wide range of other adoption challenges, most notably security and internal technical integration (Figure 3). In fact, Chinese companies had the highest percentage of executives citing security concerns and technical integration as major challenges.

Figure 3: Challenges in digital technology adoption

Challenge	China	Global
Security concerns	63%	51%
Internal technical integration issues	60%	33%
Keeping pace with digital advancements	44%	41%
Having enough skills/resources to support digital deployments	40%	34%
Exploiting the potential of digital	39%	36%
Finding the right technology partners	36%	37%
Internal organization/infrastructure and team silos	35%	27%
The overlap of technologies makes it difficult to manage	31%	28%
Developing a roadmap to adopt digital technologies	27%	30%
Lack of digital-focused leadership	23%	21%

Legend: China, Global

Bringing the Internet of Things to Life

In the past, the Internet of Things (IoT) was heralded primarily as a way to improve operational efficiency. But in today's environment, companies can also benefit greatly by seeing it as a tool for finding growth in unexpected opportunities.

The IoT incorporates smart interconnected devices with contextual interfaces that communicate with one another, with people and with businesses via the Internet. Examples include connected vehicles, environmental sensors, smart meters, wearable devices, and home health monitoring devices.

Chinese executives participating in our survey widely agreed that the IoT will affect their industry as well as their company, and were generally more likely than their global peers to say so.

Every Chinese executive we surveyed (compared with 89 percent globally) said the IoT will have a major impact on their industry. One example of this impact can be seen in the automotive industry, where it is expected that within the next two to three years, all new cars in China will be connected cars. Daimler, for instance, announced in May 2015 that it will make software from Baidu available in its Chinese Mercedes-Benz cars.[5] This is a significant development given the size of China's new car market, which is now the largest in the world. The growth in connected cars likely will also have a positive impact on China's high level of vehicle accidents, as connected car safety warnings can help drivers avoid risky driving behavior, and related telematics data can greatly benefit insurance companies and their customers with "pay as you drive" insurance models.

The connected home sector is also set to experience strong growth in China, where a high proportion of smartphone users would happily use mobile apps to manage home functions and where smart TVs teamed with mobile companies are enjoying increased popularity.

A large majority—more than 90 percent—also believe the IoT will affect their own company in several key ways, including by helping them:

- Create new products
- Add service offerings to their existing product lines
- Expand the enterprise ecosystem and technology partnerships
- Transform the company's entire portfolio to offer both new services and products
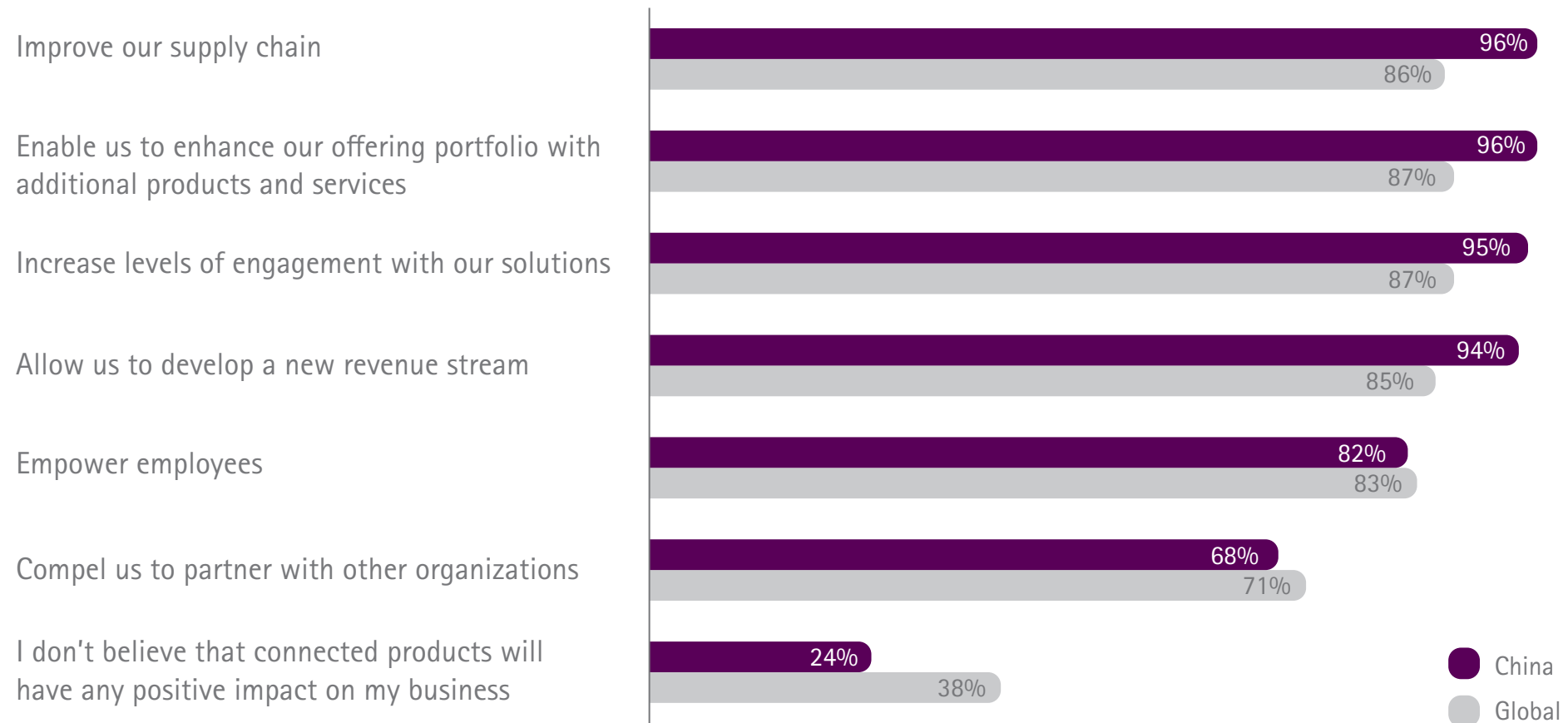
Within the next three years, more than nine in 10 Chinese executives expect the IoT to produce a wide range of benefits for their company (Figure 4). The two most common benefits are enabling the company to enhance its portfolio with additional products and services and improving the supply chain, followed by increasing levels of engagement with the company's solutions and allowing the company to develop a new revenue stream.

Figure 4: Benefits executives expect from the Internet of Things

Improve our supply chain
- China: 96%
- Global: 86%

Enable us to enhance our offering portfolio with additional products and services
- China: 96%
- Global: 87%

Increase levels of engagement with our solutions
- China: 95%
- Global: 87%

Allow us to develop a new revenue stream
- China: 94%
- Global: 85%

Empower employees
- China: 82%
- Global: 83%

Compel us to partner with other organizations
- China: 68%
- Global: 71%

I don't believe that connected products will have any positive impact on my business
- China: 24%
- Global: 38%

● China
● Global

According to our survey, many Chinese companies believe they are well on their way toward capitalizing on the IoT, with virtually all indicating their company is either e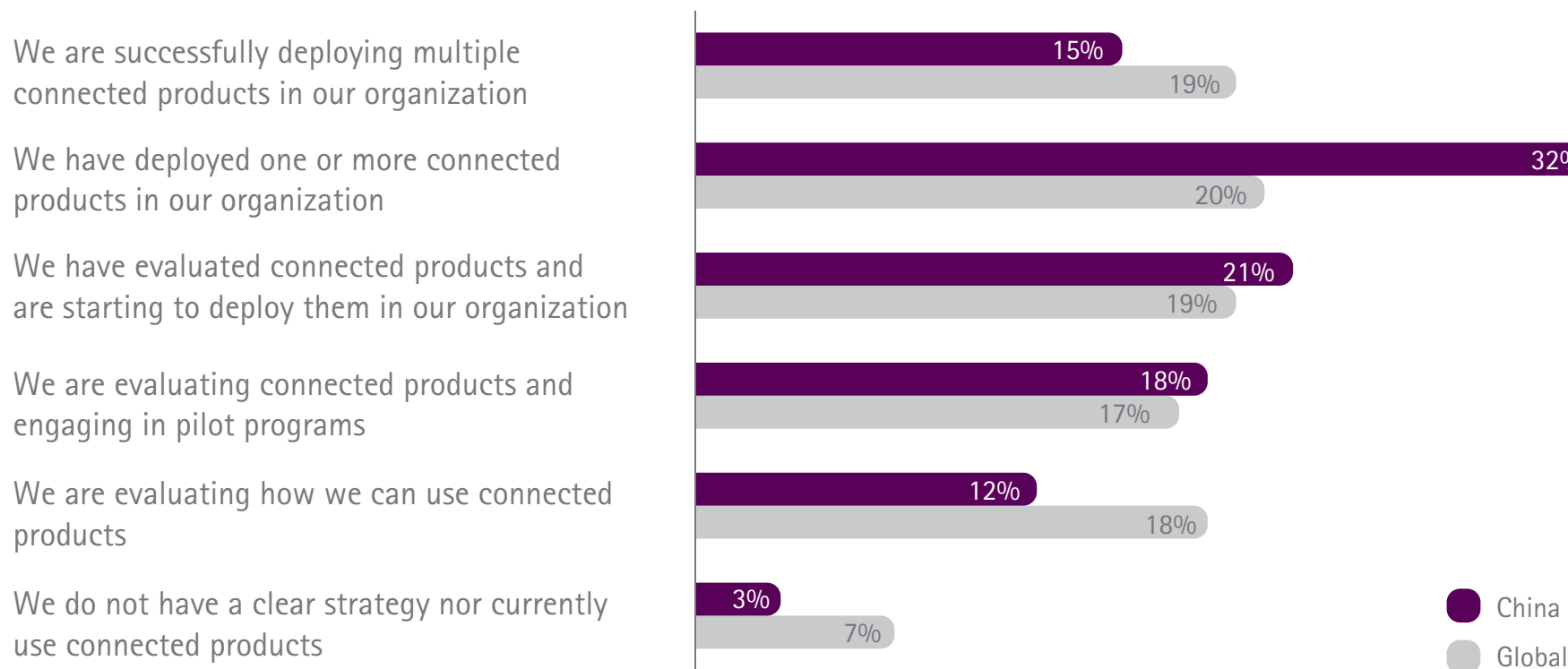valuating or actively using connected products (Figure 5). Just under half have deployed at least one connected product, three in 10 are evaluating how they can use the IoT (and in some cases, are engaging in pilot programs), and two in 10 have completed their evaluation and are moving to deployment.
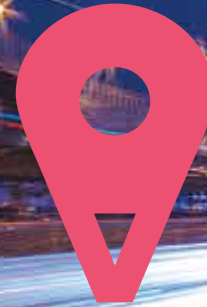
Despite the preceding, however, Chinese companies trailed other countries in having a unified IoT strategy (47 percent versus 55 percent)—a shortcoming that, if not addressed, can affect the overall benefits these companies can expect to generate in the short and long term.

Figure 5: Progress companies have made in capitalizing on the Internet of Things

We are successfully deploying multiple connected products in our organization
- China: 15%
- Global: 19%

We have deployed one or more connected products in our organization
- China: 32%
- Global: 20%

We have evaluated connected products and are starting to deploy them in our organization
- China: 21%
- Global: 19%

We are evaluating connected products and engaging in pilot programs
- China: 18%
- Global: 17%

We are evaluating how we can use connected products
- China: 12%
- Global: 18%

We do not have a clear strategy nor currently use connected products
- China: 3%
- Global: 7%

● China
● Global

Mobile Apps: Key to the Rise of the Digital Business

Given the phenomenal uptake of smartphones in China—evidenced by the rise of Xiaomi, which has grown from zero to selling 65 million of its smartphones in the space of five years—apps have become a key focus for Chinese businesses. In fact, Chinese executives participating in our survey recognize the importance of apps in the digital landscape, and do so to a much greater extent than those in other countries.

Chinese executives also see the importance of apps only growing in the coming years: Our research highlighted that nine in 10 respondents in China believe mobile apps will be the dominant interface of the future.

Use of all types of apps by Chinese companies appears poised to increase, with a majority of Chinese executives predicting all 10 mobile app types we asked about will be in use within the next two years—far outpacing the global average for each (Figure 6).
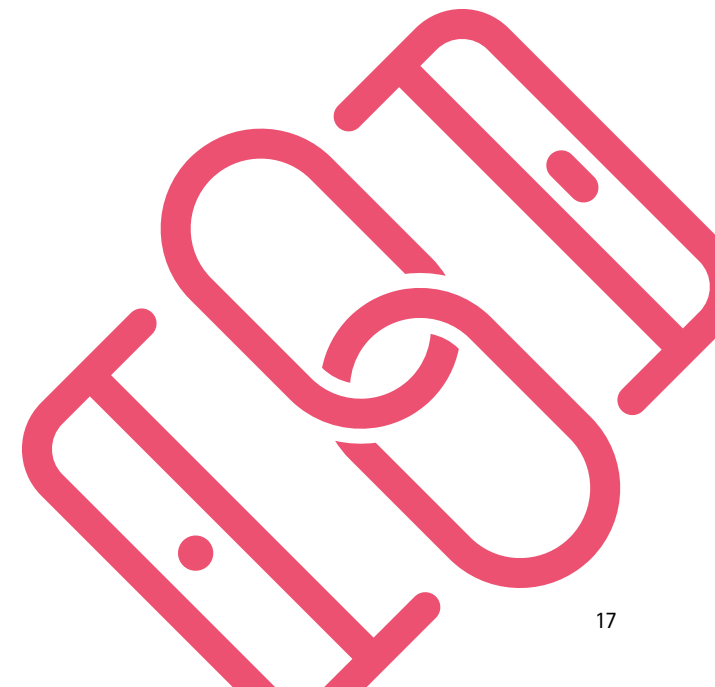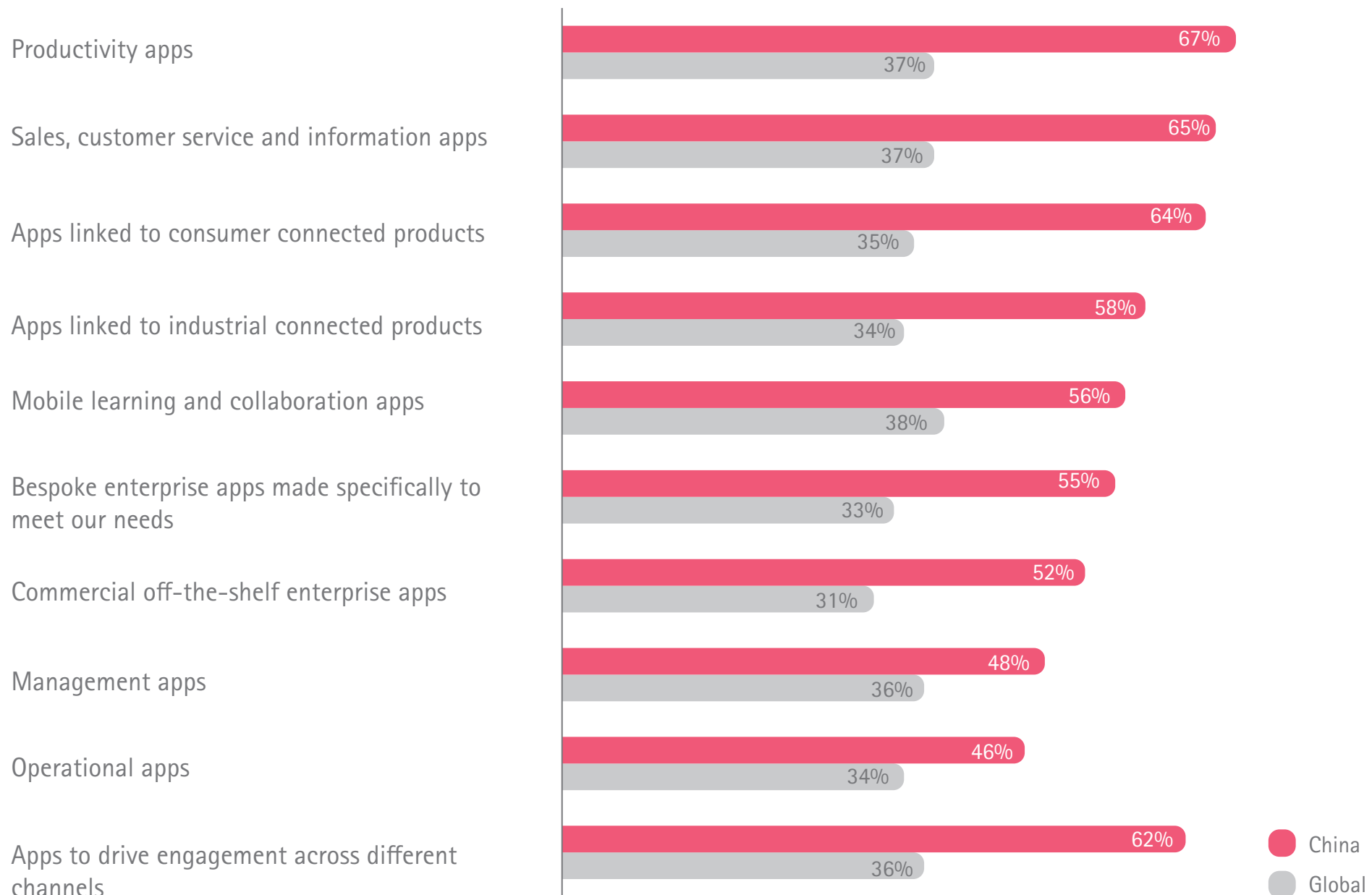
Figure 6: Expected future use of mobile apps in two years

	China	Global
Productivity apps	67%	37%
Sales, customer service and information apps	65%	37%
Apps linked to consumer connected products	64%	35%
Apps linked to industrial connected products	58%	34%
Mobile learning and collaboration apps	56%	38%
Bespoke enterprise apps made specifically to meet our needs	55%	33%
Commercial off-the-shelf enterprise apps	52%	31%
Management apps	48%	36%
Operational apps	46%	34%
Apps to drive engagement across different channels	62%	36%

Given the proliferation and successful uptake of apps in China, it's not surprising that a higher proportion of Chinese businesses have put in place measures that facilitate adoption. Chinese executives believe the biggest keys to fostering greater adoption of mobile apps across the enterprise are reliable and consistent performance, access to real-time data, a positive user experience, and security of the enterprise data used or accessed. Accordingly, seven in 10 said their apps have an intuitive user interface that enhances the user experience and that they make regular updates to functionality. Additionally, six in 10 said their companies have the following: a comprehensive testing program before launch, that includes real user feedback, to help ensure apps work reliably and consistently; the ability to upload and download real-time data to and from the cloud; and mobile security solutions that are integrated with existing enterprise security systems (Figure 7).

Furthermore, Chinese companies appear to be further ahead than their global peers in making it easier for employees to find and access apps—a critical requirement in China where app stores number in the hundreds. Fifty-seven percent of Chinese executives, compared with 46 percent of respondents globally, said they currently have in place an enterprise app store through which employees can access relevant apps.

However, our survey shows that Chinese companies still experience a wide range of challenges when building and managing apps (Figure 8). In fact, overall, Chinese executives were more likely than their global counterparts to consider most issues as challenges, with the following five standing out as particular concerns.

As with digital technologies in general, security remains the overriding challenge—cited by 68 percent of Chinese executives. That is 19 percentage points higher than the global averageand, by far, the highest percentage for any country represented in our survey.

Performance issues (such as crashes and bugs) and the fragmented nature of mobile (i.e., the multiple device types and operating systems apps must work with) were seen as a primary challenge by just over half of Chinese respondents.

Finally, operational issues (including difficulty building and updating apps efficiently) and integration issues with back-end systems were noted as challenges by slightly less than half of Chinese executives.

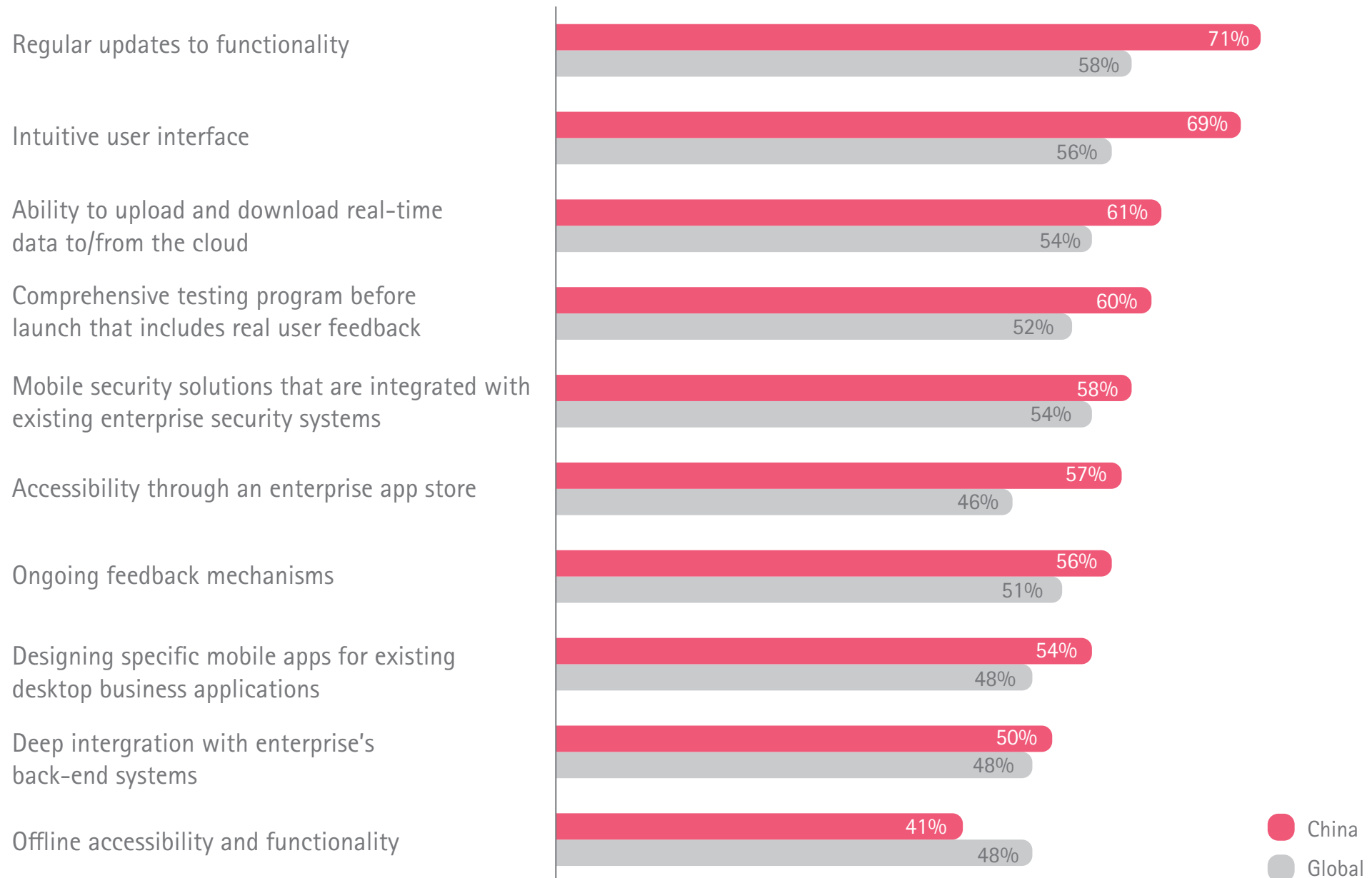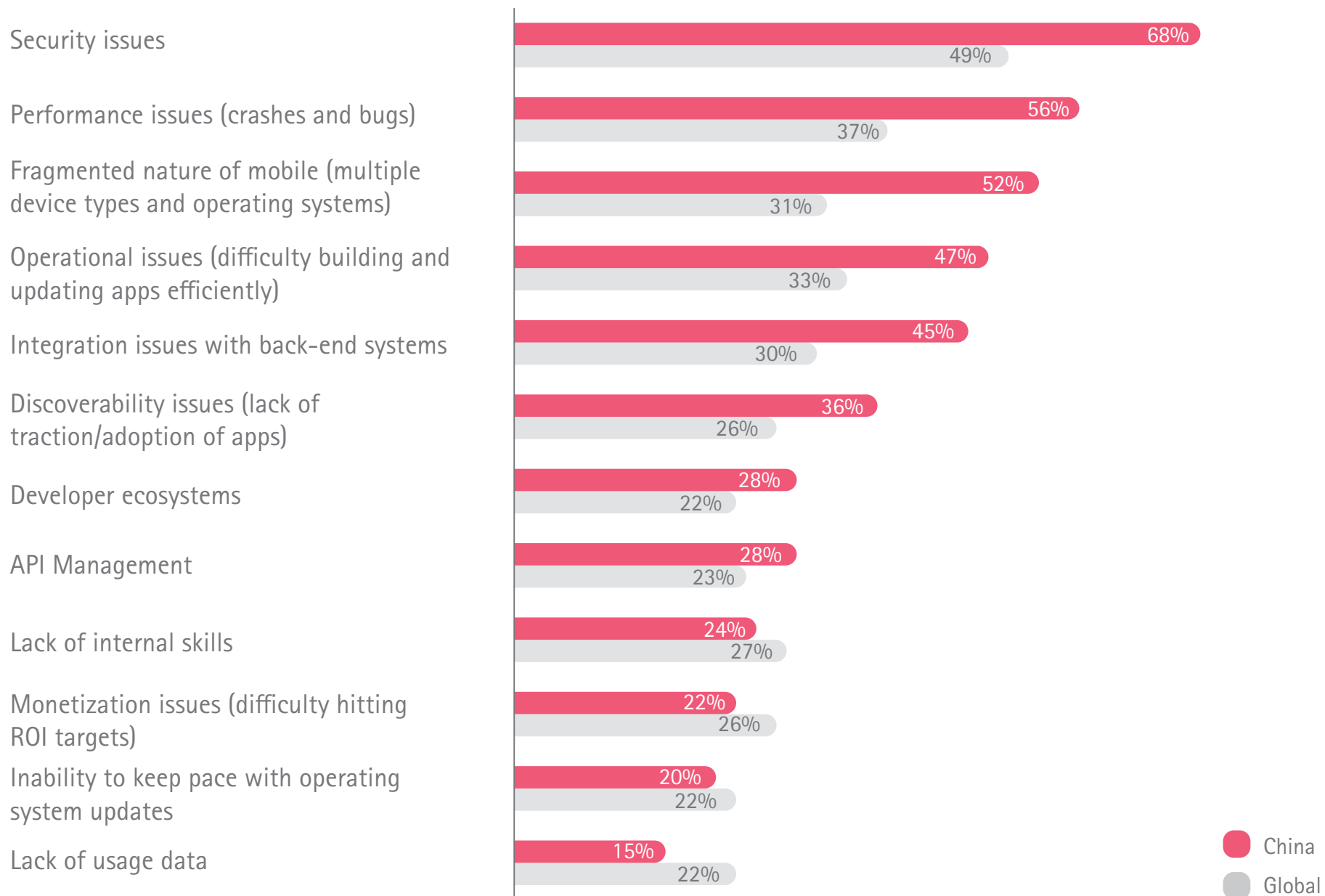# Figure 7: Capabilities in place to facilitate mobile app adoption

Capability	China	Global
Regular updates to functionality	71%	58%
Intuitive user interface	69%	56%
Ability to upload and download real-time data to/from the cloud	61%	54%
Comprehensive testing program before launch that includes real user feedback	60%	52%
Mobile security solutions that are integrated with existing enterprise security systems	58%	54%
Accessibility through an enterprise app store	57%	46%
Ongoing feedback mechanisms	56%	51%
Designing specific mobile apps for existing desktop business applications	54%	48%
Deep intergration with enterprise's back-end systems	50%	48%
Offline accessibility and functionality	41%	48%

China

Global

Figure 8: Challenges companies experience when building and managing mobile apps

Security issues
68%
49%

Performance issues (crashes and bugs)
56%
37%

Fragmented nature of mobile (multiple device types and operating systems)
52%
31%

Operational issues (difficulty building and updating apps efficiently)
47%
33%

Integration issues with back-end systems
45%
30%

Discoverability issues (lack of traction/adoption of apps)
36%
26%

Developer ecosystems
28%
22%

API Management
28%
23%

Lack of internal skills
24%
27%

Monetization issues (difficulty hitting ROI targets)
22%
26%

Inability to keep pace with operating system updates
20%
22%

Lack of usage data
15%
22%

● China
● Global

Conclusion

Like most other countries, China is experiencing increasing digitalization across society, business and government. But the pace and enthusiasm with which China has embraced digital technologies in the past five years has been nothing short of phenomenal.

Chinese consumers have quickly become comfortable in a digital lifestyle. A vast number of them across the country use digital technologies to obtain and share information, make decisions, and buy products and services. In short order, digital has become a core part of their daily lives.

The same applies to Chinese businesses. As our survey findings illustrate, Chinese companies' appetite for digital is stronger than that of most other countries, driven by executives' heightened recognition of technologies' potential to transform the way their organizations do business and to open up vast new opportunities for growth.

And, of course, digital's potential has not escaped the attention of the Chinese government, which is forging ahead with ambitious programs such as Internet+ designed to turbocharge an already robust economy.

Led by technology-hungry consumers, innovative companies such as Baidu, Alibaba and Tencent, and a highly supportive government, China is poised to become a digital powerhouse in the very near future, joining the ranks of the United States, the Netherlands, South Korea, and other countries that have been at the forefront of using the digital revolution to accelerate competitiveness and economic growth.

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