Digital China 2020:
An action plan for Chinese enterprises
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Digital technologies have the power to be the new driver of China's future growth. By harnessing the power of digital, China stands to grow its gross domestic product (GDP) by 3.75 percent by 2020 – the equivalent of adding US$527 billion to the economy during that timeframe. While China can benefit hugely from being digital, such opportunities have yet to be translated into Chinese businesses' real digital investments. Many lack a systematic approach to creating new business value from digital technologies. By building a digital transformation roadmap, Chinese enterprises can better position themselves to capture digital opportunities – and to thrive as part of "Digital China."

The digital growth driver

Digital technologies are the new driver of macroeconomic and industrial productivity growth in China.

China has grown its economy by taking advantage of the country’s demographic dividend and making significant capital investments. As China's economy matures, this approach becomes less viable. As a result, China has shifted its attention toward identifying new ways to improve its economy’s industrial productivity – by extracting greater output from existing labor and capital.

Improving productivity is key

In 2013, Accenture published a detailed analysis of China’s past and future economic drivers. The report showed that China’s previous economic growth was driven mainly by two production factors: large supplies of inexpensive labor, and considerable capital investments. However, labor shortages and a capital crunch have disrupted this pattern.¹

China’s demographic dividend arose mainly from its fast-expanding working-age population as well as the large-scale migration of labor from rural to urban communities. Although China’s total population will continue to grow, expansion of the working-age population is expected to slow. According to the 2015 World Population Prospects, released by the United Nations, China’s working-age population hit its peak in 2015 and has stagnated since (see Figure 1). What is more, its total population will also reach its peak of 1.416 billion people in 2028 and drop back to 1.004 billion by the end of this century.²

Figure 1. China’s labor market (millions)

Growth of China’s working-age population has begun to slow

Sources: Oxford Economics, United Nations

References

The dwindling labor supply, paired with rising wages, has put mounting cost pressures on Chinese companies. It has also weakened the global competitive advantage that these companies had previously enjoyed, due to inexpensive labor.

Capital investment growth has also slowed down in China (see Figure 2). Fixed asset investment, China’s economic engine over the last three decades, is now beset by overcapacity, high corporate debt and excessive real estate investment. According to a Standard & Poor’s study among the world’s 32 largest economies, China faces the highest risk of an economic downturn because of its overdependence on investment for gross domestic product growth. With such investments accounting for almost half of China’s GDP (45.9 percent in 2014), the growth engine could stall.1

In the light of these conditions, how can China drive sustained economic growth in the coming decades? Accenture believes that it will need to shift from growth fueled by factor accumulation to growth fueled by industrial productivity improvement. Simply put, Chinese businesses will need to extract greater output from their existing labor and capital supplies. Over the past 10 years, enterprises in China achieved rapid improvements in productivity, but they still lag behind industry in developed economies such as the United States and Japan. Enhancing productivity is vital to achieving sustainable economic growth throughout China’s economy.

Reference

Digital technologies can drive productivity improvements

In the long run, technological progress and innovation will be crucial for productivity-driven growth in China and will play a central role in the sustainable development of the nation’s economy. Japan and South Korea are sound East Asian examples of this. Both countries have invested steadily in adopting and innovating with technology since the 1950s. China can follow this same path. Indeed, analysis shows that by 2030, China expects to surpass the world’s most advanced countries in adopting technology and extending the technology frontier through indigenous innovation.

Just as steam engines and electricity revolutionized entire economies, digital technologies are transforming industries and economies today. Such technologies - including mobile Internet, cloud computing, big data, the Internet of Things and artificial intelligence - have delivered unprecedented efficiencies to governments and businesses everywhere. These technologies have also presented enterprises with new wellsprings of productivity and growth.

Accenture research across 11 countries in 2016 shows that businesses can spur new growth and benefit from digitalization. These countries need to strengthen workers' digital skills and knowledge, increase investments in digital assets such as software, hardware and communications equipment, and nurture an organizational culture that encourages digital entrepreneurship. If Chinese businesses can meet these imperatives, the nation’s GDP could grow by 3.75 percent by 2020, an improvement that would add the equivalent of US$527 billion – and the largest increase among the 11 countries in the study (see Figure 3).

Figure 3. GDP growth from investment in digitalization

*China has the most to gain from meeting digitalization imperatives*

<table>
<thead>
<tr>
<th>Country</th>
<th>Change in 2020 gross domestic product (%)</th>
<th>Change in 2020 gross domestic product (US$ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>3.7%</td>
<td>527</td>
</tr>
<tr>
<td>United States</td>
<td>2.1%</td>
<td>421</td>
</tr>
<tr>
<td>Japan</td>
<td>3.3%</td>
<td>146</td>
</tr>
<tr>
<td>Brazil</td>
<td>2.5%</td>
<td>120</td>
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<tr>
<td>Germany</td>
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<tr>
<td>United Kingdom</td>
<td>4.2%</td>
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<tr>
<td>Italy</td>
<td>3.1%</td>
<td>81</td>
</tr>
<tr>
<td>France</td>
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<tr>
<td>Australia</td>
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<td>34</td>
</tr>
<tr>
<td>Netherland</td>
<td>6.6%</td>
<td>13</td>
</tr>
</tbody>
</table>

Sources: Accenture and Oxford Economics, 2016

References

4 “China 2030”, World Bank, 2013
The Accenture Technology Vision comprises a longstanding analysis of key technology trends. This year’s Accenture Technology Vision highlights five emerging technology trends with a “People First” theme. The power of a digital business is no longer simply about incorporating these technologies into the organization, but about reinventing the organization - and the culture within it – to drive innovation, to create change, and to take the business forward into the next generation. Five key themes of the Accenture Technology Vision 2016 are:

1. **Trend 1: Intelligent Automation**
   Intelligent automation is the launch pad for new growth and innovation. Powered by artificial intelligence, the next wave of IT solutions will gather unprecedented amounts of data from disparate systems and - by weaving systems, data and people together - create solutions that fundamentally change the organization – what it does and how it does it.

2. **Trend 2: Liquid Workforce**
   Companies are investing in the tools and technologies they need to keep pace with constant change in the digital era. But there is typically a critical factor that is falling behind: the workforce. Companies need more than the right technologies; they need to harness those technologies to enable the right people to do the right things in an adaptable, change-ready and responsive liquid workforce.

3. **Trend 3: Platform Economy**
   The next wave of disruptive innovation will arise from the technology-enabled, platform-driven ecosystems now taking shape across industries. Having strategically harnessed technology to produce digital businesses, leaders are now creating the adaptable, scalable and interconnected platform economy that underpins success in a digital world.

4. **Trend 4: Predictable Disruption**
   Every business now understands the transformational power of digital. But few have grasped how dramatic and ongoing the changes arising from new platform-based ecosystems will be. It is not just business models that will be turned on their heads. As these ecosystems produce powerful, predictable disruption, whole industries and economic segments will be redefined and reinvented.

5. **Trend 5: Digital Trust**
   Pervasive new technologies raise potent new digital risk issues. Without trust, businesses cannot share and use the data that underpins their operations. Today go well beyond establishing perimeter security and incorporate a powerful commitment to the highest ethical standards for data.

These themes are the latest expression of our assertion that “Every Business is a Digital Business.” With the impact of digital technologies on the strategies and operational priorities for organizations worldwide, companies must begin to embrace a new digital culture to move forward and transform.
The Internet of Things (IoT) is a prime example of digital success. In the manufacturing sector, companies can use data generated by machinery, equipment and products to develop better-informed production plans, monitor manufacturing activities, and reduce machine failure and downtime. In the energy sector, the IoT can help companies connect demand and supply in real time so they can allocate energy resources in ways that support energy efficiency. In the healthcare sector, digital technology can turn the vision of telemedicine into a reality, enabling doctors and nurses to track patients’ conditions remotely and promptly respond to emergencies via connected devices.

Accenture forecasts that industries core to China’s macroeconomic growth stand to make significant gains by embracing digitalization (see Figure 4). The additional GDP generated as a result of digitalization, the digital output in those industries, will grow by a factor of 1.6 by 2020. The automotive, industrial equipment, infrastructure and transportation industry will lead, boasting a digital output of US$395.4 billion. The financial services industry will make a smaller contribution to this growth. However, its digital output will represent approximately one-third of the sector’s total output in 2020, making this sector the most digitalized of all the sectors in terms of the proportion of digital output.

Figure 4. Digital output in China’s six core industries (US$ billion, 2015 versus 2020)

*China’s automotive, industrial equipment, infrastructure and transportation industry will lead the way in the growth of digital output*

<table>
<thead>
<tr>
<th>Industry</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto, Industrial Equipment, Infrastructure and Transport</td>
<td>240</td>
<td>395</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>188</td>
<td>311</td>
</tr>
<tr>
<td>Consumer Goods and Services</td>
<td>169</td>
<td>252</td>
</tr>
<tr>
<td>Electronics and High-tech</td>
<td>129</td>
<td>195</td>
</tr>
<tr>
<td>Chemicals &amp; Refined Petroleum</td>
<td>89</td>
<td>142</td>
</tr>
<tr>
<td>Financial Services</td>
<td>67</td>
<td>101</td>
</tr>
</tbody>
</table>

Sources: Accenture and Oxford Economics, 2015
China has a solid digital foundation

China is already undergoing a digital transformation as a result of Chinese consumers’ enthusiasm for these technologies as well as the nation’s fast-growing digital infrastructure. Let us look at what is happening with Chinese consumers in more detail. They are particularly enthusiastic about search, entertainment, networking and online shopping technologies. Indeed, the activities that these technologies make possible have become almost a daily necessity for Chinese consumers. People pay for products using their mobile devices, attend online courses, make doctors’ appointments online and hail taxis using apps on their smartphones. By the end of 2015, China had 688 million Internet users and 620 million mobile Internet users. Among them, 413 million had shopped online, collectively generating US$623 billion in online retail transactions, which accounted for 12.9 percent of China’s total retail transactions. Moreover, 152 million Internet users enjoyed the convenience of digital health services by making doctors’ appointments, seeking medical advice or even working out using the Internet or mobile apps. Nearly 100 million people used apps for transportation.

Chinese consumers’ growing use of and demand for new digital technologies, new products and new user experiences is motivating Chinese companies to continuously innovate in their products, services and business models. These enterprises have an opportunity to use digital technologies to better serve their customers and create business value that was unimaginable in the past. Whereas Fortune 500 companies used to take 20 years on average to reach a market capitalization of US$1 billion, savvy companies in today’s digital world can get there in just four years. Chinese companies that can ride this digital wave will benefit.

But consumer enthusiasm for digital is only part of the picture. Growth in China’s digital infrastructure matters equally. Thanks to the development of “smart” and “wireless” cities, along with increased prevalence of mobile Internet, China has seen Internet penetration rates soar over the years. Furthermore, as part of its 13th Five-Year Program, China plans to increase its fixed broadband penetration rate by 30 percent and its mobile broadband penetration rate by 28 percent by 2020. The nation also plans to advance research on key technologies such as 5G and ultra-wideband, and to initiate the commercialization of 5G.

References

6 “37th Statistical Report on Internet Development in China, China Internet Network Information Center”, 2015
Recognizing the transformational impact of digital technologies on consumers, industries and society, the Chinese government has defined a “Digital China” vision. The vision comprises a number of national initiatives aimed at supporting digital transformation in a range of industries. The 13th Five-Year Program, released in March 2016, outlines a series of plans - from building a new generation of information infrastructure and upgrading traditional industries through to using advanced digital technologies to promote mass entrepreneurship and innovation. Below, we overview key projects defined in the “Digital China” Program.

**Made in China 2025**

Announced in 2015, Made in China 2025 aims to enhance manufacturing efficiency and raise manufacturing value through use of digital technologies and platforms. The plan was developed at a time when China’s manufacturing sector was struggling. China had seen its GDP growth slow. It had entered a new phase of economic development, in which the focus was shifting from quantity to quality and efficiency. In the face of such changes, China’s manufacturing sector has lost its low-cost advantage. Meanwhile, consumers’ needs have grown increasingly diverse, and pollution and inefficient energy use have become pervasive problems.

Given all these challenges, Chinese manufacturing companies must move up the value chain. Digital technologies such as the IoT, cloud computing, big data and the Industrial Internet can help them do so, by enhancing their operational efficiency, optimizing asset allocation and adopting “green” manufacturing practices. Even more important, such technologies will help companies swiftly and flexibly respond to ever-changing consumer demands. For instance, they can master on-demand production and mass customization, which will enable them to provide personalized and differentiated offerings to consumers. Digital technologies could even help Chinese manufacturers gain a stronger position in the global marketplace.

**Internet Plus**

While Made in China 2025 focuses on digitalization of China’s manufacturing sector, Internet Plus seeks to transform a broad spectrum of industries through use of digital technologies. The plan emphasizes more than just integrating mobile Internet, cloud computing, big data and the IoT into businesses in various traditional industries to enhance operational efficiency. It also calls for companies to use digital technologies to develop new sources of revenue, to change the way they produce their offerings and to identify and seize the most promising opportunities that may arise in the future.
Key challenges

Digital technology holds great promise as the new engine driving China's economic growth in the future - yet Chinese enterprises face a number of challenges on their digital journey.

Compared to its global counterparts, China stands to gain the maximum advantage from embracing digitalization. To support this move, Chinese enterprises will need to invest in digitalization now. Yet our research shows that they face obstacles.

Chinese enterprises fail to invest in digital

In 2015, Accenture surveyed CEOs across 32 countries. Only 52 percent of the respondents from Chinese enterprises said they would increase their company's IT investments in the next 12 months - a percentage much lower than that of companies based in other major economies (see Figure 5).8

Figure 5. CEOs’ intention to increase IT investment in the next 12 months

A relatively small percentage of Chinese CEOs plan to step up IT investment in the coming year

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nederland</td>
<td>90%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>86%</td>
</tr>
<tr>
<td>Australia</td>
<td>82%</td>
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<tr>
<td>France</td>
<td>82%</td>
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<tr>
<td>Germany</td>
<td>76%</td>
</tr>
<tr>
<td>Japan</td>
<td>70%</td>
</tr>
<tr>
<td>Italy</td>
<td>64%</td>
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<tr>
<td>Spain</td>
<td>54%</td>
</tr>
<tr>
<td>China</td>
<td>52%</td>
</tr>
<tr>
<td>United States</td>
<td>45%</td>
</tr>
</tbody>
</table>

Source: Accenture survey

Note: Why do United States executives display even less motivation to invest in IT than Chinese executives? US-based businesses and the national government have been investing heavily in digital infrastructure and technologies since 2010 - evidenced from their top rank in the Global Connectivity Index published by Huawei.9 The lack of interest from Chinese businesses in making immediate investments is startling, given that China ranks 23rd out of 50 countries on Huawei's Global Connectivity Index.

References

9 “2016 Global Connectivity Index”, Huawei, 2016
Why are Chinese enterprises hesitant to invest in digital technologies? Our secondary research and discussions with industry experts revealed three culprits:

• **Chinese companies lack a well-defined digital strategy:** Digital initiatives should support an organization’s digital strategy. A strategy for “being digital” involves more than just adding digital channels to the existing business or creating a new digital business independent of the existing one. A digital strategy is all about business transformation. It should start by rethinking and redefining what value needs to be delivered and then working backwards to the initial steps. Yet, many Chinese companies have not yet defined such a strategy.

• **Chinese companies are struggling to design a digital business model:** Once they have defined a digital strategy, companies must build a digital business model to support the execution of the strategy. A digital business model defines a customer value proposition, profit formula, digital resources available and metrics for assessing the impact of digitalization. High-tech companies have risen rapidly by establishing such business models, which differ markedly from the conventional business models used by many Chinese enterprises. For Chinese enterprises that have formulated a digital strategy, building a supporting business model will require careful consideration. They need to assess how digital technologies can bring new forms of value to their customers and how they can deliver that value profitably. They may even need to integrate their digital business models into their current organizations.

• **Chinese companies have yet to decode how to operate digitally:** Companies seeking to digitally transform must also set up the right digital operating model – which includes decisions regarding matters such as workforce capabilities, infrastructure and operations, and organizational culture. A company’s digital operating model is most valuable when it is aligned with its digital business model. But many Chinese enterprises are having great difficulty defining and implementing a digital operating model. For instance, they are unsure which functional and technology capabilities they will need to support the use of digital technologies throughout their organization. And they have difficulty attracting and retaining digital talent.
Accenture defines digitalization as the process of transforming digitized resources (such as connected facilities and processes) into sources of new value for customers, as well as new value for a business, such as fresh sources of revenue. The digitalization era is an extension of the IT and industrial IT eras. In the digitalization era, a company can use digital technologies such as big data, cloud computing, mobile technology and platforms to build customer- and data-driven businesses, spur innovation, bring better products, services and user experiences to customers, and achieve a unique competitive advantage. However, the digitalization era differs from the IT and industrial IT eras in many ways (see table below).

A company can be using digital technologies, but not be a digital business. For instance, perhaps a business has established an online sales channel, has equipped its sales force with tablet computers and has installed cloud-based software. All of these activities may help the enterprise run more efficiently, but they will not deliver the large-scale impact needed to drive improvements in the top line. Truly digital enterprises view such technologies as tools for driving revenue growth and process excellence at the same time, a combination that sharpens a business’s competitive edge.

References

11 “India’s Path to Digitalization: The Corporate Agenda”, Accenture, 2015
Taking action

Chinese enterprises must define a digital strategy, business model and operating model and execute effectively to master digital transformation.

Chinese companies need a roadmap comprising three major steps in the digital transformation journey: ambition, action and achievement (see Figure 6).

Figure 6. Digital transformation roadmap

*Chinese enterprises need a three-step roadmap to transform themselves in the digital age*

### Ambition
- Define digital value to be created

### Action
- Foster ownership, capabilities and mindset to deliver digital business value

### Achievement
- Build digital business and operating models

#### Digital strategy
- **Customer-driven growth**
  - Use digital to profitably engage connected customers

- **Process efficiency**
  - Use digital to optimize process costs

#### Ownership
- Make creation of digital value a C-suite priority
- Drive organization-wide awareness of digital transformation
- Project future revenues gained from delivery of digital value

#### Mindset shift
- Openness
- Collaborative experimentation
- Machine inclusiveness
- Trust & security

#### Capabilities
- Digital enterprises
- Digital customers

#### Digital business model
- **Customer value proposition** using digital
- **Profit formula** based on digital enhancement of customer gains
- **Digital resources** in the business ecosystem to deliver optimal value
- **Metrics** to reflect commitment and impact of digitization

#### Digital operating model
- **Workforce**
  - Agile, efficient and engaged employees
- **Infrastructure & operations**
  - Rapid, scalable, intelligent and connected IT infrastructure and technology stack
- **Culture**
  - Adaptable, collaborative and risk-taking corporate culture
Step 1. Ambition: Define digital value to be created

Chinese companies must start by defining how they will use digital technologies to create new business value. They can do so by analyzing a variety of factors, such as future technology developments, as well as industry and consumer trends.

Business leaders must identify how they will use digital technologies to improve revenue growth by profitably engaging connected customers. Executives should think about how to apply digital technologies to enhance existing customers’ experiences whenever they do business. They also need to identify ways to deploy such technologies to attract new consumers, optimize sales and distribution channels, drive ongoing product and service innovation and develop a new profit and pricing model. Business leaders can also brainstorm ways to apply digital to optimize process efficiency; for instance, by using digital tools to improve asset allocation.
Step 2. Action: Foster the ownership, mind-set and capabilities needed to deliver the new digital value

Once a company has defined its digital strategy by articulating the new forms of digital value it wants to create, it needs to foster ownership of the effort, encourage a shift in mind-set required to deliver the envisioned new value, and invest in the right digital capabilities. Together, these activities help the organization set the stage for executing the digital strategy.

Fostering ownership of the digital transformation effort

Creation of new digital value must be a C-suite priority, and senior executives need to drive organization-wide awareness of the company’s and digital strategy, all the way to front-line employees. To further foster a widespread sense of ownership of the transformation journey, executives can project future revenues to be gained from delivery of new digital value, and communicate those projections to everyone involved in the digitalization initiatives.

Adopting a digital mind-set

Digital technologies are catalyzing the convergence of industries and intensifying cross-industry competition, as evidenced by the rapid emergence of new competitors, markets and customers. At the same time, companies are also struggling with ever-greater business complexity, uncertainty and risk. To adapt to these changes, Chinese companies will need to adopt a digital mind-set, shifting their thinking on several fronts. For example, they will have to move away from self-reliance to openness to working with partners, such as customers, start-ups and even competitors, to innovate more quickly and efficiently. They will need to shift from linear development of new offerings to collaborative experimentation with partners on product and service design. In addition, they will need to move away from the notion that machines substitute humans toward recognizing the possibilities of machines and humans working together. And they must change from passive reaction to information security issues, such as data breach, to establish a protection mechanism up front.

Investing in digital capabilities

With new digital technologies constantly emerging, Chinese companies need to make calculated choices about their digital investments. Building a digital company and winning digital consumers should be their top priorities.

To build a digital enterprise, companies need to invest in digital capabilities such as the Industrial Internet, artificial intelligence and agile innovation – all of which can help them enhance operational efficiency. For example:

- **The Industrial Internet** can help companies improve manufacturing processes, minimize manufacturing downtime, enhance product design and after-sales service, and strengthen technical collaboration in the business ecosystems in which they participate.

- **Artificial intelligence** can help companies collect, identify, analyze and process large volumes of diverse data efficiently and to predict trends, enabling more informed decision making.

- **Agile innovation** can help companies innovate swiftly and flexibly. Key capabilities and resources supporting agile innovation include design thinking, scrum, digital collaboration platforms and collaborative prototyping tools.

To win digital consumers, companies should break away from their traditional product-driven development model, deepen their understanding of consumers’ implicit and explicit needs and deliver customized solutions and user experiences. The following digital capabilities will prove essential to these efforts:

- **Data insight**: By using business intelligence technologies such as predictive statistical modeling and self-learning processes, companies can integrate huge amounts of data from multiple sources. They can then conduct holistic, multi-dimensional analyses of the data to gain insights into how consumer preferences are changing and what they must do to attract and retain customers.

- **Omni-channel management**: Companies can invest in new technologies to integrate key data across multiple channels, including data related to inventory management, pricing, efficiency, customer behaviors and information sharing. Companies can also upgrade their existing technology infrastructure; for example, by investing in cloud computing, enhancing mobile support, improving inter-system compatibility and developing systems that proactively protect data security.
Step 3. Achievement: Deliver new value by building the right digital business and operating models

To deliver the new forms of value defined in their digital strategy, Chinese companies must build a commercially viable digital business model and a digital operating model. A digital business model involves understanding the following:

How digital technologies will enhance value for customers

In the business-to-consumer (B2C) realm, successful companies have analyzed large volumes of diverse data generated through social media platforms, such as Twitter and Facebook, to create new forms of value for customers, such as usage-based insurance for cars, time savings from shopping online, alternative last-mile delivery options such as drones, and so on. In the business-to-business (B2B) arena, successful manufacturing companies have used connected devices equipped with sensors and mobile networks to deliver greater value to their customers in such forms as advanced process control to improve product quality, or crowd forecasting based on advanced analytics to increase the accuracy of demand forecasting, and so on.

Which digital resources are available in the business ecosystem to deliver the enhanced value

In today’s digital world, consumers expect cutting-edge features and personalized, unique experiences with companies and their offerings - but they do not want to pay extra for these forms of value. To satisfy them, companies must identify which digital resources are available across their industry’s value chain that can best help them meet consumers’ rising expectations. Only then can they integrate such resources with their own assets to provide “affordable excellence” to customers.

How the company will maximize its profitability while delivering enhanced value

For successful digital companies, profit maximization is a game of “I” (the company) with “You” (the customer), not a game of “I” versus “You.” Customers are no longer merely takers of a company’s offerings but active co-creators of a company’s products or services. In this environment, an enterprise’s profits are strongly influenced by two factors: first, the level of efficiencies the company can achieve while creating new value for customers (from offering conceptualization to launch), and second, the share of wallet the business can earn by providing differentiated experiences that are co-created with customers.

Which metrics the company will use to assess the impact of its digitalization efforts

Purely financial indicators such as revenue and profit do not fully reflect the impact of a business’s digitalization efforts. The best digital companies define additional metrics - such as percentage of digital sales/total sales, digital customer profitability and margin, digital customer-engagement score, and so on - that help them assess the impact. Such metrics enable executives to gauge the digital performance of the organization overall and of its employees, in terms of an ability to deliver new value to customers according to the firm’s digital strategy.
A digital operating model complements a company’s digital business model, by reflecting decisions made about the enterprise’s workforce, its infrastructure and operations, and its organizational culture.

**Workforce**

Companies can use digital technologies, such as crowdsourced workforce virtualization, to orchestrate internal and external talent pools to deliver value to customers in new and better ways. For example, they can gain access to a large universe of talent on demand, and scale talent up or down quickly to adapt to changes in customer requirements. In addition, they can strengthen workforce engagement, by matching employees to tasks and activities that interest them most and that play to their best strengths.

**Infrastructure and operations**

Companies can use digital technologies to maximize automation in key operations, such as sales forecasting and organizational learning. And they can do so across different functions, such as data center, network center, manufacturing and security.

**Culture**

In an organization that has a digital culture, people are adaptable, collaborative and comfortable taking risks. Such a culture encourages people to cooperate with their internal and external counterparts to accelerate problem solving and work together in new and better ways. People are able to establish new behaviors that support the company’s digital transformation, such as performing digital diagnostic to assess digital levels across company, establishing digital diploma with electives for both core digital talent and others.
Red Collar

Founded in 1995 and based in Shandong, China, Red Collar specializes in manufacturing custom-tailored suits and shirts. Since 2003, the company has invested in building its own networking system to streamline its production line using digital technologies. Adhering to a business model focused on customer-to-manufacturing and online-to-offline innovation, Red Collar applies Internet of Things (IoT)-related technologies to mass-produce “made-to-measure” suits and shirts.

In this way, Red Collar has been able to remove the bottlenecks common in traditional custom-tailored garment production, which include low productivity, high intermediate costs, and inconsistent and unmanageable quality. 

The company’s production process starts with analysis of data on a customer’s body measurements and personal preferences. Before assigning jobs to relevant workers, the system automatically calculates and transforms the customer’s data into language that frontline workers recognize, such as the style of the suite, cutting procedures, and sewing procedures. Information flows smoothly across different production lines, and a unique radio frequency identification (RFID) tag carries and delivers all the data on the customer’s requirements. Because each garment has its own RFID, Red Collar can monitor every production process in real time to ensure quality. Moreover, the smart production system can allocate jobs suited to each worker’s skills, improving productivity and reducing operating costs.

As a result of Red Collar’s innovative business model and savvy use of digital technologies, the company can complete a suit in just seven working days after receiving the order. This performance has significantly improved the organization’s competitive strength, helping it to attract overseas customers. It now makes 3,000 tailored garments daily for its clients in New York and plans to double its highly customized production in the future.

Che Bao

Che Bao is China’s first third-party online car insurance platform providing usage-based insurance (UBI) services. It uses data on individual customers’ driving performance to offer packages that reward safe driving.

In China, about 70 percent of car accidents result from inappropriate driving behaviors such as speeding. The usage-based business model promotes safe driving by offering lower insurance premiums to customers who demonstrate safe driving behaviors.

Che Bao collects data on a wide range of indicators of safe driving performance, such as fuel consumption, speed, mileage, driving time and location and the number of hard brake applications. By installing a smart wireless device in the vehicle that is compatible with hundreds of different car models, Che Bao has automated the collection of such data. The system translates the information into driving-safety scores without requiring human intervention. Safe drivers earn daily premiums that they can apply to offset the following year’s insurance costs.

As of September 2015, this strategy has attracted three million drivers to UBI services across China.

References

Digital technologies promise to turbocharge China’s economic growth by enabling dramatic improvements in industrial productivity within key industries.

Acknowledging digital’s potential, the Chinese government has outlined a new vision – “Digital China” – in its latest economic plan. To make the vision a reality, Chinese enterprises will need to embrace digitalization, including investing in digital technologies that generate fresh revenue streams by delivering new forms of value to customers. By moving up the value chain in their industry, companies will not only support China’s digital vision, they may also strengthen their competitive position in the global marketplace.

But to gain these advantages, Chinese businesses will need to undergo a digital transformation – one that starts with defining their digital strategy. They must then foster a sense of ownership of the strategy throughout their organization, as well as invest in the digital technologies and capabilities required to implement the strategy – and make the corresponding mind-set shifts. Finally, they need to build a digital business model and a digital operating model to ensure that their digital strategy delivers on its promise.

This transformation cannot happen overnight. Rather, it will require long-term planning and rigorous implementation. Using a three-step roadmap can help to guide companies on their digital journey – and navigate the shifting landscape as digital technologies continue to advance.
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