

RIDING THE WAVES OF DISRUPTION

Business ecosystems and competitive
advantage in the digital economy

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Preface

Business ecosystems and competitive advantage in the digital economy is an Economist Corporate Network (ECN) report. It is based on desk research and consultation with experts in Tokyo. The report is sponsored by Tata Consultancy Services (TCS). The findings and views expressed in this report are those of the ECN alone and do not necessarily reflect the views of the sponsor.

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- Juergen Brock, former CMO, Fujitsu Americas, Fujitsu Global Marketing Headquarters
- Jeffrey Char, CEO & founder, J-SEED Ventures
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- Yuko Harayama, professor emeritus, Tohoku University
- Keizo Ishii, CDO & vice-president, Coca-Cola Japan
- Fami Lee, public affairs leader, IKEA Japan
- Yuki Takishima, director, IT Innovation Division, Ministry of Economy, Trade and Industry of Japan
- Akemi Tsunagawa, CEO, Bespoke
- Tetsuo Tsuneishi, chairman, Tokyo Electron
- Michael Wade, professor of Innovation and Strategy, Cisco Chair in Digital Business Transformation, International Institute for Management Development (IMD)

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Key findings

- The digital economy is growing rapidly; its share of GDP in most developed countries is already around 7%. Among Asian countries, South Korea is one of the leaders, with value added by the ICT sector at 10% of GDP.
- China is becoming a serious player in the field of start-up ecosystems, and Beijing and Shanghai are among the top start-up ecosystems globally.
- The principal technologies driving the digital economy are artificial intelligence (AI), the Internet of Things (IoT) and cloud. Overall, US\$13trn could be added to global GDP between 2017 and 2030 through automation and AI.
- Annual revenue of the IoT market is predicted to reach US\$520bn by 2021 and the economic impact of connected devices could be as much as US\$11.1trn annually by 2025.
- Full implementation of measures for the promotion of the digital economy could bring an additional ¥130trn (US\$1.2trn) to Japan's GDP between 2018 and 2030.
- Japan is seeing a dramatic increase in electronic commerce (EC): both B2C and B2B EC markets are growing at about 8% year on year. Flea market C2C EC rose by 32.2% in 2018.
- Given the scale and speed of digital disruption, the nature of competition and collaboration in business is changing. Platform ecosystems are becoming a principal partnership model.
- Close to 90% of Japanese companies feel the need to partner with other firms to advance their digital capabilities. Over 40% believe that the best partner is either an IT vendor or system integrator; slightly over 19% would favour a tech venture.
- With all industries facing disruption, digital transformation is essential in securing competitive advantage. However, it cannot be achieved by creating independent "digital units" or by launching "digital" products disconnected from the value chain. Transformation is successful only when it addresses the following key components: business model, value chains, customer relationships and company culture.
- Effective transformation of the customer experience incorporates both physical and digital aspects, which many companies tend to overlook when developing their strategies.

Introduction

Global trends in digitalisation and the strategic imperative for companies to respond

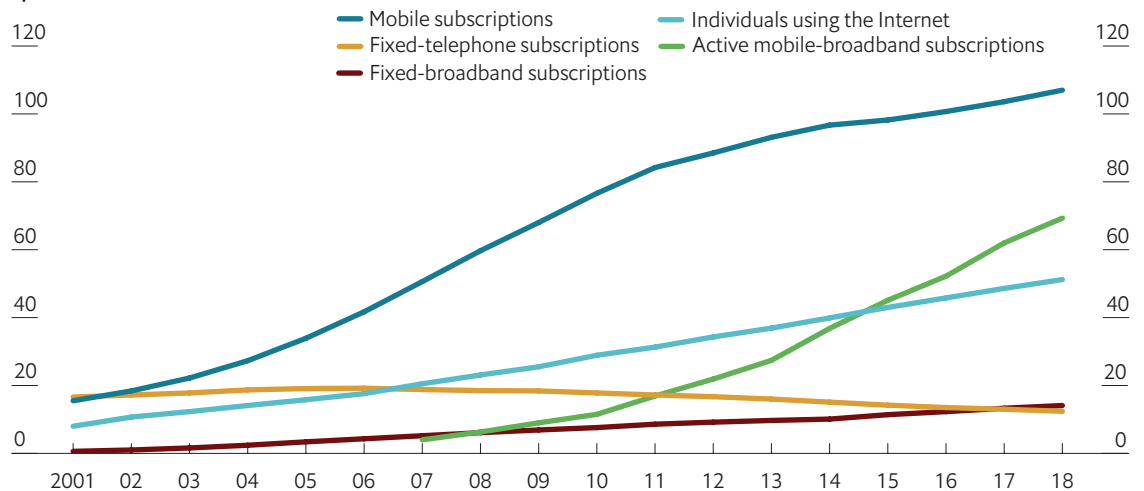
Mobile-broadband subscriptions globally went from 4% in 2007 to nearly 70% in 2018, which has created a range of new industries and opportunities for collaboration among businesses gathering data from all the connected mobile devices.

Digital technologies pervade modern society and are disrupting the business world like no other previous technological innovation. Organisational structures, business models and the value proposition of companies are changing fundamentally and no industry is untouched by digital revolution. So, what are the recent trends in digitalisation globally and what is the true potential of the digital economy?

General estimates put the size of the digital economy in 2017 at US\$12.9trn and forecast it to rise to US\$23trn by 2025.¹ In the US alone, the digital economy accounted for 6.9% of GDP or US\$1.35trn in 2017.² It is already bigger than such industries as construction and retail and it supports 5.1m jobs or 3.3% of total US employment.

The development of global infrastructure for the digital economy is steadily increasing. Particularly striking is how mobile-broadband subscriptions globally went from 4% in 2007 to nearly 70% in 2018 (see chart below). This has created a whole range of new industries and opportunities for collaboration among businesses that gather data from all the connected mobile devices.

Global ICT developments in 2001-18
(per 100 inhabitants)



Source: ITU Statistics (<https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>).

The digital economy in Asia and Japan

The size of the digital economy in many Asian countries is comparable to those in the US or Europe. In China, the value of the information and communications technology (ICT) sector stands at around 7%.³ South Korea is a global leader; the share of value added by the ICT sector to the South Korean economy is above 10%. In ASEAN countries, it is estimated that the digital economy will add around US\$1trn to GDP by 2025.⁴ Having the largest share of the population globally, the Asia-Pacific region

¹ https://www.huawei.com/minisite/gci/en/digital-spillover/files/gci_digital_spillover.pdf

² Digital economy here includes: digital-enabling infrastructure (hardware, software, IoT devices, etc.), e-commerce (B2B, B2C, P2P) and digital media. Source: <https://www.bea.gov/news/blog/2019-04-04/digital-economy-accounted-69-percent-gdp-2017>

³ <https://www.imf.org/~media/Files/Publications/WP/2019/wp1916.ashx>

⁴ https://eiuperspectives.economist.com/sites/default/files/digital_platforms_and_services.pdf

Riding the waves of disruption

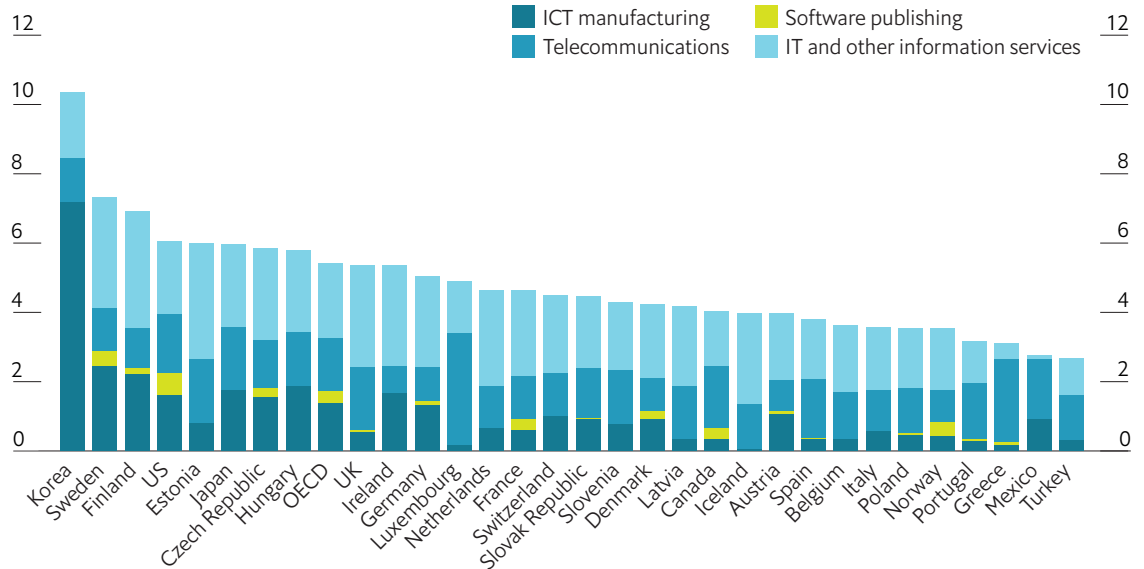
Business ecosystems and competitive advantage in the digital economy

Having the largest share of the population globally, the Asia-Pacific region has tremendous potential to harness the main commodity of the digital economy: data generated by the users.

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Value added: ICT sector and sub-sectors in 2015

(% of total value added at current prices)

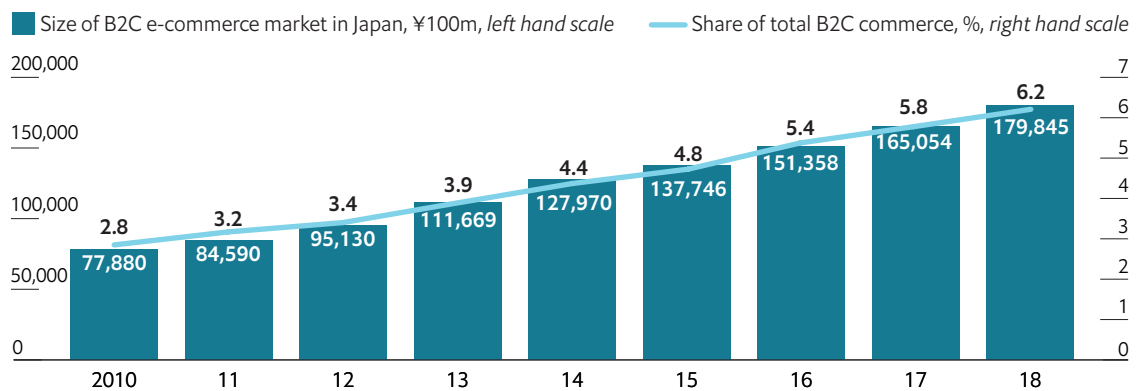


Source: OECD Digital Economy Outlook 2017.

Compared to other countries in the region, Japan is well-positioned to lead the way in capitalising on the new technologies. In The Economist Intelligence Unit's Asian Digital Transformation Index 2018, Japan is outperformed only by Singapore and occupies first position in the rankings by industry connectivity.⁵ Japan's infrastructure for further development of digital services is already highly advanced, with levels of broadband penetration and mobile subscriptions among the highest in the world.

One of the areas of the digital economy that is seeing a dramatic increase in Japan is electronic commerce (EC). In 2018 the size of the domestic B2C EC market reached ¥18trn (up by around 9% year

Growth of Japan's B2C e-commerce market



Source: Ministry of Economy, Trade and Industry of Japan (2019).

⁵ <http://connectedfuture.economist.com/wp-content/uploads/2018/12/ADTI-whitepaper.pdf>

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Business ecosystems and competitive advantage in the digital economy

More than 80% of Japanese companies rely on legacy information systems that are cumbersome to operate and infrequently updated.

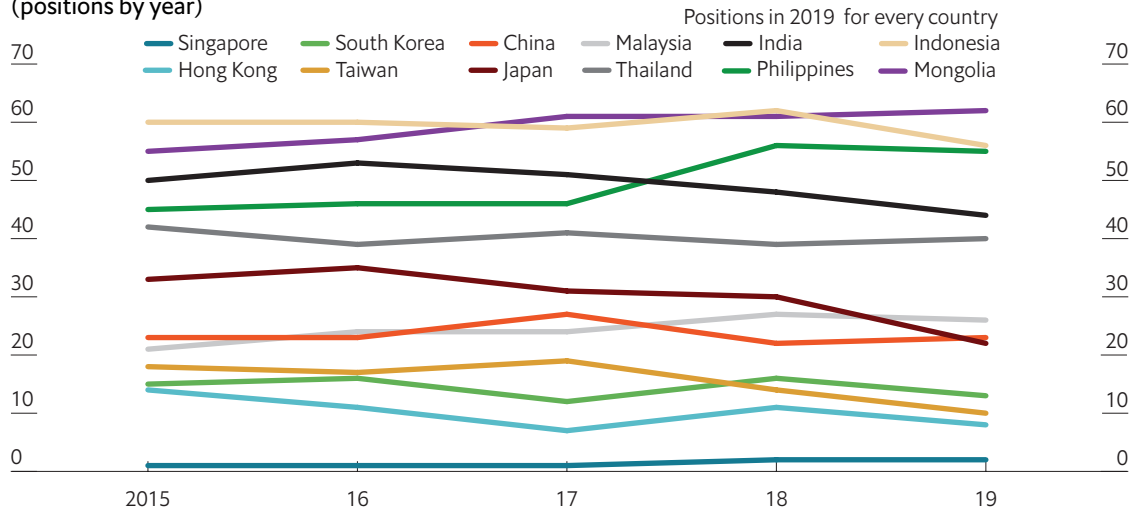
Full implementation of measures for the promotion of the digital economy could add ¥130trn to Japanese GDP between 2018 and 2030.

on year). EC's share of all commercial B2C activity rose threefold from 2010 to 6.2%, while the B2B EC market expanded by 8.1%, to ¥318.2trn in this period, accounting for around 30% of all commercial B2B transactions. The C2C EC market is expanding even more quickly, reaching 32.2% in 2018, boosted by the new generation of applications and services for the sale of second-hand goods, such as Mercari.⁶

However, there is concern that the full potential of the digital economy is not being exploited and that Japan is beginning to lag behind in terms of digitalisation. IMD's World Digital Competitiveness Ranking 2019 places it in 23rd place out of the 63 countries covered, and in the Asia-Pacific region it is well behind Singapore, South Korea and China, occupying only 6th position out of all 12 countries of the region.⁷ Most Asian countries are improving in terms of digital competitiveness, while Japan appears to have reached a plateau.

Asian countries in the IMD Digital Competitiveness Rankings

(positions by year)



Source: IMD World Digital Competitiveness rankings 2019.

Both the Japanese government and the private sector understand the urgency and importance of driving digital transformation. One of the largest barriers to this is the usage of outdated information systems. More than 80% of Japanese companies rely on legacy information systems that are cumbersome to operate and infrequently updated. Moreover, almost 70% of Japanese companies understand that this prevents them from achieving digital transformation—or, at least, significantly slows it down.⁸

A recent study group for digital transformation organized by the Ministry of Economy, Trade and Industry of Japan (METI) concluded that Japan will start losing up to ¥12trn annually if Japanese companies fail to achieve successful digital transformation by 2025. And it is not only business that has to respond to the challenges of digital disruption. “Another point is digital transformation of the government itself. We provide lots of services, such as education, medical and healthcare; digital technology can realise one-to-one communication or customisation of [these] services,” asserts Yuki Takishima, director of IT Innovation Division, METI. Full implementation of measures for the promotion of the digital economy could add ¥130trn to Japanese GDP between 2018 and 2030.⁹

⁶ <https://www.meti.go.jp/press/2019/05/20190516002/20190516002-1.pdf>

⁷ <https://www.imd.org/globalassets/wcc/docs/release-2019/digital/imd-world-digital-competitiveness-rankings-2019.pdf>

⁸ <https://www.meti.go.jp/press/2018/09/20180907010/20180907010-2.pdf>

⁹ <https://www.meti.go.jp/press/2018/09/20180907010/20180907010-2.pdf>

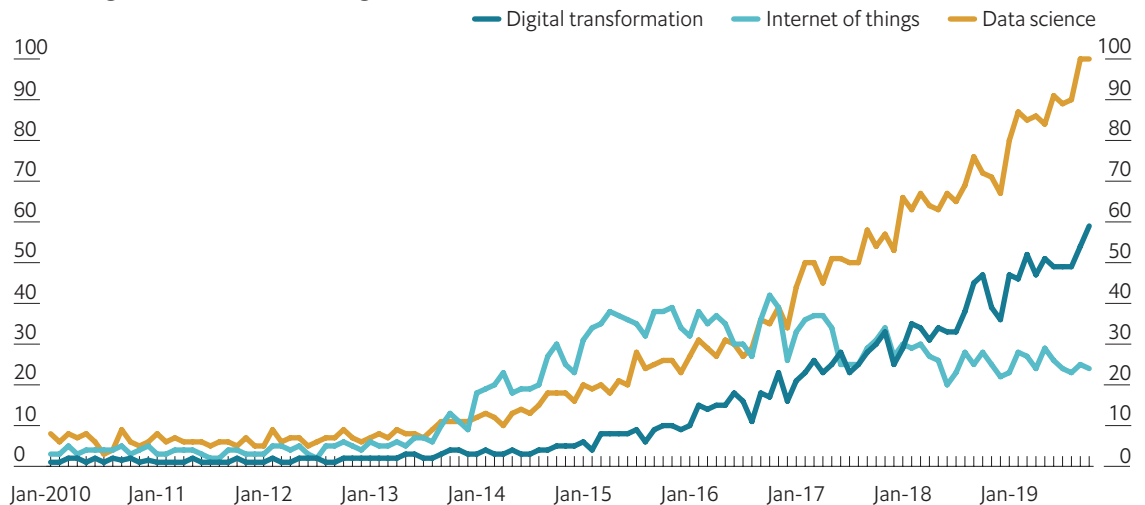
Chapter 1

From the 4th Industrial Revolution to Society 5.0

The potential of IoT, AI and other emerging digital technologies

Among the many emerging digital technologies, cloud, IoT and AI stand out and are expected to bring the greatest benefits to both business and society. Executives see the highest value in adopting AI and IoT solutions, while consumers expect improvements in public health services and energy security and sustainability. Google search statistics indicate that there has been a simultaneous rise in the interest in data science, IoT and digital transformation.

Evolving online interest in digitalisation



Source: Google Trends.

What is significant about the new wave of digital technologies is that they have a strong connection to the world outside of the internet and involve more interaction with real, physical things.

As Yuko Harayama, professor emeritus at Tohoku University, explains: “It’s not just products and services, but you’re surrounded by digital technology. If you look at your everyday life, you are so dependent on digital technology. You don’t see the technology as such but, invariably, there’s something behind you through your interactions at home, at the office or while taking the calls, supporting you with more information, with more recommendations and guiding the way you will be acting.” IoT devices literally connect everyday life to the internet, which, in turn, allows for the exponential growth of the amount of gathered data that feeds into AI algorithms and makes them more sophisticated and powerful. This synergy only works if the companies and government entities behind them operate successfully in both real-world and digital spaces.

Overall, US\$13trn could be added to global GDP between 2017 and 2030 through automation and AI.

How much is AI and IoT?

Fastest-growing and declining start-ups by sub-sector; early-stage funding deals over five years.

Top four fastest-growing start-up sub-sectors	Top four declining start-up sub-sectors
Advanced manufacturing & robotics (107.9%)	Adtech (47.9%)
Blockchain (101.5%)	Gaming (40.4%)
Agtech & new food (88.8%)	Digital media (38.9%)
AI, big data, & analytics (64.5%)	Edtech (15.8%)

Source: Startup Genome (2019): *Global Startup Ecosystem Report 2019*.

A recent special report by *The Economist* rounds-up the estimates of the size of the IoT market and the implications for the economy, concluding that, "IoT aims to do for information what electricity did for energy." As with most technologies when in their infancies, opportunities are huge, and the growth rate will be tremendous. Annual revenue of the IoT market is predicted to reach US\$520bn by 2021 and the economic impact of connected devices could be as much as US\$11.1trn annually by 2025.¹⁰ There will be 125bn connected devices in the world by 2030, and around 1trn by 2035, outnumbering humans by more than 100 to one.¹¹ Operating them in real time and ensuring security against cyber-attacks would be challenging, but all the more important for any company in the industry.

Apart from the market for connected devices, adoption of IoT technologies creates a vast amount of data that can be used by companies—by 2025 it is forecast to reach 175 zettabytes, or ten times the data generated in 2016.¹² "Using data [analytics] changes business process, because, before that, we used a deductive approach and using data is a kind of induction, so we don't know what's going on and what happens. We need to do the business itself in a different way and behind the scene there's a basic change in the process," says Katsumi Emura, NEC Fellow.

All these data cannot be processed by humans and this has led to the developments we have seen in AI. Global spending on AI technologies will reach US\$80bn by 2022, with retail and manufacturing companies, banks and healthcare providers investing the most in AI solutions.¹³ The majority of that investment (US\$13.5bn) will be in AI applications and software platforms, followed by hardware (servers) (US\$12.7bn). Overall, an additional US\$13trn could be added to global GDP between 2017 and 2030 through automation and AI.¹⁴

This growth, however, will be seen only by the front-runners in AI enablement. The companies that fully integrate AI technologies into their operations in the next 5-7 years will see their cashflows double by 2030, while the cashflows of slow adopters will decline by 20% over the same period.

Society 5.0: the largest ecosystem

New digital technologies serve as the basis for the concept of Society 5.0, which is formulated as "a vision of human-centred future society promoted by the Japanese government to achieve an advanced society, which realises economic growth and solves social challenges, by advancing towards [the UN's] Sustainable Development Goals (SDGs) through the increasing convergence of the physical world and the virtual world". Yuko Harayama, a leading expert who has advised the Japanese government on this subject, comments: "In the concept of Society 5.0, we try to think not only about the structure of the

¹⁰ <https://www.economist.com/technology-quarterly/2019/09/12/drastic-falls-in-cost-are-powering-another-computer-revolution>

¹¹ <https://www.forbes.com/sites/louiscolombus/2018/12/13/2018-roundup-of-internet-of-things-forecasts-and-market-estimates/#e775a757d838>

¹² <https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagate-data-age-whitepaper.pdf>

¹³ The Economist Intelligence Unit, Telecommunications Report 2019. <http://www.eiu.com/industry/article/1248015108/connected-devices/2019-05-13>

¹⁴ https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-ISSUEPAPER-2018-1-PDF-E.pdf

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“We think there is a huge governance gap between the private sector and our regulatory framework, and we need to address that.”
Yuki Takishima,
director, IT
Innovation
Division, METI.

society, but how to make people engage to design the future of society, backed by science, technology and innovation. And, for that, we need to combine power coming from the business sector and from civil society. You need to have really strong infrastructure and you need to discuss the institutional framework to ensure that it is used in the best way, not only for the business community, but for society itself. That means we have to prepare the institutional framework, including how to manage the data in a way that we can take care of privacy and personal issues.”

The issue of how to regulate this ecosystem is a major hurdle to its further development. “How to adjust digital transformation in the private sector and how to promote innovation through digital transformation? We now think there is a huge governance gap between the private sector and our regulatory framework, and we need to address that,” says Yuki Takishima. In that sense, the main challenge comes not from the technology side, but from the legal and, broadly speaking, cultural points of view.

Chapter 2 Team play

Business ecosystems in the digital economy

“Digital is also about teaming up; digital transformation leaders don’t go alone and one of the success factors for them is teaming up and working with external technology partners and suppliers.” Juergen Brock, former CMO, Fujitsu Americas, Fujitsu Global Marketing Headquarters.

With the scale and speed of digital disruption, it is clear that even the largest companies cannot compete with others on their own—collaboration is essential to success. Annabelle Gawer, professor of Digital Economy at the University of Surrey, uses a vivid sporting analogy for platform ecosystems and the nature of digital competition:¹⁵ previously, competition in business was like tennis, where one player plays against another, but now the reality is more akin to a football game, where one team (i.e. one digital platform, like Apple iOS) competes against another team (i.e. another platform, like Google Android). The main opportunity for smaller companies comes from the ability to join bigger, stronger teams and gain the technical capabilities to digitalise their businesses. At the same time, the leaders in digital technologies are only able to stay in their roles if they have a good team playing for them. “Digital is also about teaming [up]; digital transformation leaders don’t go alone and one of the success factors for them is teaming up and working with external technology partners and suppliers,” agrees Dr Juergen Brock, former CMO, Fujitsu Americas, Fujitsu Global Marketing Headquarters.

What is a business ecosystem?

Today, the term “business ecosystem” encompasses the business model where “companies co-evolve capabilities around a new innovation: they work co-operatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations”.¹⁶ This concept has become a vital part of organisational theory in the 21st century, as more and more industries are being affected by the new possibilities for integrated communication and information management, allowing companies to build deeper and more sophisticated relationships. These advances have become possible because of the emergence of digital platforms that “enable a connected ecosystem of customers, vendors and third-party players, simultaneously supporting and benefiting from the key components of a digital society”.¹⁷

Creating an ecosystem is a long and complicated process that requires strategic thinking. “The danger is that it becomes superficial. If you have the company, you can have partnerships with start-ups and incubators; you can do a little bit of innovation here, you can have a lab that’s testing new technologies there—you have all these little things, but the problem is that they don’t really impact the main thing. When they try to come in, they often bounce off, they never make it in, because the core company, the ‘mothership’ is very resistant,” says Michael Wade, Cisco Chair in Digital Business Transformation at IMD.

Ecosystem-building has to start with the vision of what the company aims to achieve. As explained by Katsumi Emura: “We see the change of innovation process. Today, we start from the vision and issue-setting. We must understand who are the related stakeholders involved and then we can create

¹⁵ <https://eiuPerspectives.economist.com/technology-innovation/state-global-digital-economy>

¹⁶ <https://hbr.org/1993/05/predators-and-prey-a-new-ecology-of-competition>

¹⁷ <https://www.gsmainelligence.com/research/2019/09/collaborative-platforms-for-digital-societies-in-asia-pacific/806/>

“Today, we start from the vision and issue-setting. We must understand who are the related stakeholders involved and then we can create the business ecosystem. If we can clearly set the target, we can invite the right people to join.”
Katsumi Emura,
NEC Fellow.

the business ecosystem. If we can clearly set the target, we can invite the right people to join. We’re trying to do that; for example, NEC is now pushing the value-chain innovation—reducing the waste of food or other products. We need to connect everything from production to consumption, and then we can understand who is who within the group. After that, we can communicate with different digital companies and invite them to join our team.”

One industry where platform ecosystems play a key role in realising the full potential of digital technologies is Mobility as a Service (MaaS). The prominent example here is Monet Technologies, a joint-venture between Japanese automotive giant, Toyota, and multinational conglomerate, SoftBank, created with the aim of promoting cross-sector collaboration in developing autonomous vehicles and the MaaS concept. Since its creation in 2018, major Japanese auto manufacturers Mazda, Suzuki, Subaru, Isuzu, Hino and Honda have bought stakes in the company, and today Monet is a consortium of 355 companies. Meanwhile, the Renault-Nissan-Mitsubishi alliance is teaming up with Google’s self-driving development company, Waymo.

Start-up ecosystems in Asia and Japan

A particular phenomenon that has emerged with the developments in digital technologies is the start-up ecosystem. A classic example is Silicon Valley. Too often, governments or large companies have tried to emulate its success by replicating its strategy and methods, which rarely delivers positive results. It is becoming clear that there will be no “next Silicon Valley”, but 30 promising local ecosystems globally have the potential to develop into sub-regional or full-scale regional hubs of innovation.¹⁸ On a regional level, China is becoming a much more serious player in the field of start-up ecosystems; two of its major cities (Beijing and Shanghai) are featured in the top ten ecosystems globally, with Beijing making it into the top five. This is in line with the study of Asian innovation ecosystems by Hemmert et al. (2018) that establishes key similarities and differences between Silicon Valley and hubs in Asia (Tokyo, Seoul and Beijing).¹⁹ While all three major Asian innovation hubs have in common such traits as strong government support, a lack of a developed “entrepreneurship culture” (failure acceptance) and a high level of human capital development, Beijing differs significantly from both Seoul and Tokyo in being a more globally oriented city.

The dominance of the Japanese business landscape by large, powerful corporations plays an important role in how start-up ecosystems evolve in Japan. In recent years, even the most conservative of companies has started to work in the field of open innovation; 88.5% of Japanese companies feel the need to partner with other firms to advance digital business and 41.9% of them think that the ideal partner is either an IT vendor or a system integrator, while 19.4% would go for a tech venture. The majority seeks technological support (31%) or help in realising their ideas (28%) from their partners.²⁰

A seasoned expert in venture capital markets and start-up investments, CEO & founder of J-SEED Ventures, Jeffrey Char, explains why collaborations between corporations and start-ups in Japan are yet to deliver on expectations: “The employees at large corporations are still not good at working with start-ups. They often look down on the start-ups and don’t really respect them. Moreover, the large corporations are very slow-moving and have many people involved (many who can say ‘no,’ but few who have the authority and ability to say ‘yes’) in the joint endeavours or partnerships.” Not all the

¹⁸ <https://startupgenome.com/reports/global-startup-ecosystem-report-2019>

¹⁹ Hemmert, M., Cross, A.R., Cheng, Y. et al. The distinctiveness and diversity of entrepreneurial ecosystems in China, Japan, and South Korea: an exploratory analysis. *Asian Business & Management* (2019). <https://doi.org/10.1057/s41291-019-00070-6>

²⁰ https://juas.or.jp/cms/media/2017/03/Digital19_ppt.pdf

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88.5% of Japanese companies feel the need to partner with other firms to advance digital business and 41.9% of them think that the ideal partner is either an IT vendor or a system integrator, while 19.4% would go for a tech venture.

blame lies with the corporate world, however; Mr Char believes that “start-ups, for their part, are often unaware of what it takes to work effectively with these large corporations, have unrealistic timeframes, and are altogether unprepared to work with large corporations. As a result, there are many failed projects involving start-ups and large corporations in Japan but, hopefully, this will improve as both sides gain experience.”

Chapter 3 Digital business in action

Key elements of strategies for harnessing the potential of the digital economy

We have shown why companies cannot ignore the potential of digital technologies, but what are the strategies for achieving digital enablement? At the working group lunch event organized by ECN, we noticed that the experts see a high level of uncertainty in how executives approach the theme of digital transformation. “In my view, from both the disrupter side (start-ups) and the legacy side (large organisations), one of the key words that comes to mind is ‘fear’. When digital transformation is happening, it’s scary, because there is a lot of uncertainty in the future outcome. How do you address that? You have to take a different approach to what you’ve been doing, and it’s hard to be confident in changing what worked in the past. Approaches to matters such as risk appetite and performance measurement need to be transformed, together with business model changes driven by digital innovation,” says Rei Tanaka, a fintech start-up executive.

“You need to have clear goals—why exactly the digital transformation is needed, instead of ‘Let’s just do something digital,’ because this is something very questionable.”
Akemi Tsunagawa,
CEO, Bespoke.

Why go digital?

As noted by experts at our lunch, the first step to overcome that uncertainty is setting the right targets and understanding what is digital and why you need it. “I see two main challenges. One is that you need to have clear goals—why exactly the digital transformation is needed, instead of ‘Let’s just do something digital,’ because this is something very questionable. Many innovation teams also come to us saying, ‘Our CEO or chairman wants to do something with AI, so can we do something together?’ And the second thing is, companies think that, by using some kind of AI solution, their stock prices will go up. And that is a no-no; it never works,” explains Akemi Tsunagawa, CEO of AI start-up, Bespoke.

Digital transformation cannot be achieved by creating independent “digital units” or by launching digital products disconnected from the value chain. Successful transformation incorporates everything: business model, value chain, customer relationships, and company culture. “In digital transformation, most people focus on the digital side, but the real challenge is on the transformation side. How to change cultures, structures and people’s mindsets; how to change the way you engage with your employees and customers; all these things need to be considered in the digital transformation. And, often, they’re not, and digital transformation is seen as being something technical,” says Michael Wade.

What to do with digital?

All the industry experts we interviewed emphasised the necessity of a clear understanding of what type of tasks digital technologies can help to achieve and what can be done by implementing them. “In our global digital transformation survey, we established that the number one challenge is lack of knowledge and skills relating to digital technologies. And, usually, people say, ‘Well, I need someone who understands machine learning or someone who understands scrum. Yes, true, potentially you need someone like this, but another interesting finding was that you need managers who understand

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“In digital transformation, most people focus on the digital side, but the real challenge is on the transformation side.” Michael Wade, Cisco Chair in Digital Business, IMD.

digital technologies and what you can do with digital. You don't need to understand coding, you don't need to understand frameworks, but managers and executives need to understand what they can do with it,” says Juergen Brock. This has to come from the top but, in many cases, CEOs have only a vague idea of how to use digital technology and how it can change the customer experience.

CDO and vice-president of Coca-Cola Japan, Keizo Ishii, thinks that this is one of the areas where executive-level digital officers should play their part: “Currently, digital marketing people are not good enough to convince top management, while top management do not have enough understanding of digital, because they are still talking about digital KPIs—how many clicks we have, how many downloads we have, but they are not talking about how much impact we have on P&L. That's why top management cannot make decisions to go through with it. The CDO's position is to translate those KPIs into financial statements and present them to the global office to make decisions.”

Realisation of what digital technology is capable of leads to a better understanding of when it should and should not be used. “Many Japanese CEOs and managers are great, but maybe the majority of them are more likely great company operators, or good and safe car drivers. But a car driver must think, if he is CEO, maybe instead of a car we should go by shinkansen [“bullet train”] or a jet plane? That's where much bigger value creation comes from, not only from driving a car beautifully and safely. So, a great CEO should be very serious about looking for much more value creation and should challenge it,” says Tetsuo Tsuneishi, chairman of Tokyo Electron.

What does the customer want?

Ultimately, digital disruption comes down to the higher role of customer expectations in the business model. With new technologies, customers have more control and they expect their last best experience to be equalled by their next experience. For customers, digital technologies mean convenience, as epitomised by the famous example of Domino's pizza delivery app, which offers the ability to “order your favourite pizza without touching your phone”.

Successfully blending physical and digital is key to the transformation of Swedish furniture chain IKEA, which has recently started online sales in Japan. “In 2017, IKEA Japan launched online shopping. At that time, what we struggled the most with was change management, people's mindset and how to change it. Asking someone from the IT department to change the whole system is impossible. At IKEA, we have created the multi-channel transformation team and we have started to change the whole system globally. We had to talk to all the stakeholders about why it is necessary. ‘You are going to have this system and it's going to do online sales, that's it?’ No, you have to have a new mindset and a new understanding. And not only for the co-workers, but also for the customers—we need to know how to share this information in the specific language that they understand,” says Fami Lee, public affairs leader, IKEA Japan.

Interestingly, in parallel with online sales, the company also decided to start opening smaller stores closer to city centres. As Fami Lee explains it, “How to have online and offline connection? We still need people. Everything is going to be digitalised and it is more convenient, but consumers still need to have that ‘touch and feel’ experience.” It is not only the companies that feel uncertainty and fear in the digital era; the customers also need to have something familiar to hold onto and do not want every part of the shopping experience to be disrupted.

“How to have online and offline connection? We still need people. Everything is going to be digitalised and it is more convenient, but consumers still need to have that ‘touch and feel’ experience.” Fami Lee, public affairs leader, IKEA Japan.

Conclusion

We have looked at the key trends driving the digital economy and the technologies that are shaping the new ways of doing business. We have established that Asia-Pacific region is on a par with other parts of the globe when it comes to the competitiveness of the digital environment and some of the countries in the region are among the world leaders, especially in such areas as start-up ecosystems. While not being one of the top countries in the digital enablement, Japan is noticeable for the introduction of the concept of Society 5.0, which brings together public and private efforts in the quest for the sustainable development of both virtual and physical realities.

Digital technologies present immense opportunities, but unlocking their potential requires continuous collaborative efforts across sectors and organisations. Experts point out that the challenges associated with further adoption of emerging technologies include the lack of knowledge and understanding of digital among top-management, reliance on outdated legacy IT systems and the vagueness of the targets for digital transformation.

The crucial point in understanding the digital transformation is that it is not a zero-sum game. “It is not one or another—digital transformation or no digital transformation—it goes side by side, and how you can switch from one to another is really the key. We can never stop technological advancement, because it is a part of human nature to do more and discover something new, but you have to combine it in a way that you can keep your existence and your lifestyle with this new technology,” says Yuko Harayama. The companies that are leading in digitalisation are the ones that can clearly define what constitutes their competitive advantage and how it can be improved with new technologies.

There is no rulebook or single strategy that can lead to seamless transformation in the digital era. It is also important to recognise that it is not always so much of a technical task. The experts we consulted for this research share the view that culture plays an equally important role in digital transformation as do the technological or engineering capabilities of an organisation. In that sense, the ecosystems need more diversity and cross-industry partnerships to produce the mindset change that is essential for digital enablement.

Riding the waves of disruption

Business ecosystems and competitive advantage in the digital economy

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