

ESSAYS



DIGITAL TRANSFORMATION VS. COVID-19: THE CASE OF JAPAN

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Abstract

Whilst the DX policy of the Japanese government started in 2001, then called the E-Japan Strategy and being replaced a few years later by the *i*-Japan Strategy, in the 20 years since then IT has not been a success in Japan's administrative system. On the other hand, the private sector, concerned about Japan's lagging in its adoption of information technology, has been gradually moving forward to DX measures, such as electronic contracts. Then, this year, the COVID-19 pandemic broke out. Japan is (as of July 2020) about to experience a second wave of this disease. The need for DX has become imperative in all aspects of Japanese society, especially the government and business sectors. In the first half of 2020, the government set up DX policy rapidly; for example, civil court proceedings, the traditional carve seals custom, and the submission of administrative documents to government agencies have also been forced to move forward to DX due to COVID-19. It might be said that the crisis has been the catalyst for Japan's shift to DX. However, it will be at least a few years before it can be known whether Japan's DX will succeed, looking at the past examples within the Japanese bureaucratic system and politicians' attitudes towards DX.

Keywords

DX, digital transformation, digitalization, digital currency, Japanese government, Coronavirus, COVID-19, Japanese law, digital law

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ЦИФРОВИЗАЦИЯ И COVID-19: ОПЫТ ЯПОНИИ

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Аннотация

Правительство Японии в 2001 году взяло курс на политику цифровой трансформации (E-Japan Strategy, впоследствии — *i-Japan Strategy*). Тем не менее за последние 20 лет информационные технологии так и не были успешно внедрены в систему государственного управления. В то же время частный сектор, обеспокоенный отставанием Японии в этой области, инициативно внедряет цифровые механизмы, одним из примеров которых служат смарт-контракты. В начале 2020 года мир столкнулся с пандемией COVID-19, в настоящее время в Японии ожидается вторая волна. Потребность в цифровой трансформации становится актуальной во всех сферах японского общества, особенно в государственном управлении и бизнесе. В первой половине 2020 года правительство приступило к реализации цифровой повестки: нововведения коснулись гражданского процесса, подачи документов в органы государственной власти, а также таможенных процедур. Таким образом, кризис ускорил процесс внедрения цифровых технологий в право Японии. Учитывая осторожный, консервативный подход отдельных политиков, потребуется минимум несколько лет чтобы оценить успешность цифровой модели японского общества.

Ключевые слова

цифровая трансформация, переход к цифровой экономике, цифровизация, цифровая валюта, правительство Японии, коронавирус, COVID-19, право Японии, цифровое право

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Introduction

As of July 2020, Japan is in the midst of the turmoil of battling COVID-19. The numbers of infected persons have risen since lifting the Declaration of National Emergency on 25 May. PCR testing is limited to the person who is seriously ill or gets special permission for this test. Compared with countries such as Korea, China, and the U.S.A., the numbers of PCR testing are remarkably limited, seemingly controlled by the Ministry of Health, Labour and Welfare, to about 17,354 nationwide as of 31 July¹, and 4,851 per day in Tokyo Metropolitan as of 30 July². This crisis, happening so suddenly in early 2020, has pushed the Digital Transformation (hereafter, DX) movement all across the country forward, especially for the Japanese government, which has been moving toward DX gradually. Indeed, *the Nihon Keizai Shimbun*, a famous economic newspaper in Japan, ran an article subtitled “Twenty Years, the Japanese Government Tried to Become an IT Nation, but Failed” (Yasoshima, 2020). DX in Japan arguably started in 2001, when the Japanese government adopted a national plan of DX, called the E-Japan Strategy³. In July 2009, *i-Japan Strategy 2015* was announced, which was intended to be completed by 2015 and seemed to be a revised plan for E-Japan Strategy⁴.

Since then, policies and plans were made, but they seem not to have fully succeeded. This is because it has been thought that promoting the DX policy as a campaign pledge is not a way for lawmakers or the ruling party to win elections (Yasoshima, 2020). Whether this analysis is correct or not needs to be analyzed more, but it may be that politicians usually focus on subjects that will win them votes in elections; DX policy was not in such a criterion.

The coronavirus outbreak has dramatically turned these circumstances upside down. Japan is now in a situation where it is necessary to push forward its DX policy. The government, led by the Liberal Democratic Party (LDP), is beginning to see that the DX policy will hold one of the critical elements to the House of Representatives elections scheduled for the next year (though perhaps these might happen in the fall of 2020).

On the part of Japanese bureaucracy, DX is recognized to have accelerated. In April 2020, the Minister of Justice told the press that to promote the digitalization of legal administration and the adoption of AI and ICT, the Minister was invited to participate in the Ministry of Justice Web-meeting. The Minister said that the Ministry of Justice Web-meeting would be held periodically. On the other hand, the Minister admitted that the Ministry of Justice currently had a video-meeting system with a line that did not connect to any place other than in the Ministry, which was a big problem intended to be solved soon. The comment of the Minister reflects the fact that there is a problematic tradition in bureaucratic sections. It might be said that the coronavirus outbreak forced these bureaucratic organizations to the realization that digital transformation must be advanced.

In short, due to this coronavirus pandemic, it has become more apparent that Japan has now entered a new era in which the DX process must be fast-tracked. The author would like to describe current measures for DX that the Japanese government has been tackling.

¹ Ministry of Health, Labour and Welfare. (2020, June 30). *Situation update for COVID-19 and the MHLW's response*. <https://www.mhlw.go.jp/stf/covid-19/kokunainohasseijoukyou.html>

² Tokyo Metropolitan Government. (2020, June 30). *Updates on COVID-19 in Tokyo*. <https://stopcovid19.metro.tokyo.lg.jp/en>

³ IT Strategic Headquarters. (2001, January 22). *E-Japan Strategy*. https://japan.kantei.go.jp/it/network/0122full_e.html

⁴ IT Strategic Headquarters. (2009, July 6). *i-Japan Strategy: Striving to create a citizen-driven, reassuring & vibrant digital society towards digital inclusion & innovation*. https://japan.kantei.go.jp/policy/it/i-japanstrategy2015_full.pdf

Recent DX Policies of the Japanese Government

DX policies of the Japanese government are currently being planned and implemented by several organs. The Ministry of Economy, Trade and Industry (METI) has taken the lead in formulating and promoting policies for DX in economic and industrial sectors. The Expert Group for Digital Transformation was established in May 2018 within METI, and this unit has researched various issues of DX and examined countermeasures: *The DX Report – Overcoming the IT System, “the Cliff of 2025” and the Full-Scale Development of DX*, was published in September 2018⁵. In July 2018, METI set up a small team called the DX Office. Its mission is to lead the digitalization of the procedure of the public administration alongside the DX movement of the Japanese government as a whole⁶. Pursuing a concrete measure, the Ministry METI formulated the *DX Promotion Indicators and Guidance for Promoting Digital Transformation* to clarify these issues; it says that executives should be aware of and to help boards of directors and shareholders review DX initiatives (Ministry of Economy, Trade and Industry, 2019).

COVID-19 has accelerated these movements for DX. The IT Strategic Headquarters, and the National Center of Incident Readiness and Strategy for Cybersecurity, both belong to the Cabinet, formulated basic government policy in 2020. On 27 April 2020, the “Intellectual Property Promotion Plan 2020” (hereafter, IP2020) was adopted by the Japanese government. It is a plan to promote digitalization through intellectual property. Section 3 of IP2020 is titled “Promoting the Strategic Use of Intellectual Property in the Innovation Ecosystem”, saying that DX should be accelerated⁷.

A further step for DX taken in 2020 is the proposal, put forwards by the special committee for promotion of the digital society of the Liberal Democratic Party (LDP), of the establishment of a ministry to promote DX. Moreover, a new organization for the digitalization of public administration was proposed by the LDP’s Economic Growth Strategy Headquarters.

Not more than a month later, this proposal was swiftly crystalized as a government policy; on 17 July 2020, the Cabinet Office officially announced the cabinet decision “the Basic Policy of Economic and Fiscal Management and Reform 2020” (hereafter “the Basic Policy 2020”). The Basic Policy 2020 consists of three chapters: Chapter 1: Overcoming the Crisis Under New Coronavirus Infections and the New Future Ahead; Chapter 2: Responding to the Spread of Infectious Diseases and Phasing Out Economic Activities; and Chapter 3: Realizing the “New Normal”. In particular, Chapter 3 stressed that the intensive investment in and implementation of digitalization would be a driving force for the “new normal” age, called the Digital New Deal. In this chapter, regarding decisive action about digital government, promoting Digital Transformation is particularly mentioned. It also says that the Japanese custom of using paper documents, stamping carved seals, and face-to-face meetings should be reexamined.

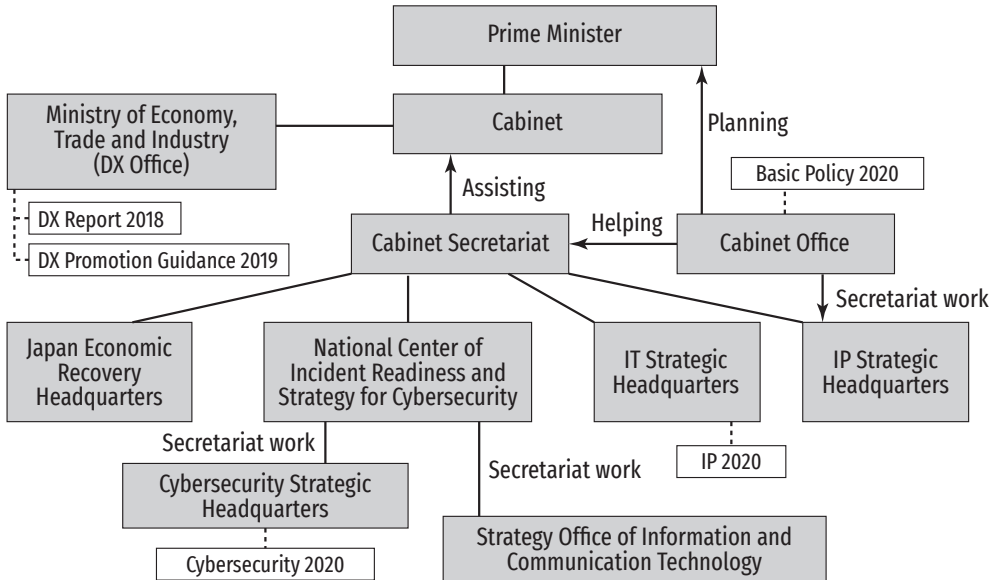
⁵ Ministry of Economy, Trade and Industry (2018). Repōto— IT shisutemu’ 2025 nen no gake’ no kokufuku to DX no honka-ku-teki na tenkai [*DX Report – Overcoming the IT System, «the Cliff of 2025,» and the Full-Scale Development of DX*]. <https://www.meti.go.jp/press/2018/09/20180907010/20180907010-3.pdf>

⁶ Ministry of Economy, Trade and Industry (2018). Keizai sangyō-shō no dejitaru-ka o suishin suru’ keizai sangyō-shō oyobi chū shō kigyō chō dejitaru. toransufōmeishon-shitsu’ o secchi shimasu [Ministry of Economy, Trade and Industry establish «Ministry of Economy, Trade and Industry and Small and Medium Enterprise Agency Digital Transformation Office» to promote digitalization]. <https://www.meti.go.jp/press/2018/07/20180725002/20180725002.html>

⁷ IP Strategic Headquarters (2020). Chiteki zaisan suishin keikaku ni rei ni rei— shingata korona-go no’ nyū. nōmaru’ ni muketa chizai senrya ku [Intellectual Property Promotion Plan 2020 – Intellectual property strategies for the «new normal» post-new coronavirus]. <https://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku20200527.pdf>

Figure 1

The Administrative Structure and Comprehensive Plans for DX Policy



Note. Illustrated by the author, based on websites of each relevant organization of the Japanese administration system.

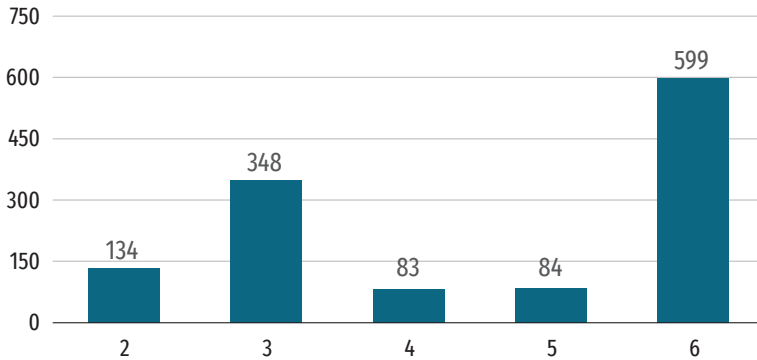
The Basic Policy 2020 further points out that “looking at the recent implementation of support measures in response to the infectious disease, it is clear that digitalization and online system are lagging behind, especially in the administrative sector”. Regarding Digital New Deal, the Basic Policy 2020 declares that the Japanese government will actively promote the digitalization of Japanese society as a whole. It also indicates that building a digital government would be the highest priority policy issue, and that promoting DX in the private sector and creating an environment that encourages investment and innovation in private sectors should proceed. Meanwhile, the Basic Policy admits that the digitalization of public administration is lagging, and emphasizes the need for intensive reformation and acceleration of the digital government for the entire government. It says that concentrating on standardization and sharing business processes and information systems among national and local governments is also needed, adding that the development of digitalization and cloud computing of the local governments, through cooperation between the government and the private sector, is essentially important.

On 15 July 2020, the Japanese government held a joint meeting of IT Strategic Headquarters, headed by the Prime Minister, and decided a Declaration regarding Creation of World’s Most Advanced Digital Nation, aiming for the digitalization of the whole of Japanese society. This Declaration was officially announced on 17 July 2020⁸.

⁸ Cabinet Office. (2017, May 30). Declaration to be the World’s most advanced IT nation basic plan for the advancement of public and private sector data utilization. Prime Minister of Japan and His Cabinet. https://japan.kantei.go.jp/policy/it/2017/20170530_full.pdf

Figure 2

The Numbers of Web-Conferencing



Note. Created by the author.

Two days later, after the announcement was publicized, the government's Cyber Security Strategic Headquarters issued a new plan, "Cybersecurity 2020". Although it is only a guideline with no legal effect, it aims to encourage government agencies and private enterprises to carry out digital transformation. To promote DX in Japan, the government demanded that all parties take positive cyber defense to prepare for potential attacks.

It remains to be seen whether all of these policies will be successfully implemented, and whether Japan will be able to join the ranks of advanced IT countries. Also, the reformation of administrative tradition — the so-called vertical administration system — seems to be one of the critical elements for Japan's DX success.

DX and the Litigation Procedures in Civil Courts

On the part of the judicial sector, the Office of the Supreme Court in Japan announced using IT tools to sort out issues, such as web conferencing, as a first step in introducing IT into civil litigation procedures. Eight district head courts out of fifty district head courts across the country, including some division of the Tokyo and Osaka District Courts and an Intellectual Appeal Court, would be expected to introduce web conferencing⁹. As of 6 July, fourteen district courts nationwide have already started web-conferencing¹⁰.

However, in April and May, the numbers of web-conferencing decreased because of the Declaration of National Emergency for COVID-19. After the Declaration was lifted, this number increased, as shown in the graph below.

⁹ Supreme Court of Japan (2020). Webu kaigi-tō noIT tsūru o katsuyō shita sōten seiri no un'yō no kaishi ni suite [Regarding the start of the operation for legal issue arrangement using IT tools such as web conferencing]. Courts in Japan. https://www.courts.go.jp/about/topics/webmeeting_2020_0203/index.html

¹⁰ Supreme Court of Japan (2020). Webu kaigi-tō noIT tsūru o katsuyō shita sōten seiri no un'yō o kaishi shite iru chō ni suite [Regarding the courts that already started a new operation of the controversial arrangement using IT tools such as web conferencing]. Courts in Japan. https://www.courts.go.jp/about/topics/webmeeting_2020_0706/index.html

Web conferencing for sorting out issues is not open to the public. In the legal sphere, the advantages of IT-based court proceedings are now apparently due to the fact that attorneys can attend the meeting at each law firm. The Japanese government plans to amend the related laws to allow for oral arguments via web conferencing in 2023 and online submission procedures of complaints in 2025.

From Carved Seals to Electric Seals

Carved seals (*hanko* or *inkan* in Japanese) are used in all aspects of daily life in Japan, such as receiving a parcel delivery service, making a notification at a bank, or receiving something at a post office. It is so common that when people get married, their friends and parents give them a high-grade carved seal made of blackwood or a similar material for their private seals as a gift to make *Jitsu-in* (meaning an officially registered carved seal). This is required when borrowing a loan or buying real estate, for example. A carved seal — especially a registered carved seal — is required in the business world to make contracts. It can be said that a carved seal is a part of Japanese customs, even a culture. A few cases have taken place where a challenge has been made so as to avoid such a custom¹¹. This kind of custom has been considered necessary for official administrative procedures. A carved seal is required in court proceedings and ordinary governmental affairs as well.

However, COVID-19 seems to have made Japanese society dramatically pay attention to the fact that the carved seal may be unnecessary. The demand for electronic contract services is increasing rapidly. Unlike traditional written contracts, electronic contracts do not involve printing, stamping, enclosing, or mailing the contract. It makes operations more efficient and reduces postage costs. Indeed, in June 2020, the government already issued a guideline on carved seals; it says that carved seals would not necessarily be required in contracts for private companies and public-private transactions to promote tele-work. And even if not stamped with a carved seal, it is possible to certify a contract by email texts and other digital documents, records of transmissions and receipts, and digital signatures.

On the part of the private sector, the trend for electronic contracts has now stopped. Fuji Xerox announced that it would sell an electric contract system nationwide. The Nomura Real Estate Development, one of the leading real estate companies, would positively introduce an electric contract system in winter 2020.

Considering the movement of introducing an electric contract system, the government announced another measure for its intention to promote DX policy. In the past, when a digital signature was made, a digital certificate had to be attached to the digital signature to verify that it was the person who made it. However, it took several weeks to obtain a digital certificate, which raised questions about its convenience. The government confirmed that digital signatures without a digital certificate would also be valid.

Based on these measures, further growth of the electronic contract service industry is expected. It may be said that this could lead to a new social phenomenon whereby a larger number of companies will use electronic contracts instead of paper documents with carved seals.

This trend was boosted by the fact that the Japanese government and four economic organizations have announced a joint declaration aimed at reducing the amount of paperwork, carved seal, and face-to-face work. These practices have continued for a long time due to Japanese legal systems and practices in corporate contracts and administrative procedures. Indeed, con-

¹¹ Nikkei BP Company. (2016). A case study: Japan mortgage loan company: Japan's first contract system without a registered seal: Breaking the barriers of business practices with wisdom and IT. *Nikkei Computer*, (925), 48–51.

trary to the private sector that remarkably introduced electric contracts, sixteen of twenty-one organizations of the Japanese government did not use electric contracts in the 2019 fiscal year¹².

A Recent Decision by the Japanese Supreme Court, Reflecting the Digital Age

Intellectual property rights, such as copyrights, are likely to pose various challenges in the digital transformation era. The recent decision of the Japanese Supreme Court seems to symbolize Japan's digital age. The outline of the case and the judgment are as follows¹³.

A photographer (hereafter X) took a photo of a flower and posted it on his website. X put a copyright mark and X's name on the edge of the picture. A Twitter user saw this photo and posted it on Twitter without permission. Twitter users who saw this photo retweeted the photo, and in these cases, the part of the picture with X's name and copyright mark on it was automatically trimmed by Twitter's system. Alleging that the rights of attribution — one of the author's moral rights — had been violated, X claimed Twitter should disclose the email addresses of the users who retweeted the photo. However, the company refused to do so.

In 2016, the Tokyo District Court found copyright infringement by unauthorized tweets. However, it denied that retweet users infringed X's rights. On appeal, the Intellectual Property High Court found that the retweet users *had* violated X's right, and decided to disclose the email addresses of those people who retweeted. This time, the Supreme Court's decision upheld the Intellectual Property High Court's decision, requiring Twitter reveal its user's email addresses.

Interestingly, although all five of the judges made a unanimous decision, one judge added a dissenting opinion. The judge said that it presented too excessive a responsibility for the retweeters, since they did not know the photos were trimmed simply because Twitter automatically trimmed the photo. On the other hand, the presiding judge's additional comment is that retweeters who do not know about Twitter's trimming system might violate the right of attribution. Twitter has become one of the most critical information distribution tools in society today. It is not reasonable to entrust individual Twitter users to raise their awareness of the rights. Concerning the protection of attribution rights and the avoidance of burden on Twitter users, Twitter is expected to take appropriate measures regarding a provider of information distribution services' social responsibility, which has become an essential social infrastructure¹⁴.

It can be said that the judges strictly interpreted the Copyright Act. The only way to protect the rights of the original author of the photo is to acknowledge the responsibility of the retweets. Nevertheless, the question remains. As the dissenting opinion says, the retweeters did not know the pictures were trimmed due to Twitter's automatic trimmed system. Since no comment has been made on this legal case, future analysis of this case by the legal scholars and digital experts should be expected.

¹² Horigome, T. (2020, July 7). The public administration's electric contracts spent 1% last fiscal year, of the maintenance cost of 1.6 billion yen, a lack of progress in de-carved seals. *The Asahi Shimbun*. Retrieved from Kikuzo II database.

¹³ Abe, S. (2020). Trimming and reprinting the photographer's name is "infringement of rights" Supreme Court rules: beware of image retweets. *The Asahi Shimbun*. Retrieved from Kikuzo II database.

¹⁴ Supreme Court of Japan (2018). Heisei san rei nen (ju) dai ichi yon ichi ni gō hasshin-sha jōhō kajji seikyū jiken-rei wa ninen shichi gatsu ni ichi nichi dai san shō hōtei hanketsu [Case Received in 2018, No. 1412 Caller Information Disclosure Request Case July 21, 3rd Small Court Judgment]. Courts in Japan. https://www.courts.go.jp/app/files/hanrei_jp/597/089597_hanrei.pdf

Digital transformation involves AI, Cloud, IoT, and Big Data. It should be added that it is vital that the laws and legislative policy, including interpretation of legal rules, also align with the DX era.

Conclusion

The author has illustrated current DX policies of the Japanese government, especially in the administrative and judicial sectors. A few cases should be added to understand to what extent Japan's current DX movement is underway. For instance, the government announced that it has begun studying the introduction of digital currencies. The Bank of Japan (BOJ) has already begun joint research with overseas central banks, and the government is now in line with the BOJ. The Bank of Japan said that it was the government that determines the issuance of digital currency.

Further movement of DX in Japan is seen in the so-called insurance-tech business. Tokio Marine & Nichido Fire Insurance Co. Ltd. has recently launched a new system in which AI analyzes the data of the drive recorder installed in a car and produces an accident investigation report. It previously took a week to create an accident investigation report, but it can be completed in 5 minutes by using this system (Fujimura & Hiramoto, 2020).

The Japanese government is facing a second wave of COVID-19 as of July 2020. Its policies for DX were in place in the first half of the year. Future historians may argue that 2020 was a turning point in history for the world and Japan. Under these circumstances, for Japan, 2020 will become the year when the digital transformation became indispensable. The private sector and the administrative sector are accelerating digitalization at all criteria and levels. It will become clear whether or not the Japanese digital transformation proves to be successful, perhaps within the next five to ten years.

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