

Digital public administration services: is technology adoption enough?

Loke Pak-Yen and Rachel Gong



Introduction

The digitalisation of the public sector provides opportunities for innovating methods of delivery while adding value to existing services. To achieve these goals, there needs to be an efficiently-coordinated and integrated governance system as well as citizen-centric system design¹.

Digitalisation involves more than digitisation. Digitisation and digitalisation, although often used interchangeably, have distinct meanings². Digitisation is the translation of physical data into digital forms; digitalisation integrates digital technologies to provide value-added functionalities. This involves rethinking processes and information flows as well as the use of technical tools. The digitalisation of public services in Malaysia is too often simply digitisation.

Views are short opinion pieces by the author(s) to encourage the exchange of ideas on current issues. They may not necessarily represent the official views of KRI. All errors remain the authors' own.

This view was prepared by Loke Pak-Yen and Dr Rachel Gong from the Khazanah Research Institute (KRI). The authors are grateful for the valuable comments from Dr Tan Jun-E and Dr Eun Hee Lee.

Authors' email addresses:
rachel.gong@krinstitute.org
pakyenloke@gmail.com

Attribution – Please cite the work as follows: Loke Pak-Yen and Rachel Gong. 2022. Digital public administration services: is technology adoption enough? Kuala Lumpur: Khazanah Research Institute. License: Creative Commons Attribution CC BY 3.0.

Photo by anon.

Information on Khazanah Research Institute publications and digital products can be found at www.KRIInstitute.org.

¹ Deloitte (2021)

² Khazanah Research Institute (2021)

In this article, we posit that the digitalisation of public administration services needs to transform not just technologies but processes as well so that everyone can benefit. The digital ecosystem needs to be designed in such a way that it improves efficiencies and is accessible to all.

Digital public administration services

The Malaysia Digital Economy Blueprint (DEB) was released in 2021 in line with the Twelfth Malaysia Plan (12MP) to promote economic growth through digitalisation. By 2025, Malaysia expects to increase its high-skilled job supply; enhance digital capacity, connectivity and literacy among individuals; and increase technology usage within business industries. The DEB's digital government initiative aims to achieve 80% end-to-end public service capabilities and to be ranked 12th globally on the United Nations Online Service Index (OSI), compared to 42nd in 2016³.

Since 2005, Malaysia has consistently been ranked in the top 50 in the world based on the OSI⁴. The OSI measures the extent to which governments can provide end-to-end public services digitally to their citizens. End-to-end public services, simply put, are systems and processes that help individuals achieve an end task. The OSI measures the accessibility, inclusivity and availability of transactional public services through the Online Service Questionnaire⁵. However, a high OSI rank does not necessarily indicate a more efficient or inclusive public service experience.

Rethinking processes and information flows

The COVID-19 pandemic forced a quick shift to electronic systems (e.g., making application forms available online with e-payment integrations) that merely recreate the same offline processes in digital form. This does not necessarily improve efficiency or the user experience.

Government agencies rely on legacy systems that heavily influence their operational business model⁶. The path dependency approach (i.e., one touchpoint depends on the previous touchpoint) is often embedded into systems and processes, constraining digital transformation. Rather than designing systems and operational processes with a user-based bi-directional feedback flow, these structures and processes are often determined by preexisting top-down policies and legislation⁷. Enabling a digital service without testing information flows can result in unexpected bottlenecks.

³ Dahalin et al. (2019)

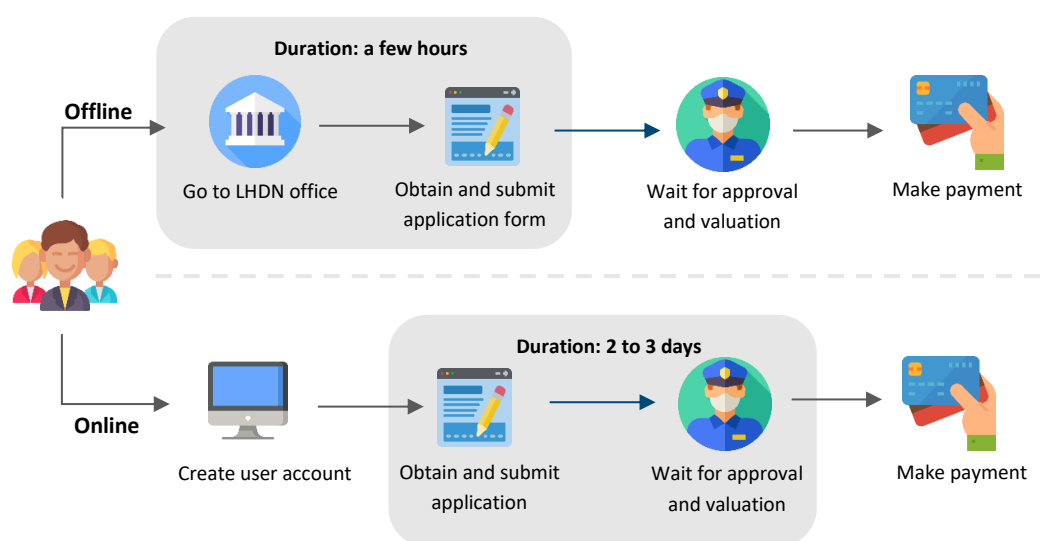
⁴ Dahalin et al. (2019)

⁵ UN (2018)

⁶ Alexandrova, Rapanotti, and Horrocks (2015)

⁷ Fishenden and Young (2017)

Figure 1: A comparison of offline and online stamping applications processes⁸



Source: NST (2018), Alicia (2019), LHDN (2022), JPPH (n.d.)

For instance, the online stamping process used by the Malaysian Revenue Board requires a user to create an account, fill in an online form and submit it; this is a quick process. The submitted form is then transferred to an officer to determine whether it was filled correctly. If approved, the form will then be passed on to the valuation or endorsement officer that will determine the stamp duty. The entire process from submission to valuation takes around 2 to 3 working days.

Compare this to the offline process which takes on average just a few hours even though it requires the applicant to physically travel to an office and be present to wait for an officer to approve the application and perform a valuation in person.

The World Bank reported that despite the digitalisation of public services leading to a 30% decrease in workload and time, the duration of the e-permitting process in a country depends significantly on its process design and digital capacities⁹. The Doing Business 2020 report claimed that an entirely offline permitting process for businesses averaged 168 days globally. Increasing digital services decreases the time taken to complete this process, reaching a 32% reduction (to an average of 114 days) with the introduction of more than five digital services¹⁰.

Digitalisation, if done well, can significantly improve efficiency within the public sector. For instance, in 2015, the construction permit process in India required 44 procedures in Mumbai and 24 in Delhi, lasting up to 171 and 195 days respectively¹¹. After updating legacy regulations and processes to accommodate the use of online portals and integrating online applications

⁸ NST (2018); Alicia (2019); JPPH (n.d.); LHDN (2022)

⁹ APEC Digital Economy Steering Group (2022)

¹⁰ World Bank (2020a)

¹¹ World Bank (2020b)

between agencies, getting a permit in 2020 required only 19 procedures in Mumbai and 11 in Delhi, lasting up to 98 and 113.5 days respectively.

Digital inclusion for seniors

Citizens of all ages access public services, so digitalised public services need to be accessible to all age groups.

In Malaysia: lack of redundancies and offline options are barriers to access

Early digital adoption in Malaysia left many seniors behind. In 2020, the Malaysian Communications and Multimedia Commission reported that amongst the 11.3% of non-internet users in Malaysia, 51.8% were seniors aged 60 and above¹². Recent reports show that the digital age gap is closing¹³ thus it is essential that public services are designed to be accessible by users of all ages. The online stamping process described earlier may seem straightforward to users who are younger and more digitally savvy, but those older and less familiar with digital systems may find it more challenging to create an online account and navigate the website without help.

In some cases, the move to digitalised public services has removed alternative offline options. As public services transition to being fully online, physical offices may not have the capacity to provide support services as before. Seniors with limited experience navigating online systems may find the digital process complicated. When they seek help, they are directed to online service portals with little instruction or support. Although further information is available if they contact the service provider (e.g., through telephone or email) or refer to the 255-page online stamping process manual¹⁴, it is important to recognise that every additional step is another barrier to access that lowers the likelihood of adoption of digital public services¹⁵.

Digital inclusion can be improved by providing greater accessibility¹⁶, providing literacy training¹⁷, increasing affordability and strengthening security and privacy¹⁸. However, it is essential to also consider the design of digital processes and redundancy systems for public services. Digital public service systems should be reassessed for their usability and relevance to ensure inclusivity by design, for example by offering large font sizes, translations into different languages and simpler user interfaces.

¹² MCMC (2020)

¹³ Khazanah Research Institute (2021)

¹⁴ LHDN (2022)

¹⁵ Saad (2014)

¹⁶ Gomes (2016)

¹⁷ Perdana and Mokhtar (2022)

¹⁸ Akinola (2021)

In China: digitally inclusive design for seniors

China has a salient digital divide between the young and seniors¹⁹. In 2020, the China Network Information Centre²⁰ reported that 10.3% of users in China were 60 or older, compared to Malaysia, where 3.4% of users were over 60 years old²¹. Additionally, 26.2% of seniors in China were using WeChat, a popular all-in-one service and messaging app in China, and 4.4% were using search engines²². Although a survey found that 38.6% of internet users over 60 were committed users, these were people with at least secondary education and of high socioeconomic status²³.

In response to the digital generation gap, the Chinese government introduced the “Notice on the Implementation Plan for Effectively Solving the Difficulties of the Elderly in Using Intelligent Technology”²⁴ to ensure non-discriminatory access to service for seniors through creating redundancies. The notice outlined the need for applications and services to design accessible and inclusive technologies and services. For instance, the notice entails a requirement for medical institutions to ensure the availability of manual service windows for registration and payment and simplified online medical services²⁵ (e.g., through integrating voice guidance features) for seniors.

Moreover, the Chinese government also requires transportation companies to prioritise seniors in their operations by providing alternative reservation methods (e.g., telephone) and a smooth user experience (e.g., using one-click functions)²⁶. For example, a government-backed e-hailing application, Shencheng Chuxing (申程出行), provides customers with the option to hail a cab with one button. This reduces the need to register the destination and pick-up location and gives seniors easier mobility as they can verbally provide travel details when the cab arrives and pay using traditional means.

Conclusion

Malaysia has the opportunity to consider how other countries have redesigned systems and processes in the digitalisation of their public services. Simply adopting new digital processes and increasing technical functionality in the public sector do not automatically lead to improved efficiencies or a smoother user experience, particularly for seniors. Designing more inclusive digital systems and processes that users of all ages and digital experience can access is key to digital transformation of public administration services.

¹⁹ Liu et al. (2021)

²⁰ Zhong (2020)

²¹ MCMC (2020)

²² Liu et al. (2021)

²³ Sun et al. (2020)

²⁴ Office of the State Council (2020)

²⁵ Office of the State Council (2020)

²⁶ Chen (2020)

References

- Akinola, Sofiat. 2021. "How Can We Ensure Digital Inclusion for Older Adults?" World Economic Forum. 2021. <https://www.weforum.org/agenda/2021/10/how-can-we-ensure-digital-inclusion-for-older-adults/>.
- Alexandrova, Assia, Lucia Rapanotti, and Ivan Horrocks. 2015. "The Legacy Problem in Government Agencies." In , 150–59. <https://doi.org/10.1145/2757401.2757406>.
- Alicia. 2019. "Why Should I Stamp My Tenancy Agreement?" *SPEEDHOME Guide* (blog). November 6, 2019. <https://speedhome.com/blog/why-should-i-stamp-my-tenancy-agreement/>.
- APEC Digital Economy Steering Group. 2022. "Policy Recommendations: Digital Permitting and E-Government Measures to Advance the Post-COVID-19 Economic Recovery."
- Chen, Wency. 2020. "China Pushes for Friendlier Digital Transportation Services for Seniors." KrASIA. December 30, 2020. <https://kr-asia.com/china-pushes-for-friendlier-digital-transportation-services-for-seniors>.
- Dahalin, Zulkhairi, Mohd Rushdi Idrus, Mohd Khairudin Kasiran, Maslinda Mohd Nadzir, Rohaya Dahari, Rafidah Abd Razak, and Nadratun Nafisah Abdul Wahab. 2019. "Online Services Index Performance: Countries' Analysis in OSI Ranking to Improve Malaysia UN Ranking" 8 (8):7.
- Deloitte. 2021. "Future of Digital Trust – Digitalization of Public Sector Organizations," no. 05/2021. <https://www2.deloitte.com/content/dam/Deloitte/de/Documents/risk/FoDT-Digitalization-public-services.pdf>.
- Fishenden, Jerry, and Cassian Young. 2017. "Escaping Waterfall Government and the Myth of 'Digital Transformation.'" ComputerWeekly.Com. 2017. <https://www.computerweekly.com/opinion/Escaping-waterfall-government-and-the-myth-of-digital-transformation>.
- Gomes, Viviane. 2016. "Web Accessibility for Elderly." In . <https://doi.org/10.1145/2910019.2910036>.
- JPPH. n.d. "Duti Setem – Portal Jabatan Penilaian dan Perkhidmatan Harta." Accessed August 2, 2022. <https://www.jp-ph.gov.my/v3/ms/perkhidmatan-jpph-2/aktiviti-penilaian-dan-perkhidmatan-harta/duti-setem/>.
- Khazanah Research Institute. 2021. "#NetworkedNation: Navigating Challenges, Realising Opportunities of Digital Transformation." <http://www.kr-institute.org/assets/contentMS/img/template/editor/KRI%20-%20NetworkedNation%20-%20Navigating%20Challenges,%20Realising%20Opportunities%20of%20Digital%20Malaysia.pdf>.
- LHDN. 2022. "Stamps Assessment and Payment System User Manual."
- Liu, Lingchen, Fan Wu, Huiying Tong, Cuihong Hao, and Tingting Xie. 2021. "The Digital Divide and Active Aging in China." *International Journal of Environmental Research and Public Health* 18 (23):12675. <https://doi.org/10.3390/ijerph182312675>.

- MCMC. 2020. "Internet Users Survey 2020." *Malaysian Communications and Multimedia Commission*.
- NST. 2018. "Drafting and Stamping Tenancy Agreement." NST Online. June 14, 2018. <https://www.nst.com.my/property/2018/06/379903/drafting-and-stamping-tenancy-agreement>.
- Office of the State Council. 2020. "Notice of the General Office of the State Council on the Implementation Plan for Effectively Solving the Difficulties of the Elderly in Using Intelligent Technology." 2020. http://www.gov.cn/zhengce/content/2020-11/24/content_5563804.htm.
- Perdana, Arif, and Intan Azura Mokhtar. 2022. "Seniors' Adoption of Digital Devices and Virtual Event Platforms in Singapore during Covid-19." *Technology in Society* 68 (February):101817. <https://doi.org/10.1016/j.techsoc.2021.101817>.
- Saad, Natrah. 2014. "Tax Knowledge, Tax Complexity and Tax Compliance: Taxpayers' View." *Procedia - Social and Behavioral Sciences*, 2nd World Conference on Business, Economics and Management, 109 (January):1069-75. <https://doi.org/10.1016/j.sbspro.2013.12.590>.
- Sun, Xinran, Wenxin Yan, Hao Zhou, Zhaoqing Wang, Xueying Zhang, Shuang Huang, and Li Li. 2020. "Internet Use and Need for Digital Health Technology among the Elderly: A Cross-Sectional Survey in China." *BMC Public Health* 20 (1):1386. <https://doi.org/10.1186/s12889-020-09448-0>.
- UN. 2018. "E-Government Survey 2018." https://publicadministration.un.org/egovkb/portals/egovkb/documents/un/2018-survey/e-government%20survey%202018_final%20for%20web.pdf.
- World Bank. 2020a. "Doing Business 2020."
- . 2020b. "Doing Business Case Studies," no. 2.
- Zhong, Isabella. 2020. "Chinese National Committee on Aging Tackles the Issue of Senior Citizens Accessing the Internet and Smartphones – China Development Brief." 2020. <https://chinadevelopmentbrief.org/reports/chinese-national-committee-on-aging-tackles-the-issue-of-senior-citizens-accessing-the-internet-and-smartphones/>.