

Report on IPS–IMDA Digital Inclusion Symposium 26 July 2019

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The [IPS–IMDA Digital Inclusion Symposium](#) was held on 26 July 2019 at the Lifelong Learning Institute. Organised by the Institute of Policy Studies (IPS) and the Infocomm Media Development Authority (IMDA), it was held in conjunction with IMDA’s three-day [DIGITAL INCLUSION FESTIVAL](#). The symposium aimed to explore issues pertaining to digital inclusion and readiness in Singapore. Close to 250 participants attended the symposium, which brought together academics as well as representatives from the public, private and people sectors.

Opening Remarks

In his Opening Remarks, Mr S Iswaran, Minister for Communications and Information, highlighted the importance of digital readiness and digital inclusion. This is especially so as access to technology is a key determinant of one’s quality of life. However, he also recognised that certain segments of the population (e.g., seniors, persons with disabilities) have limited access to or were unfamiliar with digital technology. Thus, he stressed that it was important for the public, private and people sectors to work together to ensure that “no one is left out”. As an example, he cited a public-people partnership where officers from his ministry worked with volunteers on a programme which provided 200 low-income seniors with smart phones and pre-paid mobile data plans, as well as training and assistance on basic digital literacy skills to use the smartphones effectively. Minister Iswaran also gave the example of a private-people partnership, where Facebook and TOUCH Cyber Wellness worked together to organise a Digitally Ready Seniors Programme. The programme, conducted at TOUCH’s senior centres at Ang Mo Kio and Yishun, taught seniors how to use digital services such as e-payment and transport apps. Seniors who have attended the programme were encouraged to teach other seniors to be digitally ready. To encourage more of such partnerships in future, Minister Iswaran announced that nominations for the first Digital Participation Pledge Award, which recognises organisations who have put in place initiatives to prepare their employees, stakeholders and the community to be digitally ready, were open.

Minister Iswaran also emphasised that building a digital ready society was more than just ensuring accessibility to technology, but also about equipping citizens with skills to use technology in ways that would enrich their lives.

Minister Iswaran applauded Grab, who worked together with various agencies such as the Land Transport Authority, SG Enable, Traffic Police and Viacom, to ensure that a Grab driver who had a physical disability was able to drive safely and conveniently. He also highlighted a collaboration between IMDA and four APSN schools to incorporate Basic Digital Skills into the schools' curriculum, benefiting close to 700 students with special needs as they learn how to create email accounts to communicate with their friends using emails and how to make use of SingPass to access government services. Minister Iswaran further noted another partnership between IMDA and the APSN Tanglin Special School, to teach their students practical cyber wellness skills via an Adventure Virtual Reality game. He also applauded 36 Silver Infocomm Wellness Ambassadors, who would serve as role models to help fellow seniors embrace digital services at the Basic Digital Skills Workshop in West Coast and Teck Ghee.

In closing, Minister Iswaran reiterated that building an inclusive digital society required the whole society to come together. And he hoped that the examples he provided would inspire more people and corporate partners to use technology to “create new ways to innovate and drive social change”.



Minister S Iswaran delivering the opening remarks at the IPS-IMDA Digital Inclusion Symposium.

Keynote Address

The keynote address was delivered by Mr Kim Andreasson, Managing Director at DAKA Advisory. Dr Carol Soon, Senior Research Fellow at IPS, chaired the discussion session after his address.

As a consultant to the World Bank and the United Nations, Mr Andreasson recounted how he had focused on cyber security issues at a time when people were mostly concerned with populating the online space with information. He believed that digitalisation went beyond ensuring access; it had to include ways in which users would be able to utilise technology safely.

He pointed out that the public, private and people sectors each plays a crucial role in ramping up digitalisation efforts in a country and help it reap the benefits. For example, in the US, when the IRS introduced online tax filings in 1990, only four million users did so. However, this has grown to 127 million users by 2017. And in Denmark, shifting to digital postal mail resulted in substantial cost-savings for the government, as the price for sending a digital post is much lower than sending a physical letter.

On digital divides, he said the divide was not only in terms of access divide, but also many other factors such as age, ability, location and usage. And as his research showed that there was a correlation between social divides and digital divides, he suggested that focusing on solving the digital divide could help solve the issues of social divide as well.

Different countries face different challenges on digitalisation; they would also tackle these challenges differently. For example, in South Korea, a key challenge was raising awareness among its citizens on the various e-government services. This was because despite the number of e-government services provided, a survey showed that less than half of its population was utilising them. Denmark was focused on organising data for transparency and measuring residents' satisfaction on all its digital government services to identify areas for improvement. Meanwhile, Vietnam relied on a World Bank Assessment to help track their digitalisation efforts.

Mr Andreasson also highlighted findings from a survey conducted by DAKA Advisory and the Economist Intelligence Unit, which showed that policymakers, officials and telecommunication executives had differing views towards digital inclusion and divide. While respondents as a whole identified affordability as the first barrier to digital inclusion, policymakers were twice as likely than telecommunication executives to attribute a digital divide to the lack of skills. The findings also revealed that the private sector generally welcomed regulations to guide their digital inclusion efforts. He also highlighted the importance of benchmarking, as it encourages other countries to learn and take reference from one another. An example he gave was the Internet Inclusion Index, which measures the availability, affordability, relevance and readiness of digital inclusion efforts across 100 countries. In 2018, Singapore was ranked second behind Sweden.

Finally, he addressed the double edged-sword of emerging technologies such as artificial intelligence (AI) and cloud computing. While he recognised that these technologies could bridge some of the digital divides, it could also create new divides. To mitigate this, he strongly suggested looking at other forms of digital divides (beyond access) and for the public, private and people sector to come together to bridge these divides. One possible way is to raise awareness among those who are not online about the benefits of going online. Another way is to track the progress of initiatives that were created to promote digital inclusion in order to evaluate its effectiveness.

Role of 3Ps in bridging the digital divide

Dr Carol Soon kicked off the Q&A session and asked about the role of private and people sectors in contributing to digital inclusion. In response, Mr Andreasson suggested identifying mutual interests among the people, private and public sectors. This could lead to “natural partnerships” to address the gap. An example is the case of both governments and banks working together to get more people to use digital services. Banks could provide advertising space for governments to promote their e-services and vice versa. And while he acknowledged that many countries struggle to motivate their residents to engage in discussion about digital inclusion, he gave kudos to IMDA’s Silver Infocomm Initiative, where senior volunteers teach other seniors to be digitally ready.

When asked about how Singapore could enhance her competitive edge in digital inclusion, Mr Andreasson said the public sector should identify ways in which it could foster digital inclusion, and the challenges in doing so. The public sector should also look inwards and ensure that its training programmes address any digital divides that exist within and across public agencies. He also cautioned against being motivated by ranking alone, as it was only a tool for measurement.

Identify “pain points” to encourage seniors to go online

A participant asked how seniors could be encouraged to understand the benefits of going online. Mr Andreasson suggested identifying “pain points” in their everyday life and explaining that these could be avoided by going online. Dr Soon added that understanding the users’ needs was indeed more effective than a “prescriptive approach” in driving digital inclusion. She then gave the scenario of a senior who learned how to use Skype in order to communicate with his grandchildren when they moved to another country.

Downsides of connectivity

A participant also asked about the downsides of greater inclusion and connectivity. To this, he replied it was ensuring that users were using technology for “useful usage”, or doing productive things online. He said this was a global problem and cited a gaming café in Ho Chi Minh which had to close down in order to curb gaming addiction among students.

Dr Soon rounded up the session by asking Mr Andreasson for a forecast of what digital divide might look like in the future. He hoped that there would not be much of a divide, as there would be greater participation in terms of digital inclusion. However, cyber security would be his top concern, given that cyber criminals are getting more sophisticated.



Mr Kim Andreasson and Dr Carol Soon at the Q&A session which discussed the challenges and opportunities of digital inclusion.

Panel I: Fostering Digital Inclusion — Perspectives from 3Ps

The speakers for Panel 1 were Dr Kwak Dong Kyun, Fellow at the Korea Information Society Development Institute; Mr Lien Choong Luen, General Manager of GoJek Singapore; and Professor Jutta Treviranus from the Inclusive Design Research Centre at Ontario Art and Design University in Toronto. The panel explored the success stories and challenges of bridging the digital divide and discussed possible measures to overcome existing challenges. The chair for this panel was Dr Natalie Pang, Senior Research Fellow at IPS

Dr Kwak said South Korea took an industry-first approach in their efforts to build a digitalised society. This could stem from the belief that a digitalised industry would ultimately lead to a more prosperous society. Unlike South Korea, Dr Kwak observed that Singapore took on a more people-centric approach. This is because much of Singapore's digitalisation efforts have focused on increasing residents' access to, and building literacy and participation in technology. And while Dr Kwak noted that South Korea has a strong desire to uplift vulnerable citizens to participate digitally, this has not been specifically delineated as one of its agenda in digital inclusion. Dr Kwak also raised some of the challenges that South Korea and even Singapore might face in their efforts to be a digitalised society. They included fake news, digital unemployment and the borderless digital economy.

Mr Lien explained that to create a "pull" for people to use services like GoJek, the organisation's strategy was finding tech-based solutions to solve the various social problems in countries like Indonesia. He also noted the need to build offline networks and channels in

order to attract non-tech savvy users online. He then raised the point that digital inclusion was a subset of technological inclusion, followed by social inclusion. Mr Lien added that because GoJek believed in inclusivity, designing its ecosystem-centric platform would always be a work in progress, as they would have to consider the changing needs of its users and partners. Finally, he illustrated how GoJek has impacted its users by sharing stories of how GoJek drivers have been able to earn and save money, and how merchants have been able to maximise their resources after promoting their services through the platform.

Professor Jutta Treviranus began her presentation by challenging the entrenched beliefs and values in which societies have lived by. She dissected the theories of Quetelet, Pareto, Dewey and Darwinism, and urged the audience to critically re-think internalised ideas on standardisation, conformity and efficiency, which have had their inadequacies embedded into the design of social institutions and public policies. She also urged for efforts in digital inclusion to be designed for diversity. In particular, she strongly recommended a rethinking of Pareto's 80/20 principle, where the "difficult 20 per cent" is ignored in favour of the majority. Instead, focusing on designing for the marginalised "20 per cent" could result in innovative breakthroughs as "the terrain is unexplored". To assist designers, she recommended resources from the Inclusive Design Research Centre in Toronto, Canada, which has open sources, open access, open standards and open data. More importantly, she said designing for diversity should not be an afterthought, but to be thought through right from the start.



(From left to right) Dr Kwak Dong Kyun, Prof. Jutta Treviranus and Mr Lien Choong Luen.

Issues relating to data privacy, measurement metrics and the gig economy

Dr Natalie Pang chaired the Q&A session and asked for the panellists' views on the issues of data privacy and protection, measurement metrics, pricing transparency on platforms such as GoJek's, and welfare benefits for workers in the gig economy. In response to data privacy and protection, Dr Kwak said this was something that the South Korean government has been struggling with. He said the government was not keen on regulation for fear of deterring stakeholders; they were instead open to a global alliance to ensure the safe use of its data. Prof. Treviranus added that she had been working on ISO Standards to prevent the abuse and misuse of data. As for measurement metrics, she felt that ranking systems would not work as they would result in the "abandoning" of the "20 per cent", in the quest of "winning" and coming on top in rankings. On pricing, Mr Lien said there was an element of transparency, where, through the app, users would know upfront the cost of a service. For example, in booking a GoJek ride, users would be informed of the cost of the journey before

deciding to book or reject the ride. This is unlike taxi services, where users do not know the cost of the journey till they have reached their destination. In response to the question on welfare services of workers in the gig economy, Prof. Treviranus suggested creating a platform co-operative, which is governed and owned by workers and profit is shared among them. Mr Lien added that driver partners on GoJek have access to medical sick leave as well as insurance.

Design should focus on people at the “edge”

Participants also questioned the key barriers to making design more inclusive, especially for emerging technologies such as AI and machine learning. To this, Prof. Treviranus said it was essential to have a change in mindset and to critically evaluate old frameworks as they restrict knowledge within the bounds of limited assumptions. Dr Kwak built on her point and called for greater proactiveness to include the vulnerable communities into digital design right from the beginning. Prof Treviranus also recommended that design start with the people at the “edge” because it would present the largest spread of digital inclusion. Mr Lien said this was good in principle, but might be difficult to implement if not much is known about this group. He added that in the tech world, feedback on who are on the edge comes only after a product or service has been rolled out. The product then undergoes rapid iteration based on how it interacts with market and consumers. Prof. Treviranus replied that the underlying problem, especially with design thinking systems, was the singular and rigid focus on a winning solution. Instead, the ecosystem should work towards a more adaptive and embracing environment for innovations. Mr Lien concurred that the nature of an ecosystem demands inclusivity and that there is no “one size fits all” solution.



Dr Natalie Pang and the speakers from Panel 1.

Enabling Digital Participation through Design

According to the World Health Organization, about 15 per cent of the world's population have some form of disability. The next speaker, Mr Bryn Anderson, demonstrated the lack of digital accessibility and participation for people with disabilities. Mr Anderson is a Digital Accessibility Consultant at Siteimprove, where he supports large organisations by providing monitoring tools and solutions for content quality and usability issues.

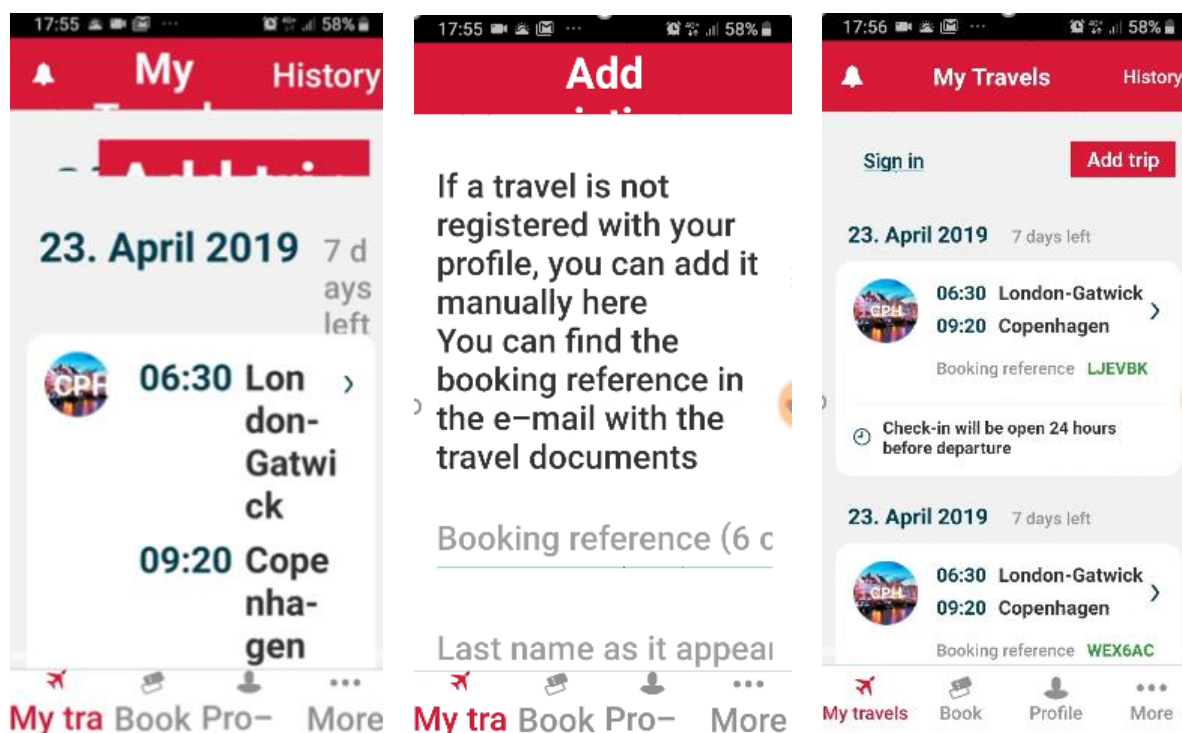


Mr Bryn Anderson, Digital Accessibility Consultant at Siteimprove

He said the needs and preferences of persons with disabilities for navigating the online space remain unmet to date. To illustrate, he recounted his personal experience (as one who is visually impaired) at having to use the Norwegian Airlines mobile application. The app did not cater to his needs, as the text was too small for him to read. And if he increased the text size to one that he was comfortable with, the information was truncated and not displayed in a readable format. He also demonstrated the limitations of functions such as a screen reader, where it was not able to clearly communicate to him what he should do (e.g., where to input password), thus resulting in confusion.

Additionally, he said designing for online inclusion was not just limited to the online space; it should also consider users' physical location and activity. For example, inclusive design should take into account the needs of parents who would have to use technology while juggling a baby and a stroller. To aid designing digital tools with universal inclusion in mind, he suggested looking at reference materials and tools such as the Web Content Accessibility Guidelines and the EU Accessibility Directive. These are practical and systematic guidelines

that could not only help solve accessibility issues, but also better equip service providers to achieve digital inclusion through universal design.



Screenshots of the Norwegian Airlines mobile app. An increase in font size would result in illegibility (left and middle), as opposed to reading the screen in normal mode (right).

Panel II: Closing Digital Divides — Technology Deployment for Communities

The next panel featured community practitioners and business representatives. It comprised Mr Andrew Buay, Vice President for the Singtel Group's Corporate Sustainability; Mr Koh Kong Meng, General Manager and Managing Director at HP Inc. (South East Asia and Korea); Ms Carrie Tan, founding Executive Director, Daughters of Tomorrow (DOT); and Mr Sunny Chan, Chairman and Board Member, RSVP Singapore, The Organisation of Senior Volunteers. The speakers spoke about the work they have done to promote digital readiness and how they overcome the digital divide in their communities. The session was chaired by Dr Soon.

Mr Buay presented the work Singtel did to bridge the digital divide. He used the term “digital chasm” to delineate the inequality that exists in digital accessibility. He said the general discourse on digital inclusion should be concerned with providing digital assets of not just devices but also the relevant knowledge and skills to marginalised communities. He explained this based on findings from a 2018 report in which Singtel collaborated with international think-tank DQ Institute, to understand the current state of online child safety globally. The findings showed that children worldwide have been granted earlier access to digital devices, the internet and social media. In turn, this posed serious problems for increased cyber risks such as cyber bullying and further issues in mental health and identity. He also highlighted the presence of a correlation between access to mobile devices and a high number of hours spent by children on social media. While high screen time was not

necessarily problematic, it was the time spent on productive or unproductive technology usage that was of concern. As such, Singtel adopts a holistic approach to digital inclusion through the promotion of digital citizenship. For example, Singtel partnered with the DQ Institute in #DQEveryChild, a programme aimed at teaching children how to navigate the digital environment responsibly and effectively through gamified learning. He also mentioned that Singtel was working with key institutions such as the Organisation for Economic Cooperation and Development to establish a global framework in order to coordinate efforts to build children's digital competencies. Lastly, Mr Buay highlighted the uplifting role of technology in providing basic necessities such as affordable education and healthcare to countries outside of Singapore.

Ms Tan highlighted the work that DOT does to prepare underprivileged women in Singapore for the workforce in order for them to earn a livelihood and gain financial independence. This included conducting workshops to build their confidence and teaching them IT skills. As of 2018, DOT has trained over 400 women, of which 30 per cent have gained employment. She also debunked the common misconception that digital savviness and literacy correlates with age. In her experience, the lack of digital skills was due to the lack in social connectedness. To illustrate, she gave the example of young women in their 20s who had abruptly lost touch with technology after they dropped out of school at age 15. Beyond equipping these women with IT skills, part of DOT's efforts include attaching them to a virtual mentor to guide and support them in their learning. They would also offer customised homework suited to the aspirations of these women, and when necessary, provide child-minding services during training. To her, digital accessibility goes beyond the provision of a device and picking up IT skills, but in ensuring that the women were in the right environment for learning.

Next, Mr Chan spoke about RSVP's Cyberguide Programme. Each year, the programme trains more than 2,000 IT-savvy "young seniors" (adults aged 40 and above) to promote IT skills to their peers. He said this was an effective way to reach out to seniors, as the volunteers could also communicate with them in their preferred language or dialect. RSVP also manages a wide range of courses through their partnerships with various agencies — such as the IMDA, Senior Activity Centres, National Environment Agency — to teach seniors IT skills such as how to access emails through their smartphone. He added that these courses were specially designed to cater to the learning needs of seniors. This means refraining from including excessive information and technical terms that could be too difficult for the seniors to comprehend. Training sessions also typically focused on imparting a particular skill such as connecting to the internet or how to search for information online. He hoped that these were practical skills that seniors could then apply in their everyday lives.

The last speaker was Mr Koh from HP Inc. He highlighted four megatrends that would inform global directions and impact communities alike, before going into the specifics of the work done by the organisation in digital inclusion. First, he said rapid urbanisation, combined with infrastructure strains, would continue to be key pressure points for cities in planning for population management and service provision. Second, changing demographics, in particular a rapidly ageing society and an increased life expectancy, would continue to impact societies worldwide. The third trend would be hyper globalisation. He cited the case of Jakarta, a fast-developing city that has the largest number of Twitter users in the world. The

last megatrend was accelerated innovation across all sectors and industries, which would lead to greater disruption. He then elaborated on the work HP Inc. has done to foster digital inclusion, specifically in terms of access, literacy and participation. He cited HP Inc.'s participation in the IMDA's Digital Inclusion Festival as an example, where 35 employees were mobilised as volunteers to guide seniors on their smartphone usage.

Barriers faced by the people and private sectors

Dr Soon chaired the Q&A session, and Mr Anderson joined the discussion. Dr Soon asked each speaker to identify a key impediment that hindered their work. Mr Anderson and Ms Tan both said the lack of social connection was a key barrier in getting society to be more understanding towards the underserved communities. For example, Ms Tan said women often experienced social isolation as they were afraid of being stigmatised by people around them. For Mr Chan, he said volunteer retention and constant programme evaluation were some of the issues that kept him occupied. This is because they were crucial to the sustainability of RSVP's efforts in digital inclusion. In Mr Buay's reply, he again noted the importance of preserving the benefits of technology alongside pertinent issues such as internet addiction.

Bring stakeholders together to achieve digital inclusion

Participants also asked how partnerships between stakeholders could be enhanced to achieve digital inclusion. Ms Tan said digital inclusion must be understood in the context of a social divide. It was also crucial to understand the needs of people from different sectors before synergies could be identified for collaborations. For example, she said some of the mothers whom DOT worked with have found jobs at big data companies through the partnerships she has formed with said companies. Mr Koh added that many practitioners had been working towards the same goal of cultivating a more digitally inclusive society, but efforts by organisations could be fragmented because of diverging interests and priorities. He suggested that a good way to bridge these different interests would be to link companies with non-governmental organisations (NGOs) via a digital marketplace. However, Mr Chan pointed out that collaborations could be forged only if there was sufficient awareness of the need to tackle a problem and concrete beliefs that an opportunity could be leveraged. Mr Anderson added that partnerships and "camaraderie" could also be formed when different stakeholders rally around a common objective. Mr Buay said the untapped potentials existed not in reduplicating but in building on existing efforts and frameworks, hence collaborations could extend beyond the local community.

What are the new digital divides?

The speakers were also asked to identify potential or new digital divides that may result from emerging technologies such as AI or virtual reality. Mr Anderson said most of the design of emerging technologies was targeted for the majority. If this were to continue, the marginalised "20 per cent" will consistently not be included. Mr Buay added that perhaps this was where other organisations, besides the big technology companies, could step in. He gave the example of Xceptional, a company in Australia that helps businesses employ people on the autistic spectrum who possess certain "high-tech" skills that would be relevant in areas such as cybersecurity. At the same time, Mr Chan also cautioned against enabling large-scale applications of technology, which now increasingly bear ethical considerations.

On the other hand, Mr Koh said he was an “optimist” when it comes to new technologies, as he believed that it could help with digital inclusion. For example, AI could help create inclusive products or services efficiently and cheaply. Nevertheless, he was concerned about the increase in online echo chambers, which could lead to a more stratified society. As for Ms Tan, she said that as people spend more time on screens and less on personal interactions, there could be a decline in traits such as empathy and emotional intelligence.

There was a consensus among the speakers that the Singapore government is making progress in closing digital divide. Nevertheless, Mr Chan said the nation’s structured and organised approach to problem-solving requires time for efforts in digital inclusion to show substantial results. He added in jest that in order to work with the government, one had to be a “fighter” who would not get “tired” and “surrender”. Ms Tan said there were still immense opportunities for integrating the underserved communities into the ecosystem of partnerships. This was also echoed by Mr Koh, who said the challenge was in getting these groups on board.

Tech companies’ role in regulation

Dr Pang asked the speakers about the implications of tech companies taking over functions that used to be associated by institutions like banks or government. Mr Chan emphasised that service providers themselves must be the ones to self-regulate. From a corporate perspective, both Mr Buay and Mr Koh concurred that companies should be driven by the right values and recognise the difference between active community participation and the abuse of power or rights. In particular, Mr Koh expressed his personal view that companies in general do not seek to replace the state’s role in providing for important goods and services. Moreover, companies have and should continue to perform functions otherwise unfulfilled by regulatory bodies. He gave an example of cryptocurrency management which subsequently spawned the development of blockchain.



(From left to right) Mr Bryn Anderson, Mr Koh Kong Meng, Ms Carrie Tan, Mr Sunny Chan & Mr Andrew Buay.

Dialogue Session

The final session of the symposium featured a dialogue session with Dr Janil Puthuchery, Senior Minister of State, Ministry of Communications and Information and the Ministry of Transport. The chairperson was Professor Lim Sun Sun, Professor of Communication and Technology & Head of Humanities at the Arts and Social Sciences, Singapore University of Technology and Design.

Dr Puthuchery spoke about the government's rationale behind the various interventions and programmes targeted at digital inclusion. He said that Singapore responded to change and opportunities by being forward-looking and adapting to the challenges of both the day and of the future, to build a globalised, hyper-connected forward-looking city-state and country. This was because Singapore, as a hyper-connected open economy reliant on trade, is heavily-exposed to forces of disruption and change. Therefore, Singapore's value proposition is in rapid adaptation to and adoption of change, in this case, digitally driven technology.

Dr Puthuchery emphasised that the government had to be more deliberate and active in pushing efforts to facilitate the digital transformation process because of two factors. One, because the current pace of digital change is too fast to allow for the luxury of time for gradual adoption, and two, because the fundamental outcome of the Smart Nation transformation is in creating economic opportunities and economic inclusion for Singapore and Singaporeans.

He noted that the Digital Readiness Blueprint was launched to promote citizens' access to digital technology and to equip them with the skills to use digital tools with ease and confidence. It adopts a holistic approach guided by three principles — digital access, digital literacy, and digital participation. For example, the government increased competition in the telco market to keep data costs lower, and lowered barriers to access by ensuring community spaces such as the National Library Board and community centres had access to Internet. The government also ensured that students were equipped with digital literacy skills by including it in the education curriculum. As for digital immigrants, the demographic of Singaporeans that are less familiar with digital technology, the government introduced a skills development framework through training courses and consistent public engagement, which provides opportunities to develop digital skills. For businesses, Dr Puthuchearry said that the government and consumers have to apply pressure as regulators and consumers, to insist that businesses have a moral and social obligation to be as inclusive as possible. The government also has a duty as a State to make sure that access to essential government and public sector services, which are increasingly being delivered through digital means, will not be limited because of limitations in digital access.

Dr Puthuchearry also noted that to encourage participation, businesses must be engaged as they understood the way market demand and consumers worked. Shaping positive responses to digital adoption must include engaging businesses and providing them with access to policy, so that people will have the opportunities and the desire to practice their digital skills.

In closing, Dr Puthuchearry commended the progress made by Singapore. While citizens have accepted the need to accelerate the pace of digital development, the work remains. He emphasised that the cultivation of a digitally inclusive society was more than a whole-of-government approach — it required the combined efforts of government, industry and community.



Dr Janil Puthuchery during the Q&A session.

Ways to sustain digital inclusion efforts

Professor Lim chaired the Q&A session. She asked Dr Puthuchery for his views on how digital inclusion efforts could be made more sustainable beyond the push for access, literacy and participation. He replied that in itself, the push for access, literacy and participation could be the solution for sustainability. Using seniors as an example, he said that once they started becoming comfortable in using some products such as messaging platforms and social media (i.e., access and literacy), the government could then leverage their new skills (i.e., participation) to look for new ways to engage with them. Additionally, seniors who are comfortable with digital engagement have the potential to be digital customers, thus presenting a new market segment for businesses to tap into.

Some participants were concerned whether accessibility and inclusion tools truly improved accessibility or did the opposite. Dr Puthuchery acknowledged that user experiences on digital platforms were unique and fragmented. However, he felt that designers should not over customise user design, which he felt might complicate accessibility. Instead, Dr Puthuchery felt that designers should pay attention to making useful compromises in their platform designs, so that users had various ways to navigate their platforms, to achieve a similar desired outcome.

Who fights fake news?

Issues pertaining to fake news were raised as well. To this, Dr Puthuchery shared his opinion that an active role needed to be adopted, to engender meaningful public discourse on fake news, instead of leaving the problem to solve itself. He felt that there needed to be some oversight and regulatory tools on the credibility and reliability of media platforms.

However, he felt that this was only one small tool, to protect people against egregious false statements of fact. However, he noted that the rest of the space was open for debate, and added that it was also equally-important for each person to have the tools and the ability to think critically and identify false or misleading information, through continued education, vigilance and engagement across the population. Dr Puthuchearry also suggested that the media industry, the government communication services and the academic communication services, needed to have the capability to deliver quality news and information, communicate usefully and engage with the public meaningfully.

Cyber security and data privacy as key concerns of the government

Dr Puthuchearry was then asked to identify the biggest risk of digital inclusion. In response, he said that while no one was exempt from the risk of security and privacy issues, the government believed in the critical conception of digital transformation alongside social inclusion and cyber threats. When asked on the degree to which the government was receptive to the idea of sharing data for private-public partnerships, Dr Puthuchearry gave a definite “Yes”, provided that principles such as anonymity, consent and security were maintained. He emphasised that the security and privacy of citizens’ data was of paramount importance and could not afford to be compromised by profit-making intentions. He also said that members of the public already have access to Data.gov.sg, which comprises open and anonymized datasets from public agencies.

In closing the session, he highlighted enterprises that provided tools and services catered to the needs of under-served communities. Dr Puthuchearry saw the presence of social enterprises and organisations such as SG Enable as fundamental to digital inclusion and hence social inclusion. For example, the Enable IT programme has equipped persons with disabilities with enhanced skills sets to conduct their daily activities through support schemes and workshops. He also highlighted that greater support towards the social significance of such work would go a long way in raising public awareness and engagement on the various social issues.



A participant asking Dr Janil Puthucheary a question at the Q&A session.

Closing Remarks

In her closing remarks, Dr Pang pointed to a common theme that emerged from all the discussions — the importance of strengthening partnerships through engagements with multiple stakeholders. For instance, she pointed out the idea of a digital marketplace that would connect companies with NGOs. She noted how digitalisation was both a global and a localised concern that would have profound impacts on people's lives. It is important to think about regulation as not just the protection of individual rights, she added, but also a nimble reflection of how much innovation that could be practised. Lastly, she said the journey of digital transformation and digital inclusion was very much about questioning assumptions and reshaping social norms, and truly understanding the meaning behind digital inclusion.

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