

**DR JANIL PUTHUCHEARY, MINISTER OF STATE FOR COMMUNICATIONS AND
INFORMATION
AT THE COMMITTEE OF SUPPLY DEBATE
ON 11 APR 2016**

A SMART NATION OF OPPORTUNITIES FOR ALL

INTRODUCTION

Madam Chair,

1. Digital technology is changing and at the same time driving change at an astounding pace. Many view these developments with anxiety: will a machine take over my work? Will social media divide society? Will I be left behind as technology progresses? Is cyberspace safe?

2. We cannot ignore such concerns. We cannot pretend that as a small, open country, we can shield ourselves from these forces. The only way ahead is to prepare for the threats and opportunities, and try to be the disruptor rather than the disrupted.

3. This is what being a Smart Nation is about: we have a national plan. We will develop, deploy, and exploit digital technology. We will secure the future of our jobs, and drive the transformation of our quality of life. We will maintain the cohesiveness of our society, and our relevance to the rest of the world. To succeed, everyone needs to come together: citizens, companies, government.

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ROLE OF GOVERNMENT

4. What can Government do to enable this vision of a Smart Nation? Three things. First, we must build first class infrastructure for pervasive, seamless and high speed connectivity to benefit citizens and businesses. Second, government must lead in the use of technology for our daily business: to serve people, make policy, plan ahead. Finally, we need to nurture research and innovation to build new solutions, create and capture new value.

(i) Wireless@SG

5. First, connectivity. I thank Associate Professor Randolph Tan, Mr Saktiandi Supaat and Mr Zaqy Mohamad for their questions about Wireless@SG. It is already faster than most public Wi-Fi services around the world. But demand is increasing, and so we will increase its speed from the current 2 Mbps to 5 Mbps. This is faster than existing 3G speeds. It will be more than enough to surf the web, and stream high-definition videos. Also, we will double the number of Wireless@SG hotspots from 10,000 to 20,000 across Singapore by 2018.

6. In doing so, we will focus on public places, such as community clubs, hospitals, polyclinics, government service centres MRT stations, hawker centres, VWOs, retail and tourist spaces. This will increase the penetration and pervasiveness of Wireless@SG. Already today, our hotspots-to-population ratio is second only to Tokyo. Our efforts and investments will help Singaporeans stay more connected. We will continue to support this programme as long

as necessary because we need the wireless ecosystem to develop into one that is vibrant and self-sustained.

7. But it is not the connectivity that makes us smart; it is what we do with it. We need businesses to ride on the network, to build and deploy new products and services, as alluded by Associate Professor Randolph Tan. There are already new players in the market taking advantage of the open access mandate in broadband infrastructure, they provide new range of products and services such as real time surveillance, and time-critical financial data services delivery. Operators can also use Wireless@SG to offer improved services such as cashless payment and location-based analytics. All this benefits consumers, businesses, and productivity.

(ii) Creation of GovTech and Smart Nation Platform

8. We are forming the Government Technology Agency, or GovTech, to drive transformation in Government and to use digital technology to serve citizens better and improve our processes.

9. One of the immediate responsibilities for GovTech is to roll out the Smart Nation Platform. Today, each government agency collects their own data, deploys their own sensors, and develops their own applications. This slows innovation and increases costs. The Smart Nation Platform will provide a shared sensor communication platform for whole-of-government, to allow collection, sharing and analysis of different types of data to benefit all.

10. The first phase of Smart Nation Platform development and deployment is already under way, covering high traffic areas in the city and Yuhua. The first priorities for using the data will be transport and security. Working with SPF and LTA, we will be using the Smart Nation Platform video sensors and analytics to enable incident detection, vehicle count, speed analysis and crowd sensing. We want to use the data to reduce crowdedness, improve bus waiting times and comfort.

11. This citizen centric impact is what we want to achieve, and the Smart Nation Platform is not just a bunch of devices, but a way for different agencies to come together, put citizens at the centre, build and share innovations that will serve people better. This is what GovTech is all about, and I am confident that we can achieve this vision, with the support of all agencies.

(iii) Services and Digital Economy

12. Mr Saktiandi Supaat asked how we intend to develop Singapore's digital innovation capabilities under the Research, Innovation & Enterprise (RIE) 2020. Out of the \$19-billion fund announced by PM Lee earlier this year, \$400-million will go to support the Services and Digital Economy (SDE) domain to drive research and innovation for our Smart Nation.

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13. A new Smart Systems Strategic Research Programme (SS SRP) will be launched this month. This is a collaboration among MCI, the Smart Nation Programme Office (SNPO) and the National Research Foundation (NRF), and will have two strategic imperatives: first, to support the development of digital technology in areas that affect citizens the most, such as transport, health and service productivity; second, to build capabilities in platform

technologies to open up possibilities for innovation in many different fields. Examples are sensor communications, 3D geo-spatial science and cybersecurity.

14. Globally, digital services were projected to have generated approximately US\$1 trillion in revenues last year. We want Singapore business to share in this, to be part of this and to drive this. With these investments and plans we can make sure that we give our businesses every opportunity to be part of the global action.

15. For example, leveraging on Singapore's access to Asian languages, Dr Li Haizhou from A*STAR's Institute for Infocomm Research is leading an international effort with over 27 countries to develop a multilingual speech translation service over the internet. This will enable 95 per cent of the world's population to communicate with each other. This is an example of our competitive advantage, as a result of the people that we have, the place that we occupy in the world, and the opportunities available to individuals, to enterprise and to academia here in Singapore.

ROLE OF ENTERPRISES

(i) Future Economy

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16. The public sector can be the enabler and catalyst, but it is the private sector that needs to lead in innovation, to bring ideas from the research lab to the market, to deal with the disruption and be disruptors themselves. I am working together with representatives from the technology sector, such as Mr Caesar Sengupta, who is the Vice President of Google,

located here in Singapore, together with a group under the Committee on the Future Economy to examine the impact of disruptive technologies on our economy, and to come up with some recommendations for Government, private enterprises, and individual citizens.

17. We will look at how technology presents opportunities to re-engineer our business processes for better outcomes, leveraging on Singapore's competitive advantages – for example our high level of connectivity, our very high rate of literacy, as well as technological literacy, and the high level of trust that exists in the Singapore brand name. At the same time, we must anticipate risks from new technologies, such as the threats to traditional businesses and jobs from automation. We must find ways to ease the transition for our people into new jobs and allow them to thrive in future work environments.

(ii) Infocomm Investments Pte Ltd

18. We have a vibrant start up ecosystem, but to seize the opportunities out there, this ecosystem needs to grow. Last year, Infocomm Investments Pte Ltd (IIPL) set up a start-up space called BASH, which stands for Build Amazing Start-Ups Here. And we did. BASH has built 65 amazing start-ups in the one year that it has been operating. Across the whole of Singapore, IIPL has accelerated about 230 start-ups, including the 65 start-ups from BASH. We have found that our strategies also increase the survival rate of start-ups. Lots of start-up ideas, and initial excitement, but a key part of the process is the ability of the start-up to get past the initial stage and attract further follow-on funding and investment. The survival rate, under our strategy has increased significantly from 10% to more than 60%. Most have chosen to be based in Singapore, which in turn creates jobs for Singaporeans.

19. This achievement would not be possible without a growing number of Singaporeans who are offering their time and expertise to help other aspiring entrepreneurs. One example is Teik Guan. He was the CEO and CTO of DS3, a Singapore-based company, before he moved on to Gemalto, a digital security MNC. He decided to make a mid-career change this year and became a full time mentor at BASH. With his rich experience, he has been an extremely valuable resource for promising entrepreneurs. He is advising several start-ups on issues like optimising share-holding, identifying good business channels, and improving their business strategies.

20. Thanks to such efforts, the quality of our start-ups is improving. More and more home-grown start-ups are developing products that could potentially transform their sectors. One example is Jaga-Me, a graduate of IIPPL's pre-acceleration programme. Jaga-Me is a local start-up that connects patients and their families with quality home nursing services on-demand. In doing so, it helps families to manage the stress of caregiving.

ROLE OF THE INDIVIDUAL

(i) Smart Nation Fellowship Programme and Technology Associates Programme

21. The success of our Smart Nation will ultimately depend on the choices that we all make. For BASH, their secret is experienced mentors like Teik Guan who wants to nurture the next batch of entrepreneurs. Government also needs people with the technical skills and the passion to serve, so IDA launched the Smart Nation Fellowship Programme last month. This programme invites experienced Singaporean tech professionals to come into Government

and deliver meaningful digital and data solutions for citizens. In the first three days alone, we received about a hundred applications. Many of them are working in top software firms, an overwhelming response.

22. IDA has also pioneered a Technology Associates Programme, to build a pipeline of technology leaders and experts for the Government through training and mentorship. Over 350 applications were received for 15 spots under this programme. Technology Associates have worked on projects such as the Business Grants portal announced by Minister Heng in the Budget and the online Student Learning Space being developed by MOE. I am glad to see Singaporeans responding enthusiastically, not just to the NERF guns but also to our call to action to come and build our Smart Nation together.

(ii) Data.gov.sg

23. But even if you choose not to join the Government or work at BASH, there is a lot to do. If you like to play with data, or programme an app, visit our open data portal data.gov.sg. We revamped it last year to present our data in a clearer and more meaningful manner. It is also machine readable, and so easier for anyone to use it to develop their own ideas and products. Here's a map from data.gov.sg that allows you to make a comparison among the telecom operators by region. If you click on the different hexagons or type in the address, you will be able to compare the speeds of the different telecom operators at the places that you are interested in. We want to make data open, accessible and easy to use. We want to encourage all the innovators out there to create something useful on top of our data, maximise its value for the public, or do something just for the fun of it.

24. This is what the digital platform must do for us: bring us together as a people, each contributing our knowledge and experience in small and big ways, and be of service to one another.

25. And this is also why it is important that we take an inclusive approach as we take on the challenges and opportunities of the digital revolution, and help each other adapt to the inevitable change.

26. Some disruptions are easier to manage, such as the cessation of 2G mobile services that Mr Pritam Singh highlighted. This is not expected to affect many people, as 2G subscriptions comprise less than 3% of the total mobile subscriptions in Singapore today. The bulk of them are not senior citizens, but rather foreigners living in Singapore, corporate users and prepaid users. IDA is working with mobile operators to help them migrate smoothly to 3G and 4G networks. I would like to reassure Mr Singh, and I hope you to help assure them that they can continue with their existing 2G subscriptions at current prices on the 3G network, until they choose to change or upgrade their plans.

(iv) Digital Inclusion

27. Other issues need more deliberate action – like bridging the digital divide. We must ensure that no segment of the community is excluded from computer and internet connectivity, especially low income households, the elderly, and people with special needs. We have to date connected more than 29,000 low-income households since 2006. Internet usage by our seniors aged 50 and above has also increased significantly from 33% in 2012 to

51% in 2014. I would like to assure Mr Singh that our Silver Infocomm programmes and Digital Inclusion programmes are available in vernacular languages. I attended a very nice multi-generational bootcamp in Punggol East together with Mr Charles Chong, and there were ten-year-old Primary 4 students training people of their grandparents' age on how to access the various programmes on Toggle and how to do their online banking. They were doing so in a mixture of English, Malay, Mandarin and Hokkien. It was really a very interesting experience.

28. Getting people online is only the start. Serving them online is just as important. Today, government websites are held to standards by the World Wide Web Consortium (W3C) for use by people with disabilities. But we are not satisfied to stop here, and are looking at how e-government services can be designed better to serve all Singaporeans, especially the elderly and people with special needs.

29. We also use technology in other ways, for example the recent Budget 2016 speech had live-captioning, to enable the hearing-impaired and the deaf community to have direct access to the Budget speech.

30. Ms Chia Yong Yong mentioned the Enabling Village. This helps people with disabilities live and work independently using infocomm and assistive technology. This is Nur Madiah Hidayah Lim. She is 34 years old and born without limbs. She has benefited from some of the technology-driven programmes and devices we have put in place, and through SG Enable's Programme at Tech Able, she is now working as part of our digital economy. Madiah found a job in Singtel as a Call Centre Operator.

CONCLUSION

Madam Chair,

31. The world faces an uncertain and anxious time ahead, but it is also a time full of surprise, potential and opportunity. Smart Nation is a rallying call to Government, to industry and to all citizens, and all of us need to work hand-in-hand, and seize these possibilities. We will need to take risks, be prepared for change and keep a look out for one another. Smart Nation is not about building technology. It is about us, and the relationships we build with each other, as one people.

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An Engaged and Connected Singapore

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