

# Leading Digital Government Transformation



GOVERNMENT TECHNOLOGY AGENCY OF SINGAPORE







In support of Singapore's vision to become a Smart Nation, GovTech actively works with public agencies to develop and deliver secure digital services and applied technology for individuals and businesses. As a leading centre for information communications technology and related engineering, GovTech also enhances the capabilities of the Singapore Government in these domains.



# Building Capabilities

In tandem with the evolving digital landscape, citizens expect smooth and intuitive transaction experiences when interacting with the government. That is why we seek to transform the way government digital services are delivered by attracting top tech talents and keeping their skills sharp.

#### Centre of Excellence

Multidisciplinary teams of technical experts implement innovative projects within Government and advise agencies on their technology solutions, raising digital capabilities across Government.

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#### Capability Building

Through providing learning and development opportunities in emerging technologies, GovTech not only strengthens the technical capabilities of our Public Officers, but also inspires them to deepen their expertise.

# Sparking Digitalisation

Today, technology can improve lives in a way unimaginable previously. As an advocate of continuous growth towards becoming a Smart Nation, we are big believers of collaboration. For that reason, we build an ecosystem of open platforms and make available our data sets for use by businesses and developers.

**Open Data Network** 

The network empowers private sector to leverage on Government data through data.gov.sg to drive new services, and publicprivate collaborations.

Smart Nation Sensor Platform Data from sensors & Internet of Things (IoT) devices will make our city more liveable and secure.



#### Singapore Government Technology Stack

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A new platform comprising common digital services and infrastructure is made available to all government agencies.

# Driving Co-creation

Everyone plays a part in digital services transformation. No longer just passive users, citizens, businesses and public officers can use openly available data to form their own insights and prompt changes in our daily experiences. Naturally, we value diverse views and encourage collective engagement in engineering new possibilities.



Hackathons By bringing together public officers and members of the public to brainstorm and solve challenges, innovative solutions are developed for smarter, better living.

#### e-Payments Drive

Transactions between individuals, businesses and the government have become simpler, swifter, more seamless and safer, thanks to effective e-payment platforms.

#### Moments of Life

Through organising relevant government services around different agencies to coincide with key moments in citizens' lives, transactions with government agencies become more seamless and convenient for citizens.



## Chairman's Message



#### Introduction

In May 2017, the Smart Nation and Digital Government Office (SNDGO) was set up under the Prime Minister's Office. This established digitalisation as a core agenda for the Singapore Government and underscored its importance as a pillar in driving public service transformation efforts.

As the implementing agency under SNDGO, GovTech plays a key role in steering and mobilising the government in its digitalisation efforts. Over the course of the year, GovTech has continued to make progress in implementing Strategic National Projects, delivering citizencentric services and building technology capabilities in government agencies.

#### Implementing Strategic National Projects

One of the key Strategic National Projects is the National Digital Identity, which seeks to give citizens a unique digital identity to perform secure online transactions. We have initiated trials for the SingPass Mobile App, which uses QR code scanning for authentication and does away with the need to remember long passwords or the hassle of using physical tokens.

In May 2017, the Smart Nation and Digital Government Office (SNDGO) was formed to establish digitalisation as a core agenda for the Singapore Government and a pillar in the country's public service transformation efforts."

#### The National Trade Platform won Best e-Business Digital Initiative

at the World Summit on Information Society (WSIS) Prizes 2017 We have continued to strengthen our partnership with the industry to leverage MyInfo to enhance their customers' experience. MyInfo is a service that enables citizens to manage the use of their personal data to make online transactions simpler. Banks are now using MyInfo digital profiles to reduce the hassle of form filling for their customers when opening bank accounts, leading to an 80 percent reduction in application time. We will look for other partnerships to extend the benefits of MyInfo to more businesses and individuals.

A proof-of-concept tender was also called for the Lamppost-asa-Platform project, which forms part of the Smart Nation Sensor Platform (SNSP). SNSP will enable agencies to collect, analyse, and share data from sensors that are deployed island-wide. As part of this endeavour, lampposts across Singapore will be linked up to form an interconnected network of wireless sensors.

## Delivering citizen-centric services

We have rolled out many digital services to improve the lives of our citizens. In October 2017, the Parking.sg app was developed with the Urban Redevelopment Authority and the Housing & Development Board to provide a quick and convenient way for motorists to pay for short-term parking at coupon-based public car parks. This was extended to motorcyclists and drivers of heavy vehicles in December. By then, the app had already garnered more than 300,000 downloads on both iOS and Android and had been used for more than a million parking sessions.

Another project, the Singapore Student Learning Space (SLS) piloted by GovTech and the Ministry of Education, received international recognition when it won the 2018 IDC Smart City Asia Pacific Awards (Education). SLS is a digital learning platform to enhance learning and collaboration for students from primary schools to junior colleges. It helps teachers to design lessons using resources developed or curated by the Education Ministry. The platform was piloted at selected primary and secondary schools, and is now being rolled out progressively to all schools.

Demonstrating a different approach to service delivery, we launched a mobile application called Moments of Life (Families), where services are organised and integrated around the needs of citizens. Through the Moments of Life application, families with young children can now navigate key services such as searching for preschools and accessing their child's medical appointments and immunisation records. We will extend this Moments of Life approach of developing usercentric applications to more citizen roles in the coming years.

## Building capabilities in government

As we drive the digital transformation of the public sector, it is important that we work with agencies to strengthen their digital capabilities. We do this by supporting public agencies in designing and building digital platforms, services and capabilities that they can tap on for their digitalisation efforts.

A key development was the establishment of a Centre of Excellence (CentEx) to build up a sustainable pool of deep tech expertise within the government. The CentEx for Information and Communications Technology and Smart Systems (ICT & SS) comprises five capability centres focused on Data Science & Artificial Intelligence; Application Design, Development & Deployment; ICT Infrastructure; Cybersecurity; and Sensors & IoT. These capability centres will house multidisciplinary teams of data scientists, data analysts, software developers and engineers.

To drive pervasive adoption of digital technologies across all agencies, Chief Digital Strategy Officers (CDSOs) were appointed to develop digitalisation plans for their respective Ministries. We have launched the Ministry Family Digitalisation Plan and a guide to support the CDSOs in their work, and embarked on a Digital Shopfront Project to improve web standards across Whole-of-Government websites.

# Chairman's Message

The success of Singapore's digitalisation efforts also depends on strong technological leadership. In line with this, the Smart Nation Scholarship was launched to attract and groom a deep pool of engineering talent who can lead the public sector to drive our Smart Nation and digital transformation efforts. Scholarship recipients will have the opportunity to pursue a technical career with GovTech, the Cyber Security Agency of Singapore or the Infocomm Media Development Authority.

We are also engaging and building connections with overseas-based Singapore tech and engineering professionals using private-public sector sharing at tech forums in the United States as well as networking sessions in the

United Kingdom to keep them plugged in on the latest tech developments and breadth of opportunities in Singapore (and the region). Through the Smart Nation Fellowship Programme, we are inviting them to contribute back to Singapore's tech scene in technical advisory roles or by lending their expertise and skills to collaborative projects.

#### On the right track

Feedback from citizens and businesses and international recognition for some of our projects indicate that our digitalisation efforts are on the right track.

For example, Singapore was ranked 1st in IMD's Digital Competitiveness Report and also topped PWC's Cities' Readiness

Index. Projects such as the National Trade Platform won best e-Business Digital Initiative at the World Summit on Information Society (WSIS) Prizes 2017, and the National Digital Identity and Smarter ePayments Ecosystem project were recognised in the IDC Smart City Asia Pacific Awards.

These accolades were backed by feedback from GovTech's most important stakeholders – the citizens who are our customers. Every year, we conduct the Digital Government Customer Perception Survey to assess satisfaction with key digital government services and identify areas for improvement.

The latest results indicated high usage of government digital services amongst citizens (84 percent), with more than 92 percent of the respondents expressing satisfaction with the overall quality of the services. Amongst businesses, almost all used digital government services for their operations, with 92 percent expressing satisfaction with the overall quality of the services.

There is still much more that we can do, and we will continue to make investments to support Singapore's digitalisation push. In FY17, over \$2.4 billion worth of ICT tenders were awarded in areas such as data analytics, sensors and related software and systems to help build capabilities and drive digital transformation. We have also been developing products to help businesses and end users. Examples include

LicenceOne, a business licensing portal that aims to deliver a more user-friendly and efficient licensing experience for businesses, and Beeline, an open cloud-based smart mobility platform developed to provide data-driven shuttle bus services for commuters.

#### Launching the Digital **Government Blueprint**

In FY18, we will make a concerted push in building a Smart Nation and Digital Government with the launch of the Digital Government Blueprint. The Blueprint will be a statement of our ambition. It will guide our Smart Nation efforts along two key principles. The first

The Blueprint presents many more new opportunities for GovTech to collaborate, innovate and make a difference to the lives of Singaporeans ... And in line with our organisational values we will do so with an ethos that is agile, bold and collaborative."





is to create a government that is Digital to the Core, using data, connectivity and computing in all aspects of our work. The second is to be a government that serves with Heart, automating processes where possible to better serve citizens with a personal touch.

Our vision for Smart Nation is one with a vibrant and competitive economy and many new job opportunities; an inclusive society with a high quality of life enabled by innovative, responsive government services. Together with our partners and agencies, GovTech will continue to forge ahead to deliver these outcomes, with an organisational ethos that calls on us to be agile, bold and collaborative.

**NG Chee Khern** Chairman, GovTech

# Statistics

Singapore's Performance in the Digital Government Rankings



#### **Background and Objectives**

The UN e-Government (eGov) Survey measures the effectiveness of all 193 UN Member States in the use of Information and Communications Technology (ICT) in delivering public services, identifies patterns in e-government development and performance, and highlights areas where the potential of ICT and e-government has not been fully exploited. The Survey is often used as a component of other international benchmarks to measure the effectiveness of digital governments.

Publication Year	FY12	FY13	FY14	FY15	FY16	FY17			
(a) UN eGov Survey (released biennially)									
(i) Development Index	10 <sup>th</sup>	No report	3 <sup>rd</sup>	No report	4 <sup>th</sup>	No report*			
(ii) e-Participation Index	3 <sup>rd</sup>	No report	10 <sup>th</sup>	No report	8 <sup>th</sup>	No report*			

\* The UN eGov survey ranking results for 2018 has been published and will be featured in GovTech's FY18 Annual Report.

The WEF Global IT Report (GITR) measures the capacity of countries to leverage ICTs for increased competitiveness and well-being. The report ranks the economies by examining the main drivers of ICT readiness and ICT impact. With an extensive coverage of 139 economies worldwide, accounting for over 98.1% of global GDP, the report remains the world's most comprehensive and authoritative international assessment of ICT impact on the development and competitiveness of nations.

(b) World Economic Forum Global IT Report (released annually)									
(i)	Government Usage Sub-Index	2 <sup>nd</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	Not Available*		
(ii)	Social Impact Sub-Index	3 <sup>rd</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>	Not Available*		

\* Rankings were not available as at the date of publication.

Annual Digital Government Perception Survey (Citizens) Conducted in 2017

#### **Background and Objectives**

The Digital Government Customer Perception Survey (Citizens) is conducted annually by the Smart Nation and Digital Government Office (SNDGO) and GovTech to assess citizens' satisfaction with key digital government services and to identify areas for further improvement.

The survey was conducted from October to November 2017 for the reporting period of FY2016 (i.e. 1 April 2016 to 31 March 2017).

Research Methodology



1,500

respondents, comprising representatives of the total demographic population above the age of 19, were surveyed. Data collection was done via face-to-face interviews.

#### **Survey Results**

84% of respondents used digital government services

for personal matters

in FY2016.



For the 16% that have not used digital government services, the majority have other family members that are transacting with the Government on their behalf, or indicated that they have no need to transact with the Government.

#### Overall Satisfaction with Digital Government Services



95%

73% were satisfied or

expressed satisfactionwere satisfied or(rating of 4 and abovevery satisfied (ratingon a scale of 6) with theof 5 and above onoverall quality of digitala scale of 6).government services.of 5 and above on













#### Satisfaction with E-Payment Services Provided by the Government

65% of respondents made payments to the Government in FY2016.

The most common payment mode used was online via bank transfer or GIRO facilities.



# 97%

of the respondents who made payments to the Government in FY2016 expressed satisfaction with e-payment services provided by the Government (rating of 4 and above on a scale of 6).

76%

were satisfied or very satisfied (rating of 5 and above on a scale of 6).

# Statistics

#### Annual Digital Government Perception Survey (Businesses) Conducted in 2017

#### **Background and Objectives**

The Digital Government Perception Survey (Businesses) is conducted annually by the Smart Nation and Digital Government Office (SNDGO) and the GovTech to assess the business community's satisfaction with key digital government services initiatives and to identify areas for further improvement.

The survey was conducted from October to December 2017 for the reporting period of FY2016 (i.e. 1 April 2016 to 31 March 2017).





6 in 10 businesses had 1 to 3 digital transactions with government agencies in FY2016.

#### Research Methodology



# 1,600

businesses, representative of the following industry sectors were surveyed. Data collection was done through telephone interviews. Business sectors surveyed include:

- Commerce;
- Community, Social & Personal Services;
- Construction;
- Financial & Business Services;
- Manufacturing; and
- Transportation, Storage & Communications.

#### Overall Satisfaction with Digital Government Services

- Satisfied (Rating of 4 and above)
- Very Satisfied (Rating of 5 and above)



## **92%**

expressed satisfaction (rating of 4 and above on a scale of 6) with the overall quality of digital government services. were satisfied or very satisfied (rating of 5 and above on a scale of 6).

**64%** 

#### Satisfaction with E-Payment Services Provided by the Government

government services if asked.



**74%** of respondents made payments to the Government in FY2016.







64%



of the businesses would **use digital government services at least once every month**.





of the respondents who made payments to the Government in FY2016 expressed satisfaction with e-payment services provided by the Government (rating of 4 and above on a scale of 6).





# Highlights 2017

#### 1 May

#### Consolidating Singapore's Smart Nation efforts

GovTech, together with the Smart Nation Programme Office and relevant departments from the Ministry of Finance and Ministry of Communications and Information were restructured to form the Smart Nation and Digital Government Group (SNDGG) under the Prime Minister's Office. GovTech was designated the implementation agency for key Smart Nation projects under SNDGG.

> May 2017

> > 1 May

#### 3-4 May

#### Exchanging government experiences in developing digital capabilities

Public sector leaders from top digital governments including Australia, Denmark, Estonia, Finland, Israel, Japan, New Zealand, Sweden and the United Kingdom, as well as the World Economic Forum attended the second Digital Government Exchange organised by GovTech. One of the key topics discussed was the building of sustainable capabilities to improve citizens' lives through the use of digital and smart technologies.



#### 1 April

#### Strengthening cybersecurity with Internet separation

2017

The Whole-of-Government effort to separate the Internet from internal public sector systems was completed one month ahead of schedule. Supported by GovTech, this was part of an ongoing move to strengthen the Government's cybersecurity posture and better protect government and citizen data.



#### Extending MyInfo to banks to improve customers' transaction experience

The use of MyInfo was extended to banks, allowing citizens to tap on their MyInfo digital profile to auto-fill selected bank application forms. This led to an 80% reduction in application time for banking transactions.



#### 24 May

#### Collaborating with industry to boost innovation and Smart Nation capabilities

More than 1,000 industry participants and public officers attended the Smart Nation and Digital Government Industry Briefing. GovTech also collaborated with SGTech to organise a closed-door industry discussion on how to better develop and deploy the National Digital Identity, National Trade Platform and Smart Nation Sensor Network.



#### 26 May

#### Steering the development of anticipatory citizencentric services

GovTech met with over 60 ICT Steering Committee (ICTSC) chairpersons from over 60 agencies at an inaugural briefing to discuss the use of technology to deliver anticipatory citizencentric services.







#### **3 August**

#### Hosting Hong Kong leader at Hive

GovTech hosted Mrs Carrie Lam, Chief Executive of Hong Kong, on her visit to Hive.

#### 16 August

#### Enhancing learning and collaboration with the Singapore Student Learning Space

2017

The Ministry of Education (MOE) and GovTech piloted the Singapore Student Learning Space (SLS), a digital learning platform to enhance learning and collaboration for students from primary schools to junior colleges. SLS also helps teachers to design lessons using resources developed and curated by MOE. The platform was piloted at 62 primary and secondary schools, before being rolled out progressively to all schools in 2018.



# Highlights 2017



#### **25 August**

Aug 2017

#### **Reducing teachers' administrative** work with Parents Gateway

The Parents Gateway was piloted at five schools, where processes were redesigned to achieve better alignment with the system and reduce teachers' administrative work. The Parents Gateway will be rolled out progressively to all schools from October 2018.

# **30 September**

#### Illustrating the use of open data to improve lives

The inaugural National Data Visualisation Video Challenge attracted over 80 submissions by some 220 students from institutes of higher learning.

The theme was "How Open Data makes a difference for you and me". During the finals, 12 teams showcased data visualisation videos depicting how open data can improve lives, for example, by identifying towns that require more eldercare facilities, the need for water conservation, and the importance of social acceptance to prevent ex-convicts from re-offending.

#### **16 October**

Raising public sector cybersecurity awareness at Cyber Safe Cyber Ready

The second Whole-of-Government cybersecurity conference, Cyber Safe, Cyber Ready, was held to a full house of 800 public officers. The event featured international cybersecurity expert Professor Marco Gercke.

#### **19 October**

#### **Establishing Singapore** as a thought leader in open data

data study by the Economist Intelligence Unit which covered 10 countries. The insights helped establish Singapore as a global thought leader in open government data and increased awareness of the data.gov.sg portal.





#### **10 November**

#### **Releasing MyInfo APIs** to drive innovation

The MyInfo Developers and Partners Portal was launched, allowing businesses and developers to tap on MyInfo application programming interfaces to create innovative digital services that can better serve the public.

Nov 2017



#### **15 September**

#### Updating agencies on public sector tech developments

About 400 officers attended the Public Sector Infocomm Seminar, which was organised by GovTech to provide government personnel with regular public sector technology updates. The session in September also featured a hands-on segment on the Enterprise Data Hub.

Oct

#### 1 October

#### Improving the parking experience with Parking.sg

The Parking.sg app was developed by the Urban Redevelopment Authority, Housing & Development Board and GovTech to provide a guick and convenient way for motorists to pay for short-term parking at coupon-based car parks.



#### **19 October**

#### Embracing open data to catalyse co-creation

The code for the Beeline platform was progressively released into open source, in line with of catalysing innovation and cocreation. The move allows industry and individual developers to adopt, build on and scale up the platform and develop new mobility solutions.



#### Providing support for training and career planning with MySkillsFuture Portal

GovTech worked with SkillsFuture Singapore to launch MySkillsFuture portal, a one-stop resource site to help students and adults plan for their training and career needs.



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#### **1** December

#### Enhancing the protection of corporate data with the use of CorpPass

regular government transactions have started using Singapore Corporate Access (CorpPass) to better protect and manage their corporate data. Over 250,000 active businesses are expected to use CorpPass when it becomes the only login method for online corporate transactions with the



#### 20 December

#### Extending the use of Parking.sg app to more motorists

The Parking.sg app was extended to motorcyclists and drivers of heavy vehicles. By which time, the app had already garnered more than 300,000 downloads on iOS and Android and had been used for more than a million parking sessions



# Highlights 2018

#### **12 January**

#### Supporting agencies in their digitalisation efforts

The Ministry Family Digitalisation Strategy Officers, who were Family Digitalisation Guide. In addition, over 500 business users Centre of Excellence in ICT and

2018

#### **31 January**

#### Tapping industry insights for Singapore's digitalisation plans

The Smart Nation Speaker Series was launched, providing a platform for industry technology experts to share insights into technology trends and developments with Government Chief Digital Strategy Officers and Chief Information Officers. This was part of a larger effort by GovTech to support agencies in formulating their digitalisation plans.



#### 1 March

#### Grooming future public sector technology leaders

The Smart Nation Scholarship was launched to attract, develop and nurture public sector technology leaders who will drive Singapore's Smart Nation and digitalisation efforts. Scholarship recipients will have the opportunity to pursue a technical career with GovTech, Cyber Security Agency or the Info-communications Media Development Authority of Singapore.



Mar

2018



#### 17 March

#### **Mapping Singapore's** tree population

NParks and GovTech jointly developed the Trees.SG online map which shows the locations of 500,000 trees across Singapore and their biodata.



#### **17 January**

#### Hosting Prime Minister Lee at Hive

GovTech hosted Prime Minister Lee Hsien Loong on his visit to Hive to understand more about our agency's work in supporting Singapore's Smart Nation and public sector digital transformation initiatives.





Feb 2018

Providing a one-stop service for over 100 business licences

LicenceOne, the one-stop digital service for business licences, has grown to include 110 licences from 19 government agencies.



#### 3 March

#### Tightening government web interface standards with Digital Shopfront initiative

Usability checks were conducted on over 700 government websites as part of the Government Digital Shopfront initiative to tighten web interface standards across Whole-of-Government. GovTech also conducted clinics and briefing sessions on website usability, engaging over 100 representatives from 28 agencies. The government's web interface standards were also shared with vendors to help them better design government websites.







#### GOVERNMENT TECHNOLOGY AGENCY OF SINGAPORE

#### **Board of Directors** (As at 1 September 2018)

1 Mr NG Chee Khern

4

Chairman Permanent Secretary Smart Nation and Digital Government

Mr TAN Kok Yam Deputy Secretary Smart Nation and

5

Digital Government

6

3 Mr KOK Ping Soon Chief Executive Government Technology Agency

7

**Mr Alexander** 

7

### Prof Freddy BOEY (President's Office)

Deputy President and Provost National University of Singapore

9 Mr David KOH Chief Executive Cyber Security Agency

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President

Singapore Exchange Ltd

10 Dr Bruno LANVIN Executive Director Global Indices – INSEAD

10

11 Mr Matt QUINLAN Director

#### 5 Mr Peter HO Chief Executive HOPE Technik Pte Ltd

#### **Ms Mariam JAAFAR** Partner and Managing

6

Director (Singapore) The Boston Consulting Group Singapore

KLEINBERG Managing Director Exchange (MoPub), Asia-Pacific/Japan, Twitter Inc

#### 8 Prof Annie KOH

Vice President Office of Business Development, Professor of Finance (Practice) Singapore Management University

13 Mr Muthukrishnan **Mr TAN Kiat How** RAMASWAMI

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Chief Executive Info-communications Media Development Authority

14 Chief Executive

#### 8 9 1



Ontrack Advisory

Mr TAN Peng Yam

Defence Science and Technology Agency

Stepped down Ms Jacqueline POH (30 April 2018)

New appointee Mr KOK Ping Soon (1 May 2018) 10)



#### Mr KOK Ping Soon Chief Executive

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2 Mr CHAN Cheow Hoe

Information Officer

Deputy Chief Executive (Product Management & Development) & Government Chief

Mr FOONG Sew Bun Deputy Chief Executive (Services, Governance & Cybersecurity)

Ms LIM Bee Kwan Assistant Chief Executive (Governance & Cybersecurity)

Mr TAN Eng Pheng Assistant Chief Executive (Services)

11 Mr LEONG Der Yao Director Data Science and Artificial Intelligence

12 Ms Evangeline CHUA Chief People Officer People & Organisation Group

13 Ms LEE Kai Nee Chief Financial Officer Finance, Investment & Procurement Group

6 Mr CHAI Chin Loon Senior Director Cyber Security Group

#### 7 Mr KWOK Quek Sin Senior Director

National Digital Identity

8 Ms ONG Seok Leng Senior Director Governance Group

9 Ms Jacqueline LIM Acting Senior Director Government Infrastructure Group

10 Mr Parimal ASWANI

Director Government Digital Services

14 Mr LIM Keng Soon Chief Communications Officer Communications and

Marketing Group

15 Mr Vincent KOR General Counsel Legal

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(12)

Director



#### Ms Jennifer TAN

Strategic Planning and International

#### Stepped down

Ms Jacqueline POH (30 April 2018) Mr LIU Feng-Yuan (31 July 2018) Ms Lena GOH (19 September 2017) Mr Mark LIM (31 December 2017) Ms Dorcas TAN (30 September 2017) Dr TAN Guan Hong (30 September 2017)

#### New appointees

Mr KOK Ping Soon (1 May 2018) Mr FOONG Sew Bun (4 June 2018) Mr LEONG Der Yao (1 August 2018) Mr LIM Keng Soon (20 September 2017) Mr Parimal ASWANI (1 January 2018) Ms Jennifer TAN (1 October 2017)

# Members of Board Committees

#### Audit & Risk Committee (AC)

Mr Muthukrishnan RAMASWAMI Chairman Prof Freddy BOEY Member

Mr David KOH Member

Mr Matt QUINLAN

Member

Mr LEE Ah Boon Co-opted Member

#### Finance & Investment Committee (FIC)

**Prof Annie KOH** Chairman Mr KOK Ping Soon Member

Mr Peter HO Member Mr TAN Kok Yam Member

#### People Matters & Rewards Committee (PMRC)

Mr NG Chee Khern Chairman Mr TAN Kiat How

Ms Mariam JAAFAR Member Mr KOK Ping Soon

Mr Alexander KLEINBERG Member Subsidiary

Assurity Trusted Solutions Pte Ltd ("Assurity") is a wholly-owned subsidiary of GovTech. It was incorporated to operate the National Authentication Framework (NAF).

The NAF is a project to improve the security of consumers performing online transactions. It is supported by the Monetary Authority of Singapore and respective regulators, such as the Ministry of Finance and the Ministry of Health.

The NAF is a part of GovTech's vision of "An Intelligent Nation 2015 (iN2015) Masterplan" to develop a secure and trusted infocomm infrastructure. This is to facilitate the delivery of safe online services offered by the public and private sectors. The NAF is one of the key initiatives of the Infocomm Security Masterplan and National Trust Framework.



Ms Shirley WONG Managing Partner TNF Ventures Pte Ltd

Newly joined Mr KWOK Quek Sin (1 January 2018)

Mr Vivek KUMAR (13 November 2017)

**Stepped down** Ms Jacqueline POH (1 December 2017)



#### Ms Deborah LEE Formerly Executive Vice-President, Corporate Development Singapore Press Holdings Ltd

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Mr Robert CHEW Chairman Assurity Trusted Solutions Pte Ltd



Mr KWOK Quek Sin Senior Director, National Digital Identity Government Technology Agency (GovTech)



Mr Bruce LIANG Chief Executive Officer Integrated Health Information Systems Pte Ltd Chief Information Officer Ministry of Health



Mr TEO Chin Hock Deputy Chief Executive Cyber Security Agency of Singapore



Mr Charles FAN Chief Executive Officer Assurity Trusted Solutions Pte Ltd



Mr Vivek KUMAR Assistant Director-General NTUC

Director, U Startup, U Associate, U Future Leaders, and U PME, Secretary NTUC Membership Council



Mr TAN Chee Hau Director, Smart Nation and Digital Government Office (Planning and Prioritisation) Prime Minister's Office



Mr Eddie CHAU Board Advisor Assurity Trusted Solutions Pte Ltd

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