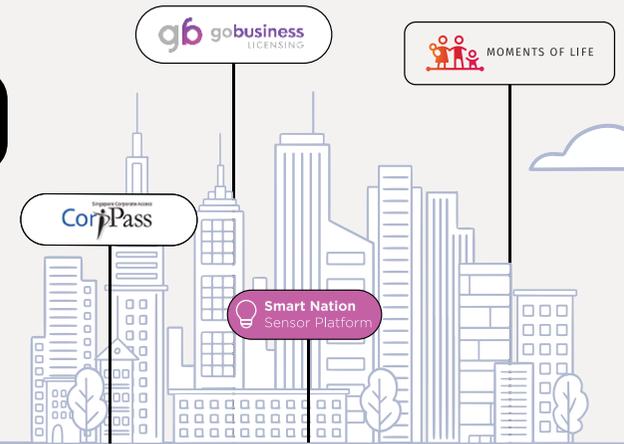


# DELIVERING



# AS ONE 2019 2020

# GOVTECH

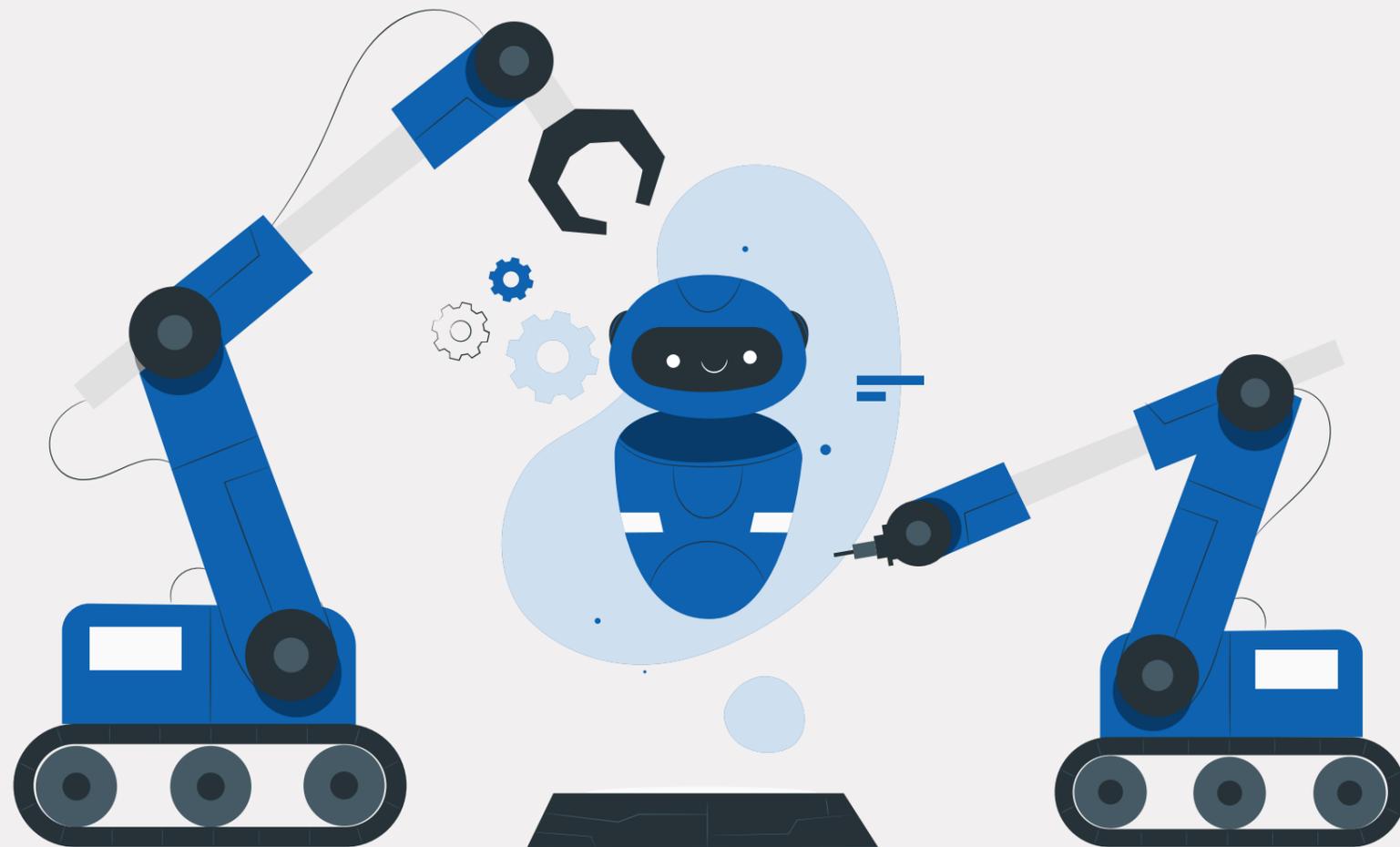


# ANNUAL REPORT



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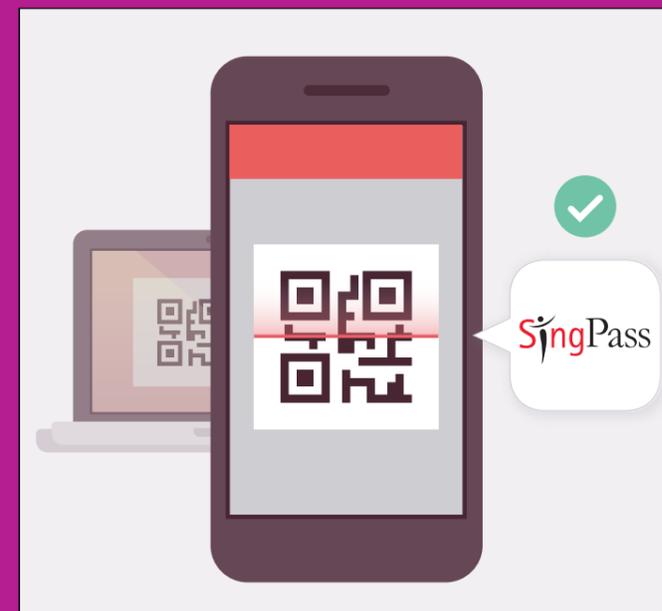
# TRANSFORMING OUR DIGITAL SERVICES FOR CITIZENS AND BUSINESSES

As the implementing agency for Smart Nation and Digital Government, digital transformation is at the heart of what we do. We are continually transforming our digital services for citizens and businesses, ensuring that our applications and services are not just relevant and efficient, but seamless and easy to use.



## GoBusiness Licensing Portal:

The GoBusiness Licensing Portal was launched as a pro-enterprise digitalisation effort to enable businesses to apply for licenses, permits and certificates in a simpler, faster and better way. Currently rolled out to the Food & Beverage sector, it has reduced the number of application form fields from 845 to just 90, and reduced the application time by up to 14 days.



## SingPass Mobile:

The SingPass Mobile app offers Singapore residents secure and convenient access to government and participating private sector services using fingerprint, face or an easy-to-remember passcode. Popular features include login shortcuts providing direct access to frequently-used government digital services and a customisable profile for personal information at a glance. Today, more than 60 per cent of all SingPass authentications are conducted through the SingPass Mobile app.

# BEING AN ICT & SS FUNCTIONAL LEADER WITH DEEP AND INTEGRATED CAPABILITIES

GovTech harnesses the best info-communications technologies and smart systems (ICT & SS) to make a difference to the everyday lives of citizens. For us to be the functional leader in these fields, we are constantly deepening our capabilities so that we can work with government agencies to provide end-to-end solutions in an integrated way.



## SG Tech Stack:

The SG Tech Stack, a common platform that simplifies and streamlines the processes required to build modern digital services, is now richer with more components and widely adopted by government agencies in their application development.



## Capability Centres:

Our Capability Centres, with their teams of dedicated technical specialists, continue to roll out practical solutions to solve agencies' problems: the TV whitespace trial provides low-cost and long-range wireless connectivity in the Southern Islands, the Jaga Phishing tool aids in the reporting of phishing emails, and Mobile Video Analytics solutions reduce the limitations and cost of fixed cameras.

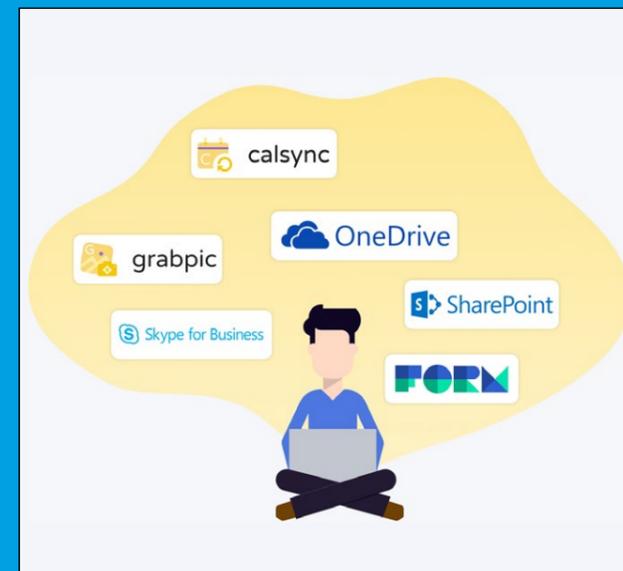
# BUILDING A DIGITAL-TO-THE-CORE PUBLIC SERVICE

It is our commitment to help every public agency become a digital organisation, and ensure that every public officer is digitally enabled. The Ministry Family Digitalisation Plans guide agencies in furthering their digital ambition, while our suite of digital workplace tools increase public officers' productivity.



## Ministry Family Digitalisation Plans 2.0:

The second phase of digitalisation planning was rolled out to ministries, and is anchored by a common frame of what “Digital to the Core” means to each government agency. Courses, tech primers and workshops were organised for public sector leaders to equip them to drive digital transformation in their workplace.



## Digital Workplace programme:

More agencies were onboarded to products such as Room Booking System and Asset Management System to simplify corporate processes; while digital workplace tools like SharePoint Online and FormSG made it easy for public officers to collaborate more effectively and increase their productivity.

# CHAIRMAN'S MESSAGE

FY2019 was a busy year for GovTech as we continued to improve the way we work and deliver on digital government through GovTech 2.0. The GovTech 2.0 Strategy Frame was officially launched at our staff conference last May, where we also unveiled our new mission statement: **“Engineering Digital Government, Making Lives Better”**.

This strategy frame is a multi-year plan that sets out how we will transform the way we live, build and achieve a Digital to the Core (DttC) Public Service and nation. We have a strong foundation to build upon, and have made good progress implementing our three Strategic Outcomes in FY2019: delivering transformative digital services for individuals and businesses; being the Infocomm Technology & Smart Systems (ICT & SS) functional leader with deep and integrated capabilities; and enabling every public agency to be a digital organisation, with every public officer digitally-enabled.

## Delivering Transformative Digital Services to Individuals and Businesses

In 2019, we achieved the highest-ever level of satisfaction in the annual Surveys on Satisfaction with Government Digital Services for Citizens and Businesses – the best performance since 2012. 86% of citizen respondents and 77% of business respondents indicated that they were very satisfied with government digital services, surpassing our Digital Government Blueprint (DGB) KPIs of 75% for each. Our efforts to engage and build communities comprising developers, the industry and users, and in driving usability standards and building user-centric applications have paid off, and there has been an increase in adoption and usage of many of our products.

As of 31 March 2020, SingPass Mobile, part of our National Digital Identity (NDI) platform, crossed one million downloads; the Moments of Life (MOL) app (now known as LifeSG) expanded to include MOL Active Aging, with more than 140,000 downloads; and our digital bot for citizens, Ask Jamie, now handles more than 200,000 sessions per month. Other citizen-centric apps, such as Parking.SG and Parents Gateway, also received very high scores in terms of user satisfaction – with 94.4% and 91.7% of users rating ‘very satisfied’ and ‘extremely satisfied’ respectively.

More businesses are leveraging on our NDI APIs to build better services and streamline their operations. Over 240 businesses have come onboard personal data platform MyInfo, and more than 460 F&B services are using the GoBusiness Licensing Portal to apply for relevant licences. The SGWorkPass app, which now serves more than 50,000 businesses that employ work pass holders, won the first prize at the 2019 Asia Pacific ICT Awards (Digital Government), and Parents Gateway bagged the 2nd runner-up at the 2019 ASEAN ICT Awards – a wonderful recognition from the industry to wrap up the year.

## Exercising Functional Leadership with Deep & Integrated Capabilities

All this could not have been done without us stepping up efforts to live as digital natives and strengthen our capabilities in the fields of ICT & SS. In the past year, we have organised our technical staff into 10 functional clusters based on their scope of work and developed more than 100 job competencies across 32 key roles. 10 Practice Leads have been appointed to drive the development of GovTechies in each cluster, with the opportunity for GovTechies to learn from one another under various Communities of Practice.

We set up the Community of Distinguished Engineers (CODE) in June 2019 and onboarded three pioneer members to deepen our technical abilities. Their technology expertise has brought much value, helping to spearhead key projects in areas such as robotics and cloud. GovTechies have also had the opportunity to learn from local and overseas industry experts under the Digital Technology Attachment Programme and Technology Mentorship Programme. Within GovTech, the Data Analytics Readiness Team was set up to drive our efforts in being a data-centric organisation.

Measures were also put in place to strengthen our cybersecurity defence so that our systems remain secure and stable. These include enhancing our existing IT and data security audit framework, providing full-stack monitoring services for the Whole-of-Government (WOG) through the Cybersecurity Operations Centre, and initiating the Government Bug Bounty programme to discover and remediate any critical vulnerabilities in government ICT systems. We have also successfully migrated 113 government systems to the commercial cloud in line with our Cloud-First Strategy, enabling agencies to build and operate systems more effectively.



To stay ahead in exploiting digital technologies for the government, the Digital Experimentation and Implementation Unit (Open Government Products, or OGP) was set up in July 2019 to prototype digital products and alternative operating models and processes. OGP will test different approaches to ICT infrastructure and policies, as well as novel methods of operating in a digital technology organisation. They have since developed many digital solutions that make it easy for public officers to deliver digital services in a more cost-effective manner. For example, over 40,000 forms were created using Form.sg, with more than 50 million form submissions; and 76 public websites were developed using Isomer, with 8 million users and 15 million sessions recorded.

As the ICT & SS functional leader, we worked with our central government agencies including the Smart Nation and Digital Government Office (SNDGO), Public Service Division (PSD) and Ministry of Finance (MOF) to uplift the digital capabilities of our agencies by supporting them in their digitalisation journey – implementing central programmes to ensure resilient and secure systems, and building up ICT & SS capabilities for the Singapore Government.

We launched the inaugural Digital Maturity Index (DMI) survey to ascertain the public sector’s level of digital maturity and readiness at agency, Ministry Family and WOG levels. Over 2,400 members of senior management in 86 government agencies participated in the survey. Together with PSD, we conducted a course for public sector leaders on “Leading Digital Transformation in Government”, and a series of tech primers and thematic workshops were held for agencies’ Chief Digital Strategy Officers and Chief Information Officers.

Based on the DMI findings, we worked with SNDGO and the Ministries to develop the 2nd Ministry Family Digitalisation Plans (MFDP) to support their journey to

become “Digital to the Core”. The MFDP 2.0 plans outline four key thrusts to sustain the digitalisation momentum and help make every public agency a digital organisation: strengthening ops-tech integration; uplifting technology capabilities; exploiting & maximising data; and building up our people & workforce expertise. Execution of these plans will be supported by additional digitalisation resourcing provided by MOF.

In the GovTech Effectiveness Survey for 2019 which measured Public Sector Leaders’ perceptions of our effectiveness in planning, supporting and implementing the digital transformation of the public sector, 72% agreed that GovTech is an effective ICT & SS Functional Leader. Our global exchanges with ICT leaders through the 4th Digital Government Exchange, and the signing of the Memorandum of Understanding with the UK Government Digital Service, are just some of the undertakings that will help us to continue growing in this vein.

## Building A Digitally-Confident Public Service

It bears repeating that recent events have emphasised the need for us to double-down on our digitalisation efforts to make every public officer digitally-enabled, and every public agency a digital organisation.

I am pleased to note that our work in improving the digital workplace tools and services for public officers has resulted in the highest-ever satisfaction score of 71% – a significant improvement of 21 percentage points from 2018’s survey. This is thanks to the hard work of our team who laboured behind the scenes to improve the digital workplace environment, as well as those at the agencies who addressed users’ concerns and needs.

We rolled out tools such as Microsoft 365, allowing officers to collaborate with one another in real-time on shared documents; a Digital Workplace Digital Guide that provides step-by-step instructions on how to use digital workplace tools; and a WOG guide for virtual meetings. These have proved useful as we transitioned to home-based work in recent months, allowing us to continue meeting and working together as a team with minimal disruptions.

## Delivering as One

As the year progressed and COVID-19 upended our work and our lives, I am glad to say that we have continued to drive GovTech 2.0 and exemplify our values of being Agile, Bold and Collaborative in all that we do. We have also worked closely with our parent Ministry, SNDGO, on WOG policy, strategy and implementation. This has enabled us to strengthen our partnerships with other Ministries and government agencies, integrating efforts and collaborating with policy and operations owners to build and deliver better systems and products.

When the pandemic hit, we were agile in redeploying staff and resources to meet the unforeseen, urgent challenges – collaborating with our government agency partners in a short amount of time to roll out digital solutions that support the WOG COVID-19 response.

Together with The People’s Association (PA), Ministry of Health (MOH) and the Ministry of Communications and Information (MCI), MaskGoWhere was built in under 12 hours and went live in 48. We worked with the MCI team to enhance the Gov.sg WhatsApp service, providing citizens with critical and timely information on COVID-19 updates directly from the government. As organisations moved to implement mandatory temperature scanning, our team worked around the clock to develop and roll out a low-cost self-help

temperature scanner using existing off-the-shelf materials, which was deployed to Government buildings and community facilities. Homer, a location reporting tool, was developed in partnership with the Ministry of Manpower for more efficient monitoring of people on Leave of Absence, Stay Home Notice and Quarantine Order during the pandemic. TraceTogether, one of the world’s first contact tracing apps, was made possible because of the boldness and can-do attitude of our team, blazing a trail for other countries’ contact tracing efforts.

When most of our workforce made the transition to work from home, GovTech played a critical role in “keeping the lights on” and ensuring that our ICT systems continued to function well, and supported WOG business continuity by enabling remote working and collaboration. All these and more are testament to how we have Delivered as One.

In many ways, COVID-19 has impacted us on a personal and a societal level. Digital adoption has accelerated rapidly in a short amount of time, with more citizens and businesses relying on digital tools to carry out their daily work and activities. Navigating life and the way we work in a post-pandemic world will require us to stay nimble and agile, adjusting quickly to deliver digital services and solutions that meet our stakeholders’ needs. It is now more crucial than ever for us to push ahead to deliver on our Smart Nation vision and to make lives better – together, as One GovTech.



**Ng Chee Khern**  
Chairman  
Government Technology Agency

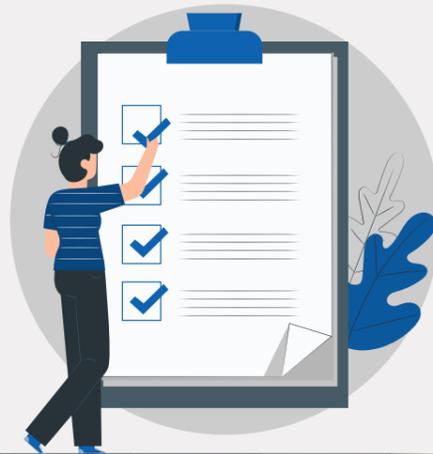


## Singapore's Performance in the Digital Government Rankings

### United Nations e-Government Survey

The UN e-Government (eGov) Survey measures the effectiveness of all 193 UN Member States on the relative ability of their governments in harnessing infocomm technologies (ICT) to deliver online services and engage its citizens in public policies.

In 2018, Singapore ranked 7th overall on the E-Government Development Index and was 2nd for the Online Services Index. There was no report for 2019.



Publication Year	2012	2013	2014	2015	2016	2017	2018	2019
<i>UN eGov Survey (released biennially)</i>								
i. Development Index	10 <sup>th</sup>	No Report	3 <sup>rd</sup>	No Report	4 <sup>th</sup>	No Report	7 <sup>th</sup>	No Report
ii. Online Services Index	1 <sup>st</sup>	No Report	2 <sup>nd</sup>	No Report	3 <sup>rd</sup>	No Report	2 <sup>nd</sup>	No Report
iii. e-Participation Index	3 <sup>rd</sup>	No Report	10 <sup>th</sup>	No Report	8 <sup>th</sup>	No Report	14 <sup>th</sup>	No Report

## Annual Survey on Satisfaction with Government Digital Services (Citizens)

### Background and Objectives

The Survey on Satisfaction with Government Digital Services (Citizens) is conducted annually by the Smart Nation and Digital Government Office (SNDGO) and GovTech to assess citizens' satisfaction with key government digital services and to identify areas for further improvement. The survey was conducted from October to December 2019 for the reporting period of FY2019 (i.e. 1 April 2019 to 31 Mar 2020).

### 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

The Survey on Satisfaction with Government Digital Services (Citizens) received its best performance since FY2012. 86% of citizen respondents indicated that they were very/extremely satisfied with government digital services — an 8-percentage point improvement compared to the previous year.

### Overall Satisfaction with Government Digital Services (Satisfied = Rating of 4 and above; Very Satisfied = Rating of 5 and above)



99%

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

86%

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



98%

agreed that government digital services have improved in the past 12 months and would encourage their friends and families to use it.



86%

were very satisfied or extremely satisfied with the reliability, relevancy and ease of usage of government digital services in general.



92%

rated government digital services as close to the best digital service they have used.

## Singapore's Ranking in the IMD-SUTD Smart Cities Index 2019

The IMD-SUTD Smart Cities Index (SCI) is jointly developed by Singapore University of Technology and Design's Lee Kuan Yew Centre for Innovative Cities (SUTD-LKYCIC), and Switzerland's Institute for Management Development (IMD). It is the first global Smart City survey to be based on citizens' perceptions of the social and economic impact of technology. 120 citizens from each of the 100-over participating cities were surveyed on their ideas of the city's existing infrastructure, as well as technological provisions and services available to its residents.

Singapore was ranked 1st as the smartest city in the world for 2019, and performed well across the board for the indicators of public safety, lifelong learning opportunities provided by local institutions, having green spaces, as well as online access to job listings. The other Top 10 smartest cities include Zurich (second), Oslo (third), Geneva (fourth), Copenhagen (fifth), Auckland (sixth), Helsinki (eighth), Bilbao (ninth), and Dusseldorf (10th).

## Annual Survey on Satisfaction with Government Digital Services (Businesses)

### Background and Objectives

The Survey on Satisfaction with Government Digital Services (Businesses) is conducted annually by the Smart Nation and Digital Government Office (SNDGO) and GovTech to assess the business community's satisfaction with key government digital services and to identify areas for further improvement. The survey was conducted from October to November 2019 for the reporting period of FY2019 (i.e. 1 April 2019 to 31 Mar 2020).

### Research Methodology

# 1,500

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

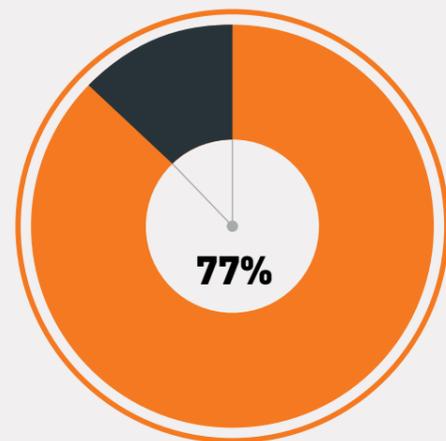
- Commerce;
- Community, Social & Personal Services;
- Construction;
- Financial & Business Services;
- Manufacturing; and
- Transportation, Storage & Communications.

### Survey Results

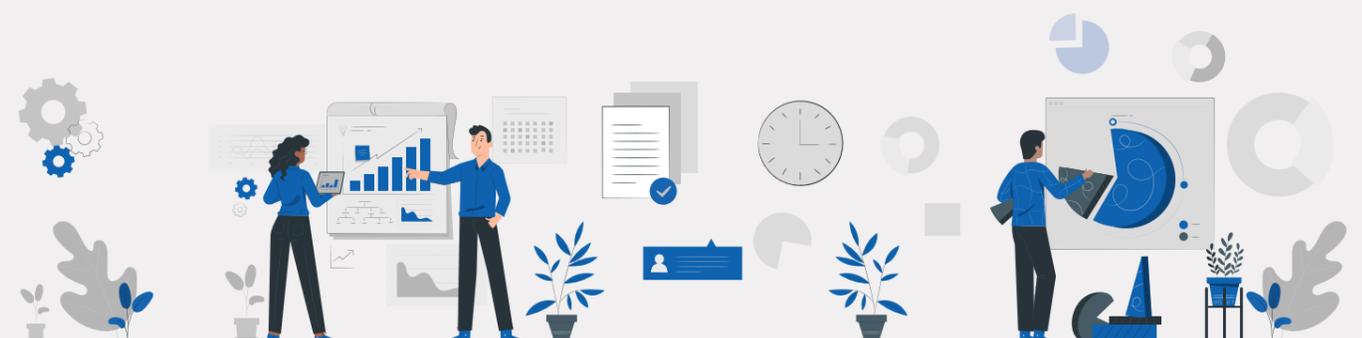
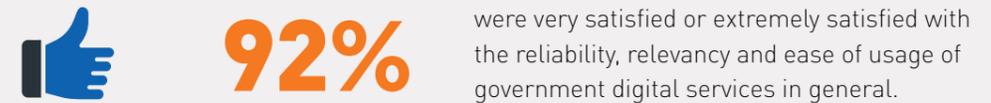
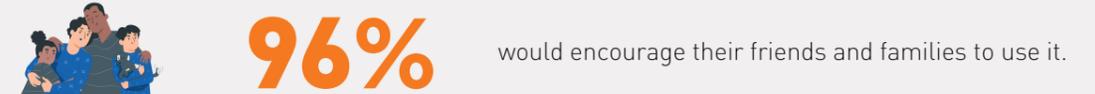
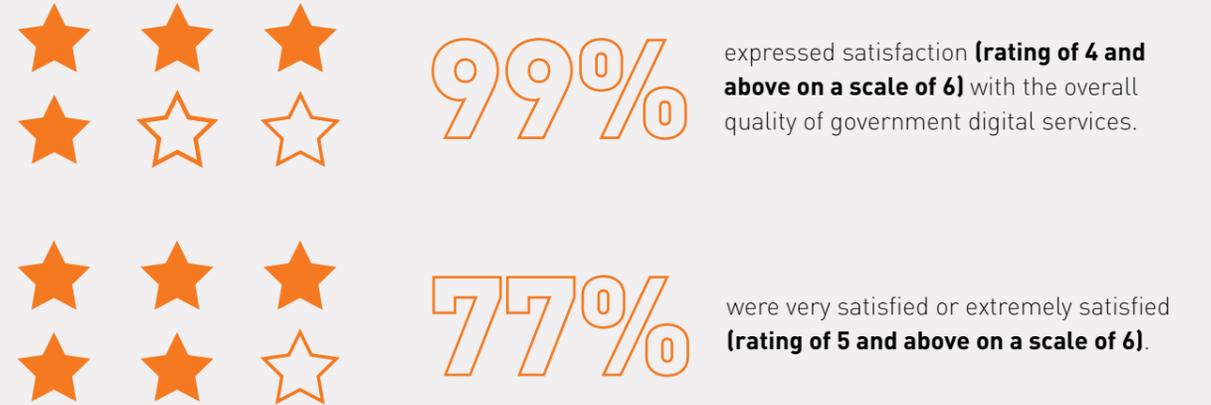
The Survey on Satisfaction with Government Digital Services (Businesses) received its best performance since FY2012.

# 77%

of business respondents indicated that they were very/extremely satisfied with government digital services — an 8-percentage point improvement compared to the previous year.



### Overall Satisfaction with Government Digital Services (Satisfied = Rating of 4 and above; Very Satisfied = Rating of 5 and above)



## MAY 2019

### 28 MAY Engaging partners and developers through GovTech's first Industry Day

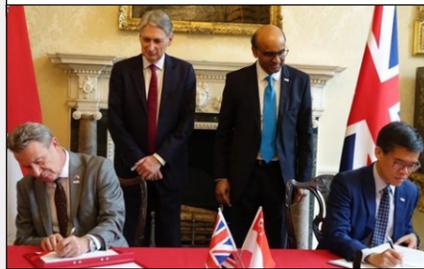
GovTech held our first Industry Day comprising two events — the annual Smart Nation and Digital Government Industry Briefing and STACK-X: Cloud technology conference. More than 1,400 participants across both the private and public sectors attended the Industry Day to get first-hand updates on Singapore's technology roadmap and to learn more about the Government's commercial cloud policies. Workshops were also held to teach developers how to build apps and integrate MyInfo APIs in the cloud environment.



## JUN 2019

### 13 JUN Strengthening collaboration in digital government with UK GDS

GovTech and the United Kingdom's Government Digital Service (GDS) signed a Memorandum of Understanding (MOU) to strengthen collaboration in the design and delivery of digital government public services. Under the MOU, GovTech and UK GDS will mutually share knowledge and best practices in improving the delivery of digital public services, building digital skills and capabilities of government officials, and adopting open standards for government information, data and software.



### 15 JUN Accelerating agencies' digitalisation with the Government on Commercial Cloud (GCC) portal

GovTech completed the commissioning of the Government on Commercial Cloud (GCC) system for agencies to procure commercial cloud services from Cloud Service Providers. With the GCC, agencies can accelerate their respective digitalisation programmes.

## AUG 2019

### 5 AUG Accelerating the digital transformation of public agencies

As part of the government's ongoing digital transformation efforts, GovTech launched the second phase of the Ministry Family Digitalisation Plan and developed a Digital to the Core Framework as a foundation to measure the digital maturity of public agencies.

### 21 AUG Introducing the world's first mobile app for trademark registration

Developed by GovTech and the Intellectual Property Office of Singapore (IPOS), IPOS GO is the world's first mobile application for trademark registration. Thanks to the app, organisations no longer need to spend 45 minutes applying for a trademark and can now get it done in under 10 minutes.



### 30 AUG Trialling TV whitespace in five Southern Islands

The Singapore Land Authority, GovTech and Civil Aviation Authority of Singapore announced the start of a six-month trial of TV whitespace (TWWS) in five Southern Islands. Agencies worked with a Singapore start-up, Whizpace, to explore the use of TWWS connectivity to support sensor and Internet of Things (IoT) deployments on these islands.



## JUL 2019

### 12 JUL Helping public officers improve their data science capabilities

The Data Arcade Tournament was organised by GovTech for the second year running to help public officers level up in their data science capabilities and hone their skills in visual analytics. Part of an overall strategy to encourage officers to be more data-driven in their work, the tournament was supported by top industry players in visual analytics — Qlik and Tableau. Participants processed data and built dashboards using open or agency datasets over a period of five months, with the tournament culminating in a live hackathon to deliver insights on datasets from the National Volunteer and Philanthropy Centre for the public good.



## SEP 2019

### 1 SEP Serving seniors through the Active Ageing module on MOL

Moments of Life (MOL) (now LifeSG) is a mobile app containing a suite of services which supports citizens' needs at key junctures, by integrating and bundling services across government agencies. In addition to the first module supporting families with young children, the app introduced an Active Ageing module in September 2019 to serve the needs of senior citizens. Through the app, they can obtain key information on events, courses and workshops for seniors, as well as access their Merdeka Generation e-Card.

### 9 SEP Medical certificates (MCs) go digital with DigiMC

GovTech developed and rolled out DigiMC, a platform that allows SingHealth institutions to replace paper MCs with digital ones instead. DigiMC was piloted at the Singapore General Hospital and the National Heart Centre Singapore in September 2019, and is expected to be rolled out to all SingHealth institutions by 2020.

### 25 SEP Detecting smokers using action recognition with Project Balefire

A collaboration between GovTech and the National Environment Agency, Project Balefire detects smoking activities using video analytics on the edge. GovTech developed an in-house algorithm that automatically recognises human motions or actions of smoking through video. Project Balefire has reduced the need for enforcement officers, disseminating real-time alerts when smoking activities are detected.



OCT 2019

1 OCT

## Ensuring the security of Government applications with the Vulnerability Disclosure Programme and Government Bug Bounty Programme

GovTech's Vulnerability Disclosure Programme was launched by Senior Minister Teo Chee Hean in his opening speech at the 2019 Singapore International Cyber Week, as part of our ongoing efforts to ensure the cybersecurity of Government internet-accessible applications used by citizens, businesses and public officers. SM Teo also noted that 31 vulnerabilities were remediated as a result of GovTech's second Government Bug Bounty Programme, an initiative where white hat hackers are invited to test the security of government systems.

24 OCT

## Receiving recognition for Parents Gateway at the 2019 ASEAN ICT Awards

Launched by the Ministry of Education and GovTech in January 2019, Parents Gateway has reduced the administrative workload for some 33,000 teachers and levelled the operational capabilities of about 350 schools. Serving 600,000 parents, the app emerged the second runner-up at the 2019 ASEAN ICT Awards.



31 OCT

## Streamlining processes for businesses with the GoBusiness Licensing portal

The Ministry of Trade & Industry, Smart Nation and Digital Government Office and GovTech launched the GoBusiness Licensing portal on 31 October 2019. Reviewing the service journey from a Food & Beverage (F&B) company's perspective, the team streamlined the regulatory processes required for businesses to set up and apply for licenses. The portal reduces the number of form fields from 845 to just 90 and has since been used by more than 460 F&B businesses.

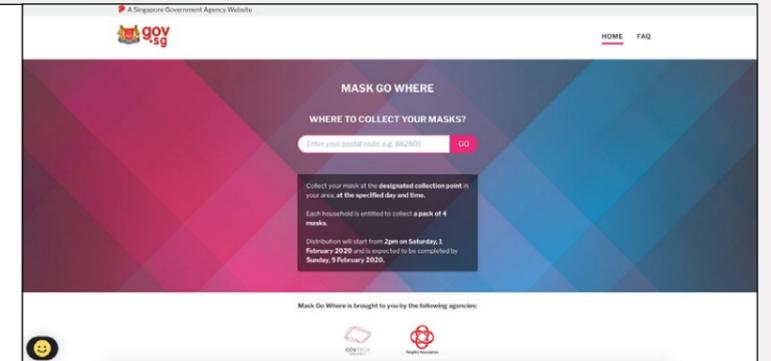


FEB 2020

1 FEB

## Supporting the Whole-of-Government COVID-19 response with timely, informative web portals

When COVID-19 hit, GovTech rallied various government agencies to roll out informative web portals MaskGoWhere and FluGoWhere in a short time. These platforms played a key role in providing timely and accurate information to Singaporeans regarding the collection of masks and information on Public Health Preparedness Clinics.



8 FEB

## Improving the living environment of citizens through sensors

The Lampost-as-a-Platform (LaaP) trial in one-north and Geylang — part of the Smart Nation Sensor Platform project — assesses the technical feasibility of using existing lampposts as infrastructure to mount and power sensors to improve the living environment for citizens. These include environmental sensors to monitor temperature, humidity and air quality, satellite receivers to detect and verify GNSS signal quality, as well as video cameras for crowd analytics. The trial is also testing other use cases, such as detecting and counting the number of Personal Mobility Devices (PMDs).



12 FEB

## Keeping returning travellers in check during the pandemic

To better track and monitor travellers served with Leave of Absence and Stay-Home Notices during the COVID-19 period, GovTech collaborated with the Ministry of Manpower to set up an SMS and mobile web reporting system that allowed the ministry to push down daily SMSes to these individuals and receive updates on their location and body temperature.

NOV 2019

18 NOV

## Enhancing home safety for vulnerable seniors

The Housing & Development Board (HDB) and GovTech kicked off the deployment of a Wireless Alert Alarm System, as part of the Smart Nation Sensor Platform project. From Nov 2019 to mid-2022, 53 one-room HDB rental blocks under Project LIFE (Lift Improvement and Facilities Enhancement for the elderly) will be equipped with the system to help enhance home safety for some 10,000 eligible seniors.



22 NOV

## Clinching the top spot for Digital Government initiatives at APICTA 2019 with SGWorkPass

The SGWorkPass app is a collaboration between GovTech and the Ministry of Manpower to provide work pass holders with a means of digital identification. With the app, workers can access their employment information and use it as a proof of identity. The app emerged as the winner under the Digital Government category at the 2019 Asia Pacific ICT Awards.



FEB 2020

19 FEB

### Developing low-cost, in-house solutions that address current needs

GovTech rolled out a low-cost fast-deploying self-help temperature scanner — developed wholly in-house using off-the-shelf materials — in government buildings and community clubs to automate temperature-taking during the COVID-19 outbreak. Close to 200 units were assembled and deployed with the support of public service officers.



21 FEB

### Using AI in the fight against COVID-19

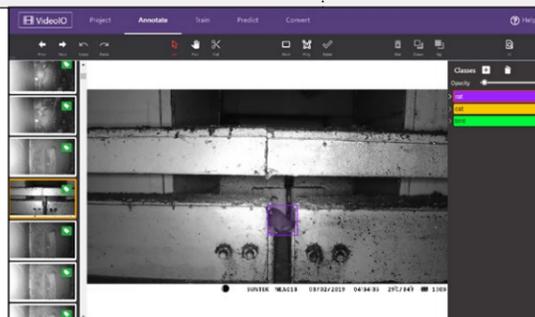
To further support mandatory temperature screening efforts during the COVID-19 pandemic, GovTech developed and rolled out a smart thermal scanner, SPOTON, which integrates commercial off-the-shelf infrared and RGB cameras with GovTech-developed AI face detection capabilities. SPOTON can screen temperatures of up to 10 people at once. This fast, accurate and affordable mass temperature screening solution was trialled and deployed within several government agencies and community facilities.



26 FEB

### Enhancing agencies' productivity with VideoIO

VideoIO was developed by GovTech to enable agencies to quickly prototype and train Video Analytics (VA) models on their own and enhance productivity by incorporating VA into their daily workflow. Agencies can now develop their own object classification and detection models using VideoIO, such as the detection of various vehicle types and micro-organisms on microscopic images.



### Open sourcing effective solutions to reduce manpower for temperature screening

To augment the temperature screening operations in public places with high human traffic, GovTech developed VigilantGantry to reduce the manpower and time spent on manual temperature screening. The solution was trialled at the National University of Singapore and subsequently open sourced for adoption by industry partners.

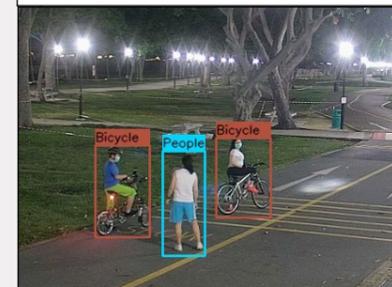


MAR 2020

2 MAR

### Harnessing technology to implement safe distancing measures

MOBIUS was developed by GovTech as a solution for counting pedestrians, joggers, bicycles and Personal Mobility Devices on footpaths, park connectors and shared paths. This solution was first developed to enable agencies such as the Urban Redevelopment Authority and the Land Transport Authority to obtain data for urban planning. MOBIUS was also adopted to support safe distancing measures for the National Parks Board and National Environment Agency during the COVID-19 situation.



18 MAR

### Commissioning the Sensor Data Exchange platform for holistic operational planning

GovTech commissioned the Sensor Data Exchange platform as part of the Smart Nation Sensor Platform, enabling government agencies to publish and subscribe to sensor data seamlessly and cost-effectively, regardless of the different systems they run. Through the platform, agencies can better utilise and analyse cross-agency sensor data for holistic operational planning.

20 MAR

### Supporting the nationwide contact tracing efforts with TraceTogether

To support the nationwide contact tracing efforts, GovTech worked with the Ministry of Health to develop and roll out TraceTogether, a contact tracing mobile app that uses Bluetooth technology for proximity tracing. Using TraceTogether, potential COVID-19 cases can be detected and isolated earlier and more efficiently. TraceTogether's BlueTrace protocol was also open sourced for other countries to develop their own contact tracing applications.



31 MAR

### Surpassing one million downloads for SingPass Mobile

As of 31 March 2020, more than one million users have chosen to use the SingPass Mobile app for convenient access to government and private sector services, without entering long passwords. More than 60 per cent of all SingPass authentications are now conducted through the app. Besides quicker logins to digital services, SingPass Mobile enables users to prove their identities and provide personal details securely over the counters at selected locations.

### Tapping on NDI APIs to build better digital services

On the industry adoption front, more businesses are tapping on GovTech's National Digital Identity (NDI) APIs to build better services and streamline their operations. In FY2019, 110 industry partners integrated NDI APIs with close to 270 private sector digital services.



# INSIDE GOVTECH

## Agile. Bold. Collaborative.

At GovTech, our values are simply represented as **A, B** and **C**, which stand for **Agile, Bold** and **Collaborative**. These values serve as a compass for us as we go about our mission to **Engineer Digital Government** and **Make Lives Better** by driving digitalisation in Singapore. Our staff, whom we affectionately refer to as GovTechies, are empowered to innovate and collaborate to deliver projects that harness technology for the public good; building applications and rolling out initiatives that benefit our citizens, businesses and public officers.



## Our Corporate Culture

GovTechies think big, start small, and learn from failing fast. Our relaxed and open work environment means that people from various teams and seniority can walk up to each other at any point in time to bounce off ideas and solutions. We are committed to building a workplace that is diverse and inclusive — regardless of gender, race, education, age, or other personal characteristics. This is what helps us do great work.

“ I joined GovTech and made the move from the private to public sector primarily because I was drawn to GovTech’s purpose and the value that we bring to citizens. As a GovTechie, you are playing a part in transforming our nation through technology. That, to me, is a very, very meaningful purpose.”

— Evangeline Chua,  
Chief People Officer

### Enabling Your Success

“Why join GovTech?”, you may ask. At GovTech, we care about your success and ensuring that you have the tools and opportunities to learn from the best. Our customised suite of people programmes provide our engineers with the option to undergo attachments at big tech companies and be mentored by overseas Singaporeans based in the Silicon Valley. This guarantees that they are well plugged back into the industry, learn from top-notch mentors, and bring their best back to GovTech.

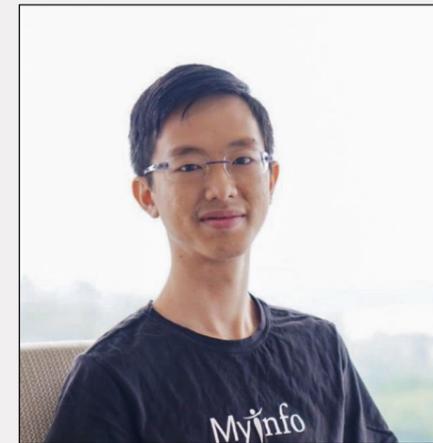
### How We Hire

We are always on the lookout for individuals who are passionate about using technology to better the lives of Singaporeans. Our hiring process ranges from staff referrals to open hiring through traditional means and our signature TechHunt — an annual recruitment event where we invite top talents to meet our hiring team and gain insight into life Inside GovTech. Through TechHunt, we have hired a diverse range of talents — software engineers, digital business analysts, cybersecurity specialists, data scientists, AI engineers and infrastructure specialists — to help us design, build, and deliver tech solutions that will impact our citizens and businesses.



<https://go.gov.sg/govtechjobs>

Interested to join us?  
Scan the QR code  
above to apply!



### From Former Intern to GovTechie

A passion for problem solving was what led **Chew Shao Quan** to pursue a career in GovTech after his internship. The 26-year-old has been a GovTechie for two years with the National Digital Identity team, working on many nationwide projects and juggling roles such as software developer, solutions architect and data analyst. A doer by nature, Shao Quan advises interested applicants to be passionate and eager to learn,

while broadening their experiences by participating in hackathons and side projects. He loves the challenges and learning experiences that his job in GovTech brings, and enjoys seeing the fruits of his labour impact Singaporeans’ lives in a positive way. “The smiles on my users’ faces and knowing that I have managed to help them makes me really happy to do what I do.”



### From Silicon Valley to Singapore

Returnee Singaporean **Chong Jia Yi** left a colourful career in Silicon Valley behind in favour of life at GovTech. A founding member of GovTech’s Community of Distinguished Engineers, the 38-year-old brings with him a wealth of experience — having spent 10 years as a Research & Development Technical Director at Pixar Studios working on numerous big-name films like WALL-E, Brave, and Finding Dory. At GovTech, Jia Yi is putting his expertise in Deep Learning to good use, developing and rolling out the Robotics Software Stack that will enable the control of legged robots in various

unstructured environments. An avid bird photographer in his free time, Jia Yi shares that he decided to return to Singapore to try a different direction in terms of his career. “A lot of difficult and challenging problems today are actually getting solved by the world’s governments. These problems are on a much larger scale compared to what we face in industry, and GovTech is in a very favourable position to solve them. In doing so, we are delivering solutions not for private enterprise but the public good, which I am sure we can all agree is a very positive outcome.”

# MEET OUR GOVTECHIES



## Lim Zui Young

*DevOps and Quality Engineer*

As the tech lead for the SupplyAlly team, Zui Young helps build tech solutions for the Singapore government — specifically, the SupplyAlly mobile app that helps government agencies and partners distribute physical goods efficiently and prevent double-dipping. SupplyAlly was used widely during the recent mask, CDC Voucher, and TraceTogether token distribution to ensure that individuals collected only what was allocated. Prior to that, Zui Young was an intern at GovTech and started out as an engineer in quality engineering and development operations. Citing grit, adaptability and compassion as key traits to his job, Zui Young is also passionate about the field of e-accessibility, frequently volunteering his time to ensure that GovTech's apps are accessible to a wide range of users.

*"The people at GovTech make all the difference. We have very talented people who work together to reach our objectives and timelines, and I like that I am able to contribute back to society in a meaningful way through technology."*

## Saslinda Selamat

*Project Manager*

Saslinda's role as a Project Manager involves her "keeping the lights on" for various backend systems and ensuring that operations are running smoothly. She manages key IT projects for the Ministry of Education (MOE) to drive digitalisation and streamline processes for better work productivity. A mother of two, Saslinda is a natural multi-tasker who loves the flexibility that her job allows to juggle both work and family commitments effectively. Since joining GovTech, she has also gained confidence in expressing her thoughts and ideas and built better people skills.

*"I have great team members who come together to get things moving and try their best to help in every way possible. Our bosses also recognise the hard work that we put in to deliver a project successfully. At GovTech, you never work alone — everyone has a good set of knowledge and are always willing to share."*



## Joel Tai

*Assistant Manager*

A UX designer by training and now manager of a UX team, Joel plays a key role in ensuring that businesses and citizens have a great user experience with GovTech's products. His day-to-day work involves him driving UX strategies and roadmaps for many digital platforms such as GoBusiness, OpenCerts, MCCY Grants Portal and Business Grants Portal. Joel is a firm believer that design is a team sport, and enjoys working with GovTechies who share the same excitement and passion to develop meaningful products for the public good. When not working on UX solutions, he can usually be found taking in art at museums or galleries and staying active by playing volleyball at the beach.

*"Being at GovTech, we are at the forefront of the Smart Nation movement — tackling real-world problems of transport, housing, security, healthcare and the environment with technology. It thrills me to know that our work can directly impact the lives and livelihoods of our fellow Singaporeans."*



# MEET OUR GOVTECHIES



## Heng Xiu Teng

Associate Cybersecurity Specialist

Keen to play a part in Singapore's Smart Nation journey, Xiu Ting joined GovTech as an associate cybersecurity specialist last year. She plays a key role in hunting down potential cyber threats to government systems and networks by employing a combination of threat intelligence and data analytics. A baking enthusiast, Xiu Ting loves the hands-on approach to learning that her role offers.

*"With things constantly changing, it is important for us to keep our skills and knowledge up-to-date. The opportunity to learn, as well as the good rapport with my colleagues are what keeps me going every day."*



## Ho Kwai Mei

Digital Service Manager

As a Digital Service Manager, Kwai Mei is responsible for identifying ICT opportunities for innovation and transformation at various government agencies. Now in her seventh year of service with GovTech, she is currently at the Ministry of Law, but previously led a team at SPORT SINGAPORE to develop the Active Health mobile app which won the Gold Award for Best App — Government Services at the MOB-EX Awards 2019. The app is part of an integrated technology platform and management suite to promote an active lifestyle for citizens. Outside of work, Kwai Mei is also an avid baker with a penchant for extreme sports.

*"Keeping an open mind, always thinking of new ideas and learning to adapt to changes effectively are what help me do my job well. The opportunities to learn and grow at GovTech are boundless, and I am motivated to keep coming up with new ways to improve citizens' lives."*

## Delon Leonard

AI Engineer

Developing AI solutions to benefit society is what Delon does in GovTech every day. As part of the Video Analytics team in GovTech, Delon led the development of Balefire, an automated smoking detection video analytics system that minimises the need for constant monitoring of surveillance footages for illegal smoking activities. In recognition of his effort, Delon and his team clinched the MEWR Dare to Do award in Feb 2020.

*"I am privileged to be part of a team that is able to work on projects that contribute directly to the betterment of society. My team always makes it a point to work with stakeholders to test our system on-site with actual operations. This allows us to better understand the shortcomings of our system, which helps us to iterate constantly to deliver better solutions for the public."*



## Soh Chee King

Digital Business Analyst

After 10 years in the private sector, Chee King joined GovTech because he wanted to help deliver services that make a positive difference. As a Digital Business Analyst at the Intellectual Property Office of Singapore (IPOS), Chee King's daily work involves analysing business needs and deploying services to meet IPOS' business objectives. He was part of the team that developed and launched IPOS GO, the world's first mobile app that allows businesses to apply for trademarks with the Government in less than 10 minutes.

*"Receiving positive feedback on our digital services motivates me. With GovTech constantly reviewing and updating itself in the latest technologies, you are surrounded with good opportunities to learn and make a difference to Singapore's future ICT landscape."*



**Mr Alexander KLEINBERG**  
Chief Executive Officer  
Edde Pte. Ltd

**Ms Lesly GOH**  
Senior Technology Advisor  
World Bank Group

**Mr NG Chee Khern**  
Chairman  
Permanent Secretary  
Smart Nation and Digital Government

**Mr Peter HO**  
Chief Executive Officer  
HOPE Technik Pte Ltd

**Ms Mariam JAAFAR**  
Member of Parliament  
Partner and Managing Director (Singapore)  
The Boston Consulting Group

**Mr KOK Ping Soon**  
Chief Executive  
Government Technology Agency of Singapore

**Mr Bojan BLECIC**  
Senior Vice President  
Head of Experience Design — Group Customer Experience  
OCBC Bank

**Ms Melissa KHOO**  
Deputy Secretary (Policy)  
Ministry of Education



# BOARD OF DIRECTORS

(As at July 2020)



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Professor of Finance (Practice)  
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Partner  
PeepalTree Pte Ltd

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Chief Executive  
Cyber Security Agency of Singapore

**Mr LEW Chuen Hong**  
Chief Executive\*  
Info-communications Media  
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Chief Executive  
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Senior Director  
National Digital Identity



**Mr CHAI Chin Loon**  
Senior Director  
Cybersecurity Group &  
Government Chief Information Security Officer



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**Mr LIM Chinn Hwa**  
Senior Director  
Smart Nation Platform Solutions



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**Mr KOK Ping Soon**  
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**Mr CHAN Cheow Hoe**  
Deputy Chief Executive &  
Government Chief Digital Technology Officer



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Assistant Chief Executive  
Services



**Ms Jacqueline LIM**  
Senior Director  
Government Infrastructure Group



**Mr D N PRASAD**  
Senior Director  
Strategy, People & Organisation



**Mr TAN Bee Teck**  
Senior Director  
Education Cluster, Standard Products



# SENIOR LEADERSHIP TEAM

(As at July 2020)



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Senior Director  
Data Science and AI



**Mr Dominic CHAN**  
Director  
Moments of Life



**Mr Kevin NG**  
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Core Operations Development  
Environment and xChange



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Director  
Sensors and IoT



**Ms Jennifer TAN**  
Director  
Strategy & Plans Division



**Ms WONG Hefen**  
Director  
Technology Management  
Office and Development &  
Organisation Transformation



**Ms Evangeline CHUA**  
Chief People Officer  
People & Organisation Division



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



**Mr LIM Keng Soon**  
Chief Communications Officer  
Communications & Marketing Group



**Mr Vincent KOR**  
General Counsel  
Legal



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(As at July 2020)



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**Ms Melissa KHOO**

Member

**Dr Bruno LANVIN**

Member

**Mr LEE Ah Boon**

Co-opted Member



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**Prof Annie KOH**

Chairman

**Mr KOK Ping Soon**

Member

**Mr Bojan BLECIC**

Member

**Mr Bruce LIANG**

Member



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**Mr KOK Ping Soon**

Member

**Ms Mariam JAAFAR**

Member

**Mr Alexander KLEINBERG**

Member

**Mr David KOH**

Member



## Technology Advisory Committee (TAC)

**Mr Matt QUINLAN**

Chairman

**Ms Lesly GOH**

Member

**Mr Peter HO**

Member

**Mr LEW Chuen Hong**

Member

**Mr TAN Peng Yam**

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 ANG Mui Kim**

Chief Executive Officer  
Assurity Trusted Solutions Pte Ltd



**Mr Robert CHEW**

Chairman  
Assurity Trusted Solutions Pte Ltd



**Mr KWOK Quek Sin**

Senior Director, National Digital Identity  
Government Technology Agency



**Mr Vivek KUMAR**

Assistant Director-General  
NTUC  
Director, U Startup, U Associate, U Future  
Leaders, and U PME, Secretary  
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**Mr Bruce LIANG**

Chief Executive Officer  
Integrated Health Information Systems Pte Ltd  
Chief Information Officer  
Ministry of Health



**Mr TAN Chee Hau**

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



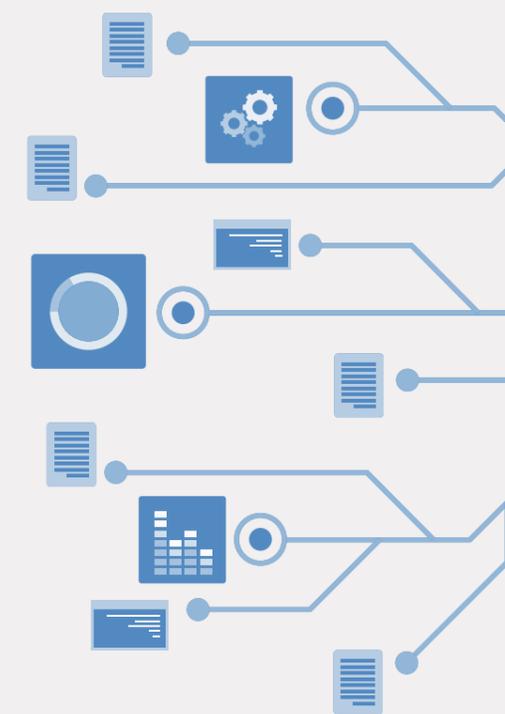
**Ms Deborah LEE**

Formerly Executive Vice-President,  
Corporate Development  
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