

# STRATEGIC NATIONAL PROJECTS FOR A SMART NATION



Figure 1: Key Milestones for Strategic National Projects  
(Image credit: Smart Nation and Digital Government Group, Prime Minister's Office)

## a. National Digital Identity System

Singaporeans have already been using SingPass for key transactions with Government agencies. Building on the SingPass system for Government digital services, the Government is developing a National Digital Identity (NDI) solution that will be more convenient and secure for citizens, which can also be used for a wide range of private sector services including banking, healthcare and professional services.

With the NDI, citizens will have a unique digital identity and authentication to perform secure transactions. Over the next 6 months, the Government Technology Agency of Singapore (GovTech) will embark on trials for mobile software-tokens as a more convenient and secure authentication service. GovTech will also expand the MyInfo service that will pre-fill online forms for government and private sector digital services.

The National Digital Identity System is planned to be operational in 3 years' time, with progressive trials for digital signatures to facilitate paperless transactions. GovTech will work with the private sector to develop a variety of value-added services which make use of the NDI, such as signing of digital agreements, secure storage of digital documents, and building access control so as to facilitate industry innovations and drive widespread adoption in 5 years' time.

#### b. Electronic Payments

The goal of the e-payments' strategy is to make payments simple, swift, seamless, and safe for everyone. With e-payments, businesses will be able to pay and get paid on time. The use of cash and cheques will be sharply reduced, enhancing consumer convenience and achieving cost savings. Making payments electronic will facilitate the digitisation of business processes and help boost productivity.

The Monetary Authority of Singapore (MAS) has been working closely with the banking industry and, more recently, the Payments Council, to drive the e-payments agenda. The recent launch of PayNow – which allows individuals to pay one another instantaneously anytime using just the recipient's mobile number – sets the stage for further applications to make e-payments more pervasive.

Efforts are underway to develop a common QR code for Singapore, to make it even easier for consumers and small businesses to receive money via PayNow, to be rolled out in 6 months' time. There is also an initiative to build better and easier ways for businesses to connect to and use PayNow, such as through new bulk processing functionalities.

MAS and the banks are continuing to work with industry players on simplifying e-payments acceptance at merchants through the deployment of Unified-Point-of-Sales (UPOS) terminals across the island, with a projected deployment of 25,000 UPOS terminals over the next 18 months. Payment counters in a growing number of supermarkets, petrol stations, utility stores, and other shops are no longer crowded with multiple terminals, displaying instead a single terminal that can accept a variety of payment options.

The Government will continue to encourage the adoption of cashless modes of payments across various domains, including retail, transport and F&B. Notably, in the area of public transport, the Land Transport Authority (LTA) has been piloting Account-Based Ticketing which allows commuters to just tap in and out with their contactless bank cards without the need to make top ups. This is a key initiative supporting the recently unveiled plans for a cashless public transport system by 2020.

To provide greater convenience for micro-payments in the heartlands, the National Environment Agency of Singapore (NEA) will be embarking on the adoption of e-payments at hawker centres, which will be rolled out in phases.

### c. Smart Nation Sensor Platform

Connectivity and technological advances present new ways to combine data, insights from various feeds and agencies, in order to improve city management and enhance our capabilities in safety and security.

GovTech is developing the Smart Nation Sensor Platform (SNSP) with common infrastructure and analytics capabilities to help public agencies enhance and improve a range of public and municipal services. Data collected and insights gained from data analytics will also be shared to support various public service operations such as urban planning, security and incident response, traffic management and maintenance of public spaces.

GovTech and partner agencies will be testing how estate management could be enhanced through monitoring of noise, water and sewage levels, as well as resource monitoring for homes through smart water meter trials for homes. These trials will leverage on the SNSP's wireless sensor network and are planned to be conducted at Orchard Road and selected housing estates over a one year period from October 2017. In addition, GovTech and the LTA will be working on a trial using Smart Connected Lamp Posts as possible infrastructure for the SNSP with limited deployments in selected areas over the next 18 months. GovTech will be seeking private sector collaboration through an open tender at the end of this year.

The Government is exploring how access can be provided to businesses and private enterprises progressively, for greater collaboration through the sharing and exchange of non-sensitive data and insights - such as environmental data on footfall or vehicular traffic - so businesses can develop new products and services for customers and end-users in 5 years' time.

### d. Smart Urban Mobility

The Government is exploring the use of data analytics and digital technologies to transform our land transport system. One example is our public bus system.

The Common Fleet Management System (CFMS), completed and installed in all public buses in mid-2017, enables LTA and operators to monitor the location and performance of their bus fleets. The CFMS provides live updates on bus locations, traffic accidents and arrival times, allowing our bus operators to work actively with their bus captains to improve bus arrival regularity.

LTA will also be evaluating the feasibility of on-demand, dynamically-routed public bus services to deliver a more customised service, with possibly shorter wait times. Three areas have been preliminarily identified as possible for the trial: Joo Koon, Punggol North/West and Shenton Way/Marina South. In the second half of 2018, commuters will be able to request pick-ups and drop-offs at bus stops in these areas through a mobile application.

In the longer term, we will tap on advances in Autonomous Vehicle (AV) technologies to further improve the public transport system. Initiatives to develop autonomous

buses and shuttles are underway, with the objective of enhancing the convenience and accessibility of public transport, as well as alleviating manpower (driver) shortages.

e. Moments of Life

The Government is committed to providing citizen-centric, user-friendly and personalised government digital services, by facilitating greater data-sharing within the Government with the proper safeguards, and allowing agencies to develop new and innovative digital services for citizens.

One example, which the Government is currently developing, is the Moments of Life initiative, which bundles services and information online according to what citizens may need at different key life moments, such as starting a family, and raising a child in the early years. In reducing the need for citizens to transact with multiple agencies by linking up services and information via a single platform, citizens will experience greater seamlessness and convenience when interacting with the Government.

An initial version of the digital service will be made available by the middle of next year. Over the next 2 – 5 years, the Government will work to expand the suite of services and information to include the development of touch-points along other life moments.