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Smart cities: Digital solutions for a more livable urban world

SINGAPORE - WORLD CITIES SUMMIT

For Southeast Asia, smart city implementations represent tremendous value



260-270k
Kilo-ton of GHG emissions saved, as much as produced by **Laos**

4,900-5,000
Lives saved from road accidents, fire and homicides, equivalent to **50% of Malaysia's fatalities nationwide**



8-12 million
Disability-adjusted life years (DALYs) reduced, more than **South Korean population's total DALYs**



1.2 – 1.5 million
New jobs created, equivalent to **20-30%** of the workforces of **Jakarta or Bangkok or Manila**



USD 9 - 16 billion
Savings on cost of living, equivalent to **2-4x** of **Brunei's total household expenditure**

6 - 8million
Man-years saved in commute time, **2x more** than **Singapore's FTE population**



Implications for public sector - how to approach smart cities



Combine smart technologies and planning with asset development

Smart cities change the nature of infrastructure, allowing cities to do more with less

Embrace an open systems approach to innovation and investment

The public sector does not have to be the sole financier and operator

Put people at the center

Becoming a smart city is not a goal but a means to an end

Add the skills and innovate across city agencies

Civic tech talent and cross-agency latitude are critical to bringing transformative change in the digital era

Get cybersmart to prepare for new types of privacy and security risks

Ensure regulatory safeguards keep pace with innovation, and act with transparency

Three-step approach to get started

01

Plan

- Articulate a vision and goals that are anchored on the needs of people
- Integrate digital solutions into infrastructure development plans
- Balance scale against custom solutions

02

Provide

- Understand that technology and data are no longer capex but necessary operational costs
- Prioritise practical over flashy to get applications off the ground
- Leverage open data portals to kickstart private sector innovation

03

Partner

- Recognise that public and private sector must work together more than before
- Build networks of cities, and/or private providers, and enhance bilateral partnerships
- Partner across industries and ecosystems as value chains are disrupted

01

Plan

- Established an integrated, national vision to make technology a central pillar across government agencies
- Launched resident-centric initiatives e.g., “Moments of Life”, project to anticipate needs and deliver apps and pre-bundled public services across agencies via a single platform for each stage of resident’s lifespan; pilot app launched in 2018

02

Provide

- Highly digital government services deployed via one of the fastest broadband/mobile networks across cities studied by MGI; was also one of the global leaders in sophistication of LPWAN technologies
- Ability to deploy applications at scale through state-owned assets, e.g., potential to scale trials of smart city components in state-owned housing

03

Partner

- Smart Nation Programme Office was set up in 2014, and tasked with coordinating digital strategies across government agencies and developing aligned standards, policies and platforms for tech deployment
- Helped bring about OneService app which brought together the services of 11 partner agencies and 16 town councils

01

Plan

- Articulated OneNYC action plan to address city's long term challenges, along with resources like Building a Smart + Equitable City outlining key smart city initiatives, and NYC Digital Playbook to guide agencies
- NYPD's Domain Awareness System, a highly sophisticated analytics & surveillance technology now marketed to other cities in partnership with Microsoft, with NYC to receive 30% of revenue

02

Provide

- LinkNYC public kiosks repurpose aging payphone infrastructure to provide range of free services like high-speed wi-fi, phone calls, a tablet for city maps and services; generate funding via ad revenue
- NYC is a global leader in open data portal sophistication among cities studied by MGI; portal is also supported by city Open Data Law mandating release of all public datasets by Dec 2018

03

Partner

- Range of initiatives e.g., NYCx, which identifies local community priorities and enables individuals / startups to work with city and Advisory Council of 22 US tech leaders to pilot and scale solutions
- Marketplace.nyc created to connect city government to smart city vendors and products, and is now a global platform active in over 60 partner cities

01

Plan

- Aligned vision with central Amsterdam Smart City (AMS) platform, launched in 2009 with aim to test innovative tech, develop partnerships & replicable business models, identify best practices to tackle city pain points
- Initiatives center on 6 locally relevant themes; residents invited to submit requests for solutions, or partners to scale their ideas

02

Provide

- City playing active role in developing digital talent via Amsterdam Institute for Advanced Metropolitan Solutions to educate tech talent and foster the development / commercialization of new applications
- Has extensive open data portal alongside initiatives like Smart City Academy, which aims to conduct research and share outcomes of local smart city projects

03

Partner

- AMS is structured as a public-private partnership of 17 partners, and through its programs brings together municipal agencies, educational institutions, nonprofit, private-sector companies and startups
- Platform has grown to include an collaborative online community with over 5,000 'innovators' and 300 partners involved in 250+ active projects