



BỘ THÔNG TIN VÀ TRUYỀN THÔNG

MINISTRY OF INFORMATION AND COMMUNICATIONS OF THE SOCIALIST REPUBLIC OF VIETNAM



A strategic approach and policy framework for Smart sustainable city in Vietnam

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Outline

- 1. Overview of cities in Viet Nam**
- 2. Smart city initiatives in Vietnam**
- 3. Smart city policies**
- 4. MIC's activities**



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Overview of cities in Viet Nam

Total number in 2017:

813 cities

~50% of Vietnam urban population

Special:

02 cities



19 cities



23 cities



45 urban settlement



84 urban settlement

78% number



640 urban settlement

The urbanization rate of Vietnam is 37,5% in which Hanoi and Ho Chi Minh city population occupy 30% of urban population nationwide



Quần đảo Hoàng Sa



Quần đảo Trường Sa



Smart city trend in Viet Nam

- **Major issues in urbans:** Urban growth quality, Infrastructure & Connections, Urban development investment, Urban management capacity, Climate change;
- Viet Nam has been focusing on building **e-government**;
- **Telcos** actively proposed smart city solutions to local governments (about 30 cities/provinces has signed MoU with major telcos to help building smart city)
- Some **smart city master plans** have been approved since late 2016 (Quang Ninh, Vinh Phuc, Bac Ninh, Ho Chi Minh city...)
- Other **active stakeholders** have been involved: Ministry of Information and Communications (MIC), Ministry of Contruction (MOC), Ministry of Science and Technology (MOST), AIC, VAIP, VINASA...



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Ho Chi Minh City

- Area: ~2,095 km² ; Population (2015): ~ 8.2 Million;
- **Master Plan** “Ho Chi Minh smart city roadmap for the period 2017-2020, vision 2025” was approved Nov 23rd 2017;
- **Smart City Vision 2025**: *A relatively high developed and sustainable economy based on optimal use of resources and citizen-centric;*
- **4 pillars** for period 2017-2020: economy, governance, living, citizen participation;
- **9 priorities**: transport, health, food safety, environment, flood prevention, human resources, public safety, e-government, planning;
- **6 solutions**: Common data platform and open data ecosystem, Simulation Center for socio-economic forecast, Intelligent Operation Center, Information Security Center, ICT Architecture Framework, Start-up Ecosystem.



Da Nang

- Area: ~ 1,284 km² ; Population (2016): ~ 01 Million
- Da Nang's smart city **Architecture** was approved Jan 11th 2018; the architecture is based on TOGAF (The Open Group Architecture Framework) and the ITU approach: “Setting the framework for an ICT architecture of a smart sustainable city”;
- **16 smart areas** are defined: IOC (Intelligent Operation Center), citizen, public services, open data, tourism, commerce, agriculture, lighting, water management, waste management, **education, healthcare**, hygiene and food safety, security and emergency services, disaster prevention – search and rescue, transport;
- Department of Information and Communications is in charge of collaborating all stakeholders to build and implement Da Nang's smart city Master Plan.



Phu Quoc Island

- Phu Quoc is Viet Nam's largest island and is a district of the Mekong Delta province of Kien Giang.
- Area: ~600 km² ; Population (2015): ~ 100,000
- **Roadmap to build a smart Phu Quoc city** in the 2016-2025 period was approved Sep 2016. Based on VNPT's smart city model, Phu Quoc focuses on tourism, transport, e-government, environment.
 - Phase 1: accomplished on Oct 2017 (WiFi available on the whole island, CCTV cameras , environment observation stations, etc).
 - Phase 2 (2018): Build a data centre, a concentrated operation centre and continue implementing basic and smart services.
 - Phase 3 (2019-2020): Continue to implement smart and added value services
 - Phase 4 (2021-2025): Will make Phu Quoc an increasingly smart city



Others

- Ha Noi:
 - Built up **critical databases** such as e-citizen (7.5M), e-health (~ 1 M);
 - **Monitoring Center** (transport & public safety, emergency, information security, data analytics, public services, press support);
 - **Smart Transportation Center; Smart Tourism Center.**
- Binh Duong Navigator 2021 (Target 2021: ICF Smart21): in collaboration with the city of Eindhoven in the Netherlands.
 - Newly industrialized zone near HCMC. Area: 2,694 km²; Population: 1.8M;
 - The Triple Helix model of collaboration, which involves a partnership between research institutions, businesses and the government.
 - **4 key areas**: people, technology, business and basic conditions such as environmental conditions, quality of living, ICT and infrastructures.
- Other smart city initiatives: Quang Ninh, Bac Ninh (**Master Plan with KPIs**).



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Smart city policies

- PM's Decision No. 1819 (Oct 2015) set target to 2020: Implementation of at least 03 smart cities
- Based on MIC's report, PM requested MIC to be in charge of collaborating with MOC to work out ***indicators to evaluate smart cities***; guidelines for local authorities ensuring the efficient and effective investment of smart cities projects (Dec 2016).
- Government's Decree No 17: MIC is in charge of guiding local governments in developing ICT applications and smart cities (Feb 2017).
- MIC issued "***ICT fundamental guidelines for building smart cities in Viet Nam***" (Document No. 58/BTTTT-KHCN, Jan 2018).
- PM's Decision No. 950 (Aug 2018) on National Plan for development of smart sustainable cities in Vietnam 2018-2025



PM's Decision No. 950

- **Objectives until 2020:** To establish the legal basis for SC and make preparations for investment in piloting at urban centers and cities.
 - To review and develop the **general legal framework**;
 - To formulate a **master plan for national standard system for SC**;
 - To develop an **ICT Framework** for SC development; a model for citizen, transportation and land management; and a national urban database phase I;
 - To support at least **3 cities in approving their Master Projects** for SC;
 - To support the **piloting of SC solutions in at least 3 new urban centers**;
 - To develop **priority SC projects for piloting in the Mekong River Delta** region...



PM's Decision No. 950

- **Objectives until 2025:** To implement phase I of smart city pilot development, targeting at least 1 city per economic zone.
 - To develop the **legal framework/regulations** based on piloting results; to adopt the ICT Framework for SC development in Vietnam;
 - To introduce national **standards** for the pilot development of smart cities;
 - To develop an urban spatial data **infrastructure**, integrating land data, construction data and other types of data at phase I's piloting cities;
 - To pilot an **urban planning group decision support system and an urban planning information lookup system at least 3 cities** of grade II or higher;
 - To support at least **6 cities at 6 economic zones** in their Master Projects for SC development and put in place SC utilities for citizens;
 - To pilot a mechanism for issuing certificates for new smart urban centers...



PM's Decision No. 950

- **Objectives to 2030:** To complete phase I of piloting, step by step scale up implementation by sector and region, and establish an interconnected, expandable network of smart cities.
 - To **review piloted mechanisms and policies**, and adopt them on a large scale;
 - To establish **SC chains** in the North, the Central Region, the South and the Mekong River Delta Region with Hanoi, Ho Chi Minh City, Da Nang and Can Tho as core cities; and establish an interconnected network of smart cities.



PM's Decision No. 950

- ***10 main groups of tasks and solutions:***
 - Review policies/regulations/standards; issue guidelines for SC development;
 - Step by step develop a national system of standards and regulations for SC;
 - Develop, operate a digitalized urban data system; national urban database;
 - Promote the application of smart technologies in urban management;
 - Develop the infrastructure for SC;
 - Develop smart utilities for citizens;
 - Develop resources for sustainable development of smart cities;
 - Increase mobilization of investment and technical assistance;
 - Actively promote international cooperation and technology exchange in SC;
 - Disseminate information and raise awareness on SC.
- (Priority tasks and timeline listed)



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ICT application

- **MIC** is in charge of **guiding local governments in developing ICT applications and smart cities** (Government's Decree No.17/2017/NĐ-CP);
- MIC is in charge of making guidelines for local governments in developing smart cities in cooperation with MOST, MOC, telcos and other associations... (as requested by the Prime Minister at Document No.10384);
- MIC is continuing to build the **system of standards/technical regulations in ICT sector**, especially in data interoperability, open data in administrative agencies, information security, personal privacy...;
- MIC is conducting some **research projects** relating to smart city (building KPIs, building ICT framework for smart cities, dashboard for smart cities in Vietnam...).



MIC's guideline for smart city development in Vietnam

- ***The term “smart sustainable city or community”*** is a city/community that uses innovative, appropriate and trustworthy information, communication technologies (ICTs), and other means to:
 - improve quality of life of citizens;
 - increase the efficiency of urban operation and services by more applications of data analytics and citizen participation;
 - promote innovation and economic growth as well as protect the environment.
- ***Principles:***
 - citizen-centric and all stakeholders' engagement, ICT infrastructure and open data ecosystem, information security assurance, encourage PPP model, HR development, international collaboration.



MIC's guideline for smart city development in Vietnam

- **Local governments build master plans** with the following principles:
 - incremental approach (step by step);
 - encourage trial projects which demonstrate that success will have potential to be repeatable and scalable across cities of different sizes;
 - make best use of existing ICT infrastructures, e-government projects;
 - encourage IoT, cloud, big data analytics and AI.
- **Principles of smart city ICT architecture framework:** layered structure, SOA, interoperability, scalability, flexibility, availability, measurability, feedback ability, share ability, security, technology neutral.
- **6 basic steps to become a smart sustainable city** (based on ITU-T: Rec Y.4000-Sup 32).



KPI for smart city in Vietnam

- **Principles to build KPIs:**
 - **Based on international standards** such as ISO, ITU...;
 - **Best practices** on building KPI from other countries;
 - The **number of KPIs should be minimum (core)**, easy to collect/verify data;
 - Running **some pilot projects** to refine proposed KPIs before official release.
- We are studying various KPIs:
 - ISO 37120 (2014); ISO/TS 37151 (2015); ISO/IEC 30146 (WD): Smart City ICT Indicators; ISO 37122 (WD); ITU-T L.1601, L.1602, L1.603; European Smart City Index (TU Vienna); ETSI TS 103 463; China KPI; India KPI....
 - KPIs in some pilot projects in Vietnam.
 - MOC's Indicators for Green Development Cities (issued in Circular 01/2018/TTBXD) and National City Performance Indicators (draft).



KPI for smart city in Vietnam

- MIC is focusing on *the “smartness” KPIs of city*: ICT use and impacts with the following principles:
 - In line with international KPIs’ principles: scientific and reasonable, comprehensiveness, availability (collectable and quantifiable), simplicity (clear), timeliness, consistent, directive (vision of city’s leaders);
 - Citizen-centric, efficient governance, cyber security assurance, open data...;
 - Pilot testing to make KPIs more relevant to local contexts in Viet Nam.



Deployment of Decision No.950/QĐ-TTg

- **Principles:** Focusing on development of ICT infrastructures for smart city in Vietnam.
- **Tasks are deploying:**
 - Develop and adopt KPIs for smart cities;
 - Develop regulations on public data sharing, cloud computing and common use of ICT infrastructure in smart cities;
 - Develop technical standards and regulations on communications and information exchange in smart cities;
 - Develop and adopt an ICT Framework for smart city development;
 - Develop an ecosystem of smart city products and services, especially by domestic enterprises;



Deployment of Decision No.950/QĐ-TTg

- **Tasks are deploying:**
 - Formulate and implement a project for information safety assurance in smart cities;
 - Develop a model for integrated management of population, land, transportation and urban planning and launch this model in piloting areas;
 - Continue to promote the development of e-government, develop public administration services;
 - Raise awareness on smart cities for the community.



Ongoing activities

- MIC, MOC and MOST are collaborating for ***some research projects on smart city's including KPIs***;
- MOST is focussing in ***development of common standards for smart cities***;
- MIC is focussing in ***development of technical regulations for communications and data exchange in smart cities***;
- MIC is looking for ***international best practices on smart cities***:
 - KPIs (ITU, ISO/IEC, EU, China...);
 - Maturity & benchmark model;
 - PPP model;
 - Frameworks, architectures, standards;
 - Strategies, policies, guidelines for developing smart cities in local governments...



Thank you!

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