

City Story 10 Ho Chi Minh City, Vietnam

Integrated Data Systems for Urban Planning
and Management

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Land Area:
2,095 km²



Population:
9,427,598



Population Density:
4,500 people/km²



Ho Chi Minh City Hall, fronted by a statue of
Ho Chi Minh in Vietnam.

Image: Christopher on Wikimedia Commons

In 2018, Ho Chi Minh City (HCMC) became one of 26 pilot cities to join the ASEAN Smart Cities Network (ASCN). Since then, its smart city ambitions have grown from strength to strength through its smart city projects and roadmap, for which the city is preparing to enter the second phase in 2021–25.³² Even before this, HCMC’s efforts over the years in the direction of data openness and interoperability helped it build a strong foundation for further smart city developments.



HIDS workshop with the Singapore delegation comprising staff from CLC, TF and SLA.

Image: Centre for Liveable Cities

The HCMC Peoples’ Committee (PC) understood the importance of having ready access to geospatial information to support the planning of liveable and sustainable districts. It thus appointed the HCMC Institute for Development Studies (HIDS) to advise on matters relating to urban development, public service delivery, resource utilisation and risk management. HIDS was tasked with drawing up a long-term, sustainable Geographic Information System (GIS) roadmap and looked to learn from the experiences of Singapore and other Asian cities.

The city established the HCMGIS portal in 2008 and has been diligently refining the system ever since. However, HIDS faced the challenge of gaining buy-in from public agencies for making reliable and updated geospatial data available on the portal. In 2018, officers from HIDS met with a Singapore delegation comprising officers and resource persons from the Singapore Land Authority (SLA), Temasek Foundation (TF) and CLC as a follow-up to HCMC’s participation in TFLUGP. The exchange of knowledge contributed towards the development of the roadmap, including service delivery improvements and ideas on how the city could better gain support from public agencies.

SLA OneMap

OneMap, developed by the Singapore Land Authority, is a publicly available national map of Singapore. It can be used to gather street-level geospatial information or be used for specific queries such as land ownership, nearby schools, and demographic data in the vicinity, among other features. OneMap is accessible via the OneMap mobile app and web portal (www.onemap.sg).



A feature of OneMap is finding land ownership
and land lot numbers using LandQuery.

Image: SLA





HCMC's IOC will enable real-time observations including traffic conditions.

Image: Daniel Stewart on Unsplash

As of 2020, there has been significant progress made on the HCMGIS portal and a total of 93 information layers have been made available (up from 67 in 2018). The digital platform has garnered considerable public attention from the public since its establishment and reciprocated well by providing interactive elements such as story maps and open data visualisations on hot topics such as the COVID-19 pandemic.³³

Since tackling the fundamental challenge of data integration and accessibility in the GIS space, HCMC has since continued to extend its digitalisation strategies to other practical uses across the public sector. In 2018, HCMC pitched two smart city projects for funding and collaboration at the ASCN platform—the Intelligent Operations Centre (IOC); and the Integrated and Unified Emergency Response Centre. These projects were part of a smart city roadmap that introduced the vision of attaining rapid and sustainable economic development through optimal resource utilisation and citizen-centric governance.³⁴ During the first phase of the

roadmap from 2017 to 2020, the city's focuses included the development of cloud computing infrastructure, big data analysis and shared data platforms among buildings to enable an open data ecosystem. In subsequent phases, these initiatives will be strengthened and improved through better processing capacity and security, for long-term sustainability and an expanded scope of implementation.³⁵

While many applications and processes were developed for individual domains such as transportation, security, healthcare and education, a key challenge stemmed from the multitude of datasets housed by different agencies in varying formats and systems. HCMC's two smart city projects sought to address the resource inefficiencies from these segregations and develop common platforms capable of collecting and analysing data from varied sources while availing it to city leaders seeking to make informed decisions on cross-cutting issues.

The IOC is envisioned as the “brain” of the city, aggregating real-time data from various virtual and physical sources, CCTVs for example. This enables officers to monitor a variety of scenarios including traffic conditions, urban flooding and security concerns. Similarly, the Unified Emergency Response

Centre makes use of GIS and the integrated video surveillance system for automated location and resource management. These help to improve response time and communication to the public in event of an emergency.^{36,37,38}



HCMC's Intelligent Operations Centre.

Image: Centre for Liveable Cities



HCMC's Traffic Control Operations Centre.

Image: Centre for Liveable Cities