

Development Bureau of the
Hong Kong Special Administrative Region Government

*For All and By All –
the Spatial Journey of the
Common Spatial Data
Infrastructure (CSDI) of
Hong Kong*

Sharing Session

May 8, 2026



Agenda

Topic	Speaker(s)
Welcome and Introduction	Mr. Kevin Leung
Context for CSDI	Dr. Albert Wong, Mr. Kevin Leung
Relevance to Different Sectors	Dr. Albert Wong, Mr. Kevin Leung
Looking Ahead – Future Roadmap for CSDI	Dr. Albert Wong, Mr. Kevin Leung
Special Topic 1: Economic Contribution of Spatial Data and CSDI	Dr. Albert Wong, Mr. Kevin Leung
Special Topic 2: Introduction of Hong Kong Geocode and its Application	Sr Tony Hon, Mr. Kevin Leung
Q&A Session	Sr Amy Wong, Dr. Albert Wong and Mr. Kevin Leung
Closing	Sr Amy Wong, Mr. Kevin Leung

The session is about 1 hour and 30 min. from 3 pm to 4:30 pm. No recording.

In the Room Today



Sr Amy Wong
Senior Land Surveyor
Development Bureau
HKSAR Government



Dr. Albert Wong
Partner
Government & Public
Sector Consulting
PricewaterhouseCoopers



Sr Tony Hon
Senior Land Surveyor
Lands Department,
HKSAR Government



Mr. Kevin Leung
Director
Government & Public Sector
Consulting
PricewaterhouseCoopers

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Journey Leading Up to CSDI



Context Leading Up to CSDI

What is Spatial Data and Why It Matters



Definition

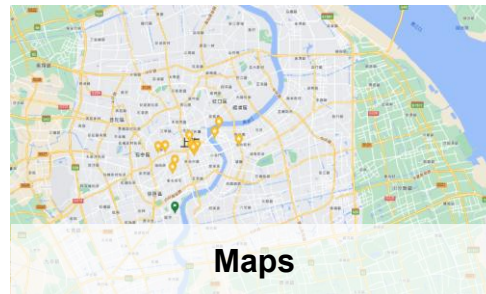
Spatial data is information that describes objects, events or other features with a location on or near the surface of the earth.

Spatial data typically combines the following information:

- **Location information** - coordinates on the earth
- **Attribute information** - the characteristics of the object, event or phenomena concerned
- **Temporal information** - the time or life span at which the location and attributes exists



Examples of Spatial Data



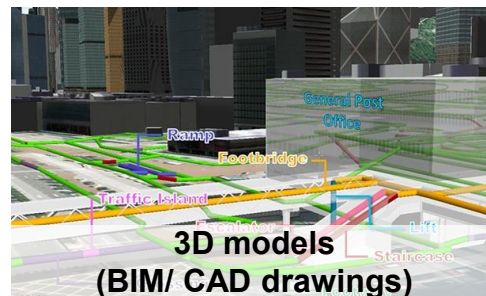
Maps



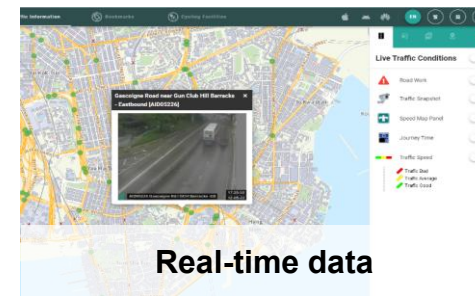
Aerial photos / satellite images



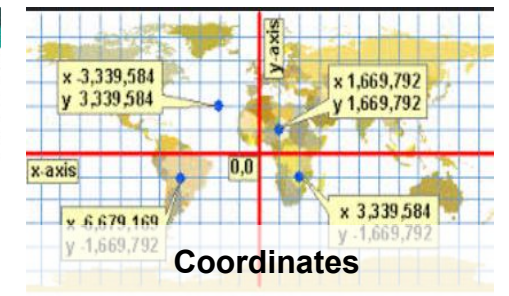
Personal locations through tagging / "check in"



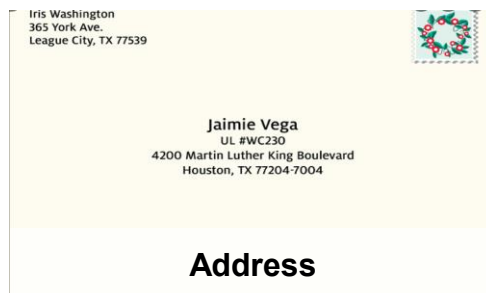
3D models (BIM/ CAD drawings)



Real-time data



Coordinates



Address



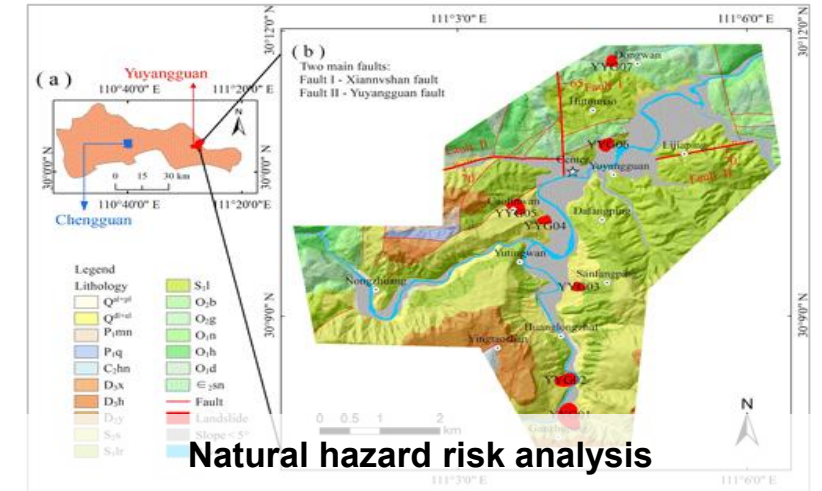
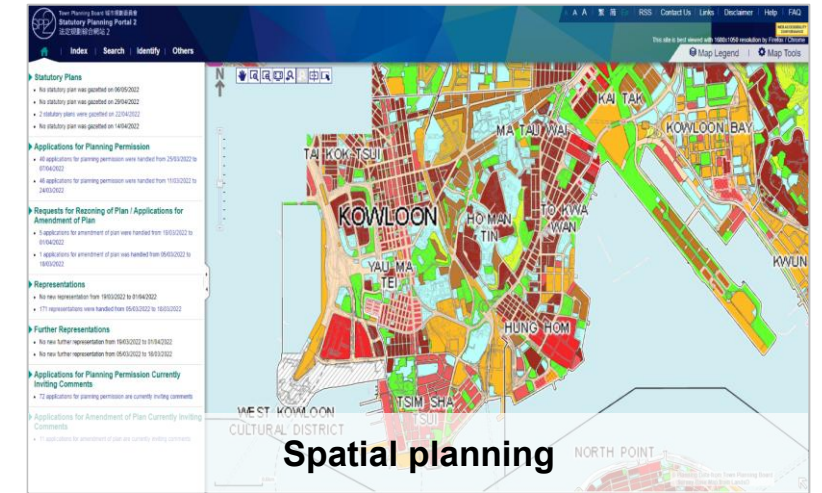
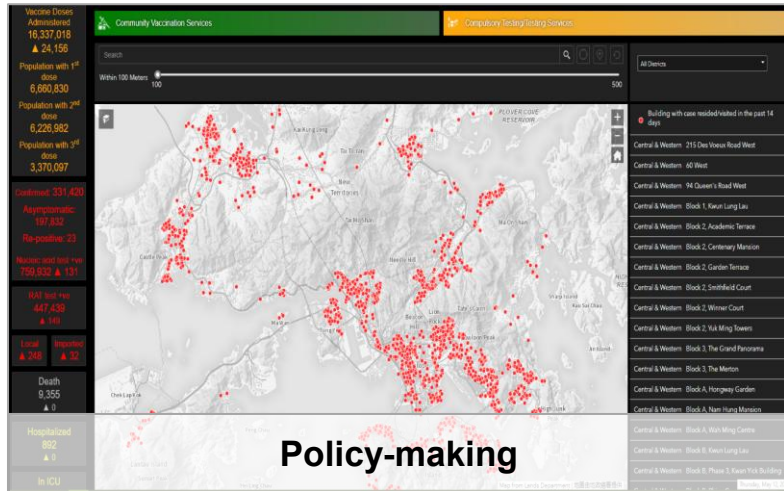
Census data



Sensor data

Context Leading Up to CSDI

Putting spatial data to good use brings convenience in life and generate insights for policy making / business decision



Context Leading Up to CSDI

If relevant data are available, we can easily answer the **WHERE, HOW** and **TO WHAT EXTENT**.

BUT the availability of up-to-date, easy to access and standardized spatial dataset is to be improved:



Technical Challenges

- Multiple sources of data, lack of single source of truth
- Data not in digitally available format
- Dataset come in different format, standards, level of details
- Lack of interoperability
- Lack of definition of data / metadata



Bureaucratic Obstacle

- Data are expensive
- Data are not made for sharing
- Process of obtaining data can be difficult
- Data are provided in piecemeals



Changes in Mindset

- Data owners do not see value of their data to others
- Data users have no skills to use or interpret data
- Level of awareness is low – obstruct wider data usage and sharing

Call for a practical solution to address the above challenges

Context Leading Up to CSDI

The Client appointed PwC to carry out a consultancy study to formulate the most effective CSDI development strategy for Hong Kong and address the issues facing sharing of spatial data.

Vision of CSDI

To contribute to a liveable, competitive, innovative, sustainable and smart Hong Kong through:

Provision of convenient, easily accessible, high quality and up-to-date spatial information and services.








Mission of CSDI

Maximise innovation, knowledge and value creation for Government, business and community.



Key Components

-  Spatial information and services sharing portal
-  Data and technology
-  Funding
-  Capacity building, outreach and partnership
-  Effective governance framework

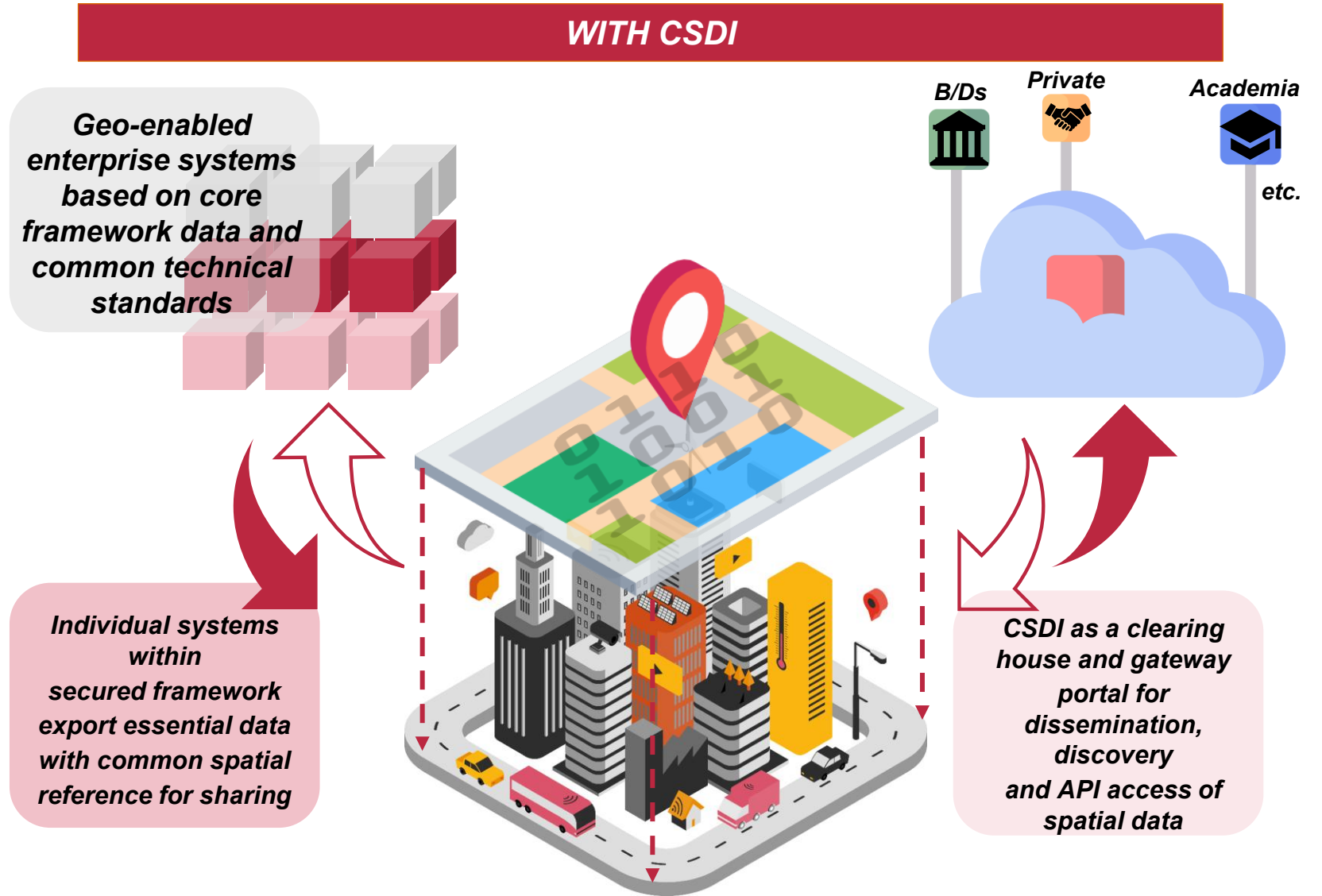
Context Leading Up to CSDI

CSDI's applications are far-reaching, spanning across policy framework, institutional setup, technical standards and operational platform for the coordinated and adaptive planning, development and management of spatial data.

WITHOUT CSDI



WITH CSDI



Context Leading Up to CSDI

CSDI is not just a data infrastructure

It is a holistic strategy covering governance arrangement, technical architecture, implementation plan, data structure, funding arrangement and partnership arrangements.

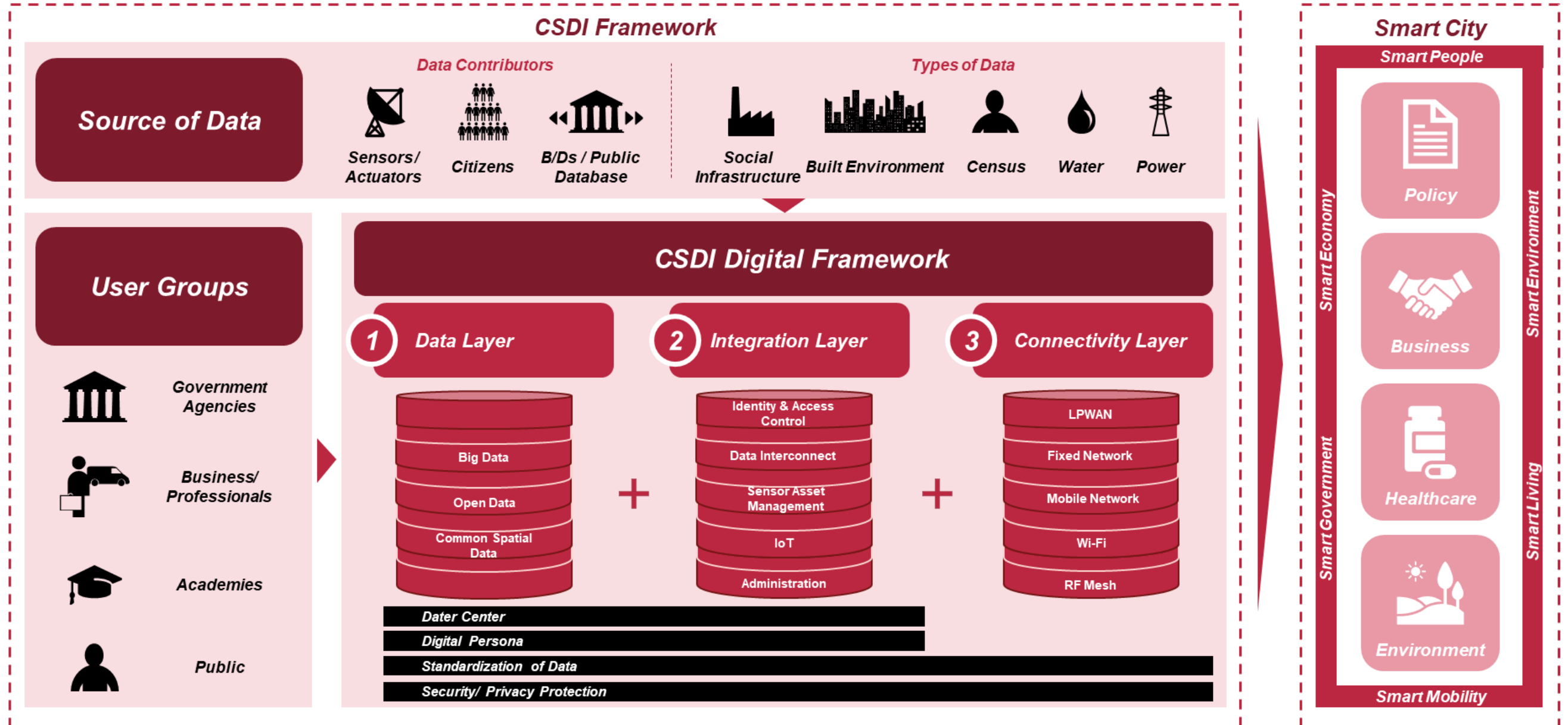


Key priorities:

- Establish a dedicated project office to drive the development of CSDI
- Develop the technical infrastructure
- Formulate business rules and procedures for sharing spatial data
- Set up data standards
- Invest in promotion and awareness raising across different sectors of HK

Context Leading Up to CSDI

The success of CSDI in driving Smart Hong Kong is governed by an ecosystem of users, data, software and hardware.



Context Leading Up to CSDI

CSDI Portal is now live with over 1,100 spatial datasets available for free download

The screenshot displays the CSDI Portal interface. At the top left is the logo for the Common Spatial Data Infrastructure (空間數據共享平台). Navigation links for 'CATALOG' and 'MAP' are visible. On the right, there are options for 'Text Size', language selection ('繁 | 簡'), and 'Login'. The main banner features the 'CSDI Portal' title and three key statistics: '1100+ Current Datasets available', '2.05M+ Dataset downloads in 2025', and '9.5B+ API service calls in 2025'. Below this is a search bar with the placeholder text 'Enter keyword like transportation, building, Lands Department...' and a 'SEARCH' button. At the bottom, there are four filter buttons: 'New Datasets', 'Most Viewed Datasets', 'Most Downloaded Datasets', and 'Most Popular Dataset APIs'.

CSDI Portal: <https://portal.csd.gov.hk/csd-webpage/>

Context Leading Up to CSDI

Key features of CSDI Portal include spatial datasets organized by categories, APIs and geospatial applications are available

The screenshot displays the CSDI Portal interface with three main sections:

- Dataset Categories:** A grid of 16 categories including Climate and Weather, Commerce and Industry, Development (highlighted with a red box), Education, Election, Environment, Geography, Health, Housing, Labour, Community and Social Welfare, Land Information, Law and Security, Population, Recreation and Culture, Sports, Technology, Transportation, and Utilities.
- Application Programming Interfaces (APIs):** A row of four API cards: Map APIs, Dataset API (OGC WFS/OGC WMS/ArcGIS REST API), Dataset API Explorer (marked with a 'NEW' tag), and OGC Catalogue Service (marked with a 'NEW' tag).
- Applications and Tools:** A row of four application cards: CSDI Use Cases, GeoAddress Finder, GeoSpatialiser (marked with a 'NEW' tag), and Geo-tagging Tool (highlighted with a red box).

This screenshot shows a map view of the CSDI Portal. A popup window is open over a building, displaying the following metadata:

Building	
SHAPE	
GeoPathNo	3428516348
DataCreate	5/9/2005
BuildingBlockType	Podium
BuildingCSUID	3428516348P0050905
BuildingID	1103117089
Status	Active
BuildingNameEN	TWO INTERNATIONAL FINANCE CENTRE
BuildingNameTC	國際金融中心二期
BaseHeight	5.8
TopHeight	48.4
Storeys	82
StoreysInBasement	
DataStamp	25/6/2020

This screenshot shows the Geo-tagging Tool interface. It features a search bar with the text "Search buildings, facilities, addresses". Below the search bar, there are three search results. The first result is highlighted and shows the following details:

Coordinates:
Latitude, Longitude: 22.4532° N, 114.1680° E
Northing(m), Easting(m): 834553.3, 835359.7

Podium Information:
Jade Plaza
翠屏商場
3 ON CHEE ROAD
安慈路3號

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Relevance to Different Sectors



Relevance to Transport and Logistics Sector

Spatial data is useful to the transport and logistics sector by enabling businesses to optimise delivery routes and improve overall supply chain efficiency across land, sea, and air networks.

Key Applications of Spatial Data in Transport and Logistics sector:

Route Optimisation & Fleet Management:

- Using road network and real-time traffic spatial data to plan the shortest, fastest, and most fuel-efficient delivery routes while tracking vehicle locations live to improve fleet coordination and reduce operational costs.

Virtual Boundary Alerts (Geofencing):

- Setting up virtual geographic boundaries on a map using spatial data so that the system automatically triggers alerts or actions (e.g., notifications, time logs, security warnings) when a vehicle or asset enters or leaves a designated area.

Spatial Data for Transport Planning and Management:

- Spatial data is fundamental to the transportation sector by providing critical geographic information that supports transport research, planning, and management to improve the efficiency and safety of movement across networks.



Relevance to Transport and Logistics Sector

A few examples of use case of spatial data in Transport and Logistics Sector



Dynamic Route Planning & Last-mile delivery optimization

- Uses road network data, real-time traffic layers to calculate the most efficient delivery sequence
- Analyses large amount of route options for each driver daily



Port Geo-Information System (GIS) Transformation

- Replaces paper-based systems with a **centralised digital mapping system** integrating real-time spatial data.
- Enables better **asset management, infrastructure planning, and environmental monitoring** across the port's vast facilities.
- Improves **decision-making, interdepartmental collaboration**, and operational efficiency through interactive dashboards and location-based analytics.



Useful Datasets for Transport-related Research or Applications

- **3D Visualisation Map**
- **3D Indoor Map**
- **3D Pedestrian Network**
- **Real-time traffic data**

Note:

*MyMapHK, a mobile map application developed by the LandsD
HKeMobility, a mobile app developed by the Transport Department*

Relevance to Tourism & Hospitality Sector

Spatial data is transforming the tourism and hospitality sector by enriching visitor experiences, guiding strategic hotel development, and enabling businesses to proactively manage risks.

Key Applications of Spatial Data in Tourism & Hospitality sector:

Augmented Reality Heritage Trails:

- Location-based spatial data enables tourists to point their smartphones at historical sites and see virtual overlays of stories, 3D reconstructions, and cultural information enhancing their heritage experience.

Optimal Hotel Site Planning:

- Spatial data helps hotel developers analyse geographic factors like proximity to attractions, transport links, competitor locations, and tourist footfall patterns to choose the most profitable site for building a new hotel.

Risk Management:

- Spatial data enables tourism and hospitality businesses to monitor and assess security risks and climate risks such as natural disasters, geopolitical threats, and extreme weather events.



Relevance to Tourism & Hospitality Sector

A few examples of use case of spatial data in Tourism & Hospitality Sector



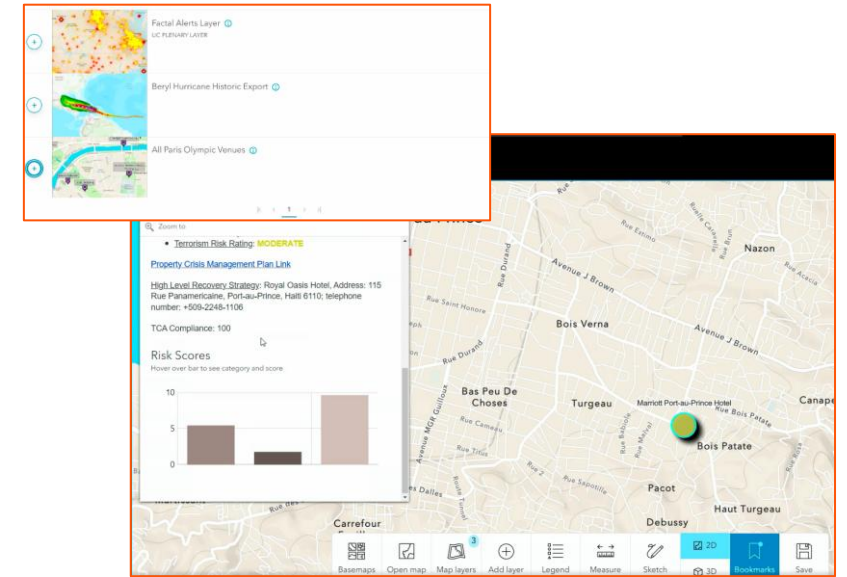
Hotel Site Selection

- Uses spatial data to analyse proximity to attractions, transport links, competitor locations, and tourist footfall when evaluating potential sites.
- Enables developers to select the most strategically profitable location.



"City in Time" Project in Hong Kong

- Uses spatial data and augmented reality to allow users to view historical photos overlaid onto present-day locations through their smartphones.
- Enables the public to explore Hong Kong's urban transformation by comparing past and present streetscapes at specific geographic points.



Hotel Operational Risk Management

- A major global hotel chain develop a Risk Atlas using GIS and spatial data analytics.
- Maps and monitors natural disasters, geopolitical risks, and security threats across its global hotel portfolio in real time.

Relevance to Import/Export, Wholesale and Retail Trades

Spatial data plays a vital role by helping businesses strategically plan site locations, understand customer behaviour, and streamline supply chain operations.

Key Applications of Import/Export, Wholesale and Retail Trades:

New Site Planning:

- Spatial data helps businesses analyse demographics, traffic patterns, competitor locations, and accessibility to choose the best geographic location for opening a new store, warehouse, or distribution centre.

Customer Analytics (Geomarketing):

- Spatial data enables businesses to map customer characteristics, allowing them to target marketing campaigns and tailor product offerings based on geographic regions.

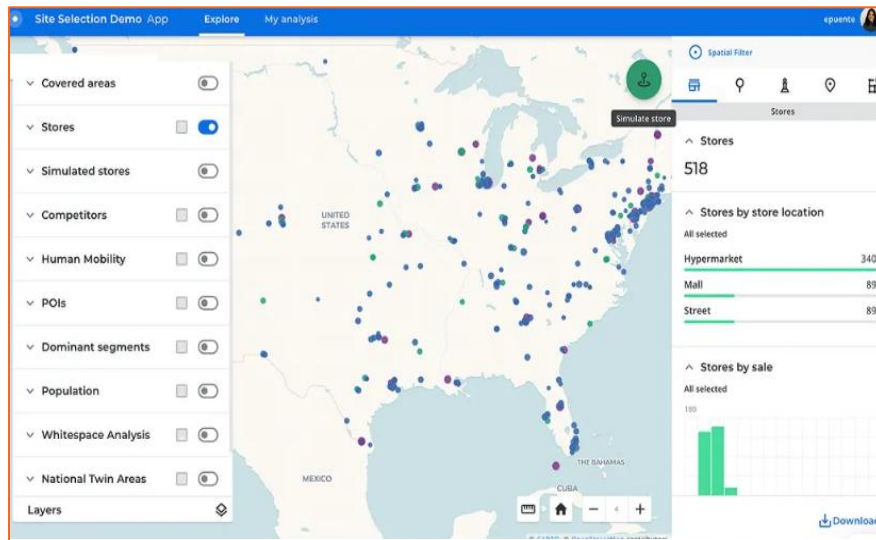
Supply Chain Optimisation:

- Spatial data allows businesses to track shipments in real time, plan the most efficient delivery routes, and reduce transportation costs across the entire import-to-retail distribution network.



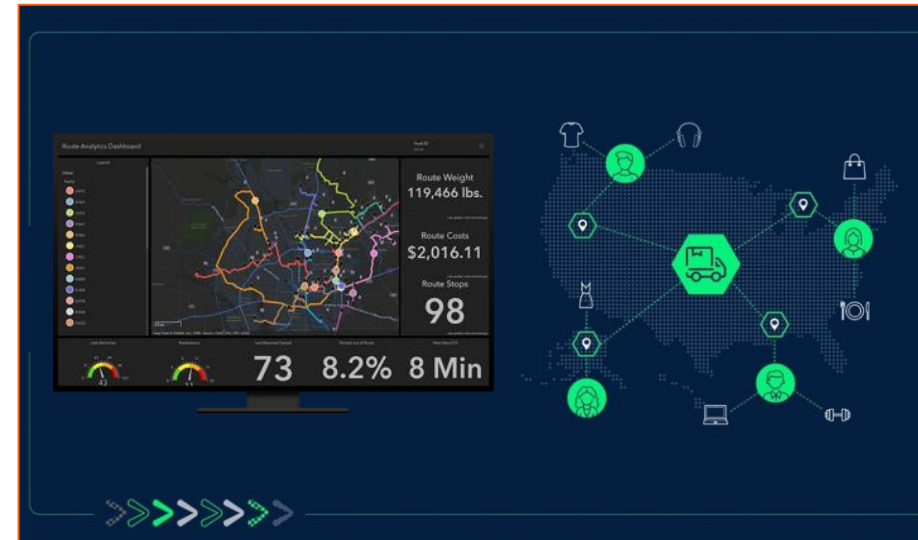
Relevance to Import/Export, Wholesale and Retail Trades

A few examples of use case of spatial data in Import/Export, Wholesale and Retail Trades



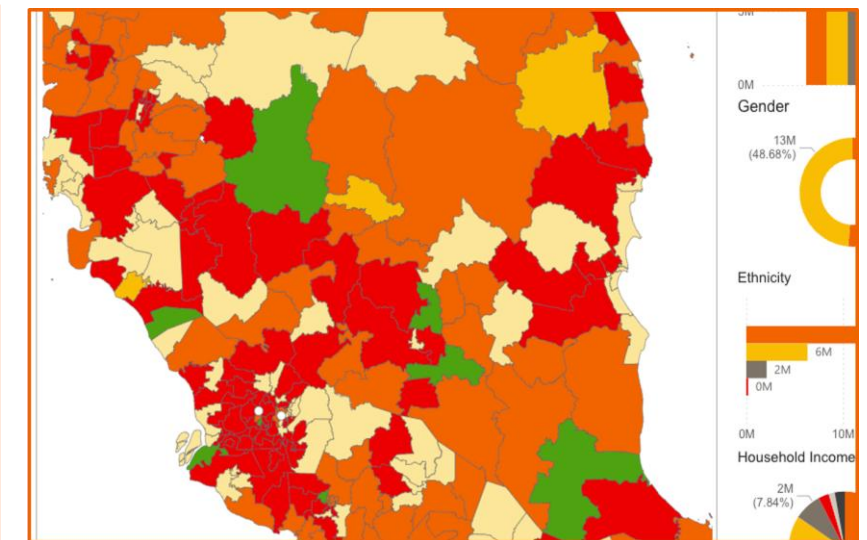
Retail Outlet Site Selection

- A major global coffee chain uses ArcGIS platform and an internal Geo-Information System(GIS) team to select new store locations.
- Analyses spatial data such as traffic patterns, demographics, income levels, and proximity to existing stores.
- Enables the company to predict store performance and reduce risk.



Spatial Delivery Optimisation

- A major global retailer uses spatial data and machine learning to analyse customer locations, delivery demand, and driver routes within each zone to plan the most efficient deliveries.
- Enables the company to predict delivery times accurately, assign drivers efficiently, and reduce overall logistics costs across its delivery network.



Segmenting customer profiles

- Analyses customer demographics, spending patterns, and competitor locations within each store's catchment area using spatial data.
- Enables companies to identify underperforming stores and untapped growth opportunities to guide future business decisions.

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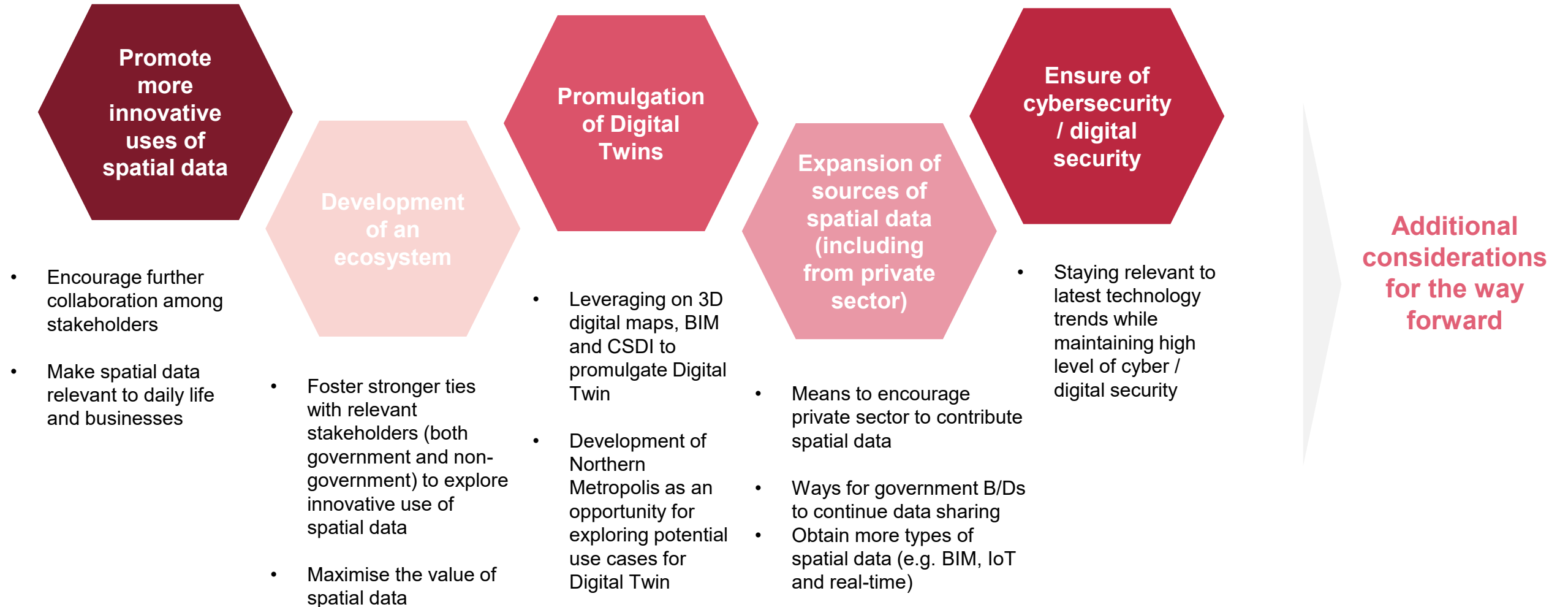
Looking Ahead – CSDI Future Roadmap



Looking Ahead – CSDI Future Roadmap

Guardrails for future CSDI development

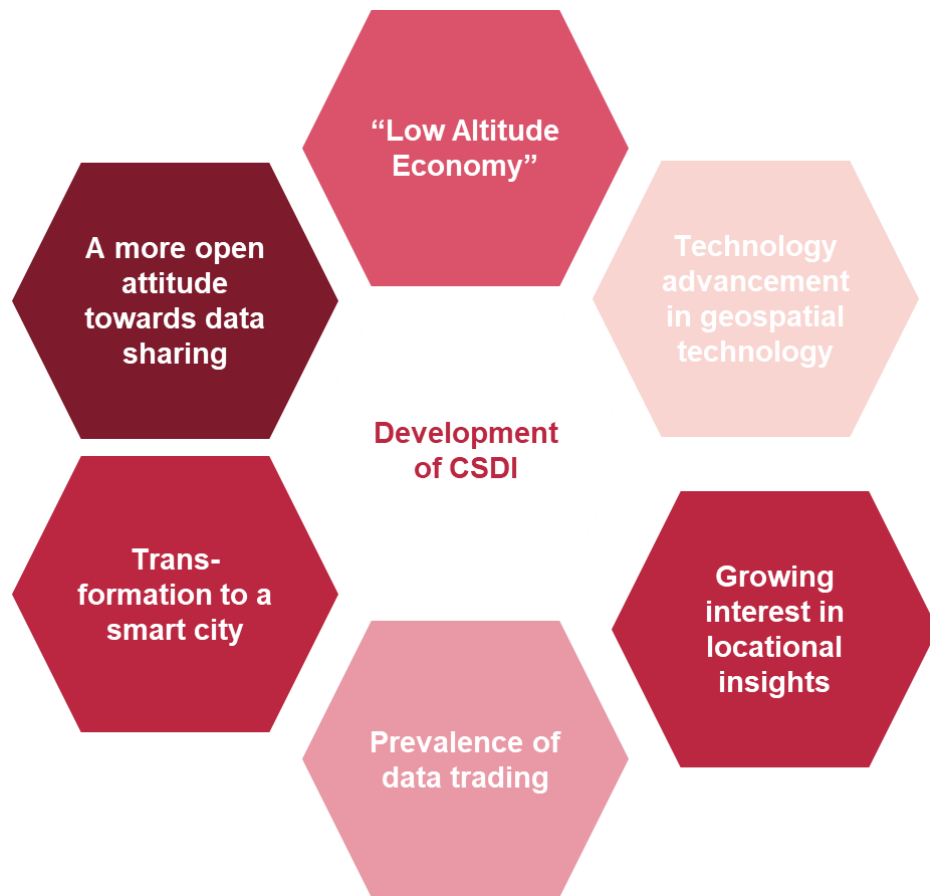
One Government Approach



Looking Ahead – CSDI Future Roadmap

Major trends that have shaped the context of CSDI development

Changes in the market landscape



Increasing provision of spatial data and downloading of spatial data via CSDI Portal



Looking Ahead – CSDI Future Roadmap

Reference for Hong Kong



Latest policy and legislation to develop SDI

SDIs are regarded as a strategic digital infrastructure (all)

Governments lead the work of setting principles, policies and partnership development (all)

More matured jurisdictions are driving development of applications and taxonomy (UK)

Resources and support are key promoting wider use of SDIs and spatial data within governments and for private sector (UK/SG)



Organisational development to propel and promote SDIs

Centralised body (e.g. a commission / office) to drive the development of SDIs and use of spatial data (all)

Capacity building activities are critical roles of centralised body (SG)

More application / theme-based approach to drive the development of spatial data applications and SDIs (UK/SG)



Mechanism for data sharing within government and with non-government users

Use of a “data agent/trader” to help address the need for spatial data in the private sector (AU)

Reliance of partnership model for expanding the source of spatial data (UK/SG)

Developing a glossary for terms and definitions of geospatial data elements to facilitate easier communication (UK/SG)

Encourage intra-government departmental cooperation to simplify administrative processes and accelerate platform development (UK/SG)



Application of spatial data in analytics and wider uses

All jurisdictions are keen to explore the use of Digital Twin and / or CIM - all start with pilot and proof-of-concept (all)

To better ensure readiness, more policies and use cases are being explored through studies and pilot cases (all)



Management arrangement for spatial data

Mandatory sharing of data of importance, such as Underground Utilities data (UK/ CN)

Data standards to be applied more flexibly subject to domains and types of data (UK/SG)

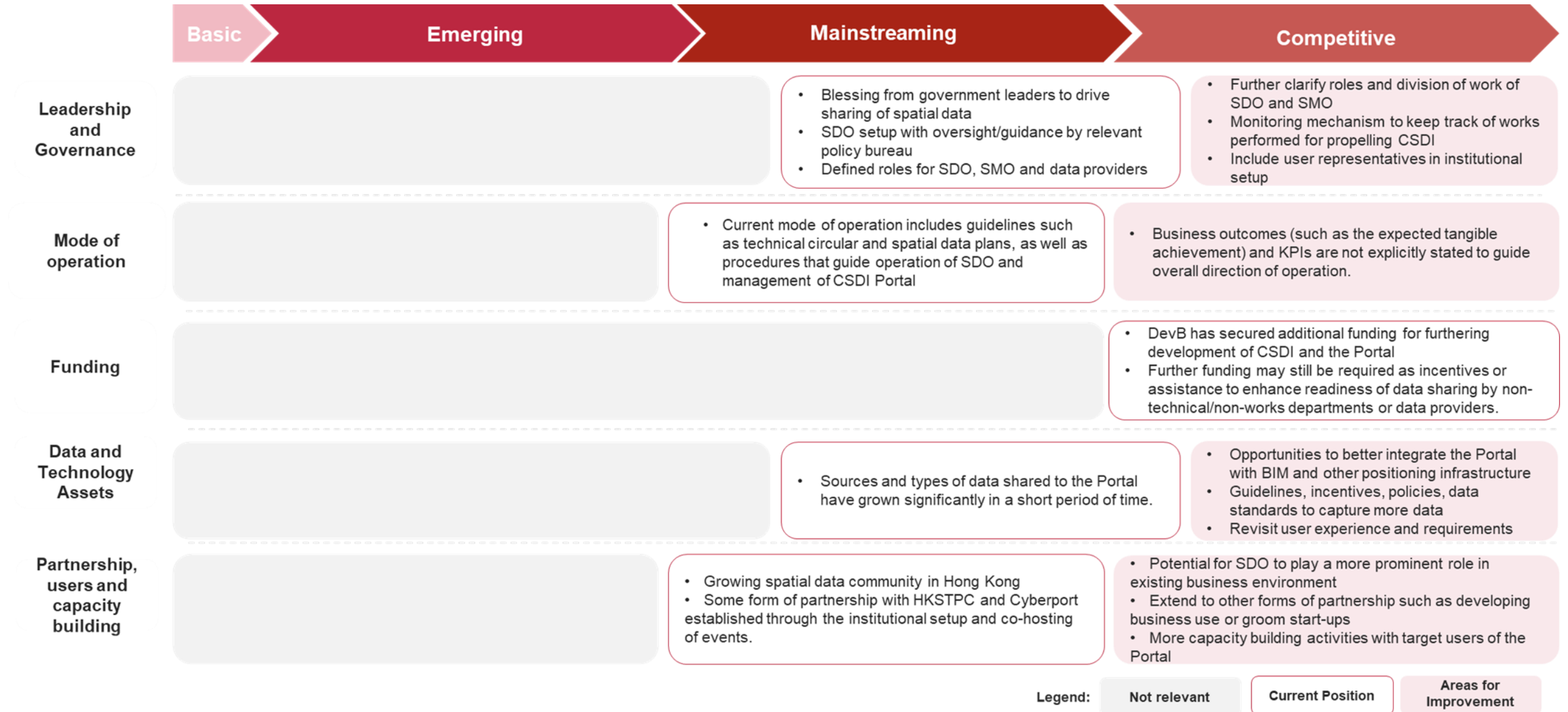


Technology trends and integration of spatial data with other technologies

BIM / AI / IoT / geo-analytics as value-adding services / features, and where SDI bring synergies (all)

Looking Ahead – CSDI Future Roadmap

We have assessed the development stage of CSDI as a whole in terms of the five building blocks



Looking Ahead – CSDI Future Roadmap – Key Recommendations

Based on the stakeholder views and assessment of CSDI development, the following illustrates our key recommendations for the way forward

Leadership and Governance

The DevB continues to serve as the “home” for CSDI and SDO to continue the momentum and upholding / improving established mechanism, which also aligns with overseas experience

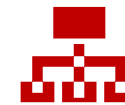
Potential inclusion of representatives from relevant non-government stakeholders (from academia, NGOs, commercial sector) in relevant committees and working groups



- DevB plays the role as a governing body **and a dedicated office to push the momentum of CSDI's development**



- Ensures a **consistent and coherent approach** in the continuous development of the CSDI platform and spatial data initiatives



- **Inclusive approach to recruit non-governmental sector players** will be conducive to the long-term development of CSDI



- Strategies and initiatives could be better tailored to diverse users and **engender more data sharing opportunities or creation of use cases**

Looking Ahead – CSDI Future Roadmap – Key Recommendations

Based on the stakeholder views and assessment of CSDI development, the following illustrates our key recommendations for the way forward

Fundamental and Common Sharable Data

Sharing of spatial data could be by theme or by policy outcomes, which would provide a purpose to data contributors and mandate for sharing

SDO could follow a theme-based approach and collaborate with industry organisations to collect aggregated data that are being shared within the businesses



- **Provide a purpose** to data contributors and **motivation** for sharing relevant datasets for value creation



- Data contributors will understand how their **collected data will fit into the broader narrative**, fostering **closer engagement and ownership**



- A theme-based approach helps aligning goals with the private sector to **gather high-priority datasets**



- Businesses may be more receptive in sharing spatial data if they perceive the potential benefits in creating theme-based initiatives that may **in return benefit themselves**

Looking Ahead – CSDI Future Roadmap – Key Recommendations

Based on the stakeholders views and assessment of CSDI development, the following illustrates our key recommendations for the way forward

Operation and Technology

Provide more value-adding services (e.g., data cleaning and manipulation, spatialise data) for Government B/Ds; and encourage partnership with external service provider(s) (potentially of a data agent) as a way to assist data owners and data users in the private market



- **Foster a more sustainable approach** to data management and processing with external help



- **Facilitate smoother data access and sharing for private market players** with external data agent acting as a mediator to communicate and standardise data

Funding and Charging

Funding support to non-works B/Ds to incentivise data sharing and improve readiness for sharing



- Provide **resources and / or funding support** for B/Ds who are less familiar with the use of spatial data to help with the preparation of spatial data



- Aims to **promote and cultivate a collaborative environment** that drives information sharing

And
/ OR

Looking Ahead – CSDI Future Roadmap – Key Recommendations

Based on the stakeholders views and assessment of CSDI development, the following illustrates our key recommendations for the way forward

Capacity Building, Outreach and Partnership

Identifying opportunities to demonstrate or build network with industries that are likely to use or benefits from spatial data, such as financial services industry, social welfare services or hospitality;



- Leverage **established synergies with various partnering organisations**, such as universities, HKSTPC, Cyberport, to organise events / promotional exhibitions for promoting the use of spatial data

Set up a showcase section to share real-life use cases and applications to demonstrate existing achievements of using CSDI datasets



- By **curating and sharing use cases**, the public and the private sector may be inspired to use optimise the use of CSDI datasets for fostering innovation

Identify within the Government, user departments that would be willing and able to conduct joint promotion with DevB or the SDO to promote CSDI from a user perspective



- **Identify key champions and partner with user government departments** could enable a more effective approach to create new practical applications or use cases to highlight the value and impact of spatial data

Looking Ahead – CSDI Future Roadmap – Key Recommendations

KPIs are proposed to measure the performance of CSDI in terms of impacts



Measurement in terms of economic impact

Quantifiable economic value-add to demonstrate contribution to economic activities

Follow the funding application cycle



Measurement in terms of user experience

Collection of user feedback and usefulness of data available to track level of satisfaction

Could be done annually or at appropriate interval



Types and number of beneficiaries / contributors

The reach of CSDI to various users in non-government sector

Number of active users of CSDI to determine user base

Could be done annually or at appropriate interval



Measurement in terms of productivity gain / savings

Savings from data discovery, formatting etc.

Follow the funding application cycle

Note: Operational performance is also important, data such as number of outreach activities, number of registered users, number of products or tools developed etc. should also be captured

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Economic Contribution of Spatial Data and CSDI



Value of Spatial Data for Selected Industries

We have tailor-made a framework to understand the quantifiable benefits and cost that are brought by the CSDI platform to selected industries in the context of Hong Kong's economy

Quantifiable Benefits brought by the proposed CSDI strategy to selected sectors in the economy of Hong Kong

Tangible Economic Benefits:

1. Total economic impact contributed by revenue generated / increase in the private sector organisations as a result of using spatial data from the CSDI
2. Cost reduction for operating with better business planning / investment decision with spatial data provided by the CSDI

VS.

Quantifiable Cost of providing spatial datasets on the CSDI, and maintaining and developing the platform

- Manpower involved in the whole data cycle (from data collection, cleansing, standardisation and integration to fine-tuning datasets upon publication on the CSDI platform)
- Manpower involved in the maintenance and the updating of the CSDI platform



Other qualitative benefits that may not be articulated in numbers such as enhanced accuracy at work

Input for calculations

- Our framework referenced the experience and impact assessments conducted by other countries in estimating the **economic and social benefits** brought by geospatial data or related initiatives
- Based on the **inputs by respondents in the survey** and the information provided by the DevB on manpower costs, the quantifiable benefits and costs are calculated respectively to understand the impact of CSDI to the economy

Value of Spatial Data for Selected Industries

The survey results have provided valuable insights into the impact created from the use of spatial data and the CSDI platform, in which we have tailored a framework to extrapolate their contribution to selected industries in value-added terms (GDP contribution)

Economic Impact from the Use of Spatial Data

Direct Impact

- % of revenue increased / enabled as a result of using spatial data in business operation

Indirect Impact

- Additional economic impact generated as a result of the organisation's direct economic impact, in which the beneficiary organisation will also purchase goods and services as inputs into production within the local economy

Induced Impact

- Impact arising from the expenditure and beneficiaries (throughout the supply chain) on other goods and services in Hong Kong from direct and indirect impact

Calculation of Value Added in Selected Industries (GDP-by-industry)

Economic Impact from the Use of Spatial Data

With the average **revenue increase collected in our survey for each industry, the % will be used for calculating the economic impact** generated by organisations of different sizes in the industry

X

CSDI Contribution Factor (%)

The overall contribution factor of CSDI across different industries gathered from our survey will be multiplied

X

Extrapolation Factor to the Wider Industry

Number of Establishment

The number of organisations based on their organisational size in the industry will be multiplied

% of Organisation Using Spatial Data

Assumption on the proportion of organisations using spatial data will be applied

X

% Using Spatial Data Experience Revenue Increase

Gathered from survey results, the overall % of organisations experiencing revenue increase across industries of using spatial data will be multiplied

% Using CSDI Spatial Data

A conservative estimation that 10% of organisations will adopt CSDI spatial datasets in their business operation

Value of Spatial Data for Selected Industries

Based on our stipulated methodology and the inputs collected from the survey results, we have extrapolated the results to understand the GDP contribution of spatial data and CSDI platform to the selected industries

Key Inputs

- The categorisation of respondents are in accordance with the **C&SD definition**, in which relevant statistics are benchmarked for the calculation of annual revenue growth of respondents (% of revenue growth obtained from survey) and the **extrapolation of the industry's value add**
- Real, estate activities; and architectural, surveying and engineering services are grouped together under the building, construction, and real estate sectors since they fall under the same umbrella sector
- The economic contribution of spatial data and the CSDI platform is pivoted against **the value-add (in GDP terms) of the respective industries**, in which the last column illustrates the % of GDP enabled by the CSDI

Industry	Total GDP Enabled by Spatial Data (A)	Total GDP Enabled by CSDI (B)	Total GDP in the Industry (C)	% of GDP Enabled by spatial data (A ÷ C)	% of GDP Enabled by the CSDI (B ÷ C)
Information and communications	\$6,644,302,525	\$234,029,515	\$102,858,746,000	6.46%	0.23%
Transportation, storage and courier services	\$14,374,340,076	\$506,301,425	\$217,775,671,065	6.60%	0.23%
Utilities (Electricity and gas supply)	\$971,661,533	\$195,568,181	\$34,873,575,000	2.79%	0.56%
Building, construction and real estate sectors (incl., real estate activities; and architectural, surveying and engineering services only)	\$791,229,959	\$27,869,165	\$134,097,015,000	0.59%	0.021%

Value of Spatial Data for Selected Industries

A similar exercise has been conducted to understand the cost saving benefits that are brought by spatial data and the CSDI for the respective industries

Key Inputs

- Comparatively, the magnitude of contribution in cost savings is **less impactful than its enablement in revenue growth**, given the spatial data's versatility in application and service development or support
- Relevant statistics are benchmarked from the C&SD data for the calculation of cost savings of respondents (% of cost savings obtained from survey) and the **extrapolation of the industry's operating cost**
- Similarly, the total cost reduced as a result of using spatial data and the CSDI platform is **pivoted against the industry operating expenses of the respective industries**, in which the last column illustrates the % of operating cost reduced by CSDI



Industry	Total Cost Reduction by Spatial Data (A)	Total Cost Reduction Contributed by CSDI (B)	Total Operating Cost in the Industry (C)	% of Operating Cost Reduced in the Sector by Spatial Data (A ÷ C)	% of Operating Cost Reduced by CSDI (B ÷ C)
Information and communications	\$812,738,331	\$28,626,746	\$122,280,724,000	0.7%	0.023%
Transportation, storage and courier services	\$5,373,229,175	\$189,259,025	\$551,532,366,419	1.0%	0.034%
Utilities (Electricity and gas supply)	\$688,439,940	\$138,563,627	\$45,895,996,000	1.5%	0.30%
Building, construction and real estate sectors (incl., real estate activities, architectural, surveying and engineering services only)	\$5,792,573,184	\$204,029,406	\$486,390,746,000	1.2%	0.042%

Value of Spatial Data for Selected Industries

There is still much untapped economic potential to be materialised in other industry sectors through further improving the adoption and use of spatial data to which CSDI can be an effective and authoritative conduit

Continue to deliver relevant, accurate and high-quality CSDI datasets

Showcase the benefits of CSDI datasets through use cases

Explore collaboration with the private sector to encourage **data sharing**

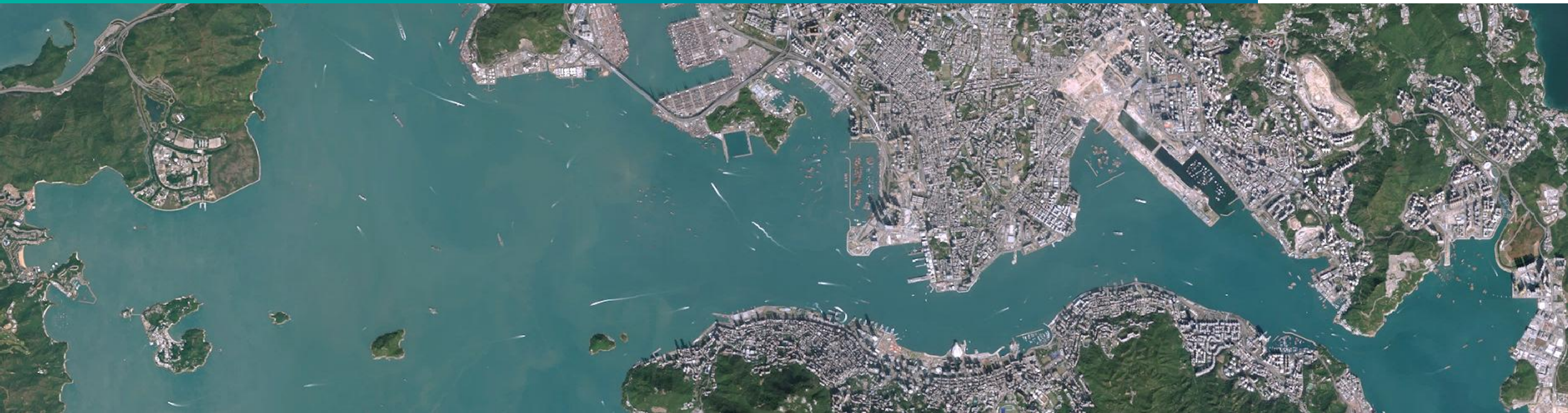
Encourage the public and private sector **utilisation and adoption of CSDI datasets**



5

Introduction of Hong Kong Geocode and its Application





Hong Kong GeoCode (HKGCode 香港地理碼)

-Enhancing Public Accessibility and Usability based on HK80 Coordinates

PROPOSAL

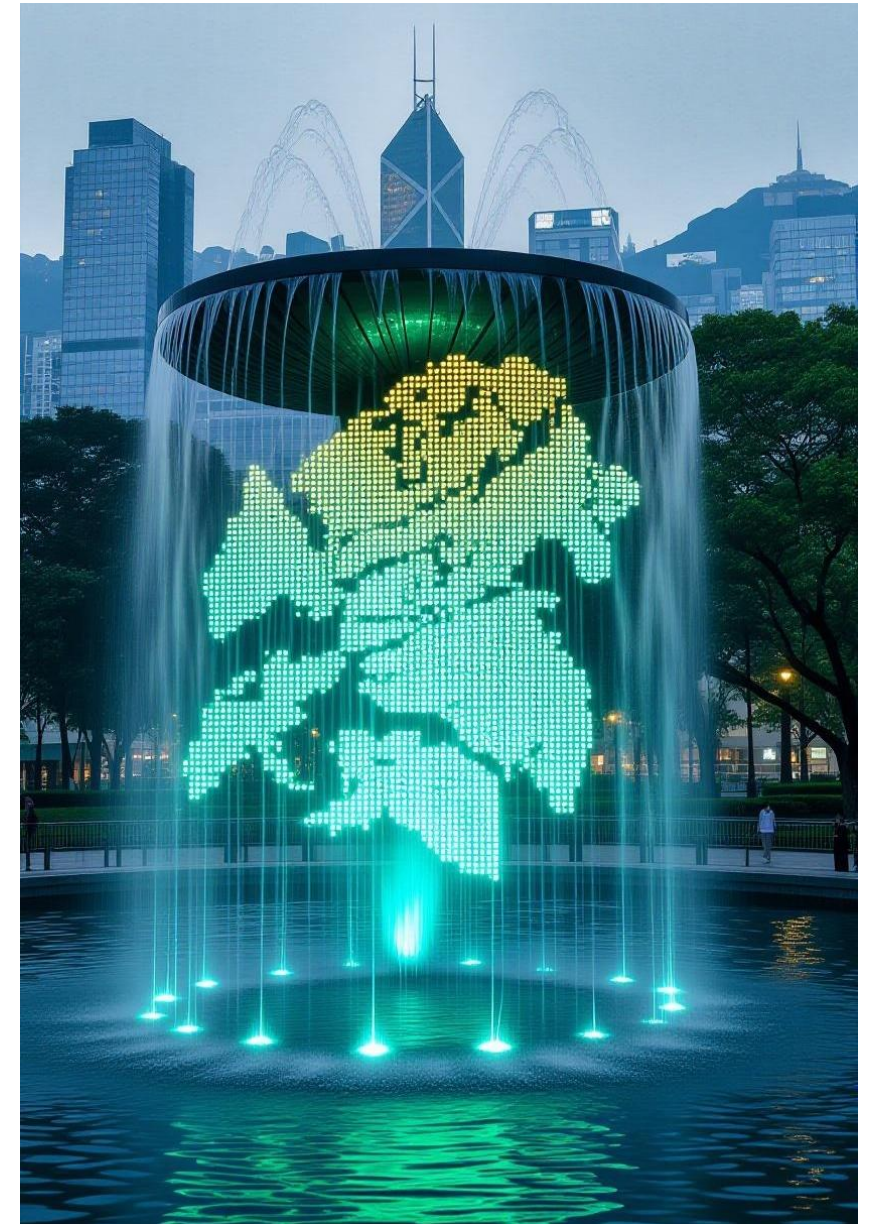
8 May 2026

For enquiries, please contact Senior Land Surveyor/GISP of Lands Department at 3749 9710 or slgisp@landsd.gov.hk.



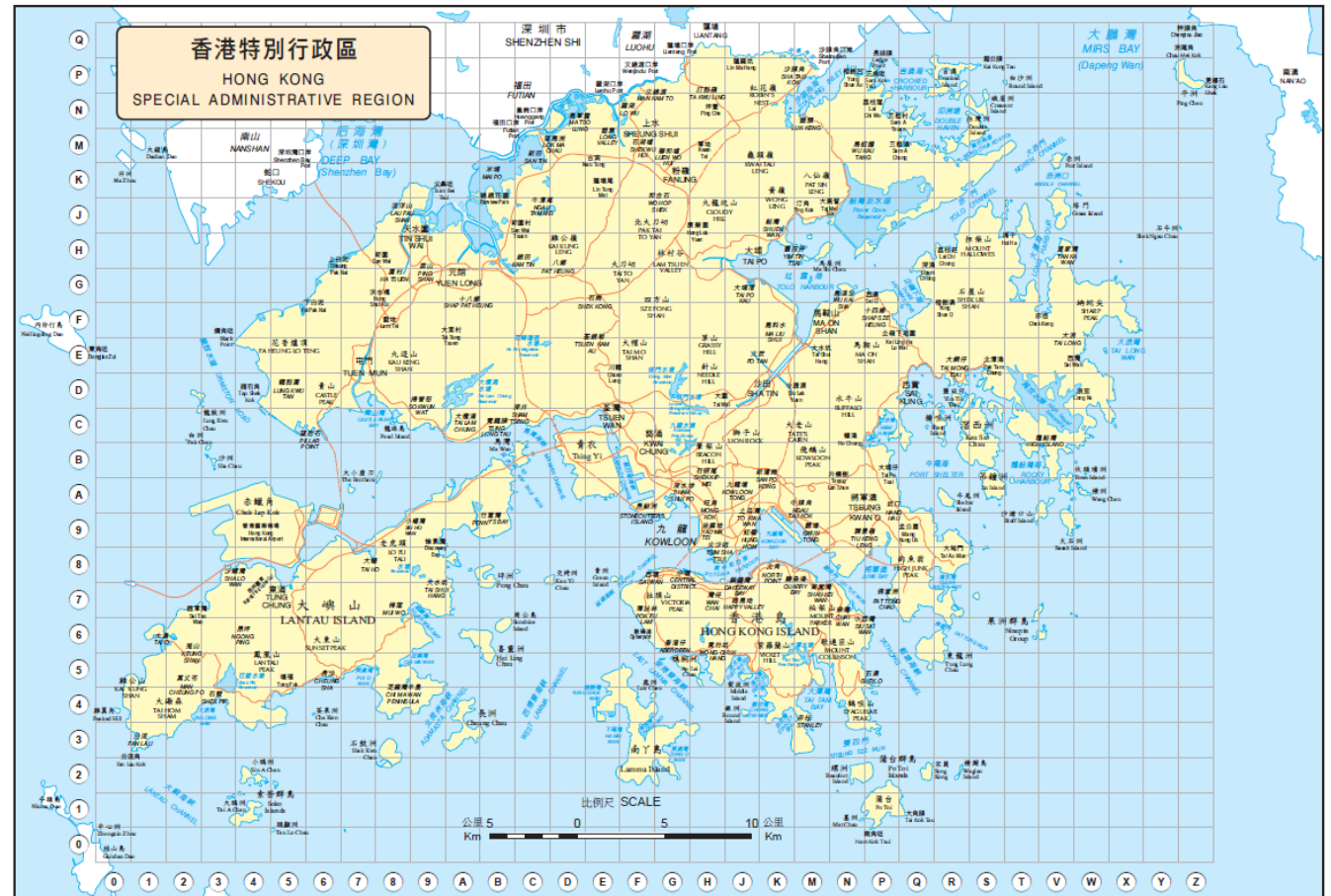
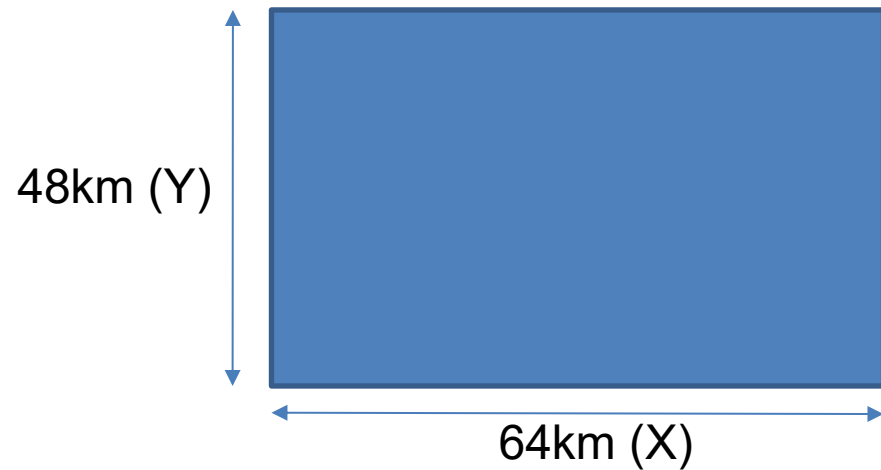
OBJECTIVES

- To set up a **simple and unique** location code derived from the HK80 Grid offering **5-meter resolution** that is human-readable, easy to memorize, and suitable for public use
- To develop enabling services for the public to adopt the HKGCode sharing service for **communication across various platforms and devices**



OVERVIEW

- Total coverage: 64km (X) x 48km (Y)
- 2 chars per level (one for X, one for Y)
- Alphanumeric: 0-9 and A-Z (base-32 style for up to 32 values)



圖則編號 MM/341/LD 圖則由測繪處土地信息中心繪製
日期: 18/12/2025

Illustration of overlaying Level 1 of HKGCode with 1:200,000 Topographic Map of Hong Kong



Hong Kong GeoCode (HKGCode 香港地理碼)

- Design philosophy of HKGCode
 - Simple, public-friendly mapcode system for Hong Kong
 - Derived from the HK1980 Grid to align with existing survey and mapping framework

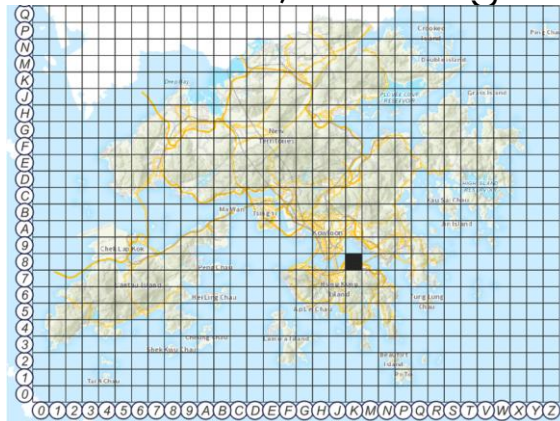
- Key features
 - 6-character alphanumeric code with hierarchical structure
 - Describing location down to approx. 5 metres
 - Human and machine readable; easy to memorise and communicate
 - API services for code generation will be provided by LandsD

Standard HKGCode

K 8 F A F 9

Level 1

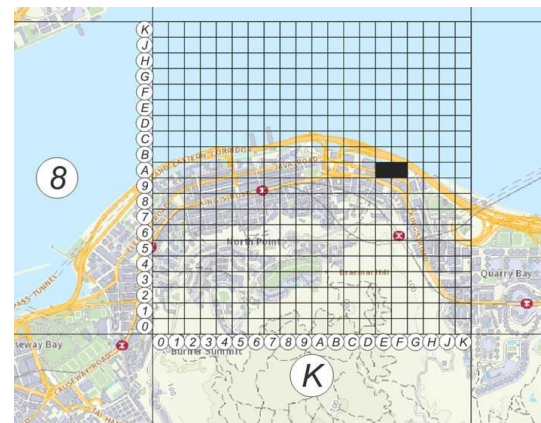
2km x 2km , 32 x 24 grid



District

Level 2

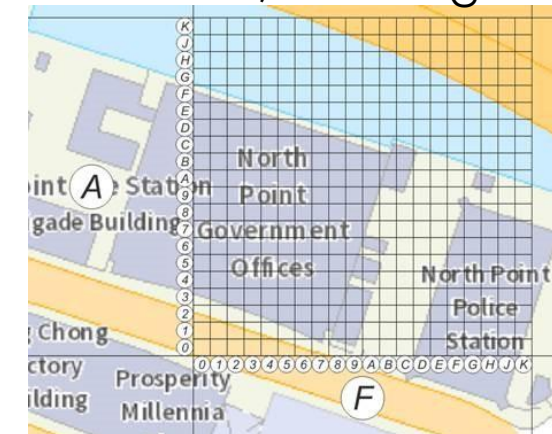
100m x 100m , 20 x 20 grid



Building

Level 3

5m x 5m , 20 x 20 grid



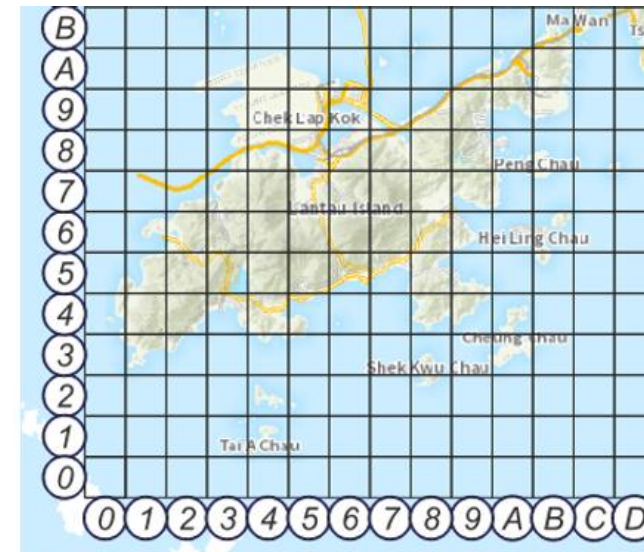
Building/Facilities



CROCKFORD BASE32 ENCODING

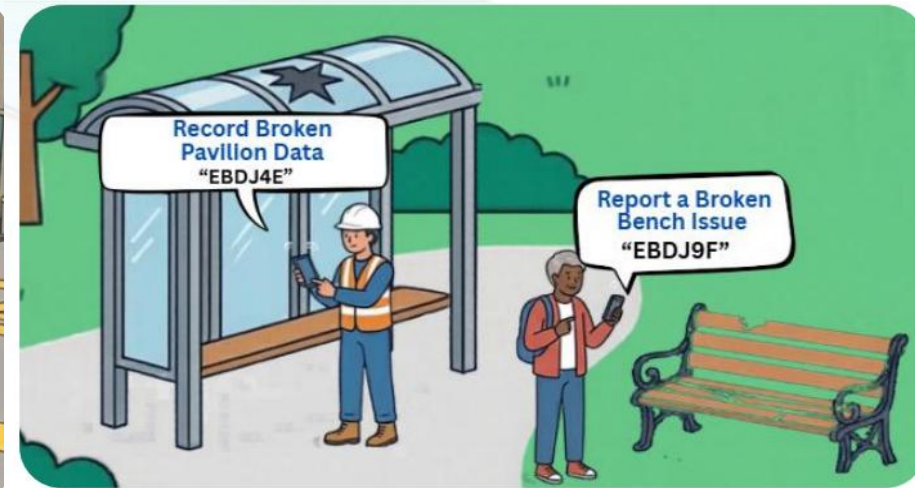
INDEX	CHARACTER	INDEX	CHARACTER
0	0	16	G
1	1	17	H
2	2	18	J
3	3	19	K
4	4	20	M
5	5	21	N
6	6	22	P
7	7	23	Q
8	8	24	R
9	9	25	S
10	A	26	T
11	B	27	V
12	C	28	W
13	D	29	X
14	E	30	Y
15	F	31	Z

- Avoids ambiguous characters (e.g., no **I, L, O, U** to prevent confusion with **1, 0**)
- Supports up to **32 indexes** for each Level:
 → Level 1(**32**,24);Level 2(20);Level 3(25)
- May easily figure out the **approximate area** based on the characters:
 →i.e. Both numeric characters for Level 1 (X,Y) may assume Lantau Island area



POTENTIAL APPLICATIONS

- Land and Mapping Applications
- Land Control and Enforcement
- Works Management
- Low-Altitude Economy and Logistics
- Emergency Services
- Tourism and Events
- Asset and Rural Land Management



BENEFITS

- **Enhanced Communication:** HKGCode's concise format facilitates **quicker and clearer** exchanges of **location information**, reducing errors and saving time
- **Increased Accessibility:** enhances **accessibility** for the general public, including tourists and non-specialists
- **Standardized Reference System:** an official system **aligned with the HK80 Grid**
- **Versatile Applications in Public Services and Digital Economy:** supports public services and digital innovation e.g.: **GeoInfo Map, MyMapHK** and **API services** for code generation will be provided by LandsD



6

Q&A Session



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