



How smart is your city?

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at the heart of the
Smart City?



What is a smart city?



City responsibilities

Now

50% of the world population lives in cities, using...

60% of the world energy, producing...

75% of the greenhouse gases.

Source: United Nations

2050

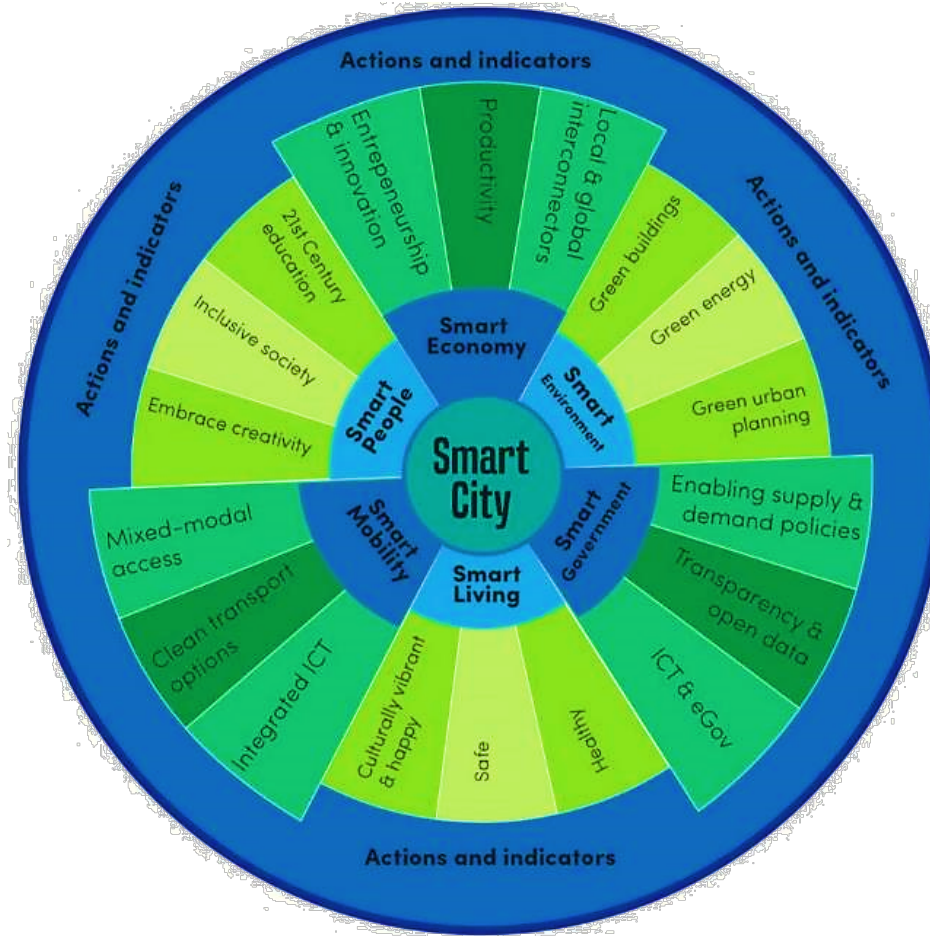
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People will need access to



Smart City Wheel by Boyd

A smart city



City responsibilities

8 fundamental responsibilities for a smart city

Public safety

Telecommunication

Energy

Mobility needs

Built environment

Health and human services

Financial aspects

Water and wastewater

8 Responsibilities

Financial aspects

- Incomes, payments, salaries, taxes are at the centre of the sustainability of a community.
- Aspects relating to payments, salaries, collection of taxes etc often not commented upon as it is the fundamental measure of success.
- Some novel ways to make cities smarter can be considered (eg the Bristol pound).



8 Responsibilities

Water and wastewater

Fundamental responsibilities which may be subcontracted to service providers but are nonetheless the ultimate obligation of the Authorities



8 Responsibilities

Built environment

Public realm alongside

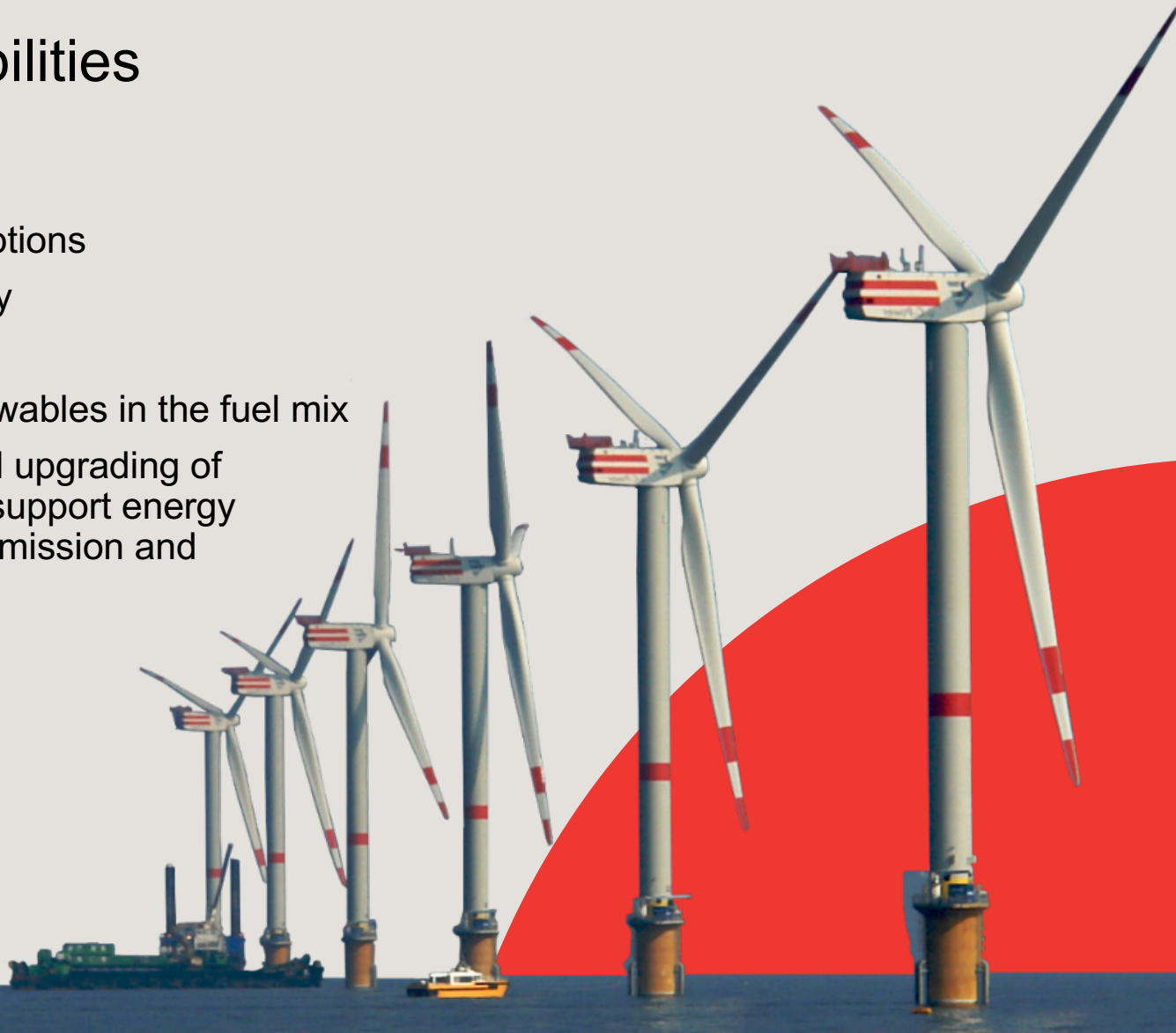
- Buildings
- Parks
- Recreational and leisure facilities



8 Responsibilities

Energy

- Affordability or options
- Security of supply
- Energy mix
- Inclusion of renewables in the fuel mix
- Maintenance and upgrading of infrastructure to support energy generation, transmission and distribution



8 Responsibilities

Health and human services

- Health
- Education
- Social Welfare
- Grievance mechanisms



8 Responsibilities

Mobility needs

Increasing public expectation of

- Reliability
- Convenience
- Affordability
- Options
- Alternative means of transport – flying taxis, AV, hyperloops.....



8 Responsibilities

Telecommunications

Planning for multi-modal point-to-point telecommunication systems that provide

- Large bandwidth
- Future proofing
- **Resilience**
- Data security
- **Personal Safety and Security**



8 Responsibilities

Public Safety

- Justice, law and order, safety
- Emergency and disaster management services (includes fire, ambulance services and Paramedics)
- Climate resilience and response plans





How smart is your city?



Identifying smart city challenges

Smart city readiness table

		City responsibility								
		Universal aspects	Built environment	Energy	Tele-communication	Transportation	Water and wastewater	Health and human services	Public safety	Financial aspects
Technology enablers	Information and Control									
	Connectivity									
	Interoperability									
	Security and privacy									
	Data management									
	Computing resources									
	Analytics									

Source: Smart City Council

Identifying smart city challenges

Maturity matrix

	Level 1 Foundation	Level 2 Embed	Level 3 Practice	Level 4 Enhance	Level 5 Lead
Smart Economy	Undertake analysis and design relevant policies	Embed policies into regulation or legislation	Ensure that policies are put in practice. Nominate an organisation to lead and provide example	Allow opportunities to develop and make these policies more effective through feedback and analysis	Provide an example of leading practice within the country, region, or globally
Smart Mobility					
Smart Environment					
Smart People					
Smart Living					
Smart Government					

The Hong Kong Smart City IT Blueprint ?

*Report of
Consultancy
Study on Smart
City Blueprint for
Hong Kong*

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7. Equipping students and workforce with the knowledge and skills to seize opportunities in a Smart City;
8. Developing an innovative strategy for procuring smart solutions; and
9. Improving preparedness, prevention, and mitigation of adverse events.

2. Smart City Development Plans

2.1. Smart Mobility

The policy objectives for Smart Mobility are to facilitate commuters' choice integrated multimodal transport; promote non-mechanised transport modes and maximise use of public transport; reduce carbon emissions and air pollut use of efficient modes of transportation; and alleviate traffic congestion through effective planning and enforcement. The anticipated outcome and benefits informed journey planning for both drivers and commuters; better user travelling within Hong Kong; and reduced carbon emissions for a clearer Hong

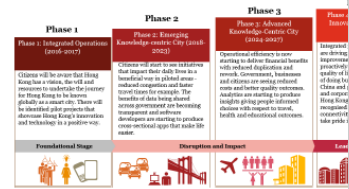
The Smart Mobility initiatives enhance people's mobility through efficient capital deployment models and infrastructure investments. Potential short-term and long-term projects include:

- Developing strategic road map for Intelligent Transport Systems ("ITS") the short-term and long-term goals of smart mobility, with the various ITS initiatives interacting with each other using real-time city data.
- Enhancing user experience at smart public transport interchange steps to provide functions and features such as integration of demonstrate multi-functionalities (e.g. traffic detection and air quality of free Wi-Fi and multi-purpose touch screen.
- Facilitating informed journey planning through all-in-one transport application ("HKeMobility") by Transport Department.
- Improving car park searching experience in off-street parking management at signalised junctions and pedestrian lights by making sensors.
- Enhancing the user experience at Hong Kong International Airport transformation, focusing on automation, mobility, personalisation and In addition, the airport should provide integrated multi-modes of transport journeys from/to airport for passengers and visitors.
- Enhancing safety features of vehicles running in Hong Kong, by technologies into vehicles to equip them with internet access ;

Executive Summary for Report of Consultancy Study on Smart City Blueprint for Hong Kong

path of increasing maturity and levels of capabilities in the progression towards becoming a leading smart city. Figure 2.1.1 below illustrates the four-phased Smart City Maturity Model from Integrated Operations, Emerging Knowledge-Centric City, Advanced Knowledge-Centric City, and eventually to World Center for Innovation.

Figure 2.1 Smart City Maturity Model for Hong Kong



- **Phase I: Integrated Operations:** Phase I includes the establishment of a cross-government governance structure to implement the Smart City Blueprint for Hong Kong and the deployments needed to lay the foundation for the city-wide shared data platform. It is key to enabling new services and/or its expansion city-wide services in each of the six smart city themes: Smart Government, Smart Economy, Smart Environment, Smart Mobility, Smart People. Foundational technologies comprise the system of sensors, communications, and data repositories that establish the basic in collect, and aggregate city service and infrastructure conditions at this capability establishes the basic foundation for Phase II, where data to monitor, analyse and control city-wide operations and the provision of smart city services.
- **Phase II: Emerging Knowledge-Centric City:** Phase II is the implementation of the Blueprint. Initiatives will build upon existing capabilities. Foundational technologies are deployed to enable data city-wide and improved analytics support better decision making.

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7. Proposed Pilot Projects

7.1. Methodology and Structure to Facilitate Continuous City Innovation

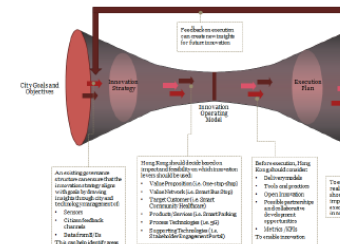


Figure 7.1 Framework for continuous innovation in Hong Kong

A city innovation framework should be adopted to facilitate continuous innovation in Hong Kong as a smart city even after initial pilot projects. To achieve innovation and growth of Hong Kong should transition through five main phases, which are as follows:

A. City Goals and Objectives:

Innovation starts with the setting and revising the long-term city goals. Moving forward, Hong Kong should consistently baseline existing capabilities and technologies to strategy based on its desires to achieve.

To transition to developing an innovation strategy, insights should first be derived from the existing landscape. Specifically, Hong Kong should focus on capturing insight areas:

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Appendix B. -

B.1. Anderson Road Quarry Development, Other New Development Areas and Lok Ma Chau Loop

The Anderson Road Quarry (ARQ) has started the infrastructure construction works in early 2016 with tentative population intake in 2022-24. This would be the first development area among the other New Development Areas. As a new development area, CEDD plans to build foundation infrastructure to facilitate the development of smart city development. The following initiatives are considered for inclusion in the provisional design for ARQ. (Items are in the following order refer.)



3. Sustainable Urban Drainage System

- Sustainable Urban Drainage System integrates blue-green infrastructures (i.e. a brief explanation of blue-green infrastructure) with recreational uses. Approaches to manage surface water that take account of water quantity (flooding), water quality (pollution), biodiversity (wildlife and plants) and amenity would be adopted in the design.
- The implementation will integrate with roadside vegetated swale; bioswale; public recreational facilities built adjacent to bodies of water or watercourses;

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Citizens outcomes at the heart of the Smart City?

What is on your wish list?





Your wish list for a smart city?



Smarter Cities: enabled by digital

Smart data:

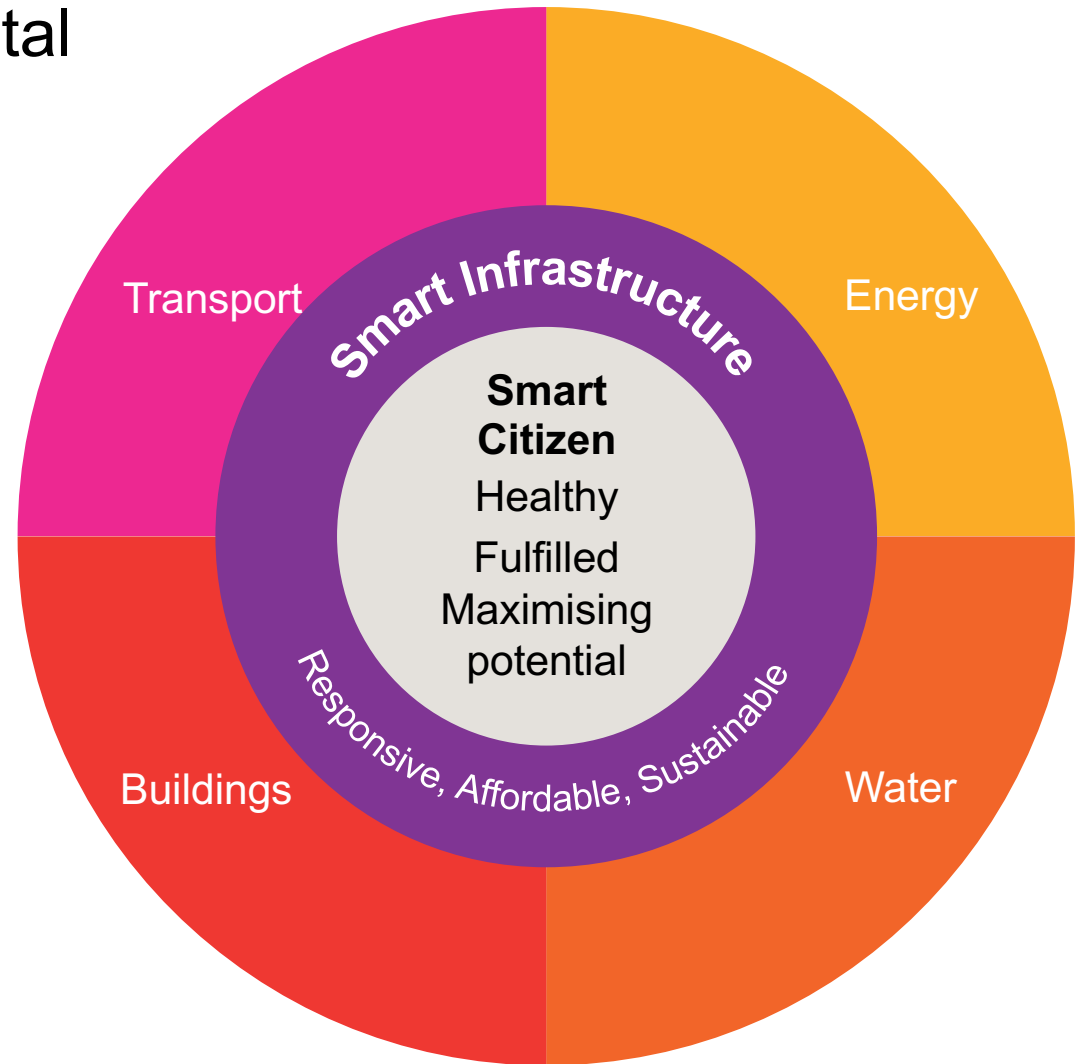
data put into service for better outcomes; connecting diverse data sources, two-way interactions with citizens

Smart infrastructure:

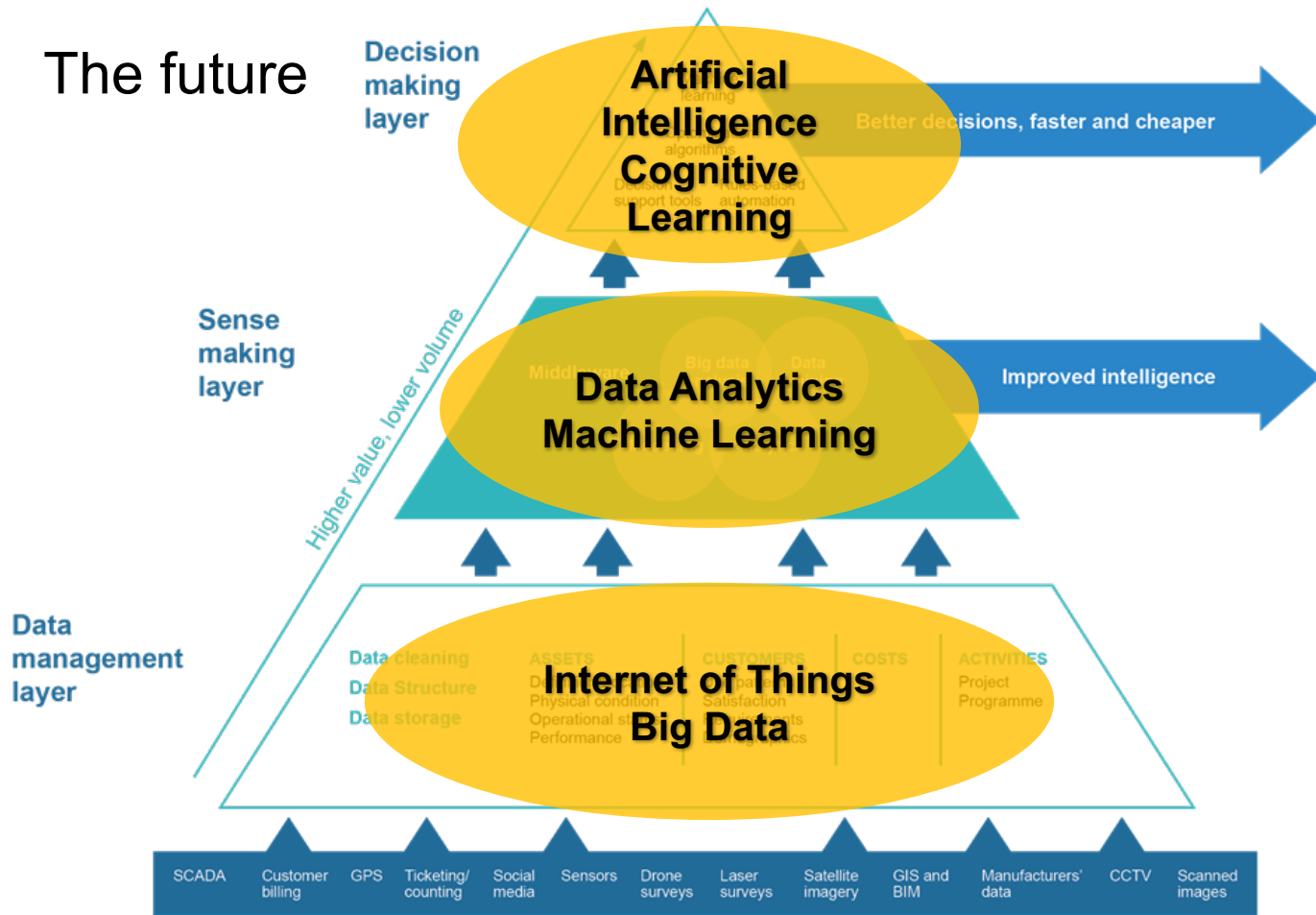
integrated system of systems, for more efficient, resilient and sustainable outcomes, responsive to changing citizen needs

Smart organisation:

structured decision making and supply chain to organise information, improve responsiveness and achieve continuous optimisation



The future





What is the value of time?

What is time well spent?

Can we add more?

If so – how?



What if everyone was given 1 hour more per day?

Is this possible?

What would you do with that hour?

Race for Attention?

You can't go back and change the beginning, but you can **start where you are** and **change the ending**

C. S. Lewis



Thank you

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