SUSTAINABLE SMART CITIES

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Challenges of Sustainable Smart Cities

By 2050, world urban population is expected nearly double. (In Indonesia within 4 decades (1970 – 2010) urban population increased 6 times, from 20 million (17%) to 120 million (50%), & by 2050, is expected more than double)

Population, economic activities, social & cultural interactions, environment & humanitarian impacts: increasingly concentrated in cities (In Indonesia, cities contribute 74% of economy)

The challenges: infrastructure, basic services, food security, housing, health, decent jobs, natural resources, education (Indonesia experience urban sprawl, slum area, traffic jam, flooding, air and water pollution)
Concept of Territorial & Urban Development in Indonesia
The objective is to achieve the public works and housing strategic direction through regional approach on 35 Growth Regions (Strategic Development Region/SDR).

The development based on SDR is a development approach that combines regional development with markets, considering the environmental carrying capacity, and focuses on infrastructure development in strategic areas/cities, to accelerate the economic growth, minimizing regional disparity and toward sustainable infrastructure development.

Therefore, integrated plan among infrastructure and strategic cities in different levels (metropolitans, cities, towns, villages) with the themes of industry, tourism, ports, etc. is required. Synchronization of infrastructure program is needed to increase the synergy in order to support growth in the areas in terms of its function, location, time, magnitude, and budget. This strategy is intended to create specialization, complementarity, synergy, and economic of scale.

Accordingly, through SDR, regions with high competitiveness will be created.
35 Growth Regions (Strategic Development Region/SDR)

Ministry of PWH, through Regional Infrastructure Development Agency, has established 35 Strategic Development Regions (SDR) as a basis for integrated infrastructure development planning.
GOALS & STANDARD OF SERVICES OF SUSTAINABLE SMART CITIES

Sustainable Urban Development goals
- Secure, healthy, safe
- Aesthetic, clean, characterized, livable
- Productive and efficient
- Ecologically sustainable

Standard of services
- Public green open space ≥ 20%
- Roads ≥ 20%
- Overall public space (incl. green & roads ± 50%)
- Water supply and sanitation access
- In line with the carrying capacity
- Lower building coverage ratio (< 30%) and higher floor area ratio (> 3)
- City landscapes
- Integrated waste management (3R)
- Landmark of the city
- Heritage sites conservation and management
- Organized urban facades
- 40% built up area for economic activities
- Mixed-use area
- High accessibility: harmony between land use & transport infrastructure
- Applied state-of-the-art of technology (in particular ICT)
- Network of cities
- Reduce the impact of climate change
- Optimizing renewable resources
- Good governance
- Encourage community participation
- Natural & man made hazards (disaster mitigation)
Illustration of Territorial & Urban Development in Indonesia
• Physical infrastructure (road network, port) connecting passengers & goods
• Serving information & communication technology between cities

PICTURE: NETWORK OF CITIES IN THE GROWTH REGION OF MEDAN-PEKANBARU

Mebidangro (Metropolitan)

City of Tebing (city of services)

Kuala Tanjung New Town (Industrial town)

Sei Mangkei New Town (agro-industrial town)

City of Bagansiapiapi (Maritime/fisheries town)

City of Dumai (Oil & gas)

City of RantauPrapat (agro-industrial town)

City of Siantar (city of services)

Cities in Toba National Strategic Tourism Areas

SUPER CORRIDOR

Food Estate

City of Pekanbaru (MICE)
ILLUSTRATION OF SUSTAINABLE SMART METROPOLITAN OF GREATER JAKARTA

- Ke Merak & Pandeglang
- Cigelung
- Jasinga
- Ke Sukabumi & Cianjur
- Ke Cikampek & Bandung

- Jalan Nasional
- Jalan Tol
- Kawasan Metro Jabodetabek
- Jalur KA
- Bandara Soekarno-Hatta
- Waduk
- Kanal / Sungai
- Tj. Priok Elevated Highways

- NEW PUBLIC CITY OF MAJA
- NCICD
- Ciliwung Shortcut
- Early Warning System KBT
- MRT Jakarta
- Semanggi, Jakarta

- Rencana Akses Maja
- Rencana Publik Kemayoran
- Bandar Udara
- Cikampek
• We need to take advantages of urbanization to readdress territorial and city development as stated in the draft of New Urban Agenda.

• The territorial development in Indonesia are concentrated in the 35 growth regions (SDR) in which region there are various level of cities (metropolitans, cities, towns, villages) with different types of themes respectively.

• Cities bear two functions internally to service livability and externally to service productivity and competitiveness.