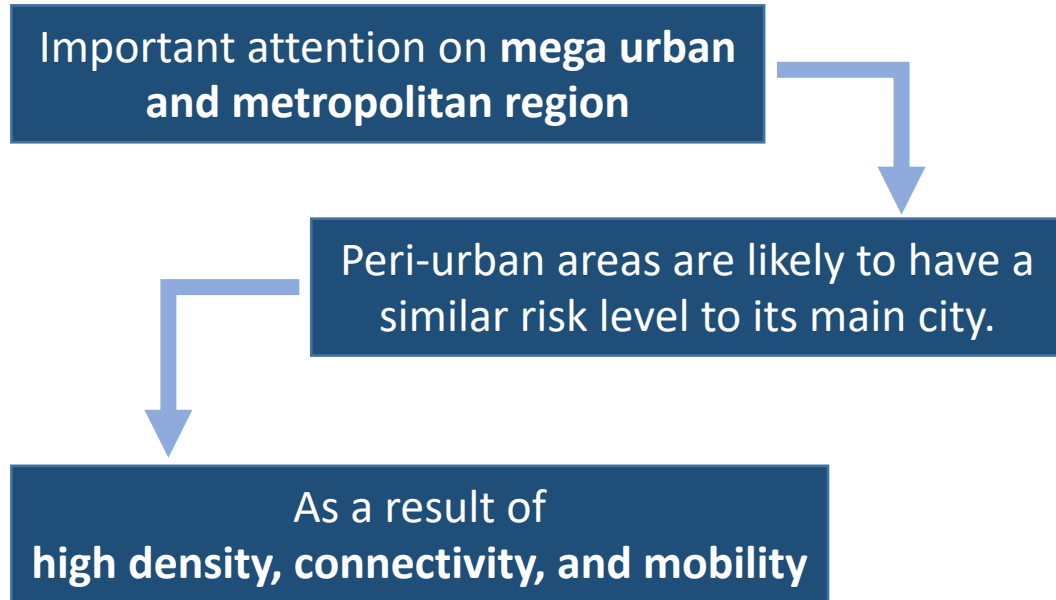


Innovation through Collaboration: Planning for Inclusive Post-COVID-19 Recovery

Urban Planning Responses

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Diponegoro University - Indonesia

smart cities post-pandemic?



Smart Cities use information and technology to engage citizens, deliver city services, and **enhance urban systems**. The use of Smart City technologies results in **cost efficiencies**, **resilient infrastructure**, and an **improved urban experience** (American Planning Association, 2019).

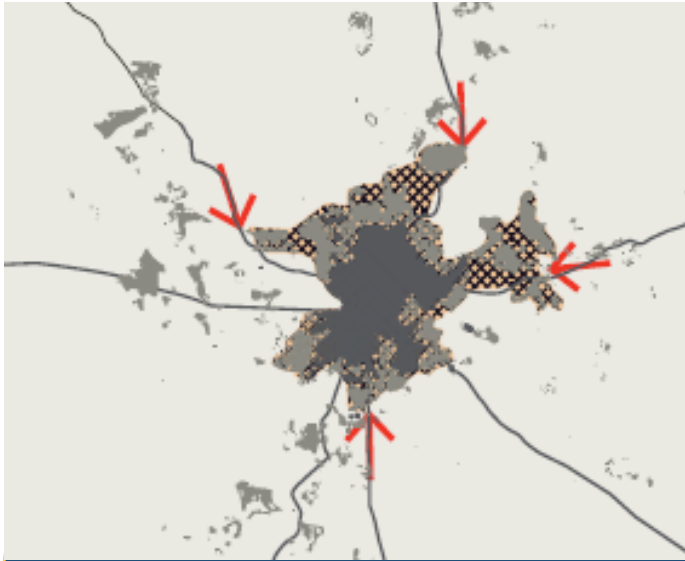
SMART ECONOMY (Competitiveness)	SMART PEOPLE (Social and Human Capital)
<ul style="list-style-type: none">• Innovative spirit• Entrepreneurship• Economic image & trademarks• Productivity• Flexibility of labor market• International embeddedness• Ability to transform	<ul style="list-style-type: none">• Level of qualification• Affinity to life long learning• Social and Ethnic plurality• Flexibility• Creativity• Cosmopolitanism/Open-mindedness• Participation in public life
SMART GOVERNANCE (Participation)	SMART MOBILITY (Transport and ICT)
<ul style="list-style-type: none">• Participation in decision making• Public and social services• Transparent governance• Political strategies & perspectives	<ul style="list-style-type: none">• Local accessibility• (Inter-)national accessibility• Availability of ICT –infrastructure• Sustainable, innovative and safe transport systems
SMART ENVIRONMENT (Natural Resources)	SMART LIVING (Transport and ICT)
<ul style="list-style-type: none">• Attractivity of natural conditions• Pollution• Environmental protection• Sustainable resource management	<ul style="list-style-type: none">• Cultural facilities• Health conditions• Individual safety• Housing quality• Education facilities• Touristic attractivity• Social cohesion

Characteristics and factors of smart city (Giffinger et al., 2007)



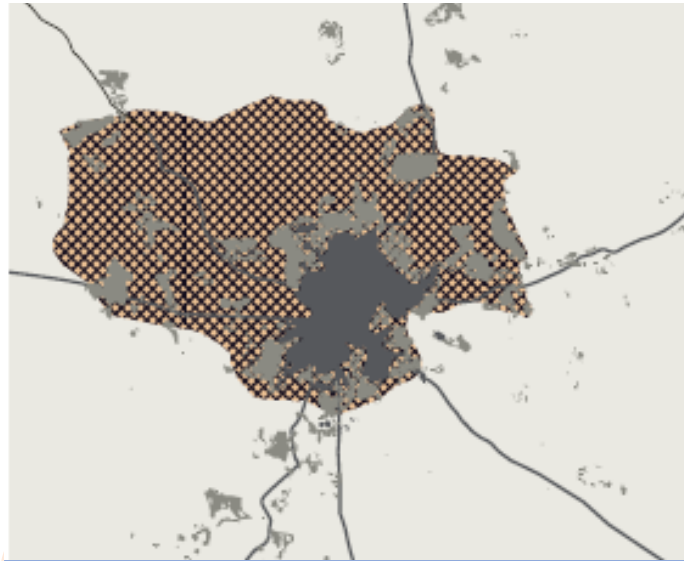
Urban Growth Management

managing density, connectivity, and mobility



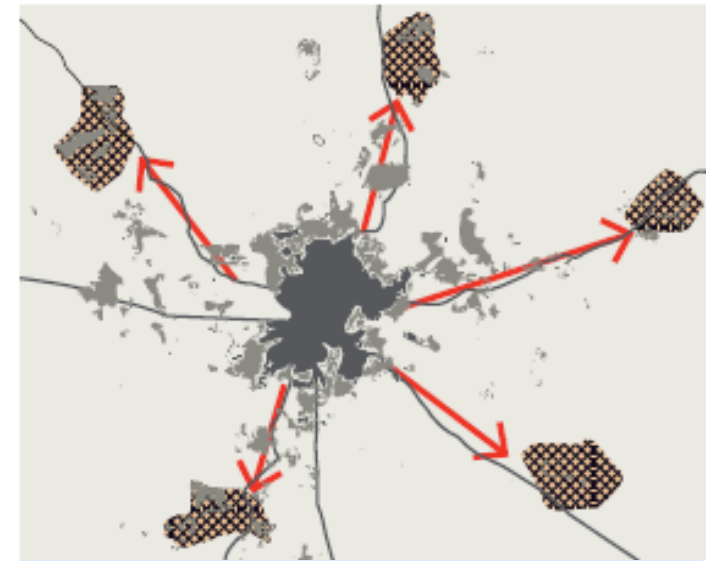
Compact City

Mixed-used urban form,
high density



Extended Urban Regions peri-urbanization

Mixed-used urban form,
moderate density



Polycentricity concentrated decentralization

Spatial separation of land uses,
low density



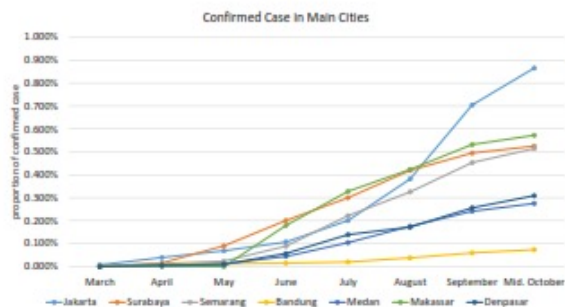
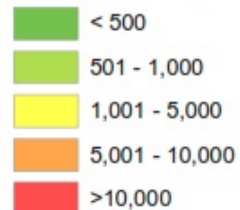
COVID-19 Pandemi Confirmed Case at targeted cities

Spatial presentation of the comparison between case number and population density

Case of seven urban agglomerations in Indonesia

Legend

Population Density (/km²)



DKI Region
DKI Jakarta, Bogor, Depok, Bekasi, Tangerang, South Tangerang, and Tangerang district
311,947 confirmed case
27,180 Death

Central Java Region
Semarang, Demak, Kendal, Salatiga and Semarang districts
41,967 confirmed case
4,225 Death

South Sulawesi Region
Makassar, Maros and Gowa
39,261 confirmed case
1,312 Death

West Java Region
Bandung & Cimahi Cities, West Bandung and Bandung districts
10,378 confirmed case
416 Death

East Java Region
Surabaya, Sidoarjo, Gresik and Bangkalan districts
97,493 confirmed case
7,318 Death

Bali Region
Badung, Denpasar and Gianyar
16,935 confirmed case
376 Death

Region	Confirmed Case	Active Case	Recovery	Death
Bali	16,935	2,004	13,932	376
Central Java	41,967	5,581	32,101	4,225
DKI Jakarta	311,947	75,576	227,109	27,180
East Java	97,493	17,773	72,401	7,318
North Sumatera	25,392	11,831	12,150	1,226
South Sulawesi	39,261	9,292	27,507	1,312
West Java	10,378	3,324	6,042	416
Grand Total	543,373	120,001	391,922	42,053

Data were collected from official government websites providing updates on COVID-19 developments from provincial and municipal/district government

Number of cases from March to Mid-October 2020

EMERGING CLUSTERS TYPES

Agglomeration	Main City and Peri-urban	Cluster Types	No. of Clusters	No. of Cases
Greater Jakarta	Jakarta*	Residential Complex/Dormitory ⁵	7	238
		Religious Activities ³	7	371
		Public Facility ⁴	4	222
		Market/Trading Center ⁴	5	184
		Office ¹	67	3800
	Bogor City**	Family ⁵	1	35
	Tangerang City**	Family ⁵	1	33
		Office/Factory ¹	1	43
	Bekasi District**	Office/Factory ¹	4	1738
Greater Semarang	Bekasi City**	Office/Factory ¹	1	22
	Semarang City*	Office ¹	3	91
		Office/Factory ¹	1	100
		Family ⁵	3	164
		Restaurant ⁴	1	20
		Market/Trading Center ⁴	1	28
		Health Facility ⁴	1	57
	Kendal**	Education ²	2	28

- Found 10 cluster types dominating the transmission (ex. Jakarta and Semarang):
 - Office
 - Office/Factory
 - Religious Activities
 - Residential Complex/Dormitory
 - Public Facility
 - Market/Trading Center
 - Family
 - Health Facility
 - Education
 - Restaurant
- Both agglomerations had **workplace setting** (office and office/factory) as the cluster type with the largest number of transmissions.
- may regard as a strategic entry point to further look at promoting smart mobility as part of smart city concept to be combined with the Work From Home policy.

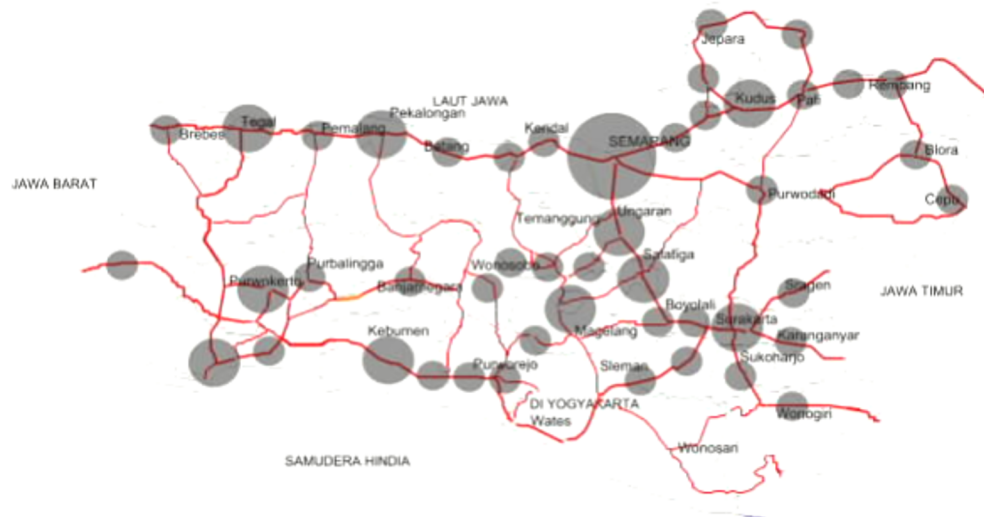
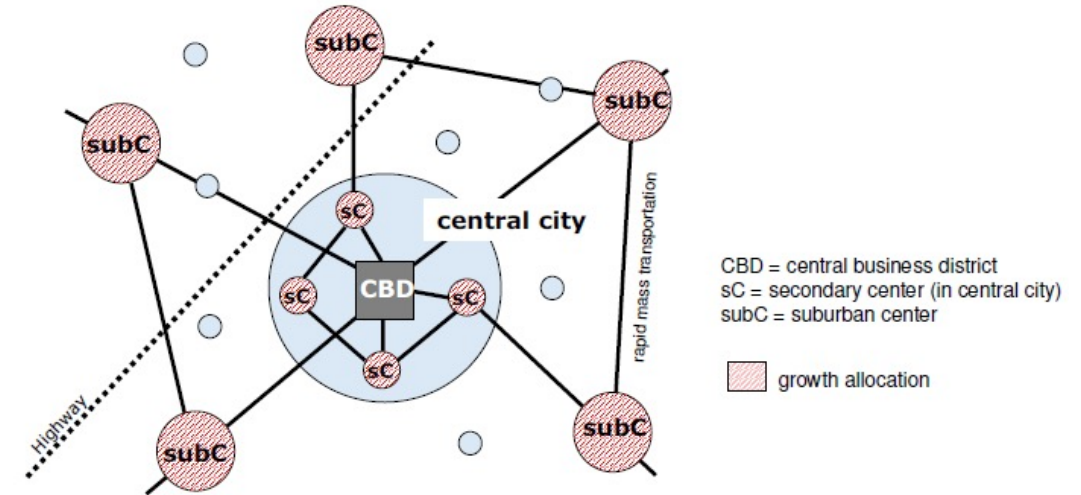


Key approaches

Managing growth to create a more balanced development

Urbanization is inevitable. Indeed, high density, connectivity, and mobility lead to uncontrolled city-size in many Asian regions.

The smart city concept comes to its momentum to limit the speed of urban growth.



Promoting a polycentric metropolitan region

Polycentric instead of monocentric is expectedly reduce people's mobility.

Polycentricity may create cities with a more humane scale of service, livable, and more sustainable.

Thank You

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