Composition revisited

Implementation Strategy for Mobility-Based Development in Bandung City, Indonesia

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Delft, June 28th, 2016

MASTER THESIS
"... low-density, scattered, urban development without systematic large-scale or regional public land-use planning."

(Bruegmann, 2005)

"... a place where activity is concentrated."

(Dickinson, 1947; Lynch 1981 in Jacobs, 2000)
WHAT DOES URBAN SPRAWL DO?

happens between city centre and sub-urban area

happens within city centre area

suburban

congestion
time-consuming
air pollution

city center

sprawling development

attractive city center

car oriented

more people coming

attempts to provide facilities & infrastructure

poor
fail

informal housing & economy

more construction

increasing development pressure

environmental degradation
How can comprehensive planning on mobility-based development help to promote sustainable urban development?
How mobility based development help to promote sustainable urban development?
concentration of collective activities or flows where everything seems to be within reach

(Jacobs, 2000; Polydorides, 1983; Lynch, 1981)
concentration of collective activities or flows where everything seems to be within reach
(Jacobs, 2000; Polydorides, 1983; Lynch, 1981)

reducing travel distance to achieve more sustainable urban form
(Jenks, et al., 1996)

decentralization of urban function
(Hall, 2002; Kloosterman & Musterd, 2001; Lambregts, 2006)

reorienting the development around a network of city hub
(Calthorpe & Fulton, 2001)
annual population growth: 1.11%  
urbanisation rate: 12.11%  
urban population: 100%  
(2000 - 2010)
Settlement
- built environment
- concentration of population
- housing cluster

Urban Centre
- higher education
- offices
- industries
- commercial
- ‘horeca’

Urban Network
- highway
- railway
- streets
- stations
- terminals
- accessibility

Governance
- governance units
- administrative border
- planning units

First Nature
- topography
- water bodies
- green area

Layered Analysis
Settlement
- built environment
- concentration of population
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First Nature
- topography
- water bodies
- green area

Layered Analysis

Sprawling

Monocentric

Disconnected

Unsynchronized

Barren
TRAFFIC CONGESTION

UNCONTROLLED DEVELOPMENT
http://cdn-2.tstatic.net/tribunnews/foto/images/preview/20130914_pembangunan-rumah-mewah-di-kawasan-
dago.jpg

SLUMS
http://static.panoramio.com/photos/large/29491225.jpg

FLOODS
http://sp.beritasatu.com/media/images/original/20140303100107118.jpg
How could comprehensive planning on mobility based development help to promote sustainable urban development in Bandung City, Indonesia?
OBJECTIVES

- ease of access
- better environmental quality
- heritage preservation
- community's participation
OUTCOME

DEVELOPMENT STRATEGIES
- development framework
- structure vision
- development guidelines

CONCEPTUAL DESIGN
- key project
Where should we relocate the informal housing?

What to do with the existing massive dev. on preserved land, demolition?

What needs to be provided to avoid/stop dev. on the north?

What about the existing urban development?
GEDE BAGE NEW DEVELOPMENT
- TRANSIT NODE
- MIXED-USE
- "HIGH-TECH VALLEY"

WHERE DOES INNOVATION THRIVE?
IABR 2016, THE NETHERLANDS

"RIUNG GUNUNG" WORKSHOP
BANDUNG, INDONESIA

image: P. R. Santoso (May 2016)
SOUTH-RING INFRASTRUCTURE
- BRT
- LRT
- NETWORK DENSIFICATION

GREEN TRAM LINE
NANTES, FRANCE

REDE INTEGRADA DE TRANSPORTE
CURITIBA, BRAZIL
NORTH-RING INFRASTRUCTURE
- BRT NETWORK
- LRT NETWORK
- "ANGKOT" CONSOLIDATION

“ANGKOT DAY”
BY RISET INDE, BANDUNG, INDONESIA

TICKET / BOOK
SAO PAULO, BRAZIL

Image: http://goo.gl/8WnUZf
KAA COMMEMORATION
- ALUN-ALUN REVITALIZATION
- CRITICAL RECONSTRUCTION OF CITY CENTRE

BRAGA AVENUE
BANDUNG, INDONESIA

CHANEL'S CRYSTAL HOUSE
AMSTERDAM, THE NETHERLANDS
GREEN-BLUE NETWORK
- NATURALISATION OF CIKAPUNDUNG RIVER
- WATERSHED PROJECT

ROOM FOR THE RIVER PROJECT
THE NETHERLANDS

CHEONGGYEcheon STREAM
SEOUL, KOREA

# 4 KEY PROJECT
2,155 houses
3,8 people / household
8,189 inhabitants

LAND OWNERSHIP
Private’s
Government’s
State-owned companies’
Unknown

mostly
privately owned
properties

FUNCTION
Industries
Offices & Service
Retails / Commercials
Dwellings

mostly
industries

BUILT ENVIRONMENT
Buildings

mostly
unbuilt

NETWORK
Roads
Railways
Terminals

right of way
40 m, 10m, 6 m

NATURAL CONDITION
Topography
Water bodies
Rice fields
Flood risk

almost
half is with flood risk

BASE MAP
Google Earth image

2,155 houses
3,8 people / household
8,189 inhabitants
VISION:
THE NEW MELTING POT FOR IDEAS
#1 better mobility network

**EXISTING CONDITION**

**IMPROVED NETWORK**

- **PUBLIC TRANSPORT**
- **ANGKOT STOP**
- **GEDE BAGE TRAIN STATION**
- **LRT / BRT STATION**
- **LRT / BRT STOP**
- **ANGKOT STOP**
- **BUS STOP**
- **BUS STOP**
#2 space for (re-)development
#3 room for the nature

- Built Environment
- Rice Fields
- Water Bodies
- Flood Risk
- Water Front
- Green Network
- Waterfront Urban Park
- Institute’s Plaza
- Station’s Plain
- Rice Fields
- Gede Bage Traditional Market
- Waterfront Urban Park
- Green Stripes
- Plain Green Stripes
#4 room for the people

- Built Environment
- Street Vendors
- Pedestrian Area
- Public Space
- Inner Courts
- Neighborhood Park
- District Park
- Waterfront Market
- Company Park
- Neighborhood Park
- Inner Courts
EXISTING CONDITION
IMPROVEMENT IN MOBILITY NETWORK
REDEVELOPMENT POTENTIAL
URBAN INFILL & REDEVELOPMENT
NETWORK OF PUBLIC SPACE
ROOM FOR THE PEOPLE
GEDE BAGE INTERSECTION
NEW GEDE BAGE INTERSECTION
mobility based development in Bandung City could be an option for future development

trans-scalar & multi-disciplinary approach is essential.

design is part of the planning process.
ROLE OF DESIGN IN PLANNING

- Materialize the regulations
- Exemplify application of the design principles
- Evaluate the plan
"If development is not acceptable to those who are affected by it, it is unlikely to be sustainable."

(Jenks, Williams & Burton, 1996, pp.299)