Exploring potentials of the socialist city
In search for relevance of the socialist urban structures in the future of sustainable city
The case of Kaunas, LT

P5 Presentation

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Lithuania

- population: 3,281,000 inh.
- area: 65,200 km²

50 years of soviet occupation (USSR)

Central and Eastern European country

current member of EU and NATO

Context of time: Lithuania as CEE country
Kaunus City

- population: 348,635 inh
- 2nd largest city in Lithuania
- 4th largest city in Baltics
- in the centre of Lithuania
- 100 km to capital Vilnius
- 200 km to port Klaipeda

Context of place: Kaunas in Baltic region and Lithuania

Source: drawing by Jonauskis, 2010
Kaunas municipality

Kaunas
population: 348,635 inh.
area: 157 m²
density: 2,279 inh/km²

Amsterdam
population: 762,057 inh.
area: 219 m²
density: 4,459 inh/km²

City comparison, source: Jonauskis, 2010
Kaunas municipality, source: drawing by author
URBAN TRANSFORMATIONS

VISION: COMPACT POLYCENTRIC CITY

LIFE IN SOCIALIST HOUSING ESTATES

STRATEGY AND DESIGN TESTS

CONCLUSIONS
Main phases of historical transformations: Focus of research

Medieval town

14th cntr

Industrial city

1795
1918

Industrial socialist city

1944

Post-socialist city

1990
Main phases of historical transformations: Socialist city

Medieval town
14th cntr

Industrial city
1795 1918

Industrial socialist city
1944

Post-socialist city
1990
Diagram of the socialist city

- Historical city centre
- Socialist housing estates
- Industry
- Urban fabric
- Public transport intensity

Source: Drawing by author
Elements of the socialist city

- high density large housing estates
- industrial district
- historical centre
- public transport

Population growth in Kaunas:
- 1915: 150,000
- 1945: 80,000
- 1991: 420,000
Main phases of historical transformations: Post-socialist city

- Medieval town
  - 14th cntr

- Industrial city
  - 1795
  - 1918

- Industrial socialist city
  - 1944

- Post-socialist city
  - 1990
Diagram of the post-socialist city

- Existing urban fabric
- Industry
- Commerce
- Street and road intensity

Source: Drawing by author
Elements of the post-socialist city

suburban extensions

logistic centres

use of public transportation

- 80% (1995)
- 60% (2008)

number of cars per 1000 inhabitants

- 130 (1995)
- 400 (2008)
Socialist legacy: housing estates

65% of population
97% private
Tendency: decline of socialist housing estates

“As soon as the housing shortage is eliminated, apartments in the estates go to the bottom of the market, segregation and urban problems can be triggered”

Dekker, 2005

-no functional /spatial / typological diversity
-deteriorated public space
-physical deterioration (up to 30%)
-parking scarcity up to 800%
Main phases of historical transformations: POST post-socialist city

Medieval town 14th cntr
Industrial city 1795 1918
Industrial socialist city 1944
Post-socialist city 1990
POST post-socialist city 2030
Next diagram of the city: a most probable scenario
• Sprawling Post-Socialist City

- extensive low-density residential areas
- private automobile dependant
- gentrified inner city surrounded by decaying housing estates


• Private City

- public realm shrunk to the traffic corridors serving only motorized traffic
- Places for gathering are often limited to theme parks for shopping and entertainment
- Model of U.S. city Atlanta, Phoenix, and Houston

(Stanilov, 2007)
Problem statement

insufficient management of SOCIALIST legacy

Socially and environmentally unsustainable city

social segregation
loss of urban vitality
inefficient land use
environmental pollution

unbalanced POST-SOCIALIST development
• **Compact City**

  _high-density,
  _mixed-use
  _efficient public transport system
  _encouraging walking and cycling

  *(Burton, 2000: 1970)*

• **Open City**

*Public space is treated as an integral element of the urban fabric, structuring space and movement in the city. Examples: Paris, Vienna, and Amsterdam.*

  *(Stanilov, 2007)*
Approach: potentials of the socialist legacy

- Public transport usage 60%
- High residential density
- High degree of social diversity
- Land under the public ownership

(Stanilov, 2007)

“If the positive aspects of post war housing could be preserved Europe would gain a lot to reach her very ambitious sustainability goals.” (Tosics, 2005)
Approach: RE-CYCLING socialist structures
Approach: Inverted transformation of historical layers

Using structures of the socialist city as a framework for the new sustainable city.
URBAN TRANSFORMATIONS

VISION: COMPACT POLYCENTRIC CITY

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STRATEGY AND DESIGN TESTS

CONCLUSIONS
Vision: Polycentric Compact City

- upgraded public transport
- existing urban fabric
- planned development
- socialist housing estates
- centre and sub-centres
- upgraded public transport
- new public transport
Vision: Polycentric Compact City

Vision part A:
Upgrading public transport system

Vision part B:
Reinforcing centralities
+ Regenerating socialist housing estates
Vision part A | Upgrading public transportation system: introducing BRT

BRT: Bus Rapid Transit system:
- high quality service [adequate to light rail]
- up to 10 times cheaper than light rail
- flexible to implement and transform
- user attractive
- environmentally friendly
- suitable for climate and terrain in Kaunas
BRT service: ring + diagonal connecting centralities
BRT service: covering most of the inner city area
BRT service: activating commercial areas and public space
BRT system: embracing main facilities and places

Objects of city/district importance:

- **administrative** (municipality/ court/police)
- **public space** (park/square)
- **transport** (pt interchange/railway station/bus terminal)
- **sports and recreation** (sports complex/ sporting halls/universal halls/playfields/stadiums)
- **shopping mall**
- **market** (open-air market/ indoor market)
- **leisure** (cinema/games/casino/cafes/bars/restaurants)
- **specialized shops** (home improvement centre/ domestic appliances/clothing/ automobile/ furniture etc.)
- **services** (banks/repair shops/beauty shops)
- **micro district centre** (containing typical elements: shopping centre, services, schools, kindergartens, stadiums, local squares)
- **culture** (theater/concert hall/open stage/museum/library)
- **science & education** (campus/university faculty/gymnasium/ research institute/ R&D centre)
- **religious** (church/mosque/ chapel/monastery)
- **medical** (hospital, health centre, clinic)
Vision part B | Upgrading centralities into city sub-centres
Vision part B | Organizing modal interchange nodes

- Kalnieciai sub-centre
- Kaunas District Municipality
- Park-n-Ride
- International/Intercity Bus Stop
- BRT node
- Shopping area
- Park-n-Bike
- PT node
- Old Town
- Park-n-Bike
- PT node
- Train Station
- Bus Terminal
- Park-n-Go
- Park-n-Bike
- PT node

- Silainiai sub-centre
- Park-n-Ride
- International/Intercity Bus Stop
- BRT stop

- Existing urban fabric
- Socialist housing estates
- Main/Supplementary nodes
- BRT lines
- Main road infrastructure
Scale comparison: samples 3 x 4.5 km

Study area

Bijmermeer, Amsterdam

Kaunas centre

Amsterdam centre
Main axis

space for motorized traffic
Socialist housing estates: micro-districts

- 2,500 - 10,000 inh
- 1,000 - 4,000 dwellings

[Map with numbers indicating population and dwelling counts]
Facilities: micro-distric centres

- Poor public space quality
- No culture and leisure facilities
Facilities: Schools and kindergartens

School yard: semi-public space

Kindergarten yard: semi-public space

Used as semi-public spaces
Facilities: parking

- Overcrowded inner courtyards occupying quality public spaces
- Shortage of parking facilities up to 800%
- No longer relevant garage blocks
Mobility: street network

tree-like structure: no continuity

superblocks
Mobility: public transport

- Public transport is actively used.
- Public transport attracts activities.
Mobility: micro-mobility

- No infrastructure for cycling
- No clear paths or directions
Public space: communal space

- Surplus of communal spaces
- No clear responsibility boundaries

Inner courtyard
Micro-district edges
Housing: 2 typologies

- Apartment blocks
- Typical individual houses
- Urban villas
- Modernist apartment blocks

Dominated by apartment blocks
Housing: social diversity within typological uniformity

for how long?
Housing: social diversity within typological uniformity

4 room apartment

80,000 euros
Suburban house: attractive alternative to the housing estates?

A detached house

100,000 euros
What would you choose if you could afford to choose?
1. Reinforcing nodes along the axial centrality

2. Establishing network for restructurization
1. Reinforcing nodes along the axial centrality
Inter-modality + public space

national highway
city ringroad
BRT
other PT modes
soft mobility

international bus
inter-city bus
BRT interchange
other PT modes
soft mobility

city ringroad
BRT
other PT modes
soft mobility

PT lines and stops
BRT lines and stops
inner-city ringroad
national highway / city ringroad

0 100 m 300 m 500 m 1000 m 3000 m
Intensification: new complementary services and facilities

- Representative offices
- Parking
- Car showrooms
- Hotel
- Regional municipality
- District health centre
- Shopping malls
- Market
- Leisure
- Bus terminal
- Park-n-ride
- Leisure facilities
- Offices
- Specialized health centre
- Congress Centre
- Recreation Hotel
- Culture
- Leisure
- Shopping mall
- Park-n-bike
- Leisure
Potential land for development
Kalniecių centrality node: existing situation
Kalnieciai centrality node: new program

- mixed function attachments
- bus terminal + park ‘n ride
- new market pavilion with square
- hotel and offices
Kalnieciai centrality node: new street profile
Kalnieciai centratlity node: Stakeholders

**national:**
- Ministry of Transport
- Inter-city bus companies

**municipal:**
- Kaunas City Municipality
- Public transport operators

**local:**
- Shopping mall owner/operator
- Real estate developers
- Enterprises/retail/service providers/local entrepreneurs

**[inter]national:**
- Hotel network operator
- Developer

**regional:**
- Kaunas Region Municipality

**municipal:**
- Kaunas City Municipality

**local:**
- Real estate developers
- Apartment owners
- Enterprises/retail/service providers/local entrepreneurs

**bus terminal + park 'n ride**

**new market pavilion with square**

**hotel and regional municipality square**

**mixed function attachments**
2. Establishing network for restructurization of the housing estates

GOALS:

• INTEGRATE TO THE CENTRALITY
• IMPROVE MOBILITY (INTERNALLY AND EXTERNALLY)
• REDISTRIBUTE AND REORGANIZE PUBLIC SPACE
• CREATE MORE DIVERSITY AND VITALITY IN URBAN ENVIRONMENT
Developing network: public transport network
Developing network: soft mobility network
Expected structural effects of the strategy

**Existing:**
- Grid of superblocks
- Ubiquitous communal space

**Proposed:**
- Grid of urban blocks
- Distributed communal space
Renovation (Rehabilitation of modernist structures)
conceptual reference: East Berlin

Rebuilding (Neglecting modernist structures)
conceptual reference: Bijmermeer, Amsterdam

Intensification (Trading modernist planning principles)
conceptual reference: Tehran

Integrated intensification (Renovation + Intensification)
reference: Jarva, Stockholm

Restructurization based on integration of new and existing structures in order to gain qualitatively new unity (system).

- enables diversity [Diversity needs historical layering of built structures. Even ordinary dull buildings should be preserved. (Jacobs, 1961)]
- sustainable
- cost-effective
- avoiding rehousing
- win-win situation for existing and new structures
Integrated intensification scenarios:

1. Minimum - Minimal intensification based on urban acupuncture

2. Medium – Moderate intensification based on equilibrium

3. Maximum – Maximum intensification based on capacity

TASK: How to establish coherence between the existing and new structures?
DESIGN TEST: restructuring socialist housing estates
Intensification along the network

- integrating socialist housing estates to the centrality
- introducing functional / spatial / typological diversity
Restructurization of SHE: enabling choices for: residential / employment / service / recreation
Sample: new urban block
unspecified communal space
no communal responsibility for maintenance?
**Existing Fabric**

**Refurbishment**

**New Program**

**Intensification:**
- + 48% of the existing net floor area
- New private space + 60% of the existing net floor area

- Housing: 17,300 m² (net floor area) / 452 units
- Green area: 12,000 m²
- Collective parking garage: 170 places (instead of 88 existing open parking places)
- Collective deck terrace: 3,300 m²
- Private courtyards: 4,900 m²
- Private terraces: 5,350 m²
- Private parking garage [offices + commerce]: 190 places
- Commercial space [net floor area]: 1,150 m²
- Office space: 2,230 m² (net floor area)
- Courtyards: 930 m² / 80 m² per unit
- Flexible space [residential / commerce / parking]: 1,250 m²

- Commercial space [net floor area]: 1,150 m²
- Office space: 2,230 m² (net floor area)
- Courtyards: 930 m² / 80 m² per unit
- Private parking garage [offices + commerce]: 190 places
- Private parking garage [housing]: 16 places
- Side-street parking: 55 places

- Intensification: spatial and functional diversification

- Housing: 17,300 m² (net floor area) / 452 units
- Green area: 12,000 m²
- Courtyards: 930 m² / 80 m² per unit
- Residential space: 3,600 m² [net floor area]
- 21 unit = 13 semi-detached + 8 apartments
- Private terraces: 860 m² = 50 m² per unit [semi-detached]
- Private parking garage [housing]: 16 places
- Commercial space [net floor area]: 1,150 m²
- Office space: 2,230 m² (net floor area)
- Courtyards: 930 m² / 80 m² per unit
- Private parking garage [offices + commerce]: 190 places
diversity of communal space/ different levels of commonality
shared and maintained quality communal space
New program

- private terraces: 860 m² = 50 m² per unit [semi-detached]
- residential space: 3,600 m² [net floor area]
  21 unit = 13 semi-detached + 8 apartments
- flexible space [residential / commerce / parking]: 1,250 m²
- office space: 2,230 m² [net floor area]
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Refurbishment

- private terraces: 5,350 m²
- private courtyards: 4,900 m²
- collective deck terrace: 3,300 m²
- collective parking garage: 170 places
  [instead of 88 existing open parking places]

Stakeholders

Public sector
Kaunas City Municipality
- providing land for development
- planning and design regulations

Civil society
Association of Housing Estates Owners Housing Communities
- participation in planning and design

Private sector
Real estate developers
- finance and development

Partial funding

Public sector
Ministry of Social Security and Labour
Ministry of Economy
Ministry of Environmental Affairs
Ministry of Energy
- regulations, funding, coordination of EU structural funds

Civil society
Association of Housing Estates Owners Housing Communities
- participation in planning and design

Private sector
Owners of the apartments
- finance
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PROBLEM STATEMENT

URBANITY

MOBILITY

PUBLIC SPACE

insufficient management of SOCIALIST legacy

unbalanced POST-SOCIALIST development

Socially and environmentally unsustainable city

social segregation
loss of urban vitality
inefficient land use
environmental pollution
existing urban fabric [in socialist housing estates] has a spatial and structural capacity for new urban programs [residential / commercial / productive / recreational] to be set within.

_recognition and reinforcement of ‘non-places’ (Auge, 2008) - spaces for mobility- as quality public spaces is crucial to achieve vision.

_surplus of public [communal] space is the most important asset enabling feasible restructurization.
Strategic planning is still in an experimental stage in Lithuania and post-socialist cities generally (Tsenkova, 2007).

The major challenge is a change in governance:
- broadening attitude towards planning [is land use planning still relevant?]
- pro-active entrepreneurship of municipality [necessary as a starting point]
- changing hierarchical power structure in planning system [introducing bottom-up]
- institutional changes [new planning organs / NGO’s]
Thank you!
The case of Kaunas - a middle sized city - confirms many of the features common to post-socialist cities of the CEE countries.

Many assets of the socialist city model have been [partially] preserved.

As a case of post-socialist city, Kaunas has a functional, spatial and structural potential to become Open City/Compact city.

The restructurization of housing estates in [Kaunas] post-socialist context has to find new strategic principles, many of which are different from western models.

Integrated intensification might be one of the effective restructurization strategies in post-socialist context.