Understanding the livability in a city through smart solutions and urban planning toward developing sustainable livable future of the city of Skopje

Emilija Sofeska ¹

¹Cosmo Innovative Center
Republic of Macedonia
First Urban Century

- Sustainability
- Resilience
- Livability

developing sustainable livable city of Skopje
understanding the livability in a city

- urban structure
- urban energy
- urban mobility
- urban climate
- urban smart technology
"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

(Blundtland Report)

- how to urbanize in harmony with society, economy and environmental?

- how to balance our short term needs with the long term demands that have to obtain livable conditions for our future generations?
expectations for population growth from 2001-2025 in the world's top 15 megacities

Source: UN Population Division, World Urbanisation Prospects 2011 Revisions
General Urban Plan for Skopje year 2001-2020

- 444760 inhabitants
- 7088.60 ha total area
- 180 705.53 ha surrounding region
- Skopje valley: 22km length, 11 km width
- City of Skopje with: 153 settlements, 28 villages

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Skopje’s rich picture

- social problems
- building procedure outside the regulations
- unplanned building
- air pollution
- transport infrastructure
- inefficient use of energy

City of Skopje, photos by Jovica Trajkovski
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Skopje’s urban structure

- 0.71 trips /capita with pedestrian movement
- 1.40 trips /capita with different types of vehicles
- 1/3 of the total industry
- Density network of settlements 14.5 km²
- Constructed area is 8053,714 m² with average flat surface of 66.60 m² / flat

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Cities’ sustainable development

- Buildings with low energy consumption
- Diverse land use
- Population density
- Economic provision in using heating and cooling services
- Waste disposal
- Transport strategies
- Smart urban solutions

Source: UCL Institute for Sustainable Resources
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levels of quality of life in the city

- safety and crime, political and economic stability, tolerance in the public realm, business conditions
- proactive policies, availability of goods and services, low personal risk and the standard of living measured by gross national income per capita
- education, hygiene, health care, culture, life expectancy at birth, education index, years of schooling and expected years of schooling
- environment, recreational possibilities, the climate, environmental issues, access to nature
- public transportation, international connectivity
- quality of architecture, urban design, effective infrastructure in a city

Source: UTSC Commons Magazine, Hambly & Woolley
polycentric urban model

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spatial models for sustainable urbanization of Skopje
Skopje’s urban greenery

- 276.70 ha of public greenery which is composed of residential green
- 3.38 ha of regional parks
- 54.82 ha of city parks
- 144.98 ha of vegetation within the public facilities (health, education, science, culture, botanical gardens...)
- 68.70 ha of recreational sports centers
- 166.83 ha of protect foliage
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Daily activity visualized

Source: http://cities.human.co/

Amsterdam SMS messages on New Years Eve

Source: http://www.aaronkoblin.com/project/amsterdam-sms/
smart city as project includes:

- daily service management infrastructure through Information Technology and social platforms
- data analysis and intelligent urban management
- use of environmentally friendly mechanism for generating its own energy needs from alternative energy sources (fields with solar panels, farms to collect wind, etc.)
- recycling, water production and go as far as to set up their own autonomous system for waste management
Skopje as a livable smart city

• information for passengers of public transportation in real time

• Internet platform for mapping traffic jams and similar problems in the city

• marking of bicycle paths

• sensors the parking spaces

urban eco gardens with smart technology irrigation

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livable city of Skopje

Skopje FF (Time-lapse of Skopje in 4K/UHD/2160p) by Goran Dzambazov

Thank you for your attention