INSPIRE Land Use Model in City Analysis

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Overview

• Strategic city planning
• Spatial analysis for strategic planning
• Land use analysis
• Elements of analysis model
• Usability of INSPIRE LU model
• Conclusions
Strategic city planning

• Results with city development strategies

• Usually beyond normative physical planning, but with much spatial elements

• Connects economic development, human resources, environment protection, natural resources management, energetics, housing, traffic, etc.

• Methodology includes basic analysis, SWAT, defining of vision, goals, priorities and measures, financial framework, implementation plan and communication strategy
Strategic city planning

- Differences in content, planned area, timeline ...
Spatial analysis for strategic planning

• Spatial data are crucial for strategic city planning – most activities and features are spatially defined

• Spatial data are used in analysis, planning and implementation monitoring

• Most important spatial data sets – Population distribution (with other georeferenced statistics) and Land use

• Land use is defined as territory characterized according to its current and future planned functional dimension or socio-economic purpose (e.g. residential, industrial, commercial, agricultural, forestry, recreational)
Spatial analysis for strategic planning

Population distribution, urban densities

Land use distribution
Land use analysis

• ELU – existing land use, PLU – planned land use

• Four main cases:

  ELUx vs. PLUx – development potential, present policy

  ELU1 vs. ELU2 – land use change

  PLU1 vs. ELU2 - implementation monitoring

  PLU1 vs. PLU2 – policy change
Land use analysis

- ELU1 vs. ELU2 vs. PLU2 - residential and mixed land use
- 1986/2011/Master plan (GUP)
Elements of analysis model

Challenge – non harmonized data sets and models

Analysis model – integration of urbanistic and geoinformation elements used to define analysis process:

- Purpose
- Temporal component
- Land use classification
- Delination of land units
- Data sources
- Data quality
Elements of analysis model

Quest for model:

- National planning model (HR)
- INSPIRE Land Use (DG Environment)
- Urban Atlas (DG Regional and urban policy)
- LUCAS (EUROSTAT)
- City models (ZG, W)
- Plan4All
Usability of INSPIRE LU model

By model elements:

• Purpose partly
• Temporal component yes
• Land use classification yes, adjustment needed
• Delineation of land units partly
• Data sources partly
• Data quality yes
Usability of INSPIRE LU model

- Further research in LU classification, delineation and data sources – University of Zagreb, City of Zagreb

- International student practice (University of Zagreb, University of Nitra, Slovakia) – preparation of INSPIRE Land Use compliant database for Zagreb river area
Conclusions

• Spatial data are crucial for strategic city planning

• Land use is one of the most important data sets for strategic city planning

• Efficient Land use analysis needs special model that integrates urbanistic and geoinformation elements

• INSPIRE Land Use model is very good basis for further customization toward strategic planning model
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Thank you!

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