Spatial information in strategic city planning - Zagreb experience

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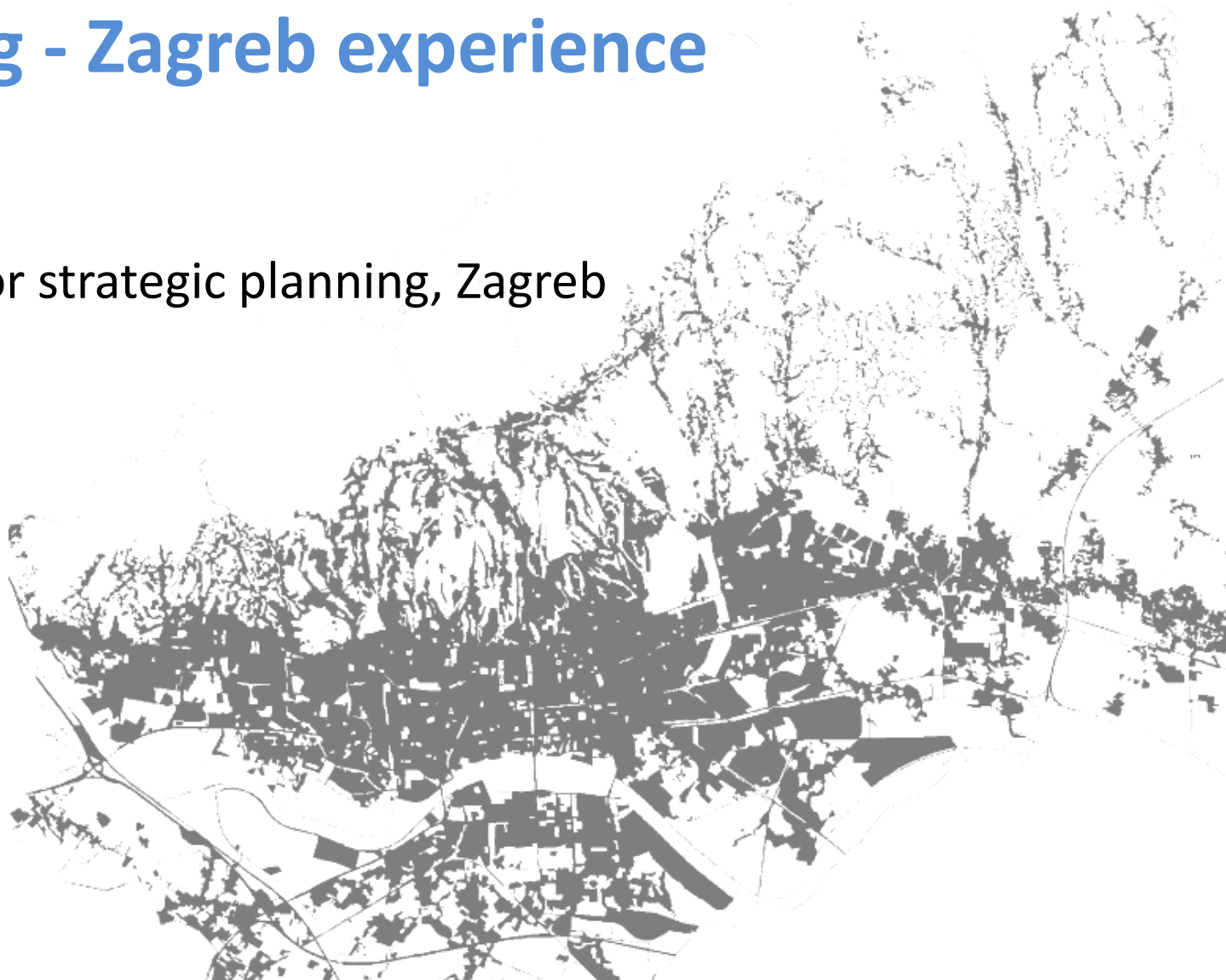


Overview

- Strategic city planning
- GI tools and trends
- Spatial data for strategic city planning

- Land use and population analysis

- ZAGREBPLAN GI measures

Strategic city planning

- Results with city development strategies
- Usually beyond traditional physical planning, but with much spatial elements
- Connects economic development, human resources, environment protection, natural resources management, energetics, housing, traffic, etc.
- Methodology from the business sector, adopted to public sector needs

Strategic city planning

- Differences in content, planned area, timeline …

Planning, tools, trends

PLANNING

- Basic analysis
- SWOT
- Vision, goals, priorities
- Measures and activities
- Implementation monitoring
- Communication strategy

GI TOOLS

- Spatial data and information
- GIS analysis
- Scenarios
- GI Applications
- Change detection, data collecting
- Data and project presentation

GI TRENDS

- Spatial data infrastructure
- Big data
- Geodesign
- Cloud
- Mobile
- Remote sensing
- Crowdsourcing
- Geoportals

Spatial data for strategic planning

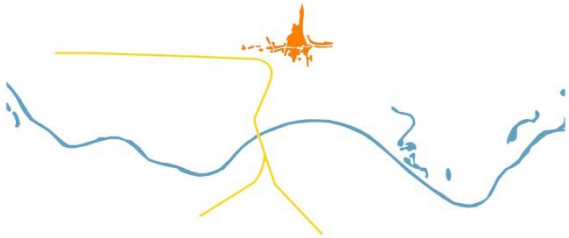
- Spatial data are crutial for strategic city planning – most activities and features are spatially defined
- Spatial data are used in analysis, planning and implementation monitoring
- Most important spatial data sets – Land use and Population distribution (with other georeferenced statistics)
- Other spatial data sets – topography, 3D models, traffic, infrastructure, land administration, environment, protected sites …

Zagreb experience

- Capital and largest city in Croatia (800.000 inh)
- Regional bussines, educational, science, culture centre
- City office for strategic planning and development
- ZAGREBPLAN – City of Zagreb Development Strategy
- Example - Land use and population analysis

Historical spatial development

- 1890

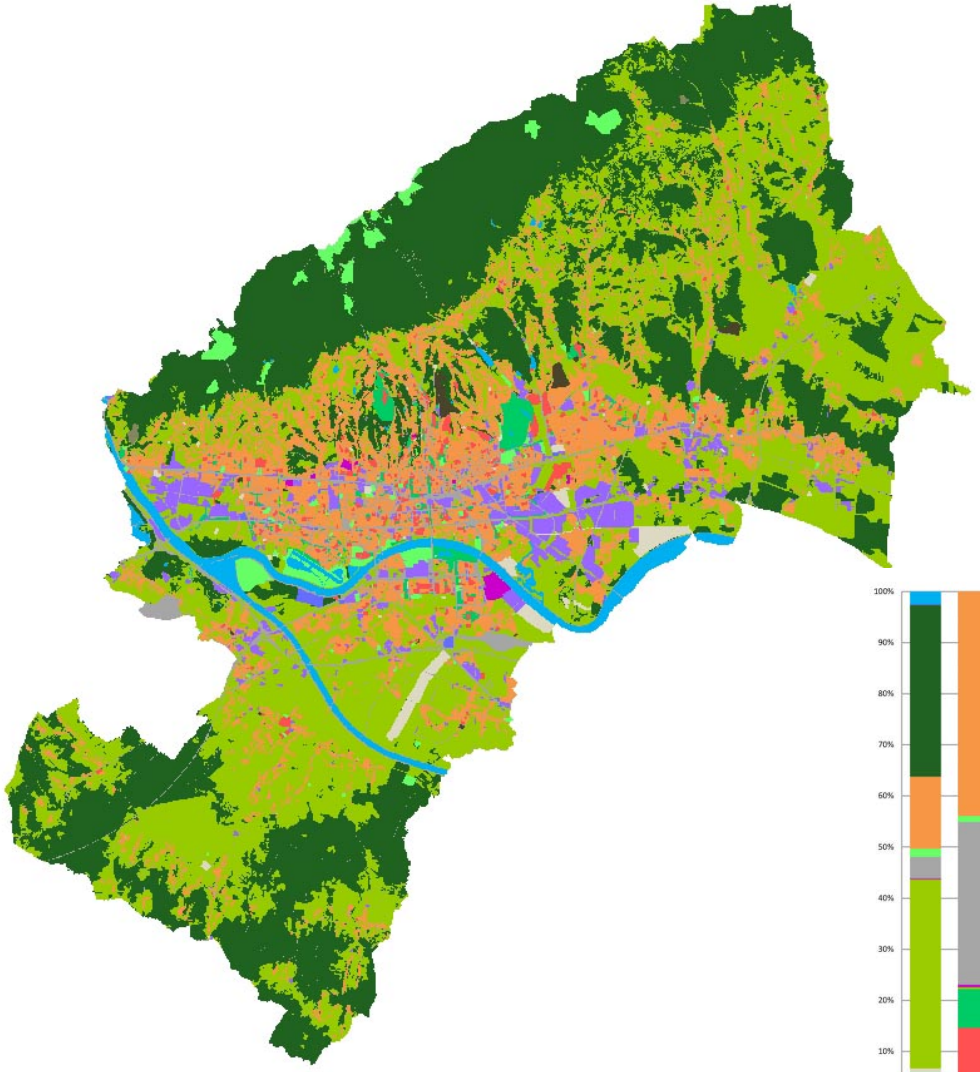


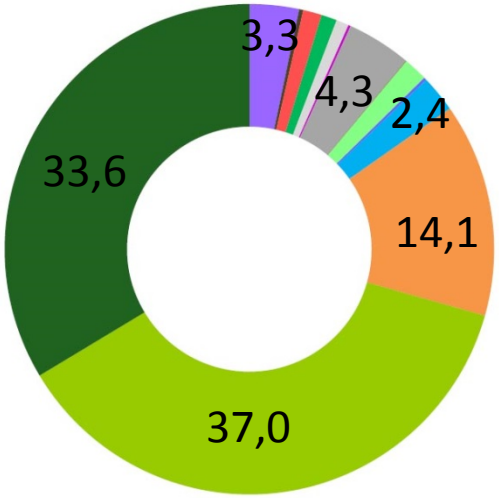
- 1930

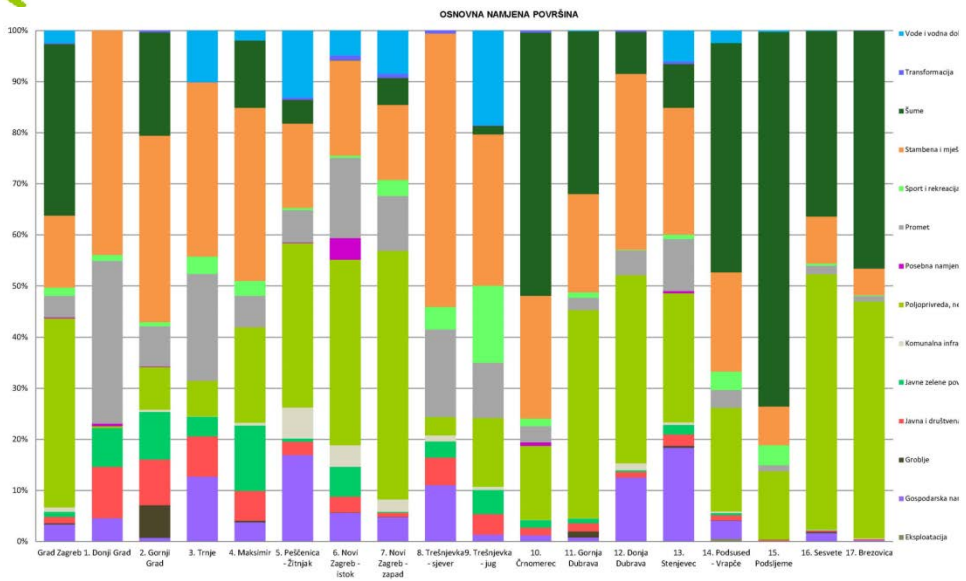
- 1960

- 2011

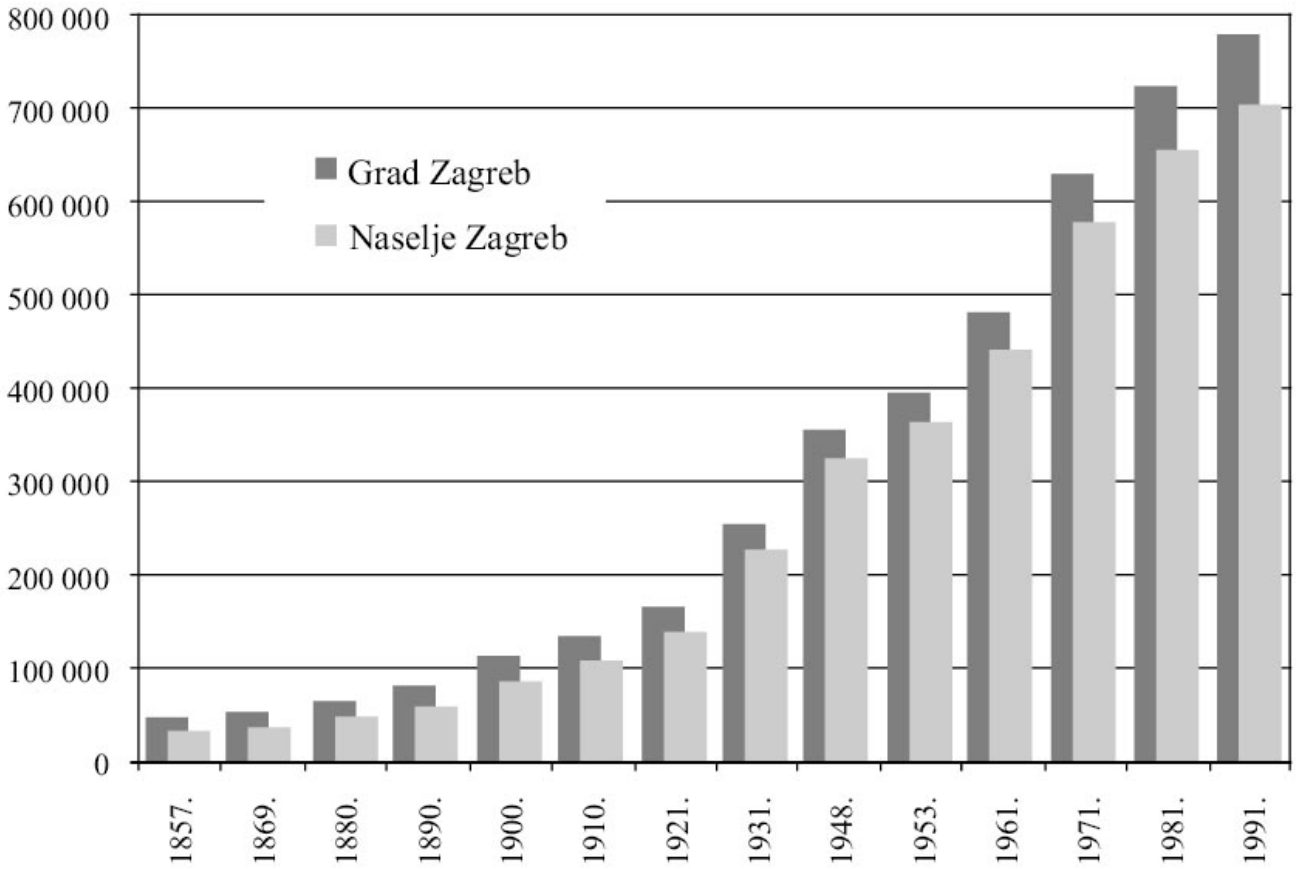
Land use distribution 2011



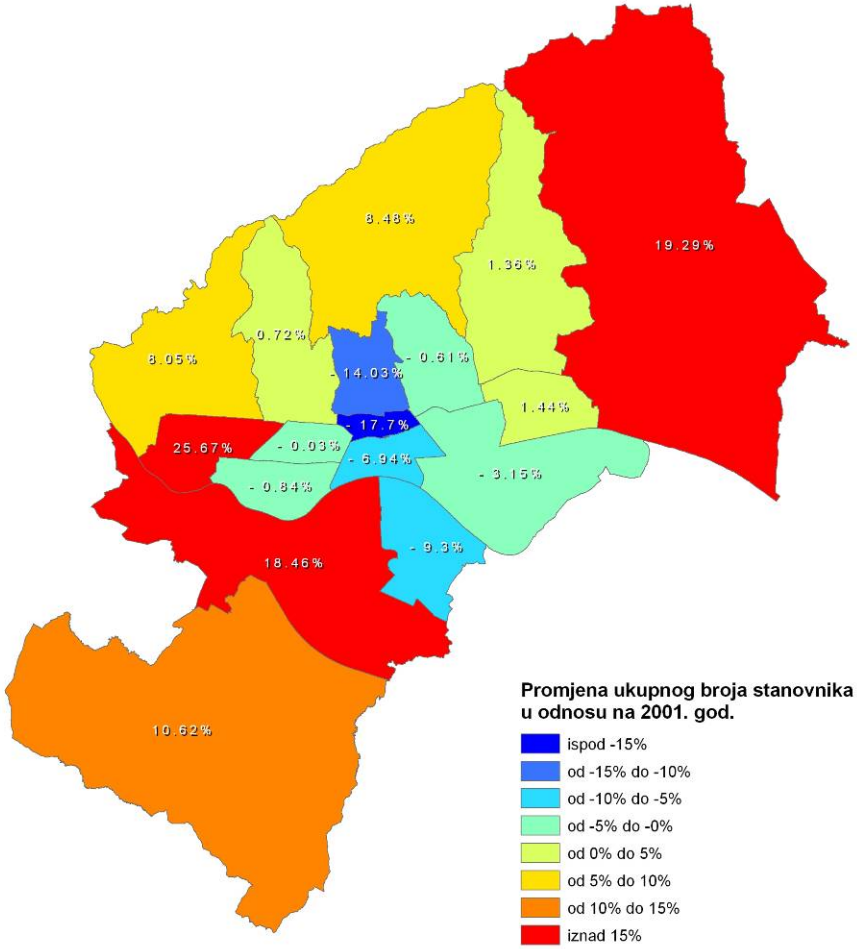


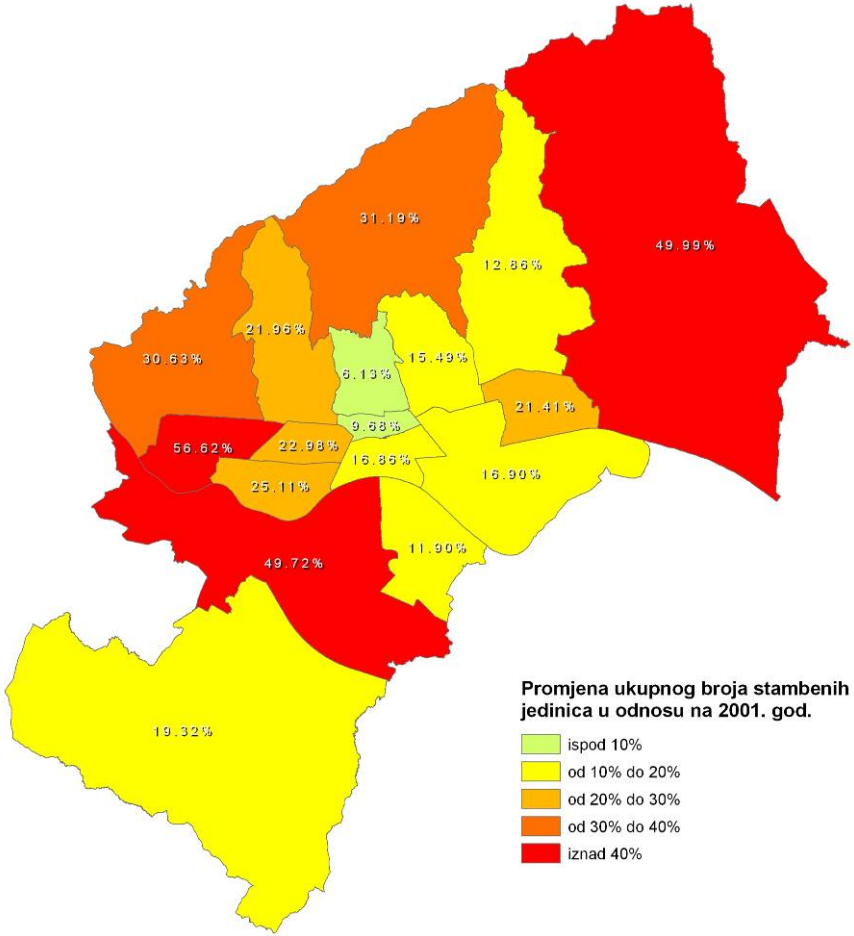


20th century population growth

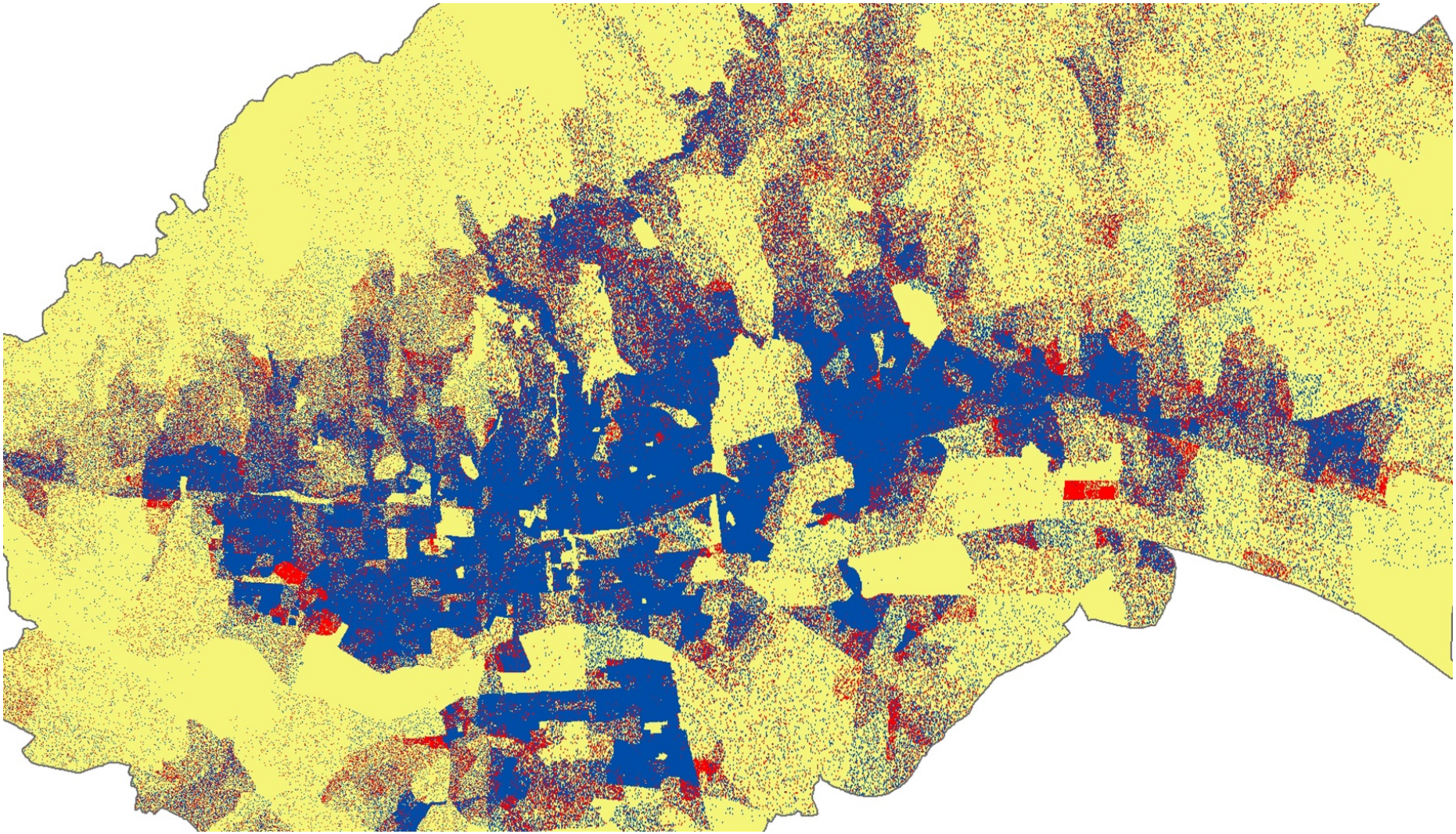


2001-2011 change - citizens and apartments



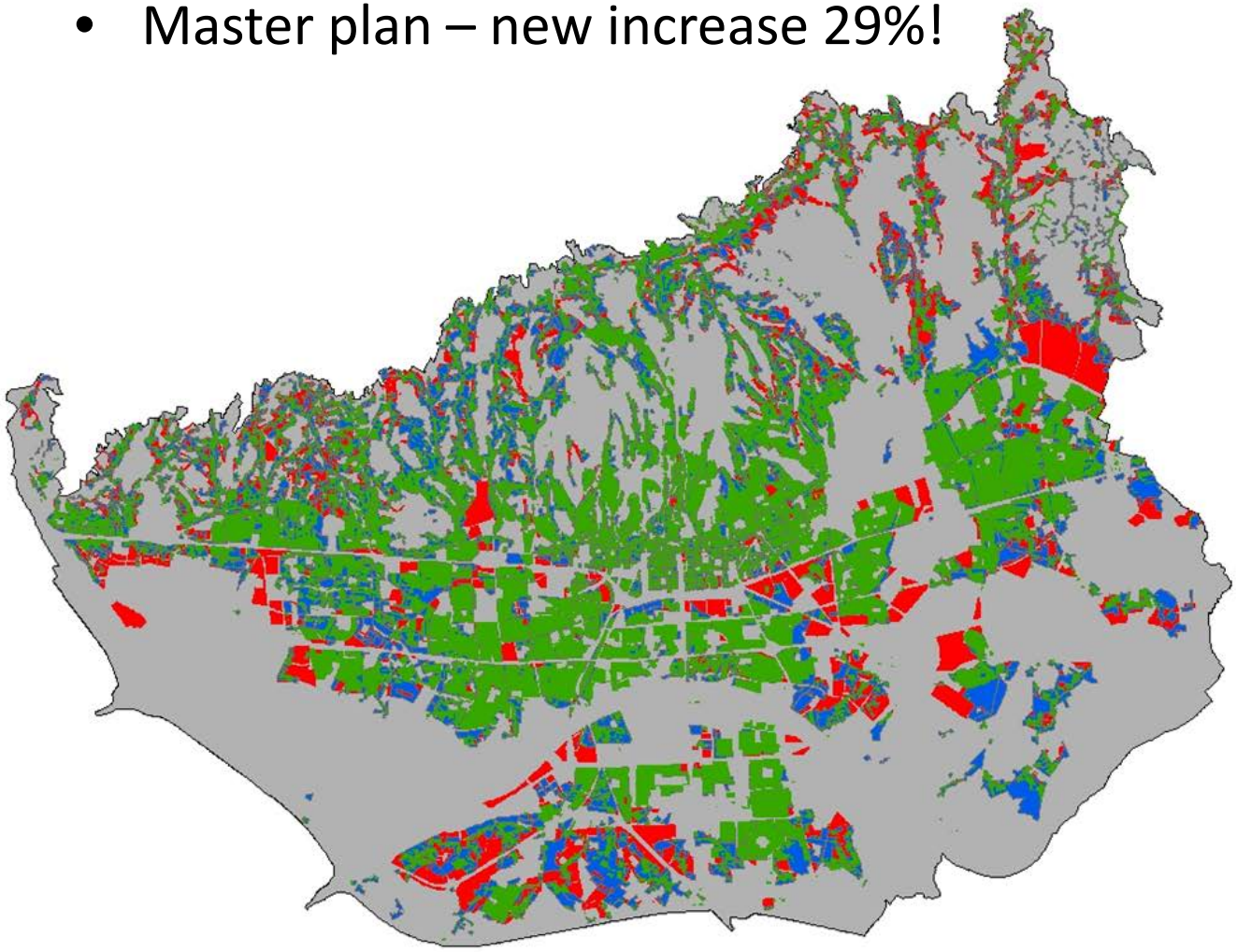


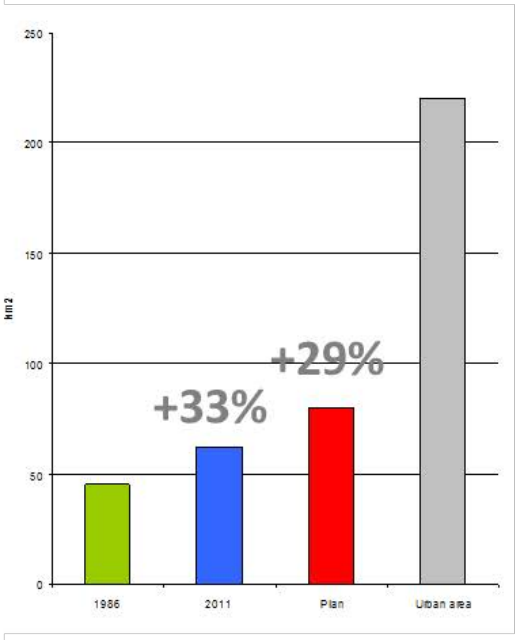
2001-2011 change - citizens distribution



Residential and mixed land use change

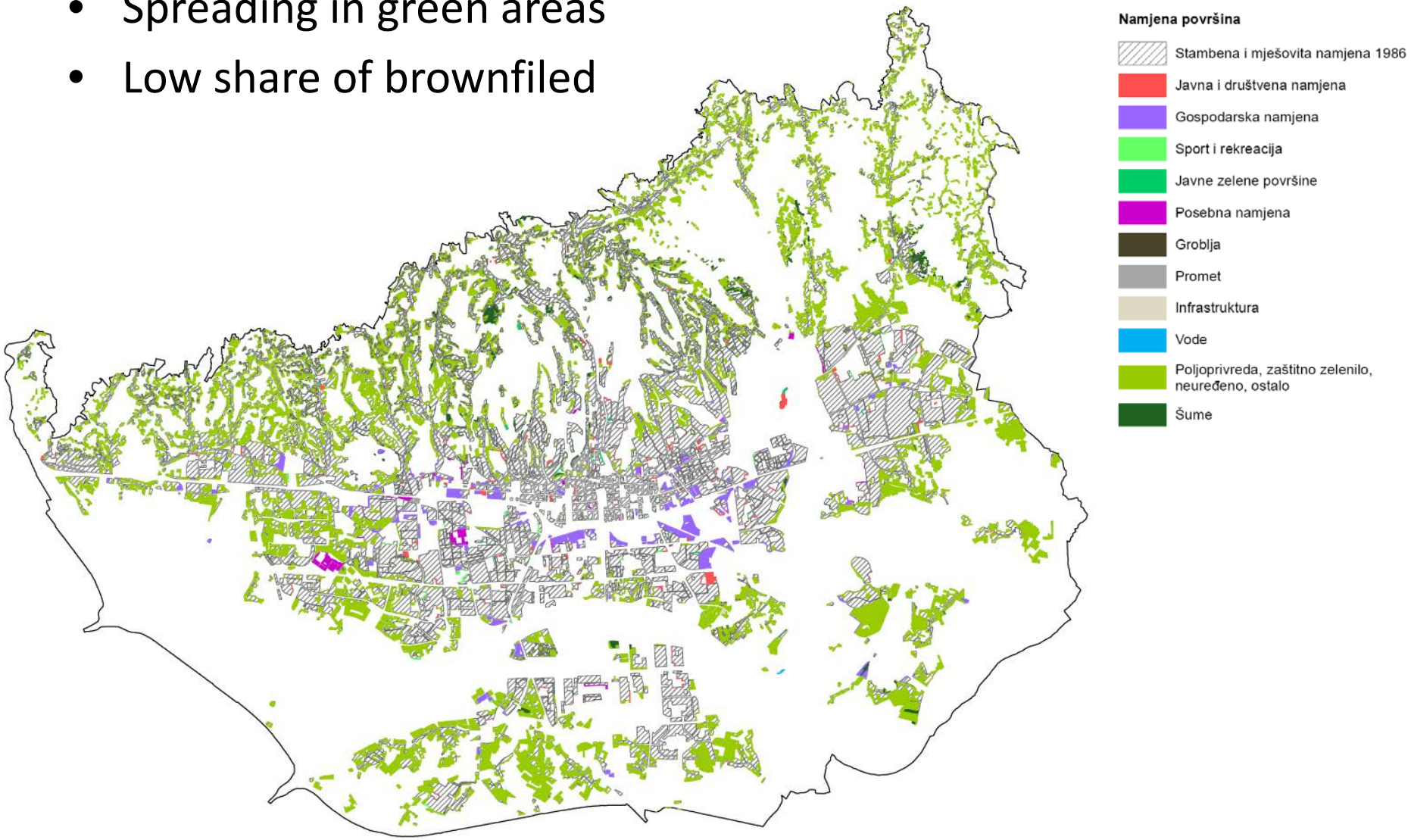
- 1986/2011 - 33% increase, population only 5%
- Master plan – new increase 29%!





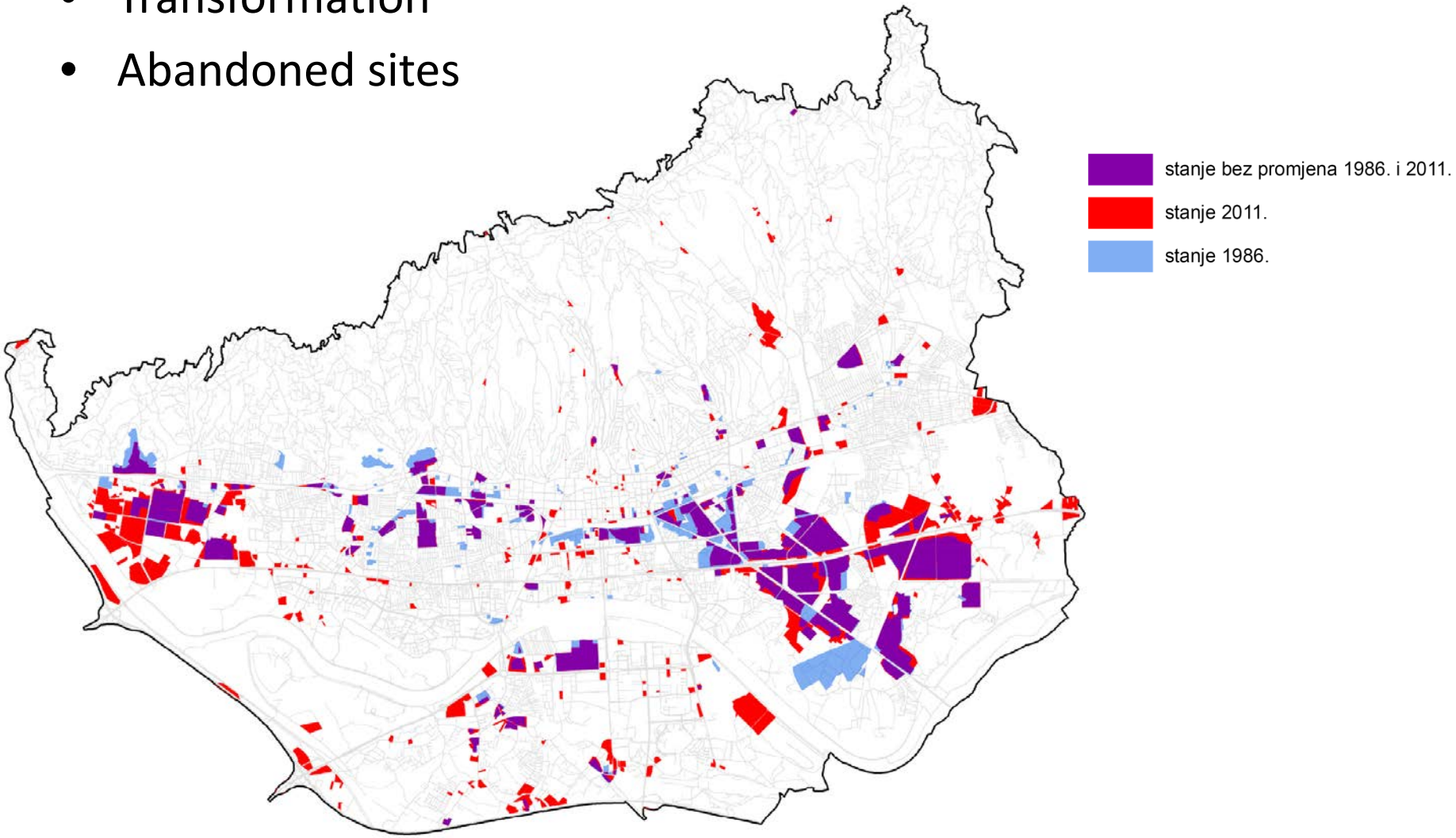
Residential and mixed land consumption

- Spreading in green areas
- Low share of brownfiled



Industry and bussines land use change

- Transformation
- Abandoned sites



Analysis results and new strategy

- Almost zero population growth
- City centre is depopulating
- Lot of new apartments and planned building land
- Unrational consumption of land for housing
- Abandoned industrial sites

- New general urban plan – decrease of planned building land for housing
- Development of brownfield projects
- Redevelopment of city centre

ZAGREBPLAN – GI measures

- c3.p1-m1 environment information system
- c3.p1-m2 forest information system
- c3.p1-m4 geotechnical cadastre
- c3.p1-m5 biodiversity map
- c3.p1-m6 landscape map
- c3.p1-m9 strategic noise map
- c3.p2-m4 illumination map
- c3.p2-m5 energy information system
- c4.p1-m1 catalog of urban densities
- c4.p1-m2 GIS of green infrastructure
- c4.p2-m5 catalog of city projects
- c5.p1-m1 records of the housing stock
- c5.p2-m2 GIS for emergency situations
- c5.p3-m3 interactive sports map
- c6.p3-m1 cadastre and land registry
- c6.p3-m2 land policy
- C6.p3-m3 spatial information management

Thank you!

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