



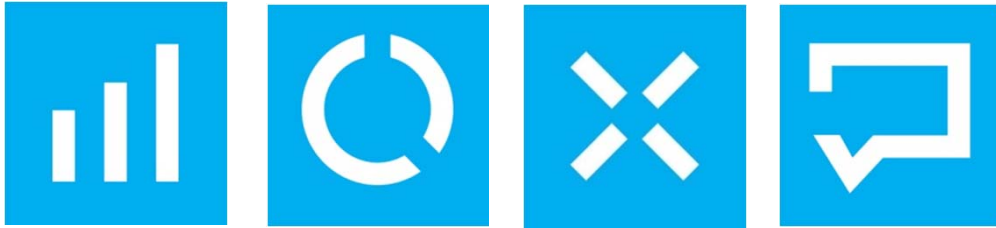
Spatial information for urban planning and management – case study Zagreb

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Strasbourg, September 7th, 2017



INSPIRE Conference 2017



Contents:



Cities & INSPIRE



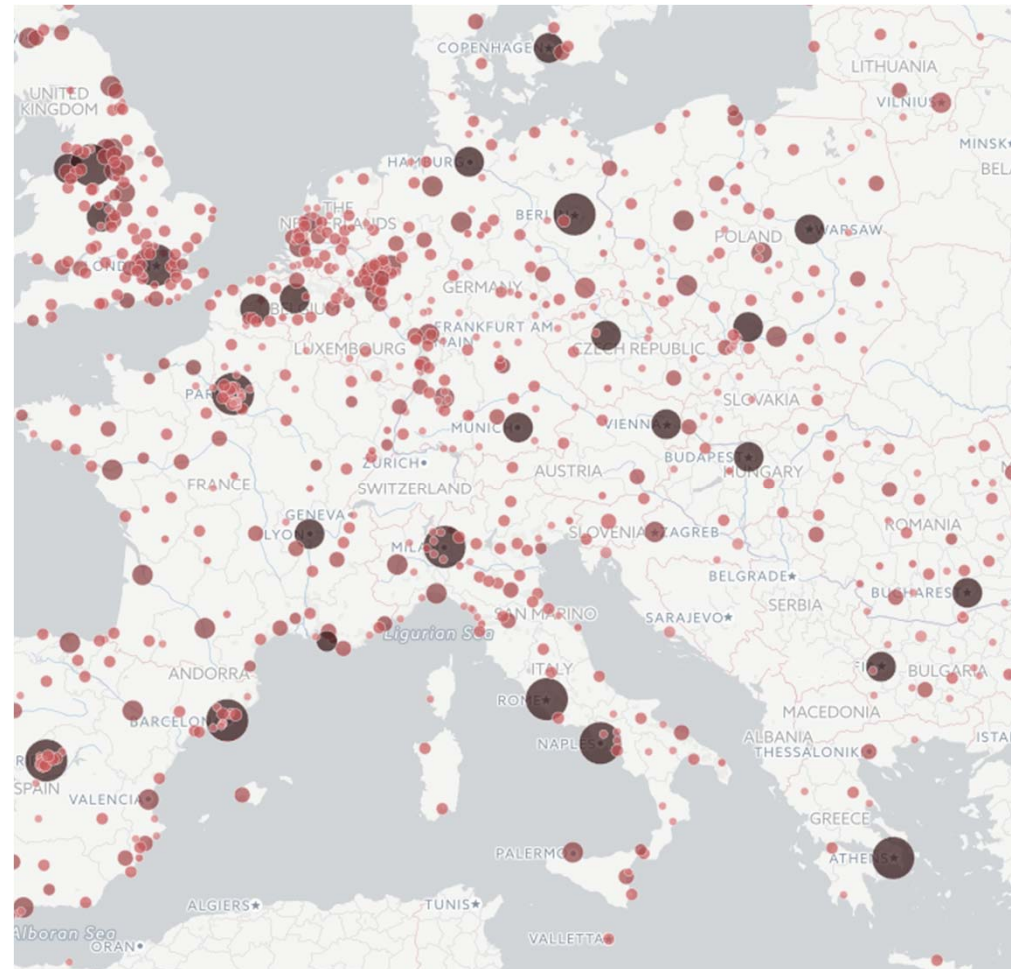
Cities in Croatian NSDI



City of Zagreb SDI



Strategic information concept



Population density - cities
Source: Urban data platform



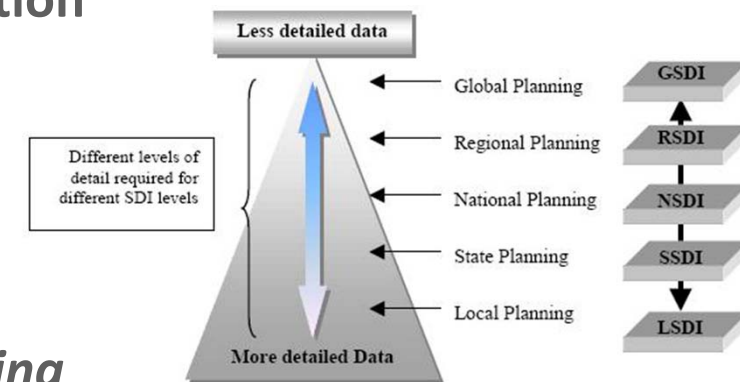
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Cities and INSPIRE (1)

- Local (city) level SDI is driven by the needs of administration and citizens, usually consists of most detailed data sets
- Connected to national and EU level (NSDI, INSPIRE)
- Role of cities - public authority (INSPIRE Directive):

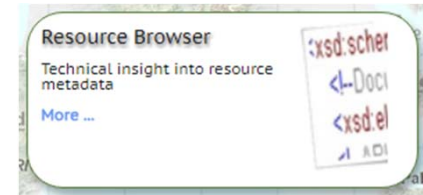
any government or other public administration, including public advisory bodies, at national, regional or local level;



Source: Rajabifard, et al., 1999



Cities and INSPIRE (2)



2017-08-31

- Query – cities in INSPIRE resource browser
- INSPIRE geoportal metadata records (269210)
- responsibleOrgName:
 - city (595)
 - stadt (3654)
 - stadtverwaltung (3169)
- Dominating Spatial Data Themes: Land use, Area management

▼Spatial Data Themes

geographical names(1) geology(1)
 habitats and biotopes(6) human health and safety(10)
 hydrography(3) land cover(10)
land use(134) mineral resources(1)
 natural risk zones(2)
 population distribution – demography(1)
 production and industrial facilities(4)
 protected sites(23) soil(1)

Spatial Data Themes

geographical names(6) geology(1)
 habitats and biotopes(7) human health and safety(17)
 hydrography(16) land cover(9)
land use(1685)
 natural risk zones(4) orthoimagery(15)
 population distribution – demography(19)
 production and industrial facilities(3)

▼Spatial Data Themes

area management/restriction/regulation zones
 and reporting units(124)
 cadastral parcels(14) elevation(1)
 habitats and biotopes(1) human health and safety(2)
 hydrography(6) **land use(665)**
 orthoimagery(4)
 population distribution – demography(20)



Cities in Croatian NSDI (1)

NATIONAL SPATIAL DATA INFRASTRUCTURE ACT

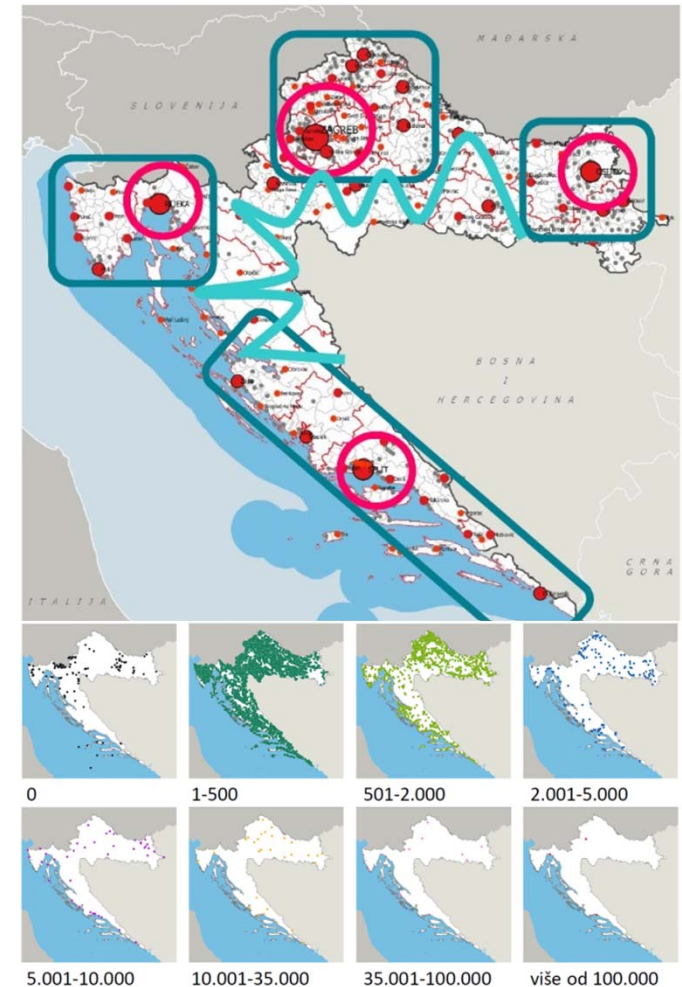
- NSDI subjects are public authorities whose competences, i.e. scope of work, include establishing or maintaining spatial data and which are obliged to participate in NSDI establishment, maintenance and development.
- *Public authorities are national, local and regional authorities and legal persons with public competences.*





Cities in Croatian NSDI (2)

- In Croatia – 128 municipalities with city status
- Mostly small and medium size cities and towns
- Large differences in financial and professional capacities, especially considering management of spatial data – only 6% of cities are active in NSDI!



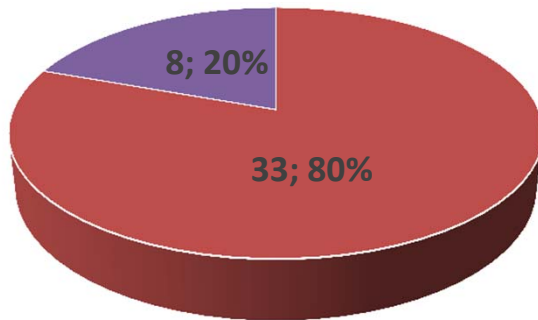
Urban network of Croatia
Source: Spatial development strategy of Croatia





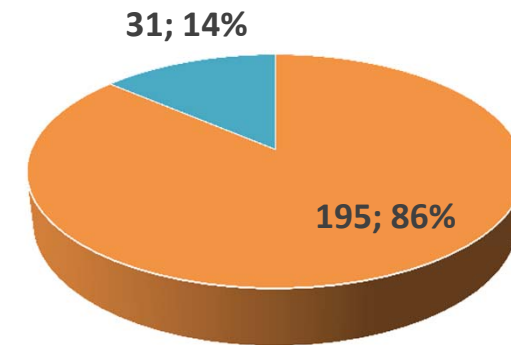
Cities in Croatian NSDI (3)

Number of NSDI subjects by levels



■ NSDI subjects at national level ■ NSDI subjects at local level

Number of NSDI sources by levels

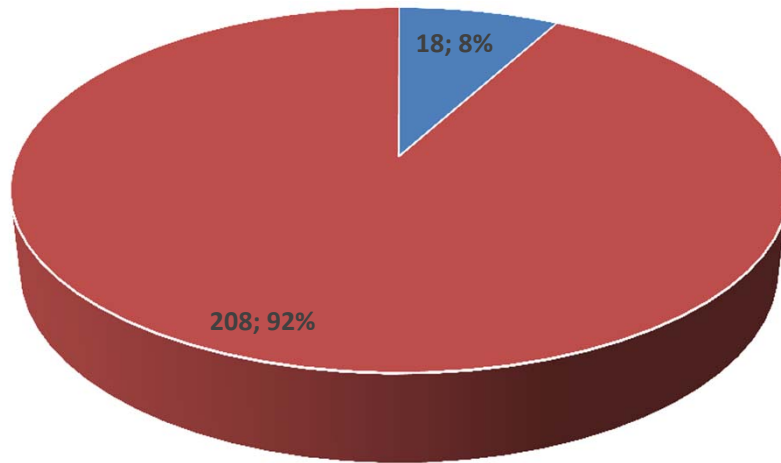


■ Number of sources at national level
■ Number of sources at local level



Cities in Croatian NSDI (4)

Number of Zagreb City data sources



■ Number of sources of the City of Zagreb ■ Number of sources of all other NSDI subjects

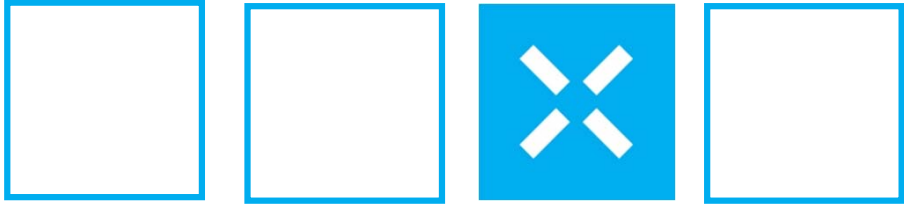
INSPIRE themes of sources of the City of Zagreb:

- I 7 Transport networks
- II 1 Elevation
- II 2 Land cover
- II 3 Orthoimagery
- III 4 Land use
- III 5 Human Health and Safety
- III 6 Utility and Government Services
- III 10 Population Distribution- demography
- III 19 Species Distribution

58% of all LSDI sources!



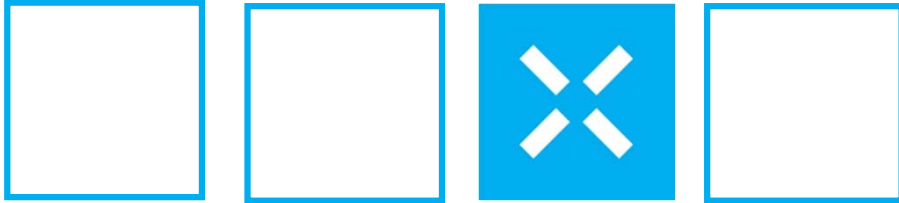
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City of Zagreb SDI (1)

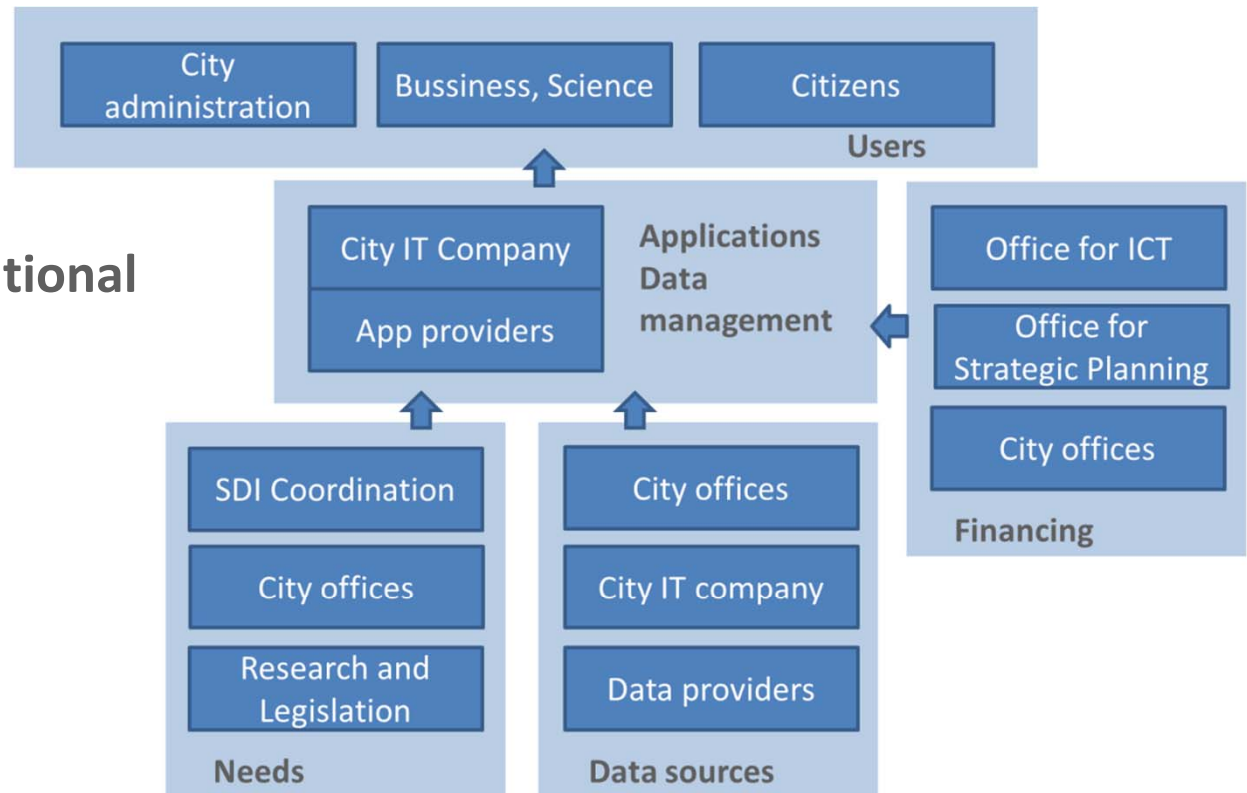
- Zagreb SDI (ZIPP) – spatial data from city administration, utility companies and institutions
- webGIS 2004, Geoportal 2012, mZIPP 2017
- Initiative – real estate and spatial planning departments
- SDI Coordination – representatives of city offices and institutions
- Leading authorities – Office for strategic planning and development, Office for ICT, City ICT company

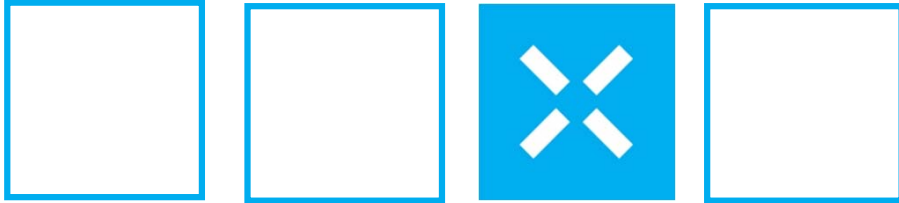




City of Zagreb SDI (2)

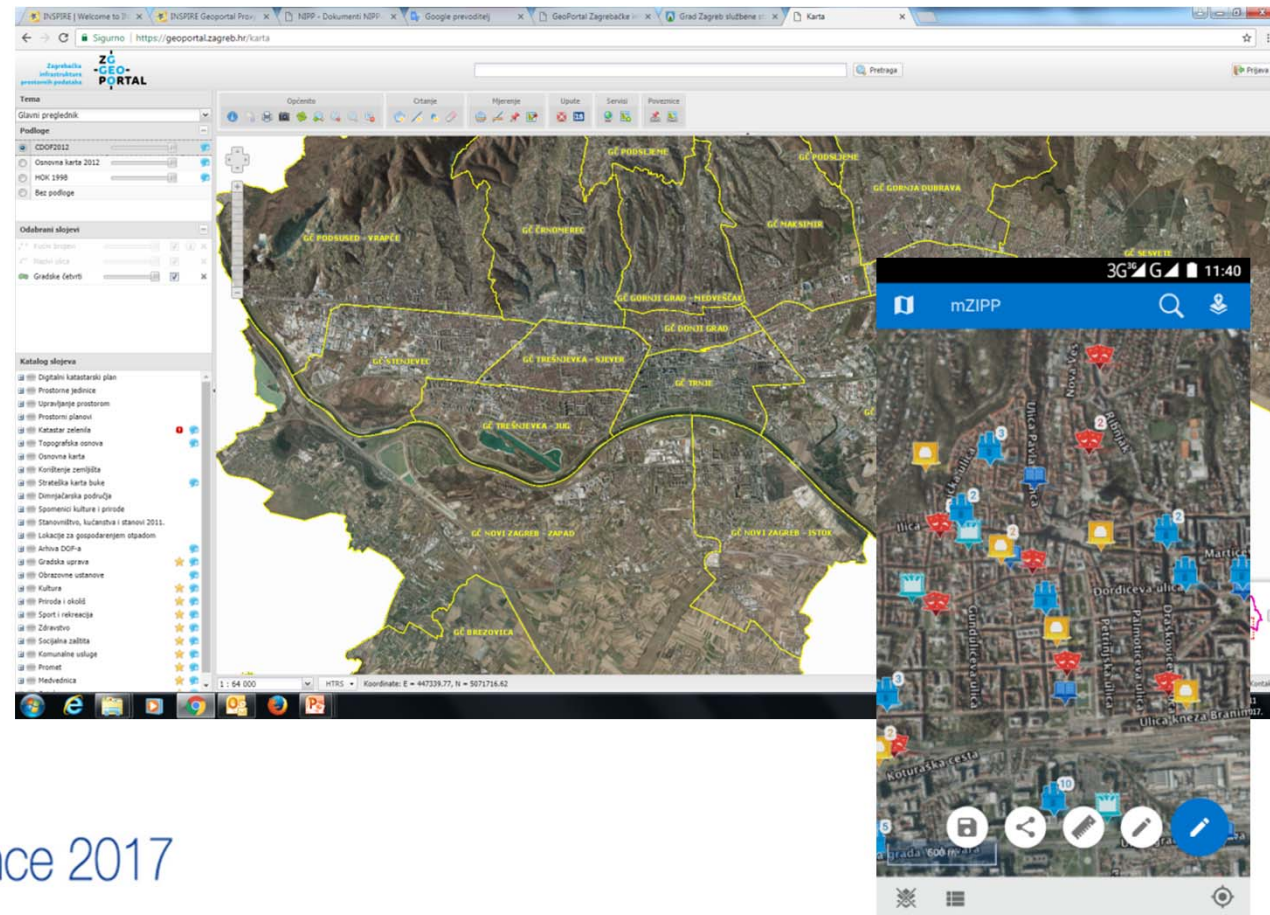
- Zagreb SDI scheme
- Flexible and resilient organizational approach





City of Zagreb SDI (3)

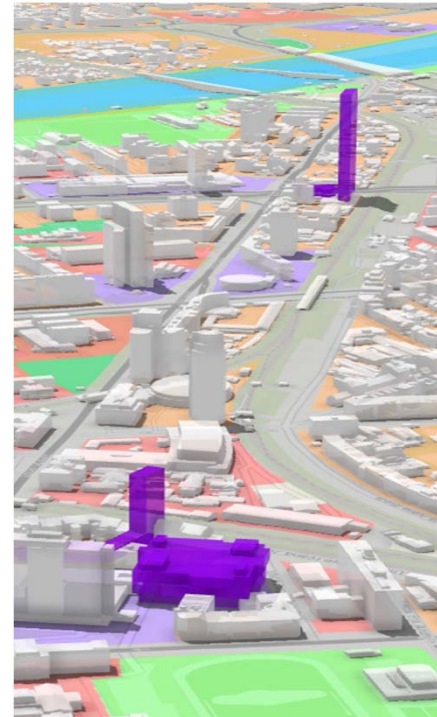
- 200.000 users/year
- Used for all spatially oriented activities in city administration (spatial planning, land management, environment, public and social infrastructure ...)
- Business, Science, NGO, citizens





Strategic information concept (1)

- New organizational approach (2017)
- City office for strategic planning and development - Sector for strategic information and research
- Department for spatial information and Department for statistics
- Better information basis for planning and management

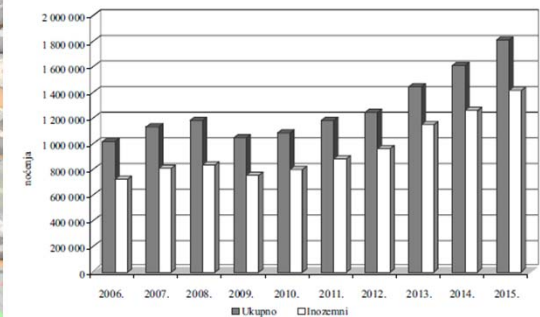


18.2. Dolasci i noćenja turista prema vrstama objekata za smještaj turista

	2014.				2015.			
	dolasci		noćenja		dolasci		noćenja	
	ukupno	inozemni	ukupno	inozemni	ukupno	inozemni	ukupno	inozemni
Ukupno	967 902	770 254	1 602 420	1 275 705	1 077 778	859 140	1 804 290	1 428 551
Hoteli	718 811	595 888	1 147 156	957 274	775 945	644 330	1 226 068	1 023 059
Sobe za iznajmljivanje, apartmani, studio-apartmani, kuće za odmor	27 361	22 005	59 742	49 880	42 437	34 648	81 338	66 774
Objekti u kućanstvima (sobe za iznajmljivanje, apartmani, kuće za odmor)	41 168	31 432	118 605	92 456	58 134	43 679	164 259	120 088
Hoteli	100 731	74 534	184 991	127 201	119 694	87 073	228 872	151 121
Ostali smještaji ¹⁾	79 831	46 395	91 926	48 894	81 568	49 410	103 753	67 509

¹⁾ Obuhvaćeni aparthoteli i integralni hoteli, prenočišta, gostionice s pružanjem usluga smještaja, planinarski domovi, učenički i studentski domovi, spavaći i kušet-vagoni, kampovi i prostori za kampiranje.

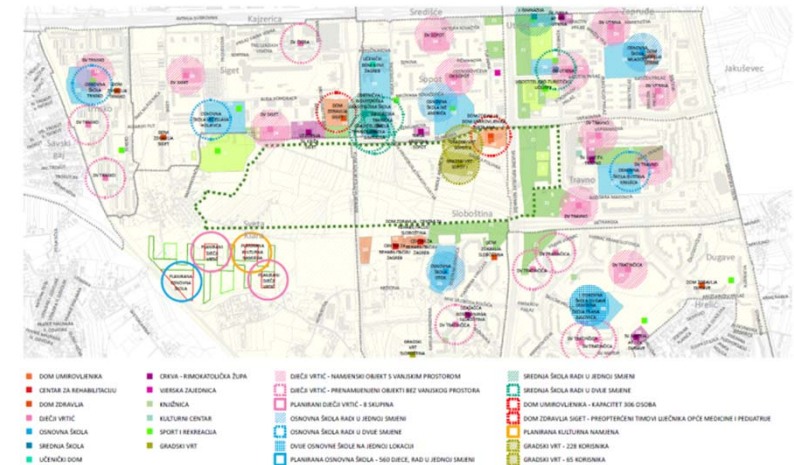
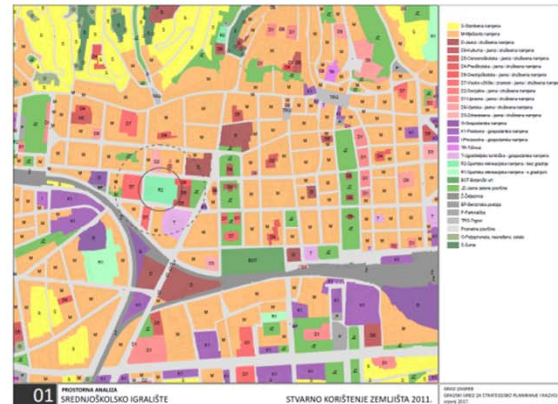
Broj ostvarenih noćenja turista

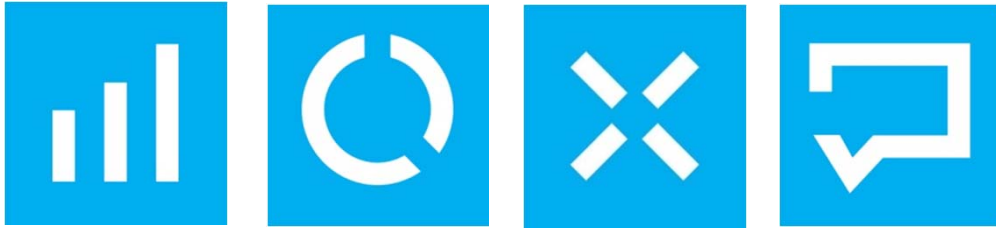




Strategic information concept (2)

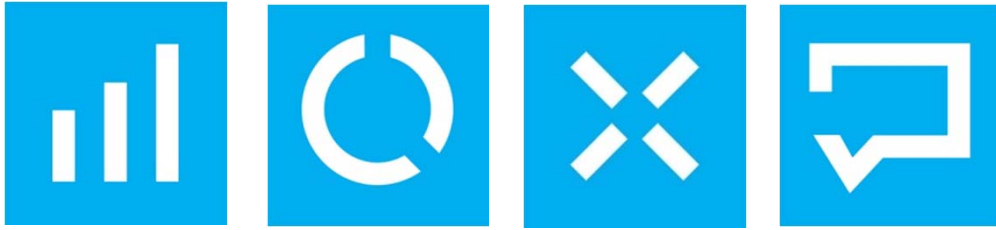
- Spatial and statistical analysis for development of strategic city projects
- Land use + Population distribution (and other statistics) + Social infrastructure
- Analysis results with guidelines for planning and development
- Supported by SDI





Conclusions

- Cities are subjects to INSPIRE and NSDI, but not involved enough
- Croatian cities participate with 14% of all NSDI sources (Zagreb 56%)
- Zagreb City SDI is largest in Croatia, initiated from real estate and spatial planning sectors
- Flexible organizational structure with coordination body lead by Planning dpt.
- City Geoportal is central and inevitable point for city administration, business, science and citizens
- SDI helps development of new spatial analysis approach in city planning



Thank you for your attention!

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