

**Workshop on
Geospatial Data Infrastructure for Economic Development**

ETT 53097

**Importance of mapping and
cadastre for management of
resources and sustainable
development**

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AGENDA

- Why management of spatial data
- Roll of NMCA in NSDI
- Land Governance
- Land Administration
- Land Management
- Sustainable development
- The importance of capacity development

INTRODUCTION

- Geodetic engineer (BcS) and Master degree at Information Systems Management (Msc)
- Profesional experience in geodetic authority, geoinformation, land cadastre, spatial data infrastructure and governmental reform.
- 22 years work experience on state geodetic projects and spatial data infrastructure project, development of geoinformation infrastructure in Republic of Slovenia and management of regional geodetic authority.
- Member of SMA management board responsible for international affairs coordination and INSPIRE
- Member of INSPIRE permanent committee and National contact point for INSPIRE
- Member of Eurogeographics Management Board and involved in several EG Knowledge expert network and ELF project
- mail: tomaz.petek@gov.si

SLOVENIA VS MOLDOVA

<u>Capital</u> (and largest city)	<u>Ljubljana</u> <u>46°03'N 14°30'E</u>	<u>Chişinău</u> <u>47°0'N 28°55'E</u>
<u>Official language(s)</u>	<u>Slovene</u>	Moldovan
<u>Recognised regional languages</u>	<u>Hungarian, Italian</u>	<u>Gagauz, Russian and Ukrainian</u>
<u>Ethnic groups</u>	83% <u>Slovene</u> , 2% <u>Serb</u> , 2% <u>Croat</u> , 1% <u>Bosniak</u> , 12% others and unspecified	69.6% <u>Moldovans</u> , 11.2% <u>Ukrainians</u> , 9.4 <u>Russians</u> , 3.9% <u>Gagauz people</u> , 2.0% <u>Bulgarians</u> , 1.9% <u>Romanians</u> , 2% others
<u>Demonym</u>	Slovenian, <u>Slovene</u>	<u>Moldovan, Moldavian</u>
<u>Government</u>	<u>Parliamentary republic</u>	<u>Parliamentary republic</u>
Independence		
	From <u>Yugoslavia</u> 25 June, 1991	August 27, 1991
<u>Area</u>		
	Total <u>20.273 km²</u>	<u>33.846 km²</u>
	<u>Water (%)</u> 0.7	1,4
<u>Population</u>		
	2010 estimate 2,048,951	3,563,695
	2002 census 1,964,036	3,383,332
	<u>Density</u> 101/km ²	121,9/km



Settlements 6.023
Land parcels
5.3 SLO / 4,4 MD
Land Owners 950 000
Buildings
1,2 mio SLO / 1,1 MD



For my eyes only...

OUR DATASETS

Land use

Land cadastre

Register of citizens

Register of companies

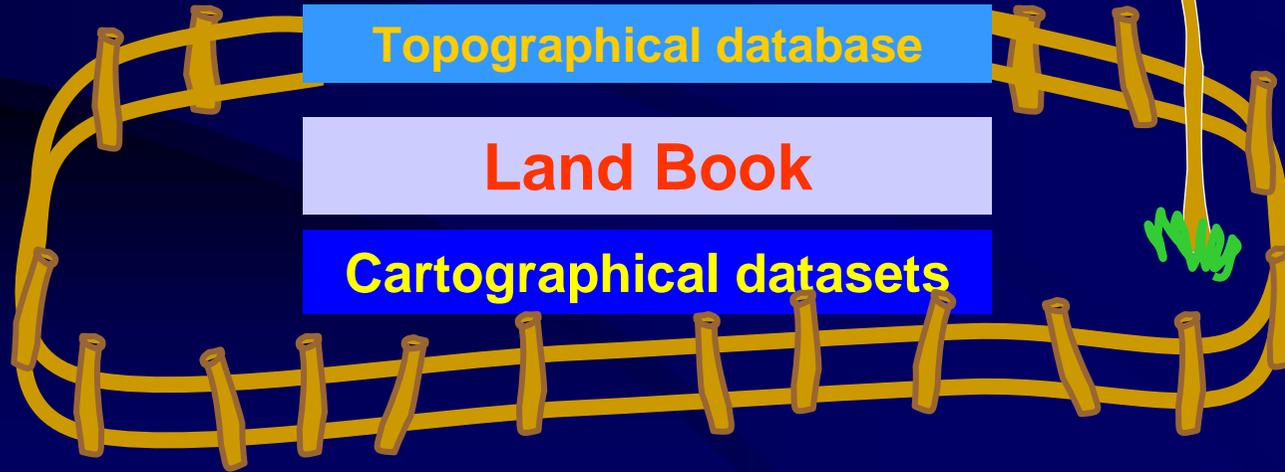
Register of buildings

Topographical database

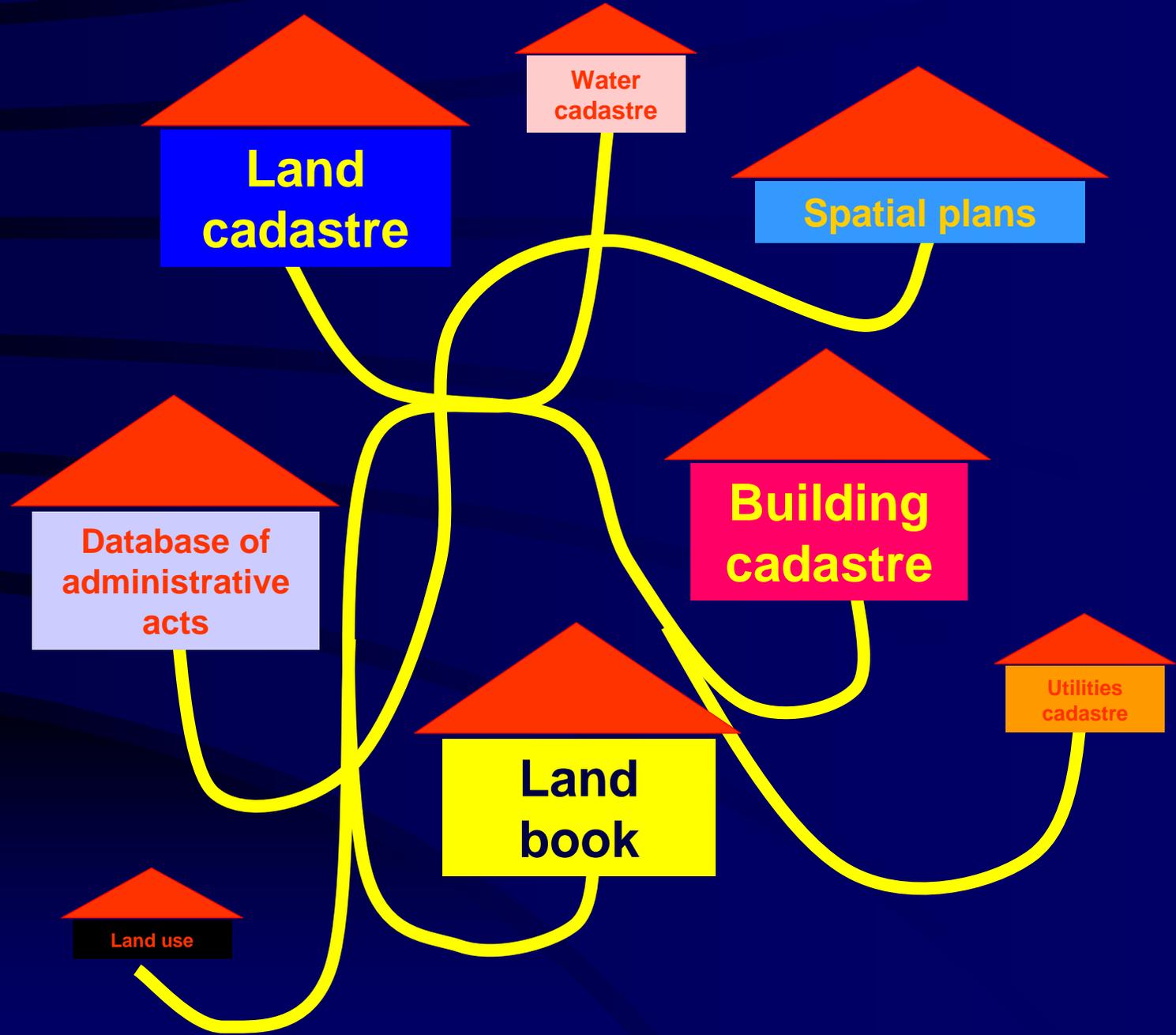
Land Book

Cartographical datasets

This is ours!



Interoperability of spatial datasets and services



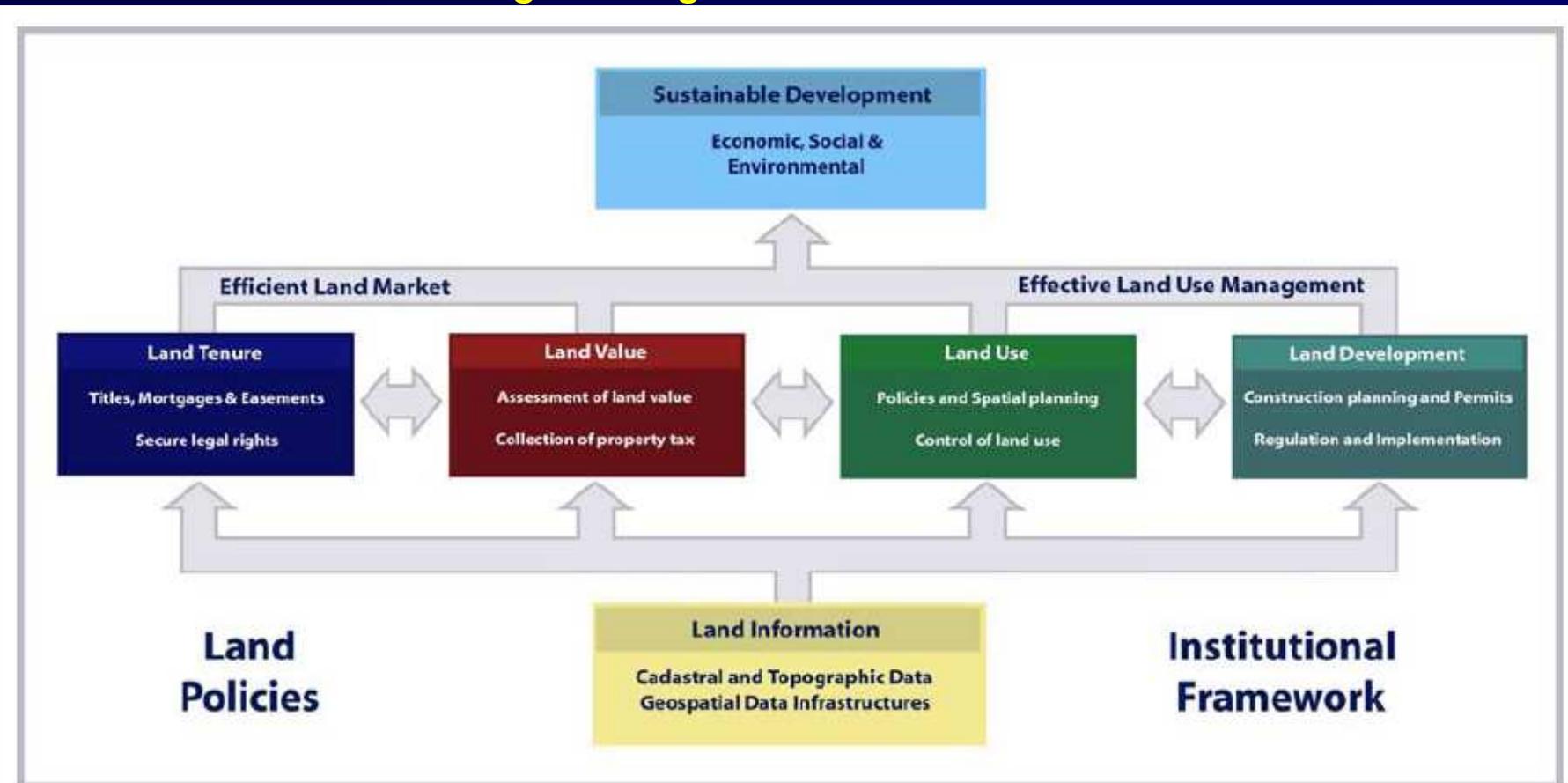
Millennium Development Goals

- The key challenges of the new millennium are
 - climate change;
 - food shortage;
 - urban growth;
 - environmental degradation; and
 - natural disasters

These issues all relate to governance and management of land.

Land Governance

the key to achieving sustainable development and to supporting the global agenda of the MDGs



A Global Land Management Perspective.

Prof. Stig Enemark, 2004

Land administration

- processes of recording and disseminating information about:
 - ownership,
 - value and
 - use of land and its associated resources.
- Determination of property rights and other attributes of the land that relate to its value and use,
- Survey and general description of these, their detailed documentation provision of relevant information in support of land markets capacity development

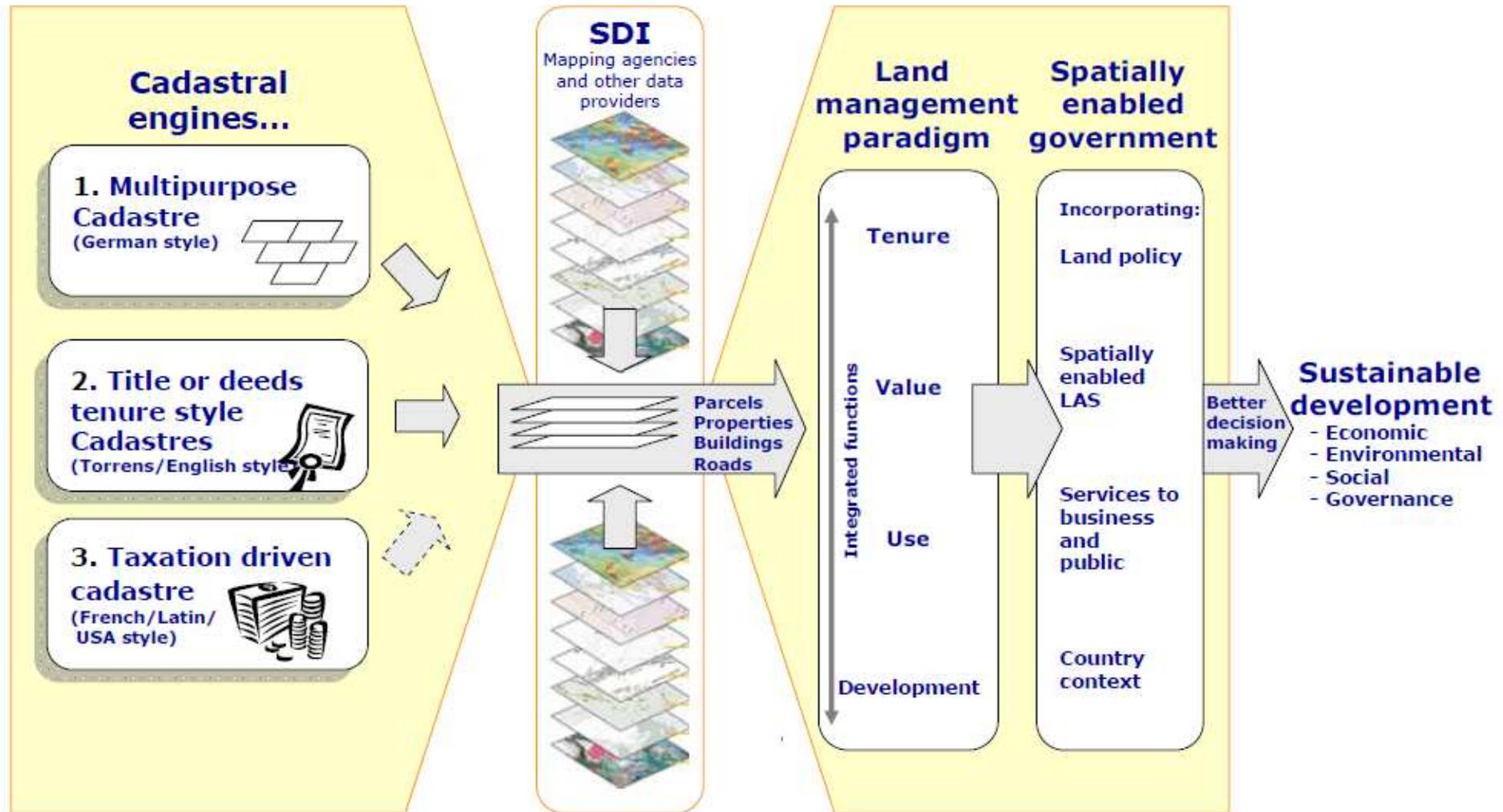
Land administration system

- Land management paradigm
- People and institutions
- Rights, restrictions and responseability
- Cadastre
- Procesess
- Technology
- SDI

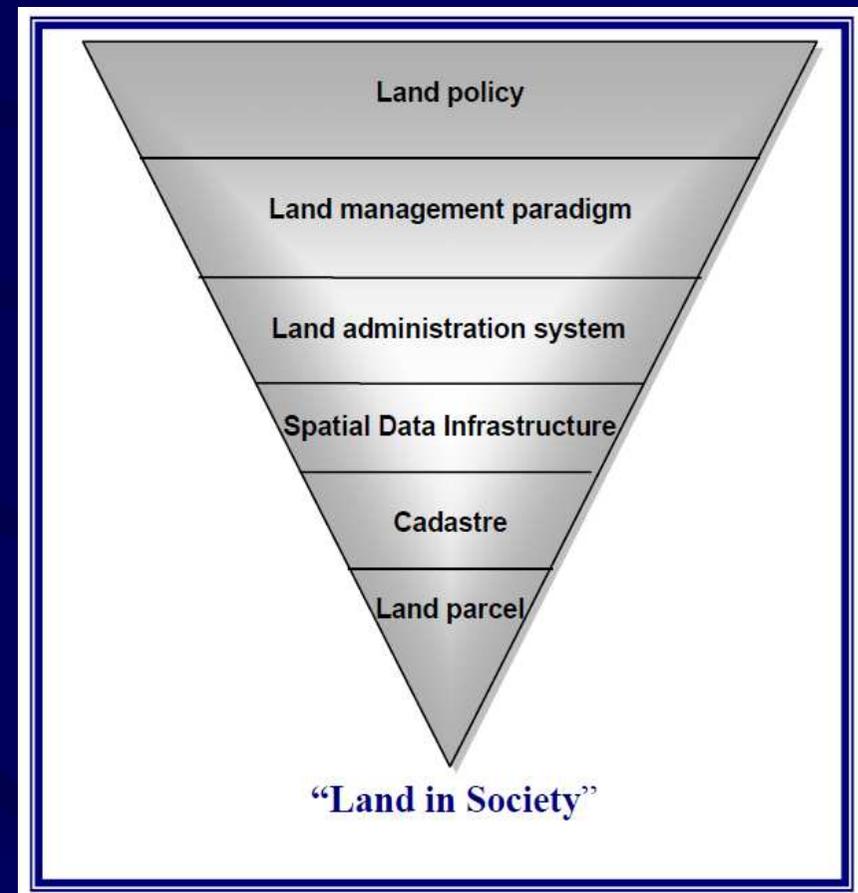
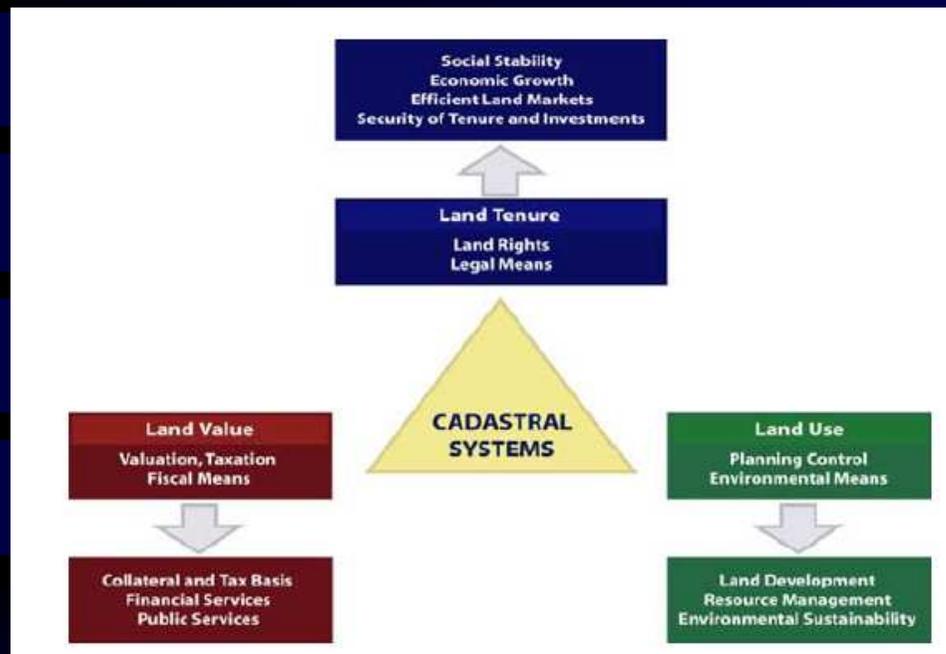
LAND MANAGEMENT PARADIGM

- design of land administration systems (LAS) toward an enabling infrastructure for implementing land policies and land management strategies in **support of sustainable development**.
 - In simple terms, the information approach needs to be replaced by a model capable of assisting design of new or reorganized land administration systems to perform the broader and integrated functions now required.
- Land management covers all activities associated with the management of land and natural resources that are required to fulfill political and social objectives and achieve sustainable development.
 - land tenure (securing and transferring rights in land and natural resources);
 - land value (valuation and taxation of land and properties); land use (planning and control of the use of land and natural resources);
 - land development (implementing utilities, infrastructure, construction planning, and schemes for renewal and change of existing land use).

Significance of the Cadastre



Multipurpose Cadastre and Land Management Paradigm





Infrastructure for Spatial Information in Europe

- European initiative to ...
 - Assist policy-making in activities that concern the environment
 - Improve spatial data sharing across all levels of public sector

Interoperable

- Facilitate **collaboration**

- Using standards, community frameworks, web services

Available

- Increase **availability**

- Using metadata & discovery services

Accessible

- Ease **accessibility**

- Using view (WMS), download (WFS) services

Compatible

- Ensure **compatibility**

- Using schema transformation, GML encodings

RE-Usable

- Improve **quality/re-use**

- Using quality evaluation, edge matching, generalisation

MISION AND GOALS OF NMA

- The National Mapping Agencies are usually one of the stakeholders in the process of establishing National Spatial Data Infrastructure (NSDI):
 - provider of basic Geo-information infrastructure.
 - Host the Secretariat of the Inter Ministerial SDI Board
 - provide coordination of NSDI activities
 - technical support
 - development of Geo-portal and
 - metadata services.

The role of the Surveying and Mapping Authority is gradually changing

- from map factory to SDI co-ordinator
- from product oriented to user needs orientation
- from data to network services
- from large number of staff to fewer staff in flexible structure



Spatial data infrastructure: So close, yet so far?



Technical challenges

- Essential standards, Cloud computing, Cloud sourcing, Web 2.0
- Cadaster 2.0, 3D, AAA...

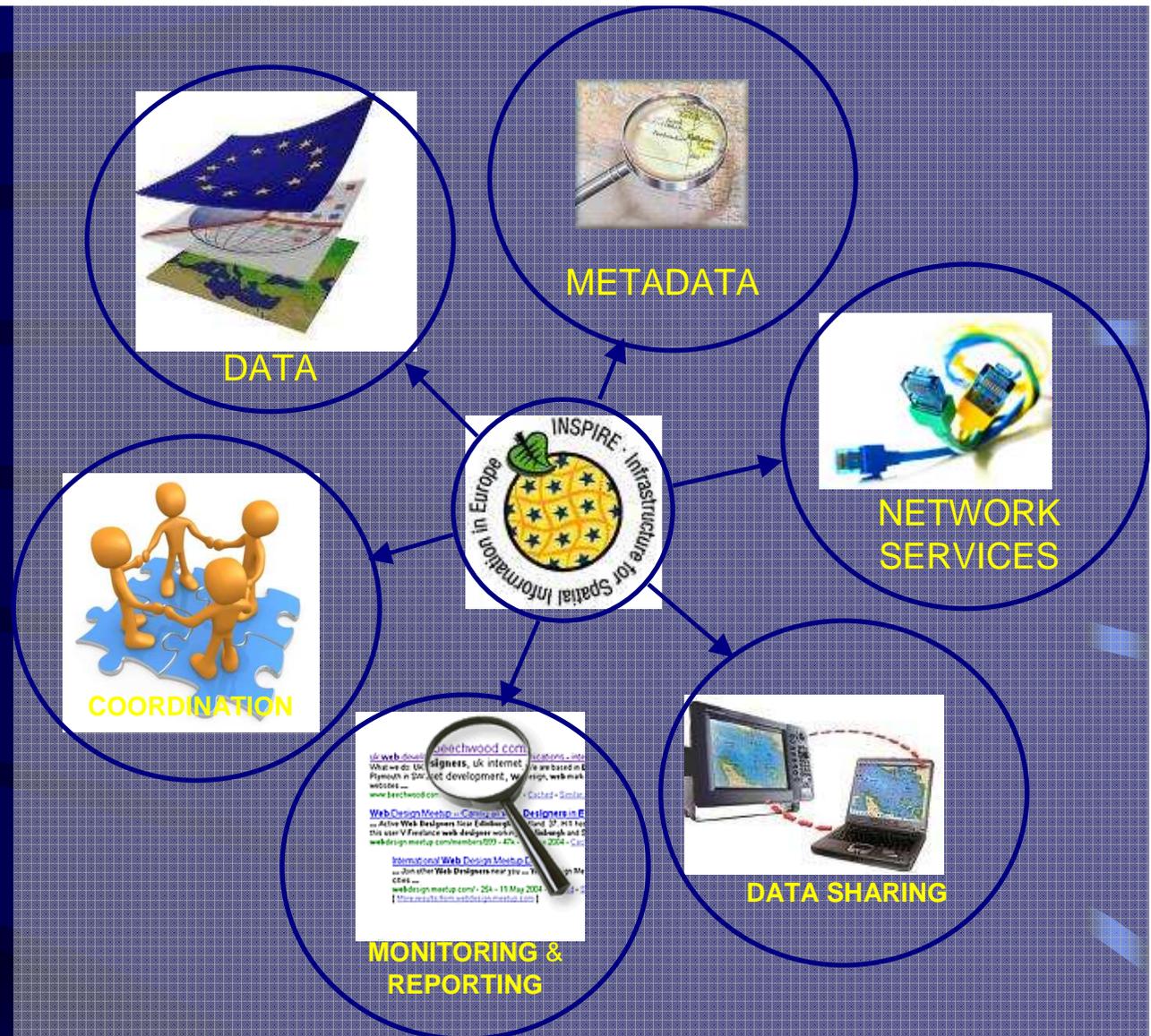
Social challenges

- Social networks, Capacity building, Awareness raising,

Organisational challenges

- to share or not to share,
- government or private, public participation,
- security, information propriety,

ELEMENTS of Slovenian infrastructure for spatial information



...for the effective compilation, management, access, delivery and use of the spatial information (Delgado, 2007).

COORDINATION AND ORGANISATIONAL ISSUE

- National contact point -
Surveying and Mapping
Authority of the Republic of
Slovenia,



MONITORING & REPORTING



11 SERVICES
88 SPATIAL DATASETS

The screenshot shows an Excel spreadsheet with columns for 'Indicator set', 'Metadata', 'Data Sets', and 'Services'. It lists various indicators such as 'Hydrography', 'Ecological Survey', and 'Prohibited sites' with their respective values and denominators.

Member State Report: SLOVENIA

	Existence	Compliance	Extend	Compliance	MD Accessibility	DS Accessibility	Use	Compliance
Indicator Name	MDi1	MDi2	DSi1	DSi2	NSi1	NSi2	NSi3	NSi4
Indicator Value	77%	0%	95%	0%	74%	69%	0	0%
Numerator	68	0	1.505.338	0	65	53	0	0
Denominator	88	88	1.583.794	77	88	77	0	0

SLOVENIAN GEO-PORTAL

http://www.geoport.si

The screenshot shows the Slovenian INSPIRE Geoportal website. At the top, there is a logo of a globe with stars and the text "Slovenski INSPIRE Geoport" next to a search bar containing "Išči...". Below the header is a navigation menu with categories: "NOVICE", "SEZNAM ZBIRK", "STORITVE", and "PREDPISI IN GRADIVA". The main content area is divided into several sections:

- Osebni vpogled v podatke o lastnih nepremični**: A section featuring a house icon and text describing a web application for viewing real estate data in Slovenia. It includes a link "Povezava do aplikacije" and a list of applications on the right: "Prostorski portal", "Podatki o lastnih nepremičninah", "Atlas okolja", "PreGIZ", "Evidenca trga nepremičnin", "Naravovarstveni atlas", and "Pregledovalnik kart".
- METAPODATKOVNI SISTEM**: A blue button with a target icon.
- ZADNJE NOVICE**: A section with two news items:
 - 02 Nov 2010**: "Poročilo o slovenskem trgu nepremičnin za prvo polletje 2010". Text: "GURS je na današnji novinarski konferenci predstavila obveščanje lastnikov nepremičnin o poskusnem izračunu vrednosti nepremičnin".
 - 01 Nov 2010**: "Obveščanje o poskusnem izračunu vrednosti nepremičnin". Text: "Geodetska uprava Republike Slovenije je v skladu z določili Zakona o množičnem vrednotenju nepremičnin poskusno izračunala vrednost nepremičnin".
- Uveljavljeni predpisi**: A section with a hand holding a pen icon and text: "Predpisi (EU in slovenska zakonodaja), ki so povezani z direktivo INSPIRE in slovensko infrastrukturo za prostorske informacije". It includes a link "Uveljavljeni predpisi".
- Povezave**: A section with a magnifying glass icon and text: "Direktiva INSPIRE velja za prostorske podatke, ki se nanašajo na območje držav članic EU, so v digitalni obliki, vodeni s strani javne uprave in se nanašajo na sklope podatkov, navedenih v prilogah I, II in III k direktivi INSPIRE. Podatki morajo biti na voljo v obliki in na način, usklajen z INSPIRE podatkovnimi specifikacijami." It includes a link "Povezave".

At the bottom of the page, there is a footer: "2010 Geodetska uprava Republike Slovenije - Vse pravice pridržane."

KOLEDAR		DOGODKI				
<< November 2010 >>						
Pon	Tor	Sre	Čet	Pet	Sob	Ned
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

http://www.geoportal.gov.si

METADATA

METAPODATKOVNI SISTEM

DOMOV | POMOČ | Slovenščina

Uporabniško ime: _____ Geslo: _____ Prijava

KAJ?

KJE?

PODATKI O STAVBAH - STAVBE

1. OPREDELITEV

Naslov vira: _____
Povzetelek vira: _____

2. RAZVRSTITEV PROSTORSKIH PODATKOV

Kategorija teme: _____ Načrtovanje: _____

3. KLJUČNA BESEDA

Existence Metadata (MD1)

Country Code	Count
BG	10
NL	15
RO	30
IE	35
HU	35
PL	40
DE	40
SK	45
FI	50
LV	50
DK	55
GR	60
EE	65
AT	65
UK	70
NO	75
PT	75
SE	80
BE	80
SI	85
LT	85
ES	90
CZ	90
FR	95
LU	95

GLOSSARY

INSPIRE pregledovalnik gesel - Windows Internet Explorer

http://www.geoportal.gov.si/tezaver/

File Edit View Favorites Tools Help

Google Search

INSPIRE pregledovalnik gesel

Pregledovalnik gesel INSPIRE

Pregledovalnik gesel INSPIRE obsega seznam gesel s spletnega mesta INSPIRE (Feature Concept Dictionary in Glossary na dan 18.11.2010) s prevodi v slovenščino.

Datum zadnje posodobitve 1. 2. 2011.

Prikaži 25 zapisov

Išči:

Geslo v angleščini	Geslo v slovenščini	Definicija v slovenščini	Datum veljavnosti
Access Restriction	omejitev dostopa	Omejitev dostopa do elementa prometa.	20110301
actor			20110301
Address	naslov	Oznaka nespremenljive lokacije nepremičnine z uporabo strukturirane zloženke iz zemljepisnih imen in identifikatorjev.	20110301
Address Area Name	ime naslovnega območja	Komponenta naslova, ki ponazarja ime geografskega območja ali kraja, ki zaradi dodeljevanja naslova združuje več naslovljivih objektov in ni upravna enota.	20110301
Address Component	komponenta naslova	Identifikator ali zemljepisno ime določenega geografskega območja, lokacije ali drugega prostorskega objekta, ki določa obseg naslova.	20110301
addressable object	naslovljiv objekt	Prostorski objekt, ki mu je smiselno dodeliti naslov.	20110301
addresses	naslovi	Lokacija nepremičnin, ki temelji na identifikatorjih naslova običajno z imenom ulice, hišno številko, poštno	20110301
Administrative boundary	upravna		20110301
Administrative unit	upravna		20110301
Administrative Unit Name	ime upr		20110301
Administrative units	upravna		20110301
Aerodrome Area	območje		20110301

Zaporedna št.: 156

Vrsta: tema

Geslo v angleščini: Administrative units

Geslo v slovenščini: upravne enote

Definicija v angleščini: Units of administration, dividing areas where Member States have and/or exercise jurisdictional rights, for local, regional and national governance, separated by administrative boundaries.

Definicija v slovenščini: Upravne enote za lokalno, regionalno in nacionalno upravo, ki razdeljujejo območja, na katerih države članice imajo in/ali izvajajo jurisdikcijo, ločene z upravnimi mejami.

Izvorni vir: INSPIRE FCD

Vir za prevod: Direktiva INSPIRE; GI

Done

start

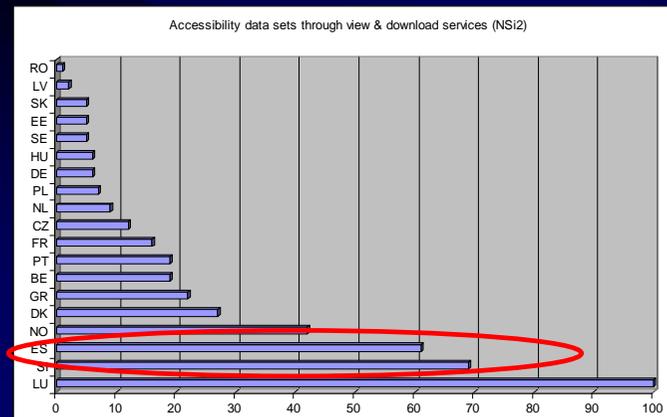
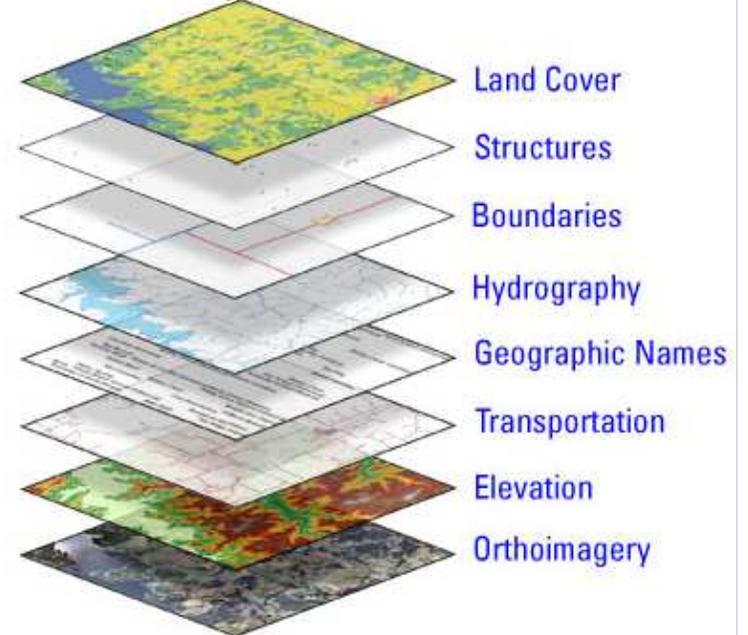
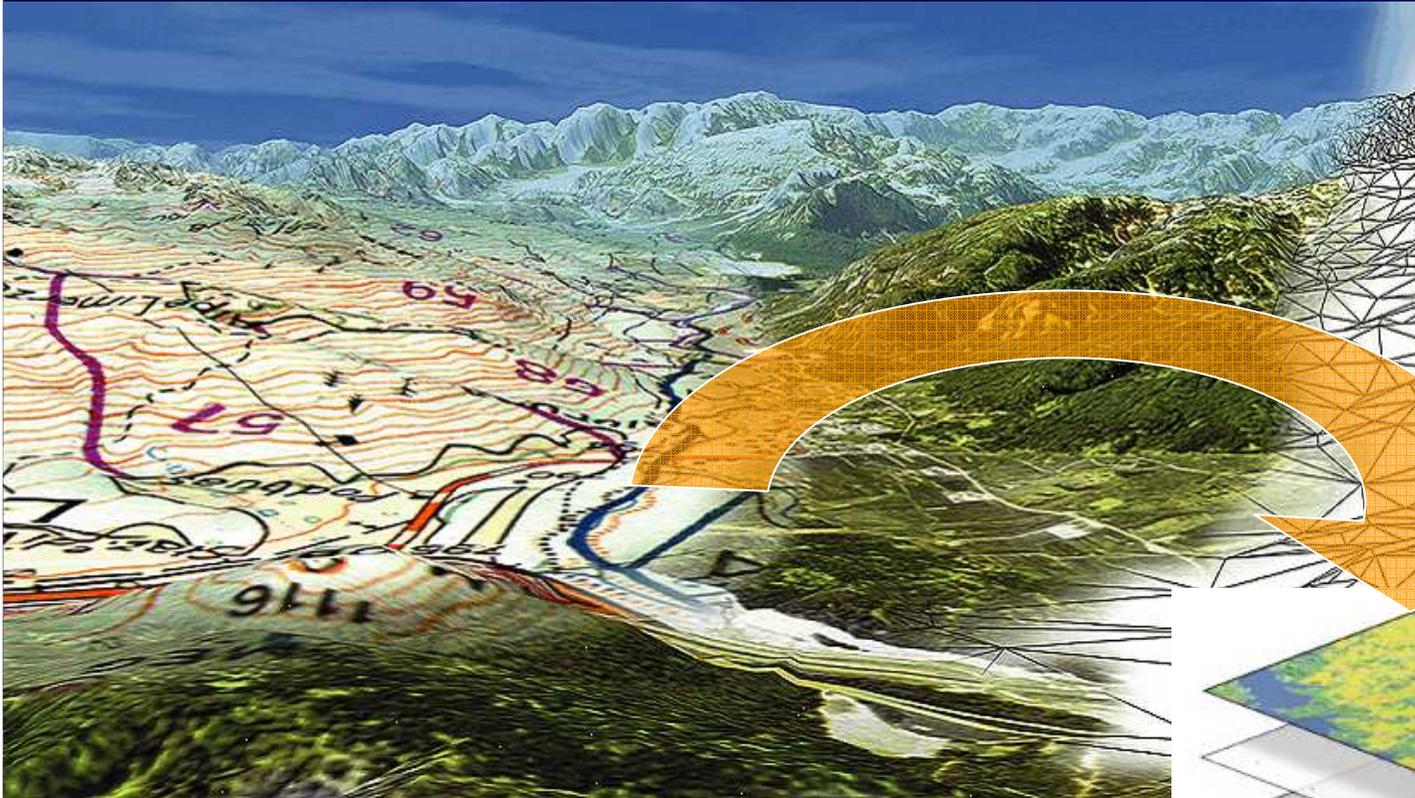
Slovenski INSPIRE ge... Location of the Hotel ... Microsoft PowerPoint ... GeoNetwork - Portal ... INSPIRE pregledoval...

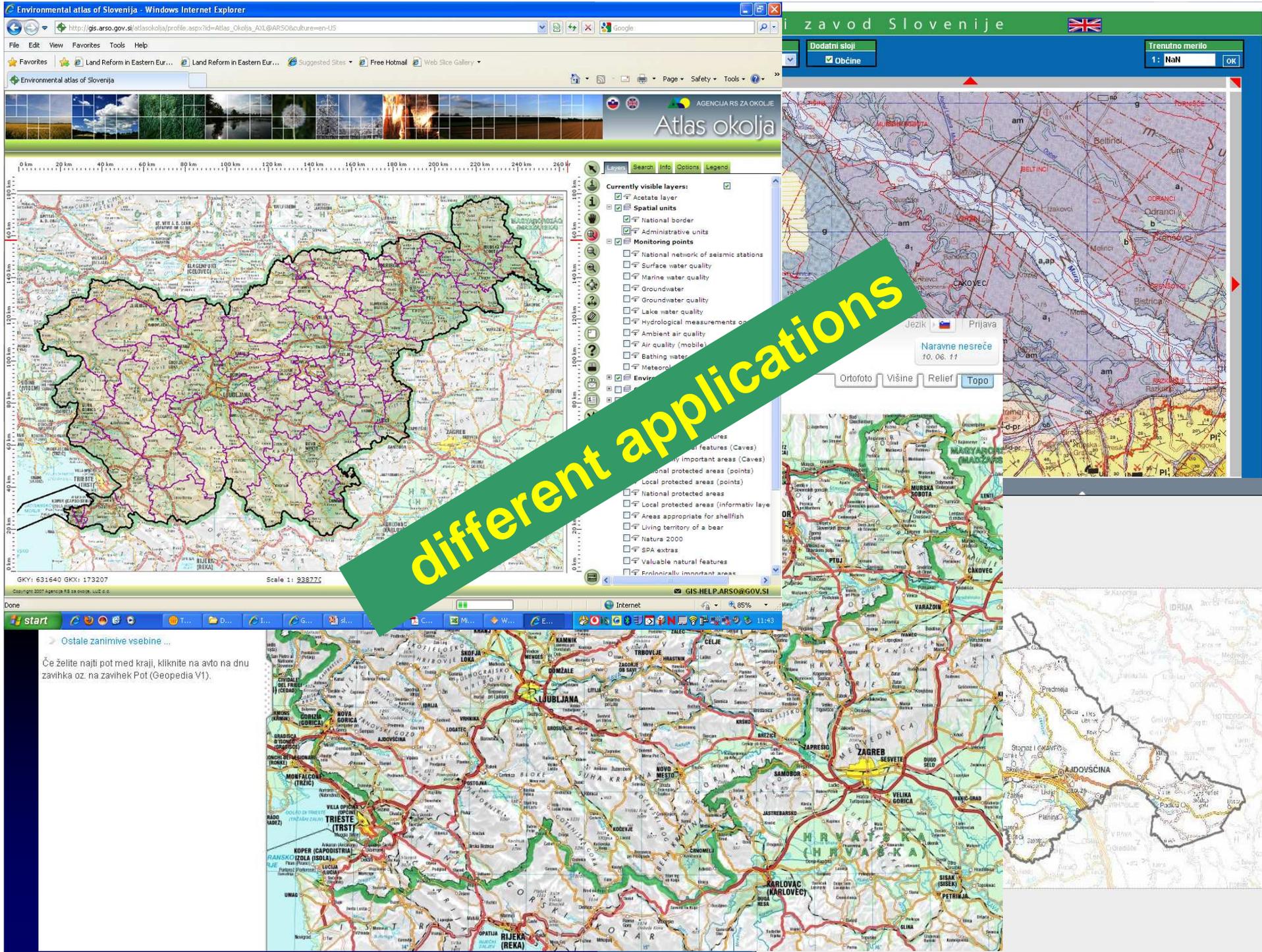
Internet 100%

9:37

DATA

LOCATION

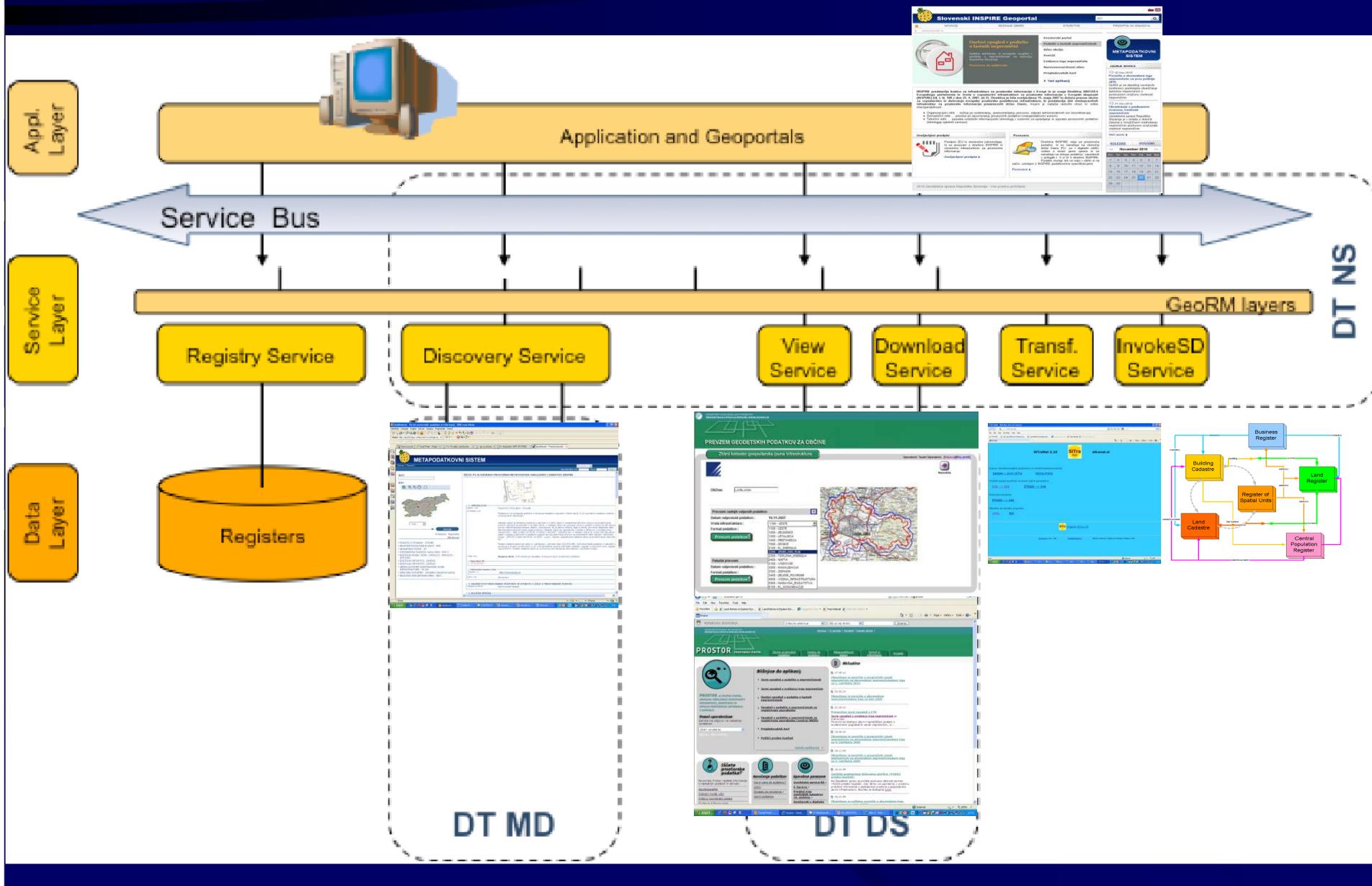




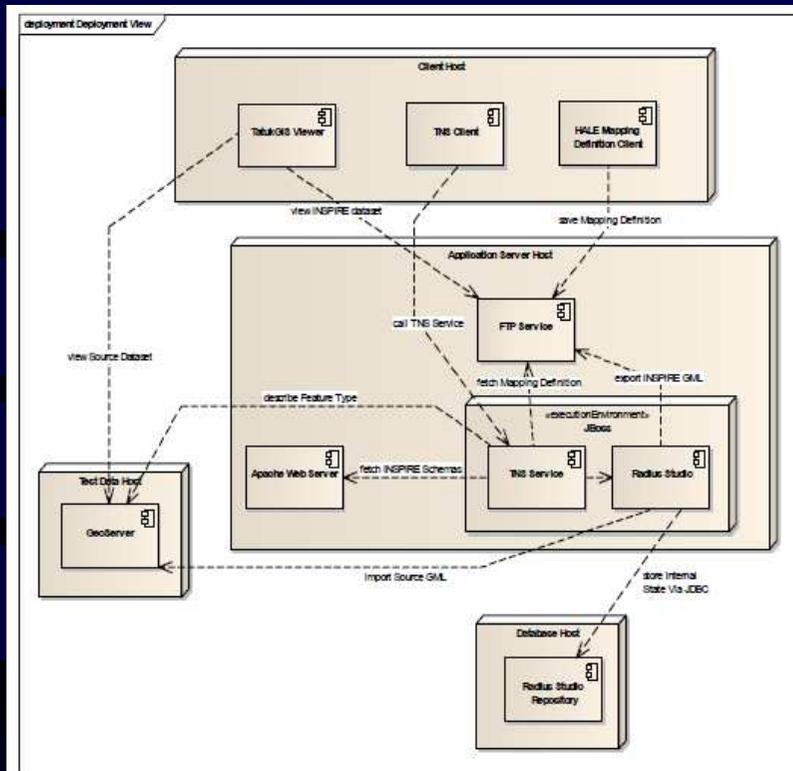
different applications

Ostale zanimive vsebine ...
Če želite najti pot med kraji, kliknite na avto na dnu zavihka oz. na zavihke Pot (Geopedia V1).

NETWORK SERVICES



INTEROPERABILITY

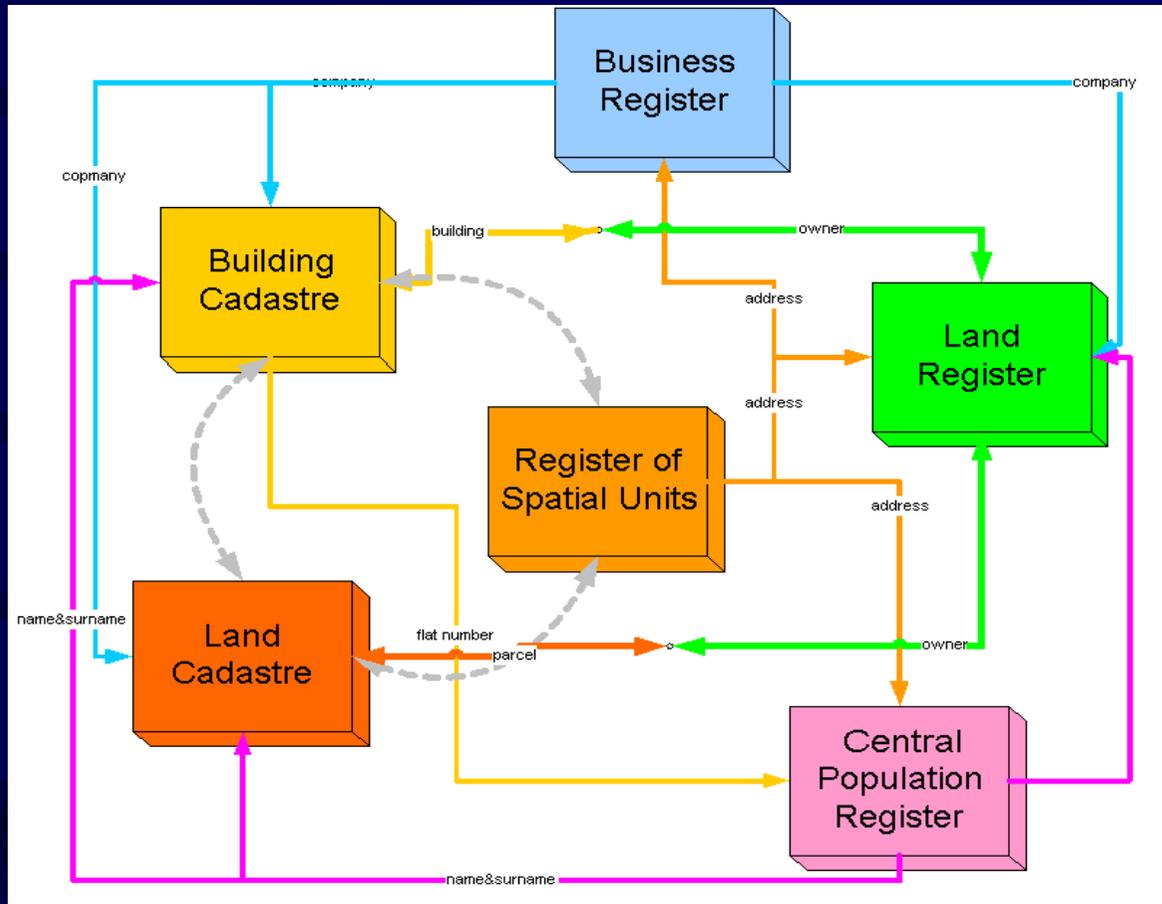


„**interoperability**’ means the possibility for **spatial data sets to be combined**, and for services to interact, **without repetitive manual intervention**, in such a way that the **result is coherent** and the added value of the data sets and services is enhanced“



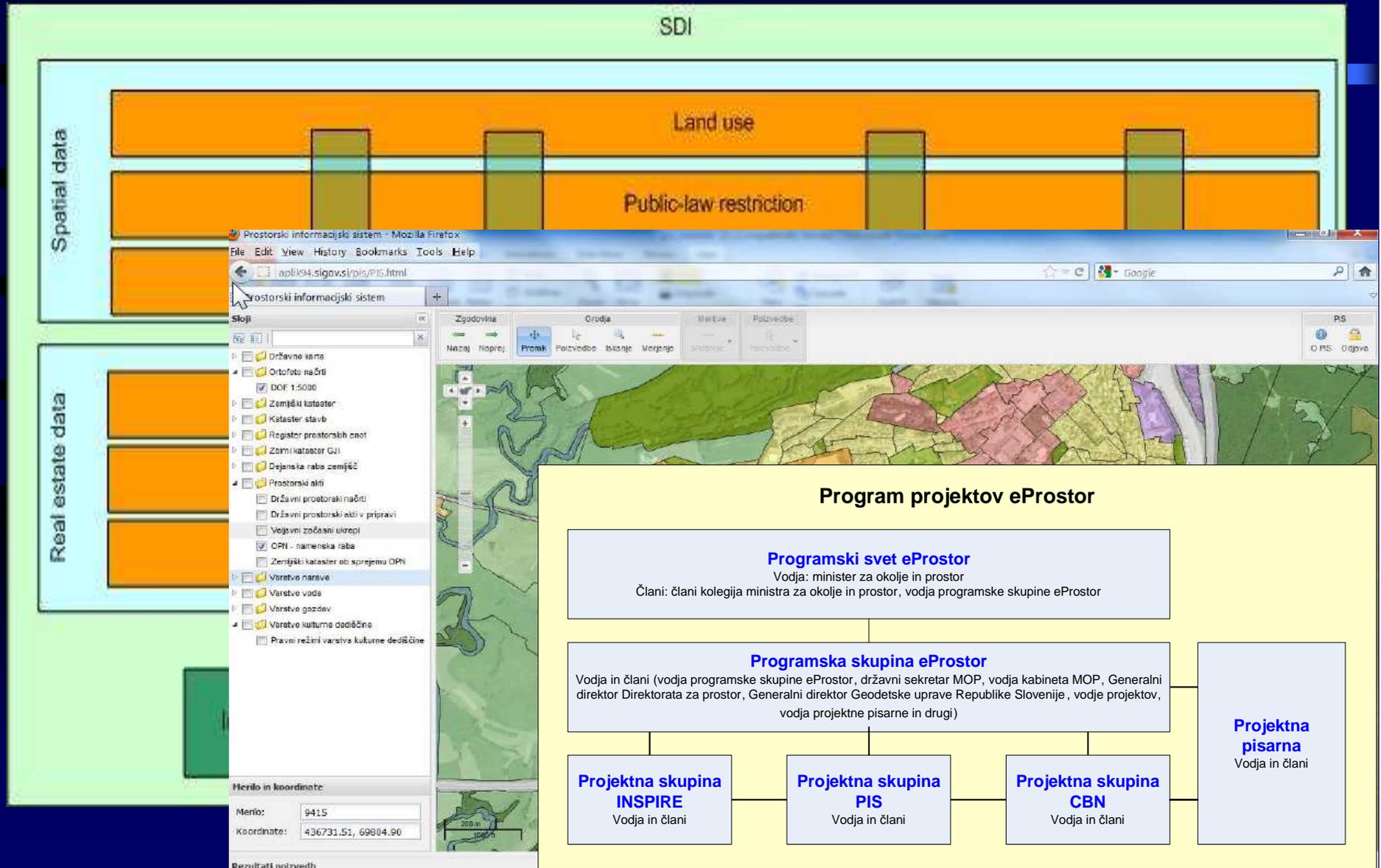
Core state registers

- Connected with web services (WS)
- Clear relations between datasets
- Interoperability of data



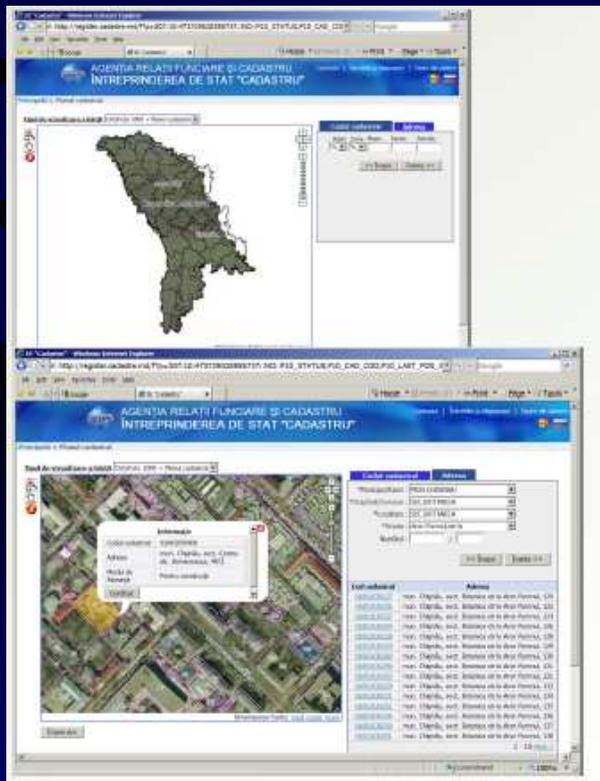
Source: Clemens Portelie: INSPIRE conference 2009

E-Spatial project

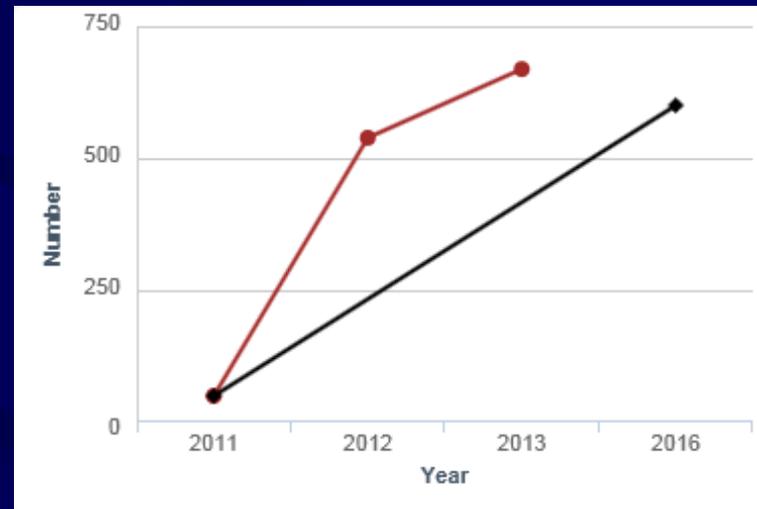
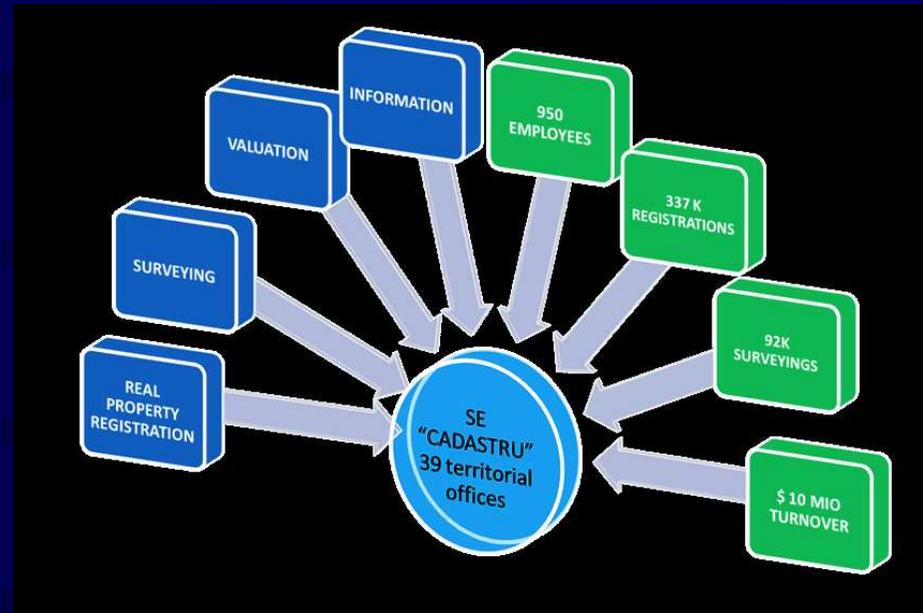


Situation in Moldova

- Data
- Services
- NSDI
- eGovernment
- Portals
- Coordination



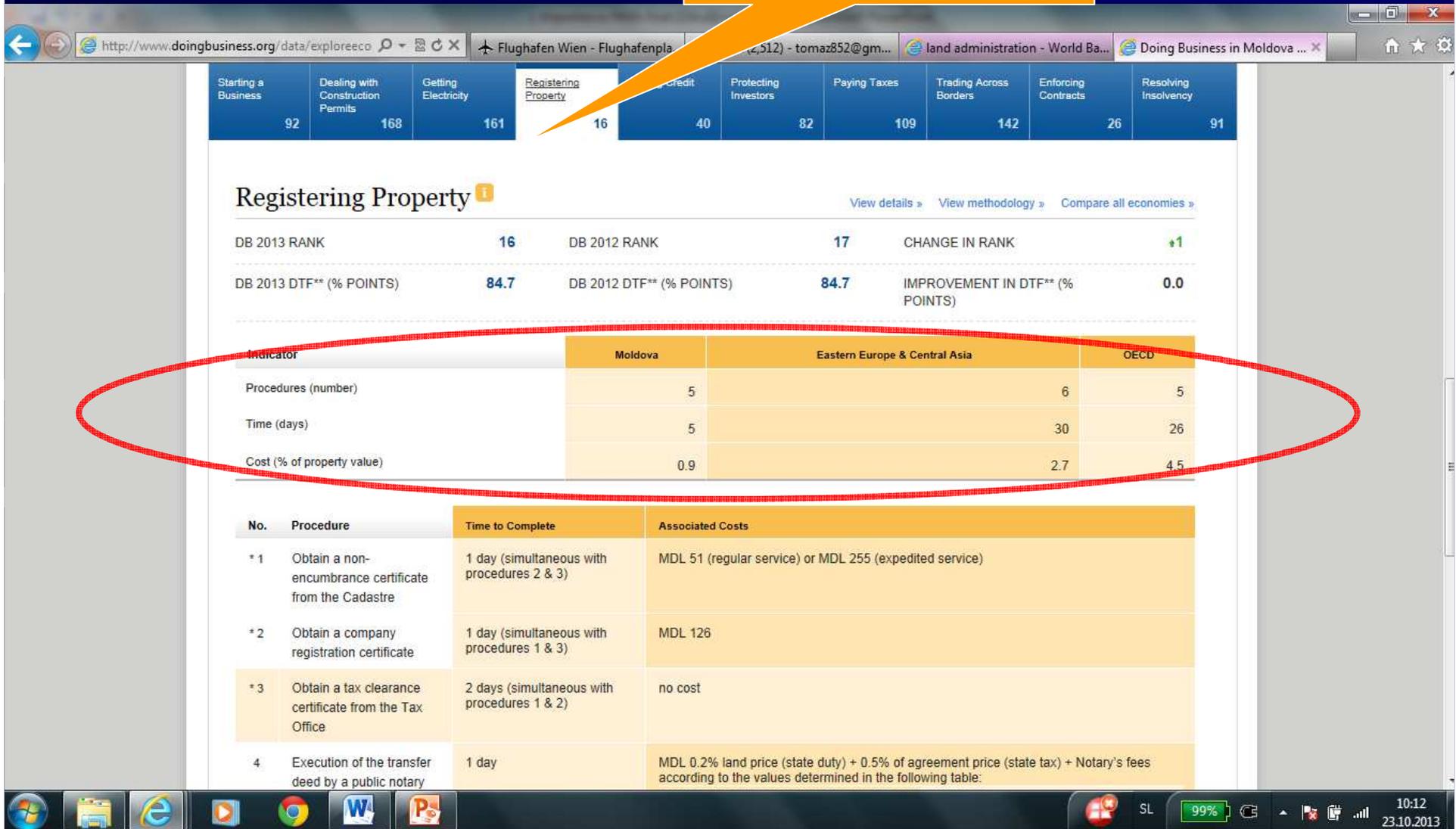
Source: Angela Matcov, SE CADASTRE



Open Data Portal in Moldova
(source WB Report about **Governance eTransformation Project**)

WB Doing Business 2014 – Property registration

16. at the World



CONCLUSIONS

- Cadastre and Mapping prepare for future challenges
- Land governance is the key to achieve sustainable development
- SDI support challenges of the new millennium
- Digital Cadastral Systems underpin efficient management of the four key functions within the land management paradigm
- NSDI build the capacity for taking the land policy agenda
- SMA must take care for quality of authoritative data

Questions?



THANK YOU!