



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR
GEODETSKA UPRAVA REPUBLIKE SLOVENIJE

SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

I FEEL SLOVENIA

SLOVENIA is



**Home of 2.054.741
inhabitants**

Area of 20.273 km²

Hous numbers: 536.616

Settlements: 6031

Wooded area: 66%

Land parcels: 5.392.020

Buildings: 1,161.407 mio

Coastline: 46 km



GEODETIC ACTIVITIES IN SLOVENIA

CIVIL

Slovene Association of Surveyors



cca 1100 members



PUBLIC

Ministry for the
Environment and
Physical planning



**SMA -
SURVEYING AND
MAPPING
AUTHORITY OF
THE REPUBLIC OF
SLOVENIA**

Government of
Republik of Slovenia

**GEODETIC
INSTITUTE OF
SLOVENIA**



cca 550 emp.

EDUCATION

University of
Ljubljana



**FACULTY for CIVIL
ENGINEERING and
GEODESY**

PROFESSION

**SLOVENIAN
CHAMBER OF
ENGINEERS**

Section of
Surveyors



308 chartered
geodetic engineers

PRIVATE

**PRIVATE
ENTERPRISES
or
CONTRACTORS**

345 companies

Geodetic Interest
Association of
Geodetic
Companies

94 members



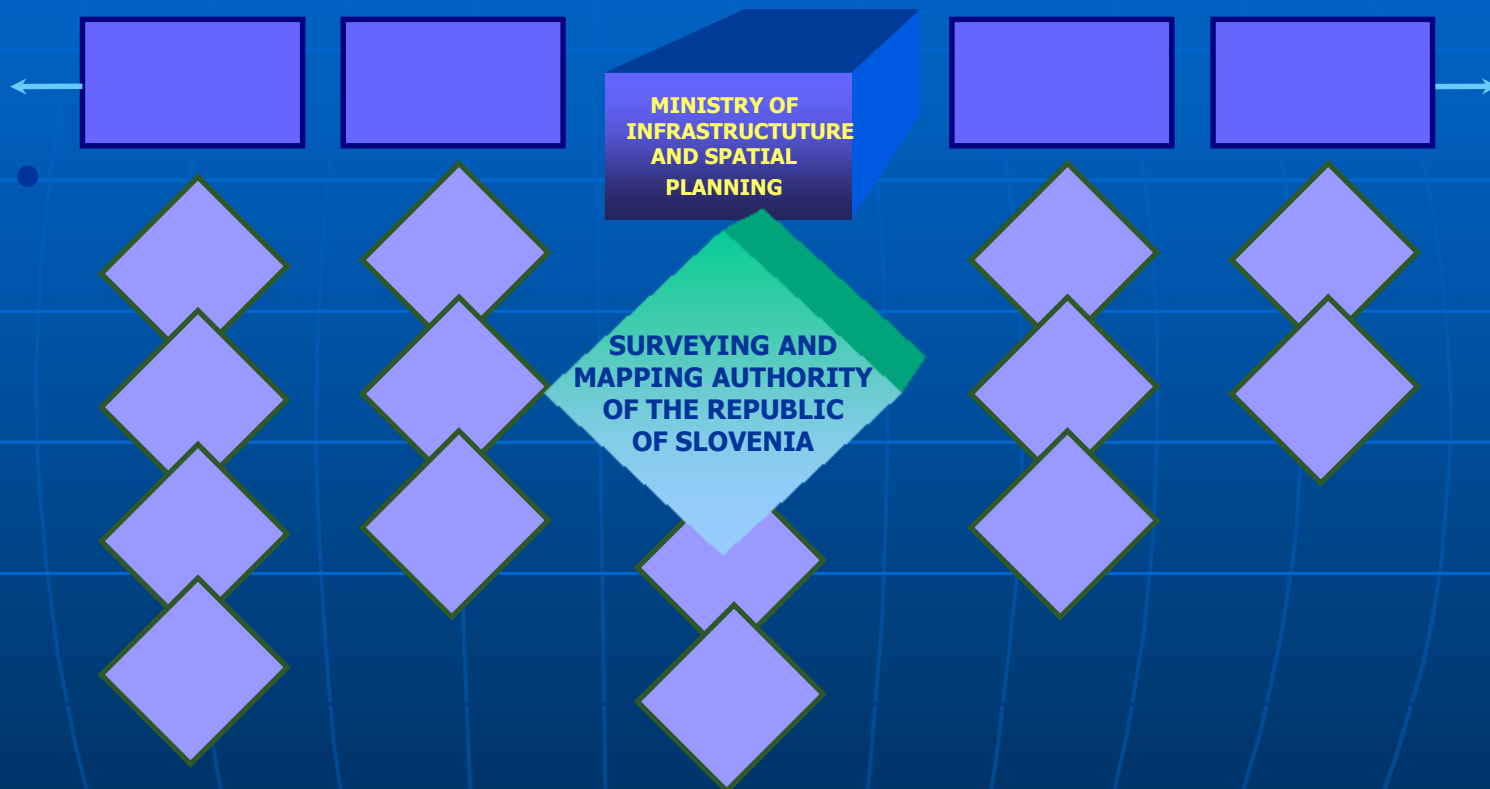
cca 500 emp.

PUBLIC GEODETIC SECTOR IN SLOVENIA



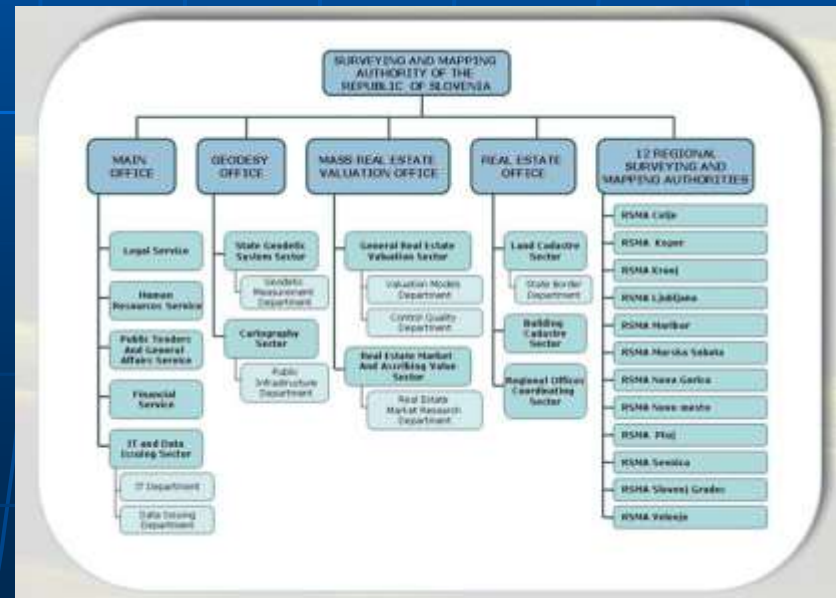
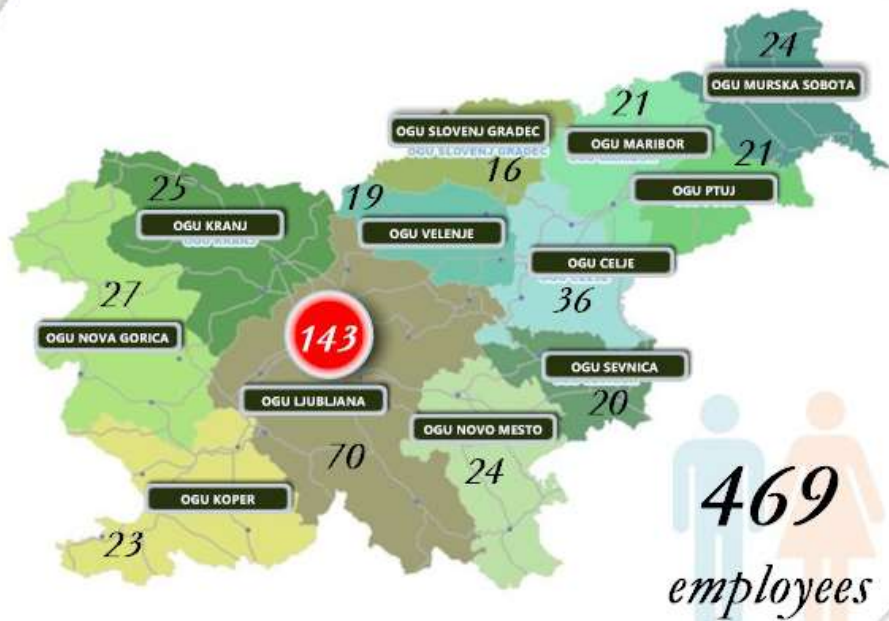
GOVERNMENT OF THE REPUBLIC OF SLOVENIA

SMA AT MESP

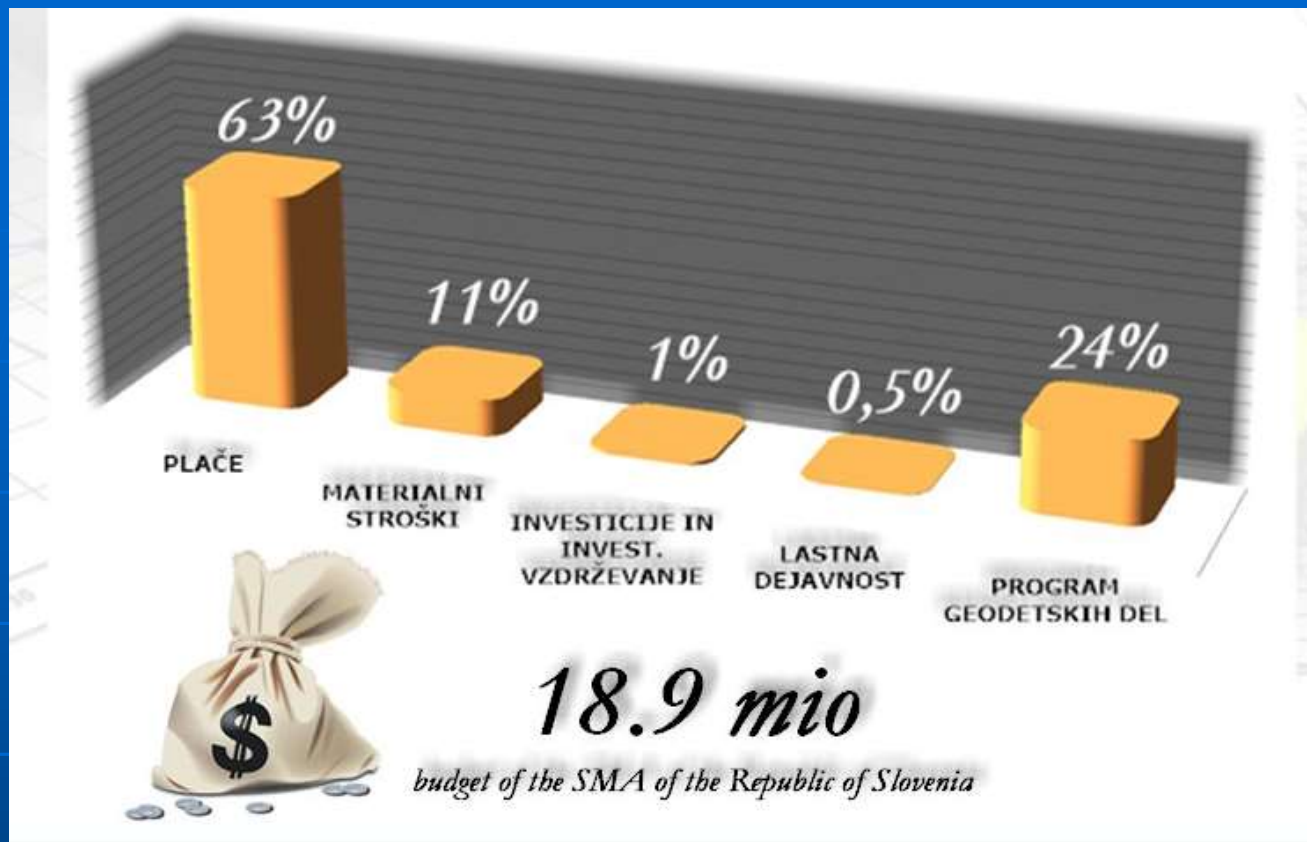


ORGANISATION

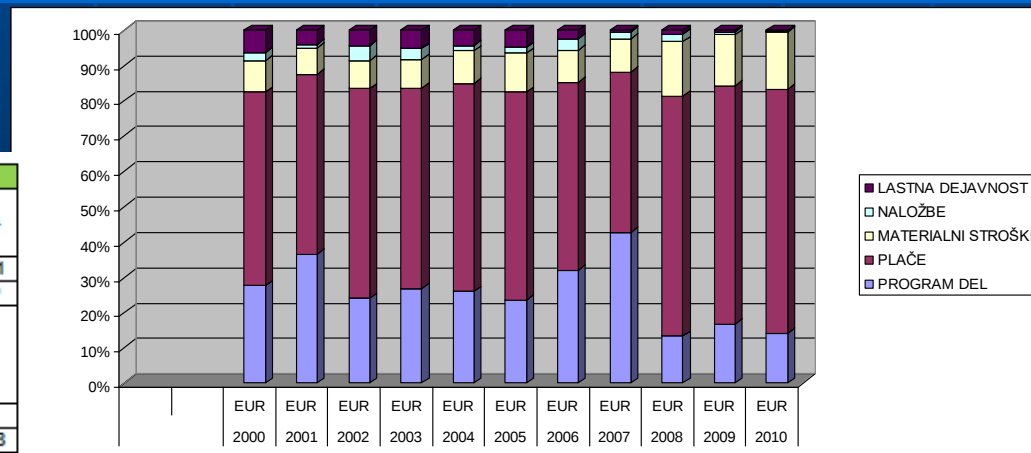
- Head office - (Ljubljana, Zemljemerska ulica 12)
- 12 regional geodetic administrations
- 42 branch survey offices.



FINANCIAL REVIEW



	2007	2008	2009	2010	2011	2012
Surveying works programme	12,158,409	2,662,839	3,488,762	3,870,418	2,363,387	2,235,824
Wages	12,915,929	13,551,555	14,137,920	14,098,625	13,976,793	13,538,511
Material costs	2,714,473	3,072,550	3,004,407	2,753,562	2,697,185	2,602,459
Investments and investment maintenance	495,624	437,209	161,390	109,496	101,145	108,782
Own activity	173,759	221,871	110,512	113,558	230,820	167,292
Total	28,458,194	19,946,024	20,902,991	20,945,659	19,369,330	18,652,868

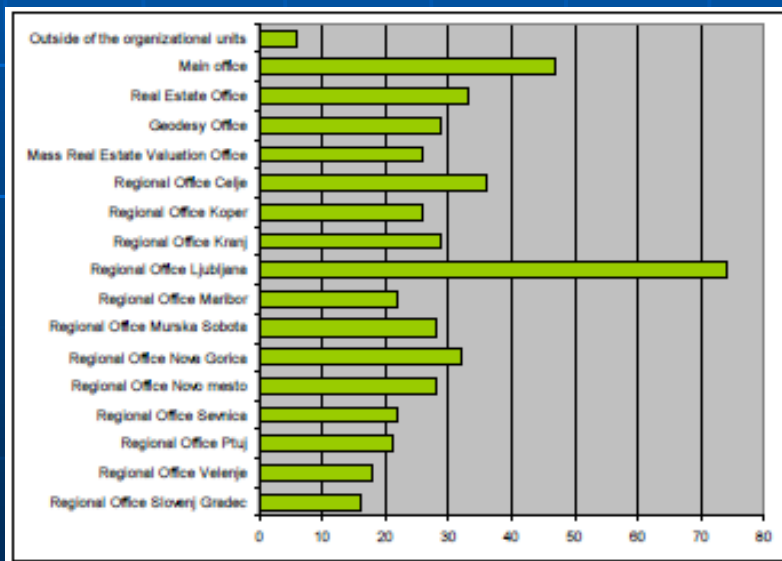


HUMAN RESOURCES

- 574 in year 2001
- 523 in year 2011 (-9%)
- 493 in year 2013
- 469 in year 2017

Staff structure by field of expertise in 2012

Surveyors	252
Agronomists	10
IT specialists	16
Lawyers, financial and administrative staff	215
Total	493



-9% in 10 years

Staff structure by level of education in 2012

University/Bachelor's degree	296
First level university	41
Secondary	150
Primary	6
Total	493

Organisational regulation:

GEODETIC ACTIVITIES ACT (2000, 2010)

set up licensed surveyors

established Section of land surveyors in Chamber of Engineer

Material regulation:

REAL ESTATE RECORDING ACT (2006)

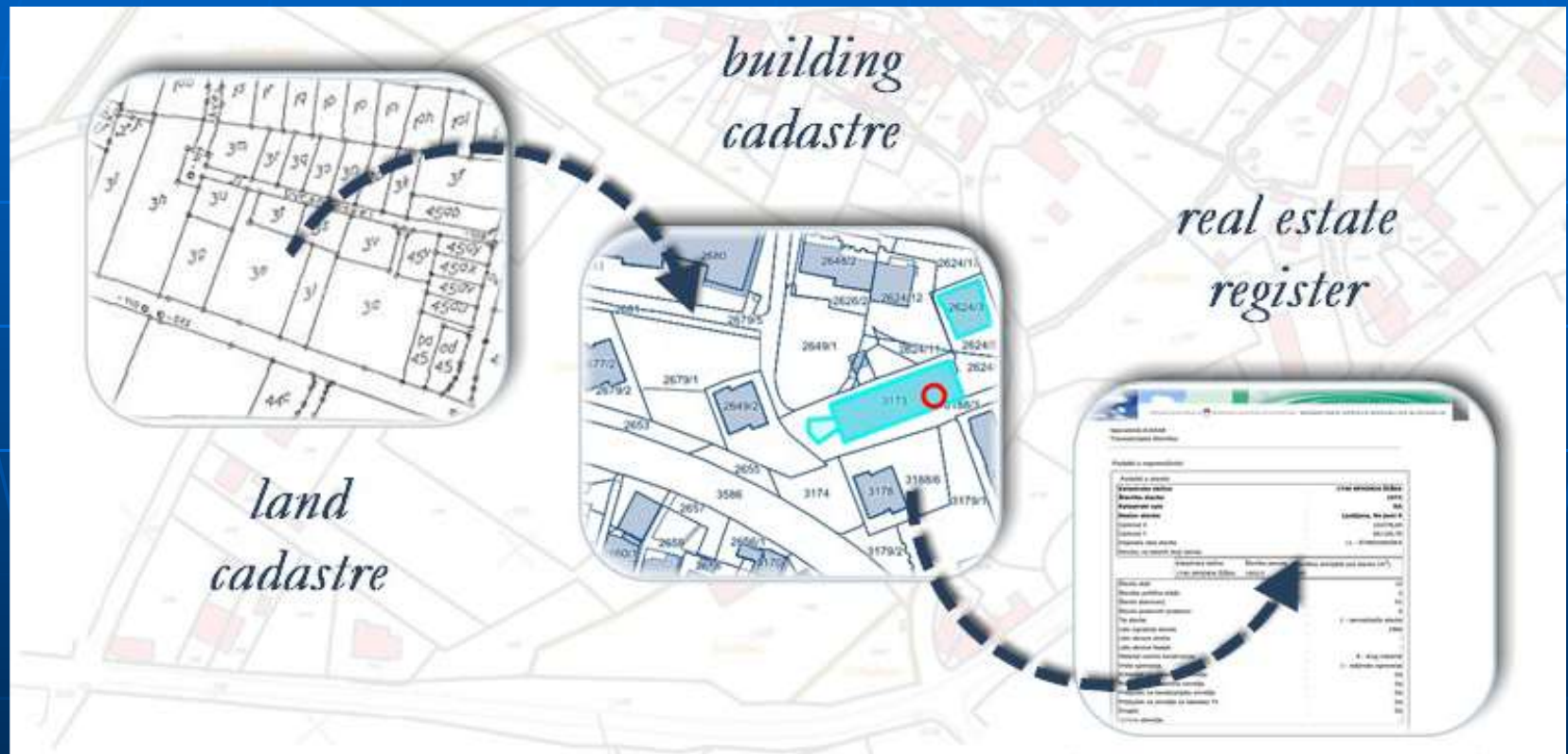
registers and datasets

parceling, land consolidation, demarcation of legal regime, parcel boundary regimes, geodetic work in urban planning....

REAL ESTATE MASS APPRAISAL ACT (2006)

SPATIAL DATA INFRASTRUCTURE ACT (2010)

REAL ESTATE REGISTRATION

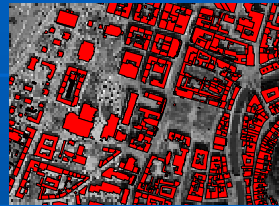


Maintenance and updating real estate data sets:

- Land Cadastre



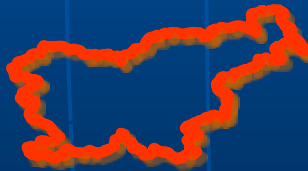
- Building Cadastre



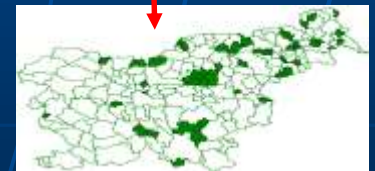
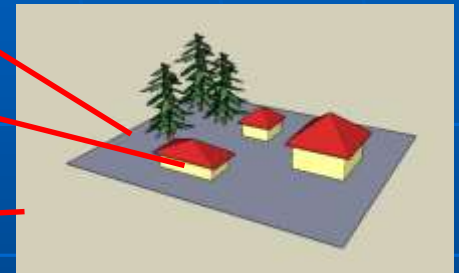
- Real Estate Register



- State Border

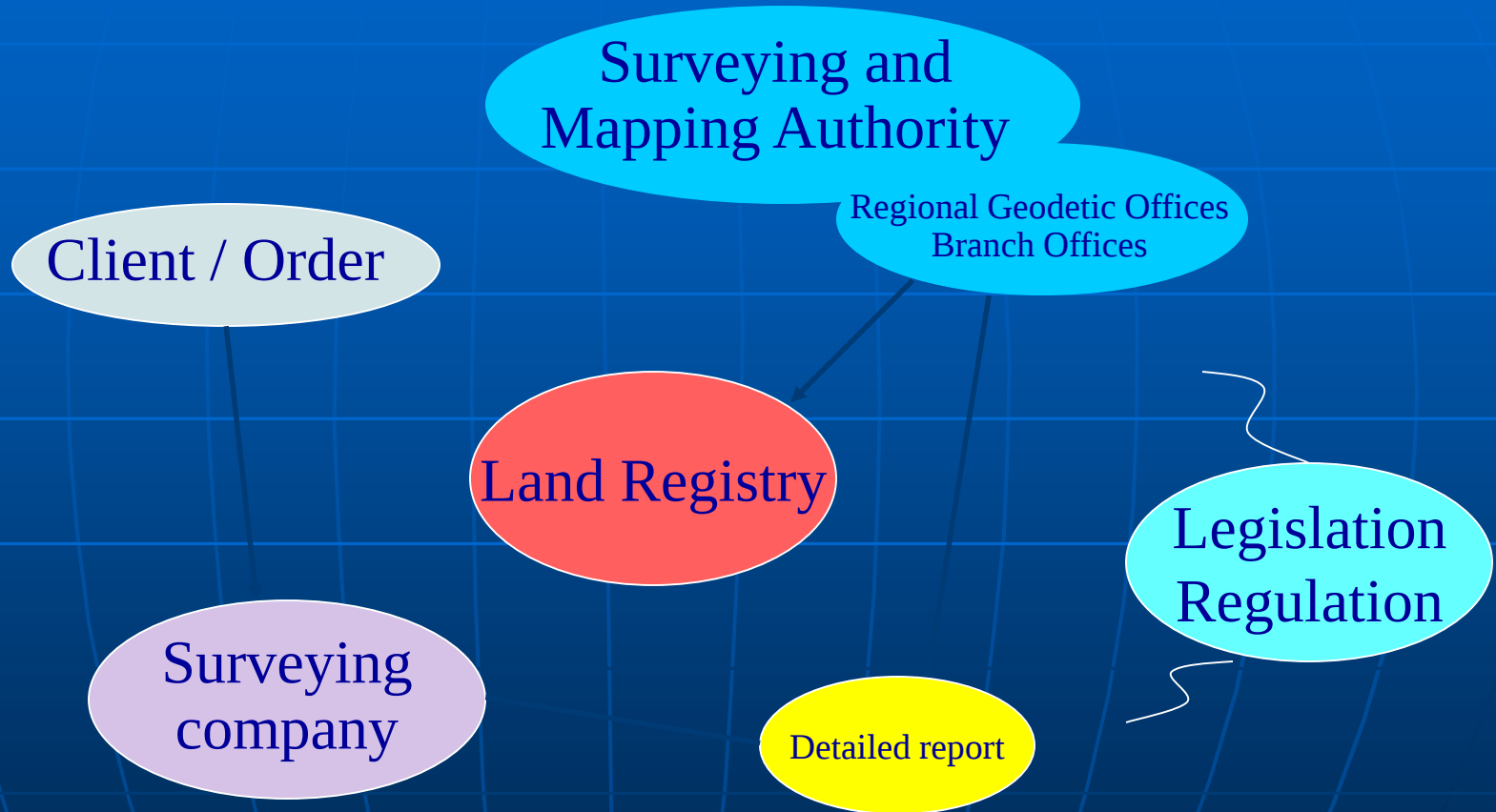


- Register of Spatial Units and House Numbers



How to Keep a Record?

Administrative procedure for Land Cadastre and Building Cadastre



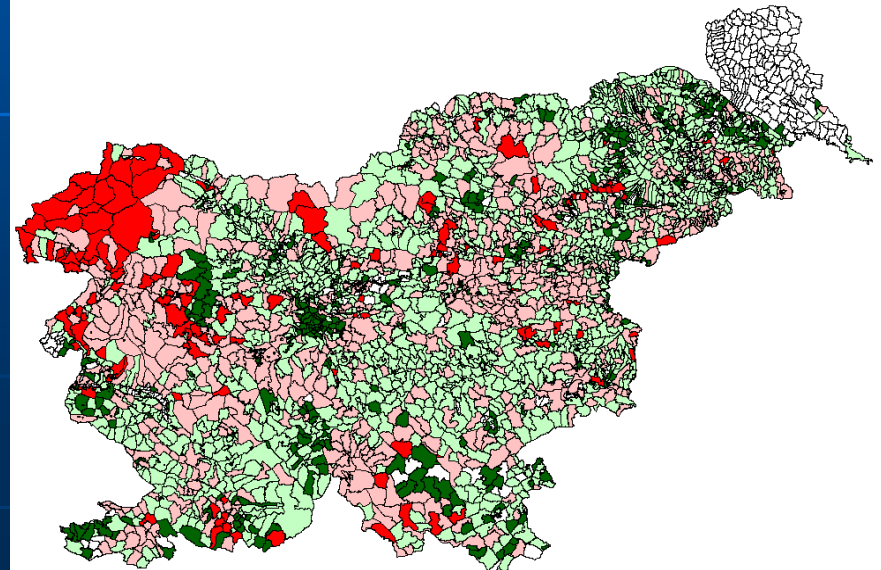
Land Cadastre - general information



Land Cadastre data

- Parcel number
- Boundaries
- Area
- Owner
- Administrator, if owned by the state
- Actual use
- Land quality

- 5,4 mio parcels
- 20 273 km²
- 2 698 cadastral communities
- 950 000 owners



Building Cadastre

Building
is an OBJECT in which you can enter.
Building is used for living, working or
protection and it can not be moved
without damage to the object.



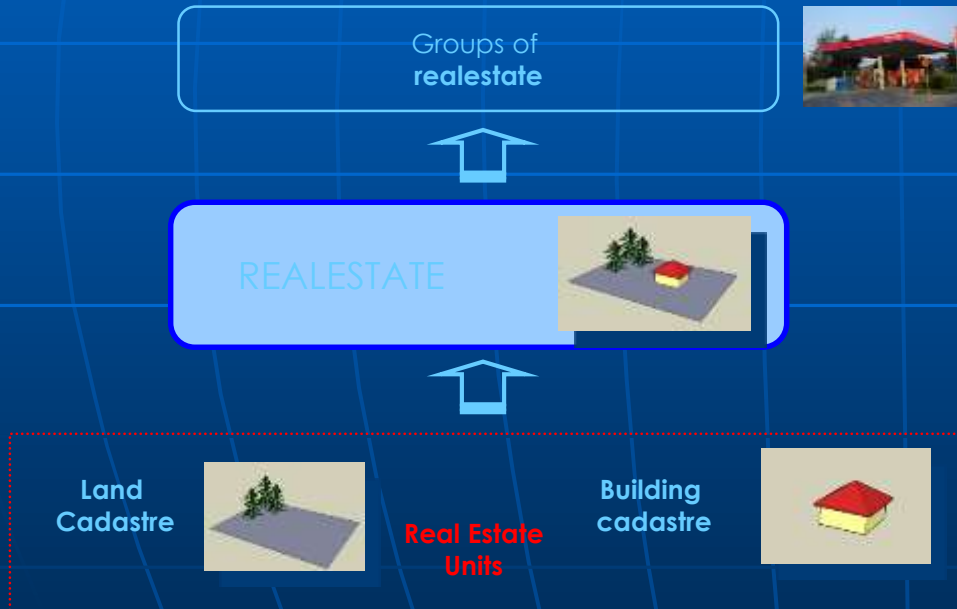
Part of the building
is a space in the building which can
be manually managed by law.

Today we have in building cadastre:

- 59.493 buildings
- 527.653 parts of buildings

REAL ESTATE REGISTER

Established in year 2008, registered 5.986.496 real estate entity
Improves existing data and fills the missing data on all real estate properties in Slovenia.
Ensures simple recording of the actual real estate situation
Creates an open, multipurpose technical record of real estate data.



Iskanje: po fizični / pravni osebi: Iščite fizično

Geodetska uprava Republike Slovenije

Register nepremičnin

Iskanje - po fizični / pravni osebi

Primer in preloži: SEVNSEK JOŽICA

POSLOVNO: 100495355283

Iskanje

Rezultat iskanja

Id nepremičnine		Vrednost		Vredn. stop.		Likaz	
id	stan	id	stan	id	stan	id	stan
10751049	1	1076	1	1076	1	1076	1
Del stavbe	1	1076	1	1076	1	1076	1
Del stavbe	0	1076	0	1076	0	1076	0

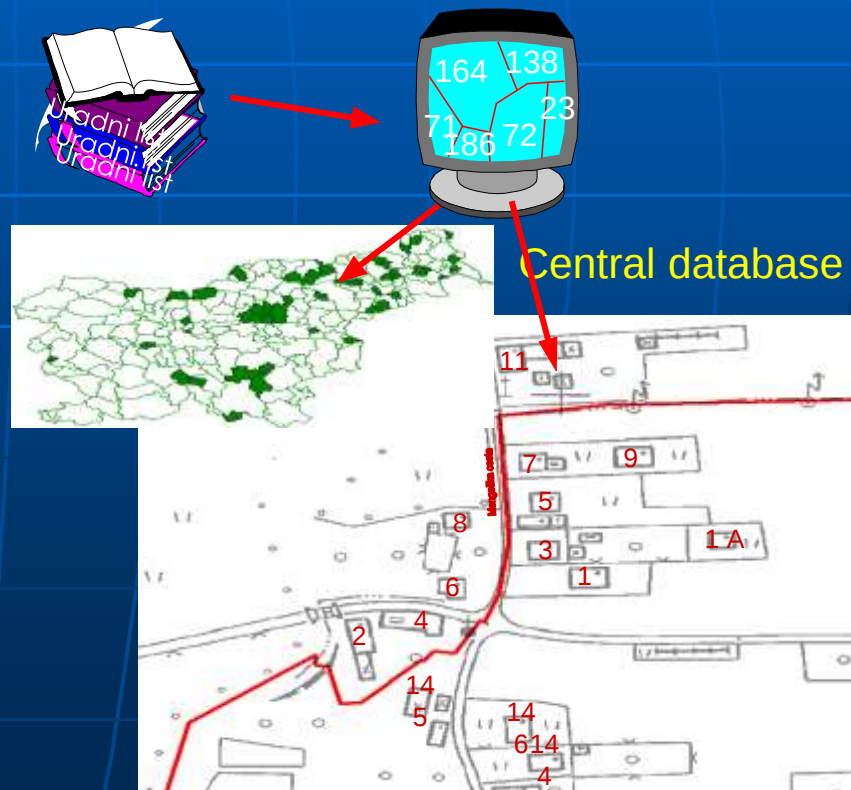
Število nepremičnin v odčitku: 0

Register of Spatial Units

Provides data for addresses and other spatial definitions.

Provides data for the central national registers like the Central Population Register, the Slovene Business Register, the Register of Taxpayers and many other collections of data.

553 817	house numbers
10 387	streets
6035	settlements
212	municipalities
58	administrative units
2.695	cadastral communes
18.041	spatial area
3.313	voting units (parliament elections)
3.310	voting units (local elections)
466	postal districts
814	school localities
1.228	communities (local, village and city district)
12	statistical regions



National Border Section



Border with the Republic of Croatia is the largest and is under arbitrage procedure.

Real Estate Census

We began with:

- data capturing using space inventorying methods
- data transfer from different public databases

Then we started with mass real estate inventory

- 9 months
- 1 983 people (inventory takers, instructors, assistants, etc.)
- Collected data from 418 000 registered persons at 164 000 apartment numbers

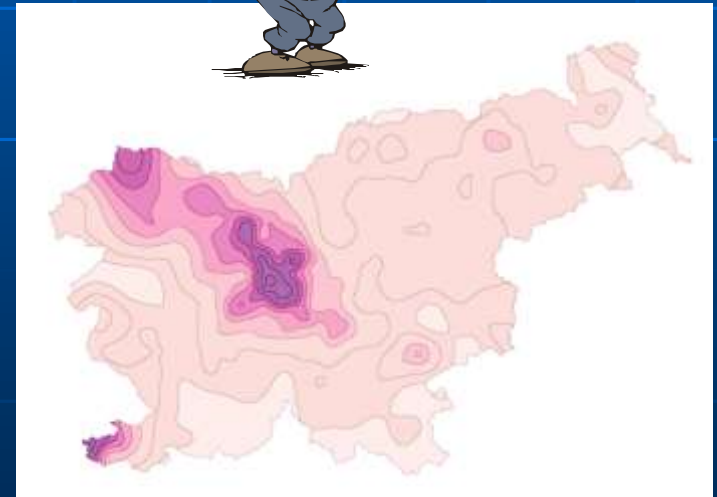
Today we have registered:

- - 1.161.407 buildings
- - 1.807.258 parts of buildings

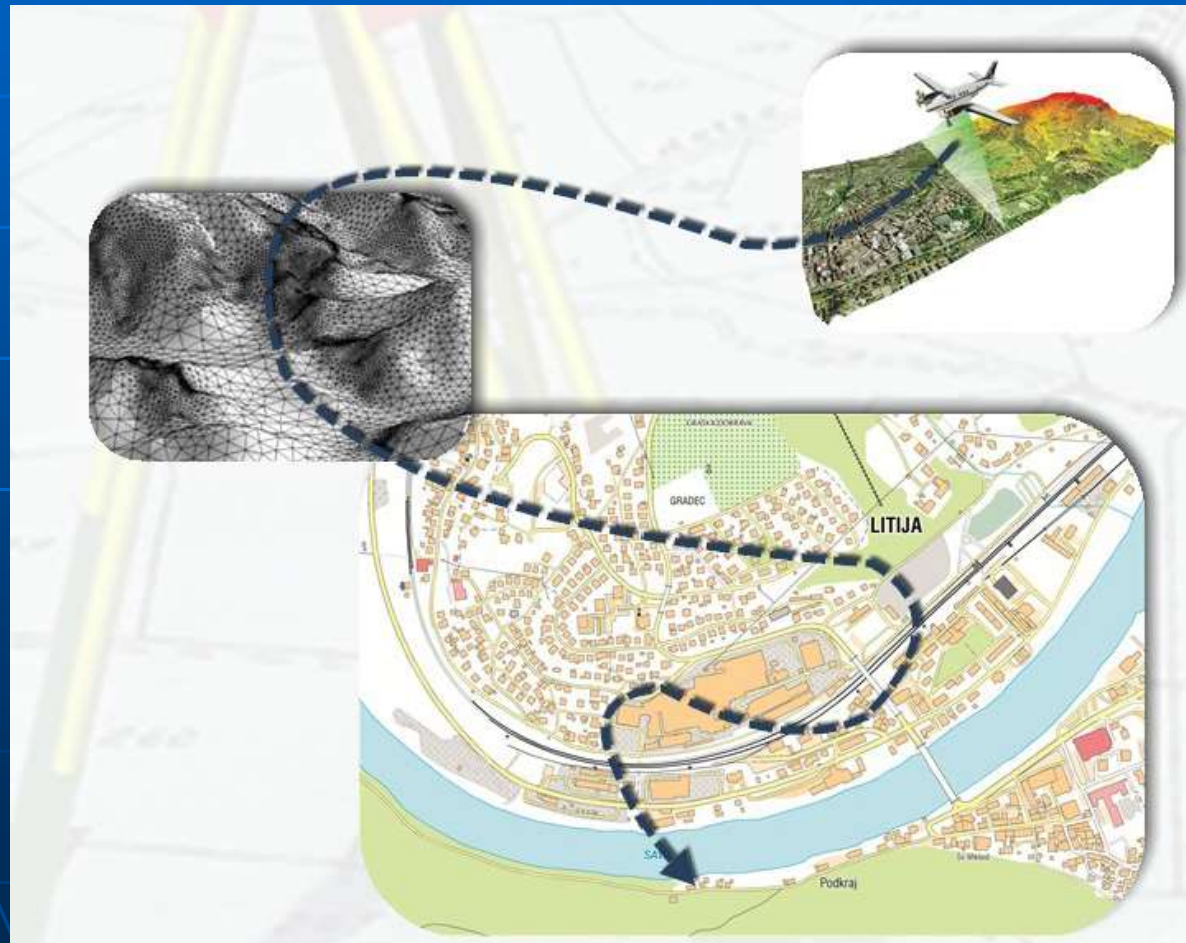


LAST 10 YEARS REAL ESTATE REGISTRATION DEVELOPEMEND

- 2001 from paper into computer
- 2011 from m2 to Euro



GEODESY, TOPOGRAPHY AND CARTOGRAPHY



SIGNAL – network of permanent GPS stations

Slovenia-Geodesy-NAvigation-Location



16
permanent
stations



CENTRALNA BAZA GEODETSKIH TOČEK

HORIZONTALNE TOČKE
VIŠINSKE TOČKE
GPS TOČKE

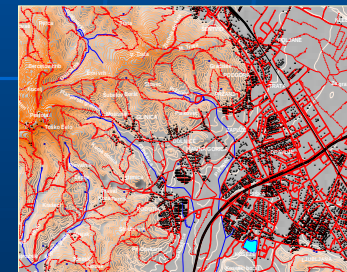
Iskalni pregledovalnik
Sprememba gesla
Uporabniška navodila

© GURS & © S&T 2005

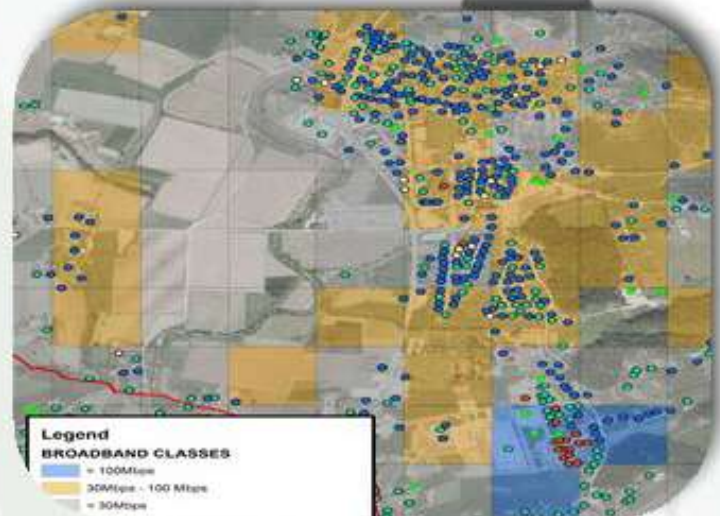
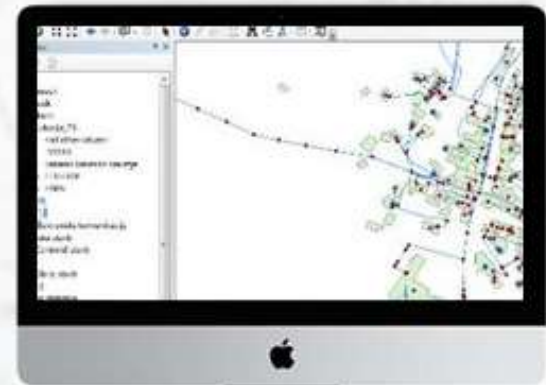


GEODETC DATA

- Digital orthophoto
- Basic and national topographical maps
- Topographical data
- Digital elevation model
- Basic geodetic sistem data
- Register of geographical names
- Consolidated cadastre of public infrastructure



Consolidated cadastre of public infrastructure



State border maintenance and documentation



GEODESY TOPOGRAPHY AND CARTOGRAPHY LAST 10 YEARS

- Geographical names database
- Digital orthophoto

- GNSS stations
SIGNAL

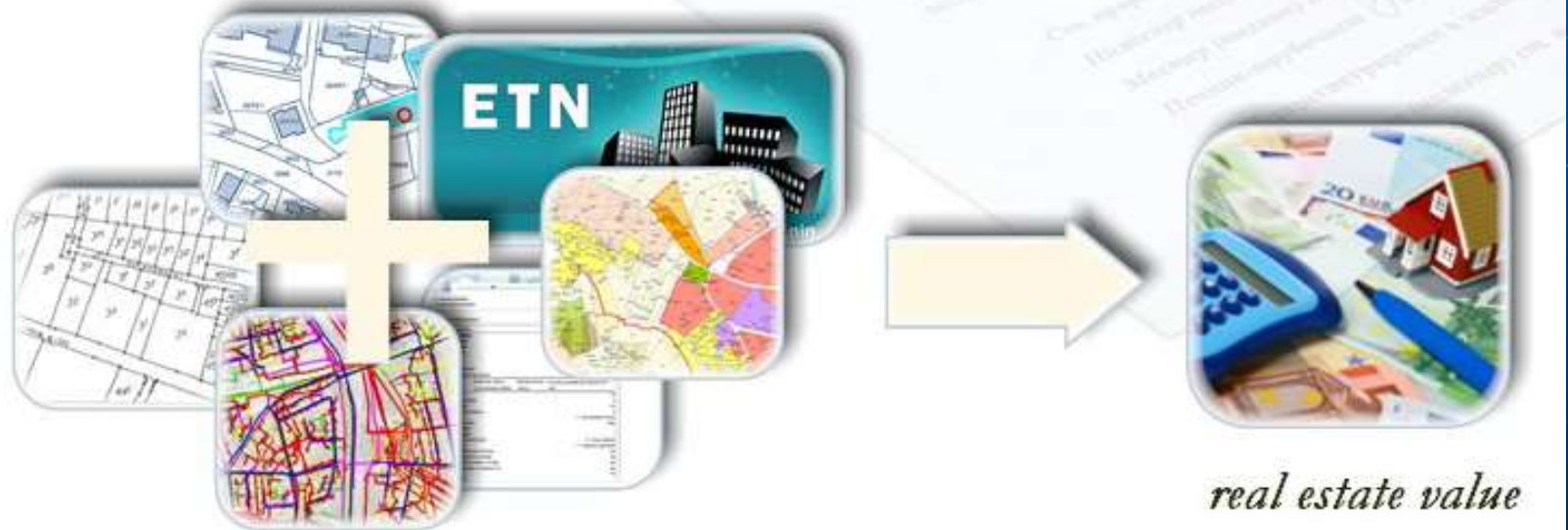
- New CRS
- Utility cadastre

State topographic
map at scale
1:50.000

- Topographic database

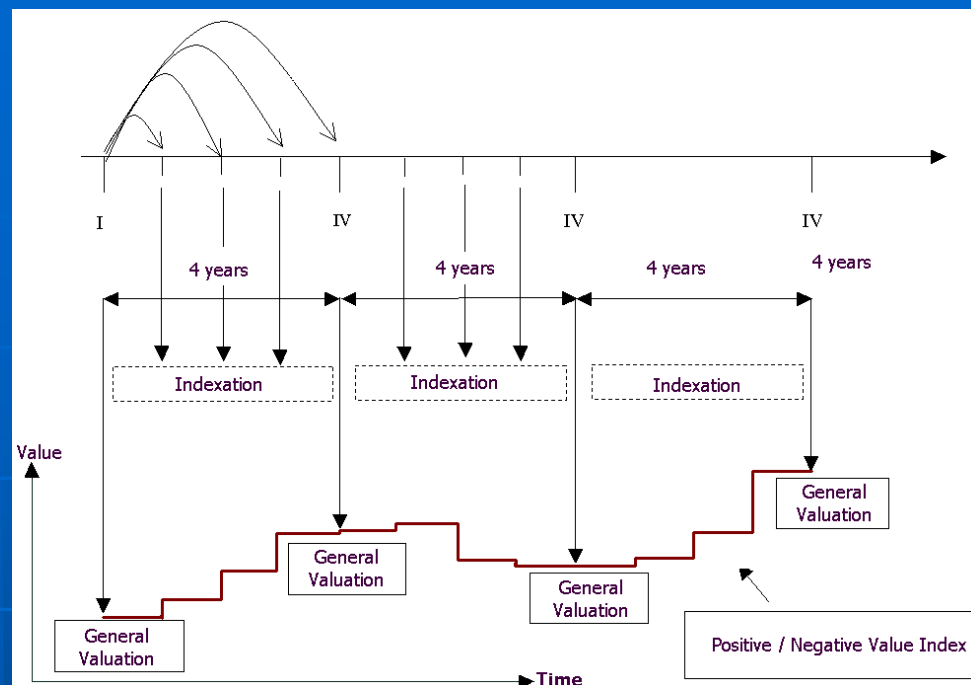
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

REAL PROPERTY MASS VALUATION SYSTEM

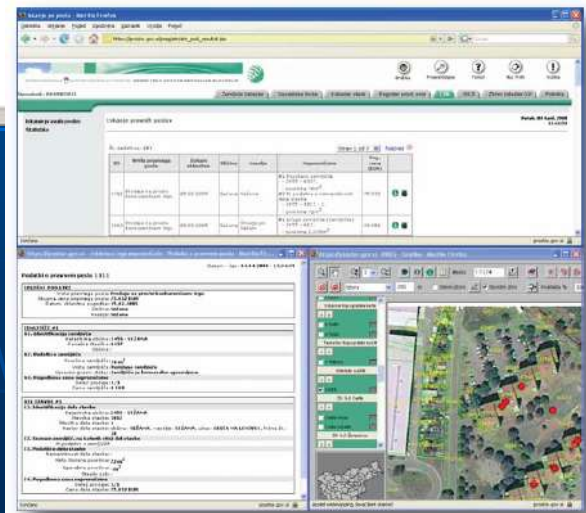


VALUATION OFFICE IS RESPONSIBLE FOR:

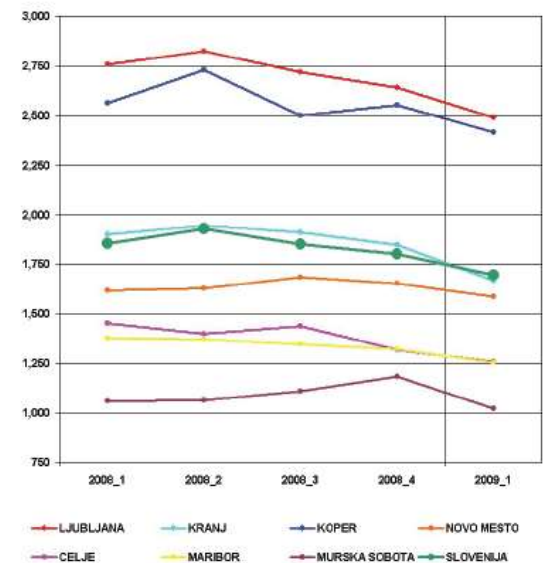
- Sales data registration, their improvement and quality
- Monitoring and reporting the Real Property Market
- General valuation every 4 years: model designing, model calibration, notification, appeal process, finally calculation of all property in Real Property data Register Consolidation of valuation models with all 211 municipalities
- Value Indexation every year



PUBLIC REAL ESTATE MARKET DATA REGISTER



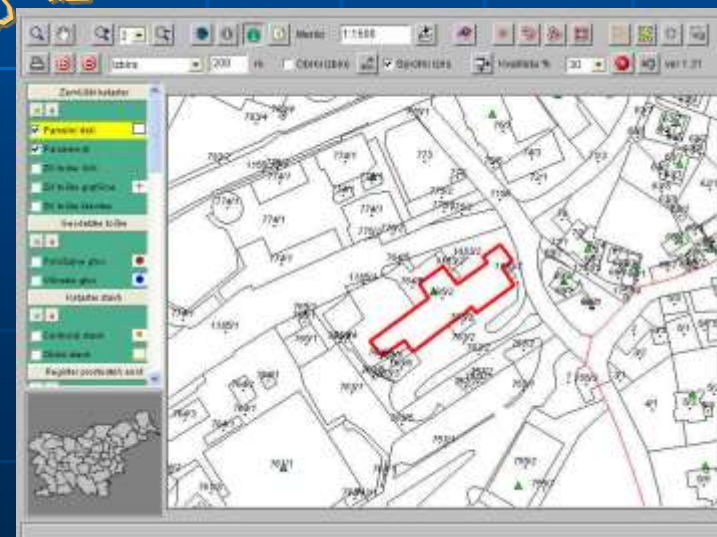
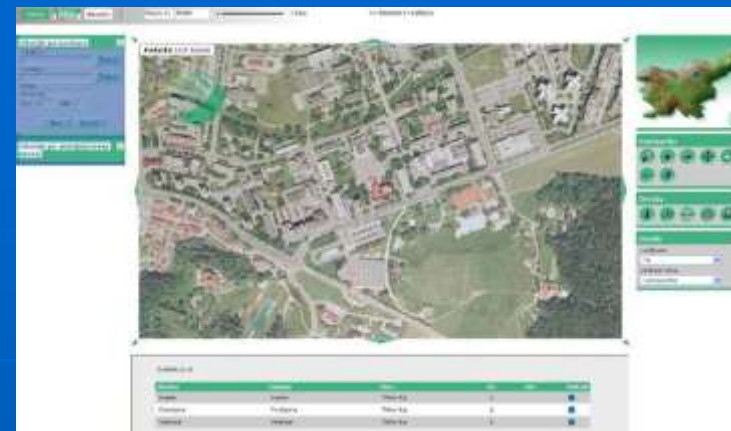
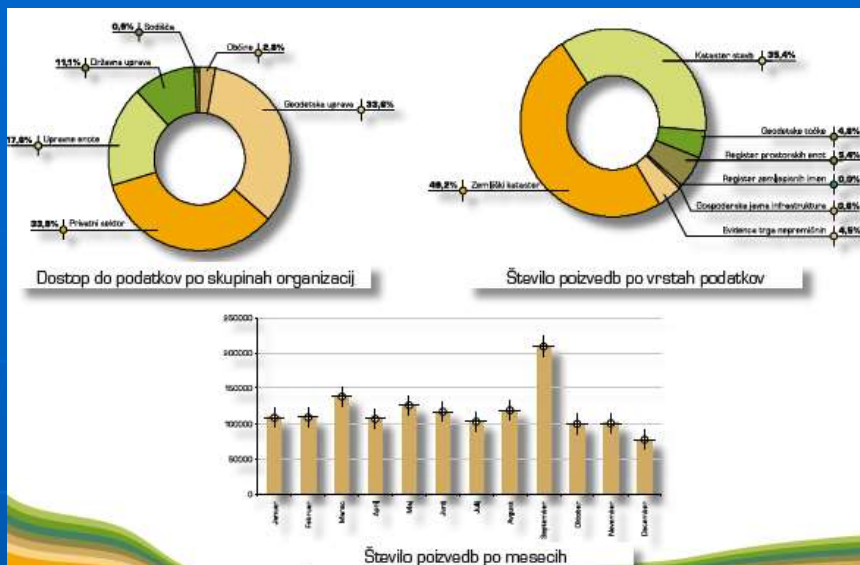
Graf: Kvartalno gibanje cene m² stanovanja za večja slovenska mesta in Slovenijo



DATA DISEMINATION, INSPIRE AND INTERNATIONAL ACTIVITIES



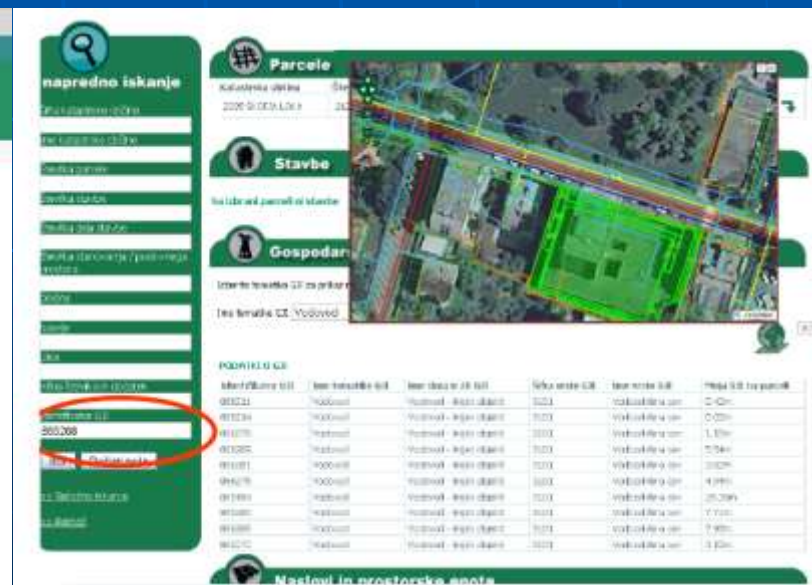
GEODETIC DATA DISTRIBUTION SYSTEM



Web map wiewer (www.gu.gov.si)

Geo portal: (www.prostor.si)

- Central Evidence of Spatial Metadata
- Electronic access to geodetic data
- Ordering Data
- SIGNAL network-Permanent GPS stations data
- Data about value of real estate

Ime lastnika GIB	Ime lastnika GIB	Ime lastnika GIB	Ime lastnika GIB	Ime lastnika GIB
001221	001221	001221	001221	001221
001224	001224	001224	001224	001224
001225	001225	001225	001225	001225
001226	001226	001226	001226	001226
001227	001227	001227	001227	001227
001228	001228	001228	001228	001228
001229	001229	001229	001229	001229
001230	001230	001230	001230	001230
001231	001231	001231	001231	001231
001232	001232	001232	001232	001232
001233	001233	001233	001233	001233
001234	001234	001234	001234	001234
001235	001235	001235	001235	001235
001236	001236	001236	001236	001236
001237	001237	001237	001237	001237
001238	001238	001238	001238	001238
001239	001239	001239	001239	001239
001240	001240	001240	001240	001240

- Initiative for directive
- INSPIRE directive
- Slovenian law for INSPIRE transposition
- SMA - national contact point (www.geoportal.gov.si)

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

INTERNATIONAL COOPERATION

- Involved in various European and International professional associations
 - Eurogeographics
 - Permanent committee for land cadastre PCC
 - Working party of Land administration UN/ECE
- Takes part in projects of professional international partnership
 - Linking of database
 - Data exchange
 - State border maintenance
- UNGEEN – geographical name
- INSPIRE directive coordination



EUROGEOGRAPHICS PRODUCT



Welcome to the EuroMapFinder

EuroMapFinder is a metadata service where you can search for information on European geographical data and maps of the [member orgs](#) EuroGeographics. Please, select your favourite language to start searching EuroMapFinder catalogue:

The catalogue service is available in three languages. Please select a window will open containing the application

[Discovery Service](#)

[Service de découverte](#)

[Auskunftsdienst](#)

EuroGeonames



In the region of
western Balkan (295.015 km²)

we could find:

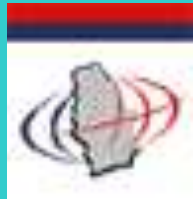
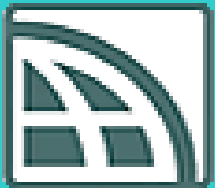
28.108.500 habitants

62.671.006 land parcels

7.500 employees in land administration in **9** geodetic agencies

3.521 chartered surveyors

1.989 private geodetic companies



Land	Fahne	Heutiger Hauptstadt	Heutiger Wappen	Historischer Wappen
Österreich		Wien		
Kroatien		Zagreb		
Tschechische Republik		Prag		
Ungarn		Budapest		
Italien (Südtirol)		Roma (Bolzano)		
(Trentino)		(Trento)		
Slowakei		Bratislava		
Slovenia		Ljubljana		

FACHTAGUNGEN DER VERMESSUNGSVERWALTUNGEN

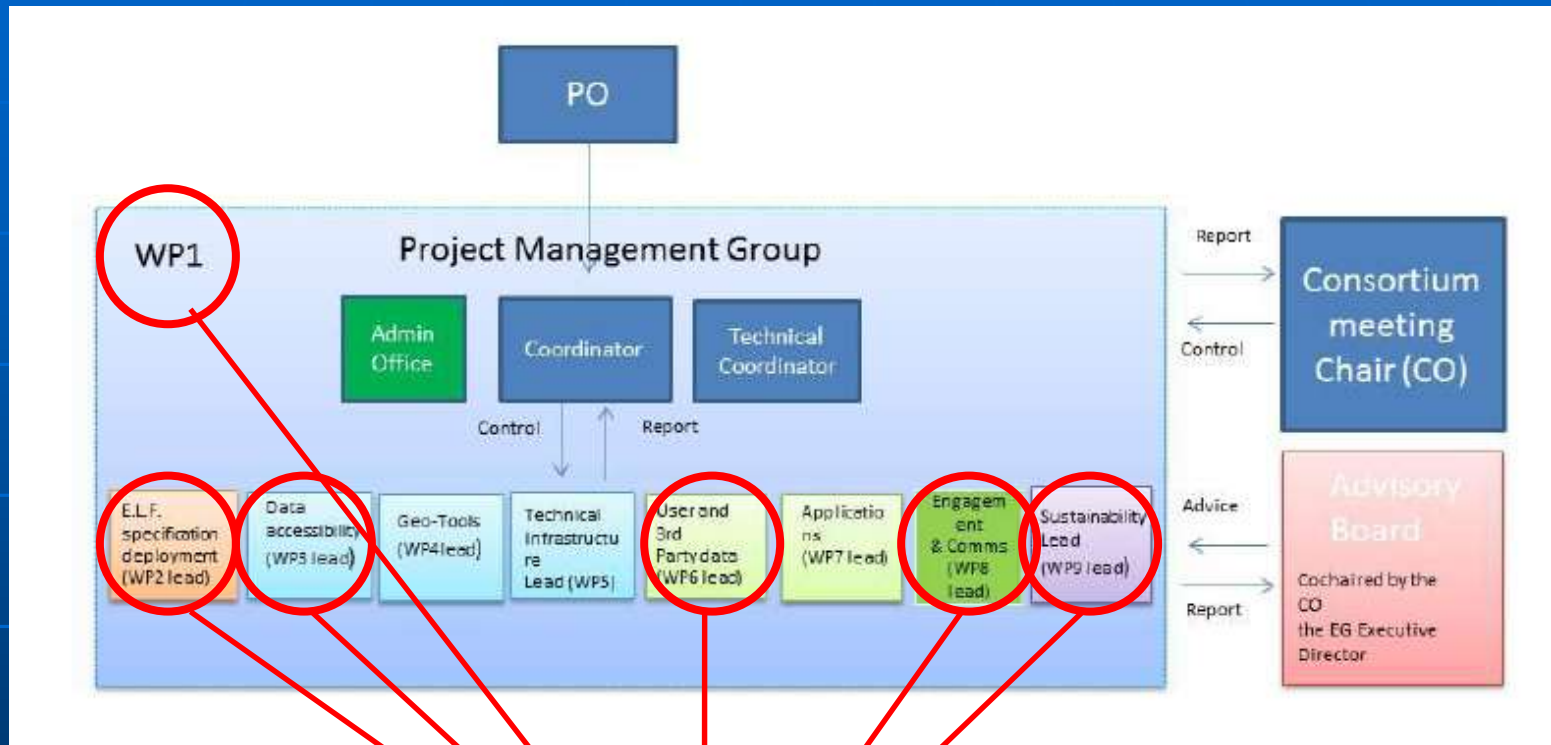


Kroatien, Österreich, Slowakei, Slowenien,
Südtirol, Trentino, Tschechien und Ungarn

Historische Karte der Österreichisch-Ungarischen Monarchie (Jahr 1910)



European Location Framework - E.L.F.



SMA

MODERNISATION OF SPATIAL DATA INFRASTRUCTURE TO REDUCE RISKS AND IMPACTS OF FLOODS

The project consists of these subprojects:

- subproject Geodetic Reference System (GRS)
- subproject Topographic database (TOPO)
- subproject Hydrographic database (HYDRO)
- subproject INSPIRE (INSPIRE)



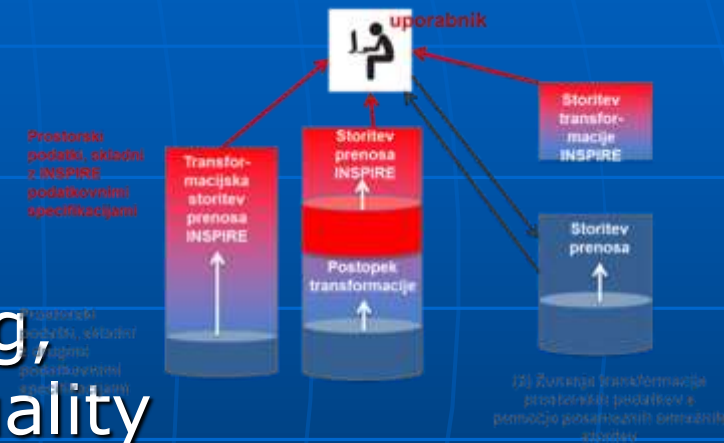
■ www.gurs-egp.si/eng



Why e-Spatial program?

Spatial datasets in Slovenia was:

- ❖ non standardised,
- ❖ not full coverage,
- ❖ IKT was outdated,
- ❖ some of them was missing,
- ❖ some of them was bad quality
- ❖

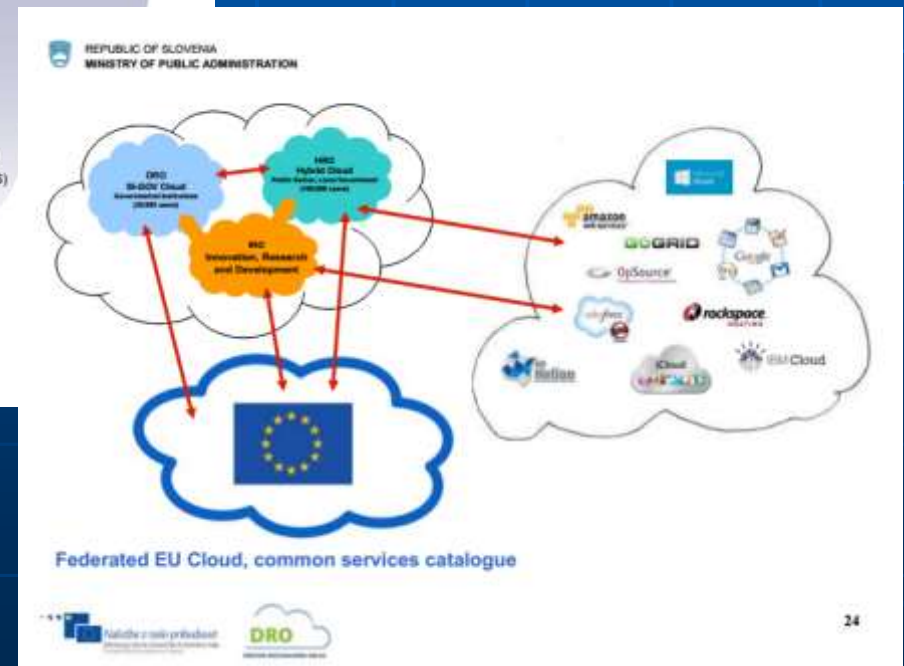
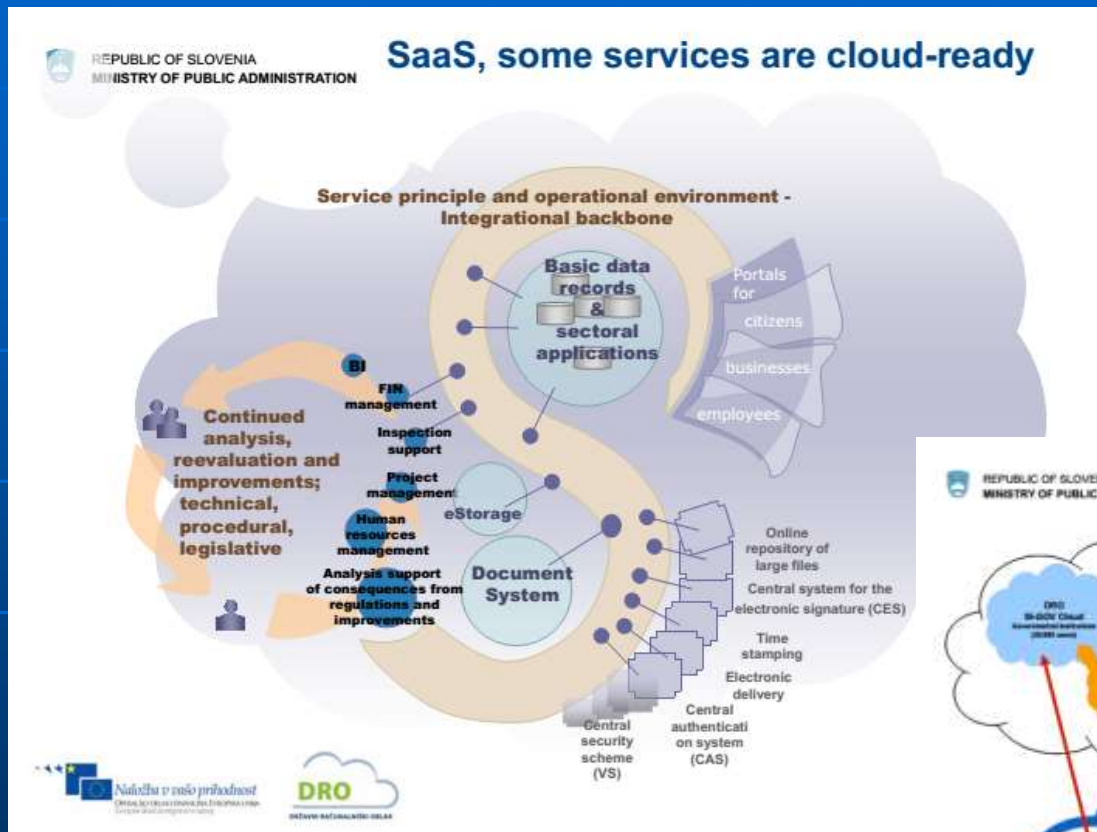


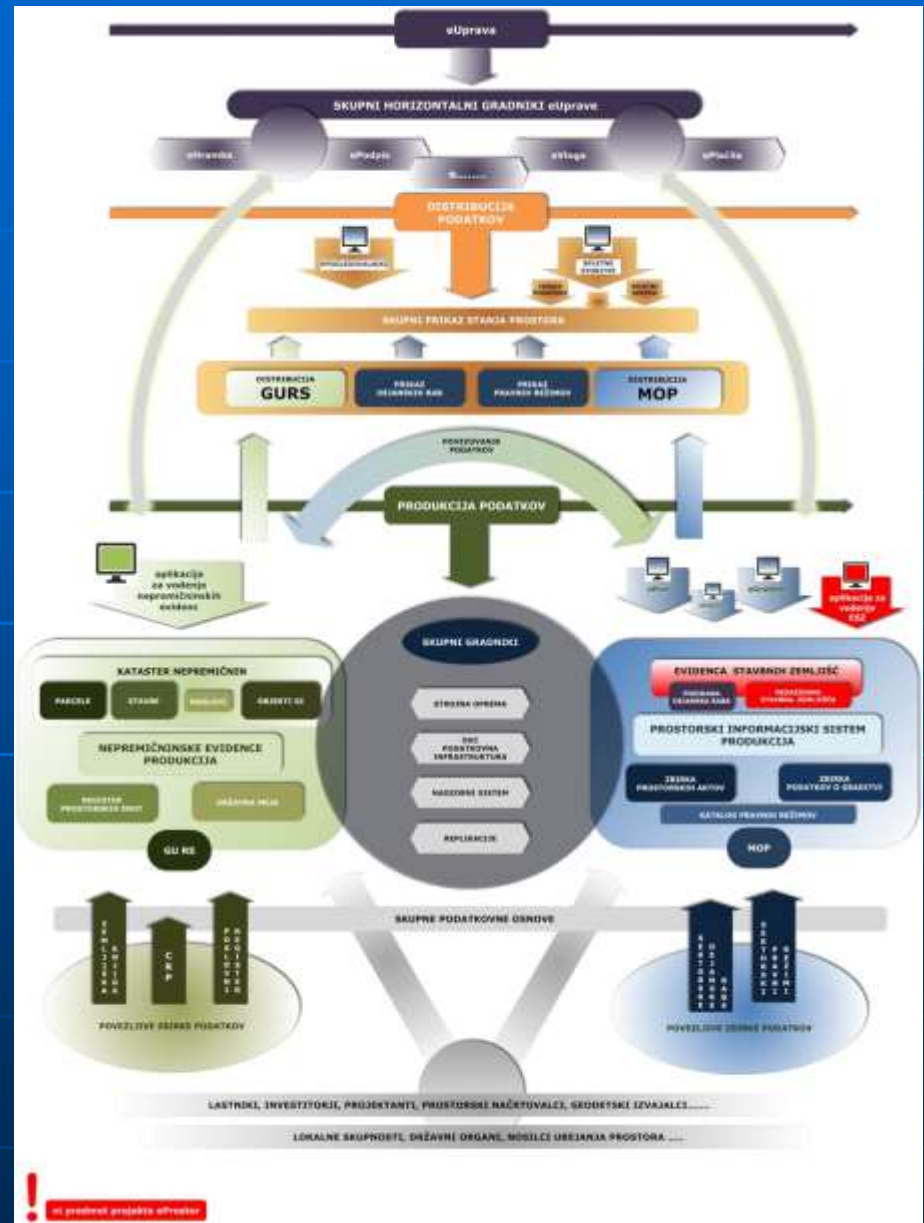
There was no possibilities for interoperability!

E-Spatial program of projects

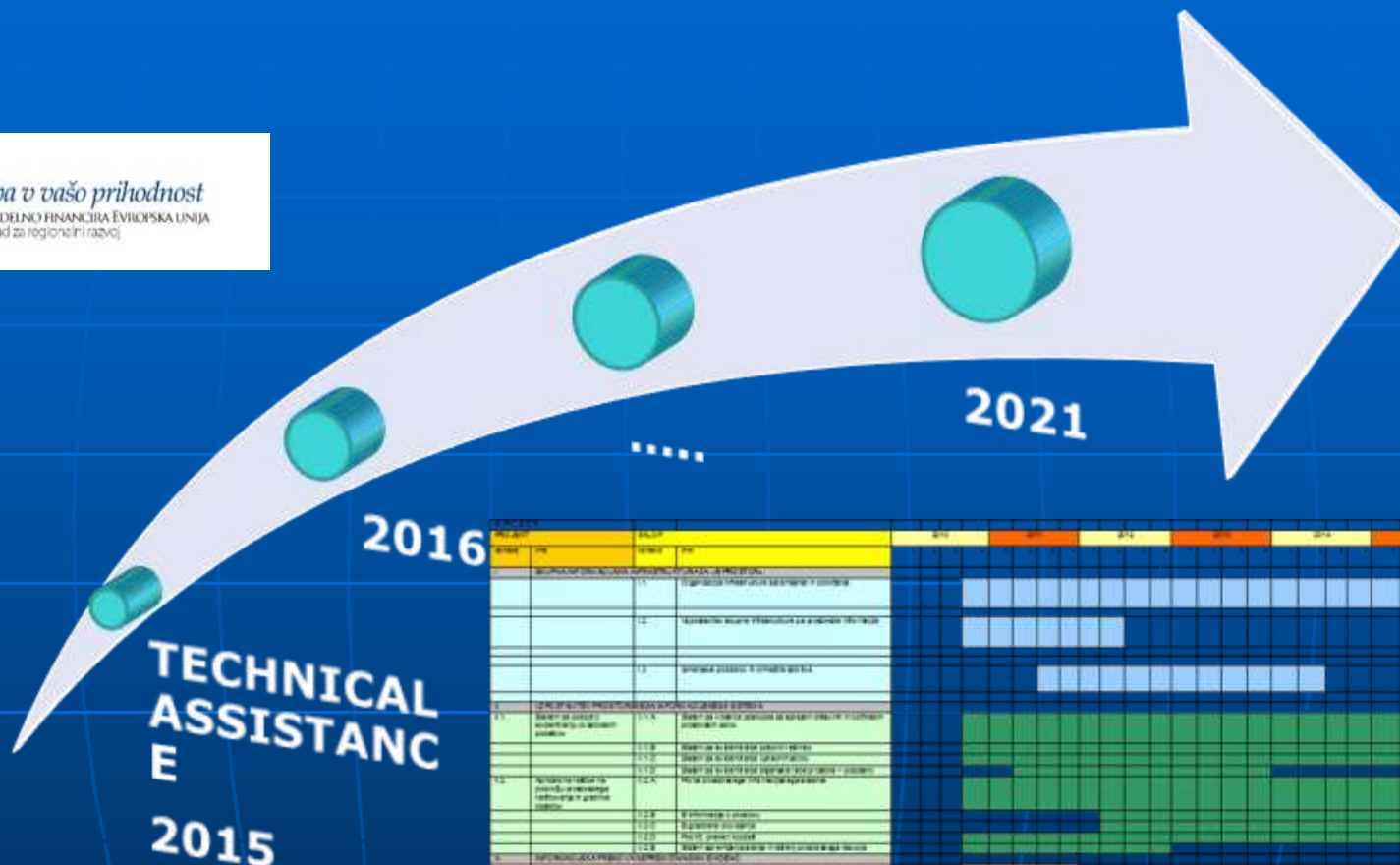


Part of State cloud computing platform managed by Ministry of Public Administration





Time line of e-Spatial program of projects



Projektni sklop	Ime projekta	Leto	2015	2016	2017	2018	2019	2020	2021	Skupaj
1.1	1.1.1	1.1.1.1								
	1.1.2	1.1.2.1								
	1.1.3	1.1.3.1								
1.2	1.2.1	1.2.1.1								
	1.2.2	1.2.2.1								
	1.2.3	1.2.3.1								
1.3	1.3.1	1.3.1.1								
	1.3.2	1.3.2.1								
	1.3.3	1.3.3.1								
1.4	1.4.1	1.4.1.1								
	1.4.2	1.4.2.1								
	1.4.3	1.4.3.1								
1.5	1.5.1	1.5.1.1								
	1.5.2	1.5.2.1								
	1.5.3	1.5.3.1								
1.6	1.6.1	1.6.1.1								
	1.6.2	1.6.2.1								
	1.6.3	1.6.3.1								
1.7	1.7.1	1.7.1.1								
	1.7.2	1.7.2.1								
	1.7.3	1.7.3.1								
1.8	1.8.1	1.8.1.1								
	1.8.2	1.8.2.1								
	1.8.3	1.8.3.1								
1.9	1.9.1	1.9.1.1								
	1.9.2	1.9.2.1								
	1.9.3	1.9.3.1								
1.10	1.10.1	1.10.1.1								
	1.10.2	1.10.2.1								
	1.10.3	1.10.3.1								

2016	2017	2018	2019	2020	2021	SKUPAJ
3.230.000	4.680.000	5.250.000	5.130.000	3.415.000	650.000	22.355.000

INFORMATION INFRASTRUCTURE FOR SPATIAL DATA



SPATIAL PLANINNG INFORMATION SYSTEM

PIS

The screenshot displays the Spatial Planning Information System (PIS) interface. The main window shows a document editor with a Microsoft Word document titled "20.doc [Read-Only] [Compatibility Mode]". The document content includes:

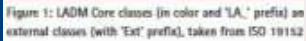
Številka: 351-229/2011 - 4
Datum: 21.02.2011

Upravna enota Postojna, izdaja o zahtevi investitorja [redacted] Postojna, na podlagi 2. odstavka 24. člena Zakona o graditvi objektov (Uradni list RS, št. 102/04 - UPB, 93/05 in 126/07), v nadaljevanju - ZGO-1, naslednje

**GRADBENO DOVOLJENJE
ZA GRADNJO NEZAHTEVNIH OBJEKTOV**

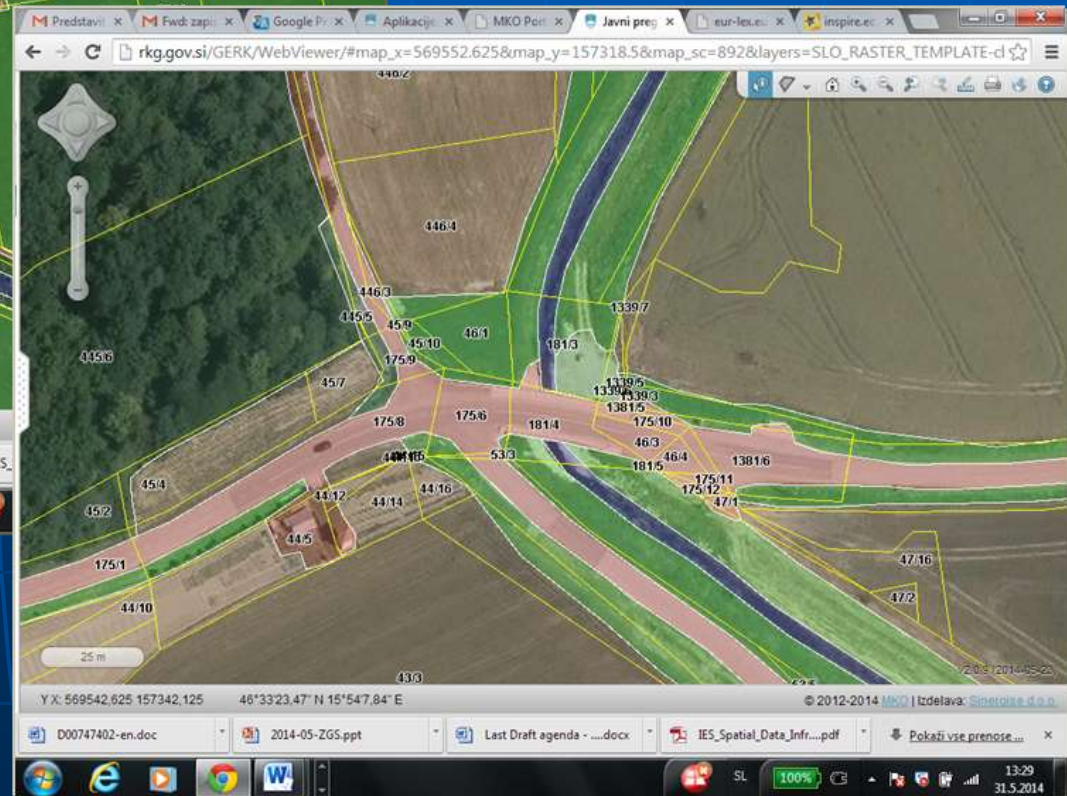
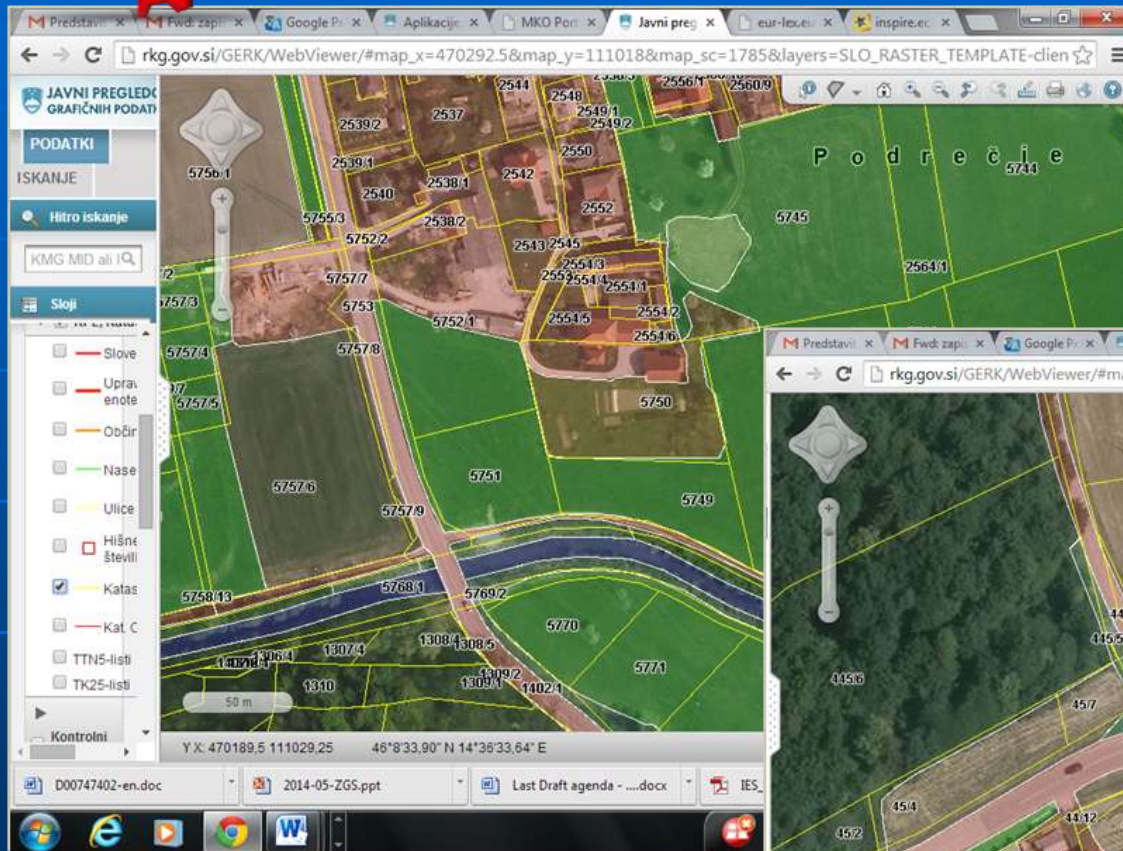
Investitor:	[redacted]
Naslov:	[redacted]
Vrsta objektov:	nezahtevna objekta: - pomožni kmetijsko-gozdarski objekt - kmečka lopa - objekt za lastne potrebe - garaža
Na zemljišču parc. št.	1377/12 in na zazidalnem delu parcele 1315
Katastrske občine:	Bukovje
Veljavnost:	Gradbeno dovoljenje za gradnjo nezahtevnih objektov preneha veljati, če investitor ne prične graditi v enem letu od njegove pravnomočnosti. Kmečka lopa , bo enoetažna, pritična, namenjena shranjevanju kmetijske mehanizacije, katere streha je hkrati strop nad prostorom. Pravokotne tlorisne oblike, maksimalnih dimenzij 5,0 m x 6,0 m, višina najvišje točke bo 3,50 m, merjeno od najnižje točke objekta. Simetrična, dvokapna streha bo krita z opečno kritino Bramac . Objekt bo lesen z betonskim tlakom. Garaža , bo enoetažna, pritična, katere streha je hkrati strop nad prostorom, namenjena shranjevanju osebnih motornih vozil, tlorisnih

The interface also includes a sidebar on the left with a tree view of project elements, a top menu bar, and a map on the right showing the project location with a red arrow pointing to a specific area.



DATA

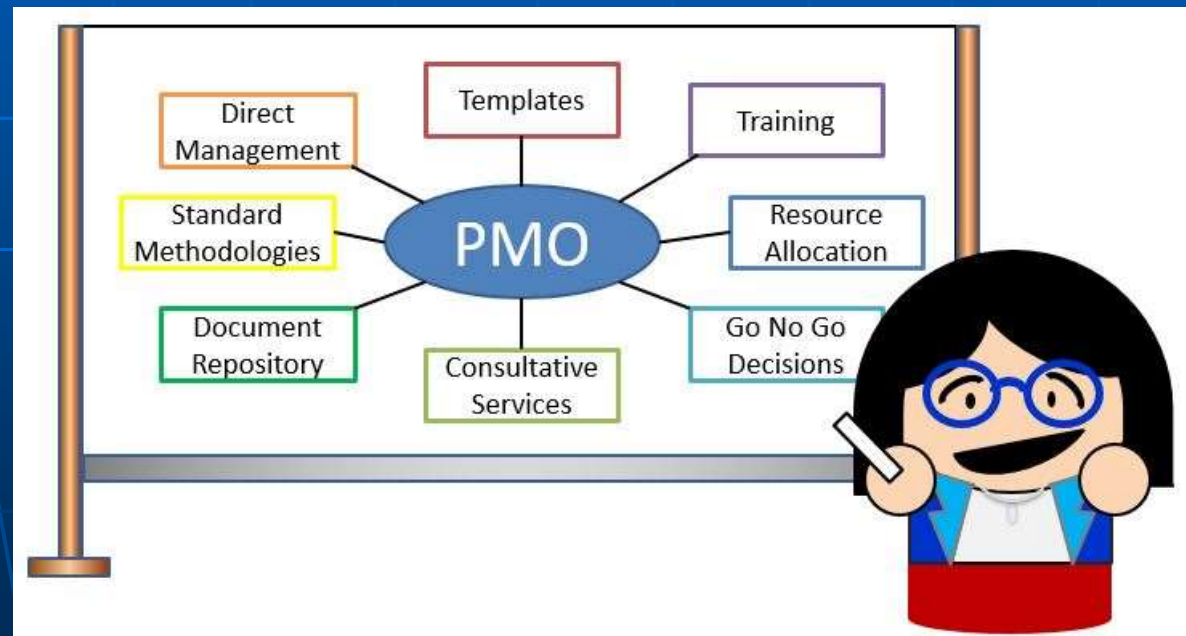
COLLECTION OF MISSING AND IMPROVEMENT OF QUALITY FOR EXISTING DATASETS





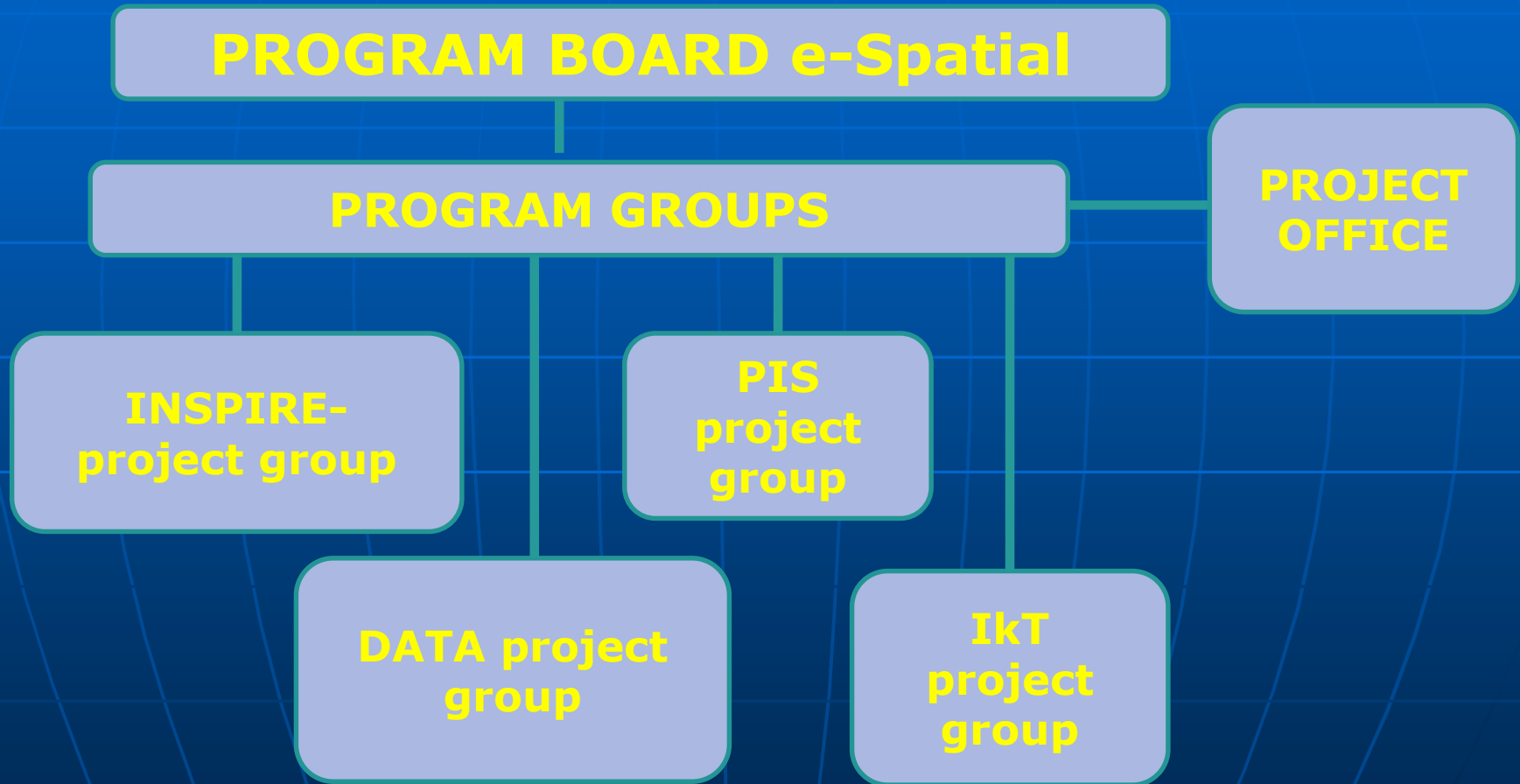
PROJECT MANAGEMENT OFFICE

Operational support for project management of all projects within program of projects





MANAGEMENT STRUCTURE FOR „e-Spatial“ PROGRAM OF PROJECT



CONCLUSIONS

- Planning phase is finish;
- Implementation phase starts at 1st. of September 2016;
- Organisational structure are on place;
- Financial resources was approved;
- A lot of work and problems in next 4 years.

QUESTIONS?



THANK YOU !
HVALA !

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