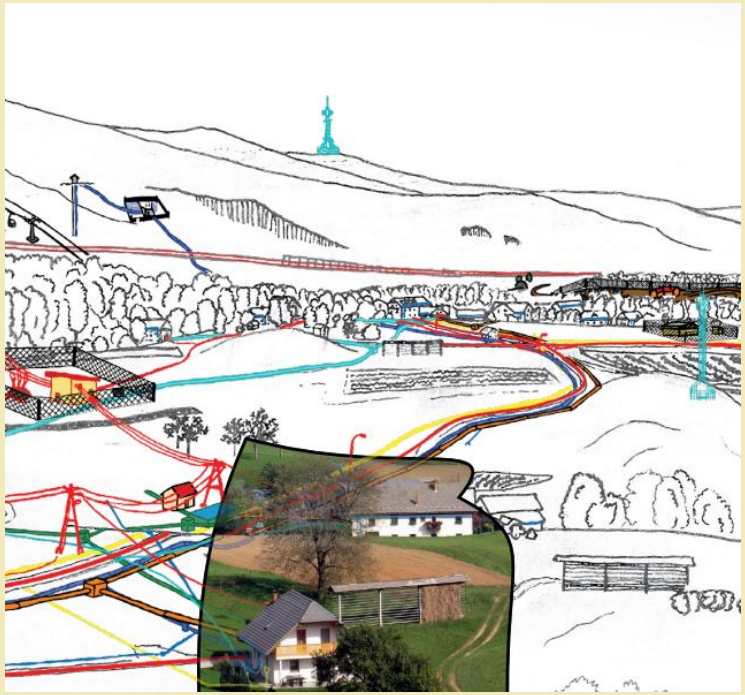


SLOVENIAN „COLLECTIVE CADASTRE OF PUBLIC INFRASTRUCTURE“ – ITS ESTABLISHMENT AND…

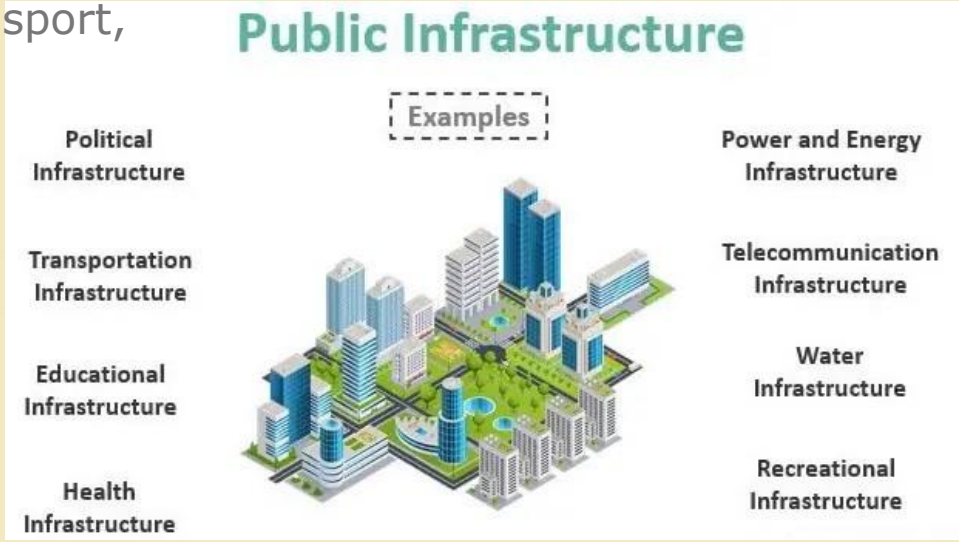
ITS UPDATE IN PROGRESS...

Uroš Alič, Simona Smrtnik

Surveying and Mapping Authority of Republic of Slovenia - SMA

BASIC FACTS….

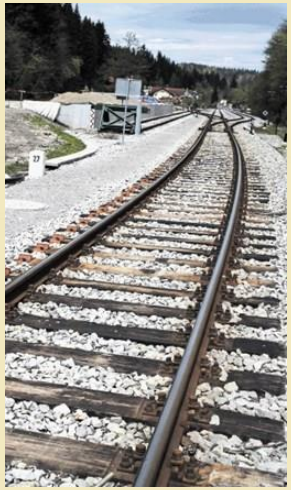
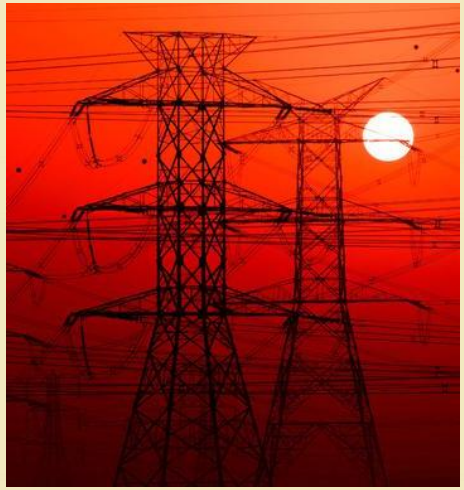
- **Public infrastructure:** real estate facilities connected into networks → to supply modern society's needs of: water, energy, need to transport, to communicate,…



- **Cadastre:** a comprehensive recording of the real estate.
- **Collective Cadastre of Public Infrastructure:** real estate database of various sorts of public infrastructure – in the territory of Republic of Slovenia established and maintained by Surveying and Mapping Authority (SMA) of Republic of Slovenia since 2005.

PURPOSE AND GOALS….

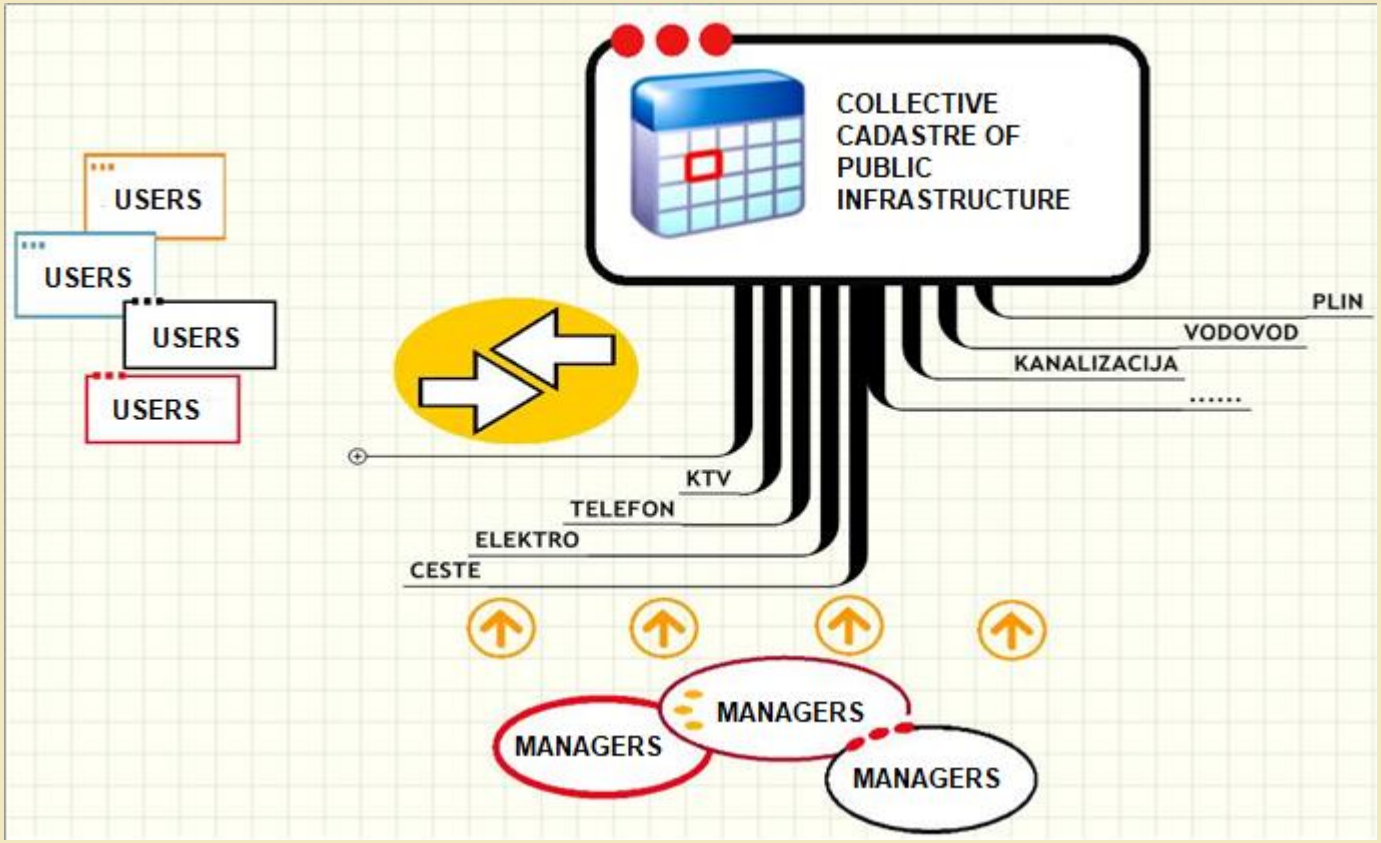
- to provide comprehensive information about **occupancy of space by public infrastructure around us** – in the air, on the ground and especially **underground.**

- Prevention of unnecessary damage at ground works,
- Support in spatial planning processes,
- Link to more detailed data (infr. manager's cadastres/registers).


ROLE OF COLLECTIVE CADASTRE

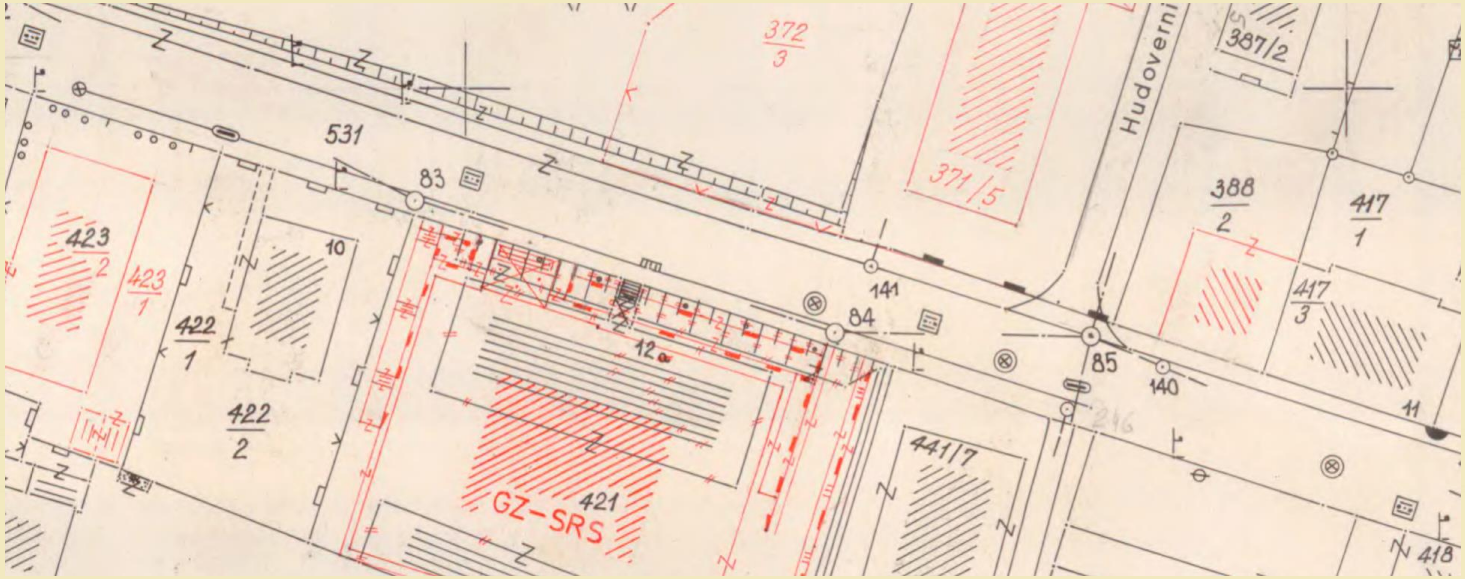
C. Cadastre of public infrastructure joins „producers" and users of spatial data.



HISTORY

➢ 1968 – Cadastre of communal facilities Act (Amendment in 1974)

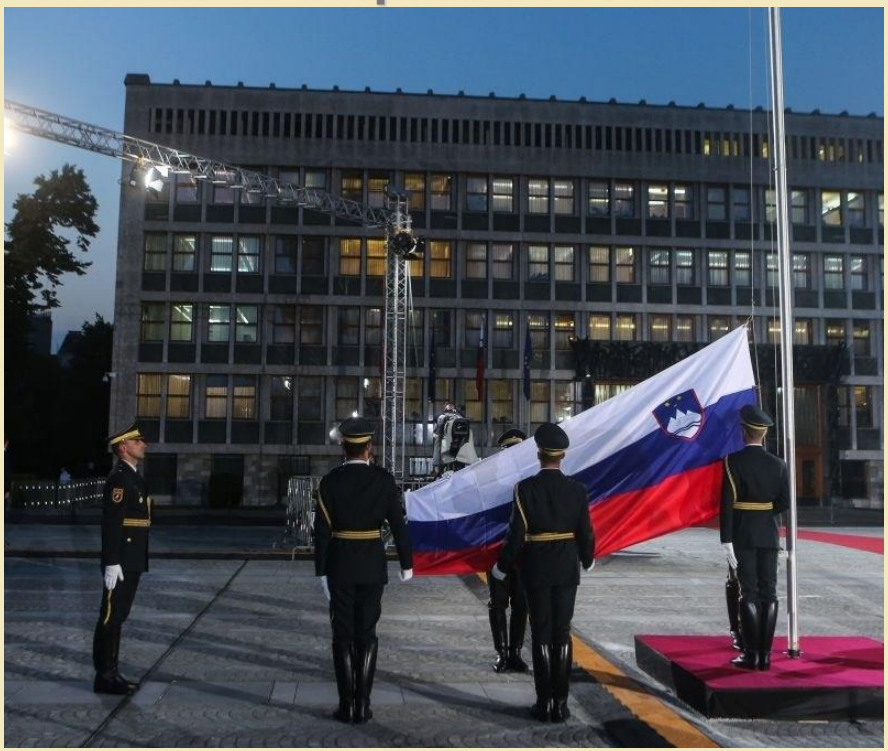
- cadastre is run and maintained by local surveying authorities, data is mostly drawn on topografic – cadastral maps:



- problems: 1. data about infrastructure is dispersed + very inconsistent, 2. almost no use of data for different purposes (spatial planning,...),...

HISTORY

- June 1991 – Republic of Slovenia – independant country



- 1995 – Surveying and mapping authority becomes government service (within Ministry of Environment and space)

DEFINITION BY LEGISLATION

- **2002 – Spatial Management Act (Amendments in 2017 and 2022):**

- „public infrastructure" gets its definition,

- **2002 – Construction Act**

- Additional demands/procedures about public infrastructure: how to build it, to connect to it, obligation to report data to Collective cadastre.

- **2004 - Rules on the Contents and the Manner of Maintaning the Actual Land Use Database**

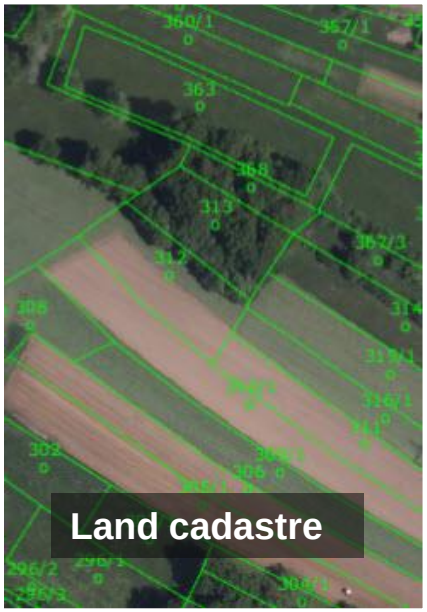
- Detailed rules about public infrastructure data to be kept in Collective Cadastre

- **2007 – Spatial Planning Act**

- Each manager of public infrastructure is oblied to:
- 1. run its own cadastre and
- 2. report data (not all, specified - with 25 atributes) to Collective Cadastre, established&run by SMA.

CREATION of the C. CADASTRE

Surveying and Mapping Authority of R. of Slovenia (SMA) – Real Estate databases:



INFRASTRUCTURES IN C. CADASTRE

1. **TRAFFIC INFRASTRUCTURE**
   (roads and mount. paths, railways, airports, harbours, cable cars)
2. **ENERGY INFRASTRUCTURE**
   (power lines, natural gas supply, heat supply, petroleum industry)
3. **COMMUNAL INFRASTRUCTURE**
   (fresh water supply, sewage system, waste management)
4. **WATER INFRASTRUCTURE** (river regulations, irrigation systems,...)
5. **INFRASTRUCTURE FOR MONITORING OF NATURAL PHENOMENA, NATURAL RESOURCES, ENVIRONMENT CONDITION, MANAGEMENT OF OTHER NATURAL RESOURCES...** (measurement stations, mining,...)
6. **OTHER INFRASTRUCTURE IN PUBLIC USE**
   (telecommunication networks, network termination points)

- **These 6 groups of infrastructure has following legislation (within responsable Sectors/Ministries) which refers to them:**

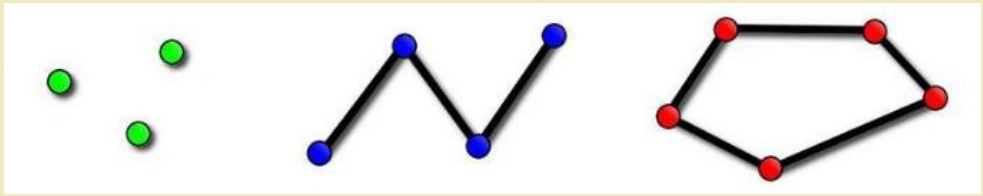
SECTORAL LEGISLATION 1/2

- ✓ Roads Act (2010),
- ✓ Act Regulating the Records of the Existing Land Use of the Public Road and Railway Infrastructure (2018), and the Rules (2019),
- ✓ Rules about Forest Roads (2009) ,
- ✓ Rules about the method of graphically presenting mountain paths (2008, 2018),
- ✓ Energy Act (2014, 2019),
- ✓ Rules on fresh water supply (2006, 2008, 2022)
- ✓ Environmental protection Act (2004),

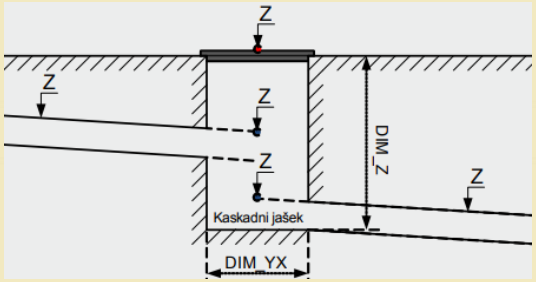
SECTORAL LEGISLATION 2/2

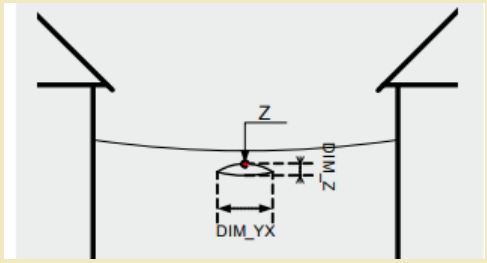
- ✓ Water Act (2008),
- ✓ Rules about laying down water infrastructure (2005),
- ✓ Rules on the Cadastres of Public Infrastructure for Environmental Public Services (2011, 2017),
- ✓ National Meteorology, Hydrology, Oceanography and Seismic Service Act (2017),
- ✓ Ordinance determining referential measurement stations for meteorological, hydrological, oceanographic and seismic monitoring (2018),
- ✓ Electronic Communications Act (2017),
- ✓ Rules of the management and content of data on communication networks and associated infrastructure, network termination points and other electronic communication networks (2018).

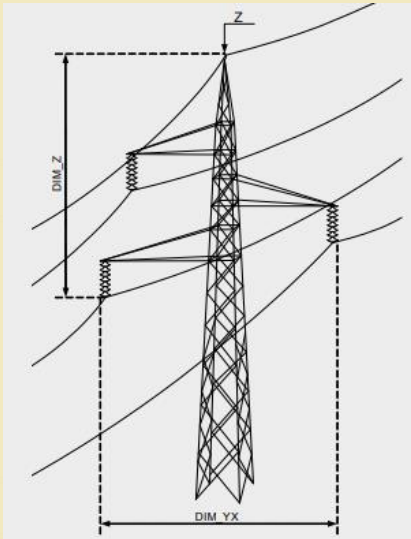
DATA MODEL



- **Every object as:**
  - **Point**
  - **Line or**
  - **Polygon (closed polyline).**
- **Geometry: as 2,5D model (2D geometry, height as one of atributes – „Z").**
- **2D geometry: D96/TM (ESRS) national coordinate system (since 2019),**
- **Heights: ortometric, atribut „Z" always <u>the top of the object</u>…**







ATTRIBUTES OF OBJECTS…

➢ **20 universal +5 „special“: identifiers, type of object (codelist), its dimensions, height, source of data (method), position&height accuracy, manager‘s company registration number, additional description,…**

ZAP. ŠT.	ATRIBUT	OPIS ATRIBUTA	FORMAT ZAPISA	ŠIFRANT VREDNOSTI ATRIBUTA
1	TIP_SPR	**Tip spremembe podatkov**	1C	Šifrant tipa spremembe
2	ID	**Enolična identifikacijska številka objekta v sistemu ZK GJI** Atribut dodeli GU ob prvem vpisu. Če je bil atribut že posredovan upravljavcu (MAT_ST), ga mora le-ta voditi in v primeru spreminjanja ali brisanja objekta ta ID tudi uporabiti. ID pri atributnih podatkih mora biti identičen ID-ju lokacijskih podatkov istega objekta!	10N	
3	ID_UPR	**Enolična identifikacijska številka objekta v sistemu katastra upravljavca (MAT_ST)** in v sistemu ZK GJI za tega upravljavca (MAT_ST) . Identifikacijska številka mora biti enolična znotraj ene tematike (vodovod, kanalizacija,...) tako v katastru upravljavca (MAT_ST), kot v ZK GJI za tega upravljavca (MAT_ST). Npr. v točkovnem sloju iste tematike ne sme biti enakih ID_UPR kot v linijskem, ne v katastru upravljavca (MAT_ST) , ne v ZK GJI za tega upravljavca (MAT_ST). Ta identifikacija je bistvena pri prvem vpisu podatkov, ko ID še ne obstaja. ID_UPR pri atributnih podatkih mora biti identičen ID_UPR-ju lokacijskih podatkov istega objekta!	20C	
4	SIF_VRSTE	**Vrsta objekta** Evidentira se s šifro objekta po šifrantu vrste objektov GJI.	4N	Šifrant vrste objektov GJI
5	CC_KLAS	**Šifra vrste objekta po CC-SI klasifikaciji** Določena na osnovi Uredbe o uvedbi in uporabi enotne klasifikacije vrst objektov in o določitvi objektov državnega pomena (Uradni list RS, št. 33/03) ter Metodoloških pojasnil in navodil za razvrščanje objektov po enotni klasifikaciji vrst objektov (CC-SI).	5N	
6	TOPO	**Topološka oblika objekta**	1N	Šifrant topološke oblike
7	NAT_YX	**Natančnost določitve položaja objekta (y,x koordinate)** Izražena s srednjim pogreškom položaja točk, ki definirajo objekt (točkovni, linijski, poligonski objekti). Točke se določi z natančnostjo, ki je definirana kot daljša izmed polosi 95% elipse zaupanja, v koordinati točke.	2N	Šifrant položajne natančnosti
8	Z	**Absolutna nadmorska višina temena objekta** */Samo za točkovne objekte!/*	7N2	
9	NAT_Z	**Natančnost določitve absolutne nadmorske višine objekta** V primeru linijskih in poligonskih objektov je to natančnost najslabše določene točke objekta.	2N	Šifrant višinske natančnosti
10	GJI	**Atribut GJI** Določa, ali je objekt GJI ali druga infrastruktura, ki nima statusa GJI, temveč je evidentirana v katastru zaradi interesa upravljavca (MAT_ST) .	1N	Šifrant statusa GJI
11	VIR	**Vir** Vir iz katerega je bil pridobljen podatek o lokaciji.	2N	Šifrant vira
12	DAT_VIR	**Datum podatkovnega vira** Datum vira pomeni datum zajema na terenu. Datum se zapiše v obliki YYYYMMDD (leto, mesec, dan).	8C	
13	MAT_ST	**Matična številka upravljavca (MAT_ST) objekta** Iz Poslovnega registra Slovenije.	7N	
14	MAT_GJS	**Matična številka izvajalca GJS (MAT_GJS) na objektu** Iz Poslovnega registra Slovenije. Če infrastruktura ni GJI, je atribut neobvezen.	7N	
15	ID_EL	**Identifikacijska številka zadnjega elaborata sprememb podatkov objekta GJI v sistemu zbirnega katastra GJI za objekt GJI** /Atribut določi GU.	15C	
16	DAT_EL	**Datum zadnjega vnosa podatkov objekta GJI v zbirni kataster GJI** Datum se zapiše v obliki YYYYMMDD. /Atribut določi GU.	8C	
17	DIM_YX	**Zunanja tlorisna dimenzija objekta** (v m) /največja prečna tlorisna dimenzija objekta/ Podatek se ne vpisuje pri poligonskih objektih! Pri točkovnih objektih velja: za okrogle objekte = premer; za pravokotne objekte = diagonala. Pri linijskih objektih velja: za cevovode=zunanji premer cevi.	6N2	
18	DIM_Z	**Zunanja vertikalna dimenzija objekta** (v m) Pomeni razliko med najvišjo in najnižjo točko objekta. V primeru točkovnih in poligonskih objektov je to višina objekta, v primeru linijskih objektov (npr. vodov) pa je to vertikalni premer cevi, ki je v večini primerov enak kot zunanji premer cevi.	6N2	
19	OPU	**Opuščenost objekta** Z atributom se poda, ali je objekt neupoščen (delujoč), ali gre za opuščen objekt. To so objekti GJI, ki jih nihče ne uporablja in po prenehanju delovanja niso bili odstranjeni.	2N	Šifrant opuščenosti
20	ATR1	**Posebni atribut 1*** Pod tem atributom se za različne vrste objektov vodijo različne karakteristike objektov.	2N	
21	ATR2	**Posebni atribut 2*** Pod tem atributom se za različne vrste objektov vodijo različne karakteristike objektov.	2N	
22	ATR3	**Posebni atribut 3*** Pod tem atributom se za različne vrste objektov vodijo različne karakteristike objektov.	10N	
23	ATR4	**Posebni atribut 4*** Pod tem atributom se za različne vrste objektov GJI vodijo različne karakteristike objektov.	8C	
24	ATR5	**Posebni atribut 5*** Pod tem atributom se za različne vrste objektov vodijo različne karakteristike objektov.	5C	
25	OPIS	**Dodaten opis** Po potrebi se objektu GJI doda poljubno informacijo, ki v ostalih atributih ni zajeta. Pri objektih s šifro vrste objekta XX99-»drugi objekti« je opis obvezen (potrebno je vpisati vrsto objekta)	30C	

DATA SUBMISSON 1/2

- **WHO: Managers of public infrastructure, or: their authorized representatives (infr. maintenance companies, surveying companies)**
- **FORM: <u>as an „elaborat“</u> – consists of: „written“ part:**

A REQUEST:

OBR. ZKGJI_1b

ALEŠ GRIL s.p. GIS, obdelava podatkov, urejanje GJI, telekomunikacijske storitve
(popolni naziv pravne ali fizične osebe)
LAZE 30, 3320 VELENJE
(naslov, poštna številka)
gril.ales@gmail.com
(elektronski naslov pravne ali fizične osebe)

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR
GEODETSKA UPRAVA REPUBLIKE SLOVENIJE
Prejeto: 03 -01- 2019
Številka zadeve: 35373-1/2019

Št. zadeve: 20181231
Datum: 31.12.2018

Geodetska uprava Republike Slovenije
Zemljemerska ulica 12
1000 Ljubljana

ZADEVA: **Zahtevek za vpis objektov v zbirni kataster gospodarske javne infrastrukture**

ALEŠ GRIL s.p., Laze 30, 3320 VELENJE, z matično številko 3263347, ki ga zastopa ALEŠ GRIL in je pooblaščenec TELEMACH d.o.o., Brnčičeva ulica 49A, 1231 Ljubljana - Črnuče, z matično številko 5692229, podaja pri naslovnem organu zahtevo za vpis objektov vrste:

6100 ELEKTRONSKE KOMUNIKACIJE

v zbirni kataster gospodarske javne infrastrukture. Predmet vpisa je: KKS Šmartno ob Paki, KKS Rogaška Slatina in KKS Radovljica.

Zahtevi prilaga elaborat sprememb, ki vsebuje osnovno datoteko 56922292018123101_OSN.XML ter vse v njej naštete izmenjevalne datoteke posameznih vrst objektov.

Žig in podpis

Aleš GRIL s.p.
Laze 30, 3320 Velenje

Priloge:
- Pooblastilo pravne ali fizične osebe
- Elaborat sprememb za vpis v zbirni kataster gospodarske javne infrastrukture
- Izjava odgovornega geodeta

AUTHORIZATION FROM MANAGER OF INFR. (if needed):

OBR. ZKGJI_1b_1

Telemach, širokopasovne komunikacije, d.o.o.
(popolni naziv pravne ali fizične osebe)
Brnčičeva ulica 49A, 1231 Ljubljana – Črnuče
(naslov, poštna številka)
info@telemach.si
(elektronski naslov pravne ali fizične osebe)

Št. zadeve: gril06/18
Datum: 9.11.2018

ALEŠ GRIL s.p. GIS, obdelava podatkov, urejanje GJI, telekomunikacijske storitve
(popolni naziv pravne osebe)
Laze 30, 3320 Velenje
(naslov, poštna številka)

ZADEVA: Pooblastilo za vpis objektov v zbirni kataster gospodarske javne infrastrukture

TELEMACH, širokopasovne komunikacije, d.o.o., Brnčičeva ulica 49A, 1231 Ljubljana - Črnuče z matično številko 5692229, pooblaščam pravno osebo ALEŠ GRIL s.p., Laze 30, 3320 Velenje, z matično številko 3263347 za vse storitve, ki so povezane z vpisom objektov v lasti TELEMACH d.o.o. v zbirni kataster gospodarske javne infrastrukture za čas od 9. 11. 2018 do 9. 3. 2019.

TELEMACH d.o.o.

Adrian Josip Ježina, predsednik poslovodstva

telemach
Telemach d.o.o. 22

AUTHORIZED SURVEYOR STATEMENT (if needed):

OBR. ZKGJI_2

IZJAVA
POOBLAŠČENEGA INŽENIRJA S PODROČJA GEODEZIJE

1. Naročnik elaborata sprememb za vpis v zbirni kataster gospodarske javne infrastrukture: Telemach, širokopasovne komunikacije, d.o.o., Brnčičeva ulica 49A, 1231 Ljubljana – Črnuče

2. **Pooblaščeni inženir s področja geodezije** UROŠ PRELOŽNIK, z matično številko IZS Geo0236.

potrjujem,

da je **elaborat sprememb** za vpis v zbirni kataster gospodarske javne infrastrukture z oznako 56922292018123101_OSN.XML, izdelan skladno s Pravilnikom o vsebini in načinu vodenja zbirke podatkov o dejanski rabi prostora, Ur.l.RS 9/2004 in ostalimi predpisi, ki urejajo vpis v zbirni kataster gospodarske javne infrastrukture ter z namenom uporabe, opredeljenim v točki 3. te izjave.

3. Namen uporabe:
   - za vpis objektov v zbirni kataster gospodarske javne infrastrukture

4. Objekti GJI: - 6100 ELEKTRONSKE KOMUNIKACIJE,

5. Metapodatki o kakovosti 6100 ELEKTRONSKE KOMUNIKACIJE

Element kakovosti	Preveritev	Rezultat
Popolnost	Pravilnost prenašanja podatkov v zbirni kataster gospodarske javne infrastrukture	Ni posebnosti
	Ocena popolnosti podatkov glede na enoto oddaje	Ni posebnosti
	Vsebovanost višinskih podatkov	DA
Položajna natančnost	Šifre natančnosti določitve položaja objektov gospodarske javne infrastrukture	8,3
Tematska natančnost	Objekti so zapisani v pravilno vrsto objektov gospodarske javne infrastrukture	Vpis objektov 6121, 6110, 6107, 6199, Ni posebnosti.
Logična usklajenost	Preveritev, da so podatki topološko urejeni, kot je predpisano v Navodilih upravljavcem za posredovanje podatkov v zbirni kataster gospodarske javne infrastrukture	Ni posebnosti.
Časovna natančnost	Pravilen datum preseka stanja in elaborata	DA
Koordinatni sistem	Izjava o koordinatnem sistem elaborata	D96 TM

Podgora, 31.12.2018
(kraj, datum)

Uroš Preložnik
(ime in priimek pooblaščenega inženirja s področja geodezije)
uros@level2.si
(elektronski naslov pooblaščenega inženirja s področja geodezije)

UROŠ PRELOŽNIK
inž. geod.
IZS Geo0236
(osebni žig in podpis pooblaščenega inženirja s področja geodezije)

DATA SUBMISSON 2/2

2. digital data: 3 allowed formats:

- ✓ Arc/Info 'generate' **format (ASCII format),** with coordinates,
- ✓ shape file **(*.SHP)**,
- ✓ GML file **(*.GML)**.

Since 2018 also ***.xml** – detailed data about pipes, cables, fibres (only at Electronic communication infrastructure):

```
<?xml version="1.0" encoding="UTF-8" ?>
- <gurs:Kabli xmlns="http ://www.gu.gov.si" xmlns:gurs="http://prostor2.gov.si/ows">
  - <gurs:Kabel>
      <gurs:ID_K />
      <gurs:ID_UPR_K>1K</gurs:ID_UPR_K>
      <gurs:ID_C />
      <gurs:ID_UPR_C />
      <gurs:ID_TR />
      <gurs:ID_UPR_TR>1</gurs:ID_UPR_TR>
      <gurs:SIF_VRSTE>6123</gurs:SIF_VRSTE>
      <gurs:ST_VODOV>4</gurs:ST_VODOV>
      <gurs:VRSTA>1</gurs:VRSTA>
      <gurs:MAT_ST>2292912</gurs:MAT_ST>
      <gurs:TIP_SPR>D</gurs:TIP_SPR>
    </gurs:Kabel>
```

SMA ACTIVITIES UPON „ELABORAT"....

1. DATA CHECK (of written and digital part), if **NOT OK**: NOTIFICATION OF CORRECTION NEEDED → to manager of infrastructure,

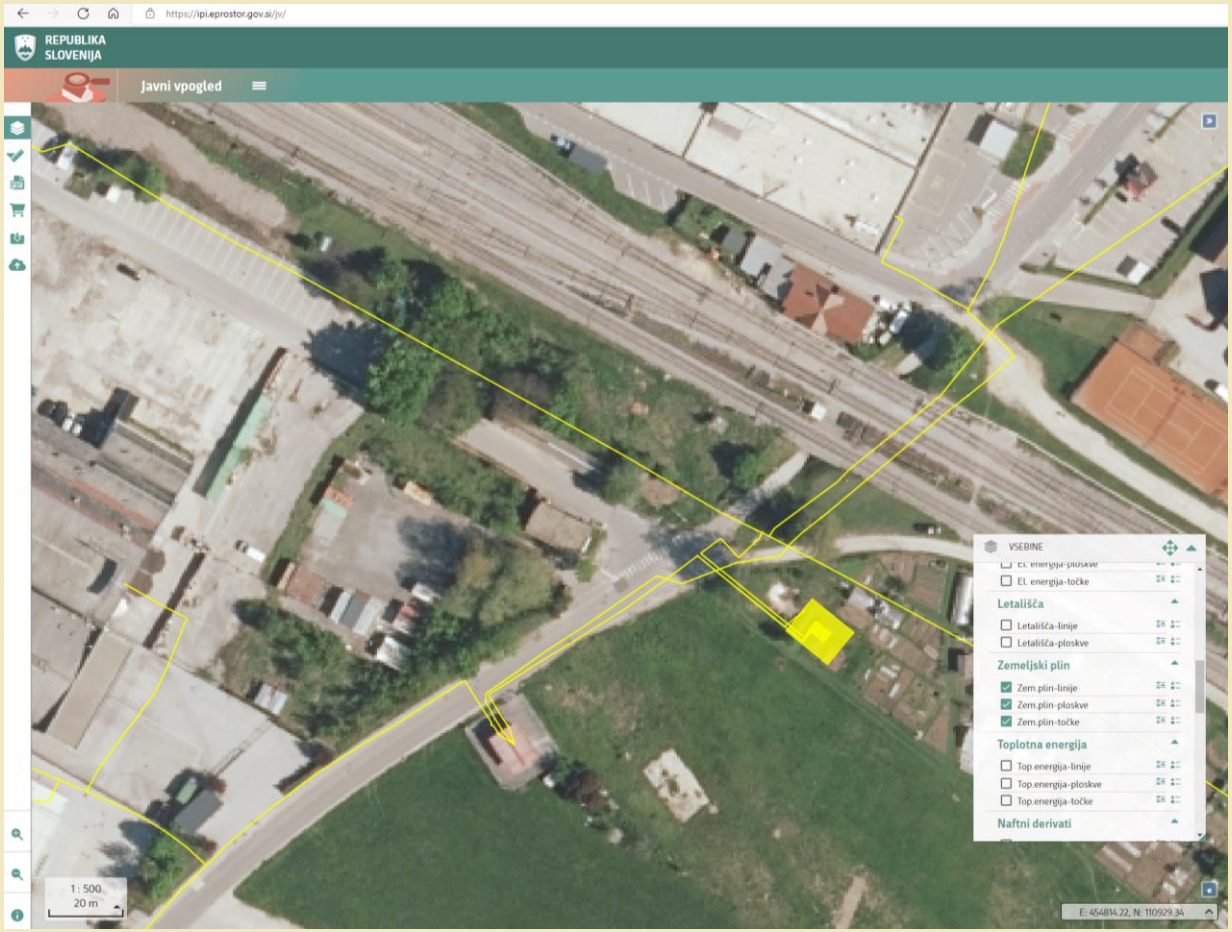
2. If/when **OK**: NOTIFICATION ABOUT DATA SUBMISSON TO THE CADASTRE → to manager of infrastructure,

3. EVERY OBJECT GETS UNIQUE IDENTIFIER (atribute) IN SMA DATABASE,

4. DATA IS COPIED (replicated) TO DISTRIBUTION DATABASE daily...

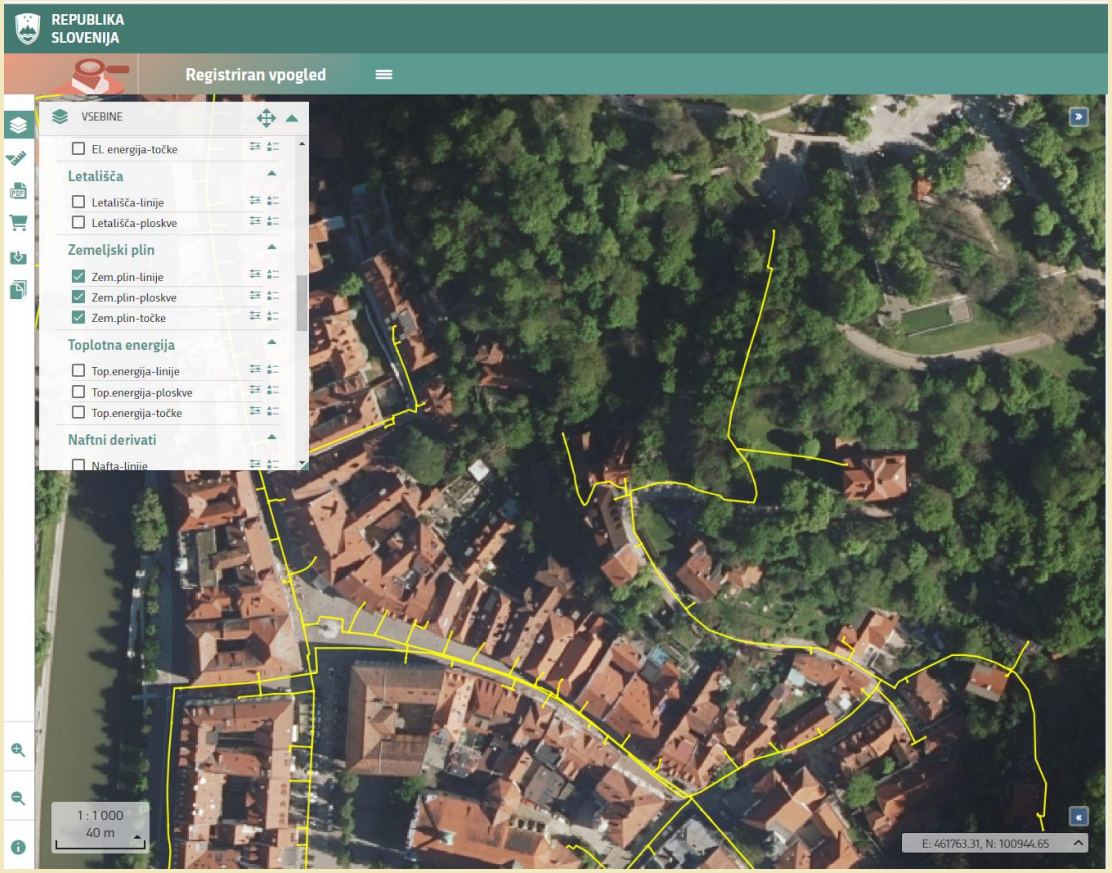
DISTRIBUTION OF THE DATA 1/4

- **PUBLIC VIEW (available at: https://ipi.eprostor.gov.si/jv):**



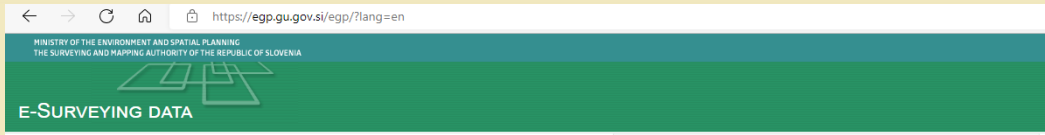
DISTRIBUTION OF THE DATA 2/4

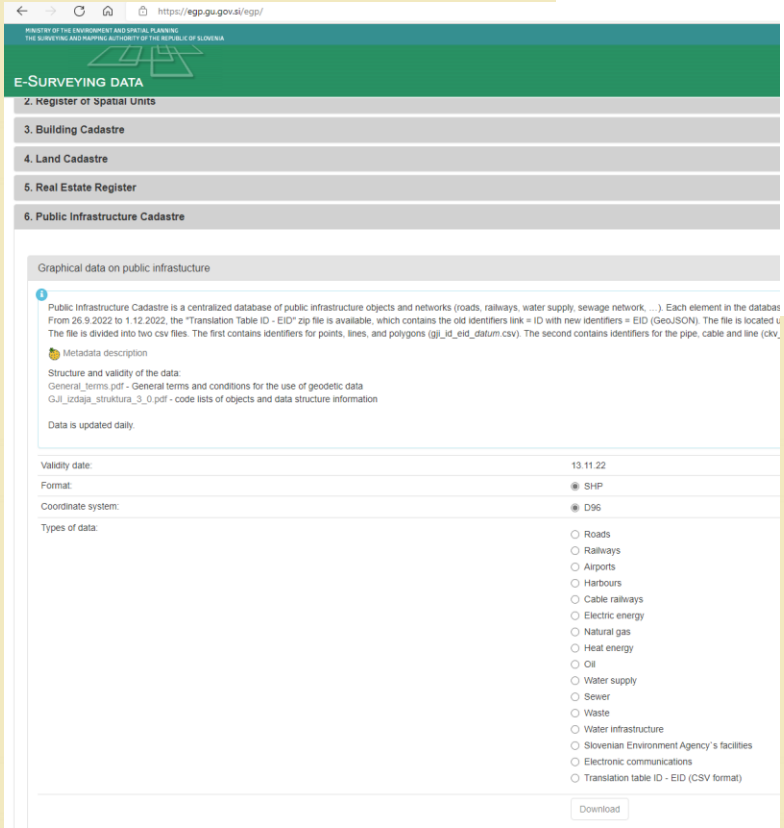
- **VIEW FOR REGISTERED USERS (registration at the SMA; additional functionalities):**

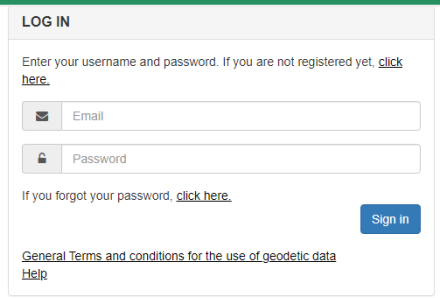


DISTRIBUTION OF THE DATA 3/4

- **PUBLIC DATA DOWNLOAD: application:** **E-SURVEYING DATA**







available at: https://egp.gu.gov.si/egp/?lang=en

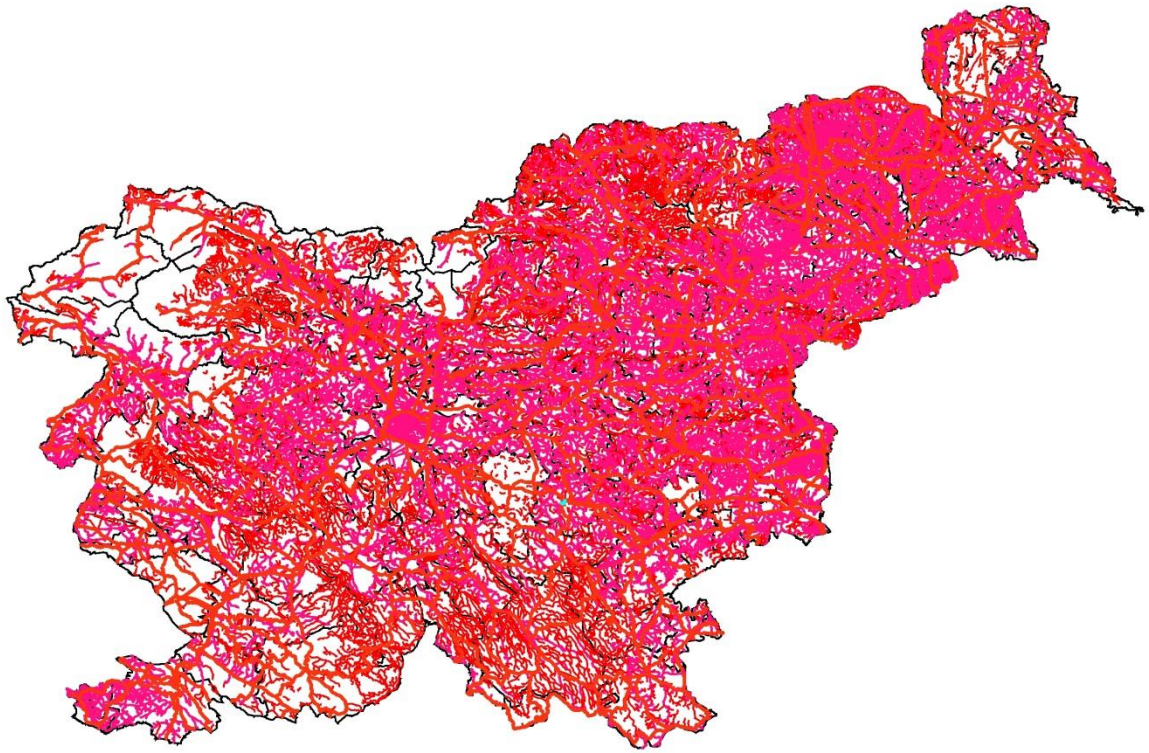
DISTRIBUTION OF THE DATA 4/4

- **DATA DOWNLOAD FOR REGISTERED USERS**
  (managers of the infastructure, surveying companies, employees at the SMA,…):

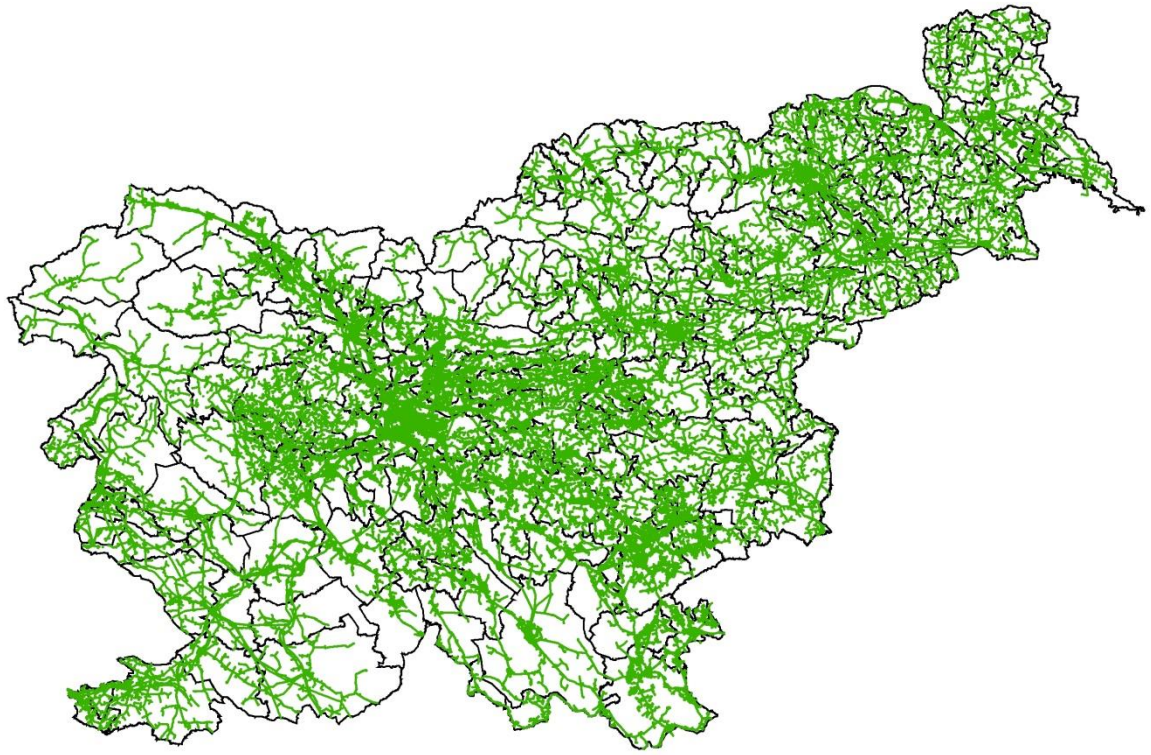
COLLECTED DATA untill 2022:

Type	Number of objects	Length of infrastructure [km]
Roads and mountain paths	159.699	62.430
Railways	9.409	2.581
Airports	153	-
Harbours	1.200	-
Cable cars	336	23
Electricity	2.207.443	56.238
Natural gas	584.399	6.761
Heat supply	91.403	1.297
Petroleum industry	218	-
Fresh water supply system	1.308.986	29.061
Sewage system	991.511	12.580
Waste management	4.641	-
Water infrastructure	11.953	136
Electronic communications	2.904.740	75.948
TOGETHER	**over 8.2 mio.**	**over 240.000**

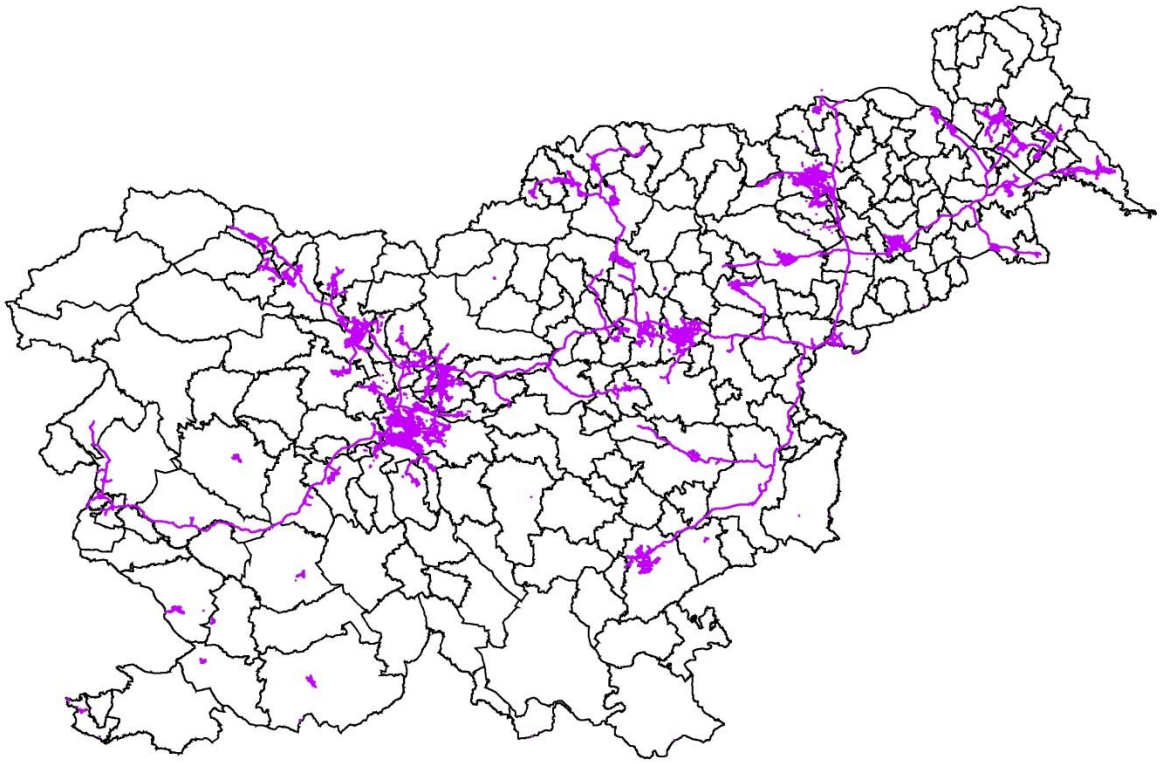
1100 - ROADS



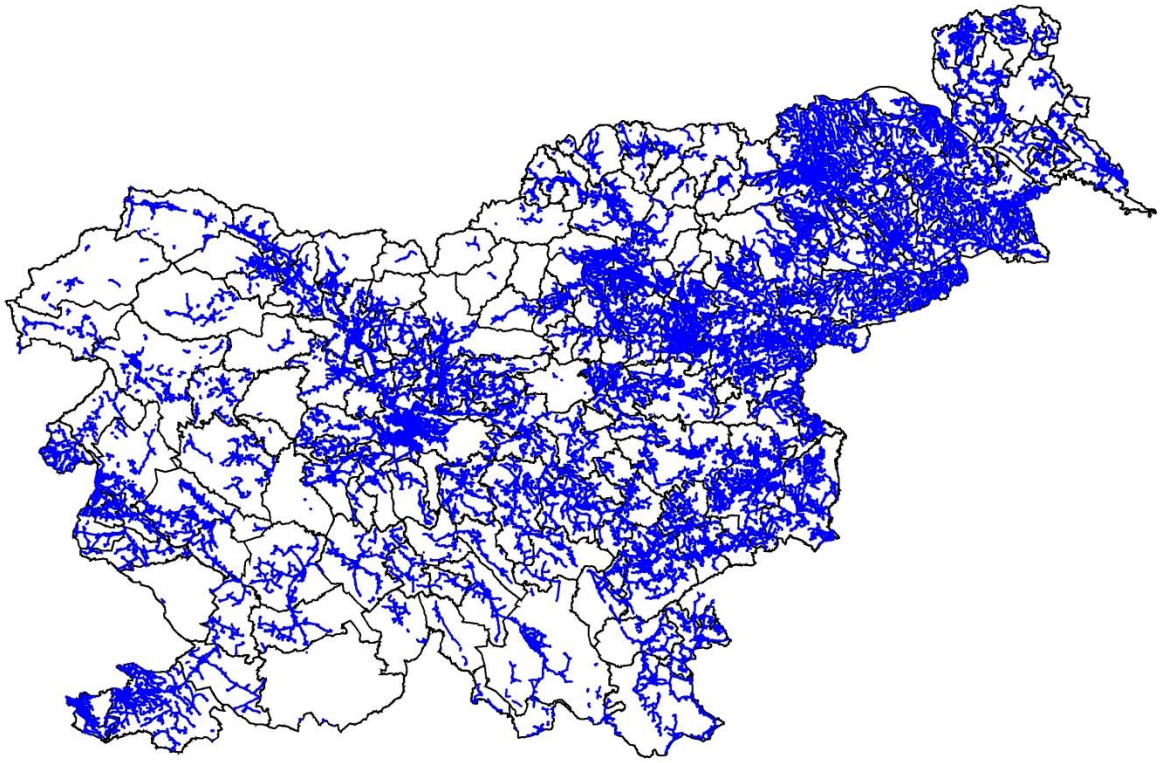
2100 – ELECTRICITY-POWER LINES



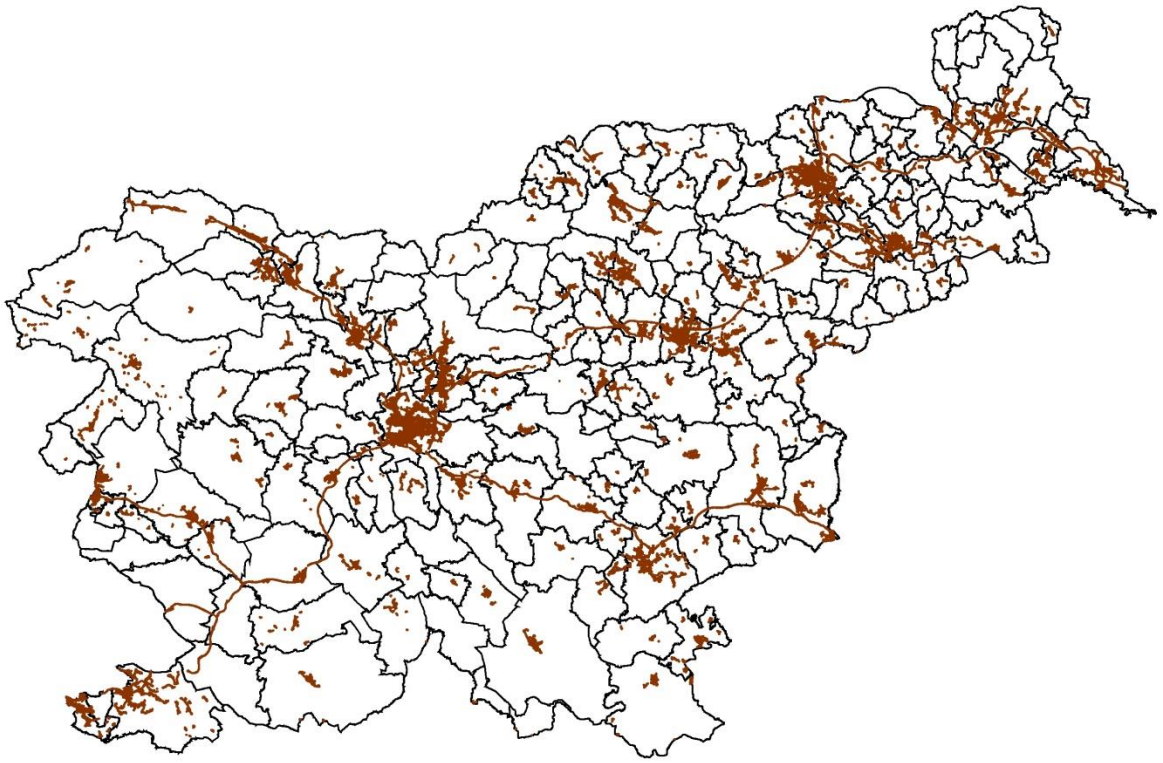
2200 – NATURAL GAS PIPELINES



3100–FRESH WATER SUPPLY NETWORK

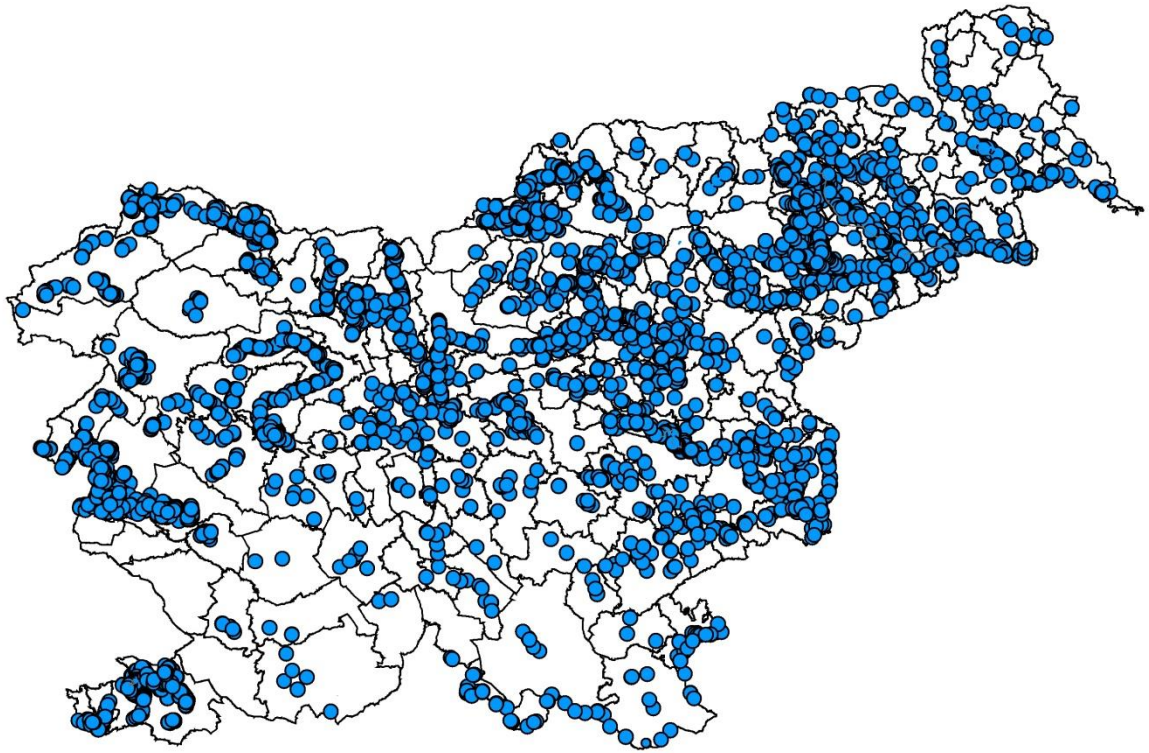


3200- SEWAGE SYSTEM

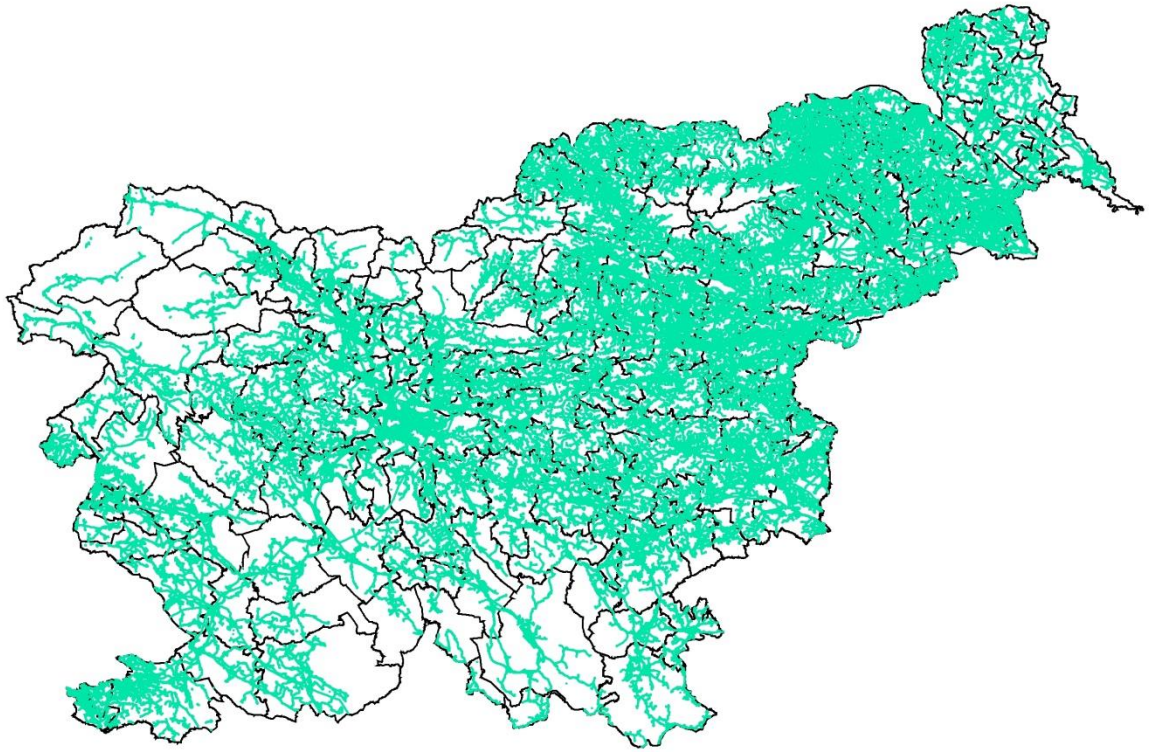


3300 – WASTE MANAGEMENT

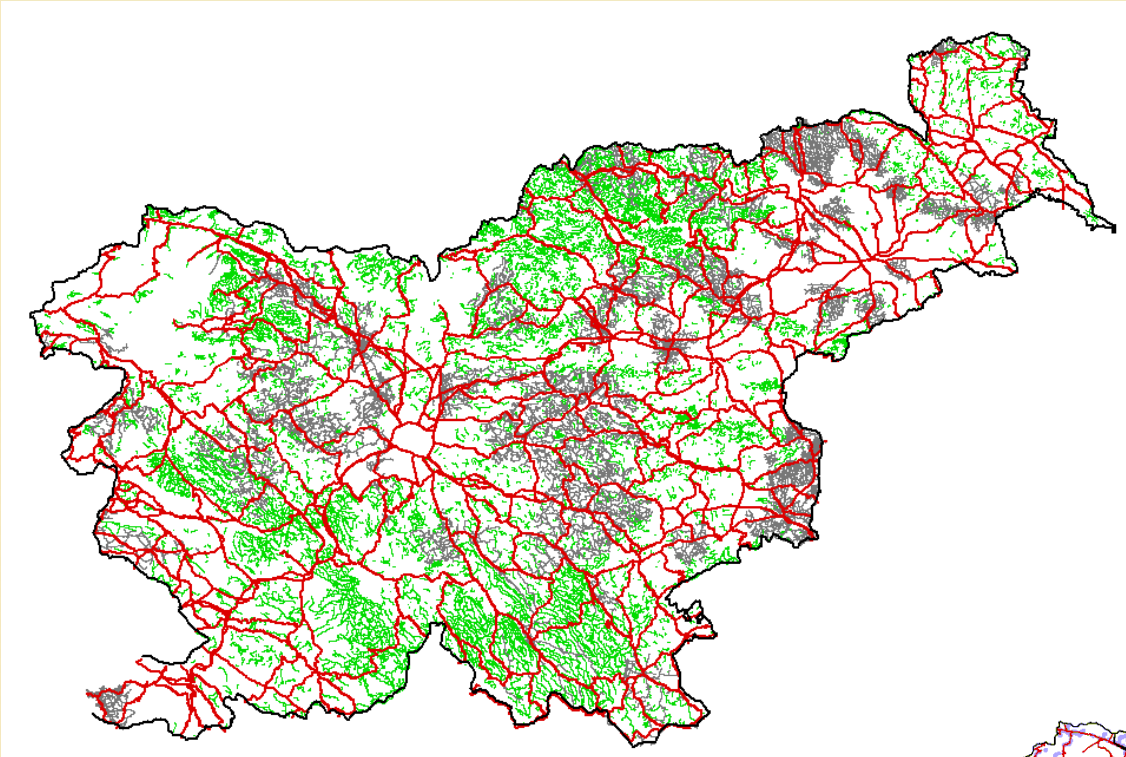
4000 - WATER INFRASTRUCTURE



6100 - ELECTRONIC COMM. NETWORKS



COMPLETENESS OF DATA (an estimation)



STATE INFRASTRUCTURE:

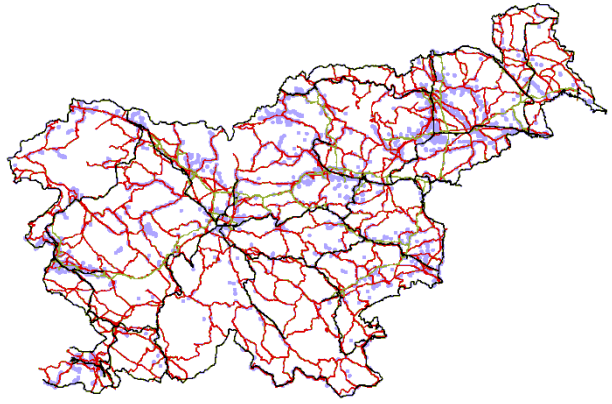
Roads:	100 %
Railways:	100 %
Natural gas supply:	100 %
Water Infrastructure:	85 %
Electricity:	95 %

OTHER INFRASTRUCTURE:

Forest Roads	100 %
Electronic communications	85 %

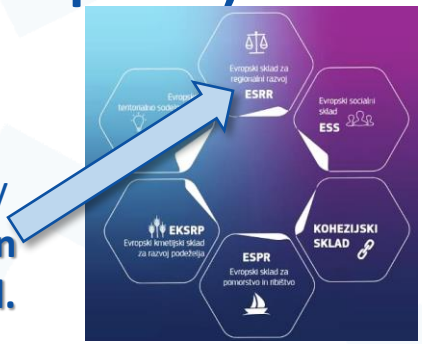
LOCAL INFRASTRUCTURE:

Municipal Roads:	99 %
Sewage System:	96 %
Fresh Water Supply Network:	99 %



THE UPGRADE - PROGRAMME OF THE PROJECTS eProstor (eng. „eSpace“)

„Sharing the space"



FINANCING: The investment is co-financed by the Republic of Slovenia and **the European Union from the European Regional Development Fund.**

TIME FRAME: Coordinated and high-quality space management and efficient real estate management are to be carried out in the financial perspective 2014-2020 (extended till 30.11.2022).

RESOURCES: The total amount of funds allocated for the programme is 22.4 mio. €, the European Regional Development Fund contributes 17.9 mio. €.

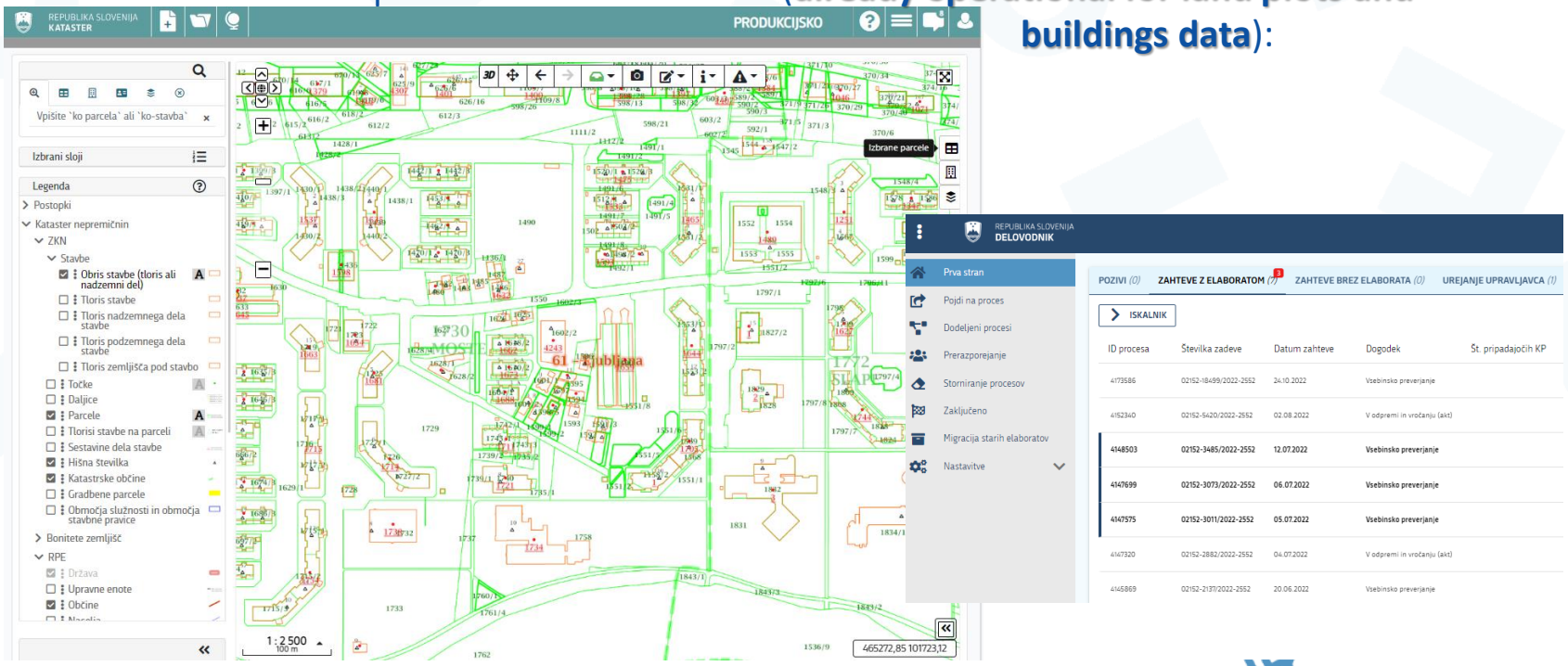
CONTRACTORS: The Surveying and Mapping Authority of the Republic of Slovenia (SMA) and the Ministry of Environment and Space Management, Directorate for Space Management, Construction and Housing.

OBJECTIVES: Greater **transparency** and **efficiency** in **Spatial Planning, Construction and Real estate Management…**

RESULTS EXPECTED: Established IT infrastructure for spatial information and services, which will provide support for the public administration and citizens at spatial planning, construction and real estate management.

SMA ROLE IN THE PROGRAMME:

- renovated real estate databases in terms of unified information,
- established a solution → **the modern functioning of the real estate system** and represented a unified basic national spatial data infrastructure (**already operational for land plots and buildings data**):



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR

REPUBLIKA SLOVENIJA
MINISTRSTVO ZA OKOLJE IN PROSTOR
GEODETSKA UPRAVA REPUBLIKE SLOVENIJE

eProstor
EN PROSTOR ZA VSE

EVROPSKA UNIJA
EVROPSKI SKLAD ZA REGIONALNI RAZVOJ

I FEEL SLOVENIA

NEWS AND CHANGES AT THE COLLECTIVE CADASTRE OF PUBLIC INFRASTRUCTURE 1/4

- **New data format: geoJSON** (for geometry: points, lines, polygons) and **JSON** (for attribute data):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  "verzija": "1.0.0",
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        "tipSpremembe":"D"
      },
      {
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        "upravljavecCeviID":"CEV2",
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        "nadrejenaCevEID":null,
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      {
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        "vrstaObjekta":6122,
        "fi":0.055,
        "tipSpremembe":"D"
      }
    ]
  }
}
```



```
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        "properties": {
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        }
    },
    "features": [
        {
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                "letoIzgradnje": 2015,
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                "tipSpremembe": "D"
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            }
        }
    ]
}
```

NEWS AND CHANGES AT THE COLLECTIVE CADASTRE OF PUBLIC INFRASTRUCTURE 2/4

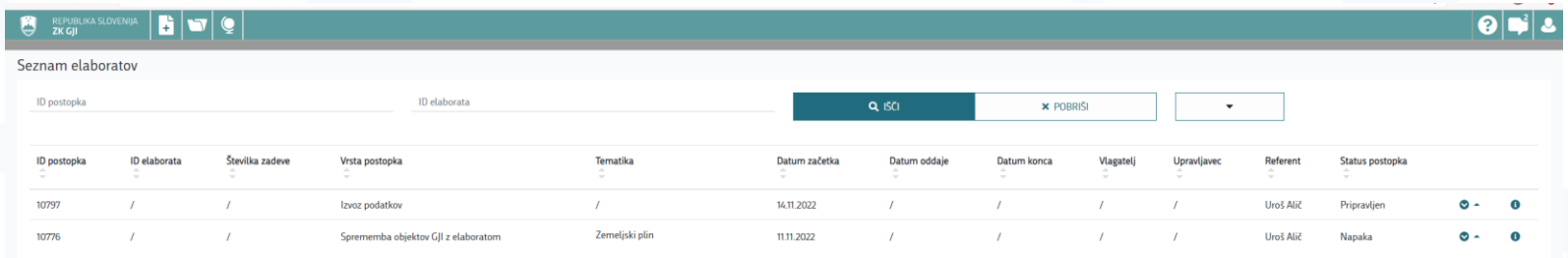
- Geometry model: **3D for all objects,**
- Attribute changes:

Abandoned attributes:	Added attributes:
Manager‘s company reg. number → shifted to separate JSON file	Year of construction/last renovation of object
Height „Z“ → 3D model	Infrastructure Connection point (connection to Buildings Cadastre)
…	…

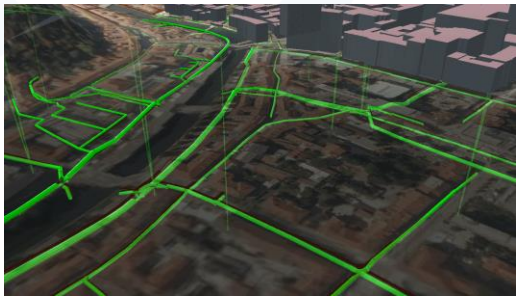
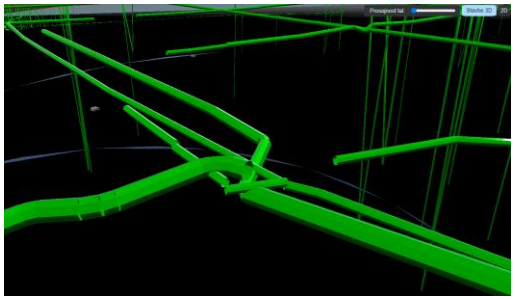
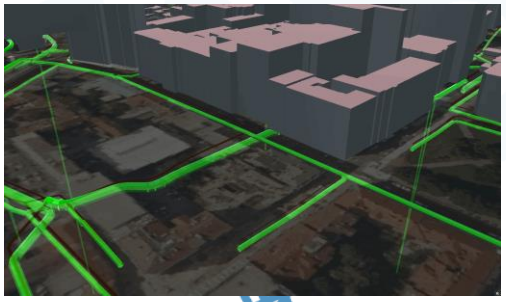
- **Data identifiers unified for all real estate databases of SMA (land cadastre, buildings cadastre, collective cadastre),**
- **…**

NEWS AND CHANGES AT THE COLLECTIVE CADASTRE OF PUBLIC INFRASTRUCTURE 3/4

- **A new real estate system developed also for Collective cadastre:**

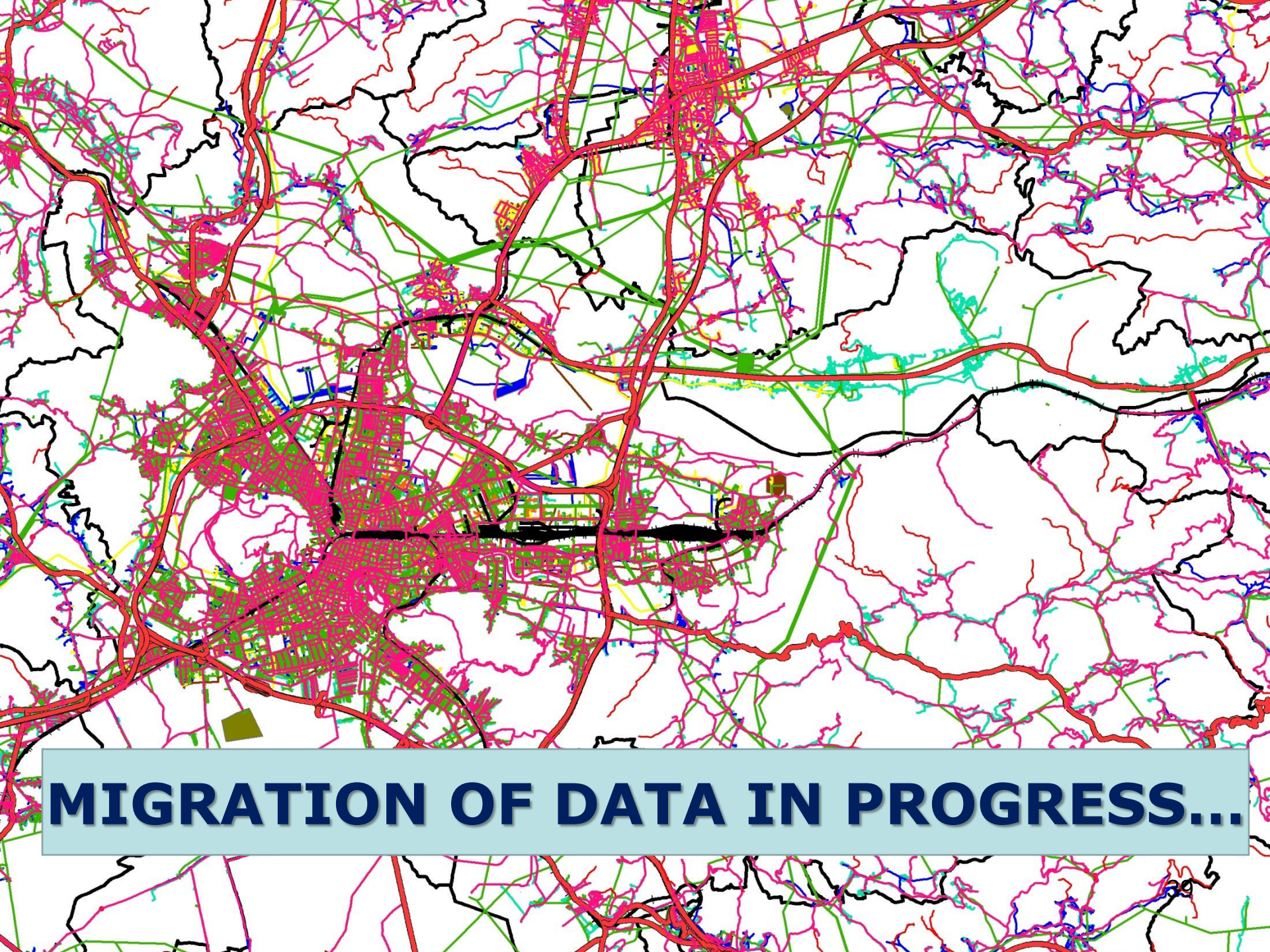


- **Advantages:**
  - ✓ **Accessible to infrastructure manager‘s, surveyors,… → they‘ll submit and make some inital checks on the data by themselves,**
  - ✓ **Procedure of data check (by SMA employees) will be easier → 3D data → 3D viewer!**

NEWS AND CHANGES AT THE COLLECTIVE CADASTRE OF PUBLIC INFRASTRUCTURE 3/4

- ✓ **Data export will be more simple:**


MIGRATION OF DATA IN PROGRESS...

THANK YOU FOR YOUR ATTENTION!

ADDITIONAL INFO:
https://www.gov.si/en/state-authorities/bodies-within-ministries/surveying-and-mapping-authority/
https://www.e-prostor.gov.si/en/
http://www.gu.gov.si/

pisarna.gu@gov.si
uros.alic@gov.si
simona.smrtnik@gov.si