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GEO Slovenia – Spatial Information Hub

SLO4D – Green Slovenian Location Framework

Dani IPP-a 2024, 28.05.2024

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Project Partners



Funded by
the European Union
NextGenerationEU



THE RECOVERY
AND RESILIENCE
PLAN



The project is included in the
Slovenian plan, funded by the
Recovery and Resilience Plan.



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
DIRECTORATE FOR SPATIAL PLANNING AND CONSTRUCTION



REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING
WATER DIRECTORATE



REPUBLIC OF SLOVENIA
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SLOVENIAN WATER AGENCY



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ENVIRONMENT DIRECTORATE



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SLOVENIAN ENVIRONMENT AGENCY

Social Reality and Environmental Challenges **vs** National Commitments



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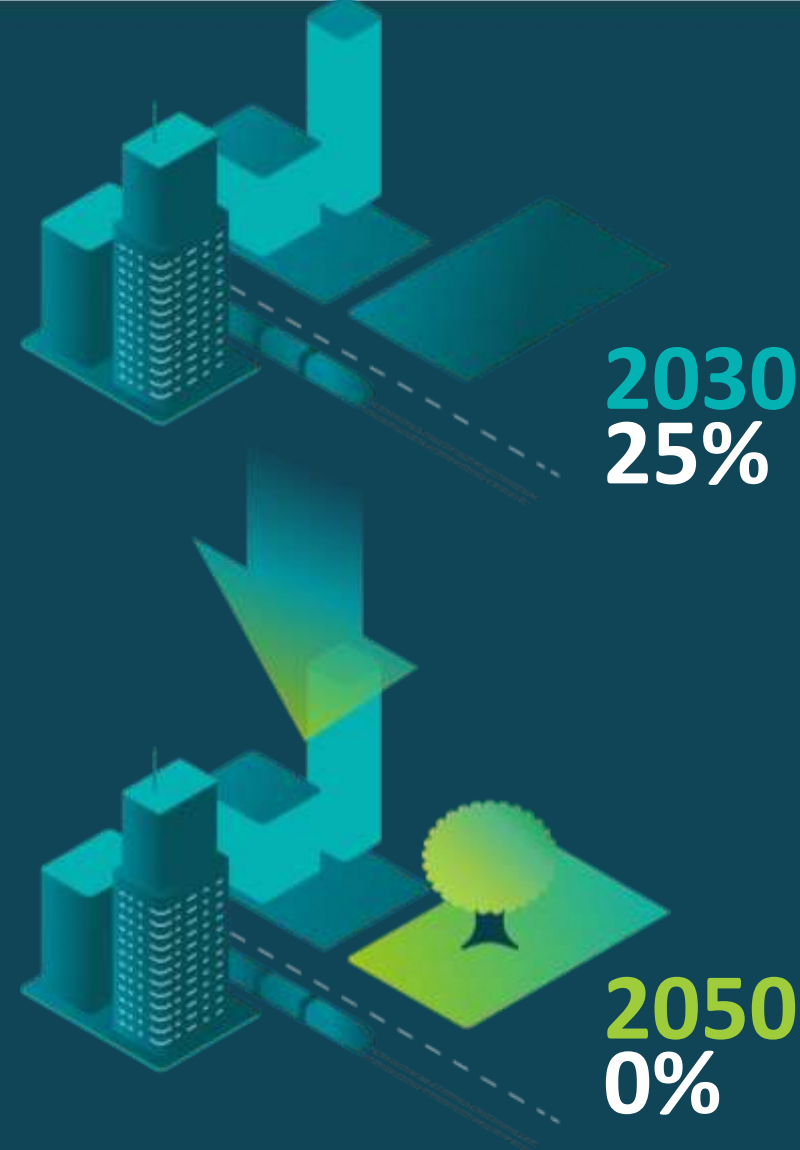
The Needs for Space for Different Activities ...

...are great and often
exclude one another



EU / National Commitments

- **EU soil strategy until year 2030**
vision: to achieve good soil condition by the year 2050 and until 2050 to achieve zero net land use.
- **National Environmental Protection Program 2030**
reduction of the net annual increase in built-up land by 25% by the year 2030 and zero growth of built-up areas from year 2050 onwards.
- **Spatial Development Strategy of Slovenia 2050**
(SPRS 2050) – reducing the net annual growth of built-up land to 0% by 2050 and related directions.



Green Slovenian Location Framework SLO4D



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SLO4D goals

Connecting

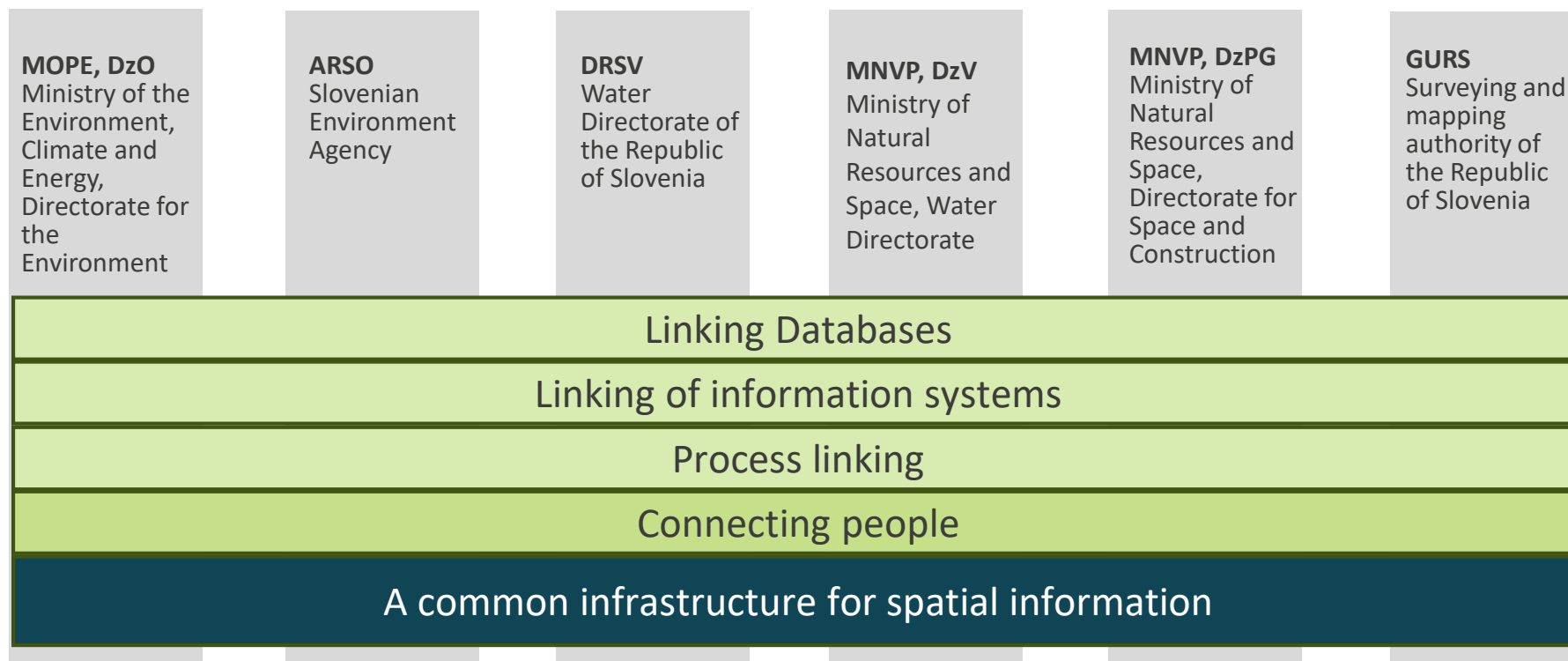
Enabling Accesss

Making it useful

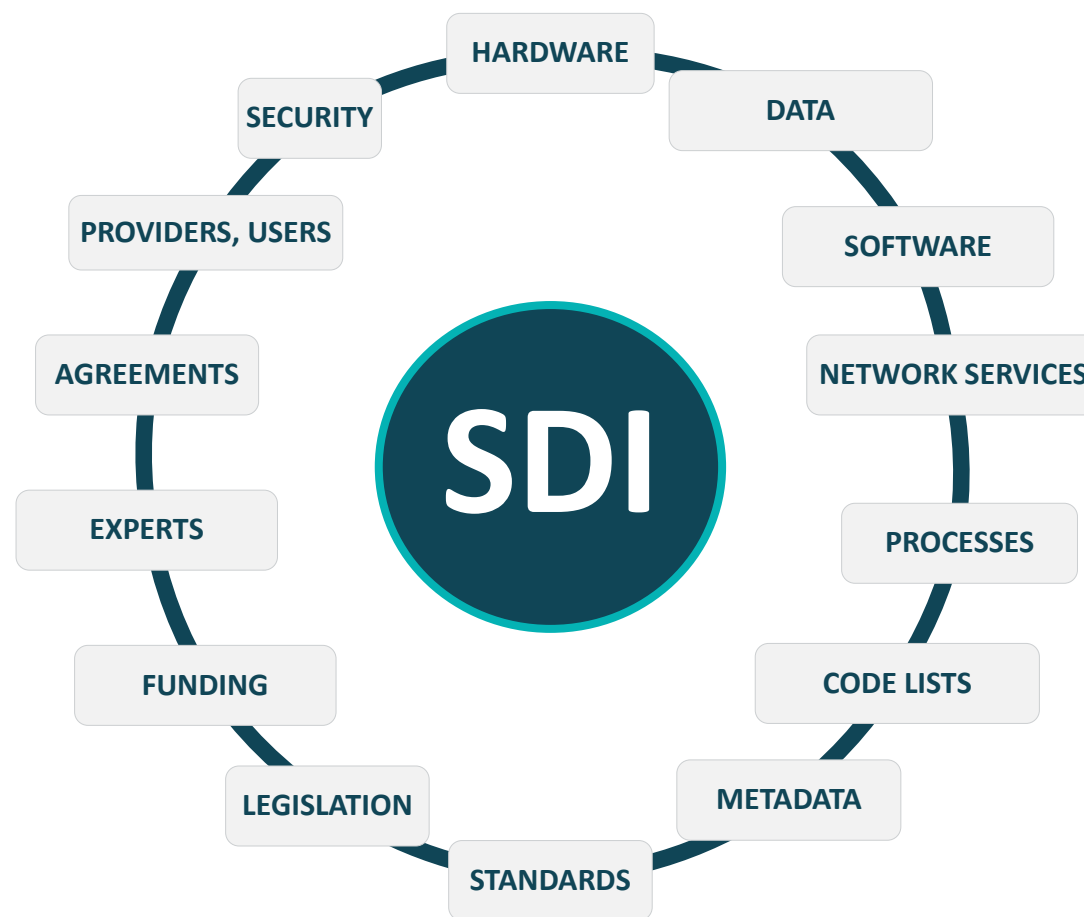
Data



SLO4D projects

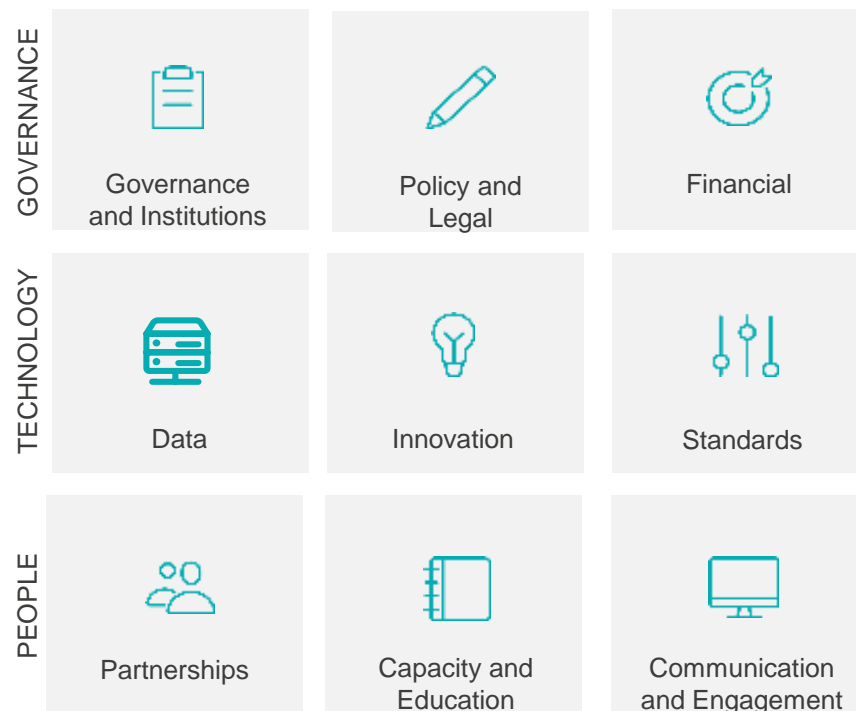


What is Spatial Data Infrastructure (SDI)?



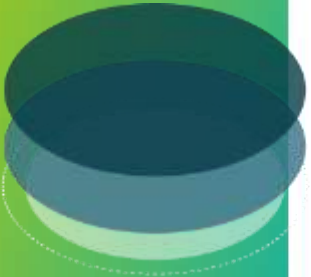


Integrated Geospatial Information Framework (IGIF)



Strategic directions for improving the management of official geospatial information





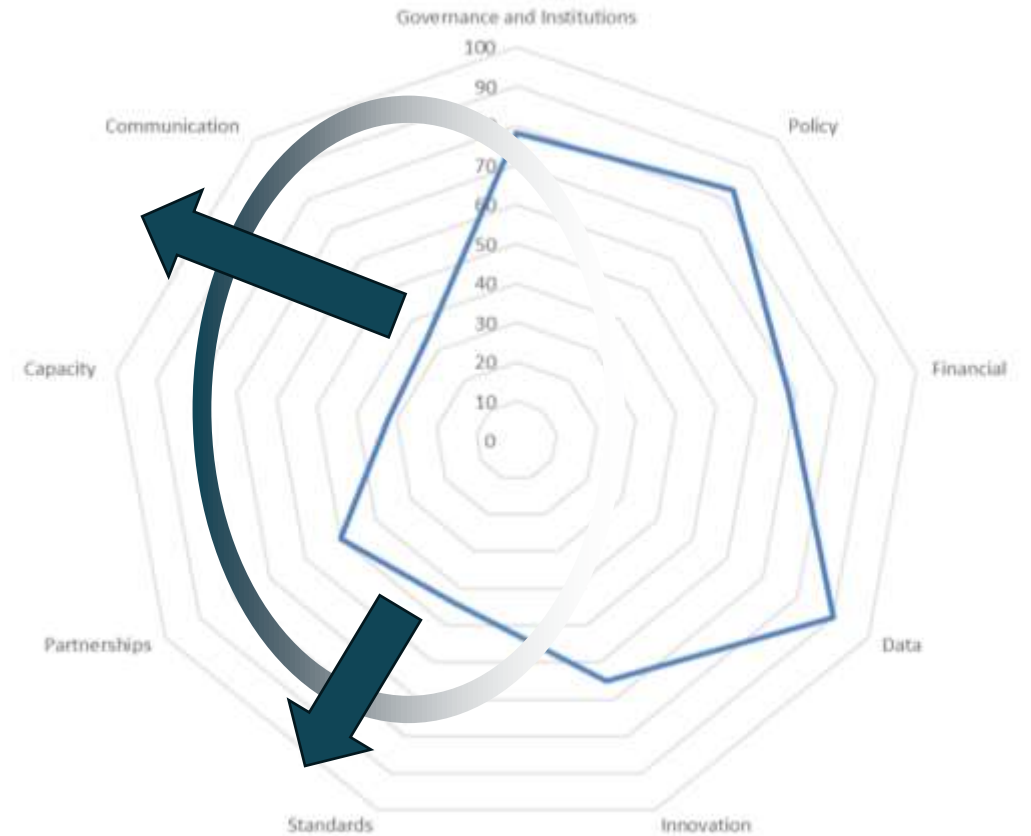
Slovene Spatial Data Infrastructure (SDI)

New SDI Strategy and Action Plan

- Poor OECD rating
- Bad IGIF spider web on soft parts
- A large amount of digitized databases
- Poorly described and accessible services

New SDI Strategy Vision

- It foresees a long-term system solution
- Based on IGIF and SLO4D guidelines
- It takes into account examples of good practices from abroad
- To Become the **Pilot Region** in Europe on SDI field



Project: Common Infrastructure for Spatial Information



SDI

Concept



**RECYCLE SPACE
SLOVENIA**

Circular Spatial
Management
Strategy Plan



**PROCESSES
AND
VALIDATION**

Modelling
processes in the
context of digital
transformation
of space and
environment



SANDBOX

User experience
and data usage
demonstrations
for decision
makers and end
users



**CAPACITY
BUILDING**

Target
training of
experts and
executives



PROMOTION

Raise awareness
among the general
population
about the results of
the project



GEO Slovenia

All Spatial Information in One Place

REPUBLIKA SLOVENIJA

GEO SLOVENIJA
Sotočje prostorskih informacij

Prostorske informacije na enem mestu

Z veseljem vas povabimo v digitalni prostor, kjer oblikujemo sofisticirano platformo za prostorske informacije, ki zagotavlja interoperabilno povezovanje ter omogoča dostop do prostorskih podatkov, storitev ter aplikacij.

[Več o GEO Sloveniji](#)

NAJNOVEJŠE NA BLOGU

KROŽNO GOSPODARJENJE S PROSTOROM odnema po celotni Sloveniji...

Se preden smo si lahko odpodli po izjemno uspešni konferenci, ki smo jo gostili v Kristalni palači v Ljubljani na temo Strategije urejanja prostora v Sloveniji in povezanega Krožnega gospodarjenja s...

Delavnica "Quo Vadis Swiss SDI"

Z velikim zadovoljstvom vam sporočamo, da smo v okviru projekta Geo Slovenia gostili ugledno strokovnjakinjo s področja prostorskih informacij iz Švice, dr. Christino Najar, ki nam je obiskala na Geodetski upravi...

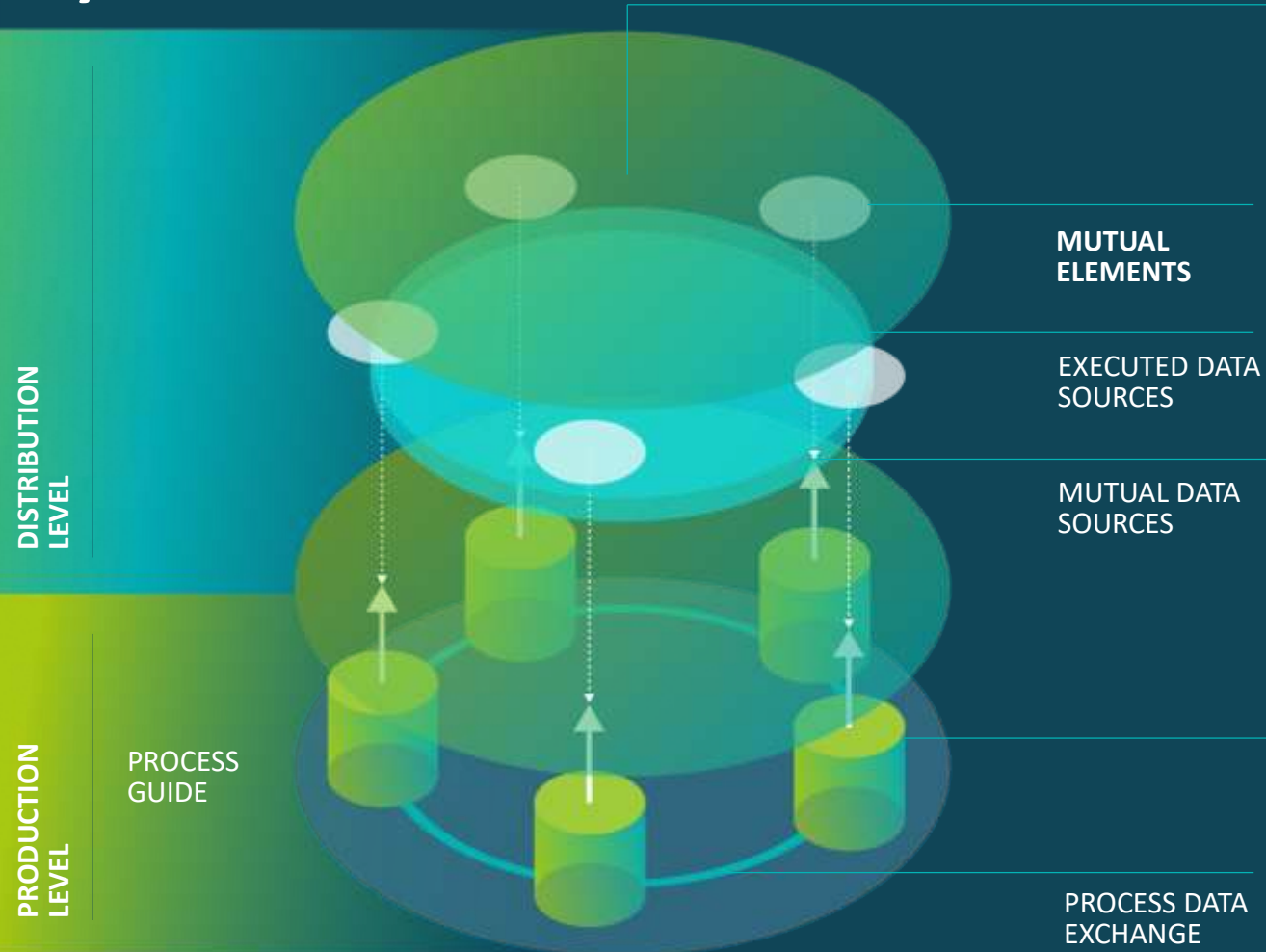
Strateška konferenca KROŽNEGA GOSPODARJENJA S PROSTOROM

V okviru projekta Zelene slovenske lokacijske okvire SLO4D in projekta »Skupna infrastruktura za prostorske informacije« v projektu Zelene slovenske lokacijske okvire smo v Kristalni palači v Ljubljani dne 23. oktobra...

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System Architecture



PLATFORM

- Knowledge base, Helpdesk
- Standardization, code lists, catalogues
- Geoinformatics team
- **Inspire team**

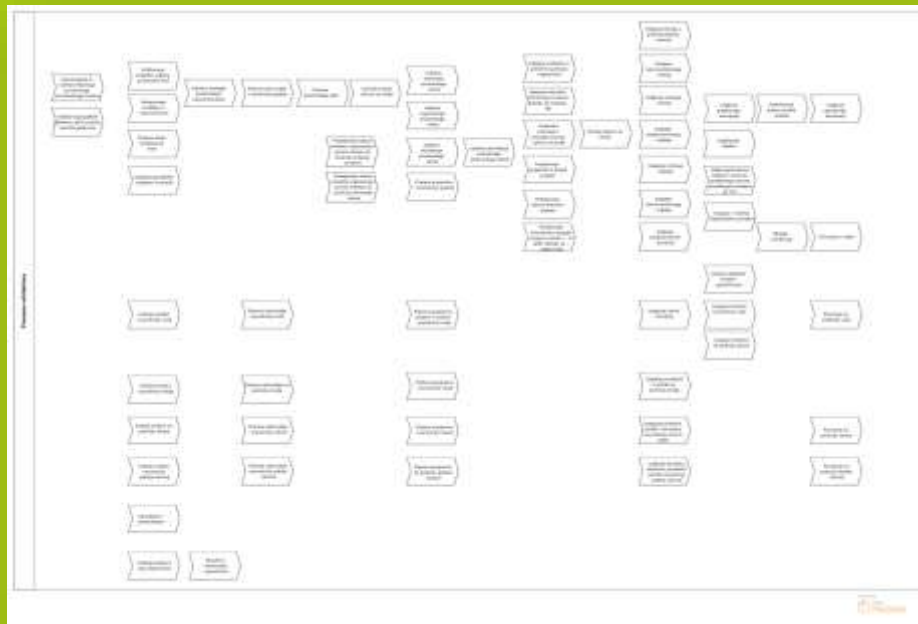
PILLARS

- Real Estate
- Space
- Environment
- Waters
- Nature

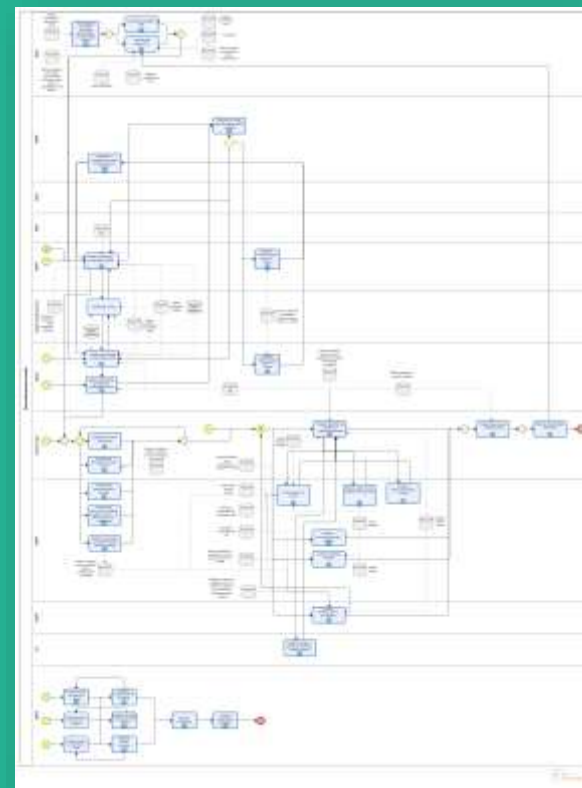


System Architecture

PROCESS ARCHITECTURE



GENERAL PROCESS MODEL

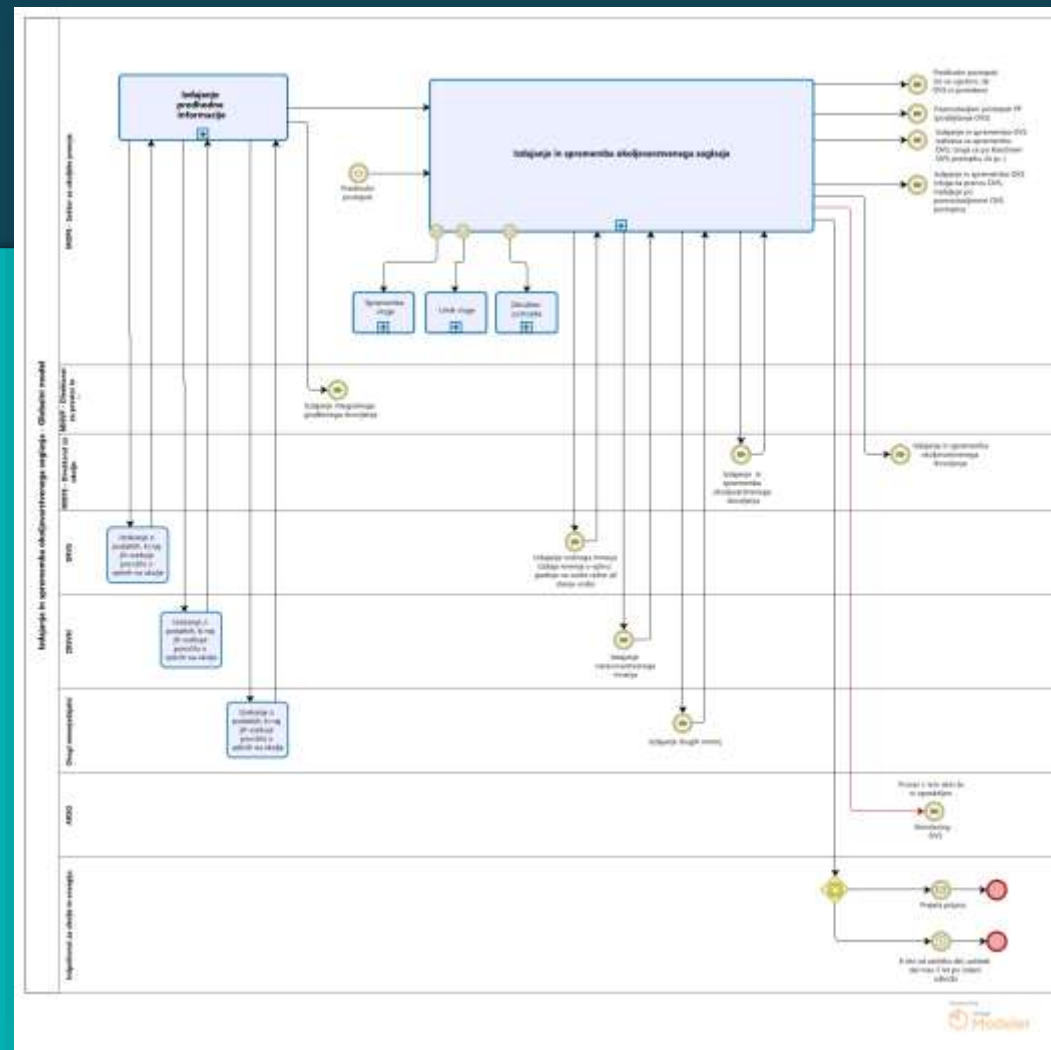




System Architecture

Process Modelling

MODELING OF EACH INDIVIDUAL PROCESS






Why?

- **Digital transformation** of the entire spatial, real estate, and environmental sector.
- **Process optimization.**
- **Improved support** for users in need of services from various sectors.
- **Support for green transition** – Recycle Space Slovenia - RSS.

<https://www.geo-slovenija.si>

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Slovenia - Floods 2023

Real-life Infrastructure Use Case

Finding suitable (safe)
locations for alternative
constructions



Črna na Koroškem, Slovenia
August 2023



Land Use and Undeveloped Building Land



Poplave 2023



VSEBINE

IZBRANI SLOJI

- ☒ NSZ rangirana po površini
- ☒ Občine
- ☒ Generalizirana namenska raba prostora

SLOJI

Evidenca stavbnih zemljišč

Funcionalno razvrstena območja

Prostorski akti

- ☒ Generalizirana namenska raba prostora

Državni postorski akti

- ☐ Območja državnih prostorskih aktov v pripravi
- ☐ Območja veljavnih državnih prostorskih aktov

Dovoljenja / graditev

Nepremičnine

Pravni režimi

Prostorske enote

Topografija

Vector Presentation of Water Lands



Poplave 2023



Legend and Layer List:

- ☐ NSZ rangirana po površini
- ☒ Občine
- ☐ Generalizirana namenska raba prostora
- ☐ Funkcionalno razvrednotena območja
- ☒ Vodno zemljišče tekočih celinskih voda

SLOJI

- Evidenca stavbnih zemljišč
- Funkcionalno razvrednotena območja
- Prostorski akti
- Dovoljenja / graditev
- Nepremičnine
- Pravni režimi
- Vode
 - Vodna zemljišča**
 - ☐ Vodno zemljišče morja
 - ☒ Vodno zemljišče tekočih celinskih voda
 - ☐ Vodno zemljišče stoječih celinskih voda
- Integralna karta poplavne nevarnosti (stanje na 12.06.2023)**
 - ☐ Območje veljavnosti rezultatov
 - ☐ Območje poplavne nevarnosti pri pretoku Q100
 - ☐ Območje poplavne nevarnosti pri pretoku Q500
 - ☐ Območje poplavne nevarnosti pri pretoku Q10
 - ☐ Območje poplavne nevarnosti pri pretoku Q100
- Integralna karta razredov poplavne nevarnosti (stanje na 12.06.2023)**
 - ☐ Območje razreda majhne poplavne nevarnosti
 - ☐ Območje razreda majhne poplavne nevarnosti
 - ☐ Območje razreda velike poplavne nevarnosti
 - ☐ Območje razreda preostale poplavne nevarnosti
 - ☐ Območje razreda srednje poplavne nevarnosti

Q100 – the Line of Century Waters



Poplave 2023



VSEBINE

IZBRANI SLOJI

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- ☒ Občine
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- ☐ Funkcionalno razvrednotena območja
- ☒ Vodno zemljišče tekočih celinskih voda
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- ☐ Območje poplavne nevarnosti pri pretoku Q500

SLOJI

Evidenca stavbnih zemljišč

Funkcionalno razvrednotena območja

Prostorski akti

Dovoljenja / graditev

Nepremičnine

Kataster nepremičnin

- ☐ Parcele
- ☐ Stavbe
- ☐ Hišne številke

Lastništvo nepremičnin

- ☐ Parcele v lasti RS (KN)
- ☐ Parcele v lasti Republike Slovenije - po interpretaciji MJU (24.08.2023)
- ☐ Parcele v lasti lokalnih skupnosti (KN)

Zbirni kataster gospodarske javne infrastrukture

- ☐ Električna energija - linije
- ☐ Elektronske komunikacije - linije
- ☐ Kanalizacijsko omrežje - linije
- ☐ Toplotna energija - linije

Q500 – Five Hundred Years Waters



Poplave 2023



VSEBINE

IZBRANI SLOJI

- ☒ NSZ rangirana po površini
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- ☐ Funkcionalno razvrednotena območja
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SLOJI

Evidenca stavbnih zemljišč

Funkcionalno razvrednotena območja

Prostorski akti

Dovoljenja / graditev

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- ☐ Toplotna energija - linije



Gruen Knecht



Erno m Kuvkum

Summary and vision



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Geo Slovenia after GreenSLO4D

Geo Slovenia has accessible, connected and comprehensive data available in the field of space, nature, water, environment and real estate.

Geo Slovenia has the largest collection of spatial data in Slovenia.

Geo Slovenia is a spatial information infrastructure, which is an important part of the national infrastructure for access to information.

Geo Slovenia is the first choice for supporting rescue and reconstruction after natural disasters.

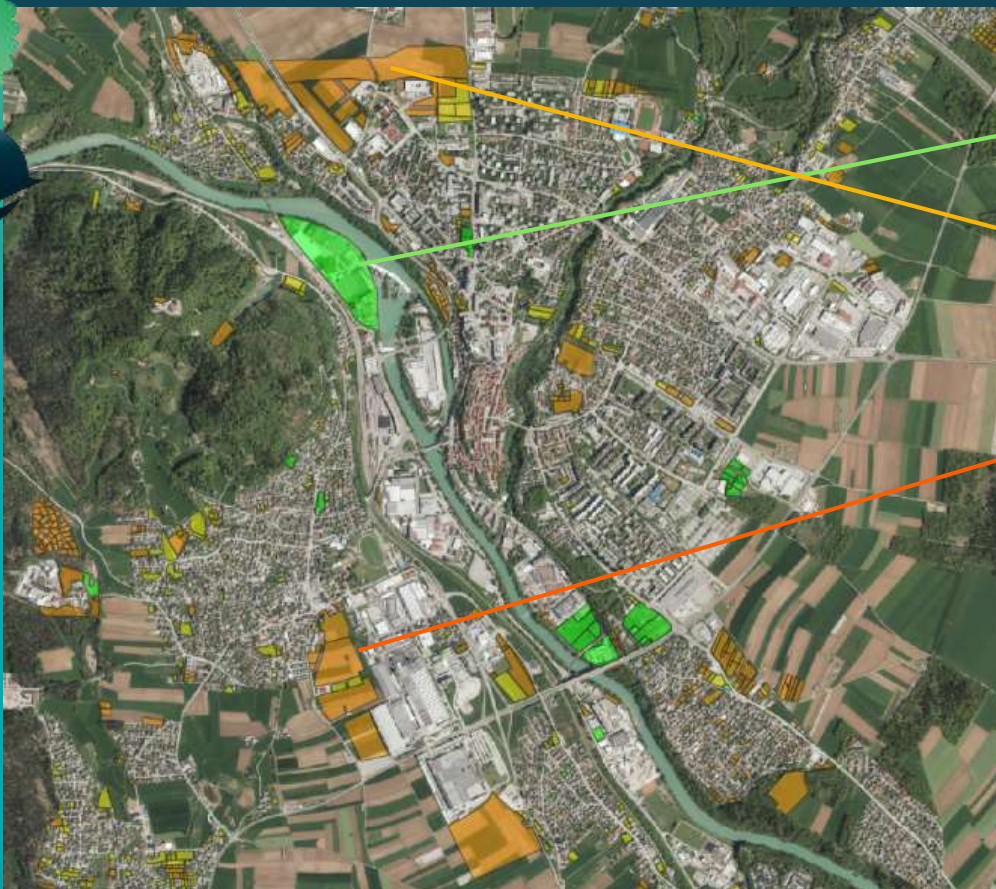
Inclusion of other database managers, service providers.

Thank You for your attention.

**„If you want to go far,
go together.“**

African proverb

Principles of Circular Space Management



1

1

Revitalization of degraded areas (renovation, replacement).

2

2

Building on vacant building land inside settlements.

3

3

Building on other building land.

4

4

Change of land use with considering compensatory measure.



SLO4D



Green

The results of connecting space, environment, water and nature are key to achieving climate goals, supporting the circular economy, preserving ecosystems and biodiversity.

Slovenian

State spatial and environmental systems included, which are key for Slovenia.

Location Framework

The location represents the foundation of connecting the contents of space, environment, water and nature.

4D

Transition to the fourth dimension (time), "for digital", connected 4 key systems (space, environment, nature and water).