Modernization of spatial data infrastructure to reduce risks and impacts of floods

Tomaž Petek

Surveying and Mapping Authority of the Republic of Slovenia

Lisbon, May 2015

I FEEL SLOVENIA

SLOVENIA is …..

Home of 2.036.541 inhabitants

Area of 20.273 km2

House numbers 527.016

Settlements 6.028
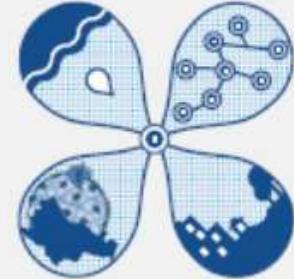
Cadastral communities 2.716

Land parcels 5.266.803
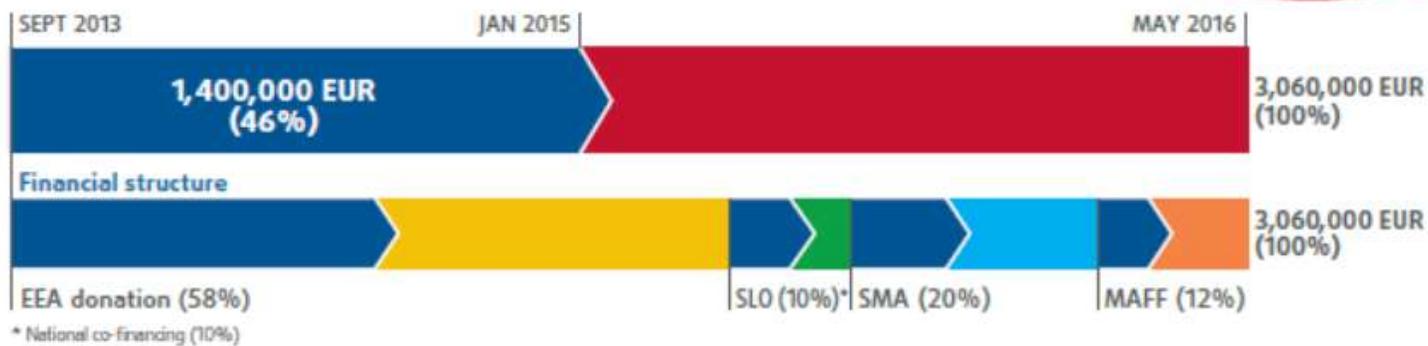
Land Owners 950 000 Buildings 1,2 mio

Content of the presentation

PROJECT DESCRIPTION
MODERNIZATION OF SPATIAL DATA INFRASTRUCTURE TO REDUCE RISKS AND IMPACTS OF FLOODS

PROJECT BUDGET

SEPT 2013	JAN 2015	MAY 2016
1,400,000 EUR (46%)		3,060,000 EUR (100%)

Financial structure

3,060,000 EUR (100%)

EEA donation (58%)   SLO (10%)* SMA (20%)   MAFF (12%)

* National co-financing (10%)

PROJECT OBJECTIVES

THE IMPROVED COMPLIANCE WITH THE EUROPEAN AND SLOVENE ENVIRONMENTAL LEGISLATION	35%
ESTABLISHMENT OF THE SPATIAL INFORMATION INFRASTRUCTURE AS A PREREQUISITE FOR COMPREHENSIVE MONITORING	47%
ESTABLISHMENT OF THE GEODETIC REFERENCE FRAME, ESPECIALLY THE VERTICAL COMPONENT, WITH THE URGENT NEED TO MANAGE FLOOD RISK AND SPATIAL PLANNING	68%
PREPARATION OF SPATIAL DATA AND PRODUCTION OF NETWORK SERVICES COMPLIANT WITH THE INSPIRE DEMANDS	50%
IMPLEMENTATION OF MEASURES TO INCREASE CAPACITY FOR THE IMPLEMENTATION OF THE INSPIRE DIRECTIVE	50%
POTENTIAL INCREASE IN THE EXCHANGE OF DATA REGARDING ENVIRONMENTAL IMPACT ASSESSMENTS BETWEEN SLOVENIA AND OTHER MEMBER STATES	30%

SUBPROJECT
GEODETIC REFERENCE SYSTEM (GRS)

Subproject manager: Klemen Medved

GRS

SUBPROJECT OBJECTIVES

ESTABLISHEMENT OF A NATIONAL COMBINED GEODETIC NETWORK	40%
IMPLEMENTATION OF THE VERTICAL COMPONENT OF ESRS	60%
DEVELOPMENT OF THE GEOID MODEL FOR THE TERRITORY OF SLOVENIA	20%

NATIONAL COMBINED GEODETIC NETWORK
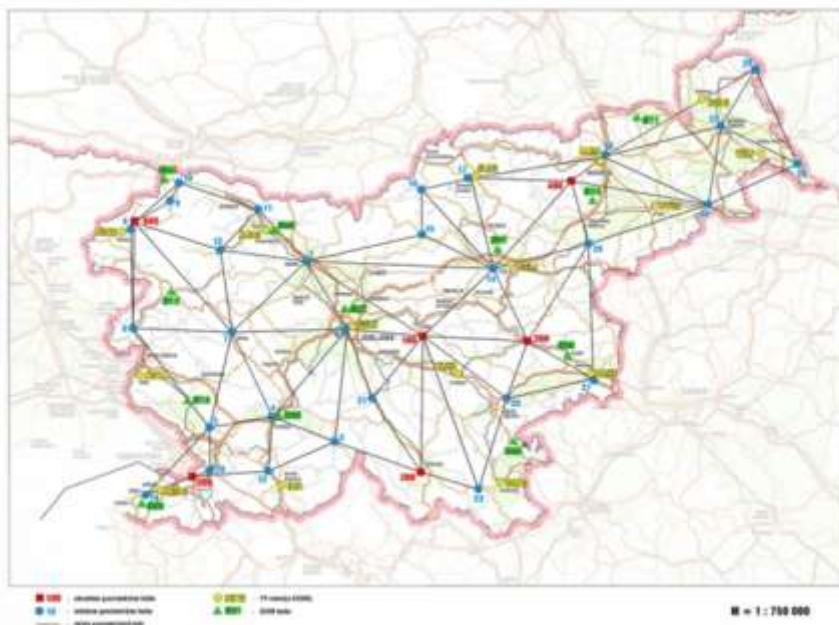
fundamental national geodetic infrastructure for continuous monitoring of geodynamic processes in the country

THE VERTICAL COMPONENT OF THE GEODETIC REFERENCE SYSTEM

•AGT 400 Areh   AGT100 Bogenšperk   AGT200 Gotenica

•AGT 600 Kluže   AGT300 Sevnica   AGT500 Socerb

absolute gravimetric measurements were carried out on all of the six existing absolute gravimetric points in Slovenia.
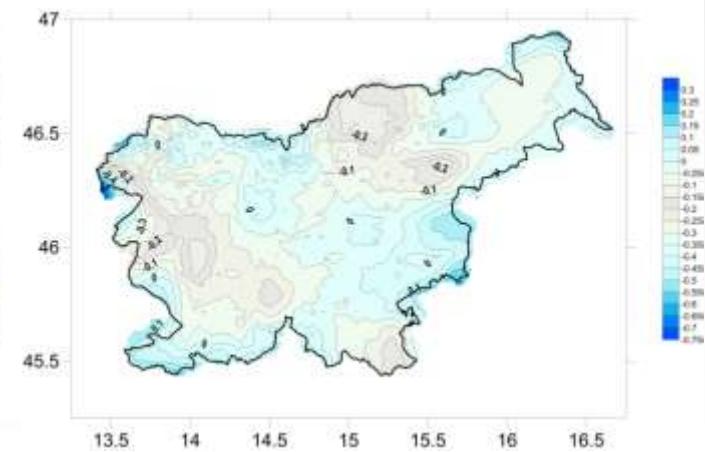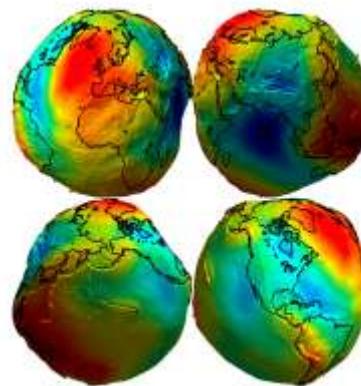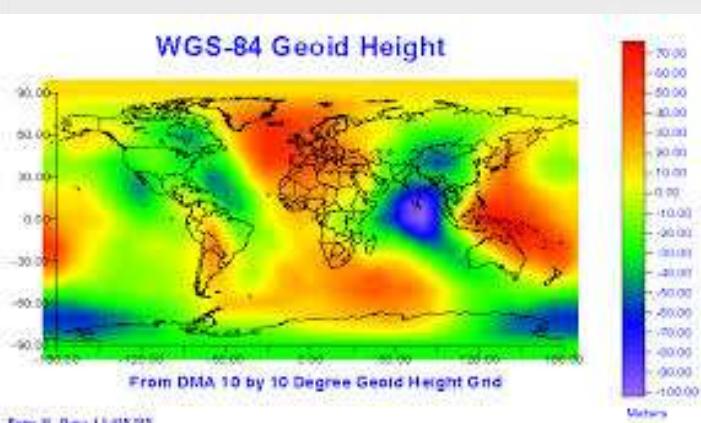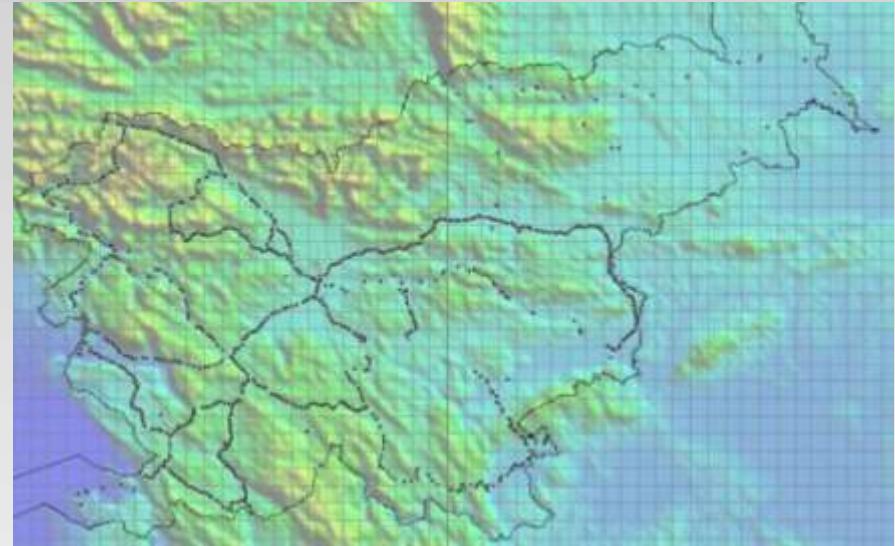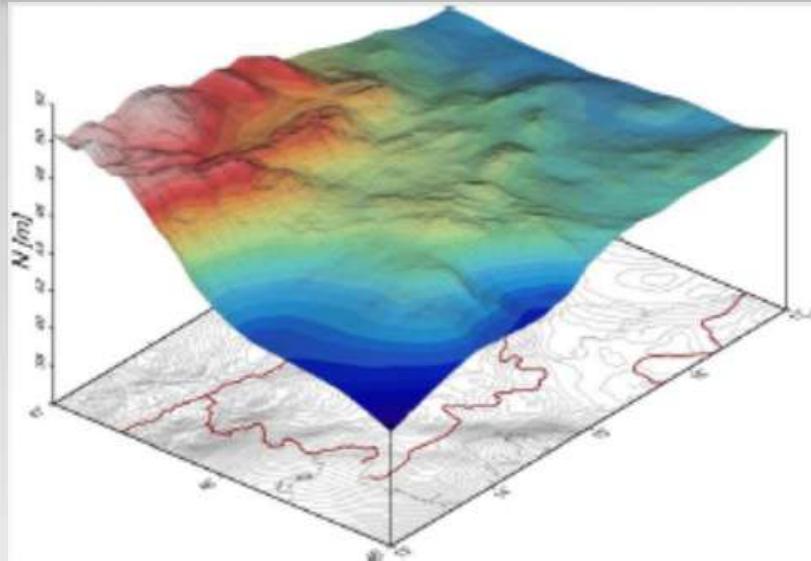
over 300 km of leveling lines were measured in 2014

GEOID MODEL
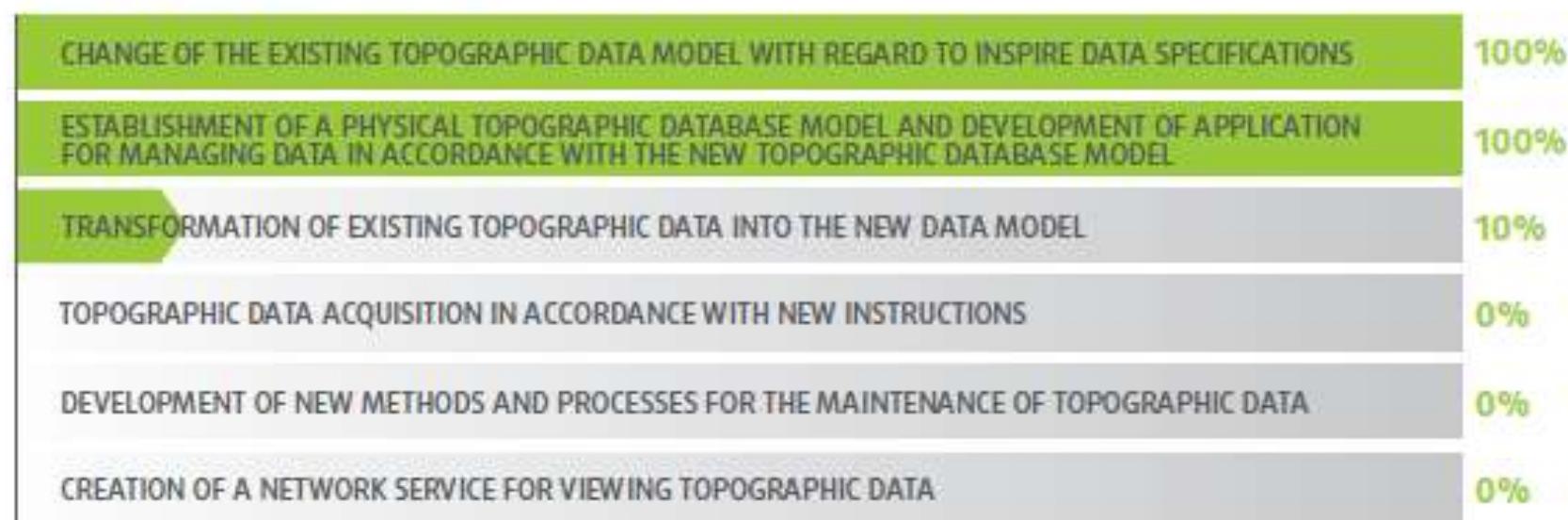
SUBPROJECT
TOPOGRAPHIC DATABASE (TOPO)

Subproject manager: Marjana Duhovnik

TOPO

SUBPROJECT OBJECTIVES

CHANGE OF THE EXISTING TOPOGRAPHIC DATA MODEL WITH REGARD TO INSPIRE DATA SPECIFICATIONS	100%
ESTABLISHMENT OF A PHYSICAL TOPOGRAPHIC DATABASE MODEL AND DEVELOPMENT OF APPLICATION FOR MANAGING DATA IN ACCORDANCE WITH THE NEW TOPOGRAPHIC DATABASE MODEL	100%
TRANSFORMATION OF EXISTING TOPOGRAPHIC DATA INTO THE NEW DATA MODEL	10%
TOPOGRAPHIC DATA ACQUISITION IN ACCORDANCE WITH NEW INSTRUCTIONS	0%
DEVELOPMENT OF NEW METHODS AND PROCESSES FOR THE MAINTENANCE OF TOPOGRAPHIC DATA	0%
CREATION OF A NETWORK SERVICE FOR VIEWING TOPOGRAPHIC DATA	0%

TOPO

With the new data model a UML diagram was also presented.
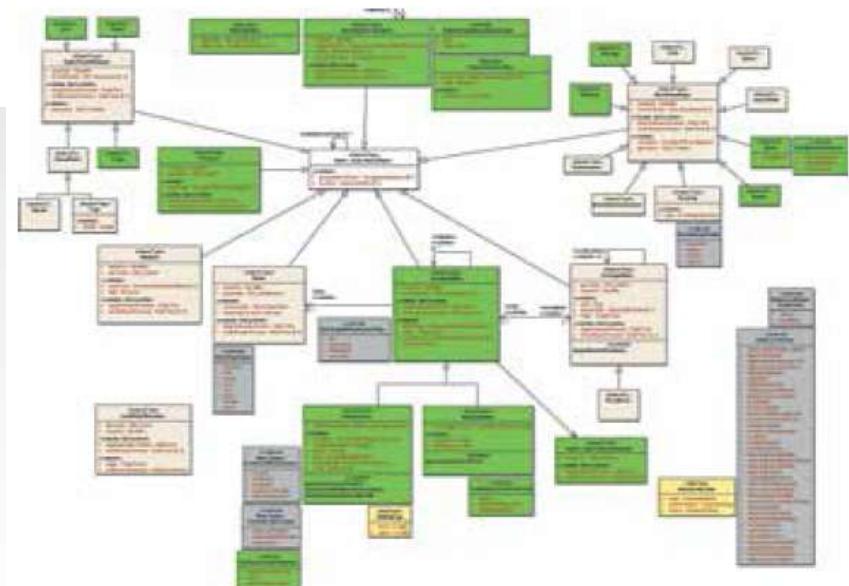
modified existing topographic data model with respect to the INSPIRE data specifications

TOPO

established topographic database

SUBPROJECT
HYDROGRAPHY (HIDRO)

Subproject manager: Boštjan Savšek

SUBPROJECT OBJECTIVES

THE MIGRATION OF HYDROGRAPHIC DATA CAPTURED WITH A TEST ACQUISITION (320 SHEETS) INTO THE TOPOGRAPHIC DATABASE OF THE SURVEYING AND MAPPING AUTHORITY OF RS (SMA)	0%
UPDATE OF THE SPATIAL DATA INFRASTRUCTURE TO IMPROVE OPERATIONAL HYDROLOGICAL SYSTEMS	40%
UPDATE OF THE WATER INFRASTRUCTURE DATABASE TO IMPROVE THE PROCESS OF WATER MANAGEMENT AND MAINTENANCE	40%
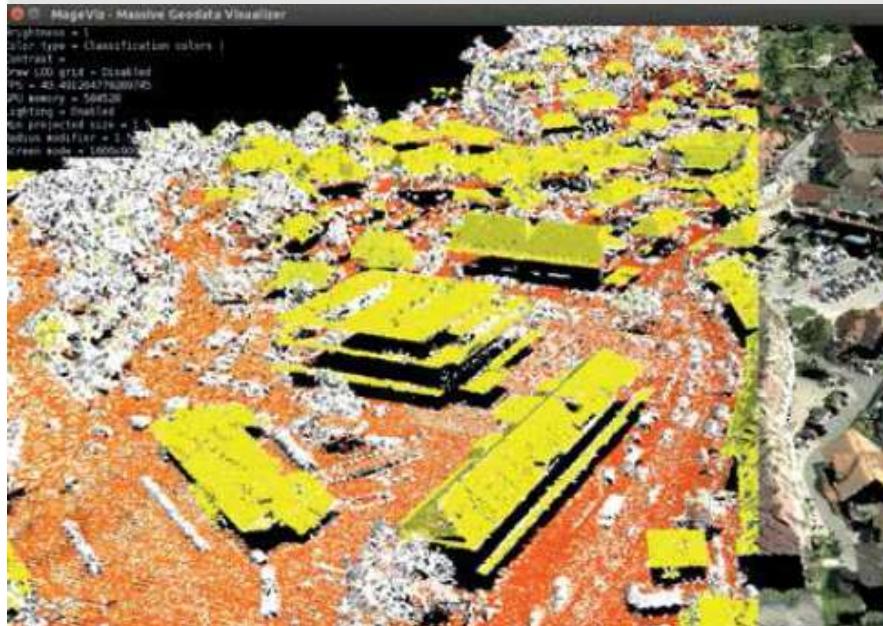
HIDRO

UPDATE OF THE SPATIAL DATA INFRASTRUCTURE TO IMPROVE OPERATIONAL HYDROLOGICAL SYSTEMS

HIDRO
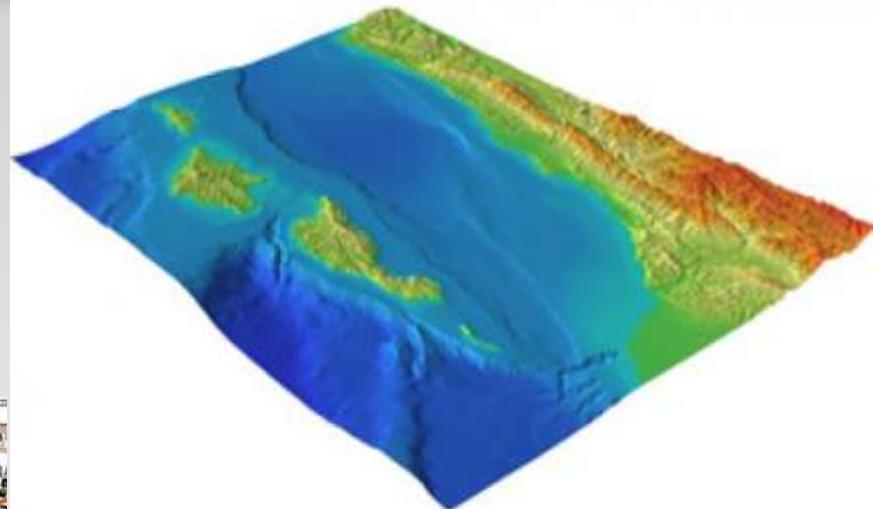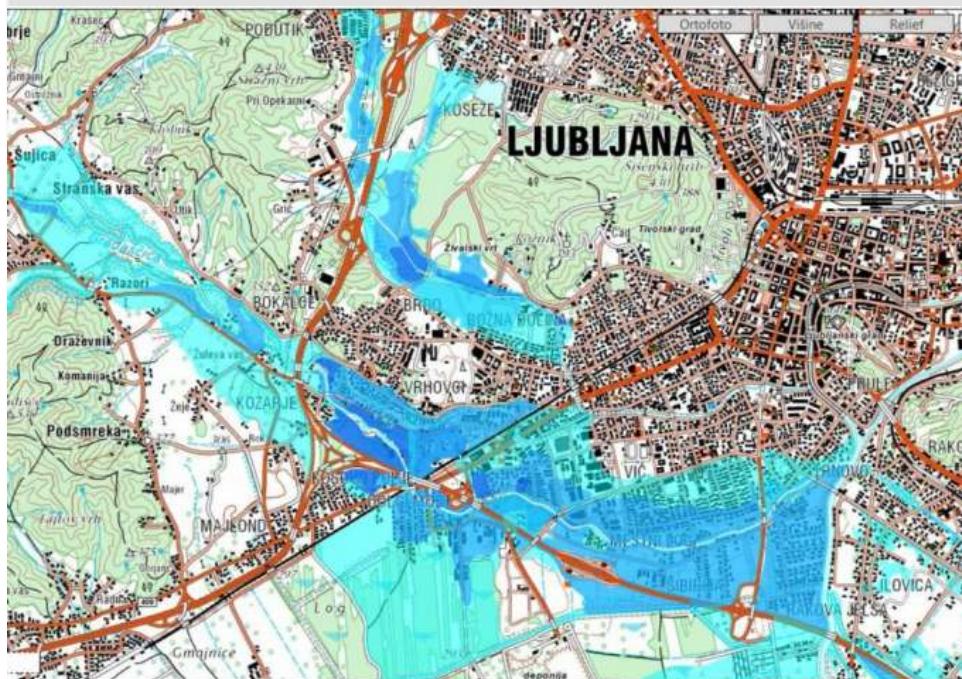
UPDATE OF THE WATER INFRASTRUCTURE DATABASE TO IMPROVE THE PROCESS OF WATER MANAGEMENT AND MAINTENANCE
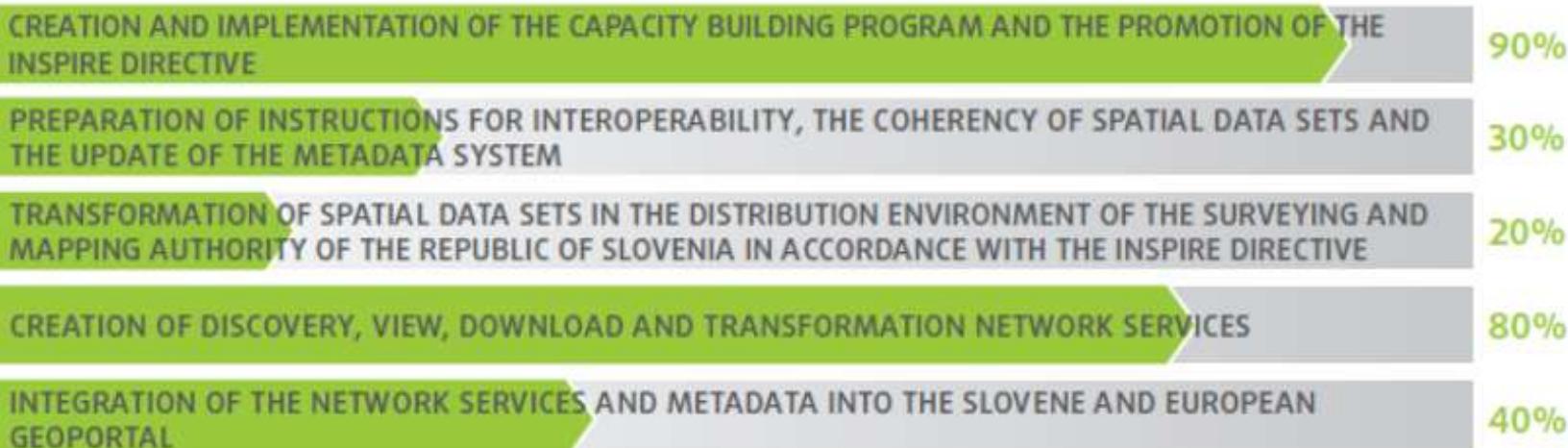
SUBPROJECT
INFRASTRUCTURE FOR SPATIAL INFORMATION (INSPIRE)

Subproject manager: Tomaž Petek

SUBPROJECT OBJECTIVES

Objective	%
CREATION AND IMPLEMENTATION OF THE CAPACITY BUILDING PROGRAM AND THE PROMOTION OF THE INSPIRE DIRECTIVE	90%
PREPARATION OF INSTRUCTIONS FOR INTEROPERABILITY, THE COHERENCY OF SPATIAL DATA SETS AND THE UPDATE OF THE METADATA SYSTEM	30%
TRANSFORMATION OF SPATIAL DATA SETS IN THE DISTRIBUTION ENVIRONMENT OF THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA IN ACCORDANCE WITH THE INSPIRE DIRECTIVE	20%
CREATION OF DISCOVERY, VIEW, DOWNLOAD AND TRANSFORMATION NETWORK SERVICES	80%
INTEGRATION OF THE NETWORK SERVICES AND METADATA INTO THE SLOVENE AND EUROPEAN GEOPORTAL	40%

Capacity building and awarenes rasing
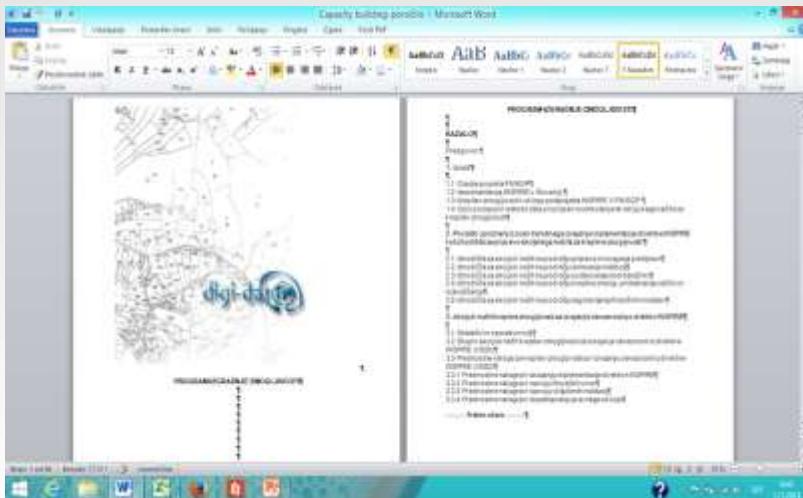
- Capacity building program
- Information and promotion of INSPIRE sub project
- Meetings and workshoops
- Guidelines for creating data policies for data access and services to the Community

WORKSHOOPS

GUIDELINES

Guidelines for creating data policies for data access and services to the Community
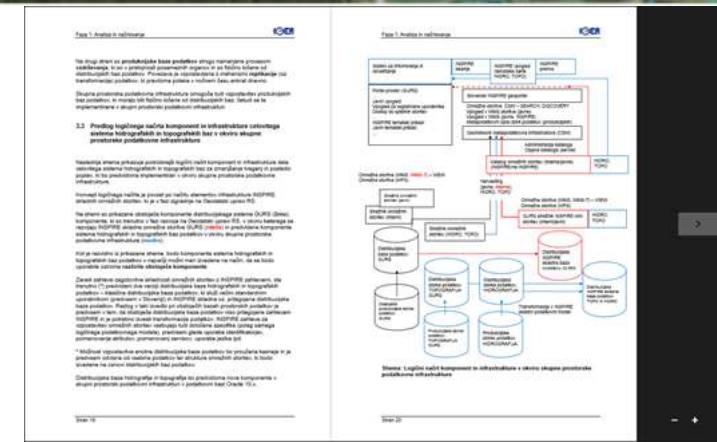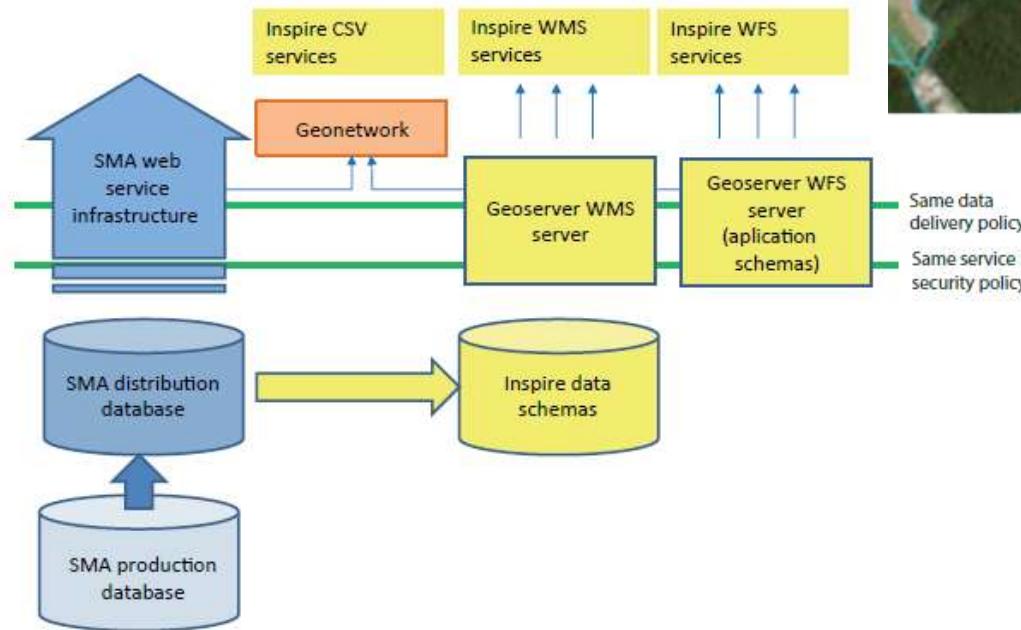
INSPIRE

COMMON INFRASTRUCTURE - ANALYSIS AND PLANNING IN THE SUBPROJECT INSPIRE

Analysis and Planning

Tema	Prostorski objekt	Izvorna zbirka podatkov	Namespace localID	WMS	WFS
Aneks I 3. zemljepisna imena GN Geographical Names	KRAJ Z IMENOM NamedPlace	REZI	SI.GURS.REZI.NP EN_MID	GN.GeographicalNames	inspire_gn:NamedPlace
Aneks I 4. Prostorske enote AU AdministrativeUnits	ADMINISTRATIVNA ENOTA AdministrativeUnit	RPE	SI.GURS.RPE.DR DR_ID SI.GURS.RPE.D44 D44_ID SI.GURS.RPE.UE UE_ID SI.GURS.RPE.OB OB_ID	AU.AdministrativeUnit	inspire_au:AdministrativeUnit
Aneks I 5. Naslovi AD Address	NASLOV Address	RPE	SI.GURS.RPE HS_MID	AD.Address	inspire_addr:Address inspire_addr:AddressAreaName inspire_addr:ThoroughfareName
Aneks I 6. Katastrske parcele CP CadastralParcel	KATATRSKA PARCELA CadastralParcel	ZK	SI.GURS.ZK SIFKO_PARCELA	CP.CadastralParcel	inspire_cp:CadastralParcel
Aneks I 7. Prometno omrežje TN TransportNetworks	CESTNI ODSEK RoadLink	ZKGJI	SI.GURS.GJI ID	TN.RoadTransportNetwork.RoadLink	inspire_rtn:RoadLink inspire_rtn:FormOfWay
Aneks III Stavbe BU Building	STAVBA Building	KS	SI.GURS.KS SID	BU.Building	inspire_bu-core2d:Building

GN.GeographicalNames

AD.Address

CP.CadastralParcel

BU.Building

TN.RoadTransportNetwork.RoadLink

AU.AdministrativeUnit

Test application: „Inspire Service Viewer"

Information and promotion of project

http://www.gurs-egp.si/eng

QUESTIONS

THANK YOU !
HVALA !

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Web: www.geoportal.gov.si

SLOVENIAN
SPATIAL DATA
INFRASTRUCTURE