GEOSPATIAL DATA IN THE SERVICE OF DIGITAL SERBIA: IMPLEMENTATION AND SOLUTIONS FOR DEVELOPMENT
The Republic Geodetic Authority - the highest quality, security, and information management standards.

- 11000 digital processes per second
- 3000 employees
- 400 law graduates
- 800 graduate engineers
- 3,8 Petabytes of data
- 50% of employed are women
- More than 4000 virtual and 70 physical servers
- More than 500 institutions are digitally connected to RGA
- More than 330 institutions
- More than 185 years of professional existence
- 170 locations in Serbia

An institution of public interest, part of the state's critical infrastructure, and a system of importance for the security of the Republic of Serbia.
NSDI DIAGNOSTIC TOOL 2016

Policy and Strategy
- RGA Strategy adopted
- New NSDI Strategy under development
- NSDI in line with e-Gov
- No clear Open Data policy

Governance arrangements
- Established NSDI Council, and TWGs
- Support and access to data and services provided
- No estimation of realtion: NSDI – SDGs
- Insufficient participation of other institutions

Legal framework
- New Law on NSDI under adoption
- Laws on Information, Intellectual rights and Personal data Protection exist
- Inadequate legal basis for sharing and exchange and data licensing
- No link between Laws on data protection in case of geospatial information

Accessibility and Technical Infrastructure
- Spatial reference system and ICT infrastructure established
- Standards on data, metadata and services exist
- National geoportal provided
- Technical performances of National geoportal low
- Transformation of data into unique coord. system to be done
- Low degree of spatial data access by internet technology

Use of NSDI/Applications
- Developed capacities through development projects
- No clear strategy on CD within NSDI
- Insufficient engagement of educational sector
- Unsatisfactory capacities in public sector

Capacity Development
- Underway usage of NSDI for decision making in areas of planning and construction and environment protection
- No incentive in usage of NSDI in other areas
- Generally Public decision making not based on usage of NSDI
- "Crowd-sourcing" solutions still not introduced

Data exist on national level
- No clear definition of responsible institutions for some core data sets

Core Data I
- (DOP, administrative units, addresses, cadastral parcels, elevation, geographical names...)

Data exist on national level
- Outdatedness of some data sets

Core Data II
- (stat. units, buildings, land cover, utilities...)

Socio-Economic impact
- Cooperation with other institutions improved through agreements
- No NSDI business model
- Socio-economic impact never estimated
- No sustainable system of spatial data pricing and licensing
- Low provision of data and services based on NSDI by private sector
The overall goal - support the economic reform of the Government by effective provision of information in the sphere of real-estate and geospatial related activities for the fast, easy and rightfull decision-making at all strategic levels.

KEY PILLARS OF REFORMS

- Participatory
- Transparency
- Equal access to information
- Efficiency
- Gender equality
- Accountability
TODAY: RGA = PLATFORM (SmartSDI)
Republic geodetic authority is a platform for informative decision making based on geospatial data

- LAND ADMINISTRATION SYSTEM
- SYSTEM FOR PRODUCTION AND DISTRIBUTION OF GEOSPATIAL DATA
- SYSTEM FOR DISASTER RISK REDUCTION AND RESILIENCE
- SYSTEM FOR ECONOMIC DEVELOPMENT
- SYSTEM FOR SPATIAL AND URBAN PLANNING
LAND ADMINISTRATION SYSTEM
“Land administration is described as the process of determining, recording, disseminating, and updating information about the relationship between people and land.”
REGISTER OF INFORMAL OBJECTS

NUMBER OF FORMAL AND REGISTERED OBJECTS    -  4.911.436
NUMBER OF INFORMAL OBJECTS              -  4 782 469

- CONSTRUCTION INDUSTRY
- BANKING AND FINANCIAL SECTOR
- INVESTMENT SECTOR
- INSURANCE
- TELECOMMUNICATION
- ENERGY
- SALES AND MARKETING
- TRANSPORT AND LOGISTICS
- URBAN PLANNING AND SPATIAL PLANNING
- CITIZENS
Informal properties in Serbia

- Socio-economic study for geospatial data and information done in 2020:

Potential market value of informal properties in Serbia:
- circa 28 billion EUR

Loss from unpaid taxes
- circa 127 million EUR per year

It is not possible to sell or buy informal properties="DEAD CAPITAL"

It is not possible to get access to utilities and infrastructure = SOCIAL AND ENVIRONMENTAL PROBLEM
Serbia has been trying to solve the issue of illegal properties for more than 25 years!

**LAW ON LEGALISATIONS IN SERBIA:**
- First Law on legalisation 1997
- Law on spatial planning and construction 2003
- Second Law on legalisation 2006
- Third Law on legalisation 2009 and 2010
- Fourth Law on legalisation 2013
- Fifth Law on legalisation 2015 (satellite images)
- Sixth 2019
- Seventh UNDER DEVELOPMENT 😊
Voluntary Guidelines on the Responsible Governance of Tenure

VG Part 3: LEGAL RECOGNITION AND ALLOCATION OF TENURE RIGHTS AND DUTIES. INFORMAL TENURE

VG Part 7: PROMOTION, IMPLEMENTATION, MONITORING AND EVALUATION: THE ROLE OF THE STATES

Support could include:

✔ technical cooperation
✔ financial assistance
✔ institutional capacity development
✔ knowledge sharing and exchange of experiences
✔ assistance in developing national tenure policies and
✔ transfer of technology
Prepare the Strategy for Formalization
- Build political will
- Analyze informalities
- Carry out cost-benefit analysis study
- Agree on fit-for-purpose strategy
- Develop communication plan
- Draft a strategy report
- Get approval from government

Prepare the Framework for Formalization
- Define areas and categories of constructions
- Determine the legal and regulatory issues
- Define the appropriate actions for formalization
- Define the registration process
- Design the draft formalization process
- Determine levels of penalties and fees
- Determine the involved institutions
- Determine and implement the administrative system

Formalization of Constructions
- Prepare inventory of informal properties
- Accept and process the submitted documents
- Register informal constructions
- Impose legal action as required
- Impose and collect penalties
- Monitor formalization

Actions parallel and following Formalization
- Improve the land and building registers
- Revise urban planning process
- Revise permitting of construction procedure
- Introduce a monitoring and inspection process
- Improve the land and building code
- Improve formalized housing
- Improve utilities and infrastructure
- Introduce property taxation
- Prevent new informality
NEW GUIDELINES FOR REFORM OF THE PROCESS OF FORMALISATION
Policy Area 1 - Geospatial, land rights, tenure, resource allocation and justice

Goal 1 Informal settlements are formalized and brought into the formal markets in a just, efficient, and sustainable manner, allowing for broader socio-economic progress, justice, and the empowerment of the people.

Policy Area 2 - Involvement of Local Communities and Local Action

Goal 2 Local community-based organizations, coordinated with a city-level team, respond to the pandemic in coordination with government ministries, medical, professional, and aid organizations of all kinds.

Policy Area 3 - Basic Data Needs, Telecommunications, and Information Technology

Goal 3 The people are empowered to cope with a pandemic by leveraging and making easily available the relevant information technologies.

Policy Area 4 - Physical Infrastructure, Water and Energy Services

Goal 4 The public physical infrastructure, water and sanitation network, and energy grids adequately, sustainably, and equitably support the informal communities.

Policy Area 5 - Services

Goal 5 Essential services are supplied to residents safely and adequately, overcoming the challenges of the pandemic threat.

Policy Area 6 - Stay at Home Recommendations, Culture, and Vulnerable Groups

Goal 6 To balance stay at home recommendations with the social and economic realities facing the local culture, diverse populations, and vulnerable groups.

Policy Area 7 - Food, Basic Consumption and Distribution

Goal 7 To ensure the adequate and safe manufacture, and distribution of food, basic consumption goods, and medical supplies.

Policy Area 8 - Environmental Concerns, Green Spaces, Recreation and Social Events

Goal 8 Provide for safer enjoyment of the environment, green spaces, recreational and social activities.

Policy Area 9 - Buildings, Construction and Land Planning

Goal 9 Risks posed by commercial, public buildings, educational facilities, informal homes, and other constructions are controlled.
SIMPLIFIED BUSINESS PROCESSES

Changed policy, many laws, procedures and technologies
Since July 2018 all services are available end-to-end digital

Before 2018

After 2018

3 DAYS
eFrontDesk and eServices
EXAMPLE OF BENEFITS FOR CITIZENS OF SERBIA

► LEADERSHIP AND GOOD MANAGEMENT + COMMUNICATION AND ENGAGEMENT = SYSTEM SUCCESS

► Digitization of real estate cadastre data, automation of processes and development of technological solutions made it possible to abolish the REAL ESTATE DEED

► Over 220 institutions have direct access to the CENTRAL BASE OF REAL ESTATE REGISTRATION through the Service Highway of state bodies - the most numerous and active local governments

SAVINGS FOR CITIZENS

> 25 000 000 hours compared to the old system, when they had to personally obtain documents at the counter

> 120,5 miliona euros how much they would pay for administrative fees before the digitization of the cadastre
REAL ESTATE MARKET AND VALUE OF PROPERTIES

REAL ESTATE PRICE REGISTRY

MONITORING AND REPORTING ON THE REAL ESTATE MARKET

• Quarterly
• Semi-annual
• Annual

RGA PRICE INDEX

1,3 million transactions.
INTERNATIONAL COMPARISON

Our real estate market is showing greater resilience to global economic changes.
Address: Lomina 39, Savski Venac, Belgrade

<table>
<thead>
<tr>
<th>Number of Rooms</th>
<th>Floor</th>
<th>Sale date</th>
<th>Contract price</th>
<th>TASP</th>
<th>RATIO</th>
<th>Appraisal Value</th>
<th>Apartment Area (m²)</th>
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<td>Studio</td>
<td>Ground Level</td>
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<td></td>
<td></td>
<td></td>
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<td>110,400</td>
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<td>110,800</td>
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<td>151,800</td>
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<td>101,000</td>
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<td>1.03</td>
<td>151,800</td>
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<tr>
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<td>2022-Mar</td>
<td>143,000</td>
<td>154,700</td>
<td>1.00</td>
<td>155,000</td>
<td>63</td>
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“a plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other and create and exchange value. Also collections of services used for hosting, processing and distributing geospatial data are called platforms.”

Key components of the platform:

► Data standardisation – data schemas, quality rules, life-cycle rules, collection guidelines
► Data tools for the producers – data life-cycle management, error reporting, data updating tools
► Data portal – finding, evaluating data – situational picture, metadata search, quality dashboards
► Data distribution services, APIs, Analysis and processing services
► Support (community)
► Management of the ecosystem
GEOSERBIA – DIGITAL PLATFORM WITH MORE THEN 330 DATA SETS AND 15M SESSIONS/MONTH

Utility Cadastre:
- Water supply network
- Sewage network
- Telecomunication
- Gas....

Real Estate Cadastre
- Ownership
- Mortgages
- Informal Buildings and Properties
REGISTER OF INFORMAL OBJECTS - PUBLICLY AVAILABLE

NUMBER OF FORMAL AND REGISTERED OBJECTS    - 4,911,436
NUMBER OF INFORMAL OBJECTS              - 4,782

- CONSTRUCTION
- INDUSTRY
- BANKING AND FINANCIAL
- SECTOR
- INVESTMENT
- SECTOR
- INSURANCE
- TELECOMMUNICATION
- ENERGY
- SALES AND MARKETING
- TRANSPORT AND
- LOGISTICS
- URBAN PLANNING AND
- SPATIAL PLANNING
- CITIZENS
CONDOMINIUM REGISTER – ALL DETAILS ABOUT BUILDINGS IN SERBIA

N: 4963137 E: 457569
STRAHINJICA BANA 66A

Condominium register (pro)
- Name: CONDOMINIUM REGISTRAR
- Address: STRAHINJICA BANA 66A
- Contact: 069/500947
- Email: sorjap.profil@gmail.com

Download PDF  Zoom to
“GREEN PASSPORTS” FOR ENERGY-EFFICIENT BUILDINGS - MONITORING
DISASTER RISK MANAGEMENT AND REDUCTION SYSTEM
Disaster Risk Register

Interactive, electronic INFORMATION SYSTEM containing data of importance for risk management.

Link to the application: https://drr.geosrbija.rs
earthquakes
landslides
floods
stormy wind
droughts
blizzards, drifts and ice, cold wave
LANDSLIDES, FLOOD ZONES, GEOLOGY, SEISMIC HAZARDS, ETC.
THANK YOU FOR YOUR ATTENTION!