REPUBLIC OF SERBIA
RATEL
REGULATORY AGENCY FOR
ELECTRONIC COMMUNICATIONS
AND POSTAL SERVICES

EC infrastructure mapping for common use in Republic of Serbia

ITU Regional Regulatory Forum for Europe on Regulation Supporting Digital Transformation

Broadband Mapping Systems in non-EU countries

30th November 2020

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Capacities which may be subject of request by EC operators:

- Type;
- Availability;
-Geographic location;
- Shared use/access only.

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Infrastructure **data** publicly available:

- Detailed;
- Geo-referenced;
- Structured;
- May be subject of sharing.

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Current **regulatory framework** covers:

- Cable infrastructure data;
- Antenna towers/masts;
- Other cable elements/equipment.

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Main **reasons** for mapping of shared infrastructure:

- Optimization of deployment;

- Less new networks setting-up costs;

- Better planning/cost sharing;

- Accelerating development of NGN.

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Purpose of using shared infrastructure:

- Competitiveness;
- Effective and efficient performances;
- Impossible to construct or install
  a new network / facilities.

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Raising **awareness** for detrimental effects on:

- Environment;
- Public security;
- Realization of spatial plans;
- Preservation of cultural heritage.

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Database presentation **consists of** the following parts:

- implementation strategy;

- current status of database;

- web application preview;

- types of data;

- future plans.

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Strategy of infrastructure mapping system:

- Law on Electronic Communications;

- Roolebook of methods for data collecting and publishing;

- Detailed geographic and structural data;

- EC operators responsibilities.

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Status of database:

- > 30 registered operators (180 total);
- > 1800 antenna towers / masts;
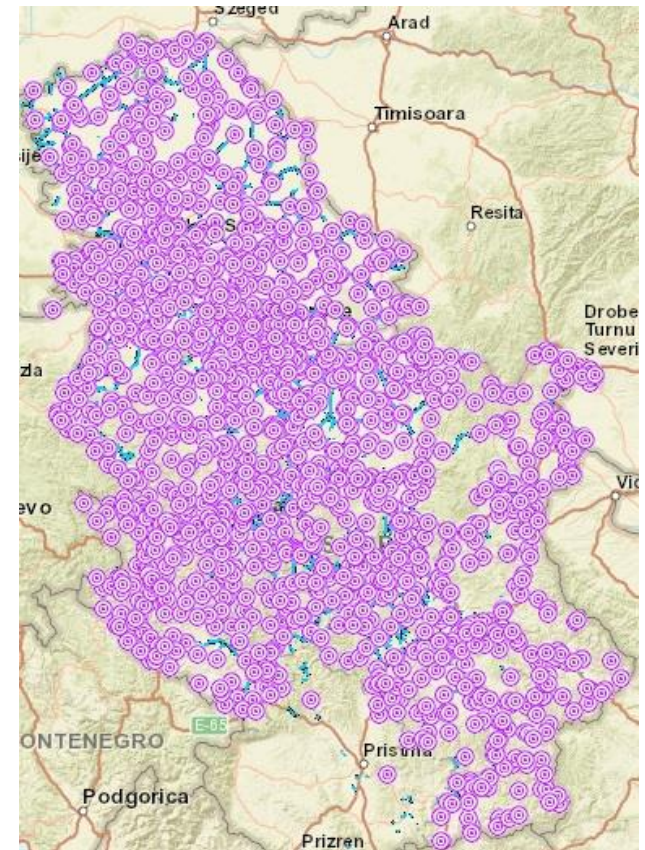- > 1500 fiber optic cables;
- > 200000 other cable elements;
- > 7000 database access / year.
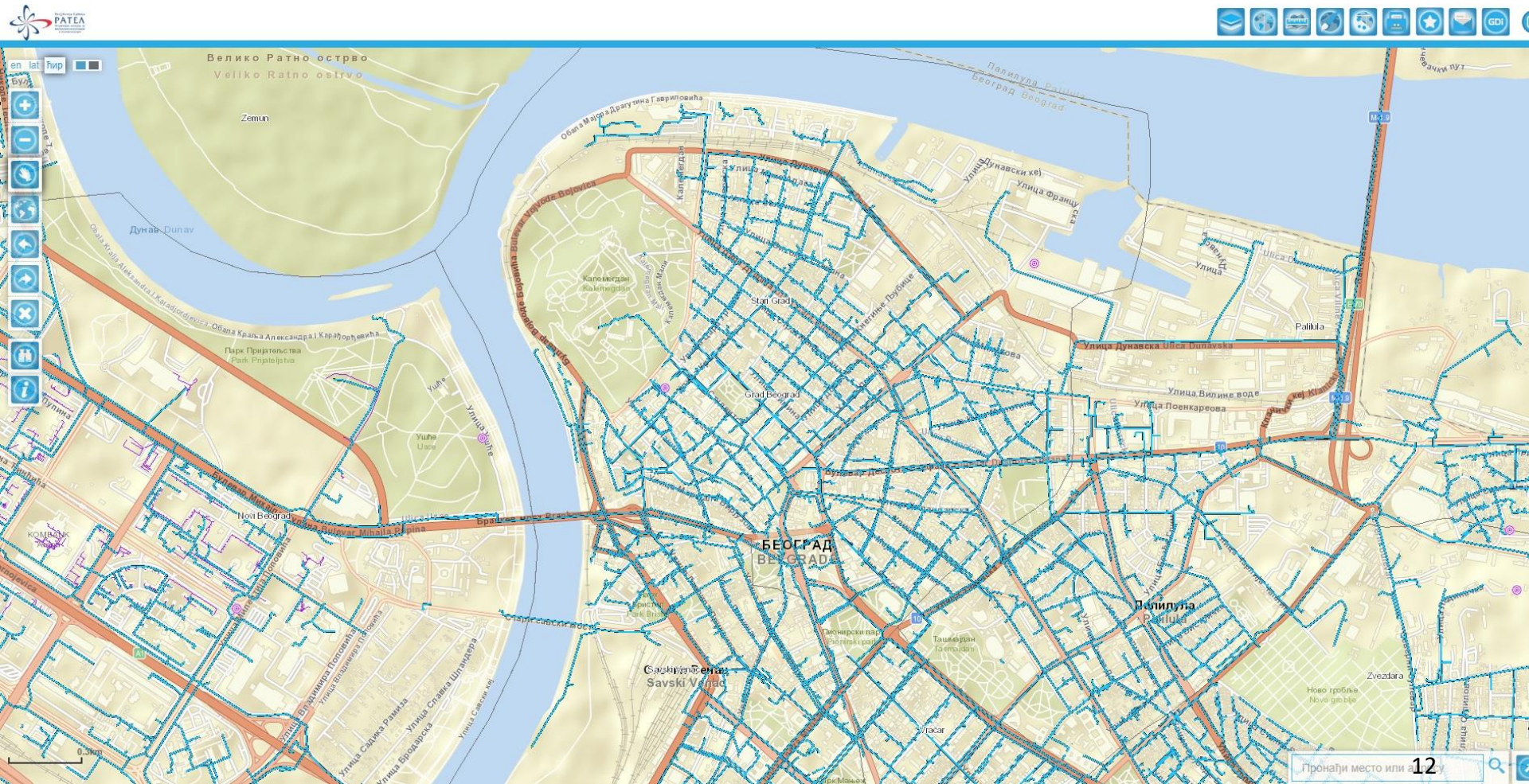
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Web application **preview**:

- Web GIS application;

- User/pass secured logging;

- EC operators and RATEL admin only;

- Clearly defined instructions;

- 2 modes of access registration R/W.

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Infrastructure sharing data (**cables**):

- Name of operator (owner)/location/route;

- WGS84 coordinates of important points (start/end, hub);

- Cable type and route length/geodetic record;

- Other information (type of pipes/number of pipes on the
   route/manhole type/number of manholes on the route);

- Capacity for lease/unused capacity;

- Cable installments and ending data (optional).

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Infrastructure sharing data (**antenna towers / masts**):

- Name of operator (owner);

- Location of antenna tower / mast and construction data;

- Shape of tower / mast base and dimensions (m);

- Tower / mast hight (m) and object hight (m);

- Free space (segment length / available azimuth range);

- Mounted equipment (type / free capacity) - optional.

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Standard mapping **GIS tools**:

- Switching on / off the layers;

- Zooming;

- Measurement of distance / surface;

- Selection of data using spatial queries / by hand;

- Exporting selected data to Excel;

- Background selection through free ArcGIS online service.

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Improvements and **Future** plans:

- Mapping of all EC infrastructure;
- Binding with other sectors;
- Active infrastructure sharing;
- Open data approach.

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Thank you for your attention.

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