

EUROPEAN FORUM FOR GEOSTATISTICS 2012

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„If you cannot describe it, you cannot manage it“



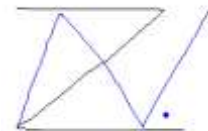
Statistics, Geodata and Our Way to Geoinformation

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I. Introduction

II. National Geoinformation Infrastructure in the CzR

III. Statistics and Registers

I. Introduction



The Czech Statistical Office has been **involved in national processes** in the creation, processing and usage of geoinformation and has been **investing** into know-how, technology and production of geodata on the territorial register platform as the support for statistical tasks.

I. Introduction

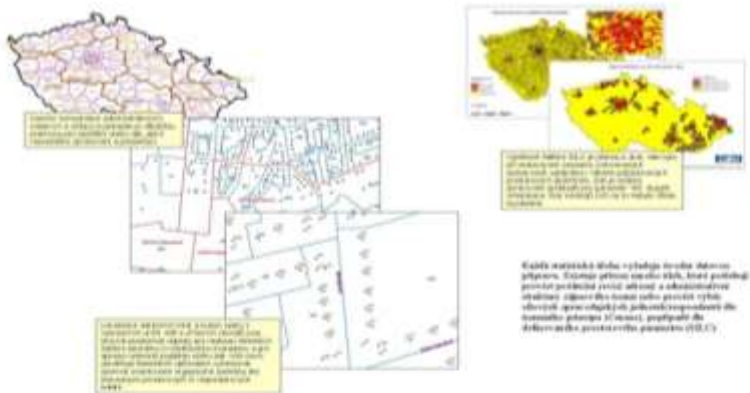


- The traditional statistical candidates for linking with primary localisation (coordinates) includes **social statistics**, house, apartment and population **censuses**, **agriculture** (Agrocensus), **construction** (buildings, apartments), **amenities of municipalities**, etc.
- *Fig. 1 - Spatial data accompanies the lifecycle of almost all statistical tasks ./.*

I. Introduction



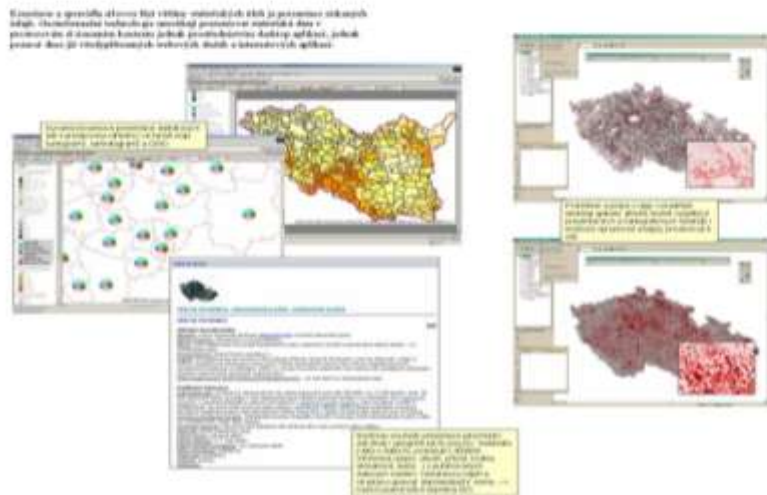
TASK PREPARATION



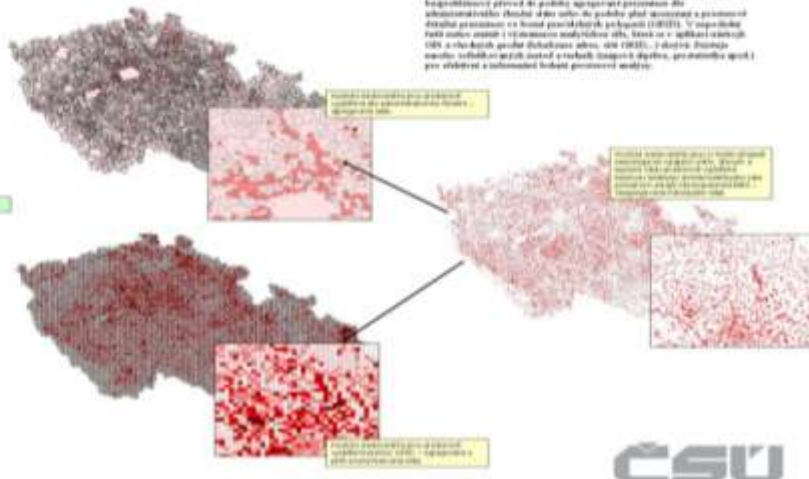
DATA COLLECTION



DATA DISSEMINATION AND DISTRIBUTION



DATA PROCESSING AND ANALYSIS



II. National GI infrastructure in the CzR



The basis for development of geoinformation (GI) in the Czech Republic dates back to the 1970s, with the greatest boom taking place in the 1990s when there were favourable **conditions**:

expansion of CAD/GIS technology and user applications in surveying and cadastre, agriculture, forestry and environment, the massive production of information about the territory at district offices, sharing of information, and the development of secondary and university education in geoinformation.

II. National GI infrastructure in the CzR



These activities brought together a community of people that formulated **a vision and found solutions** in progress. There are several legislative milestones. **Legislative regulations** were adopted :

- * on the state statistical service (1995);
- * on the information systems (2000);
- * on the transposition and implementation of European Directive 2/2007/ES on the establishment of infrastructure for spatial data in the European Community (INSPIRE);
- * the Basic Registers of Public Administrations (2009).

II. National GI infrastructure in the CzR



Moreover

In this year Ministry of the Interior is preparing the document **Strategy 2020** in the field of NGII for Czech government decision.

II. National GI infrastructure in the CzR



The main strengths of the Czech geoinformation infrastructure are as follows at present:

- Launch of the Basic Registers of public administration from 1 July 2012: Register of Persons, Register of Population, Register of Territorial Identification, Addresses and Real Estate, Register of Rights and Obligation;
 - Continuing implementation of INSPIRE and solving integration competences with the national geoinformation infrastructure;
 - Quality, accessible state map and cadastral service;
 - Quality and accessible geographic production of the state statistical service;
 - Geoapplication solutions in production and non-production sphere;
- etc.

II. National GI infrastructure in the CzR



Summary no. 1:

- Today, the Czech Republic has a **reliable, quality and accessible state map and cadastral services, geoproduction by the state statistical service, many geoapplications for the production and non-production spheres, information systems that help solve, improve or save lives and property;**

III. Statistics and registers



In a field of geodata our **Office concentrates on:**

- * keeping of detailed borders of statistical territorial units (f.e. statistical districts, basic settlement units, LAU, NUTS),
- * elementary units in coordinates (buildings, address points, streets),

on their linking spatial and statistical attributes,
on their continuous updating since 2001.

III. Statistics and registers



- The selected basis for linking statistics and spatial data is the elementary object of **the address point** and its expression in coordinates with the accuracy of a cadastral map.
- Most of our data are fitted with a detailed spatial identification, address or ID's from the beginning of its statistical life cycle.
Ex.: reports from Building authorities, Population Censuses, System of Statistical Registers, Demography;
- **Some of them are interlinked ex post (georeferencing).**
Ex.: Agrocensus 2010, register of schools;

III. Statistics and registers



- **Functional cooperation** and the coordination of state administration and local governments in the implementation of tasks is crucial. In the long term, the Czech Statistical Office naturally cooperates with:
 - * **Ministry of the Interior,**
 - * **Ministry of Regional Development,**
 - * **Ministry of Environment,**
 - * since 1998 also with the **Czech Office of Surveying, Mapping and Cadastre (COSMC)** on the occasion of the population, house and apartment census or later on the development of registers;
 - * **high schools, IT companies, etc.**



Cooperation with the COSMC takes many forms:

coordination of activities

(including the national geoinformation policy);

exchange of data sets;

services based on spatial data;



Summary no. 2:

The existence of detailed localised data and accesses to rich national services on spatial data **enables to develop new statistical methods** for presentation by means of regular polygons (grids).



Geoinformation technology finds **the greatest applications** in three areas:

public database /of regional data/;

statistical registers incl. web application iRSO;

population censuses;

III. Statistics and registers



The CZSO does not have its own geoportal and covers its **basic** needs to support data collection, processing and presentation of information in the following manner:

- Thanks to the massive development of national infrastructure and **cooperation** with the COSMC, it uses the WMS services of the Land Survey Office (LSO);
- Since 2009, the own **iRSO web application** has been available, which uses the freely available OpenLayers technology to present statistical datasets and connect the WMS services of the LSO (<http://registry.czso.cz/irso/home.jsp>).



Platform for statistical geodata and support for statistics

It is the „**System of Statistical Registers**“ */:

- Business Register,
- Census Districts and Buildings Register (RSO),
- Database of Population,

which is linking to the „Basic Registers of Public Administration“ since July 2012.

**/ The System is enlarged by new functions and statistical attributes thanks realized IOP EU project.*



RSO – Census Districts and Buildings Register

Statistical thematic map layers,
using since 2000 and providing
since 2004
(Act. 89/1995, Coll.,
Section 20a) as amended)

1 state (NUTS 0, NUTS 1)

8 cohesion regions (NUTS 2)

14 regions (NUTS 3)

77 districts (LAU 1)

6,5 th. municipalities (LAU2)

13 th. cadastral units

23 th. basic statistical units

53 th. statistical districts

2,8 mil. Buildings with house-number, 4,5 mil. flats

III. Statistics and registers



The web application iRSO covers several user tasks:

- cooperation of municipalities in preparing censuses,
- provides support for the statistical procedures of building authorities,
- searching for building address,
- searching for territorial elements,
- reports on the division of territorial units,
- building and address reports,
- expert of territorial indexes,
- downloading data,
- map services.



Examples of user needs:

Public sphere

- Among the external asks belong geodata and statistical data applicable in **rescue system** (project called 112 number), for **health protection** (noise zones), **population protection**, **fire protection**, as attributes of the Fundamental Base of Geographic Data **ZABAGED** (Land Survey Office), **land planning**, the Basic Register of Territorial Identifications, Addresses and Real Estate **RÚIAN**, **municipalities**, **Geology Institut** (radon zones), etc.

Private sphere

- for **insurances** (flood danger zones application), for calculating the density of **Mobile** nets, for **Telefonica O2**, IT companies, ..



Summary no. 3:

- nowadays our Office prefers providing the **spatial and statistical data**, which are user oriented for simply and effective usage in their applications, and own **web application iRSO** with map service.



Conclusion

We are prepared to go on in the development of GI underground.

Let GI help the good life.

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Thank you very much
for your attentions!
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