

## THE ROLE OF CADASTRE AND REAL ESTATE ADVERTISING COUNTY OFFICES IN THE LOCAL AND REGIONAL PLANNING PROCESS

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**Abstract:** *Specific current issues of cadastral work concerns at the introduction of cadastre in our country and with it the completion of specialized cadastrals. General cadastre is organized at each administrative - territorial units: common, city, municipality, county and at country level through cadastre and real estate advertising county offices.*

**Keywords:** *cadastre, E-Terra, TOPRO5*

### 1. Introduction

Currently, urban real-estate cadastre is organized by the Ministry of Administration and Interior, through ANCPI, with the main tasks of coordinating activities to ensure land base property cadastre surveying and placing utilities in cities, establishing the rules for content and quality of methodologies of the work, database creation and development of land management policies at local government level.

The purpose and importance of urban real-estate cadastre can be described on the principle of systems analysis, of which five represent the main areas of interest, and the fifth a consequence of their, embodied in:

- technical and economic mapping of all land and buildings contained within the perimeters of built-territorial administrative units at district level, city, town, commune;
- establishing uniform and complete of the elements needed to assess land and buildings situated in localities, regardless of their nature and the owner;
- an inventory of all underground and aboveground utilities networks, industrial and technical, on types of networks;
- achieving a uniform and standardized information system for property registration and cadastre management utilities, integrated into urban data bank;
- increase local decision-making responsibilities and strengthen the authorities responsible for administration and management planning, at level of county, city, town, common.

Real-estate cadastre objectives aim to create a system that would lead to:

- establish a unified operational system on taxes at central and local government;
- creating and developing a market of land and building based on actual technical and economic data, recognized and guaranteed by real estate advertising system;
- optimization of land and construction use by drawing up plans for urban and regional planning.

The content of real estate cadastre, illustrated schematically in the figure below, can be defined, as a subsystem that provides data and documents required to be assembled and

integrated into the general cadastre

Starting from the general cadastre basic entities: parcel, building, owner and the and from the data and documents which he achieve (land register of parcels, alphabetical index of owners and their address, land register of owners, bodies register property, cadastral plan), the real estate cadastre aims in expanding their following additional types of information:

- information of the parcel;
- information about construction.

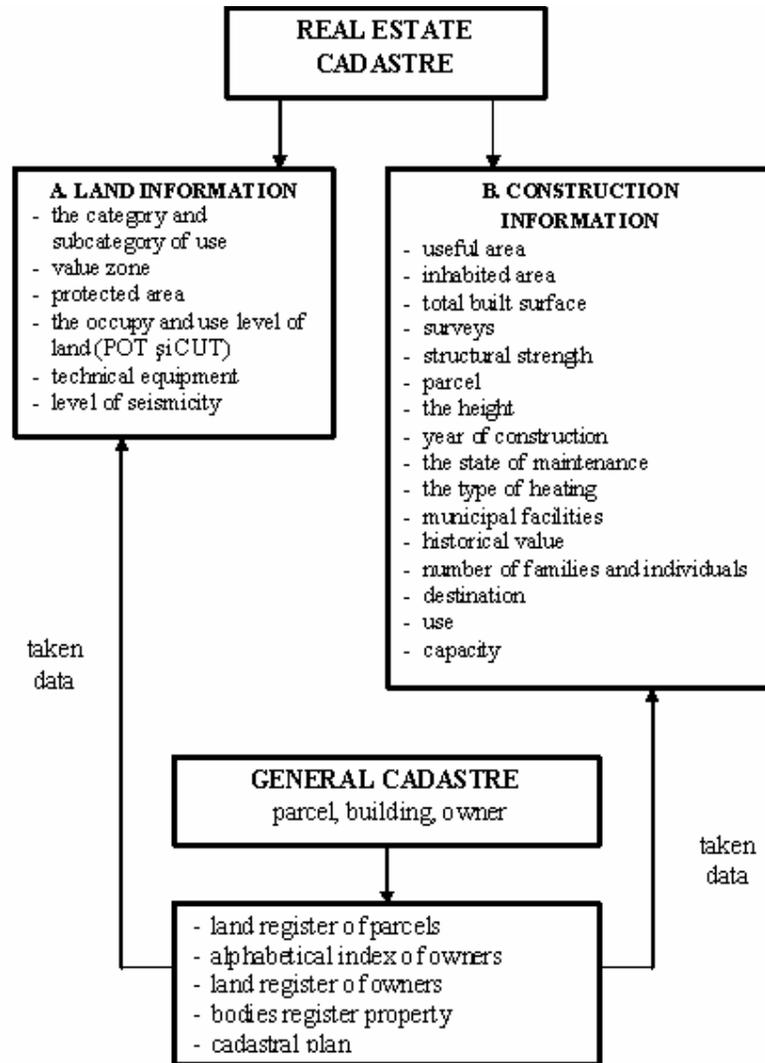


Fig. 1. The real estate cadastre components

## 2. The Geographic Information System

Geographic Information Systems (GIS) is an essential component of informatic systems that find their place and importance in the management and leadership activities. His role is to prepare and deliver spatial information necessary for automatic management of cadastral data.

Organization which coordinates and carries out GIS activity will provide quality information to all of which contribute to achieving an efficient and quality communication environment.

GIS is a technology that allows that an unlimited number of information to be linked or matched depending on their geographic location.

Together with a digital map, GIS allows viewing at local community or regional level, of information obtained by analyzing different data types: demography, pollution, income, education, soil type, land occupancy the construction of various types, preferences for television programs, number of internet users etc.

Correlating the above types of information, using GIS technology, enables efficient analysis, analysis that can be as high quality decision support. It is clear therefore that the effect of using a geographic information system in government is deeply, being at the same time the one of the basic supports for sustainable development of local communities.

A modern geographical information system should provide the following types of functionality:

- statistical analysis and spatial analysis of areas defined by the user;
- analysis of critical path, with the ability to calculate distances and to choose the most efficient routes, according to available information existing in the spatial database;
- CAD facilities, opportunity to generate plans and sketches three-dimensional models, including built-up areas, architectural models;
- possibility to define, design, develop and analyze utility networks and the possibility to monitor or simulate their operation;
- possibility of using Global Positioning System (GPS) to position various objects of urban spatial database, including the possibility monitoring of vehicles;
- standard features of a database, including their spatial component: sorting, query, the connection, addition, correction, updateing;
- inserting, updating and analysis of cadastral data;
- spatial analysis as a decision support;
- multimedia facilities (the possibility of assigning a spatial element attributes as image and audio type);
- ability to develop expert systems, allowing automation of some activities with high level of repetitivity;
- opportunities for spatial modeling, simulation, prediction.

### **3. The role of cadastre and real estate advertising county offices in implementing a Geographic Information Systems**

The role of cadastre and real estate advertising county offices is to provide the following:

- for performing measurements OCPI Alba can provide the coordinates of the triangulation points (orders I-V ) within county;
- ortofotoplans;
- cadastral plans at a scale of 1: 1000 and 1: 2000 inside localities, 1: 5000 and 1: 10000 for terrain localities,
- the maps of land books;
- the final parceling plans for some territorial administrative units registered in Annex 1;
- specialized cadastre for next localities: Aiud - an area of 158,66 hectares, Ocna Mureş - 219,37 hectares, Sebeş - 876,74 hectares and Alba Iulia – 1003,59 ha;

- the county map with limits of territorial administrative units;
- all PAD's received and entered into the database;
- land registers;
- all land books for all Alba county in analogue and digital format;
- the database with "DDAPT " that contains all the property titles with land owners and cadastral numbers of parcels, issued so far.

At cadastre and real estate advertising county offices levels is implemented the "E-Terra" program which achieve the conversion of book land into electronically, and which contain, besides the owner, parcel area, category of use, any encumbrances on the building, and the building's topology.

To implement a GIS OCPI Alba could provide data under this program for buildings that have been received and approved through this program.

ANCPI in collaboration with the Department of Cartography and Information and Communications Technology Department have developed "The reference plan of Romania - TOPRO5, scale 1:5000", following that OCPI Alba to receive the plan in digital format as soon as possible. Once receiving this plan will be possible the following:

- extraction of hydrographic elements, of communications ways and obtaining administrative limits of inside for the whole country;
- checking data vector extracted from ortofoto
- achieving integration of extracted elements into a informatic system for each county separately and validating these data.

#### 4. Conclusions

Can not imagine a territorial information system without the possibility of working with the supporting documents (from the databases of the general cadastre and real estate cadastre, property evidence and street nomenclature), with the basic documents (from the databases of studies territory planning and town planning documentation) and related documents (from the databases of certificates and permits, and protected heritage areas arranged).

Cadastre and real estate advertising county offices are willing to make these data available and to give all possible support to introduce the general cadastre in the entire country and creating a single database for the entire country.

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