

# **THE ITALIAN CADASTRAL CARTOGRAPHY SYSTEM.AUTOMATIC REAL-TIME UPDATE AND DYNAMIC ONLINE SERVICES**

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**Key words:** Cadastre, Land values; Equity; Tax policy

## **SUMMARY**

Starting from the term "Catasto" we can meanwhile state that there are various opinions on its origins, but we believe the most accredited one derives from the Latin Capitastrum, which means "Census of all existing assets in a territory". Currently, however, the term Land Registry refers to the database of all real estate, land and buildings, existing in a state. Since ancient times, real estate has been considered the most important assets for the purposes of applying taxes, mainly because they are easily ascertainable. The Italian cadastre, an inventory of real estate present in the national territory, was created through the establishment of two successive distinct sub-systems: the first - called Land Cadastre - including the list of all natural land agricultural or in any case unbuilt, the second - called Urban Building Cadastre - consists of civil, industrial and commercial buildings.



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Accra, Ghana, 19–24 May 2024

## 1. Introduction

The Land Cadastre is of a geometric-particle type, as it contains information both on the geometric nature (topography - shape and consistency) and on the technical-economic characteristics (technical-physical characteristics and incomes) of the minimum element inventoried and represented on the map, consisting of "land registry parcel". The "formation" of the Urban Building Cadastre, subsequent to that of the Land Cadastre. The Building Registry deals with all constructions, both urban and rural. The Building Cadastre does not currently replace the Urban Building Cadastre, but integrates it and extends its competence. Registering real estate properties, keeping changes evident and creating the conditions for fair taxation represent the founding purposes of the land register. Dynamic cadastral cartography consultation services have been activated for all types of users which allow you to navigate many contents of the vector cadastral maps. The information that can be consulted covers the entire national territory and is aligned with the cadastral cartographic database, updated daily in automatic mode through the technical documents prepared by qualified professionals. Two cartographic consultation services are available: o WMS cadastral cartography consultation: based on the international standard Web Map Service 1.3.0, usable with GIS (Geographic Information System) software or with specific applications available to the user; the service makes it possible to consult the cartographic contents also in an integrated manner with other geographical data (e.g. orthophotos, regulatory plans, hazard analyses, infrastructures), supporting public bodies and private users who use the cartographic information of the land registry in various areas of activity (urban planning, local taxation, civil protection and rescue, management of the environment and cultural heritage);

### 1.1 The Revenue agency

The Revenue Agency - Agenzia delle Entrate manages the national real estate information system. Its role in land administration is to draw up the complete inventory of real estate assets, describing technical and economic characteristics and registering real rights. The cadastral cartography system is designed to archive, manage and analyse geographic information on each:

- piece of land
- building
- street or surface water (rivers, lakes) located on the national territory.

The Italian cadastre is one of the five national official cartographic authorities and is responsible for constant and permanent updating of the large scale cadastral maps. The Revenue Agency daily provides online services based on the cadastral cartography system, to institutions, citizens, professionals, enterprises. Today the Italian cadastral cartography it is complete and homogeneous, totally available in vector format. Is directly related to the Database through a unique identifier: the parcel number. The entire Italian surface is surveyed, Inside Catasto there are all the Italian properties with their essentials informations.Each property is identified by 2 or 3 numbers called foglio (sheets), particella (cadastral unit) and eventually subaltern.



### 1.3 SIT: Territorial information system

SIT is a modern web GIS, an evolution of the current cadastral cartography system, is part of a wider project for the implementation of the integrated national real estate information system. The data historically managed in different systems are integrated in it , In the integrated national real estate information system the whole information asset is unified into one national system, whose elements are conveniently integrated each other, allows the geo-based data surfing and searching for all the information managed, the spatial analysis and integration with other data external to the cadastral domain and SIT goes beyond the current system based on the separation of all the archives (Cartography, Census DBs, Plans) and a web-architecture spread on 101 Provincial Offices of the Agency.



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**EXAMPLE OF USE CASES**  
 United Nations Committee of Experts on Global  
 geospatial Information Management (UN-GGIM) Europe



## 1.4 Purpose and final conclusion

The current catasto is geometric, non-probative value even if is always update with properties, it is not proof of the full value of the property

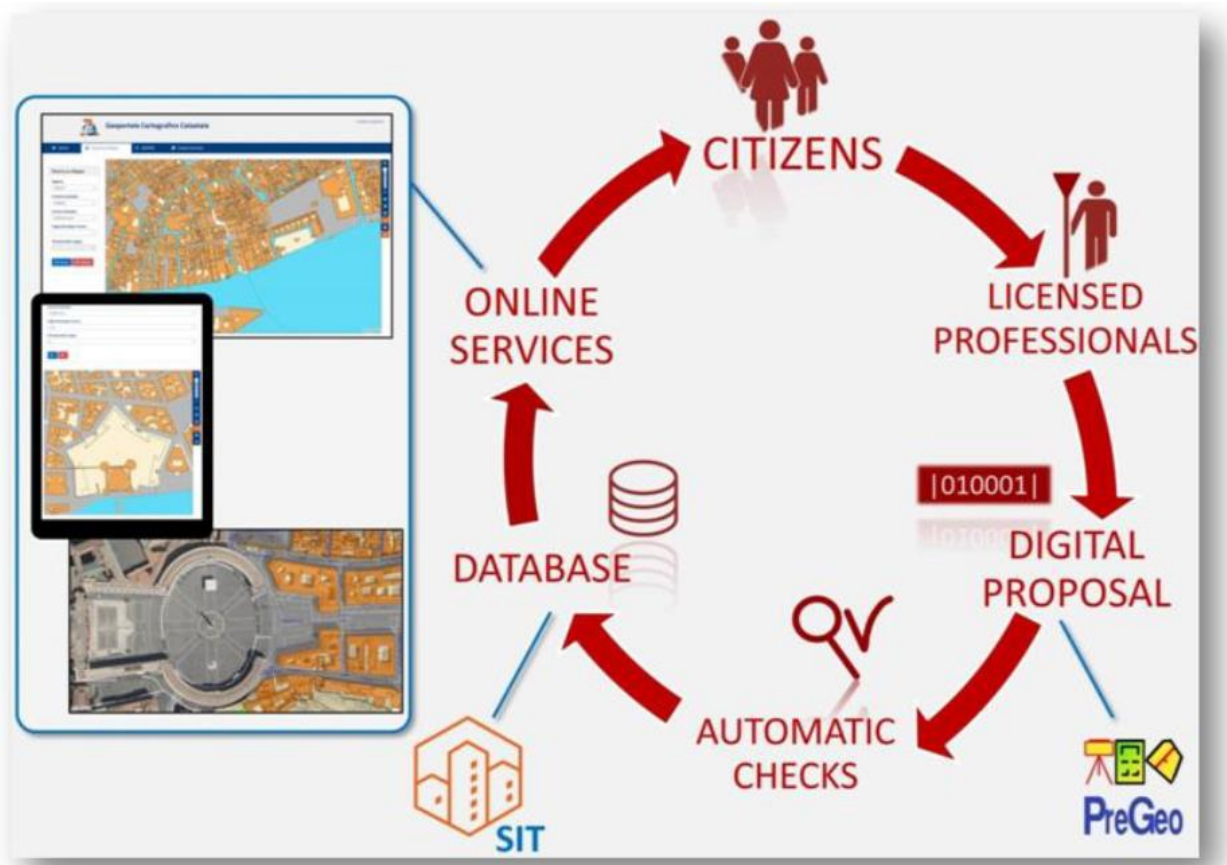
The land "catasto" has fiscal , civil and legal purpose:

- Fiscal: there are two incomes one is for taxes;
- civil: change of ownership through purchase or inheritance;
- legal: the rights of use (diritti reali di godimento) where established;

Inside catasto there are all the Italian properties with their essentials informations

Catasto was born in the Middle Ages when citizens have to register all real and personal property (beni mobili ed immobili). Then in the 80's an Italian company was contracted to computerized all the data existing in the various provincial offices. Since 2000 access to data has been via the internet for private individuals and public bodies.

Long story short, we have moved from manual drawings to the creation of a virtual database that can be consulted online by many professionals and is constantly evolving.



## REFERENCES CONTACTS

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