MINISTERO PER I BENI E LE ATTIVITÀ CULTURALI

MiBAC
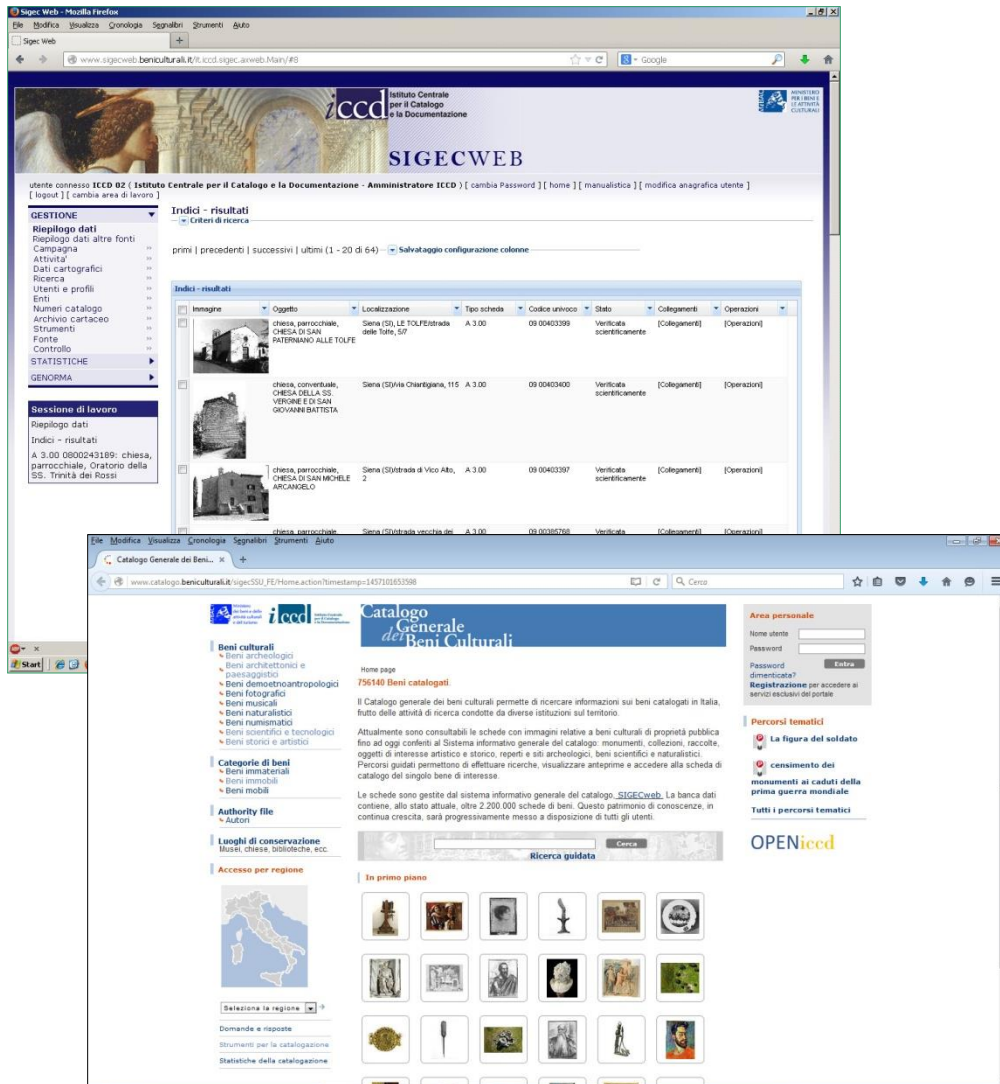
Istituto Centrale per il Catalogo e la Documentazione

•Methodologies for cataloguing cultural heritage

•Computerized cataloguing and multimedia documentation

**Instruments and procedures for geographic information management**

SIGEC (the General Catalogue Information System) is the ICCD instrument for the management and control of the entire cataloguing process. The system is composed of two main conceptual and functional environments:

- for production and management of catalogue records (*operational subsystem*)
- for public use of the catalogue (*user subsystem*).

GENORMA module, production and dissemination of regulations
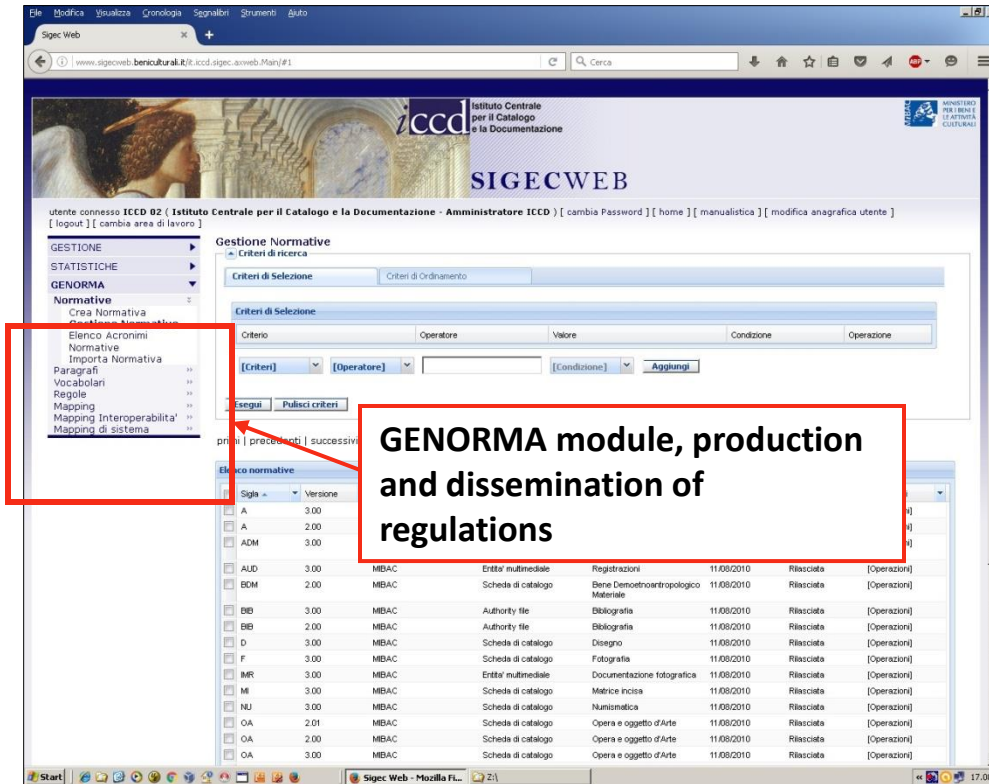
The entry into operation of the new **SIGECweb** (computerised, Internet-based system) brings about some changes:

o improved operational control and procedural flows;

o options for real-time publication of new norms, and updating of functions for creation and revision of the knowledge on cultural heritage.
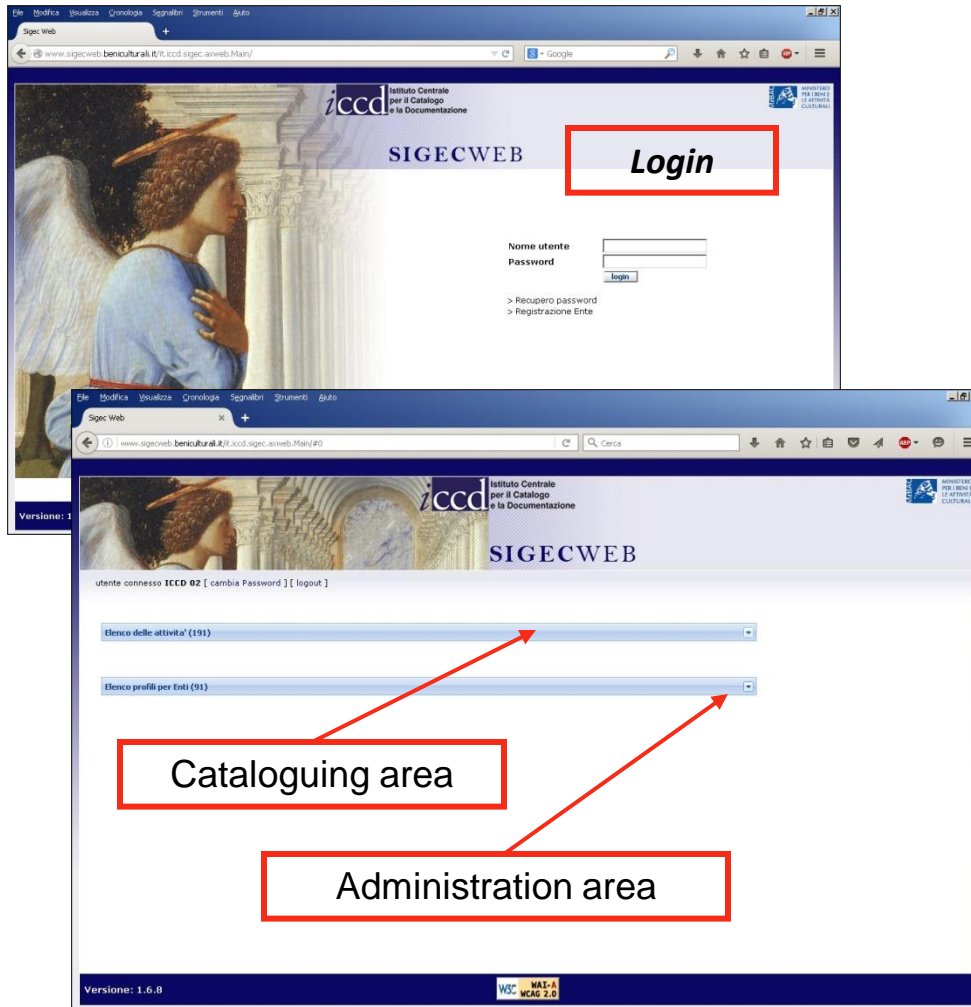
SIGECweb is accessed through any web browser, without requiring specific hardware or software.

The system is developed in consideration of the functions required by the different agencies and specialists involved in cataloguing.

SIGECweb permits creation of working environments responding to different operational needs, within the two overall areas of *cataloguing* and *administration*.

The system is capable of integrating all data on a property in a single context, thus "reconstructing" the knowledge of the original unit of heritage.
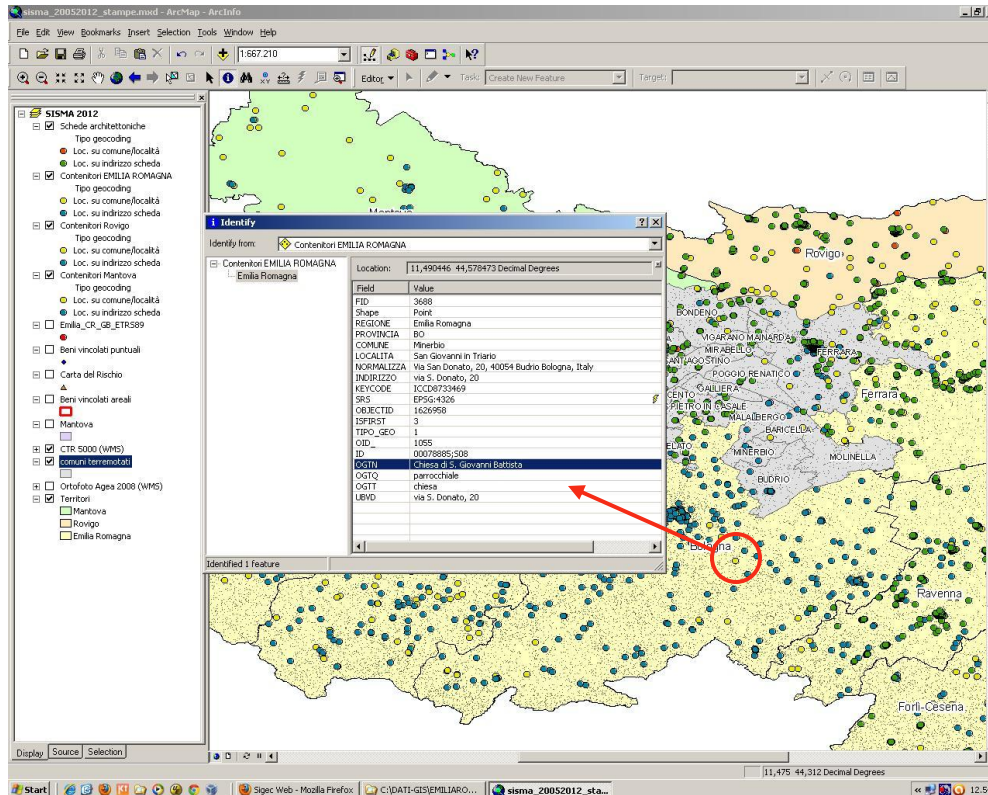
One of the great assets of a **computerised system** is the capacity for inter-relation of information and the synthesis of knowledge.

The understanding of the quantities and qualities of the national heritage requires information on the location of the properties within the territory, and their relations within this context.

Geo-referencing of cultural properties is a powerful tool in this regard.

The positions of both *immovable* and *movable properties* (e.g. architecture, archaeological areas and structures *versus* historic-artistic, archaeological objects) can be recorded.

The properties can also understood in reference to their "containers" (e.g. museums, monuments, sites, churches, storage reserves).

The **SIGECweb:** system includes specific functions for representing and sharing all such geographic data on properties.
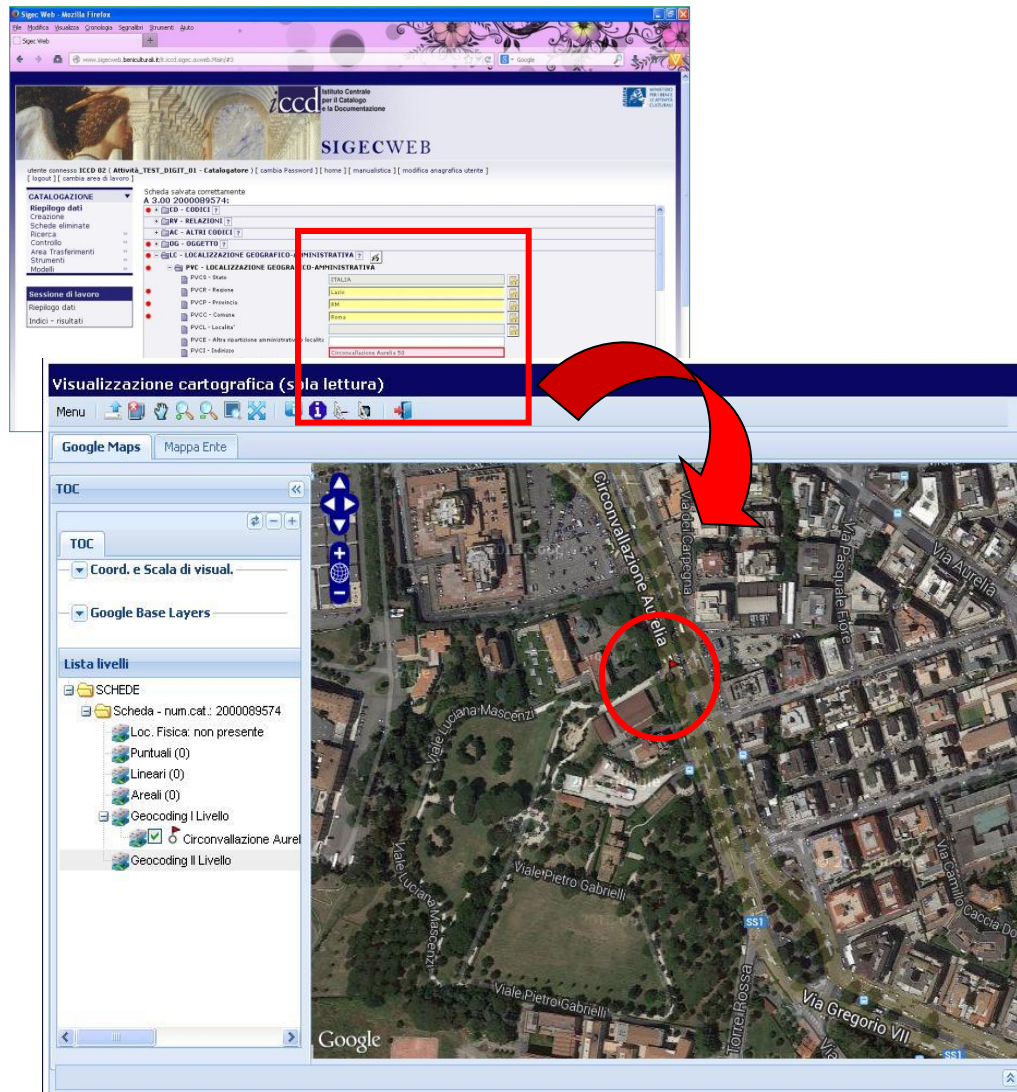
SIGECweb includes enormous quantities of data from previous cataloguing, without geographic data.

The system is thus designed with **automatic functions** to acquire the information, for example from the data on location within the Italian administrative divisions.

In this way the system can obtain mapping even for the "incomplete" records.
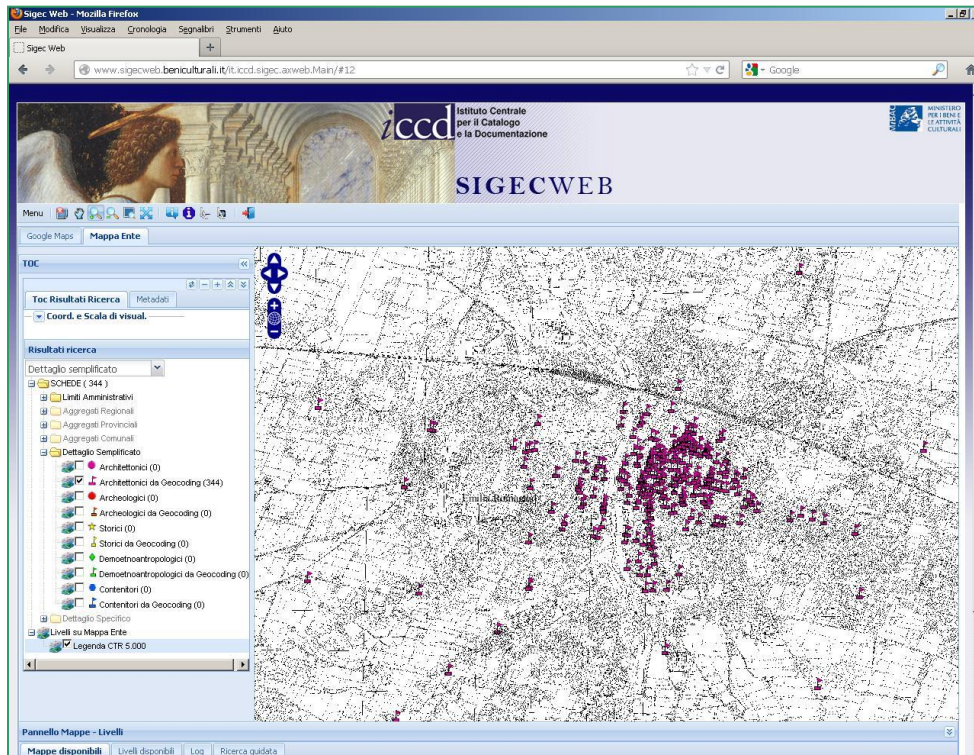
The system automatically translates (geo-codifies) the address found in a catalogue sheet in terms of X and Y (longitude/latitude) geographic coordinates.

The information is memorised as metadata, permitting even the representation of properties lacking precise georeferencing.

Geo-coding from a street address
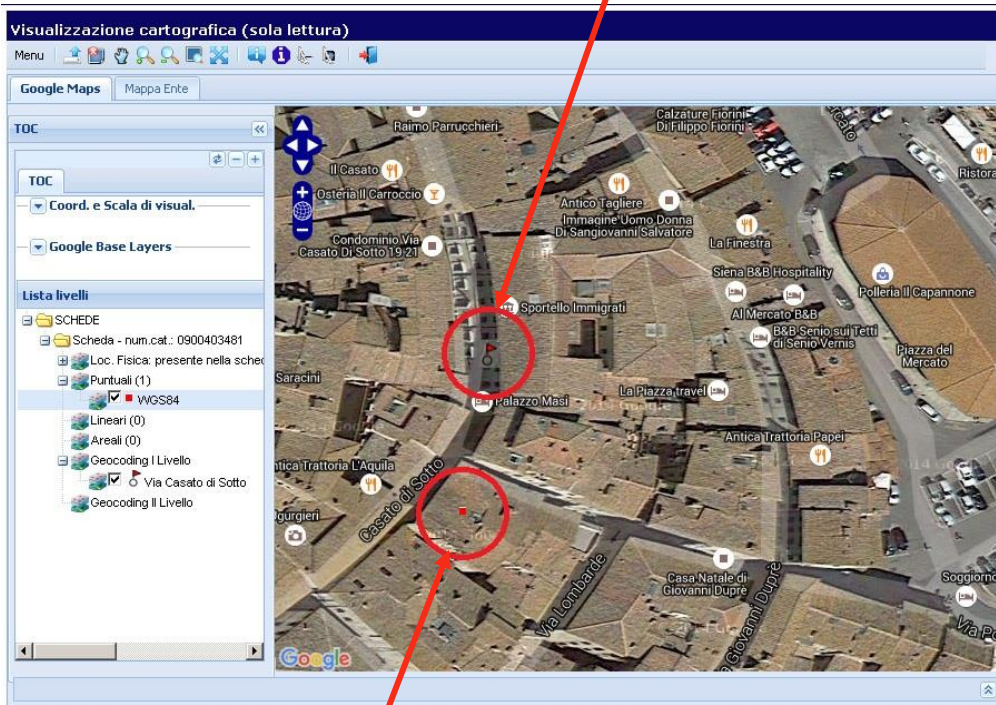
Detailed geo-referencing

The precision of the geo-referencing depends on the data included in the catalogue record.

Even at the most basic level, the geographic localisation is still useful, and can be further refined by the insertion of further data.

Navigation in Google Maps

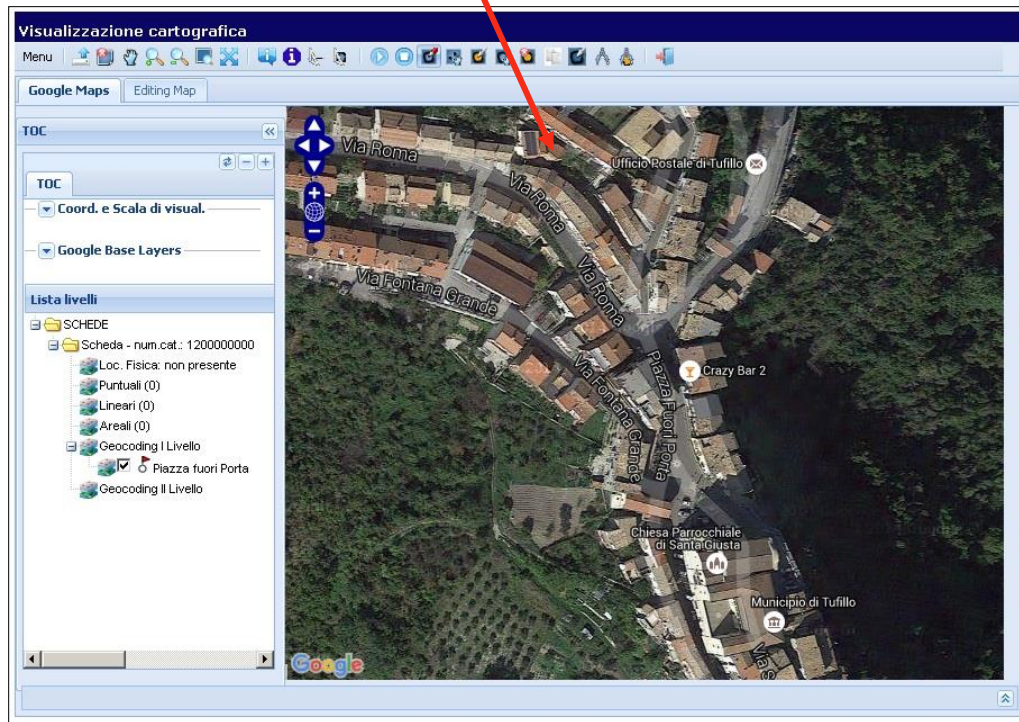The SIGECweb system permits rapid navigation in Google maps, then acquisition of geo-referencing using the Web Map Service protocol (WMS) protocol, visualised through cartographic interoperability, in keeping with the Open Geospatial Consortium (OGC) standards.

The spatial reference system (SRS) for the SIGECweb cartographic module is World Geodetic System 1984 (WGS84).

Editing interface
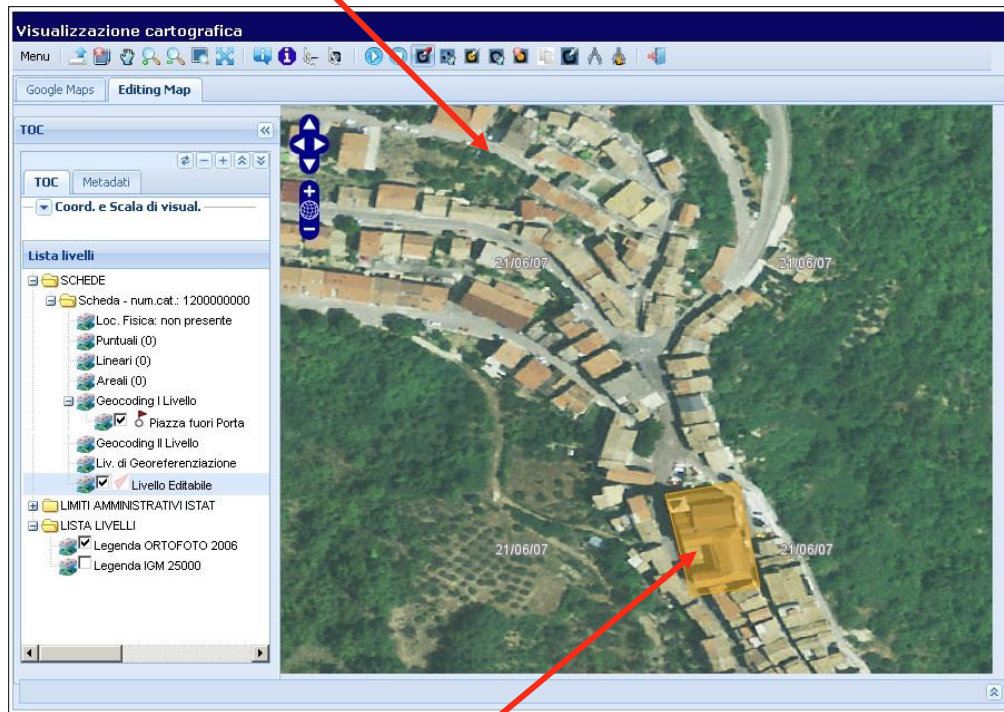
Drawing of an area

SIGECweb includes an interface with a web-based geographic information system (GIS), offering simple instruments that guide the cataloguer in drawing the property (points, lines, areas) on a cartographic base.

The drawing is then automatically related to the catalogue sheet, based on the vertical coordinates indicated through the drawing and information on the base spatial reference system.
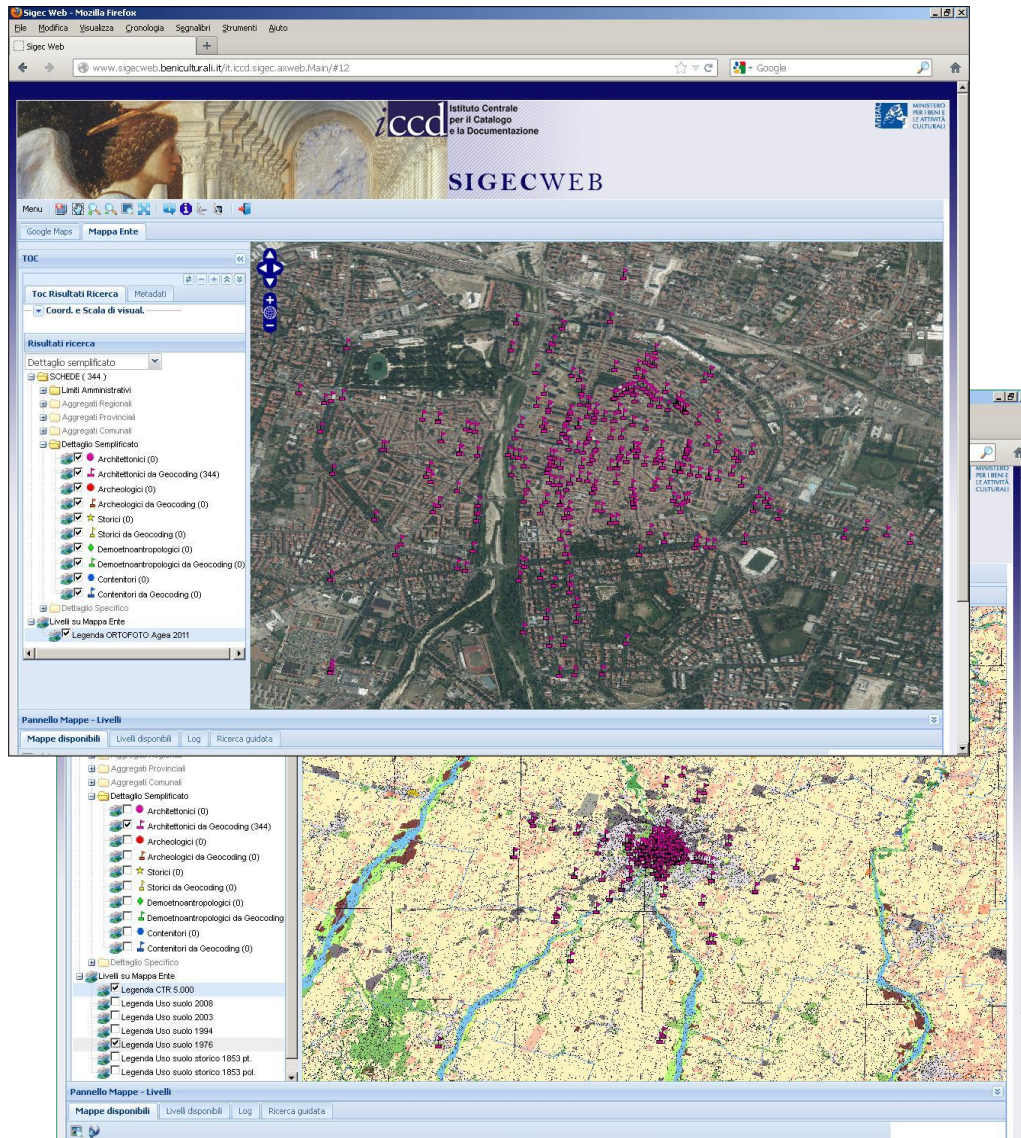
The mapping of properties throughout the territory is exceptionally useful in research and management for the national heritage.

For example, the national catalogue can now serve in the computerised preparation of summary thematic maps, permitting ready perception of the distribution and quantities of heritage properties, leading to further lines of detailed study.