The role of Spanish Cadastre in the real estate conveyancing
Main characteristics of the Spanish cadastre

- It is DG in the Ministry of Finances:
  - An administrative **official register** from the Ministry Finances with **authoritative data**

- Contains all the real estate (**complete**):
  - Urban, rural, special characteristics.
  - Public and Private land and buildings

- **Continously updated:**
  - **Obligatory** inscription of all property: by **citizens** and **public administrations**
Main task of the Spanish Cadastre is to **describe** each real estate object and to assign a **value** to it.

- **Real Estate Identification data:**
  - cadastral reference, province, municipality, addresses or location.

- **Juridical data of real estate:**
  - Titleholders’ name and national identity number, addresses of titleholders and the notification address, date of acquisition and rights data....

- **Physical data of real estate:**
  - land area, representation of the Buildings (even with the description of every floor) buildings area, class of crops, conservation status of the constructions, use (legal and actual one), construction typology, year of construction.....

- **Economic data of the real estates:**
  - value of land, value of construction and cadastral value, criteria and valuating module, real estate taxable value, exemptions and benefits.
The **cadastral value is the basis for real estate taxation.**

The cadastral value of each property is determined objectively from the data in the Real Estate Cadastre.

Quality, completeness and good updating are of importance to have **fair taxation.**

We need not only the boundaries but also inside the building (structure of the property, common areas) and all the characteristics:

- land surface,
- buildings surface,
- conservation status of the constructions,
- use (legal and actual one),
- typology,
- year of construction
- Urbanism classification
- Other characteristics

All these information available by free to everybody.
origin of our digital cartography

Historical topographic maps

1986-2006 Creation of a GIS for a fiscal cadastre
Renovation and digitalization process 1986-2006. Creation of a GIS
Not feasible to land mark all the territory -

In rural areas:
- Over ortophoto 1:5000:
- Calling to owners:
- Interpretation of the land registry titles

In Urban Areas
Over Topográfic maps 1:1000- 1:500- 1:200
Collaboration of municipalities
This methodology allowed us to cover the entire territory and create a homogeneous and continuous digital cadastre.

The creation of this GIS allowed to offer
- Transparency, because we offer it **open, free of charge** since 2003-
- **Authoritative data** for private and public users

and also develop the digital tools to improve the data

with the help of collaborators (municipalities, Notaries, land registrars.... and the legal obligation of owners and public administration to declare)
available to everybody through multiple channels, Free of charge

Serving daily 1.1 million consultations and almost 21,000 certificates
Enabling maps downloads at a rate of over 180 Milions per year

Standard model
Complete and homogeneous territorial continuum, that permits to access a huge amount of official GEOREFERENCED data

Public and private users continuously are finding new purposes
Origin of our digital cartography

Historical topographic maps

1986-2006 Creation of a GIS for a fiscal cadastre

Improving very much quality of cadastre: collaboration, technology, transparence and usability
Some particularities of the Spanish Civil Code

- In Spain there are not licensed surveyors and it is not obligatory to mark the division in the land. The agreement to divide and the boundaries are decided by seller and buyer.
- It is also not mandatory to register in the land registry
- Land registry is separate organization than cadastre
- Private contracts are objectionable to third parties

How it can work??????

Because Cadastre It is a continuous cartography open to all that is taken as base in all transactions

An owner can increase the quality in any moment
ALWAYS WITH THE AGREEMENT OF THE COLINDANTS
origin of our digital cartography

Historical topographic maps

1986-2006 Creation of a GIS for a fiscal cadastre

Improving very much quality of cadastre:
- collaboration,
- technology,
- transparency and usability

from 1996 The cadastral reference must be contained in all documents subject to registration in the Property Rights Registry affecting acts or businesses related to ownership and other rights to real estate.

- Notaries and Land Registrars are obliged to submit to the Cadastre all the information concerning the documents they have authorized or registered.
Cadastral basic data / Daily updating

Urban Cadastre
- 1.062.636 ha maps 1/1.000 o 1/500
- 12 M de buildings
- 14 M cadastral parcels,
- 39 M urban units
- 6.500 real estate updated daily, 480 new constructions

Rural Cadastre:
- 47.387.942 ha maps a 1:5.000
- 39,2 M parcels
- 2.500 real estate updated daily

Only 2.300 employees
Agreements with Municipalities and other Public Entities

- The strategy consists of gathering other Public Administrations, as well as other organizations, sharing useful information for all of them.
- They are all considered as providers and beneficiaries: they help us to maintain our data base updated, they acquire all necessary data for their goals.
- Data is electronically provided by collaborators: they can even process the information working directly in our system or sending data through the E-Office.

Obliged by law
But also win-win situation
creation, update and maintenance of the cadaster in collaboration:

• Compulsory Declarations of titleholders

• Institutional collaborators
  • AGRICULTURAL MINISTRY
  • NOTARIES
  • PROPERTY RIGHTS REGISTRARS
  • SPANISH TAX AGENCY

• Collaboration agreements with municipalities and local and regional authorities

• Other public administrations; Public Domain managers, expropriations, land consolidation, highways, railways, etc.
• 2300 employees from cadastre (internal users)
• External users:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizations with users</td>
<td>13.525</td>
</tr>
<tr>
<td>Registered users</td>
<td>68.768</td>
</tr>
<tr>
<td>Users with direct access to</td>
<td>3.069</td>
</tr>
<tr>
<td>applications of cadastre</td>
<td></td>
</tr>
</tbody>
</table>

Evolution
Data are kept continuously updated through field work and other technologies.

All citizens, notaries and registrars and the public administrations which work in the territory are obliged by law to submit information on the changes in the real estate in the Cadastre with the technical conditions defined by the cadastre that verifies that the graphical information is correct.
origin of our digital cartography

Historical topographic maps

1986-2006 Creation of a GIS for a fiscal cadastre

Improving very much quality of cadastre

from 1996 The cadastral reference must be contained in all documents subject to registration in the Property Rights Registry affecting acts or businesses related to ownership and other rights to real estate.

2015 Legal cadastre (law of coordination between cadastre and land registry)

- Reforms introduced legally in 2015 established that the description of properties in the Property Rights Registry is to be done by a geo-referenced graphical representation based on cadastre.

Once the cadastral data have been incorporated in the Property Rights Registry, the **delimitation, location and area of cadastral data are considered to be true for all legal purposes.**
The Cadastre provides to the Property Rights Registry by internet before the title inscription, all the information about the real estate properties.

Not only cadastral reference but description and cartography of cadastral parcels must be incorporated into the Property Rights Registry, if there is geographical correspondence between them.

The cadastral cartography is used as the basis for Property Rights graphical information.

Notaries and Land Registrars are obliged to submit to the Cadastre all the information concerning the documents they have authorized or registered.
law 13/2015. Coordination cadastre and land registry

It gives real estate traffic greater legal certainty by incorporating not only the cadastral reference but also the georeferenced graphic information of the parcels in the Property Rights Registry

Based in Cadastral cartography

We defined a mechanism for exchange INSPIRE CP GML

The system has permitted

the coordination of the information of both institutions for a better identification and description of real estates

and an adequate provision of services to citizens and administrations that can improve the description of the real estates and inform of any change of the description of real estates
For 99% of the residential properties and 90% of other properties, the owners only need the cadastral certificate to do the conveyance, get the mortgage and register in the land register. The bank, the notary and the registrar get it digitally from our system.

The "Descriptive cadastral and graphic certification" has been the instrument chosen to achieve the correct graphic description of the registered properties, since it guarantees the coherence of the graphic information that is registered, the non-invasion of the adjoining properties or the public domain.

The graphic information of the cadastral parcel presented in a certification is expressed in the INSPIRE GML cadastral parcel format.
We have established a fluid and safe exchange of information between all the agents involved in the real estate traffic.

Web Services
Unattended machine to machine communication

3 documents

Cadastral certification (with GML)
Alternative geo-referenced representation (in GML)
Graphical validation report

Secure Verification Code
CSV: 2096C23SFVC2415X
Our Viewer allows users to navigate from an overview of the complete territory to approach each one of the parcels, buildings and units and also through the map access to the alphanumeric characteristics of them.

And **download** cartographic files and certificates of each element, a zone or a complete data set.
**DISCRIMINATIVE DATA PROPERTY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referenda catastro</td>
<td>0610515DF8801B00301006</td>
</tr>
<tr>
<td>Location</td>
<td>CL SANT PAU 99(B)</td>
</tr>
<tr>
<td>Class</td>
<td>urbana</td>
</tr>
<tr>
<td>Primary use</td>
<td>Cultural</td>
</tr>
<tr>
<td>Built area</td>
<td>7190 m²</td>
</tr>
<tr>
<td>Construction year</td>
<td>2017</td>
</tr>
</tbody>
</table>

**PLOT CATASTRAL**

- Parcela construida sin división horizontal
- Localización: CL SANT PAU 99(B) BARCELONA (BARCELONA)
- Geographical Flot: 4124 m²

**CONSTRUCTION**

<table>
<thead>
<tr>
<th>Primary use</th>
<th>Store</th>
<th>Floor</th>
<th>Door</th>
<th>Built m²</th>
<th>Type Rehia</th>
<th>Date Reform</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSEÑANZA</td>
<td>0</td>
<td>1.045</td>
<td></td>
<td>1.615</td>
<td>R. Rehia bilição integral</td>
<td>2.017</td>
</tr>
<tr>
<td>INSEÑANZA</td>
<td>0</td>
<td>1.615</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The cadastral certification is an electronic document (PDF format).

It includes embedded the GML INSPIRE of cadastral parcel.

The certificate and its attached file are signed electronically using a Secure Verification Code (CSV)

Composed by 16 digits

These 16 digits are the only information that is exchanged
With this code CSV on the document it is possible to access in any moment by internet to the digital file in the Electronic Office of Cadastre.

- Citizens can be sure that the image on the document reflects the true coordinates.

- Applications of notaries and registrars use a web service to access the content of the GML attached file using only the code CSV.
What happened when it is necessary to change the representation of the parcel?

- declarations of citizens: segregations, divisions, joints ..
- land consolidations,
- reparcelling,
- administrative demarcation,
- expropriation
- acts of urban planning and urban managing

- first registration in the PRR

- Cadastral errors
- Property Right Register errors

Citizens and administrations can provide an alternative geo-referenced representation

This is used to update the cadastre if it passes the appropriate validations
Alternative geo-referenced representation

The technicians are required to represent the reality as an overlay on the cadastral cartography,

1. Download GML or other formats: DXF, etc
2. Modify
3. Include the alternative geo-referenced representation

That must be expresses in GML of CP
Possibility to overlap with other information
The system validates the new representation and gives back a validation report that is an electronic document signed with the secure verification code.
Parcelas catastrales **afectadas**

La representación gráfica alternativa objeto del presente informe afecta a las parcelas catastrales que se relacionan a continuación. La incorporación de esta representación gráfica en la cartografía catastral podrá producir una alteración de la delimitación y superficie de estas parcelas, por lo que se requiere la notificación previa a los titulares catastrales de las mismas en el procedimiento correspondiente.

**Referencia Catastral:** 37136A05046233

**Dirección:** FUENTEGUINALDO (SALAMANCA)

**AFECTADA TOTALMENTE**

---

**Referencia Catastral:** 37136A05046233

**Dirección:** FUENTEGUINALDO (SALAMANCA)

**AFECTADA TOTALMENTE**

---

**Parcelas resultantes**

**PARCELA** UOK_30-31

**superficie** 1370 m²

**LINDEROS EXTERNOS:**

37136A050465228
37136A050465232
37136A050469021
37136A050469032

**COORDENADA UTM**

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th></th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>697475.37</td>
<td>4473518.82</td>
<td>11</td>
<td>697451.47</td>
<td>4473499.16</td>
</tr>
<tr>
<td>2</td>
<td>697479.14</td>
<td>4473510.93</td>
<td>12</td>
<td>697466.36</td>
<td>4473508.46</td>
</tr>
<tr>
<td>3</td>
<td>697492.67</td>
<td>4473493.55</td>
<td>13</td>
<td>697442.84</td>
<td>4473511.29</td>
</tr>
<tr>
<td>4</td>
<td>697482.69</td>
<td>4473491.04</td>
<td>14</td>
<td>697441.10</td>
<td>4473512.00</td>
</tr>
<tr>
<td>5</td>
<td>697484.98</td>
<td>4473484.96</td>
<td>15</td>
<td>697480.22</td>
<td>4473542.28</td>
</tr>
<tr>
<td>6</td>
<td>697477.97</td>
<td>4473485.65</td>
<td>16</td>
<td>697483.45</td>
<td>4473538.63</td>
</tr>
<tr>
<td>7</td>
<td>697472.85</td>
<td>4473485.61</td>
<td>17</td>
<td>697547.80</td>
<td>4473533.45</td>
</tr>
<tr>
<td>8</td>
<td>697493.99</td>
<td>4473487.78</td>
<td>18</td>
<td>697469.16</td>
<td>4473532.08</td>
</tr>
<tr>
<td>9</td>
<td>697459.70</td>
<td>4473490.06</td>
<td>19</td>
<td>697475.37</td>
<td>4473518.82</td>
</tr>
<tr>
<td>10</td>
<td>697455.36</td>
<td>4473493.61</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comunication with the Notary

• The report avoids physical exchange of files, only de 16 digits are exchange between cadastre and notary

• All the exchange of information is made through web services

• Notaries don’t need to use GIS. And they can check the content using its CSV code in a service available in the Electronic Office of the Cadastre.

• If the validation report is correct, in between 5 days the cadastre send the new cadastral certificate to the Notary
Articles of the law fallowed by Land Registrars:

In any case, the alternative graphic representation must respect the delimitation of the parent parcel or the perimeter of all the parcels of the cadastral cartography.

If the alternative graphic representation affects part of cadastral parcels, it must specify the delimitation of the affected and unaffected parts, and all of them must respect the delimitation contained in the cadastral mapping.

Such graphic representation must comply with the technical requirements that allow its incorporation into the Cadastre after the registration operation has been carried out.

Metric tolerances are important
Well defined for different situations

PROPETARIO:
RIGHT TO IMPROVE METRIC PRECISION
• The technical solution developed by the Directorate General of Cadastre allows registrars to link, without the need for specialized GIS tools, the list of coordinates present in the format and its graphic representation.

• The coordinates are incorporated to the registration in a paper sheet.
Not only citizens but the public authorities that work in the territory have the duty to communicate to the Cadastre: land consolidations, reparcelling, administrative demarcation, expropriation and acts of urban planning and urban managing.

Theses administrations provide also an alternative geo-referenced representation:
- In GML format,
- Represented on the cadastral cartography,
- With technical the validation report by the cadastre.
In order to register a building the georreference of its position is also needed

We use then INSPIRE GML BU

The alternative geo-referenced representation is voluntary in several other cases as for example the Georreference of Crops
Instalations and improvements
Or buildings already registered
Assistance for cadastral declarations

Preferential declaration through the web

Possibility to everybody with electronic signature

Obligatory for:
- Public administrations
- Legal persons.
- Communities of property
- Those who carry out a professional activity for which compulsory collegiality is required, in the exercise of that activity.
- Notaries and registrars of the property

The presentation is divided into two stages

1st Generation of declaration (free)
2a Presentation of the declaration (authentication + legitimation)

Tools for generating declaration
• Possibility to attach documentation
• Generating a code
• Possibility to generate and print a predeclaration

When a graphical representation is required?

Included alternative representation validation
or
The graphic assistant
Easy to generate new enclosures perfectly
integrated into cadastral mapping

When the statements submitted affects the graphic representation of adjoining parcels

Not only the documentation supporting the proposed graphic representation (public deed, administrative document or other equivalent) is needed.

But also written document containing conformity or non-opposition with the graphic representation proposed by cadastral owners of all affected neighbouring parcels.

If this information is not provided, the Directorate-General of the Catastro may obtain it on its own.

Also, after in the Land Registry OWNERS IN LR AND COLINDANTS ARE NOTIFIED THAT MAY ALEGATE IF ANY ARE NOT LOCATED: BOE AND GEOPORTAL
Thanks for your attention