Finally, the Model of Collaboration Between Land Surveyor Engineer and the Spanish Directorate General for Cadastre is Institutionalized

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Key words: cadastre, land surveyor engineer, demarcation of property, public-private Partnerships (PPP), Spanish case study

SUMMARY

In Spain is not obligatory to mark the division in the land neither it is necessary that a surveyor preforms the documentation to present to the cadastre. The agreement to divide and the boundaries are decided by seller and buyer. But the incorporation in the Cadastre of a new real estate or the alterations of its characteristics is mandatory by law. The incorporation of data to the cadastre can be done by several ways, and by several experts (land surveyor engineers, engineers, architects…, notaries, property right registrars,..) depending on the type of real estate, and also depending of act or business that cause the change of data. They must provide information with the technical conditions defined by the cadastre that verifies that the graphical and literal information is correct.

Any modification of the physical characteristics of the cadastral parcels must be done taking as reference the Cadastral Cartography, that although it is a map shown as a territorial continuum in a digital homogeneous way, the accuracy is not homogeneous and it is based on the scale of the origin cartography and the existing technology and means in the moment of creation. Nevertheless, in the day by day updating, better cartography and better technologies has been used. All information and services of the Spanish cadastre (DGC) are free of charge, and the DGC provides this minimum cartography of all the territory. If someone wants to improve the quality of the cadastral representation can provide more accuracy representation, but always with the conformity of the neighbours.

In this context, land surveyor engineer are specialized in cadastre and real estate that manage techniques of accurate capture of topographic data, are the ideal professionals for the maintenance and correction of cadastral cartography.

Therefore, the DGC seeking to institutionalize public-private collaboration with Spanish Official Corporation of Engineering in Geomatics and Land Surveying (COIGT), signed in 2019 an ambitious new collaboration agreement with this institution that opens up a series of new methodologies and tools that are analysed in the article. The article delves into the meaning of these new parameters of collaboration that through the standardization of processes and guarantees of professional work, simplifies and speeds up the processing of cadastral updating or correcting. The training activities launched by both institutions to implement all the developments involved in the collaboration agreement is also be described and finally the results achieved in the new framework are analysed.

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Palabras clave: catastro, ingeniero en geomática y topografía, delimitación de la propiedad, colaboración público-privada (PPP), caso estudio España

RESUMEN (in Spanish)

En España no es obligatorio el deslinde ni la participación de profesionales especializados en los procedimientos de delimitación de la propiedad inmobiliaria. El acuerdo de deslindar y definir los linderos se decide entre el vendedor y el comprador. Pero, es obligatorio por ley, la incorporación al catastro de un nuevo inmueble o la alteración de sus características. La incorporación de datos al catastro se puede hacer a través de varios procedimientos y pueden participar diferentes operadores técnicos y jurídicos (ingenieros en geomática y topografía, ingenieros, arquitectos…, notarios, registradores de la propiedad,...) según el tipo de inmueble, y también según el acto o negocio que provoca el cambio. Deben proporcionar la información con las condiciones técnicas definidas por el catastro que verifique que la información gráfica y literal sea correcta.

En cualquier modificación de las características físicas de las parcelas catastrales debe tomarse como referencia la cartografía catastral. Siendo una cartografía continúa del territorio en formato digital homogéneo; aunque la precisión no es homogénea y se basa en la escala de la cartografía de origen y la tecnología y medios existentes en el momento de su creación. Sin embargo, en su actualización, se ha utilizado una mejor cartografía y mejores tecnologías. Toda la información y servicios de la Dirección General del Catastro español (DGC) son gratuitos, y la DGC proporciona esta cartografía mínima de todo el territorio. Si alguien quiere mejorar la calidad de la representación catastral puede proporcionar una representación más precisa, pero siempre con la conformidad de los vecinos.

En este contexto, los ingenieros en geomática y topografía (IGT) son especialistas en catastro y bienes inmuebles que manejan técnicas de captura precisa de datos topográficos, son los profesionales idóneos para el mantenimiento y corrección de la cartografía catastral.

Por ello, la DGC, buscando institucionalizar la colaboración público-privada con el Colegio de Ingeniería en Geomática y Topografía (COIGT), firmó en 2019 un nuevo y ambicioso convenio de colaboración con esta institución que abre una serie de nuevas metodologías y herramientas que se analizan en el artículo. El artículo profundiza en el significado de estos nuevos aspectos de colaboración que, mediante la estandarización de procesos y garantías del trabajo profesional, simplifican y agilizan la tramitación en la actualización y corrección de la información catastral. También se describen las acciones formativas puestas en marcha por

ambas instituciones para implementar todos los desarrollos implicados en el convenio de colaboración y finalmente se analizan los resultados obtenidos en el nuevo marco.

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1. INTRODUCCIÓN

The objective of this article is to explain the collaboration agreement between the Directorate General for Cadastre (DGC) [http://www.catastro.meh.es/], responsible in Spain for the creation and maintenance of the real estate cadastre and the Spanish Official Corporation of Engineering in Geomatics and Land Surveying (form now on COIGT) [https://www.coigt.com/] professional official corporation of land surveyors and what this represents in the context and legislation of our country.

This is why it first explains the functions of DGC and the procedures defined in the legislation for updating and modifying cadastral data. Continuing with the characteristics of the COIGT and their role in relation to the cadastre.

All it gives rise to the understanding why the DGC seeking to institutionalize public-private collaboration with COIGT, signed in 2019 an ambitious new agreement with this institution that opens up a series of new methodologies and tools, and stablish new parameters of collaboration that through the standardization of processes and guarantees of professional work, simplifies and speeds up the processing of cadastral updating or correcting.

The training activities launched by both institutions to implement all the developments involved in the collaboration agreement is also be described and finally the results achieved in the new framework are analysed.

2. THE SPANISH CADASTRE

The Spanish Directorate General for Cadastre (DGC), depending upon the Ministry of Economy and Finance, is the Spanish Public Administration responsible for Cadastre, and therefore, is responsible for describing the real-estate properties of the country, being in charge of providing and keeping updated the Real-estate Cadastre as well as of taking care of the correct diffusion of Cadastral data for 95% of the Spanish surface (500.000 km2) with exception to Basque country provinces (7.261 km2) and Navarra (10.421 km2).

The Spanish law establishes that the Cadastre is a register describing rural and urban real estates. This description includes, legal, physical and economic characteristics, featuring title

holders data and their rights over the real estate; geographical representation, location, cadastral reference, surface, usages, class of crop, buildings, graphic representation among other physical characteristics; and cadastral values that are the basis for real estate taxation.

The Cadastral Database contains alphanumerical information of 28'8 Million titleholders, 38'9 Million urban real estate's, 39'3 Million rural parcels and 5.944 of special characteristics real estate (on 1/2020).

The Spanish Cadastre is principally a fiscal cadastre and therefore the principles that define the Cadastre`s mission are the principle of generality (all properties must be included in the Cadastre), and the principle of fiscal justice (the cadastral value must be a valid index of taxable capacity, updated and indexed to market). But taxation is not the only purpose of the Spanish cadastre, because its digital database is valuable territorial information allowing the location and identification of real estate as well as the supply of graphic and literal information to other public entities and citizens.

The Cadastral Information System is a dynamic, open system with numerous flows of interchange of information with multiple external agents who interact with the Cadastre's databases both as suppliers of information and as users and clients.

2.1 Creation and maintenance of the Spanish Cadastre database

Although the cadastral cartography is generated at the municipal level, the Spanish Cadastral System have a continuous map with urban and rural cartography, and with all the municipalities aggregated in an unique data base. The cadastral cartography is a map shown as a territorial continuum in a homogeneous way but the accuracy is based on the scale of the origin of this cartography, for urban cartography the scale is 1:2000, 1:1000 or 1:500 and for rural cartography the scale is 1:2000 or 1:5000. But after the creation of this continuous digital cartography, from 2000, in the day by day updating, better cartography and better technologies has been used.

In Spain the agreement to divide and the boundaries are decided by seller and buyer, there are not licensed surveyors and it is not obligatory to mark the division in the land. Nevertheless the incorporation in the Cadastre of a new real estate or the alterations of its characteristics is mandatory by law. The incorporation of data to the cadastre can be done by several ways, and by several experts (Engineering in Geomatics and Land Surveying, other engineers, architects…, notaries, property rights registrars,...) depending on the type of real estate, and also depending of act or business that cause the change of data. They must provide information with the technical conditions defined by the cadastre that verifies that the graphical and literal information is correct. The final decision to inserting of cadastral survey is on cadastre.

This incorporation of data to the cadastre can be done by several procedures, also depending on the type of real estate, and of the act or business that cause the change of data:

- Compulsory declarations from titleholders that they are directly declared in our offices or by internet. Providing the documentation required for each case.
    - If the physical change of a parcel is easy and it can be done drawing over the orthophoto or other cartography, the citizen can use graphic tool provide by the Electronic Office of Cadastre (EOC) [http://www.sedecatastro.gob.es/] (figure 1). That generates an Inspire GML that past several controls verifying that the graphical and literal information is correct and a graphic validation report is then deliver. If the amendment affects neighbours it is necessary to provide the compliance of the adjoining titleholders and if it does not provide this agreement, the DGC has to carry out that procedure to obtain conformity, which takes longer.
    - Also he can contract a competent technician that performs the measurement, also if is necessary with the conformity of the adjoining titleholders. The technician that does the GML can validate it with the validation tool provide by the DGC.

With this information, the DGC or the collaborators (municipalities) update the database.

- Communications of the collaborators in cadastral updating, mainly 4.500 local authorities, 2.900 notaries and 1.100 property rights registrars and other public institutions that act over the territory. For example expropriations, land consolidation and acts of planning and urban management, etc. they are obligate to provide the data in the same conditions. They are the one that contract technicians, if it is necessary, and they provide the information with the technical conditions defined by DGC and pass the validation process.
- Inspection Works and other proceedings (as regularization proceeding to include new buildings, extensions and reforms) done by Cadastre own initiative and normally contracting technicians to do the field work.
- General works, with the assistance of private firms, under technical specifications and controls.

Any modification of the physical characteristics of the cadastral parcels must be done taking as reference the Cadastral Cartography, that it is the unique geographic representation of the cadastral parcels.

In the Spanish cadastre all information and services are free of charge and the DGC provides this minimum cartography of all the territory. If someone wants to improve the quality of the cadastral representation can provide more accuracy representation but always with the conformity of the adjoining titleholders. In the same way, if there is an error or disagreement, citizens can provide an alternative geo-referenced representation that is used to update the cadastre if it passes the appropriate graphical and technical validations.

In 2019 (2020 it is not a good example for the pandemic) the physical characteristics of 1.300.000 cadastral parcels were modified in the cadastre (parcel delimitation, modification, creation). Not all of them had to be survey in the field (in fact few of them had the necessity, the system has many other tools to update cadastral parcels). The cadastre also provides to citizens and collaborates with the tools to provide the information via internet. They must provide it in the INSPIRE cadastral parcel model (GML file is now well known by land

surveyors, engineers, architect, notaries, register workers, etc. and it has become the standard in cartography exchange) or even it is possible to citizens and collaborators use the “graphical

assistant” to delimited the new parcel on the cadastral cartography and help themselves combining cadastral cartography with other information as orthophoto, urban and rural planning maps, etc...

Figure 1: Electronic Office of Cadastre (EOC): among the services, cadastral parcel editor, graphic validator, assistant for communications, and procedures. In Spanish: Sede Electrónica del Catastro (SEC) Source: DGC

An automatic validation is carried out consisting of different checks: delivery format, INSPIRE scheme validation of cadastral parcel, attribute value syntax, and geometric verification of the information delivered against the existing cadastral information. A validation report is issued (figure 2).
[https://www.sedecatastro.gob.es/Accesos/SECAccValidacionesGraficas.aspx]

Figure 2: Graphic Validator. Source: EOC, DGC

The cadastre, by mean of this validation, guarantees also the non-invasion of the adjoining titleholders or the public domain. If adjoining properties are invaded, the cadastre asks for the conformity of the neighbour to go on. The Graphical validation report doesn't validate the legal transactions giving rise to the new configuration of the parcels plots that must also complies with the necessary legal or administrative authorization from the public authority, that must also be studied. The report is an electronic document signed with the secure verification code. It has an XML file with all the information. The report avoids physical exchange of files, shows the new representation and enables the automated capture of its contents preventing transcription errors. Notaries don't need to use GIS. Registrars access automatically to the graphical content in the XML file.

After validation and incorporation to the cadastre it is possible for the citizen, collaborator, Notary o Property Rights Registrar to obtain a "Descriptive cadastral and graphic certification" to elaborate the deed and to register. When the change of the information is a new construction, an extension of a reform in the construction the citizen must provide the information in the conditions defined by cadastre and the building must be georeferenced and validate also over the cadastral cartography with the same described tools. In these cases traditionally was the municipality, our collaborator, who prepares the documentation in defined the exchange formats of graphic and other literal information necessary for the valuation.

After the incorporation to the cadastre it is possible to generate also a certificate of the parcel, or of the construction or of the apartment with all the literal information. The cadastral certification is an electronic document (PDF format). It includes embedded the GML INSPIRE of cadastral parcel and the location of the buildings. 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 between the cadastre, Notary and property rights register. 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 (EOC).

Once the registration in the Property Rights Register is done, the Notary and the Registrar inform back to the cadastre that include the "register unique code" for the real estate. Any posterior change in the title holder of the real estate is updated in the cadastre by the communication of the registrar in the most of the cases in un-attended process.

In all the processes described above is the interest of the Spanish cadastre that land surveyor engineer that specialized in cadastre and real estate that manage techniques of accurate capture of topographic data, are more and more involved because they are the ideal professionals for the maintenance and correction of cadastral cartography and it is the best way to improve the quality of cadastral cartography. Therefore, the DGC seeking to institutionalize public-private collaboration with Spanish Official Corporation of Engineering in Geomatics and Land Surveying (COIGT), signed in 2019 an ambitious new agreement with

this institution that opens up a series of new methodologies and tools that are analysed in the article.

3. SPANISH OFFICIAL CORPORATION OF ENGINEERING IN GEOMATICS AND LAND SURVEYING (COIGT, in Spanish)

Spanish Official Corporation of Engineering in Geomatics and Land Surveying (Colegio de Ingeniería en Geomática y Topografía, COIGT) is an official corporation that brings together all the graduates in Technical Engineering in Topography and the Graduates in Engineering in Geomatics and Topography (IGT) who practice professional work in Spain [http://geomaticaes.com/ and http://www.upv.es]. It includes all land surveyors. Collegiation in this body is mandatory to practice the profession legally.

COIGT was created in 1965, being a founding member of the International Federation of Surveyors (FIG). As a corporation under public law, it has a national structure and assumes the defence of the profession and guarantees before society, both the qualification of its members, and the professional practice in accordance with the current regulations of application.

The essential purposes of COIGT are:

- To order the exercise of the profession, within the framework of the laws, and monitor compliance with them.
- To ensure that professional activity is adequate to the interests of citizens.
- To represent and defend the general interests of the profession, especially in its relations with the Public Administration.
- To defend the professional interests of the collegiate.

It currently represents 4.485 professionals (on 2/2021). It has 12 delegations spread throughout the national territory, with presence in the 17 autonomous communities (50 provinces) of Spain. COIGT belongs to various national and international organizations: FIG, Union Profesional [http://www.unionprofesional.com/], INGITE [https://www.ingite.es/], CLGE [https://www.clge.eu/], APPAT [https://colegiotopografoscr.com/appat/].

4. THE COLLABORATION AGREEMENT

The collective of land surveyors has always been historically linked to the DGC, due to its participation in the updating and maintenance of graphic information, important to be able to determine the geographical position and area of the cadastral plot, in a unique and unequivocal way in the official reference system.

More than a decade ago, this relationship materialized by signing, in 2007, a collaboration agreement. This document set out as the main objectives:

- The implementation of a Cadastral Information Point (PIC) [http://www.catastro.meh.es/esp/pic.asp] that would allow the information of the cadastral

database to be consulted by members. PICs are cadastral service delivery centres, authorized by the DGC and located in public entities, and professional colleges. These services can include: consultation of protected data, issuance of certifications, notifications of agreements, receipt and registration of documentation, electronic filing of declarations through the EOC, etc

- The communication to the cadastre by the members of the discrepancies that it might observe in the exercise of their work, taking into account that they had to try to require the conformity of the adjoining titleholders concerned.

Over the next few years, important changes occur that affect the collaboration agreement. The first is based on the publication of Law 40/2015 of 1 October on the Public Sector Legal Regime, in which Chapter VI regulates and normalizes the content of all public agreements. The second is the publication of Law 13/2015, June 24, that reforms the Mortgage Law approved by Decree of February 8, 1946 and the consolidated text of the Law on Real Estate Cadastre, approved by Royal Legislative Decree 1/2004, of March 5, and the resolutions that complement this Law, which highlights the importance of graphic representation and georeferencing of properties of the property rights register.

These events significantly affected the activities of the collective of land surveyors in relation with the DGC, with the ultimate objective of keeping the cadastral graphic information up to date. As a result, a new collaboration agreement was established with the collective, which materialized with the publication of the Resolution of 7 February 2019, of the DGC, which publishes the collaboration agreement with the COIGT.

Among the main developments of this new collaboration agreement are:

- The establishment of standardized procedures, to communicate to the cadastre variations in the graphic and literal information of the cadastral database, which land surveyors can detect in the exercise of his competencies.
- Joint capacity and training plans.
- Establishments of Cadastral Information Points (PIC) with new functionalities, in accordance with Resolution of January 15, 2019, of the DGC, which approves the regime for the establishment and operation of the Cadastral Information Points.

With regard to standard procedures for communicating discrepancies, a protocol and workflow were established in the monitoring committee of the Collaboration Agreement so that, if the information reaching the DGC complies with a number of conditions, such files may be processed by means of an abbreviated procedure (figure 3). Two phases were established in the workflow, one first prior to the recording of the information in the cadastral database, which has been called "College Phase" (Official Corporation Phase) and a second phase that would be cadastral processing called "Cadastral Phase".

In the "College Phase", the land surveyor, after all the measurements in the field, through the tools that are available at the Electronic Office of the Cadastre (EOC), he can obtain a standardized document for the adjoining cadastral holders to sign their consent, and a

graphical validation report, certifying that the proposed graphic representation, meets the technical criteria necessary for its incorporation into the cadastral cartography.

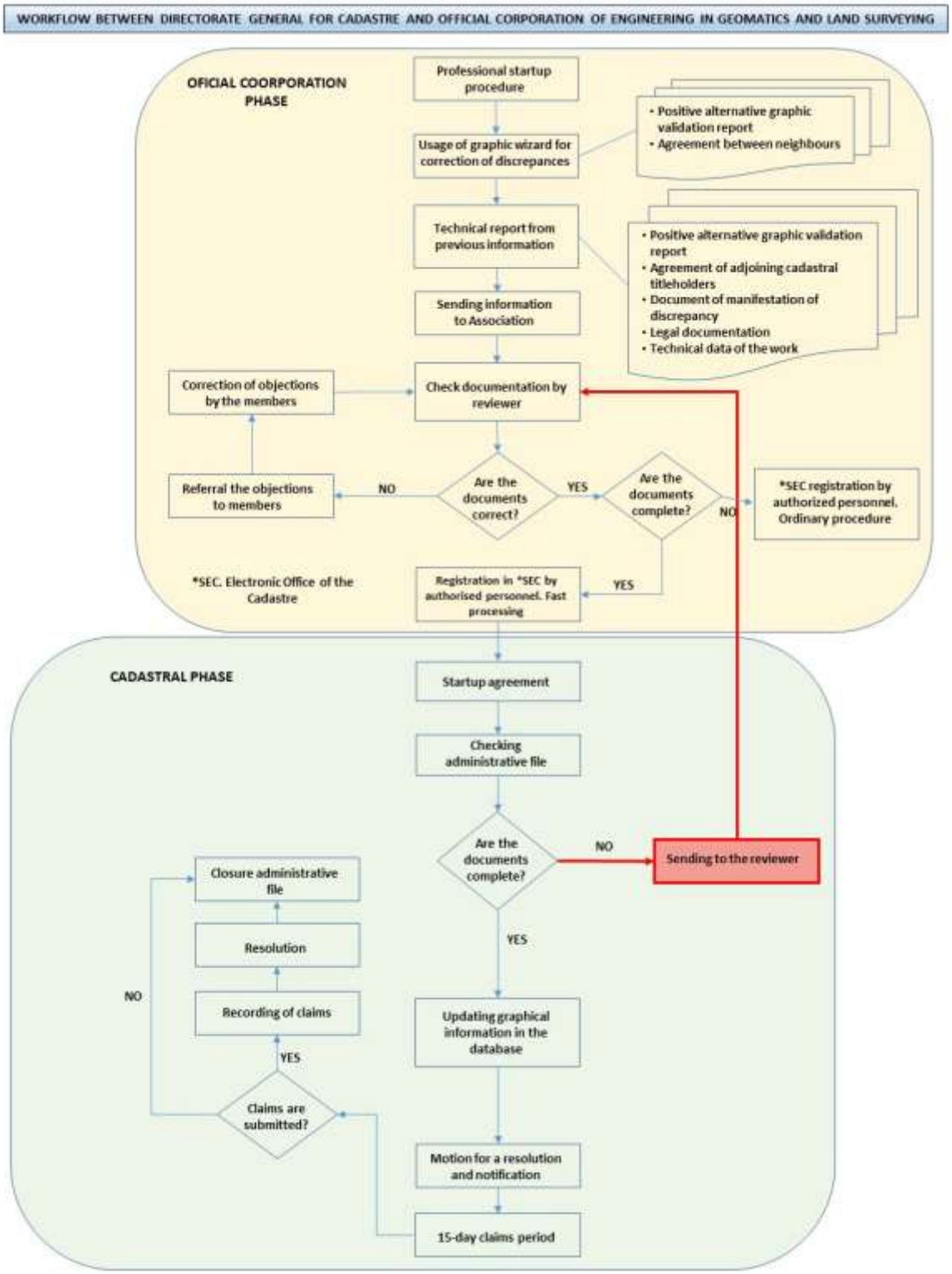

Figure 3: Workflow between Directorate General for Cadastre and official corporation (COIGT). Source: DGC

The next step is to collect all the information, so that the information can be processed by the Cadastre. According to an agreement of the "Monitoring Commission", this information must be delivered in separate files, in pdf format and with a standardized file name. The documents are as follows:

- Document of manifestation of discrepancy
- Positive Alternative Graphic Validation Report
- Compliance with adjoins titleholders of the parcel
- Legal documentation supporting the discrepancy
- Technical data of the work

The land surveyor will then forward the information to the professional official corporation (COIGT), so that it can be checked by the reviewer, who is a technician of the Corporation, who has received training from the DGC, so that he can verify that all the information is correct and complete. The reviewer is a key figure in this whole process, since in addition to checking the information he is in charge of register the file in the data base of the cadastre by the means of the EOC, having the certainty that the file will have a favourable resolution. Once the information is recorded at the site of the EOC, it is passed to the next phase, which is what has been called the "Cadastral Phase".

In this phase, the first step is to perform a new check on the completeness and characteristics of the submitted information. If successful, the information in the database is modified.

Next, having the consent of all cadastral titleholders, it is considered that there are no affected third parties, so an abbreviated processing procedure provided for in cadastral legislation may be applied, in such a way that the communication of the resolution agreement is notified to the cadastral holders concerned. Finally, in case there is no complaint the file is closed.

All actors involved in the correction of a discrepancy know the information they need to provide and in what format, so that the dossier is resolved in a faster way.

5. PROCEDURES AND TOOLS

With the collaboration agreement signed between DGC and COIGT, the processing of cadastral correction is simplified and streamlined through the standardization of processes and the guarantees of professional work. Cadastral correction regulated in Article 18.1 of the Cadastre Act [https://www.boe.es/buscar/act.php?id=BOE-A-2004-4163]. To this end, COIGT makes available to the citizen and the administration, professionals specialized in cadastre and real estate, which together with the management of techniques of accurate capture of topographic data, make them the best professionals for the maintenance and improvement of cadastral information.

Through the COIGT website you can select the type of service provider, either through different options or through a geoportal with the location of the members land surveyors (Figure 4). With a total of 1.090 geolocated professionals.
[https://coigt.com/conveniocatastro.aspx]

Figure 4: Platform for the election of member land surveyor. Source: COIGT

Currently the COIGT, keeps open four PICs in different part of Spain. COIGT members' digital access to these PICs is through their e-College platform [https://coigt.e-visado.net/PIC].

The signing of the new collaboration agreement with the DGC expands the portfolio of PICs services in the COIGT with an extension in the consultation and certification of cadastral data protected by the cadastral holders of the parcels affected in the work carried out. As in these PICs, comprehensive information services are established, as well as assistance to the citizen, in particular in the preparation of declarations and in the use of the graphical assistant. Where citizens can come to receive information, consultation and assistance in cadastral issues by the land surveyors of the COIGT.

To access protected data, and to represent citizens in different procedures before the DGC, land surveyors use the standard representation model before the DGC (since 9/2020)

Following the signing of the collaboration agreement in February 2019, that year served to be launched. COIGT being the first professional collective to sign a similar collaborative agreement with the DGC in Spain; also serving as a pilot in the public collaboration of the DGC with a private collective of professionals.

This collaboration agreement aims, in cases where there is no conflict on the delimitation of

property with the titleholders of the adjoining parcels, to be constituted as a quick way to provide cadastral mapping with the accuracy required for its access to real estate traffic under the best conditions.

Public-private collaboration between the DGC and the land surveyors collective (COIGT) makes it possible to expedite the updating and improve the quality of cadastral cartography.

The COIGT makes available to the DGC, by telematics procedures, in the specific digital formats, the digital graphic documentation of the immovable property subjected to professional work carried out and with significance in the cadastral information, once they are completed. This documentation is reflected on the official cartography of the DGC and contains the cadastral reference, areas, uses and designation of the real estate. It is also accompanied by the corresponding positive Graphical Validation Report (IVG), developed from Law 13/2015 on Cadastre-Land Registry coordination in Spain.
[https://planosypropiedad.com/2018/11/15/coordinacion-catastro-registro-en-espana-ley-13-2015-presente-en-foros-internacionales/]

Added to that information is the boundaries agreement template, and the express conformity of all cadastral owners of parcels affected by the cadastral alteration of the parcels subject to the work, or, where appropriate, as far as possible, as well as the digital photograph of the most significant facades, in the case of real estate with construction.

The following example is part of a work, done under the collaboration agreement, and with standard documentation (figure 5). Protected information has been deleted. Attached are:

- The manifestation of cadastral discrepancies by abbreviated procedure. This document attaches a secure verification code (CSV) that allows access to the Positive Graphic Validation Report through the EOC. It contains the digitally formatted drawing made by the land surveyor to be delivered to the DGC, and which has gone through a technical validation process that allows the automation of graphic changes in the cadastral database.
- The attached technical data.
- The technical plan to be delivered to the customer (figure 6). This drawing is not sent in this format to the DGC; but as a Graphical Validation Report (IVG) (figure 7).

Documents reflecting the change can be obtained from the EOC of the cadastre: before the correction and the result at present.

Figure 5: Example standard documents, 2020. Source: DGC-COIGT

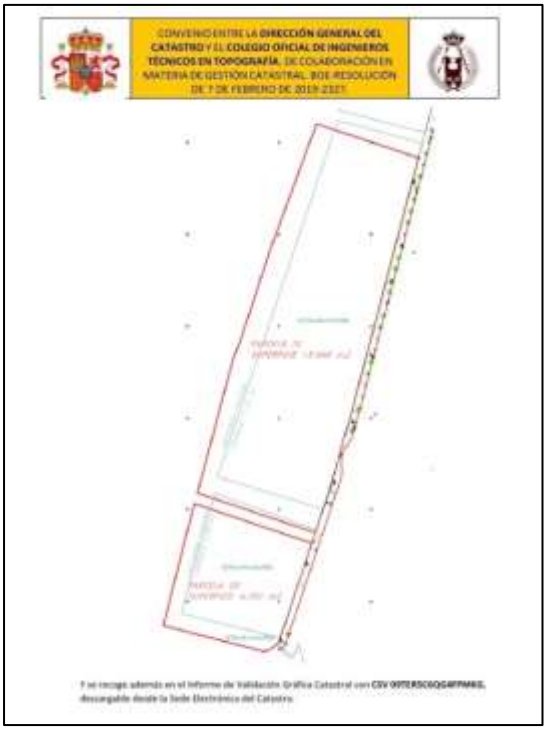

Figure 6: Technical plan to deliver to the customer, 2020. Source: Jesús García Benito, COIGT

Figure 7: Positive Graphical Validation Report (IVG), 2020. Pages 1 and 2 of 6. Fuente: EOC, DGC

In cases of correcting cadastral discrepancies, the COIGT has created an internal guide for its collegiate members with the instructions to be followed in this type of work (Guide for cadastral correction, 10/2020).

The COIGT ensures that professional work carried out through this collaboration agreement is reviewed in accordance with its official approve protocol by the corporation. Procedure that has a quality system according to ISO 9001:2015, and that provides the work with liability insurance.

6. CAPACITY BUILDING

In order to improve the dissemination of uniform criteria and guidelines for the development of the actions of the collaboration agreement, training plans are envisaged for land surveyors aimed prepare the documentation for present to the cadastre corrections and declarations. Annual plans of capacity building must be delivered in a decentralized way or through e-learning platforms. Such training plans should be eminently practical and should count with the participation of DGC staff and COIGT staff. The Program must be jointly developed by both sides.

In the capacity building sessions each of the cadastral procedures is explained and which to apply in each case, how to prepare the documentation for the different dossiers, and how to use the COIGT platform to prepare and upload the documentation. That then from the COIGT is transmitted through the electronic office of cadastre to the DGC. The entire procedure is reflected in the Guide for cadastral correction, which is regularly updated with improvements and clarifications.

Special training has been developed with the figure of the reviewer who is the guarantor that the process is done correctly and should tutor the other members who make corrections and updates

7. CONCLUSIONS

- The use of standards in procedures and documents (agreed by COIGT and the DGC) by the land surveyors (IGTs in Spain) allows the DGC to shorten the processing times of administrative files.
- In the case of corrections, providing the conformity of the adjoining cadastral titleholders, except for exceptional incidents, the cadastral file will be processed at most in 5 weeks. Some of the work can be processed even in 15 days. Without the collaboration agreement they took a lot longer.
- The agreement between these two entities makes it possible to reduce costs for citizens and provide higher quality cadastral cartography.
- It makes it possible in a quicker way to improve cadastral cartography prior to the real estate business at the notary's office or land registry, providing better legal certainty to the operation.

- Under the agreement, surveyors' training in cadastral maintenance and management issues is improved
- The collaboration of the DGC with the other Public Administrations has been for many years a standard procedure. But this agreement is a step further because represent the institutionalisation of the DGC's first public-private collaboration in land administration. It recognises the good work of the land surveyors as specialists in the updating and maintenance of cadastral cartography.
- This agreement makes clear the trust that the cadastre places in the land surveyors collective, represents a win-win situation for the two actors, DGC and COIGT and open the door to a deeper collaboration in the future.

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