



European requirements for cadastral surveyor activities

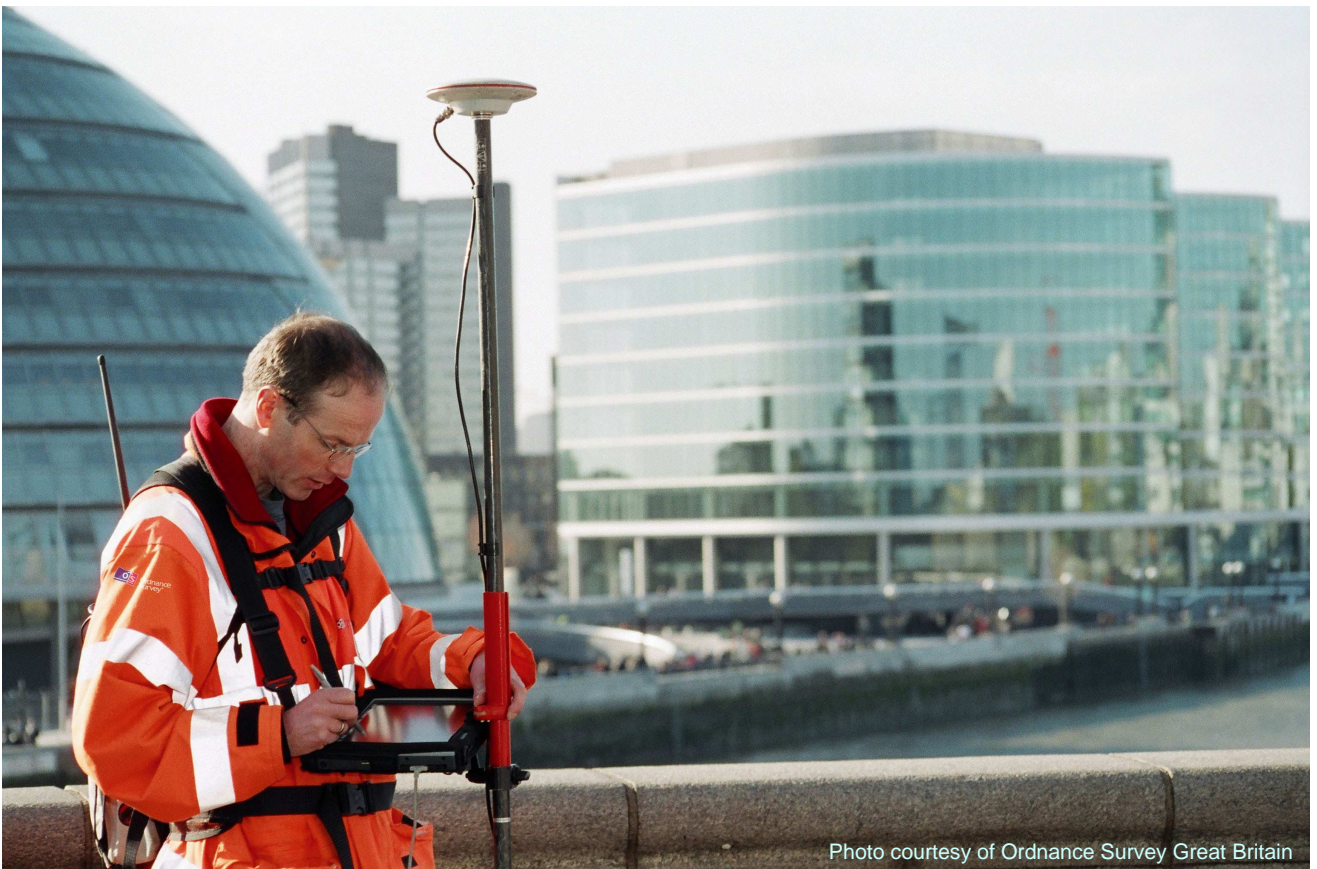


Photo courtesy of Ordnance Survey Great Britain

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Executive Summary

Security of land tenure is fundamental to a stable and prosperous society and modern economy. The Cadastre and Land Registry organisations of Europe have long provided such secure, reliable and authoritative information. In many Member States cadastral activity relies upon well qualified and properly licensed private surveyors.

Whilst measures such as the requirements for regulating the recognition of professional qualifications and the Directive on services in the internal market are starting to impact in the surveyor's market there are still significant differences in the standards required of surveyors working on state cadastres in the Member States.

This study shows that more needs to be done at both a national and European level to improve the consistency of qualification and licensing and to lay down minimum requirements for professional indemnity insurance and continuing professional development and Life Long Learning

In short a common European framework for recognition of the profession of the cadastral surveyor needs to be developed. Finding an agreement for a 'platform' following the EU-Directive 2005/36 on Mutual Recognition could be a way to define a European standard for the cadastral surveyor in Europe.

EuroGeographics www.eurogeographics.org the European Council of Geodetic Surveyors (CLGE) www.clge.eu and Geometer Europas (GE) www.geometer-europas.eu will continue to work together for such an outcome.

The project team defined the 'cadastral surveyor' as a " *person (physical or juridical) entitled to officially execute cadastral surveying tasks, determining real estate property boundaries (and other data) and producing certain real estate property documents. They do so by taking national requirements into account, which are usually defined by law (regulations).*"

Activities of cadastral surveying are usually regulated by the State and only licensed (certified) persons are permitted to execute them. A list of the national titles that correspond to "cadastral surveyor" is presented in Annex 1.

Objectives

The project objectives were to provide an overview of national terms and conditions which apply to cadastral surveyors and to identify the common characteristics that are relevant to cadastral surveyor activities in Europe.

State of the art, references

The primary activity of land surveyors in the real estate market is to provide accurate and reliable (legal) data about property. Although this is the most common activity performed by surveyors throughout Europe, cultural, political, legal and other non-specified national elements considerably influence the execution of this activity.

Laws and regulations that describe State Surveying (geodetic) and Cadastral activities - e.g. the Law on Real Estate Cadastre and the Law on Geodesy and Cartography - define the scope and requirements of the surveyors' activities. Usually NMCAs are in charge of assuring and supervising the proper implementation of these laws and regulations; therefore collaboration and interaction between surveyor and NMCA is inevitable. The most important national laws and regulations in regard to activities of cadastral surveyors are presented in Annex 2.

Regardless of national laws, the European trend of liberalising the internal market will affect cadastral surveyor activities in the near future. General requirements (a framework) regarding liberalisation of services are described in a Directive on services in the internal market (2006/123/EC, 12 December 2006). For the text of the Directive, see the link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0123:EN:NOT>

Another relevant document, in which requirements on the qualification of professions (including surveyors) in Europe are described, is the Directive regulating the recognition of professional qualifications. (2005/36/EC, 7 September 2005) which covers the recognition of professional qualifications. See the link:

http://ec.europa.eu/internal_market/qualifications/future_en.htm.

Besides these Directives, several publications on surveyor activities at a European level were taken into account by the project team:

- The education and practice of the geodetic surveyors in Western Europe, Alan Report, 1995, CLGE, www.clge.eu
- The establishment of the Profile and Definition of the geodetic surveying profession in Europe, J.Stannard, 1996, CLGE, www.clge.eu
- Enhancing Professional Competence of Surveyors in Europe, Stig Enemark and Paddy Prendergast, 2001, CLGE, www.clge.eu
- Multilateral Accord, www.geometer-europas.eu
- Survey on national structures of surveyors' profession, Geometer Europas, 2005 (internal pages on www.geometer-europas.eu)
- CLGE and GE Market Report about the market of surveying in Europe, published 2003
- WPLA report on Public/Private partnership in land administration, www.wpla.org
- Inventory "General information about requirements for land surveyors activities", EuroGeographics, 2007, www.eurogeographics.org

- “Profil de formation des ingénieurs géomètres”, joint group, 2007, swisstopo, www.cadastre.ch
- Stepping into the EU, RICS, www.rics.org

Legal framework

Depending on national legal and organisational structures, cadastral surveyors can operate either as an individual legal entity or as a juridical person in an enterprise or public organisation, or a combination of both. In some countries, different operational conditions for private cadastral surveyors (individuals or enterprises) and public surveyors (employees of NMCAs or local/regional administrations) apply. There are countries where there are no licensed cadastral surveyors (e.g. Norway, Spain and Sweden). In such countries, cadastral surveying tasks are executed by employees in service of an NMCA (e.g. Sweden), a municipality (e.g. Norway) or are contracted individually by public authorities (e.g. Spain).

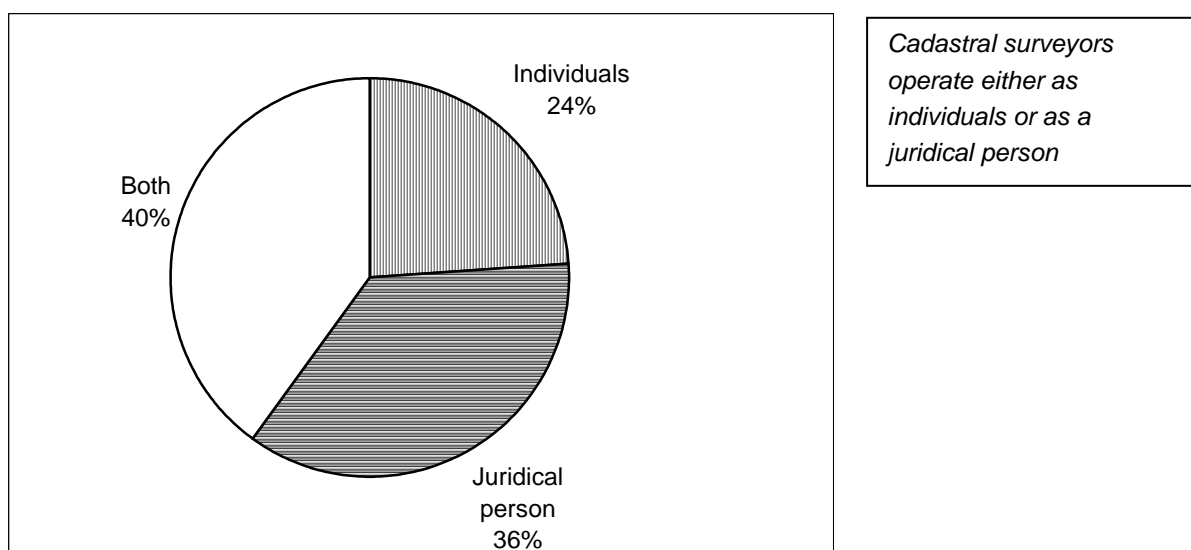


Figure 1: Cadastral surveyor's operational status

The number of surveyors in a country depends on the size of the market and the amount of work it generates. For example, in a number of Eastern European countries, where the restitution of property rights, land privatisation and real estate cadastre are still in development, the number of active surveyors surpasses the amount of cadastral

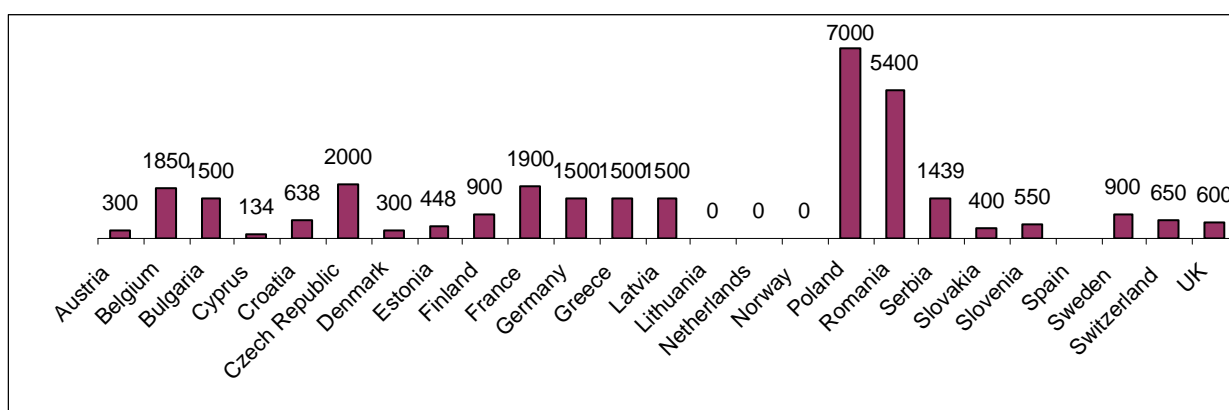


Figure 2: Approximate number of licensed cadastral surveyors (individuals) per country

surveyors in Western European countries. In several countries, individual surveyors are not counted separately. As a result, the quantity of cadastral surveyors is unknown as, for example, in Lithuania, The Netherlands and Norway.

In the United Kingdom (questionnaire answers cover England and Wales only), four different jurisdictions are in place which therefore makes it difficult to compare this unique situation with other European countries.

Due to different legal frameworks which influence the national cadastral system, as well as the home real estate market, the situation in every country is unique. This impacts, for example, on the number of cadastral surveying companies per country (Fig. 3). Some countries have no licensed companies because the cadastral surveying activity is a public duty and only NMCAs are entitled to execute this work (e.g. Sweden, Finland). In other countries individuals are licensed and companies are not counted (e.g. Germany).

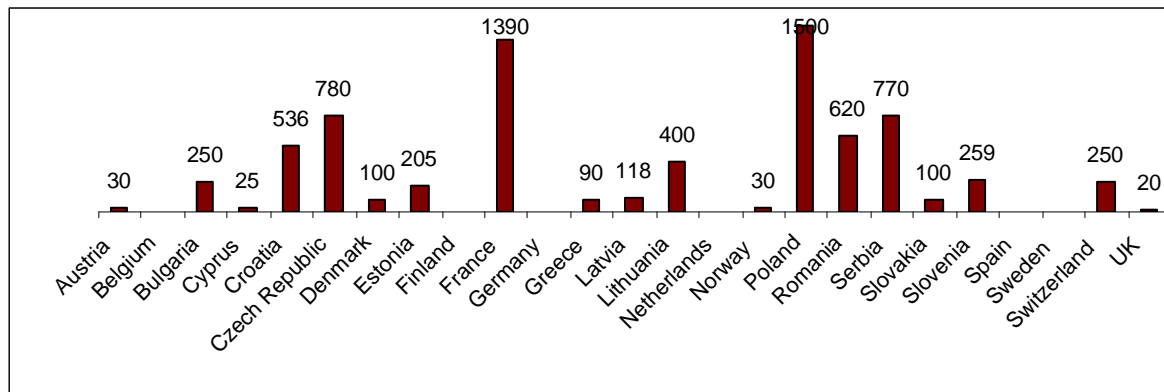


Figure 3: Approximate number of licensed companies that execute cadastral surveying

By comparing the information presented in Figs. 2 and 3, the average number of cadastral surveyors per company can be derived (Fig. 4). This figure gives an indication of the average size of companies in the countries surveyed (additional staff as secondments or assistants are not counted). Countries with zero value in the number of individuals or in the number of companies are eliminated. Statistics show different levels of the concentration of manpower per company, from small companies (1-2 surveyors) to medium size (10-20 surveyors).

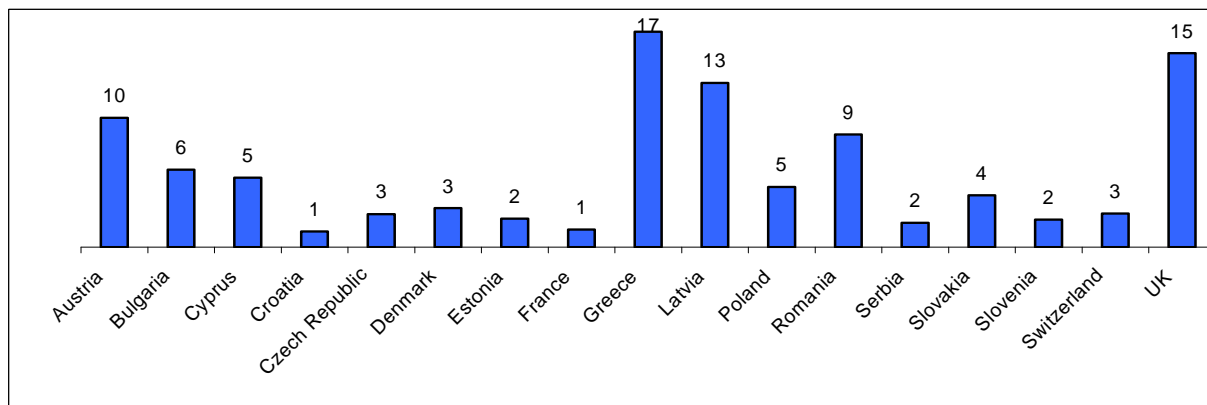


Fig 4: Average number of cadastral surveyors per company

An analysis of the tasks performed by cadastral surveyors in Europe (Fig. 5) shows that the majority of surveyors (48%) operate as private persons, while 28% of surveyors work as employees of a public entity (usually a NMCA). Additionally, 24% of received answers show that cadastral activities can be executed by either a private or a public surveyor.

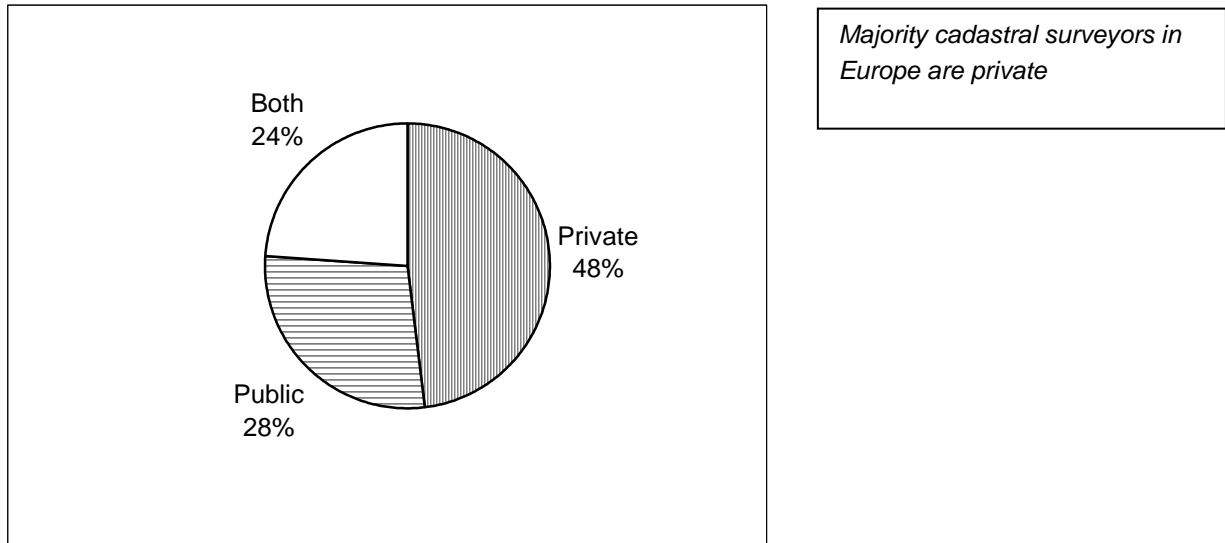


Fig 5. Types of licensed cadastral surveyors

Licensing

Chambers of Surveyors or NMCAs usually provide licences. In cases where cadastral surveyors are employed by NMCAs no separate licensing is needed; as a result, they are not included in the statistics.

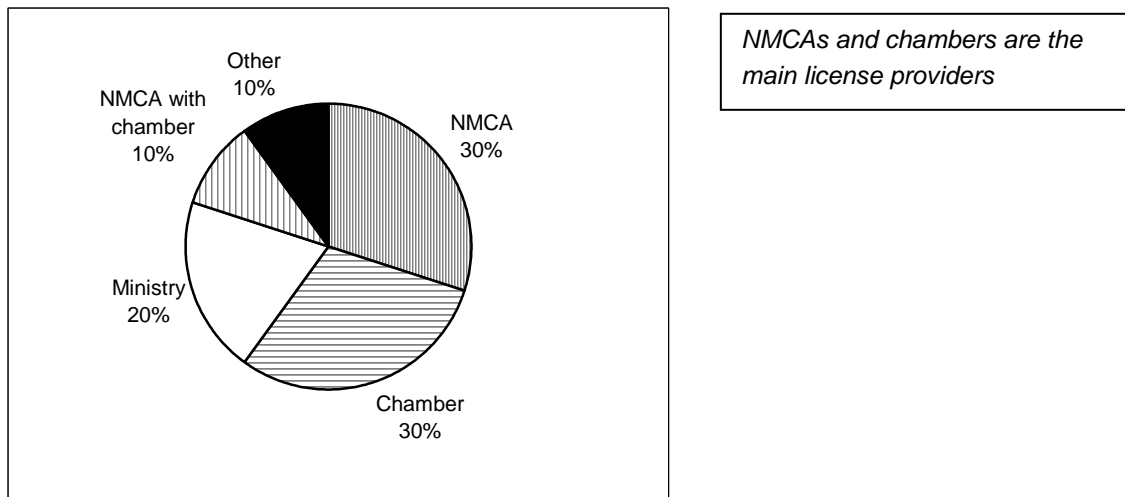
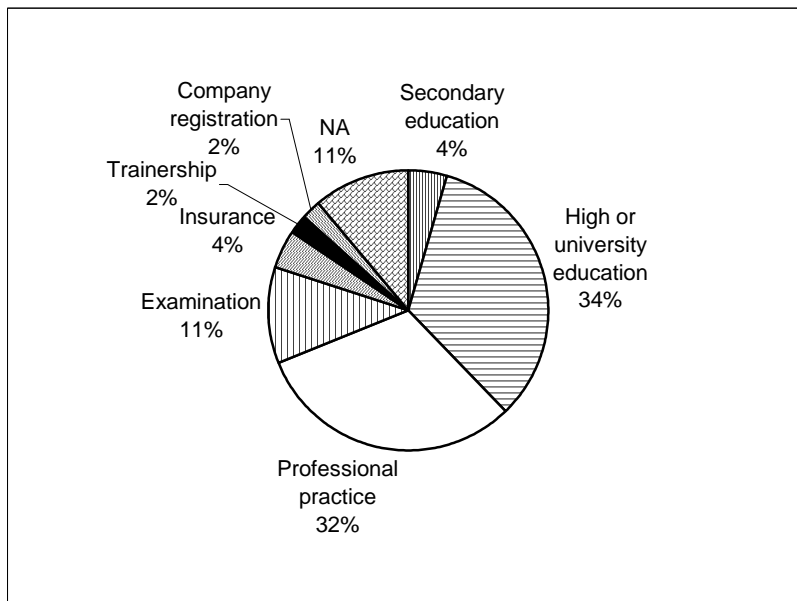


Fig 6. Organisations, which grant a license of cadastral surveyors

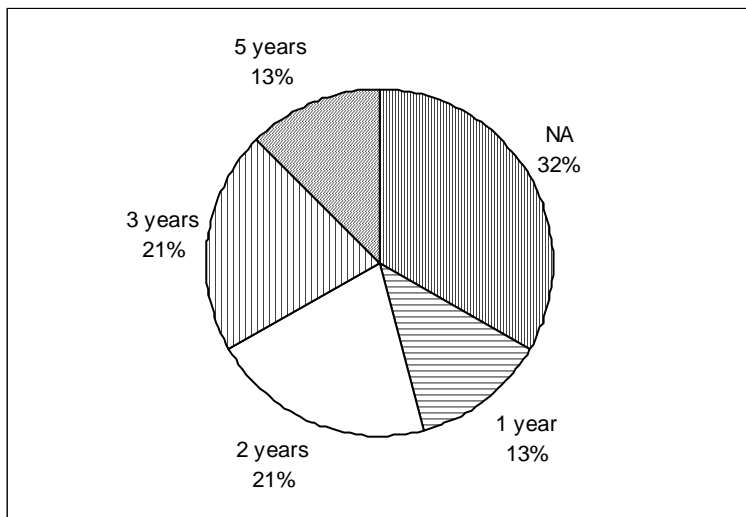
The analysis of licensing (authorisation) requirements (Fig. 7) shows that different conditions exist across Europe. In the majority of responses, a higher education in geodesy (or related disciplines) and a certain period of professional practice are mentioned as minimum conditions for surveyors who perform cadastral activities.



Common requirements for a license in Europe: high education and professional practice

Fig 7. Licensing (authorisation) requirements

There is no common practice across Europe regarding the period of compulsory practice before a surveyor is licensed for performing cadastral activities (Fig. 8). The period for compulsory professional practice varies from one to five years, with an average of two or three years. In countries where cadastral surveyors are working as employees of NMCAs, no compulsory period of professional practice is determined.



The majority of applications for licensing follow professional practice of 2-3 years

Fig 8: Compulsory period of professional practice required before applying for a cadastral licence surveyor

In relation to the cadastral activities performed by a licensed private surveyor, the survey contained a question on insurance. Mistakes can be made and third parties can make a claim. A compulsory insurance for protecting the surveyors against possible claims is only confirmed in 29 per cent of the cases. However, several recipients indicated that insurance in the near future is foreseen as necessary by law (regulation). This may become a trend.

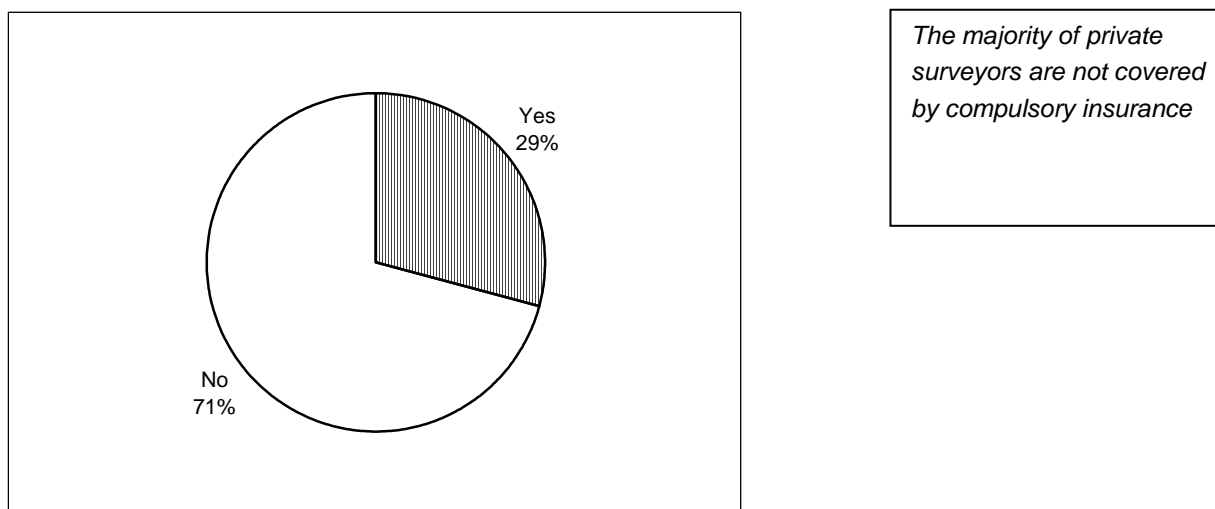
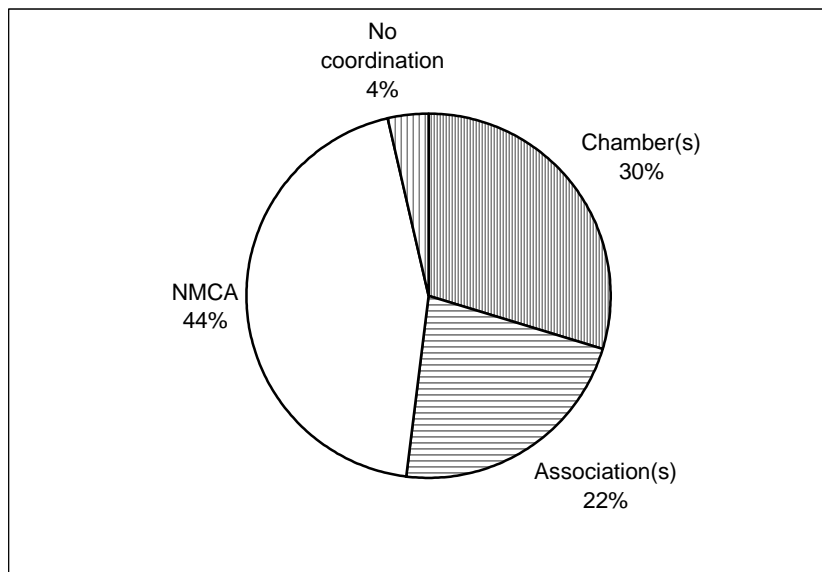


Fig 9: Does compulsory insurance apply to private cadastral surveyors as a requirement for a licence?

Compulsory insurance is applicable only to private surveyors. State guarantees apply for public servants' activities according to national public procurement conditions. As a consequence, no additional insurance is required. The terms of a compulsory insurance may vary, as well as the coverage of the insurance. For example, mistakes in cadastral documents can be treated differently from damages caused to a third party's property e.g. fence, pavement, etc. by cadastral surveyors.

Special relations between NMCAs and cadastral surveyors' communities

NMCAs, authorised to perform the legal task of administrating national cadastres and land registries, keep continuous interest in the work performed by the surveyors performing cadastral activities. These activities are in fact the basis for the cadastral database in many countries. Besides this task of collecting data, the majority of respondents indicated that NMCAs have different tasks as well. These tasks are: coordinating cadastral surveyors' activities (Fig 10), performing training activities (Fig. 11), supervising surveying activities (Fig 15) and licensing (Fig. 6).



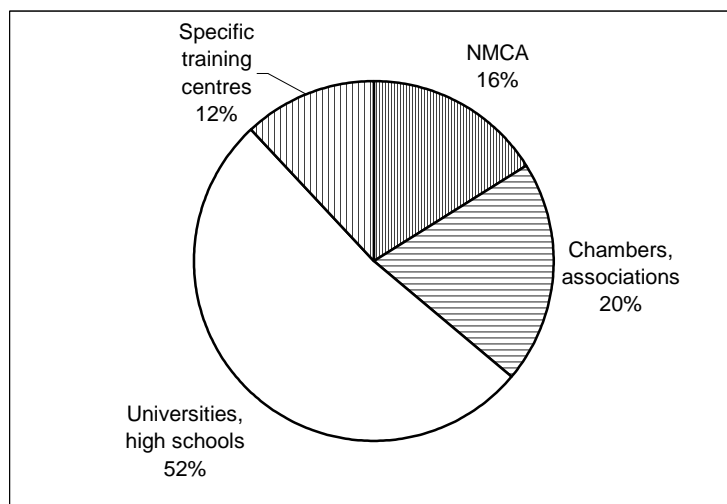
NMCAs are the principal coordinators of cadastral surveyors' activities

Figure 10: Coordinating organisation of the activities of cadastral surveyors

Responses show that NMCAs from a majority of countries are actively involved in issuing, maintaining and updating changes in laws and regulations. This legislation has its impact on the day-to-day practical work of cadastral surveyors. It appears, therefore, that a special relationship exists between NMCAs and the communities in which cadastral surveyors participate. In fact the NMCAs operate as a gateway to the decision makers at State level. They have to assure that the quality of their data meets the high standards required by their stakeholders.

Education requirements

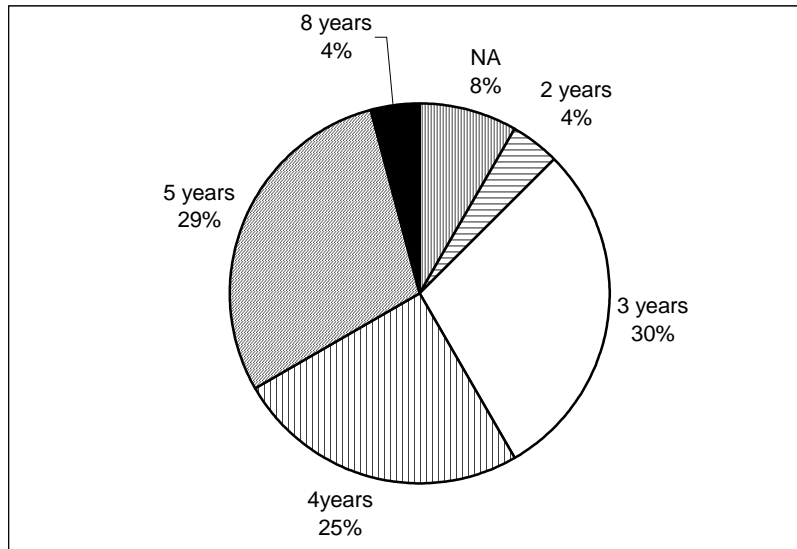
The majority of respondents indicated that high schools and universities are the main providers of cadastral surveyor training and education (Fig. 11). NMCAs train only the cadastral surveyors employed by them; chambers and associations provide training only to private cadastral surveyors.



Universities and high schools train the majority of cadastral surveyors

Fig 11: Which organisations provide training and education for cadastral surveyors?

National educational systems are different across Europe. As a result, no exact requirements, to become an accredited or accepted cadastral surveyor, could be defined for a minimum and common level of education after secondary schooling. An average educational period of 3 to 5 years was reported as necessary to become a cadastral surveyor (Fig. 12).



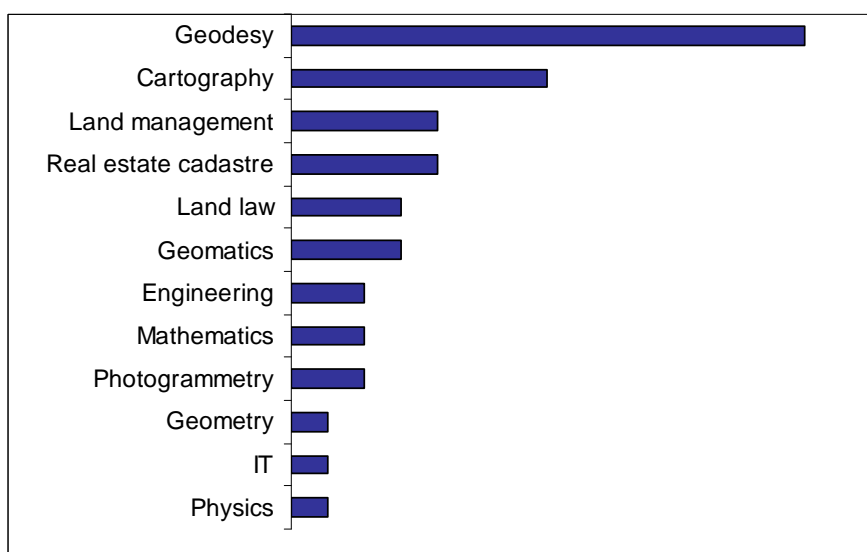
Average educational period:
3 to 5 years

Fig 12. Minimum duration of education after secondary school before becoming a licensed cadastral surveyor

Under an initiative of Geometer Europas seven national Chambers or Associations signed an 'Accord Multilateral' agreement, where they defined and agreed an entrance qualification of BAC+ 5 years, University/Master degree + compulsory practice of at least 2 years. Although this recommendation has no legal impact in a number of countries it can be considered as a kind of ambition in order to guarantee high professionalism of the cadastral surveyors.

In the meantime also a tendency towards diminishing educational requirements in regard to cadastral surveyors activities can be seen in some countries. They focus on a concentrated specific training (e.g. United Kingdom).

In the survey the discipline of education was measured. Respondents mentioned a number of different disciplines. Fig 13 provides a summarised list of disciplines applicable in Europe. The majority ranked 'geodesy' as the discipline most commonly demanded in regard to cadastral surveyor's activities.



Geodesy is the commonly demanded discipline for cadastral surveyors

Fig 13. Disciplines for education after the secondary school

Tasks and duties

Based on the results of the questionnaire and discussions in the meetings, the most common activities of cadastral surveyors were identified (Fig 14). Cadastral surveyors take technical measurements, mark parcel corners, advise (landowners), validate (depends on the authority) and acquire approval for cadastral documents from relevant authorities.

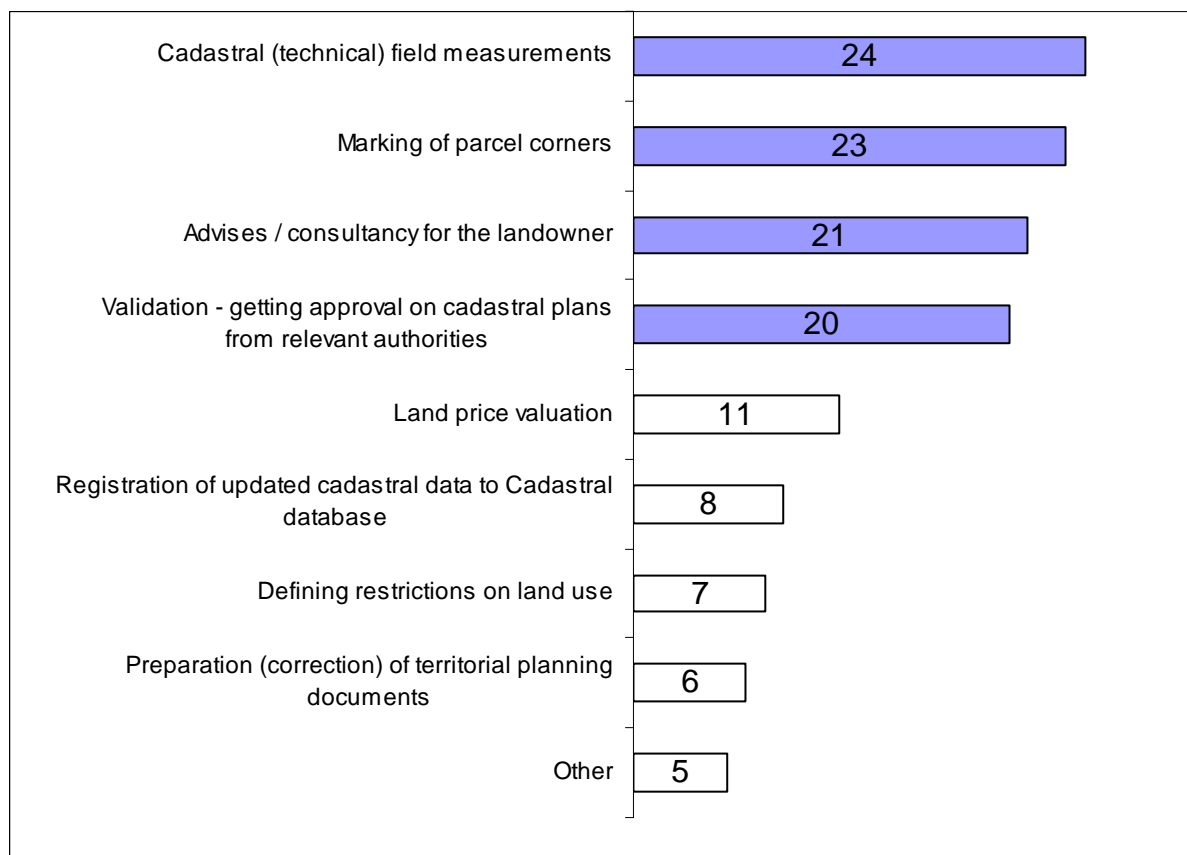
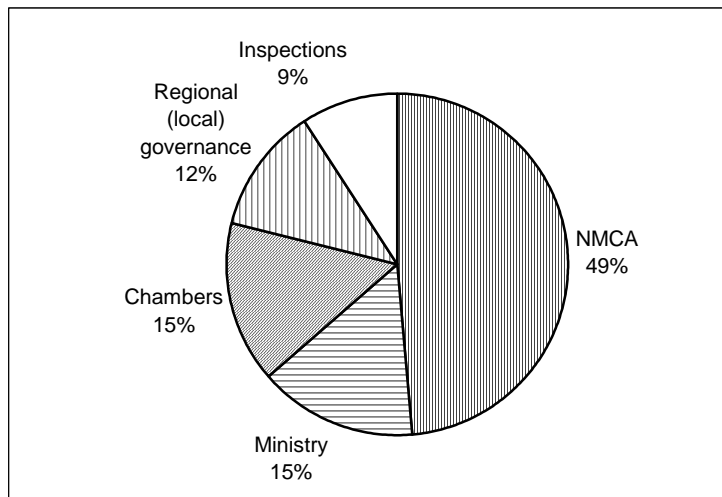


Figure 14. Main tasks and duties of cadastral surveyors

An action performed by a cadastral surveyor has or might have a legal impact on property data. This characteristic makes his profession comparable to other legal professionals like notaries or lawyers. Common in Europe is the duty of cadastral surveyors - to determine official property boundaries, although the scope of specific responsibilities doing so is different across Europe. As presented in figure 14, some respondents also mentioned other tasks. Certainly the list in the Fig 14 could be extended, but the first four tasks shall be treated as “European unanimous recognition” of cadastral surveyors’ tasks.

Supervision

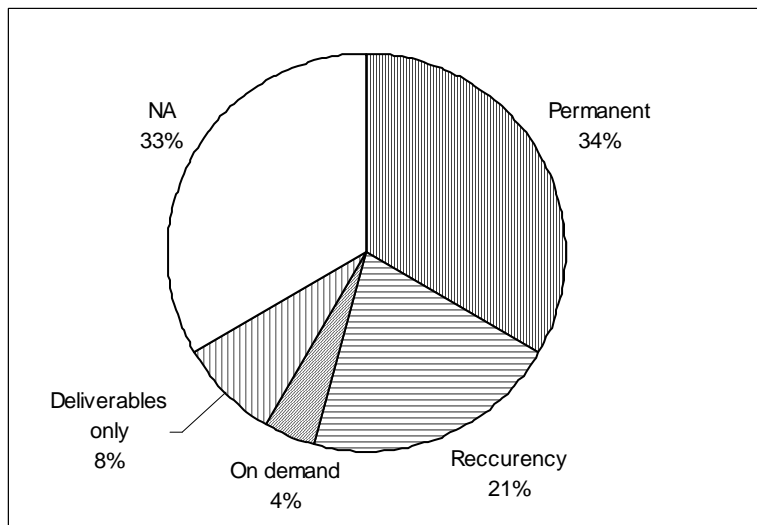
The majority of respondents indicated that NMCAs are responsible for the supervision of cadastral surveyors' activities (Fig. 15). We like to stress that NMCAs are only supervising institutions for own employees. When public cadastral surveyors are not included the percentage (Fig 15) representing the NMCAs would have been much lower. Other common supervisors are: Ministries, chambers and regional or local governance. A link between the bodies that grant licenses (see Fig 6) and performs supervision actions (Fig 15) exists. Often the same organization is in charge of a license assignment and the controlling measures. Some European countries (like Croatia, Czech Republic, Slovakia) established specific inspections for assuring proper supervision of cadastral surveyors activities. The results show that a large number of cadastral surveyors are permanently controlled (Fig 16).



NMCAs are responsible for the supervision of cadastral surveyors activities

Fig 15. Organisations which are responsible for quality control of cadastral surveyors' deliverables and/or the supervision of cadastral surveyors' activities

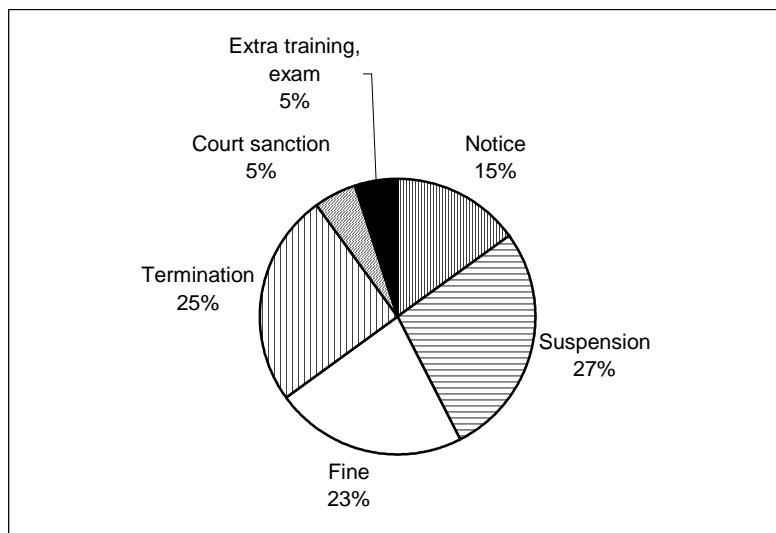
Also a recurring control occurs fairly often (21%). On the other hand it appears that a similar percentage (to permanent control) can be derived from the survey. It is not known if information about the frequency of the control does not exist or that no requirements are available for such a control. 8 per cent of the respondents reported that control for the activities (the process) performed by the cadastral surveyors' does not exist. In this case a quality check on the deliverables (the surveyors product) is in place.



There are big variations in controlling the activities of the cadastral surveyor

Fig 16. Control of cadastral surveyors' activities

When the quality delivered by a surveyor is lacking, several sanctions can be recognized. They are different in type and weight. The four types of sanctions which are applicable in most countries are: a notice, a fine, a suspension of the license (certificate), and a termination of the license (Fig. 17). The survey made clear that also a notice existed. Some respondents did not associate a notice with a sanction; a notice is usually issued before a sanction. However, several respondents associated a notice with a sanction and these are included in the figures below.



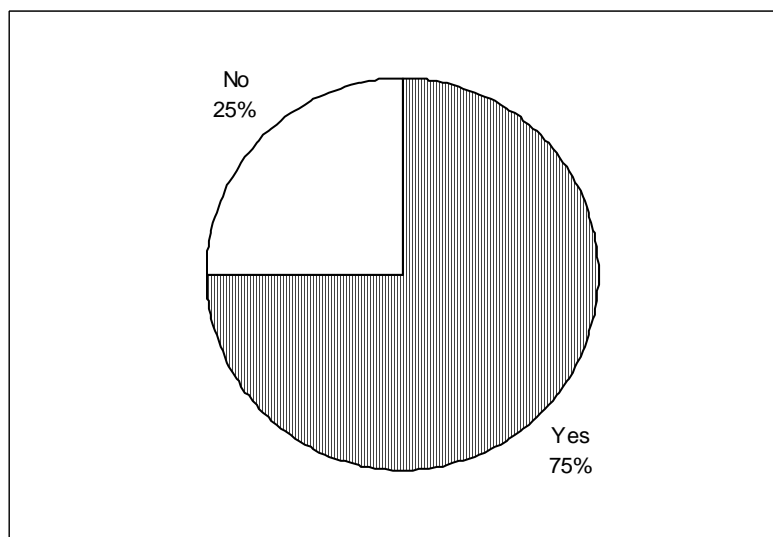
Sanctions against cadastral surveyors activities: notice, fine, suspension, license termination

Fig 17. Sanctions in case of inappropriate quality of work

The level of sanctions depends on the requirements issued for licensing the cadastral surveyors.

Liability

The majority of cadastral surveyors in Europe are fully responsible for any mistakes they make in their work.



Cadastral surveyors are fully liable for their activities

Fig 18. Is the cadastral surveyor fully responsible for quality and correctness of cadastral data?

In Figure 18 this is visualised. Although this is the case, only very few countries have clear rules or mechanisms for third party reimbursement or compensation for the acknowledged loss arising out of cadastral surveyor’s activities. Therefore the liability of the cadastral surveyor limits itself to sanctions on their level of qualification rather than financial compensation for losses suffered by the customer.

Many surveyors rely upon the results of litigation in the civil courts between the surveyors and clients to provide a solution for negligence instead of purchasing Professional Indemnity Insurance (PII).

When cadastral surveyors are employed by an NMCA their liability is limited to public servant duty. In these cases the State is liable for the cadastral data maintained by the Agency.

In the countries, which replied with a 'no' response (the surveyor is not responsible for the quality of cadastral data), a shared responsibility exists. The organisation (State) is responsible externally for the work provided by the cadastral surveyor, although the activity itself (validation of cadastral data) is the responsibility of the professionalism of the cadastral surveyor.

If a surveyor is responsible for produced cadastral documents, the duration of their liability can differ. Fig. 19 shows that the liability of cadastral surveyors is not well defined in a number of countries. For instance almost half the respondents (46 per cent) indicated that there does not exist a maximum period for the liability of cadastral surveyors. 24 per cent mentioned a lifetime responsibility, which sounds equivocal and might be questioned in the European Human Rights Court or even by national civil court.

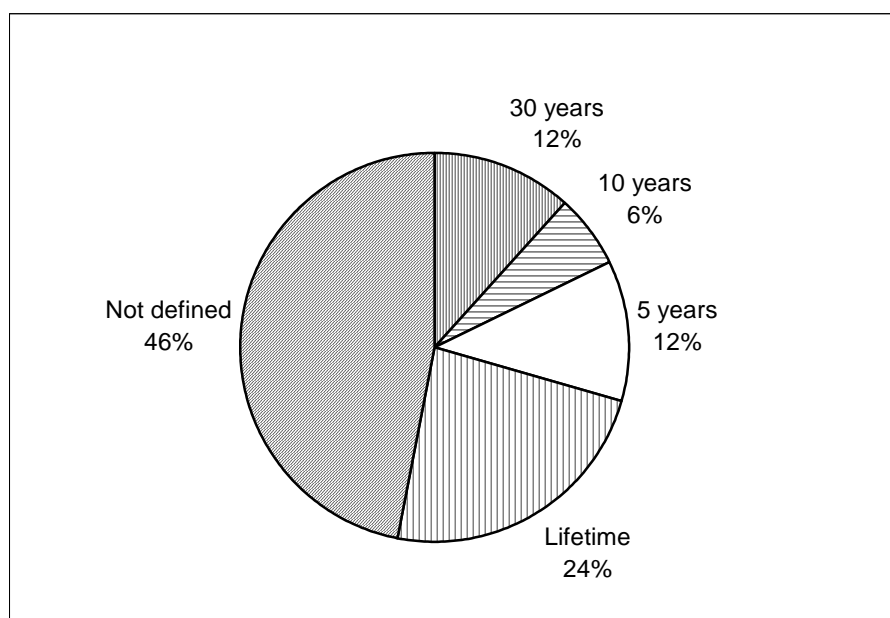


Fig 19. Period during which cadastral surveyors are liable for the produced cadastral documents (data)

Trends

EU internal market leads toward liberalization and consolidation – the surveyor’s market cannot remain isolated. However a network of EU national coordinating bodies is a precondition for cross border surveyors activities. Each country already has a designated contact office for cross border recognition of professional qualifications and each has a right defining national requirements for surveyor’s activities. However the requirements should be fair, transparent and congruent with the European basic freedoms; restrictions must be appropriate.

Public Private Partnership and sharing ‘best practice’ within the activities of cadastral surveying (both nationally and internationally) lead to the improvement of legal frameworks regarding national Cadastres. They often have a technical or organisational impact.

Development of Information Technologies (GPS, GIS, computer science) influences new ways of working (considering the preparation and documentation of cadastral information).

A compulsory insurance – consumer protection in the European sense against claims from third parties because of cadastral activities is foreseen as a good tool for assuring security to both citizens and cadastral surveyors. Therefore a number of countries have started already or are considering the definition of requirements for compulsory insurance.

A common European framework for recognition of the profession of the cadastral surveyor/professional needs to be developed; regarding the different national legal conditions a difficult task. Finding an agreement for a 'platform' following the EU-Directive 2005/36 on Mutual Recognition could be a way to define a common European level of qualification for the Cadastral Surveyor.

The "**Subsidiarity principle**" as a basis for European development, will encourage a change in the practical exercise of cadastral surveys; there will be less emphasizes on public activities and more on private activities performed under NMCA or chamber supervision.

Wider scope of cadastral surveyors activities – besides his special competence cadastral surveyor could, by means of his qualification, offer a range of special services and consultancy in the field of land planning, building, technical surveys, juridical land oriented issues. The cadastral surveyor serves a necessary function in society and economy in addition to the State's authorised tasks improving the interface between the State and the citizen.

Continuing professional development - because of continuous changes in surveying and IT technologies, new legislative requirements and market developments, continuing professional development is essential.

Conclusions

Based on the gathered and analysed information the following conclusions can be drawn:

- Cadastral surveyors operate as individuals and/or within juridical person, but they keep certain levels of personal responsibility for producing cadastral data.
- The number of cadastral surveyors per country depends on market size, cultural and legal conditions, and the level of a country's economic and political transition.
- Laws and regulations that describe the execution and cadastral surveying (Law on Real Estate Cadastre) usually stipulate the requirements for cadastral surveyor's activities.
- There are more private surveyors than public surveyors involved in European Cadastral activity.
- NMCAs play an important role with regard to cadastral surveyor's activities – they act (in majority) as license providers, supervisors and coordinators.
- The principal tasks and responsibilities of a cadastral surveyor in Europe are:
 - Performing cadastral (technical) field measurements
 - Marking parcel boundaries
 - Advising land owners
 - Validating information – getting approval on cadastral plans from relevant authorities
- The common requirements for licensing (authorisation) of cadastral surveying activities are a:
 - High or university education in geodesy and related disciplines
 - Period of professional practice
- Universities and high schools mainly provide training and education to cadastral surveyors, but chambers and associations play an important role organising training courses and raising qualification.
- The average duration of education after secondary school before applying to become a licensed cadastral surveyor is 4 years.
- Permanent or recurrence quality control applies for cadastral surveyors activities with exemptions for the one working as public servants in public organisations.
- Four major types of sanctions apply against inappropriate work of cadastral surveyors:
 - Notice
 - Fine
 - Suspension of the license
 - Termination of activities
- A cadastral surveyor is liable for his activity producing cadastral data. It appears that in many countries the period of liability is not clearly defined.

Annex 1. Table of national titles that correspond to 'Cadastral Surveyor'

	Country	
1.	Austria	Ingenieurkonsulent für Vermessungswesen
2.	Belgium	i. Expert fiscal (ex géomètre-expert des Finances), ii. Inspecteur principal d'administration fiscale
3.	Bulgaria	инженер - геодезист
4.	Croatia	ovlasteni inženjer geodezije
5.	Cyprus	Κτηματικός χωρομέτρης.
6.	Czech Republic	úředně oprávněný zeměměřičský inženýr
7.	Denmark	praktiserende landinspektør
8.	Estonia	
9.	Finland	toimitusinsooeri
10.	France	géomètre-expert
11.	Germany	Oeffentlich bestellter Vermessungsingenieur
12.	Greece	Diploma rural and surveying engineer
13.	Latvia	Kadastrālās uzmērišanas veicējs
14.	Lithuania	matininkas
15.	Norway	Kartforretningsbestyrer/oppmålingsingeniør
16.	Poland	Geodeta uprawniony
17.	Romania	Persoane fizice autorizate (PFA) and persoane juridice autorizate (PJA)
18.	Serbia	Geodeta sa licencom
19.	Slovak Republic	Autorizovaný geodet a kartograf
20.	Slovenia	geodet, ki izvaja geodetske storitve
21.	Spain	
22.	Sweden	Lantmätare (or more in detail expressed: Förrättningslantmätare)
23.	Switzerland	Ingenieur-Geometer (d), Ingénieur-Géomètre (f), ingegnere(a) geometra (i)
24.	The Netherlands	Landmeter van het Kadaster
25.	United Kingdom	Chartered Surveyor

Annex 2. Most important national laws & regulations governing activities of cadastral surveyors

Country	Which laws describe cadastral surveying?	Which law (regulation) stipulates a permission or responsibility for person executing cadastral survey?	Which law (regulation) describe control and supervision of cadastral surveyors?	Which law (regulation) describe liability of cadastral surveyors?
Austria	Liegenschaftsteilungsgesetz regulates competences, Vermessungsgesetz regulates procedures and interrelationship to public authorities and agencies, some other laws regulating competences and interrelationship between private and public sector.	Vermessungsgesetz, Liegenschaftsteilungsgesetz Grundbuchsgesetz	Vermessungsgesetz, Vermessungsverordnung, Liegenschaftsteilungsgesetz	Ziviltechnikergesetz
Belgium	<u>Arrêté royal du 26/07/1877</u> portant le règlement pour la conservation du cadastre (Moniteur belge du 18/08/1877) Law of 26/07/1877 concerning the updating of the Cadastre CIR - Code des Impôts sur les Revenus 1992 (Income Tax Code) Titre IX. Le revenu cadastral des biens immobiliers (Art. 471 - Art. 504) (Title IX. Cadastral income of the property)	<u>Arrêté royal du 26/07/1877</u> portant le règlement pour la conservation du cadastre (Moniteur belge du 18/08/1877) Law of 26/07/1877 concerning the updating of the Cadastre CIR - Code des Impôts sur les Revenus 1992 (Income Tax Code) Titre IX. Le revenu cadastral des biens immobiliers (Art. 471 - Art. 504) (Title IX. Cadastral income of the property)	The cadastral surveyors are Civil Servants. Agreement with the Private Surveyors (control by The General Administration of the Patrimonial Documentation)	The cadastral surveyors are Civil Servants. Agreement with the Private Surveyors (control by The General Administration of the Patrimonial Documentation)
Bulgaria	Cadastral and Property Register Act, Geodesy and Cartography Act	Cadastral and Property Register Act, Geodesy and Cartography Act	Cadastral and Property Register Act, Geodesy and Cartography Act	Cadastral and Property Register Act, Geodesy and Cartography Act
Croatia	The Law on State Survey and Real Estate Cadastre	The Law on State Survey and Real Estate Cadastre	The Law on State Survey and Real Estate Cadastre	The Law on Croatian Chamber of Architects and Civil Engineers
Cyprus	Cadastral Surveying Law, N.67(I)/2005	Cadastral Surveying Law, N.67(I)/2005	Cadastral Surveying Law, N.67(I)/2005	Cadastral Surveying Law, N.67(I)/2005
Czech Rep	Surveying and Real Estate Cadastre Offices Act	Surveying and Real Estate Cadastre Offices Act	Surveying and Real Estate Cadastre Offices Act	Surveying and Real Estate Cadastre Offices Act
Denmark	The law of subdivision and registration in the Cadastre	The Act of Surveyors	The Act of Surveyors	The Act of Surveyors
Estonia	Land Cadastre Act	Land Cadastre Act	Land Cadastre Act	Land Cadastre Act
Finland	Real Estate Formation Act	Real Estate Formation Act	Real Estate Formation Act	Real Estate Formation Act
France	Framework directive on maintenance of the cadastral map, September 1990 (Cadastre Office, Ministry of Economy)	By law setting conditions of attribution of cadastral works agreement (Cadastre office, December 1985)	Law of the 7th of May, 1946 setting up the Ordre des Geometres Experts	Law of the 7th of May, 1946; and Decree 96-478 of 31st of May, 1996 on professional responsibilities codes
Germany	state law (not federal law) about official surveying and mapping	Law about official surveying and mapping	law about the licensed surveyors (different in the 15 states, not in Bavaria)	law about the licensed surveyors (different in the 15 states, not in Bavaria),
Greece	N.2308/1995, N.2508/1997, N.2664/1998, N.3127/2003, N.3481/2006	N. 716/77	N. 716/77	N. 716/77, N. 4663/30

Country	Which laws describe cadastral surveying?	Which law (regulation) stipulates a permission or responsibility for person executing cadastral survey?	Which law (regulation) describe control and supervision of cadastral surveyors?	Which law (regulation) describe liability of cadastral surveyors?
Latvia	Law on National Real Estate Cadastre; Regulations on registration of cadastral object and updating of cadastral data; Regulations on licensing of land survey, cadastral surveying, geodesic and cartographic works	Law on National Real Estate Cadastre; Regulations on registration of cadastral object and updating of cadastral data; Regulations on procedure of provision and amount of information necessary for maintenance of Cadastre Information System	Law on National Real Estate Cadastre; Regulations on registration of cadastral object and updating of cadastral data	Law on National Real Estate Cadastre; Regulations on registration of cadastral object and updating of cadastral data; Regulations on licensing of land survey, cadastral surveying, geodesic and cartographic works
Lithuania	Law on Real Estate Cadastre	Law on Geodesy and Cartography; Law on Real Estate Cadastre	Law on Geodesy and Cartography	Law on Geodesy and Cartography
Norway	Law on the cadastre of 1978. New law on the cadastre was adopted in June 2005. The new law is still not put into force.	The law on the cadastre defines this as a responsibility of the municipality	The law on the cadastre	The law on the cadastre
Poland	Geodesy and Cartography Law	Geodesy and Cartography Law	Geodesy and Cartography Law	Geodesy and Cartography Law
Romania	Law no. 7/1996 republished and Law no. 16/2007	Law no. 16/2007	Law no. 16/2007	Law no. 16/2007
Serbia	Law on state survey and cadastre and registration on real property rights	By law on conditions for working of geodetical organisation (Uredba o uslovima za rad geodetske organizacije)	By law on administration of supervision for executing geodetical works and REC maintenance (Uredba o vršenju stručnog nadzora nad izvođenjem geodetskih radova i održavanjem KN)	By law on conditions for working of geodetical organisation (Uredba o uslovima za rad geodetske organizacije)
Slovakia	Law No 215/1995 about Geodesy and Cartography and law No 162/1995 - Cadastral law and the others -partially. No english versions.	Law No 215/1995 about Geodesy and Cartography and law No 216/1995 - about Chamber of Surveyors and Cartographers.	Law No 215/1995 about Geodesy and Cartography and law No 216/1995 - about Chamber of Surveyors and Cartographers.	Law No 215/1995 about Geodesy and Cartography and law No 216/1995 - about Chamber of Surveyors and Cartographers.
Slovenia	Law on Geodetic Activities, Real Estate Property Registration bill, Building Construction and Civil Engineering act	Law on Geodetic Activities	Law on Geodetic Activities	Law on Geodetic Activities
Spain	Decree 2076/1971/ Law 7/1986			
Sweden	Land Code, Real property formation act, Adjudication and legalisation act, Utility easement act, Joint facilities act, Land registry act	Real property formation act	Government's Instruktions to Lantmäteriverket	Government's Instruktions to Lantmäteriverket
Swiss	Civil code, Ordinance on Official Cadastral Surveying, Technical Ordinance on Official Surveying	Ordinance on the Federal Licence for Cadastral Surveyors	Ordinance on Official Cadastral Surveying, Technical Ordinance	Ordinance on Official Cadastral Surveying, Technical Ordinance
The Netherlands	Cadastre Act 1992	Cadastre Act 1992	Cadastre Act 1992	Cadastre Act 1992

Country	Which laws describe cadastral surveying?	Which law (regulation) stipulates a permission or responsibility for person executing cadastral survey?	Which law (regulation) describe control and supervision of cadastral surveyors?	Which law (regulation) describe liability of cadastral surveyors?
UK	Land Registration Act 2002 and Rules*	Land Registration Act 2002 and Rules*	None, the UK has a self regulatory ethos as exemplified, in this regard, by RICS.	As RICS members must have appropriate Professional Indemnity Insurance (PII)
* The Law refers to England and Wales, other legislation applies to Scotland and Northern Ireland				

Annex 3. Questionnaire on national cadastral surveyors activities (country template)

Questions
General
Title of cadastral surveyor in native language
Operate as individual or within juridical person?
Coordinating organisation for the work of cadastral surveyors
No of licensed (i.e. - authorised) cadastral surveyors in the country
No of companies that execute cadastral survey in the country
Tasks / duties of a cadastral surveyor
Advises / consultancy for the landowner
Cadastral (technical) field measurements
Marking of parcel corners
Validation - getting approval on cadastral plans from relevant authorities
Preparation (correction) of territorial planning documents
Registration of updated cadastral data to Cadastral database
Land price valuation
Defining restrictions on land use
Other (not mentioned above)
Main responsibilities (duties) of upper level surveyor (senior surveyor or surveyor-expert) if such exist
Legal framework
Which laws describe cadastral surveying?
Which law (regulation) stipulates a permission or responsibility for person executing cadastral survey?
Which law (regulation) describe control and supervision of cadastral surveyors?
Which law (regulation) describe liability of cadastral surveyors?
Licensing (authorisation)
Types of licensed cadastral surveyors
Organisation, which grants a license (certificate)
Licensing (authorisation) conditions for applying to a license of cadastral surveyor
Period of license validity for a cadastral surveyor
Minimal requirements for education after the secondary school for applying to a license of cadastral surveyor
Minimal duration of education after the secondary school for applying to a license of cadastral surveyor
Acceptable disciplines after the secondary school for applying to a license of cadastral surveyor
Are requirements for a minimal number of hours (credits) of the acceptable disciplines for applying to a license of cadastral surveyor?
Requirements for additional qualification for applying to a license of cadastral surveyor
Organisation(s), which are responsible for training and education of cadastral surveyors
Cadastral surveyors certification levels (license types)
Compulsory period for professional practice applying to a license of cadastral surveyor
Requirements for improving qualification of licensed surveyors
Does compulsory insurance apply to cadastral surveyor as a requirement for a license?

Supervision
Organisation (-s), which is responsible for control of quality of cadastral surveyors deliverables and/or supervises cadastral surveyors activities
Frequency of controlling of cadastral surveyors activities
Sanctions in case of inappropriate cadastral surveyors work quality
Liability
Is cadastral surveyor fully responsible for quality and correctness of cadastral data?
Max. amount, which could be charged to cadastral surveyor against to remedies to third parties?
Minimal requirements for compulsory insurance of cadastral surveyors activities
Max refundable annual amount of insurance against to remedies because of cadastral surveyors activities
The period while insurance covers remedies because of cadastral surveyors activities
Max period while cadastral surveyors is liable for the produced cadastral documents (data)
By whom cadastral surveyors could be insured?