



## **FUTURE CHALLENGES FOR SURVEYORS IN DEVELOPING EUROPEAN AND NATIONAL SOCIETIES – NMCA POINT OF VIEW**

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### **KEYWORDS**

EuroGeographics, public private partnership, real estate market, spatial data infrastructure, surveying profession

### **ABSTRACT**

Dynamic changes in Europe, with a focus on globalization, economy, climate change, environment, global security, energy and demographic change require changes in traditional approaches of professions that are contributing to the implementation of European and national policies. In front of the surveying profession there are challenges to respond to the changing market and customer needs.

One of the most active European associations in the field is EuroGeographics. Its vision is to achieve interoperability of the members' national land and geographic information assets to provide Europe with an information asset that will support its goal to become the most competitive and sustainable economy in the world. The mission stated in the new Vision statement for cadastre and land registration in Europe 2012 is to provide state of the art services to the real property market and market for land information integrated within e-government and co-operating in building the national and European spatial data infrastructures. In the Vision statement two main directions are suggested: to build the national and European spatial data infrastructures and to take a more active role in the functioning of real property markets. The INSPIRE directive on establishing an infrastructure for spatial information in the European community as well as the White paper on the integration of European Union mortgage credit markets, both of which were adopted last year,

are the drivers the professional organizations and professionals need to respect. The European surveyors' market can not remain isolated as in many European countries nowadays. The Directives on services and on professional qualifications require liberalization of the market and cross border recognition of the professions.

Efficient, safe and transparent real property markets need actual and effective cadastre and land registration systems and access to the basic information about the transactions on the market and future trends. The development of spatial data infrastructures is an on-going process leading towards spatially enabled society and spatially enabled governments.

Services and operations have a future potential in setting-up public-private partnerships within the profession and between different professions. In partnership there are benefits for the public and for the private sector with certain challenges to manage the public-private relation.

There are many areas identified where the surveying profession could find new markets and new customers, but only if they start working in interdisciplinary and multidisciplinary ways at a more global scale on one side and at a small scale on the other side.

## **INTRODUCTION**

Europe and its member states are in a continuously dynamic process, challenged by changes taking them into the 21<sup>st</sup> century. The main global requirements are in the fields of economy, competition, demography, climate, environment, sustainability and others. Europe needs to modernize and to harmonize in order to respond to the needs of its citizens, to enhance the quality of life and to become more dynamic, innovative and attractive. Europe and its member countries need effective and coherent tools to function properly and effectively and to respond to the rapid changes, locally and worldwide. At the edge of activities for creating a more globally oriented and competitive Europe, more and more attention is being dedicated to the development towards a spatially enabled society and single European market with functioning financial and capital markets. Whilst the technical professions may not be the major players driving these processes they are playing a significant, or rather an essential role in delivering the aspirations of society through supporting processes. As a result of the demands from our new society and customer requirements, new technological and information achievements, new roles and functions in the professional environment, the performance of works and behavior of professionals in the field, including surveyors, need to be reconsidered.

External changes demand an evolution of work. The surveying profession is challenged to adapt and respond to the changing market needs, to a great variety of new user requirements and to the influence of different national, cross-border and pan-European policies. The surveying community needs to respond with a flexible and pragmatic approach, openness and flexibility and by developing a higher profile for professional competence, skills and integrated, multileveled and interdisciplinary knowledge.

## **SURVEYING-RELATED EUROPEAN ORGANIZATIONS' FRAMEWORK**

In the professional field of work implemented and supported by surveyors there are several European and worldwide organizations and associations gathering qualified professionals of

different types of education and skills from public, academic and private institutions, NGOs and other organizations and associations. The international organizations operate for the benefit of their members and communicate with external society to achieve its internal strategies, aims and objectives. In Europe, the most active organizations in the field of surveying and connected professions are the following ones: EuroGeographics – the umbrella association and official voice for European national mapping, cadastre and land registry organizations, European Council of geodetic surveyors (CLGE), Geometer Europas (GE), European umbrella organization for geographic information (EUROGI), the Permanent committee on cadastre in the European Union (PCC), the European land information service (EULIS), UNECE Working party on land administration (WPLA), EuroSDR - the European organization for cooperation in the field of technical research between mapping agencies, academic institutes, private sector, industry and user's groups, European land registry association (ELRA), International association of surveyors (FIG), International cartographic organization (ICA), International society for photogrammetry and remote sensing (ISPRS) and others.

International organizations provide platforms for the exchange of professional views, sharing of best practices, building-up the position of the profession and profile and producing several reports, studies, inventories and investigations that tackle different aspects of professional issues. There is no European regulation covering the entire professional field of work, there are only pieces of regulations that cover some specific areas of work. Therefore, the work and results of European and worldwide organizations are much appreciated and provide important guidance in the development of activities at the international and national level. Most of the organizations' information is open to public and is available on the Internet, only a smaller, more specific part of information, is available online for members only.

In the past, the international organizations worked more independently and in closed communities without sharing very many of their practices and resources for joint activities and the avoidance of duplication of work. Nowadays, most of the organizations work on cooperative issues and search for agreements for future operations in favor of all involved and the interested parties. Some examples that demonstrate a good spirit for sharing the best practices and for joint work are the signed Memorandum of understanding between EuroGeographics, CLGE and GE, EuroGeographics and EuroSDR, EuroGeographics and the WPLA and most recently the signed Memorandum of understanding between EuroGeographics and PCC.

## **EUROGEOGRAPHICS: TRACING THE FUTURE DEVELOPMENTS WITH ITS VISION AND THE RESULTS ACHIEVED**

EuroGeographics currently brings together 50 members (NMCAs) from 46 countries across Europe - from Portugal to Ukraine, and Iceland to Turkey (EuroGeographics, 2008a). In terms of its members, its resources and capacities, its financial means and fields of work it is by far the largest association in the professional area in the European territory.

The vision of the association (EuroGeographics, 2008b) is to achieve interoperability of the members' national land and geographic information assets to provide Europe with an information asset that will support its goal to become the most competitive and sustainable economy in the world. Geographic and land information is needed to answer key questions

such as: What is where? Who owns a piece of land or property? What is the value of the land or property and how is it used? This information - on location, ownership, value and use - is essential in almost any decision making process and represents the information for which the members of EuroGeographics are the primary (national) custodian. It is used to deliver benefit at the national level to a wide variety of stakeholders and by bringing it together more effectively across national borders is increasingly being used to deliver similar benefit at the European level in areas such as:

- The creation of a transparent and safe land market in Europe;
- Implementation of the EU's eEurope vision and delivery of better electronic services to the European citizen through better e-governance;
- Better informed and implemented regional development policies that reduce economic disparities in Europe;
- Improved management of the environment and better security for Europe's citizens in areas such as water quality, natural habitats, flooding, dispatch of emergency services, tackling cross-border crime etc;
- More cost-effective management of agricultural subsidies;
- Comparison of health and disease patterns across Europe;
- Planning, development and monitoring of new transport policies, including new transport infrastructure or toll systems;
- Management of business assets across Europe such as utility pipelines or vehicles;
- Location of new businesses such as distributor networks or new superstores;
- Growth of new (value adding) businesses and creation of new jobs within the service sector; etc.

The mission of the association (EuroGeographics, 2008b) is to further the development of the European spatial data infrastructure through collaboration in the area of geographical information, including topographic information, cadastre and land information.

To achieve the vision and fulfil the mission, EuroGeographics performs a number of roles:

- Engagement – to build a strong association of motivated members based on effective internal communication and represent the members to provide a unified voice to external stakeholders;
- Best practice - provide a platform for the exchange of information amongst its members, including the implementation of joint development and best practice projects;
- Deliver the (interoperable) infrastructure that will facilitate creation of pan-European datasets/services built on the members' national information assets.

The combination of the above roles gives EuroGeographics and its members credibility at the European level. Lobbying without joint projects, products and services in areas such as INSPIRE and GMES would reduce EuroGeographics' effectiveness. Similarly, working on projects, products and services in isolation from external policy developments reduces their value.

Among the many achievements and results of work in EuroGeographics in different groups and projects, this paper can address only a few of them. In 2005, a newly established Cadastre and land registry group started its activities (Lipej, 2008). The group was established because more than half of EuroGeographics' members deal with cadastre and/or land registry operations and because the issues of interest to members were not covered satisfactorily

within the activities of existing international organizations in the field of cadastre and land registration. The aim of the group is to contribute to the establishment of national spatial data infrastructures, national and international financial and real property markets, and to support sustainable development and good governance.

The Cadastre and land registry group is challenged by many professional activities in the field of real estate management and would like to make good use of exchange of best practices and strategies at the European level. The group works by encouraging the sharing of visions and agreements on operational activities with other key real estate players in Europe. The Cadastre and land registry group does not hide its ambition to become, in the coming future, a driving force in the European real estate field of work by means of relevant and reliable results, value-added non-competitive cooperation, lobbying at the European level, raising professional profile and increasing awareness amongst the range of stakeholders.

The most influential and completed activity of the group is the development of a new Vision statement for cadastre and land registration in Europe 2012 (EuroGeographics, 2007). The document was widely discussed in many meetings and was adopted in 2007. The PCC also approved the document at its plenary meeting in June 2007.

The Vision statement suggests that the cadastre and land registry organizations will work for the following mission: “providing state of the art services to the real property market and market for land information integrated within e-government and co-operating in building the National and European spatial data infrastructures”. In implementing this mission, the cadastre and land registry organizations have identified and outlined the services which they aim to provide by 2012. For some organizations the focus will be more on the real property market, for other organizations on building the national spatial data infrastructure.

The Vision statement predicts that by 2012 cadastre and land registry organizations in Europe will:

- provide state of the art services to the real property market and market for land information,
- co-operate in building the National and European spatial data infrastructure to support the European policies,
- build an efficient and effective organization,
- assist cadastre and land registry organizations in developing countries and transition economies.

Several more detailed activities are listed in the document to demonstrate practical goals for achieving the vision proposed. Some of the trends presented below are suggested in the direction of:

- ensuring that cadastral and real property data are part of the development of national spatial data infrastructures to ensure harmonization and interoperability of data, metadata and services on different levels and between different sectors;
- supporting the implementation of legislation and technical solutions which facilitate secured mortgage lending across national borders;
- establishing one-stop service portal that allows actors in the real property market to be able to find all information and government services that are relevant for a well regulated real property transaction in electronic form;
- ensuring that the time and costs for registration procedures are reduced to the minimum;

- having in place measurable performance indicators, including regular user satisfaction surveys.

Besides the Vision statement for cadastre and land registration in Europe 2012, the main Cadastre and land registry group documents and inventories were elaborated in the field of:

- European requirements for cadastral surveyor activities,
- cadastral parcels position and role in NSDIs and INSPIRE,
- cadastre and land registry information resource.

This paper tackles only the project report on European requirements for cadastral surveyor activities (EuroGeographics, 2008c) which was prepared in collaboration with professional colleagues from the CLGE and GE. The project team investigated legal, operational and market driven matters related to cadastral surveyor activities in Europe. In the report, the cadastral surveyor is defined as a person (physical or juridical) entitled to officially execute cadastral surveying tasks, determine real estate property boundaries (and other data) and produce certain real estate property documents. They do so by taking national requirements into account which are usually defined by law (regulations).

The report states that European cadastral surveyors operate in environment of limited national markets. Laws and regulations that describe state surveying and cadastral activities define the scope and requirements of their activities. NMCAs are usually in charge of assuring and supervising the proper implementation and securing the requirements stipulated by the laws, so collaboration and interactions between cadastral surveyors and NMCAs are both essential and inevitable. However, the European Union internal market is moving toward liberalization and globalization. The Directive on services in the internal market (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006L0123:EN:NOT>) is an important document stipulating general requirements for liberalization of the European market, which accordingly might affect cadastral surveyor activities in the near future. Another important document stating some general requirements on the qualification of professions in Europe, including cadastral surveyor activities is the Directive on Professional qualification on the recognition of professional qualifications ([http://ec.europa.eu/internal\\_market/qualifications/future\\_en.htm](http://ec.europa.eu/internal_market/qualifications/future_en.htm)).

The project report on European requirements for cadastral surveyor activities concludes with trends and conclusions in relation to the performance of cadastral surveyors. Some of them are:

- The principle tasks and responsibilities of cadastral surveyor in Europe, nowadays are: performing cadastral (technical) measurements, marking parcel boundaries, advising land owners and validating information – getting approval on cadastral plans from relevant authorities;
- The European Union internal market leads toward liberalization and consolidation, therefore the surveyor market cannot remain isolated. However, a network of European Union national coordinating bodies is a precondition for cross-border surveyor activities. Each country already has a designated contact office for cross border recognition of professional qualifications and each has a right in defining national requirements for surveyor's activities. However, the requirements should be fair, transparent and congruent with the European basic freedoms; restrictions have to be appropriate;

- Public Private Partnership and sharing best practices within activities of cadastral surveying (both nationally and internationally) leads to improvement of legal frameworks regarding national Cadastres They often have a technical or organizational impact;
- Development of information technologies (GPS, GIS, computer science) influences a new way of working (considering the preparation and documentation of cadastre information);
- A common European framework for recognition of the profession of the cadastral surveyor/professional needs to be developed regarding the different national legal conditions. 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;
- Wider scope of cadastral surveyor activities – besides this special competence cadastral surveyor could, by means of their qualifications, 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 an essential function in society and the economy in addition to the state's authorized 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.

Importantly the report suggests that a common European framework for recognition of the profession of the cadastral surveyor needs to be developed. That 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, CLGE and GE already agreed to continue to work together to achieve such an outcome.

## **CHALLENGES IN SUPPORTING REAL ESTATE AND MORTGAGE CREDIT MARKETS**

The European Commission's policy on the integration of financial services in general and retail financial services in particular is linked to the consideration of intervention in the European Union mortgage credit markets (Commission, 2005). The Commission's concern is that national markets are not integrated and the full range of mortgage products is not available in each member state. Consequently, consumers may face a reduced choice of products or even be excluded from their national mortgage market altogether. A more efficient and competitive mortgage credit market that could result through greater integration could contribute to the growth of the European Union economy. It has the potential to facilitate labour mobility and to enable European Union consumers to maximize their ability to tap into their housing assets, where appropriate, and to facilitate future long term security in the face of an increasingly ageing population. The European Union mortgage credit markets constitute a crucial aspect of the overall economy of all European Union member states. At the end of 2004, the value of outstanding residential mortgage loans represented about 40% of the European Union GDP.

The European Commission published its White paper on the integration of European Union mortgage credit markets at the end of 2007 (Commission, 2007). With the announced package of proportionate measures on the cross-border supply and funding of mortgage credit, which increase the diversity of products, improve consumer confidence and promote customer

mobility, the Commission believes that they will contribute to the greater integration, competitiveness and efficiency of the European Union mortgage credit markets.

The European Commission considers that member states should improve the efficiency of land registration procedures. This factor raises the cost of doing business for mortgage lenders and increases uncertainty for investors. The Commission will publish regularly updated scoreboards presenting objective information on the cost and duration of land registration in all member states. For that purpose, questionnaires have been sent out to member states in May 2008 by the Centre for Strategy & Evaluation Services (CSES) which is undertaking a Study on the costs and benefits of a recommendation on property valuation, foreclosure procedures and land registration on behalf of DG Internal market of the European Commission. It is planned that in 2008 the Commission presents a Recommendation that would in particular:

- invite member states to ensure their land registers are available online,
- encourage member states to adhere to the EULIS (European land information service),
- invite member states to introduce more transparency and reliability into their land registers, in particular with regard to hidden charges,
- invite member states to facilitate the use of foreign valuation reports, and promote the development and use of reliable valuation standards.

The European Commission realized that land registers are directly related to the mortgage credit markets and that the evident problems in the accessibility of land registers, the high costs and long duration of land registration procedures and the lack of completeness of registers due to hidden charges should be overcome in a reasonable period of time.

Real property markets exist in a number of forms, some formal and subject to the procedures laid down by the state, and some informal and unstructured, as is often the case in less developed economies (UNECE, 2005b). The real property market must operate on a legal basis so that all dealings are safe and secure. An efficient market involves regulating institutions that ensure a stable and transparent framework within which transactions take place. It should provide easy access to the market for all participants including landowners, tenants and corporate bodies such as banks and lending institutions, and representatives of those with third party and minority rights. There must be clearly defined goods and services such as land, buildings and mechanisms whereby these can be offered for sale or lease; mortgage facilities; stable tax regimes; access to credit; and a framework of clear, consistent and environmentally sustainable land policies.

In a market economy it is the participants in the market that play the main role. The task of the public administration, including NMCAs, is to remove market imperfections, redistribute resources, and to put in place a framework to regulate the market's behaviour through laws and regulations. At present the regulatory processes in each country differ in the extent to which they support the market; how they encourage investments, especially foreign investments, and how quickly they are removing barriers and restrictions, thereby stimulating economic growth; and how much they encourage the development of public private partnerships and private finance initiatives.

The real property market needs access to common basic information, especially to prices in the market and trends over time. This is of the utmost importance. For the market to be



successful there needs to be transparency, guarantees to the title to real estate, and efficient and effective cadastre and land registration systems that provide speedy, reliable and affordable access by the users to real estate information.

## **CHALLENGES IN SUPPORTING THE CREATION AND DEVELOPMENT OF SPATIAL DATA INFRASTRUCTURES TOWARDS SPATIALLY ENABLED SOCIETY**

The INSPIRE directive (Inspire, 2007) introduces a legal framework for an infrastructure of spatial information in the European Community which should assist policy making in relation to policies and activities that may have a direct or indirect impact on the environment. A spatial data infrastructure at the national and European level is a tool for facilitating access to and the sharing of spatial data for use within the public, professional and policy environments. Nowadays, many activities take place in the course of preparing national legislation, methodologies and other operational tasks for a better introduction to the directive implementation period. In many countries in Europe the vital infrastructure and functionalities already exist and in most of them the geodetic, mapping and cadastre data provide the core basis for the system.

In some countries and regions, especially outside Europe, the concept of spatial data infrastructure is in the process of further development. It is moving to a new business model in which the spatial data infrastructure promotes partnerships of spatial information organizations (public/private), allowing access to a wider scope of data and services, of greater size and complexity than they could individually provide. Spatial data infrastructure as an enabling platform can be viewed as an infrastructure linking people to data through linking data users and providers on the basis of the common goal of data sharing (Rajabifard et al, 2006).

The development of spatial data infrastructure is an on-going process challenged by its local, regional and global dimension and extension and which is leading towards a very dynamic and multidisciplinary approach. In addition, the process is developing in a way where societies can be regarded as spatially enabled - where location and spatial information are regarded as common goods made available to citizens and businesses to encourage creativity and product development (Wallace et al, 2006). And in that framework, spatially enabled government is defined as the government where data, information and related business services with spatial content become ubiquitous in the daily conduct of government agency business and in the efficient and effective delivery of government services. The vision of the spatially enabled government involves establishing an enabling infrastructure to facilitate the use of place or location to organize information about activities of people and businesses and about government actions, decisions and policies. Once the infrastructure is built, spatial enablement allows government information and services, business, transactions and community activities to be linked to place or locations.

## **THE WAY AHEAD: BUILDING-UP PUBLIC-PRIVATE PARTNERSHIPS (PPP)**

The concept of PPP is not standardised internationally since PPP initiatives have to meet the policy objectives of individual governments, complement other public procurement approaches and service delivery methods and have to be implemented in the light of the

available resources. However, for the purpose of the document Guiding principles for public/private partnerships (PPP) in land administration, (UNECE, 2005a) a working definition of PPP was the following:

'A partnership between a public organization and a private company which takes the form of a medium to long term relationship in which the partners have agreed to work closely together to deliver improvements to services in the interest of the public. There will be agreed arrangements for the sharing of risks, benefits and rewards and the utilization of multi-sector skills, expertise and finance. Such partnerships are usually encouraged and supported by government policy'.

The UNECE document focusing on land administration is in the paper proposed to be additionally transferred to the area of management of geographical information, where appropriate, and in that modified way the UNECE-PPP relations are interpreted in the following paragraphs.

It is a general trend in Europe and worldwide that the private sector has increasingly been invited to take part in different activities in the field of geodesy, mapping, cadastre, land registry, land consolidation and land management. The aim has been to bring together the experience and skills of different partners in a way that guarantees the maximum benefit with the best practical and financial outcomes.

Governments progressively turn to the private sector for additional resources as well as to capitalise on the private sector's efficiency, capacity and innovation. The extent of private-sector involvement needs to be carefully considered against each country's individual circumstances in order to find a reasonable and harmonised balance.

Within the legal requirements, the land registry, cadastre, mapping and other organizations concerned with geographical and land information administration should seek partnerships with the private sector to facilitate accurate, fast, inexpensive and customer friendly access to geographical and land information and its usage. By sharing resources and knowledge both parties profit from synergies, shared risk and technological developments, which otherwise would not take place. The sharing arrangement also allows for good practice in equal opportunity matters to be taken forward. The successful application of PPP in management of geographical information and in land administration requires new attitudes and skills when such partnerships are in the public interest. Management of geographical information and land administration activities are dynamic and PPP offers greater flexibility in the management of change than may be achieved in a single-purpose organization or agency.

For the public sector, the overall advantages of cooperation with the private sector are seen as:

- better overall value for the government with the appropriate allocation of risks between the parties;
- more flexibility in target-settings and in costs;
- fewer risks of cost overruns and project delays;
- increase in the capacity necessary to achieve the aims;
- better value and service delivery e.g. through increased competition;
- better awareness and understanding of its own processes and products;
- better exploitation of government assets, data and intellectual property;

- avoidance of staff recruitment problems;
- injection of private sector energy and enterprise; and
- enabling reform of public services.

For the private sector, the overall advantages of cooperation with the public sector are seen as:

- more opportunities of receiving a return on investment;
- successful use of proven technological skills and equipment in other markets;
- better cost-effectiveness;
- more incentives for technological innovation because of competition; and
- more possibilities for establishing joint ventures with foreign companies.

Mutual benefits for the public and private sector are seen as:

- ability for partners to concentrate on their specific part of shared tasks and to focus on what they are best at (e.g. the public sector on managing and controlling the activities of the public administration and the private sector on performing operational activities);
- strengthening of business processes and organizational structure on both sides;
- enabling a long term (strategic planning) view to be adopted;
- better response to the demands of society for improved security, higher quality of data and faster and easier access to data, taking into account the impact of the information society on land administration;
- easier provision of human, physical and financial resources for management of geographic information and land administration activities;
- changing the way in which the government does business and interacts with the private sector across the board;
- common need for good geographic information and land administration data and greater opportunities to exploit the data;
- partnerships to facilitate the modernization of organizations, including governmental agencies, making them more proactive and better able to manage higher risks.

There are many practical challenges in successfully managing a PPP, such as simultaneously achieving accountability, confidentiality, and fairness. For example, procedures to ensure broad accountability make the public sector relatively slow moving and rigid. In contrast, private organizations can be more flexible and efficient because their decision-making processes are not subject to the same level of scrutiny. It might be an optimal way to benefit from working together and for that purpose both sides need to adjust their expectations.

Normally PPP radically change the relationship between the government and the private sector for the better, promoting cooperation rather than conflict. It is suggested to start with small PPP arrangements (i.e. smaller contracts for the execution of management of geographical information and land administration activities), then increase the number of such arrangements and in the longer term develop a more complex approach and more sophisticated relationships (i.e. bigger contracts, professional licensing, franchising etc.).

The overall aim of PPP is to work more efficiently, effectively and economically and in doing so offer customer-oriented services. It is therefore a prerequisite that the involved institutions should be aware of customers' needs and expectations. During the past decade management of geographic information and land administration has become increasingly focused on services

to customers. The social and economic life of the community will benefit from efficient and responsive joint public-private services.

## **CONCLUSION**

The road to better prosperity of surveying profession in the European society is open for both sides, the public and the private as well as the academic and research institutions are expected to be the leaders in showing the way ahead. Taking into account the European Union priority issues, the vision and the strategy of EuroGeographics, the vision of its Cadastre and land registry group and other relevant European professional guidance, there are many directions in which the surveying profession needs to be pro-active and needs to provide a good support to operations at a larger scale.

In general, activities and ambitions of surveyors are too modest and not visible enough in society at a global scale. They have a much larger potential which they do not capitalize on. They need to investigate open demands of the society and respond with pragmatic proposals on the short term and with more complex proposals on the medium and long term basis. Surveyors need to seize their opportunities to serve the clients and society instead of waiting until they are invited to provide some service work for the customers. An interdisciplinary and multidisciplinary approach is needed and can only be achieved by building the partnerships within the profession, between the institutions and between different professions, like urbanism, law, agriculture, economy, finance, valuation, environment, public safety, emergency services, public health, tourism, cultural and natural heritage. Isolated approach and development based only on traditional surveying science and profession can not have a promising future ahead.

At a small scale surveyors need to develop and shape themselves into geo-information and land management specialists to serve the most practical needs of customers. Citizens and owners are interested in complete services for the actions they intend to perform on the bases of requested technical surveying work. Surveyors need to help customers to get the best value from their professional results and guidance and advice from using the surveying service.

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