

Role of Surveyors in Urban Regeneration Projects in Turkey

Yunus KONBUL, Turkey

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SUMMARY

Unhealthy living spaces caused by rapid urban growth, rural-to-urban migration, poverty, lack of affordable housing supply, deteriorations of existing building stocks etc. are one of the important problems in urban areas in many countries. Regeneration of those areas is necessary and urgent to make them livable places. “Demolish-rebuild approach” may help the renovation of aging buildings; however it will not provide sustainable results in problematic areas with insufficient physical infrastructure and social problems. Urban regeneration (UR) at this point provides an encouraging holistic method to renew and upgrade living spaces with the consideration of physical, social, economic and environmental aspects. Because of the interdisciplinary nature of UR, many different professions get involved in regeneration projects in order to address the differentiated needs such as engineering, architecture, planning, laws and regulations, sociology, economy, finance and environment. Surveying or geomatics engineers, with the help of their ability on spatial data acquisition and analysis, land management and so on, are expected to take a substantial part in the design and implementation of projects mostly from the engineering and technical point of view. In this paper, the role and effectiveness of surveying and geomatics engineers in UR projects in Turkey are analyzed. The positions they held, the works they carry out and the issues they experience in the projects and proposals for future directions on the surveyors’ roles in urban regeneration are discussed in the light of literature review and interviews with professionals from the UR sector.

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1. INTRODUCTION

Unhealthy living spaces emerge due to many reasons such as poverty, migration, rapid urban growth, physical deterioration of built environment and development of illegal settlements. In developed countries like UK or USA, unhealthy living spaces occur mainly because of regional economic changes such as closing down large factories or docks which leads to the physical and social deterioration of those areas. In developing countries on the other hand, unhealthy living spaces occur not only from physical deterioration of formal neighborhoods but also from rural-to-urban migrations and lack of affordable housing supply that leads to the squatter settlements. Either way, these places become favorable for low-income people because of the low rents and prices offered there.

“Building-based renewal” in problematic areas might sound a reasonable method at first glance; however there are problems with that approach. For instance, building-based renewal cannot provide sustainable results in terms of social, economic and environmental aspects because the whole focus is put on physical improvements in these projects by disregarding the long term social, economic and environmental needs. “Urban regeneration” on the other hand targets the “regeneration of areas” which can enable people to address various problems simultaneously and help different groups to work together and think comprehensively on one goal without considering their professional backgrounds. This way, the synergistic works can provide enhanced results especially in social and economic terms. For instance, social problems can be addressed by designing projects that stimulate job generating initiatives and encourage educational activities (Zheng, Shen, & Wang, 2014).

Various professionals are required in regeneration projects in order to address their respective fields; and surveyors (surveying engineers and technicians, geodesy and photogrammetry engineers, geomatics engineers) are one of those professionals. Surveyors are highly educated in terms of spatial data management and planning which are one of the core components of regeneration projects. In this paper, the role of surveyors in regeneration projects in Turkey are analyzed; their skills gaps are explored in the light of interviews with the experts in public authorities. Interestingly, there is few information about the role of surveyors in urban regeneration in the literature in Turkey and worldwide. It is thought that the conclusions of this paper can suggest educational institutions review their surveying/geomatics programs with respect to urban regeneration. It can also help raise awareness of urban regeneration among surveyors, and offer them develop new set of skills which essentially help them claim complicated urban problems and offer new services, and ultimately, contribute to a healthy urban environment for all.

2. METHODOLOGY

In 2006, a research was carried out by Adams, Turok, and Wilson (2006) to explore the role and effectiveness of surveyors in regeneration for Scottish Centre for Regeneration, Communities Scotland and the RICS Scotland by means of face-to-face interviews, telephone interviews, focus groups and online questionnaires; and a report was made with conclusions. That research is in harmony with the purpose of this paper; however the extent and the methodologies of the two studies differ. In this paper, literature review and telephone interviews were made with a number surveyors (disregarding statistical concerns) who work in regeneration projects in municipalities in Izmir, Konya, Ankara and Istanbul, and in Housing Development Administration in Ankara. They were asked four basic questions to examine what type of works they carry out, what challenges they are faced with and if they have recommendations about filling the skills gaps of surveyors in regeneration field.

3. URBAN REGENERATION IN TURKEY

3.1. History

The needs for urban regeneration in Turkey emerged because of both deteriorating building stock and illegal settlement problems in the same time. In order to understand the status of illegal settlements in Turkey, it can be a good idea to look back at its history. Technological development and mechanization in the agricultural sector starting from the 1950s caused a large rural-to-urban migration in Turkey. Peasants left their villages to find new livelihoods in the metropolitan cities. The growing demand for affordable housing in cities and lack of it eventually led the newcomers to build their own homes over lands that they did not own (preferably state lands). Due to economic difficulties, the State could not provide social houses; neither the private sector was strong enough to supply the demand. Authorities chose to ignore this illegal housing movement and a type of *de facto* home possession found its place because another alternative could not be found at the time (Baharoglu & Leitmann, 1998; Erman, 2001).

In 1984, the Act No. 2981 was enacted (known as the Development Amnesty Act) in order to enable squatters to upgrade their homes physically and legally. By this way, their *de facto* home possession would be legalized and it would provide them tenure security. The owners could then invest in their homes to make them better physically and local taxes could be collected by the authorities efficiently. Many squatters applied to the authorities to legalize their homes according to the Act. However, many of them have not finalized their legalization procedures and they have kept using their homes peacefully without any interventions from authorities until today (Uzun, Çete, & Palancıoğlu, 2010). Building unlawful homes (construction without a permit) still continue very slowly and quietly in squatter neighborhoods by adding extra stories to the houses without permission because it is difficult for authorities to detect them in those areas. However, such unlawful developments cannot

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take place in formal neighborhoods because they can be detected and demolished very quickly. The distinction between the past and the present is that the driving force for unlawful development today is not a basic housing need anymore, rather an economic benefit for the doers with the expectation of further “amnesties” that may arrive in the future, or having more homes ready when their neighborhoods are announced as regeneration areas and expecting that it may help them claim more apartment units from the new projects.

3.2. Legislations and Organizations

Urban regeneration projects are massive development projects therefore a legal framework and law enforcement are required. In Turkey, there are three different Acts describing urban regeneration activities in certain conditions.

The Municipality Act 2005 No.5393, Clause 73, is the Act that frames how urban regeneration of an area can be realized by the hands of local authorities (municipalities and provincial administrations). It describes that municipalities are authorized to carry out urban regeneration projects for the purposes of developing residential, industrial, commercial and recreational areas; rebuilding and renovating decay areas; protecting historical and cultural urban texture and taking measures against earthquake risk.

Renewal of the Areas under Disaster Risk Act 2012 No.6306 outlines the renewal principles for the areas and buildings under disaster risk such as risk of collapse, ground-sliding or earthquakes. This Act contains more obligatory clauses than others and it allows building-based renewal which is not possible with the *Municipality Act* and it authorizes the Ministry of Environment and Urbanization as the ultimate responsible.

Renovation, Conservation and Use of Dilapidated Historical and Cultural Immovable Assets Act 2005 No.5366 was enacted to authorize municipalities and provincial administrations to carry out regeneration projects in order to renew and protect historical and cultural assets and provide residential, commercial, cultural, touristic and social areas within protected zones.

According to the laws; municipalities, provincial administrations, the Housing Development Administration and the Ministry of Environment and Urbanization are allowed to carry out urban regeneration projects.

4. ROLE OF SURVEYORS IN URBAN REGENERATION PROJECTS

4.1. Interdisciplinary Nature of Urban Regeneration

Interventions to decay areas require extensive planning and consideration. The changes in those areas do not affect only buildings, but also peoples' lives and environment. There are many different aspects intertwined with each other in these projects. Therefore various professions are required to get involved in regeneration projects to address relevant problems. Because of the reasons explained above, urban regeneration is naturally an interdisciplinary method which includes engineering, sociology, finance, economy, architecture, planning, environment and many other aspects. Urban regeneration departments in public authorities in Turkey employ people mainly from these professions: civil engineers and technicians, architects, city planners, sociologists and surveyors; however people from other professions can get involved too.

A discussion in the UK was raised by Urban Task Force 1999 Report which argued that there were "skills gaps" in regeneration field. According to it, strict educational preferences and accreditation systems of different professions create barriers. Instead, more general courses should be given in order to address unique problems and enable interdisciplinary working among different professions (Adams et al., 2006). In Turkey, the skills gaps in regeneration are tried to be filled by individual initiatives of professionals when a gap is experienced in a situation, rather than being prepared to it earlier because the gaps are being found step by step. Area-based regeneration is a respectively new subject in Turkish urbanization agenda and there are lots of things to learn and experience in it.

Regeneration professionals get involved in many different types of services in the projects, however, the core duties of some of the professionals can be repeated shortly. Civil engineers/technicians and architects generally take care of the building structure and design issues. Land-use planning of the regeneration areas are handled by city planners such as deciding where the roads, parks, residential and commercial areas will be. It is becoming more and more acknowledged that social and socio-economic issues in regeneration projects should be handled by sociologists. Therefore, many municipalities today employ sociologists in their regeneration departments. Finally surveyors, who are the main subject in this paper, perform mainly land management related services. However, all of these professionals go beyond their professional boundaries and help each other in many areas. In the following chapters, the role of surveyors is deeply analyzed.

4.2. Role of Surveyors in UR Projects

The core of surveying discipline can be defined as collecting, managing and analyzing spatially referenced data. From the fact that regeneration projects target the redevelopment of neighborhoods which contain large spatial data, surveyors are highly required in regeneration teams of relevant authorities in order to handle those data. However, just like any other

professionals, surveyors need to go beyond their professional boundaries and take part in other fields as well.

In order to learn how many surveyors are involved in regeneration services in Turkey, the place one needs to visit is the Chamber of Survey and Cadastre Engineers (CSCE) which is the professional board of surveying engineers in Turkey. The CSCE has many responsibilities such as promoting and representing the profession and inspecting its members' services. Recently, the CSCE has shown increasing interest on regeneration issue. It organizes conferences about urban regeneration in order to raise awareness among surveyors. However the CSCE cannot provide information about the number of its members that are in regeneration business. There are two reasons for this. Firstly, the registration to the CSCE is compulsory if a surveyor wants to open a surveying engineering office or company; however, many surveyors who work as an employee do not feel the need to register unless they do not sign legal surveying documents. Therefore many surveyors in Turkey are not registered in the CSCE even though they perform surveying services. This causes a lack of information. The second and most important lack of information occurs due to the fact that the CSCE registration does not require information from its members about which branch of surveying that the member is specialized on or willing to perform at. Even though there is a possibility that the members can log in to the CSCE website and update their current work status, very few people do those updates. Therefore there is no data about the number of surveyors who are occupied in regeneration services in Turkey at the moment.

Urban regeneration works are generally carried out at "urbanization" and "development" departments in municipalities. In those municipalities, urban regeneration works are divided between relevant departments and the personnel of those departments carry out only the parts of the job that their departments are responsible for. However, some municipalities prefer to establish "urban regeneration" departments for only regeneration issues in order to institutionalize and manage regeneration works in a respectively elastic and independent way and this also seems to enable them to manage the process more easily. In order to exemplify an organizational structure of a municipality, Izmir Metropolitan Municipality (IMM) can be analyzed. The Department of Urban Regeneration (DUR) in the IMM was established in 2010 in order to handle regeneration works completely. The DUR has three subdivisions and those are 1st, 2nd and 3rd Office of Project Implementation. Regeneration areas are assigned to one of these offices and every office has its own director and technical personnel to design and implement regeneration projects in their own responsibility area. For instance, the 3rd Office of Project Implementation employs 10 personnel and 2 of them are surveyors (20%); the 2nd Office employs 15 personnel and 5 of them are surveyors (33%). The other employees in the 2nd Office are architects, civil engineers and building technicians (Figure 1). A sociologist is also employed in the DUR who helps for all three offices.

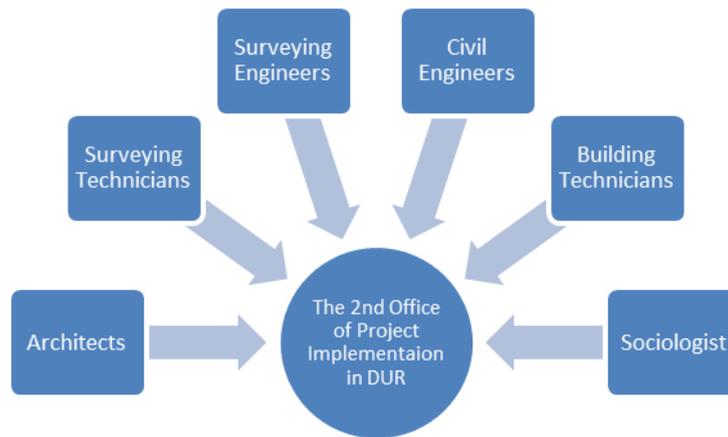


Figure 1. Personnel of the 2nd Office of Project Implementation at Department of Urban Regeneration in Izmir Metropolitan Municipality.

The telephone interviews were carried out with a number of surveyors from municipalities in Izmir, Konya, Ankara and Istanbul, and from Housing Development Administration in Ankara. They were asked four questions. The aim of the questions was to understand what type of activities are performed by surveyors in regeneration projects; in which field the surveyors feel insufficient and require more education, and lastly to ask their suggestions concerning the improvement of the skills of surveyors and surveying education at universities. All of the answers collected from the interviewees were put together without any consideration of statistical concerns. Because the interviewees are experts who are directly involved in regeneration and one may have different experiences and responsibilities than the other thus all the answers were valuable.

The answers of all the interviewees for the first question were:

Question 1) Which activities do the surveyors carry out in UR projects?

- Determination of regeneration area
- Mapping
- Construction surveying
- Property ownership determination and analysis
- Title deed transfers
- Real estate appraisal
- Geographic Information Systems (GIS) management
- Allocation of building areas
- Expropriation
- Project feasibility calculations
- Cost analysis
- Implementation of guidelines
- Setting standards about procedures

- Attending negotiation commissions
- Project presentation

Although the interviewees used different terminologies for their services, the answers could be categorized in the above list. The interviewees generally gave very similar answers which were especially concentrating on the surveying-related services. However non-surveying-related services were also given such as negotiations with stakeholders and cost analysis.

4.3. Skills Gaps of Surveyors in UR Projects

According to the answers of the expert interviewees, surveyors in regeneration seem to be highly mobile and they are dealing with many different types of issues by partnering with their non-surveyor co-workers. The strength of surveyors are naturally concentrated on land management fields such as defining regeneration area, mapping of real estate, determination of real estate ownership, expropriations and land readjustment.

The skills gaps of surveyors on the other hand were scrutinized by asking about the fields that they feel insufficient at, in terms of knowledge or experience. According to the answers, the skills gaps of surveyors are concentrated in the following fields:

Question 2) In which fields of urban regeneration do you (or your surveyor co-workers) feel insufficient?

- Knowledge of laws and regulations
- GIS-based computer software
- Knowledge of development plans (zoning) and architectural plans and their vocabulary
- Public relation
- Finance

Even though courses about real estate law are given at surveying/geomatics engineering programs in Turkey, the interviewees stressed that they and their surveyor co-workers feel lack of knowledge in this field. Legal issues that occur in the projects require deep knowledge of laws and regulations and also surveyors need to update their knowledge continuously.

GIS courses are also very essential in surveying/geomatics programs in Turkey however lack of GIS-based computer software knowledge and experience was also complained about.

Architectural plans are not taught in surveying/geomatics programs in Turkey. Therefore, the interviewees complained about the lack of knowledge about reading basic architectural plans and understand their vocabulary. Some degree of development plans (zoning) are taught in universities however lack of knowledge about reading these plans were also complained of.

Public relation is another field at which surveyors are having difficulties. Since surveying/geomatics is a solid engineering field, having any initial education about social subjects is not something expectable. It is also the same for the finance subject.

The third question was asked to understand their ideas and recommendations about future surveyors to be more effective in urban regeneration projects.

Question 3) What do you recommend surveyors do to become more effective in UR projects?

Surveyors who want to be in UR projects were recommended to develop themselves primarily in these fields:

- Real estate law
- General laws and regulations
- Real estate appraisal
- GIS software
- Basic development and architectural planning and vocabulary
- Public relations
- Finance

Urban regeneration is a new field in the Turkish urbanization agenda; therefore the courses that are taught in universities may not reflect the novel problems of regeneration projects of today. In order to have feedbacks from the interviewees, their views were asked about the education of surveying/geomatics engineering in universities and if UR related courses should be given as well.

Question 4) Should urban regeneration related courses be given in surveying/geomatics engineering programs?

All participants agreed on this. They all recommended giving courses about the subjects that surveyors in regeneration feel insufficient when they graduate from surveying/geomatics engineering programs. Especially, the importance of practical courses was powerfully stressed by the participants. Internships and practical courses were suggested to be done in urban regeneration projects.

5. RESULTS

According to the answers, surveyors' core responsibilities are land management related services such as GIS management, mapping and title transfers. However they take part in financial issues as well such as project feasibility calculations, cost analysis and mostly real estate appraisal. One another important contribution of surveyors is in social field. They join negotiations and give presentations to stakeholders in regeneration projects. All the interviewees agreed that they need more social skills. Unsurprisingly, social courses do not exist in surveying engineering education in Turkey. These "softer skills" (Adams et al., 2006) can be acquired through experience in the field work or personal development. The interviewees stressed that, for regeneration work, surveyors should continuously develop themselves in a range of skills to address complex problems that occur in the projects.

The interviewees also said that more practical courses should be given in university education; and internships could be done in regeneration projects. The practical education could enhance the students' awareness in complex regeneration problems and could lead them to develop themselves individually in the fields that they will not receive any education at universities.

Some of the interviewees expressed that the CSCE should take more responsibility in regeneration subject such as organizing educational programs and seminars about it. Some interviewees also said that educational programs or seminars for additional qualifications outside university can be helpful. This can be done by municipalities or the CSCE.

6. CONCLUSIONS

First of all, it was an interesting finding that the answers of the interviewees were very similar to the findings of the report of Surveyors in Regeneration in Scotland (Adams et al., 2006). Even though it is thought that almost every jurisdiction in the world has novel problems and unique regeneration approaches, the findings of this paper in Turkey and the report of Surveyors in Regeneration in Scotland actually show that the differences are not significant at all. Therefore it can be said that the documentation of experiences of urban regeneration projects in a country can be of great help for another country. Scientific papers are good apparatus for this purpose.

The interviews were carried out with the surveyors who work in urban regeneration projects in public authorities. It should be admitted that there are advantages and some disadvantages with this approach. One advantage is that the answers of the participants are "inside information". They are performing activities in regeneration projects every day and are being faced with challenges. They know where they are good at and where they are not. However these are all personal views. The answers about their effectiveness and skills gaps can be compared with the views of non-surveyor co-workers or project managers in regeneration projects too as Adams et al. (2006) did in their research. These outsiders (outside surveying profession) can provide valuable information about the role of surveyors as well.

As the CSCE is the professional network of surveyors in Turkey, it could be a good idea for the CSCE to start recording their members' occupation and expertise. Members can log in to the CSCE website with their username and password and update their profiles. This can help the CSCE know the number of surveyors in a certain expertise, notify its members about job opportunities, and also help establish professional branches within the members and get feedbacks from those specific expertise groups for the betterment of the overall surveying profession. These feedbacks then can be discussed in meetings and help universities adapt new courses for the challenges that the members are faced with every day that are not told in university classrooms.

According to the answers of the interviewees, surveyors in regeneration do not have problems about surveying related subjects in general. However there are some areas that are taught in

surveying/geomatics programs and that surveyors still feel insufficient at. It is normal if senior surveyors have problems with GIS management and software because they may have not received any GIS education in the past. Therefore they need to develop themselves privately. However, the younger interviewees also complained about insufficiency at GIS software. This is an indicator that more GIS software courses should be given in surveying/geomatics programs.

Another surveying related complaint came from the real estate law. Many programs offer courses of real estate law, however their extent or significance is in question. The interviewees all agreed on that they feel lack in this field.

There are some gray areas where surveyors are not directly involved but related. Zoning is one of them. Surveyors are having problems about reading and analyzing these plans. Courses about how to read these plans and how to analyze land-use policies can be given at surveying/geomatics departments.

There are some areas that surveyors are not directly involved, but need a certain level of knowledge. Construction and architectural plans are the fields that surveyors come across when they are employed in construction surveying. This skill is also required in regeneration projects. The interviewees especially complained about not understanding architectural vocabulary. Courses about basic architectural plans can be adapted in the programs. This skill directly affects their performance in real estate appraisal field as well. Real estate appraisal was another field that all the interviewees acknowledged the importance for surveying discipline.

Financial and social courses are not taught in surveying/geomatics programs in Turkey. The interviewees did not suggest giving these courses in the programs; however students can be encouraged to take selective courses about these issues if they are interested in urban regeneration.

It was acknowledged by all the interviewees that the surveying/geomatics departments in Turkey need to review their curriculums from the perspective of urban regeneration. Also, more research is required in this field.

Finally, urban regeneration is not a subject that only one type of profession can claim. Therefore, other disciplines that are involved in regeneration services should also review their position in order to improve their skills for the ultimate success of realizing beautiful, healthy and prosperous living environment.

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CONTACTS

Yunus Konbul
Izmir Katip Celebi University
Department of Geomatics Engineering, 35620
Cigli / Izmir
TURKEY
Tel. +90 232 3293535 (3759)
Email: yunus.konbul@ikc.edu.tr
Web site: www.ikc.edu.tr