

Delivery Systems of Enhancing Urban Townscapes Projects Trimming Out, Renovation and Rearrangement

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Abstract | Iranian townscapes are facing big problems at micro and macro levels. At the macro level, neglecting the townscapes during the physical transformations of cities has caused visual disorder and ugliness. At the micro level, three problems including the extensions to buildings, façade deteriorations, and dissonant boards have been degrading the quality of the townscapes. To address the problems at the macro level, those who are in charge of municipalities in Iran need to take three actions: trimming out the extensions, renovation, and rearrangement.

Consideration of some projects in Tehran's beautification organization indicates Delivery system of these projects is a key factor which needs contemplation. Different methods have caused different results. In this article, By identifying and analyzing risks related to Tehran's Beautifications organizations enhancing projects and specially Ferdowsi project which we were engaged directly, and converging them by Delphi method, we tried to extract the most optimized delivery system. The main finding is that for proper execution and preventing any misunderstanding by supervising organizations, all regulations, processes, and disciplines of an ordinary construction project must be observed but some tailoring is needed to meet complexities of these projects and respond properly to risks. Accuracy of design and details, observing social dimension and HSE guidelines are very important too.

Keywords | Beautification, Townscape, Project Management, Risk Management, Renovation, Rearrangement.

Discussing the issue

Townscape as objective representation of a city is one of the most important factors influencing humans (Vahabzade, 2006: 95). In recent decades, Iranian townscapes have decayed in different levels, each one needs proper actions (Jafari, 2017a: 5). In macro level, the main problem is rooted in directing physical transformations of cities

by detailed plans with lots of inefficiencies which lots of researchers mentioned before. Despite decades of experiences of Urban design in developed countries the method is neglected in Iran (Soltani Azad, 2002: 45). On the other hand, political and economic relations between urban managers and developers and their legal or illegal agreements, give urban managers no chance of observing and noticing townscapes as a key factor (Jafari, 2017b: 8). Figure 1 shows influential Factors of directing physical transformation and authorizing construction projects in

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Tehran's municipality. Urgent Need of resources, political and economic pressure, limitations of sustainable income and etc. constantly force managers to define and authorize projects to finance municipality with no chance of thinking and observing their impacts on townscape and as a result, the situation is worsening every day.

Skyscrapers with no harmony of townscapes, causing disorder and ugliness are an indication of such a situation in cities like Tehran (Bemanian, 1997: 57). They are symbols of agreements between developers and urban managers. Figure 2 shows dissonant impact of such buildings in Ferdowsi square. A bank owned by Tehran municipality is owner of this building. This shows instead of creative designs by architects and urban designers, townscapes are forming by an uncontrolled capitalist system. we can name this capitalistic townscape, symbolizing high class values and priorities rather than middle and underprivileged class and a revolution supported by them focusing on justice and other visions (Atashinbar, 2012). So development in

cities like Tehran leads to a contradictory and shattered city not in harmony with its natural and historical structures (Yarahmadi, 2012: 82). This contradiction is very clear in Tehran's historical fabrics.

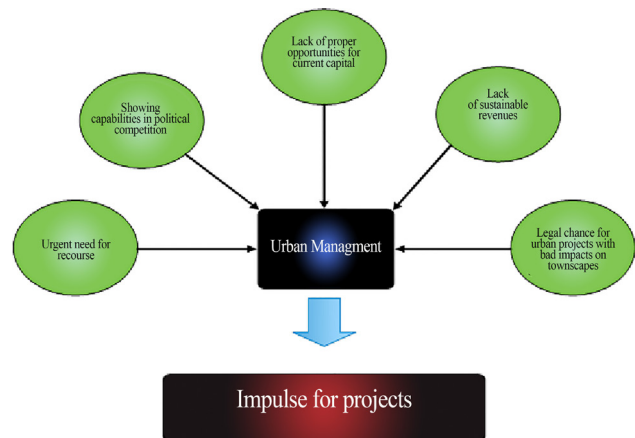


Fig. 1: influential factors of directing physical transformation and authorizing construction projects in Iranian megacities (Jafari, 2017 b).



Fig. 2: Southwest of Ferdowsi Square and unpleasant impact of City Bank headquarter on townscape. Photo: Hamid Mohammadi, 2014.

Townscape problems in macro and micro levels

Researchers has been following townscapes problems in macro levels but there is no sound research in micro level. On the other hand, despite need for upgrading and adapting to social behavior of citizens, current townscapes of cities are neglected (Osanolou & Rostamizade, 2007: 39). In micro level, townscapes are dealing with three major problems: first category includes: extensions to balconies and roofs for increasing usable area of buildings, canals and shafts for air conditioning, electricity and telephone cables and Etc. which leads to very unpleasant and ugly facades. Some cases in Ferdowsi projects are shown in Figure 3.

Next problem is façade deterioration with social and economic roots. Inhabitants doesn't consider themselves responsible for their own building facades and this cause decaying quality of some valuable facades of cities. Third problem is boards on building facades in streets with commercial stores and activates. Inhabitants put boards on facades based on their own need and taste and no aesthetic controls is applying to them (Jafari, 2017: 5). Figure 4 shows some facades in Ferdowsi project before and after project execution. In these facades all micro problems including extensions to buildings, service canals and etc. were solved with stakeholders cooperation.



Extention to
facade in Ferdowsi
project



Fig. 3: Some extensions to valuable façades that causes visual disorder and quality failure in townscape. Photo: Toufan Jafari, 2015.

Figure 4 shows some other facades in project that renovation and board rearrangement were done upon them. Hotel building in left side of picture is a macro problem which can't be solved in such a project. So despite the importance of doing research and actions to deal with macro problems, the micro problems also need actions. For that tree actions must be done:

- Trimming out ugly and unrelated extensions to facades.
- Renovation of deteriorated facades.
- Rearrangement of uncontrolled and unpleasant boards on facades.

There are lots of ambiguities in executing such projects which cause lots of legal and social problems for their management teams.

So when starting Ferdowsi project, we first consider all previous projects and actions and scrutinize all related documents and then decide to document all experience and knowledge in our project for future analysis to find a suitable solution for every challenge. So at the end of project, we start a research to determine optimized method for project delivery system to be used in future projects. For that we Annalise project's risks. Risk Management is one of the most important knowledge areas of project management and standards like Project Management Body of Knowledge (PMBOK) and PRINCE 2 has guidelines for that. In projects based on these standards, risks are identified and analyzed to find proper risk responses. These responses are a viable source to determine conceptual model for execution and project delivery system and also increase chances of projects success as a major goal of every projects.



Fig. 4: Some neighboring facades in Ferdowsi project Before and after project execution. Photos from top tp bottom: Toufan Jafari, 2015 & Hamid Mohammadi, 2014.

Research Methodology

We first register every risk for such a project based on our own experience and considering other project's documents. Then we sent an email to 18 people that were engaged in Ferdowsi project as consultant, contractor and customer. We request everyone to consider the risks we identify and propose a respond and also register any neglected risk. 14 people respond to email. We then analyze the responds and try to converge them. We again sent our version of risk responses noting some contradiction and our final proposal to 14 people. We also put two columns in the table of risks naming risk probability and risk impacts and request respondents to fill each column with proper number from 0 to 1 and also give us their opinions about responses and by multiplying them we reach to risk factor and based of this factor we prioritize every risks. At the

end, we propose a project delivery system based on final results and risk analysis. The model was presented to 9 of respondents in a session and after some corrections, we reach to final execution model of project.

Research finding: delivery system for enhancing townscapes projects

Table 1 shows identified risks in the project and their probability and impact based on mean of the respondent's answers. By multiplying probability and impact we reach to Risk Factor. Risks with risk factor higher than 50% are categorized as important Risks. Between 49% to 30%, are normal risks and lower than 30 are nonsignificant risks. Hazardous and security risks are also important. The respondents give low number for probability of these risks but their impacts are very high and can lead to noticeable

Table. 1: Risk and responses in enhancing townscapes projects based on Ferdowsi Project (Engelab street, from Ferdowsi square to Dowlat gate (Darvaze Dowlat), Tehran, Iran. Source: Authors.

| Risk Category | Risk Name | Risk Factor | | | Risk Response |
|-----------------------------|--|------------------|-------------|----------------------|---|
| | | Risk Probability | Risk Impact | Probability * Impact | |
| Stakeholder Risks | Stakeholder's resistance against trimming out extensions, especially when their benefits and interests are influenced. | 0.7 | 0.9 | 0.63 | Dialogue with stakeholders by facilitators, temperance in dealing with inhabitants, finding a suitable solution in cases trimming out had impacts on people's ordinary activities specially in design phase, estimating cost of technical solution. |
| | Benefit's contradictions between owners and inhabitants | 0.4 | 0.8 | 0.32 | Converging benefits of stakeholders by facilitation techniques publicly and privately, private dialogue with influential stakeholders. |
| | Lack of cooperation by owner's who have violated law. | 0.6 | 0.8 | 0.48 | Auditing illegal actions in facades at first phase of project and starting the legal process in courts and commissions, alongside transaction with owner/inhabitants. |
| | Government and some public agencies act too slow | 0.9 | 0.8 | 0.72 | Sending letters for cooperation in the beginning of project. Engaging high ranking municipality managers to negotiate with authorities on the other side. |
| Legal Risks | Ambiguity about necessity of project and role of municipality in enhancing townscape projects. | 0.5 | 0.7 | 0.35 | Trying to pass the projects and programs in city council to make it a legal responsibility for municipality so in cases the owner resist, sending them to court will force them to cooperate. |
| | Owner doesn't cooperate After dislodge and primary agreement. | 0.3 | 0.9 | 0.27 | Sending letters and notes to owner or inhabitant and documenting all transactions. Sending the case to court if there are no other option. |
| | Resistance of inhabitants and lack of cooperation during project implementation. | 0.5 | 0.8 | 0.4 | Signing agreement with owner/inhabitant before implementation of project, clarifying every detail and responsibilities for each side |
| Hazardous incidents | Hazardous incidents during implementation | 0.3 | 0.95 | 0.29 | Writing HSE guideline which its implementation must supervised carefully by consultant. Obliging the owner to be careful and avoid any action that may cause incidents during project implementation. |
| | Collapse of old Buildings | 0.25 | 0.95 | 0.24 | Auditing whole buildings in the project to determine dangerous buildings. Forcing the owner to straitening structure based on the law before implementation phase |
| Risks related to Design | The design Doesn't fit with context | 0.5 | 0.6 | 0.3 | Updating the design team about exact conditions of context (façades). Negotiation with inhabitants and careful observation of facades. |
| | Owners/inhabitants objection about design | 0.4 | 0.25 | 0.1 | Observing inhabitant/owner interests at first phase of design, modifying the design to some extend that public benefits and totality of design is preserved. |
| | Public benefit/individual identity duality | 0.7 | 0.8 | 0.56 | Considering individual identity in design to some extended that totality of the design and public interests are not challenged. In historic areas the main concerns will be public interest and historic motifs. |
| | Stakeholders disagreement about the design | 0.35 | 0.8 | 0.28 | Trying to align different views by facilitation. Making decisive decision if stakeholders don't reach to an agreement and finally resorting to law as the last solution. |
| Risks related to contractor | Tension between contractor personnel and owner/inhabitant | 0.6 | 0.9 | 0.54 | Clarifying contractor agents about nature of project and turning the contractor's responsibilities about the issues in implementation phase, into clear contractual items. The site manger must have social and communicational skills for dealing with stakeholders. |
| | Quality failure | 0.5 | 0.8 | 0.4 | Meticulous evaluation of contractor's ability and it's experiences in previous projects. Supervision of base works. Stage plan and authorizing the next stage only if the previous one have suitable quality. Constant supervision by consultant's agents on work packages. |
| | Disagreement between contractor and consultant about the amount of work | 0.6 | 0.8 | 0.48 | Careful detailing of design by consultant. Deciding and clarifying about new items as soon as possible. Designing hierarchy of work packages to be delivered from contractor to consultant. Supervision of base works |



Fig. 5: Some facades after renovations in Ferdowsi project. Photo: Toufan Jafari, 2015.

financial and human incidents. So observing HSE guidelines becomes very important in such projects.

From the social point of view, facilitation and constructive transaction with all stakeholder is a necessity during the implementation of project. All authorities must observe this and manage the projects with all stakeholders cooperation. At these kind of projects, public and private interest

contradiction emerges. The main objective of project is townscape quality enhancement which in some cases, contradicts strongly with individuals' benefits. This duality also emerges in façade and board design. Although project managers directors must prioritize public interest, they also need to consider individual requests and interests and increase stakeholder's satisfaction.

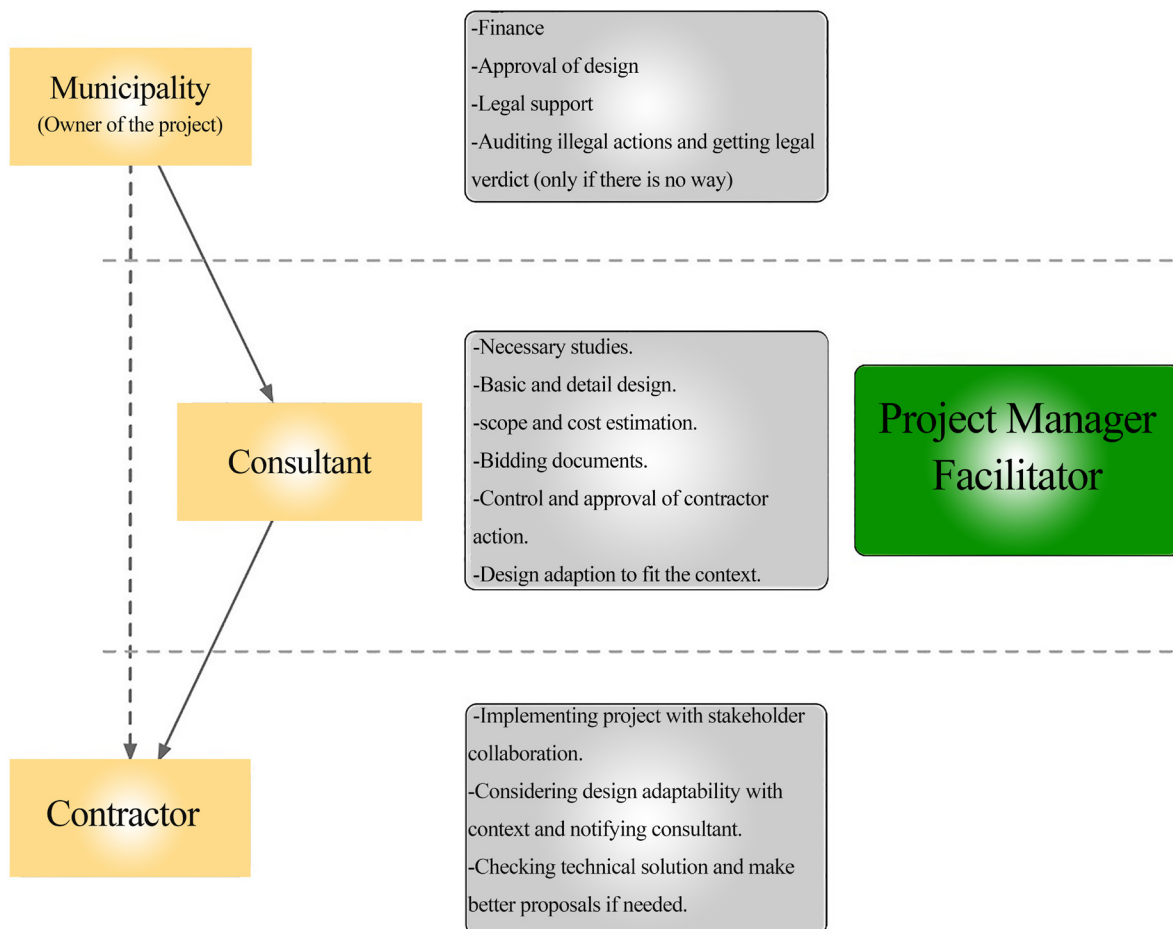


Fig. 6: Responsibilities of three actors of an ordinary construction project tailored for Enhancing urban townscapes projects. Source: Authors.

From legal point of view, transactions with stakeholders must be registered carefully. All letters must be based on clear process and in accordance with law to be submitted to court in there is no other way. An agreement must be signed between project manager and owner/inhabitant so initiation of actions on a building by municipality is based on that agreement. In cases owner/inhabitant agree to finance some actions, the amount and time, must be clearly mentioned in agreement. delivery system of these projects was discussed extensively by all decision makers. Finally based on previous projects and social and legal risks, we concluded that these project must be managed as an ordinary construction projects with observing social and legal aspects. Figure 6 shows the responsibilities of the main three actors of an ordinary construction project tailored for Enhancing urban townscapes projects. Based on our findings, the urban management including municipalities and government must act as a supporter and avoid direct engagement. Consultant design the project considering all the related risks and supervise contractor during implementation just like an ordinary construction project. Project management, facilitation and transactions with stakeholders are done by consultant too. Contractors, familiar with their responsibilities and understanding project risks, implement all actions with full cooperation of stakeholders.

Figure 7 shows project implementation process. At First, consultant provides the necessary documents in social and physical dimensions based on list of services. Collecting stakeholder's information and primary negotiations with them for better understanding of social context are very important.

Based on them consultant extracts implementation strategies and determine the amount of financing by inhabitants. Careful Registration of physical conditions, and clarifying problems is done in physical dimension. Then, design phase is started. The designer must make a delicate and rational stance for the amount of intervention and change in current conditions of façades.

Duality of public and individual interests are also dependent on History, site activities and social, legal and physical conditions that must be taken into account. Reaching to an optimum point and achieving harmony and consistency besides individual identities is through art of a designer in such projects. At the end details, financial estimation and bidding documents are provided by consultant.

Approval of project in city council or other authorities will be a critical support during implementation specially when some stakeholders resist to cooperate. Resorting to law and court is an option if only cooperation, transactions an empathy don't reach us to an agreement.

For implementation, an experienced contractor must be chosen in two phase bid (qualitative analysis and the financial proposal). Before choosing contractor(s), the project office must be initiated and stakeholder engagement started by consultant. Consultant starts transactions with inhabitants and directs contractors to achieve project's objective. The consultant also supervise contractor's tasks, consider the invoices, and change and adapt the design just like an ordinary construction project. In final method, The consultant is responsible for project management and facilitation.

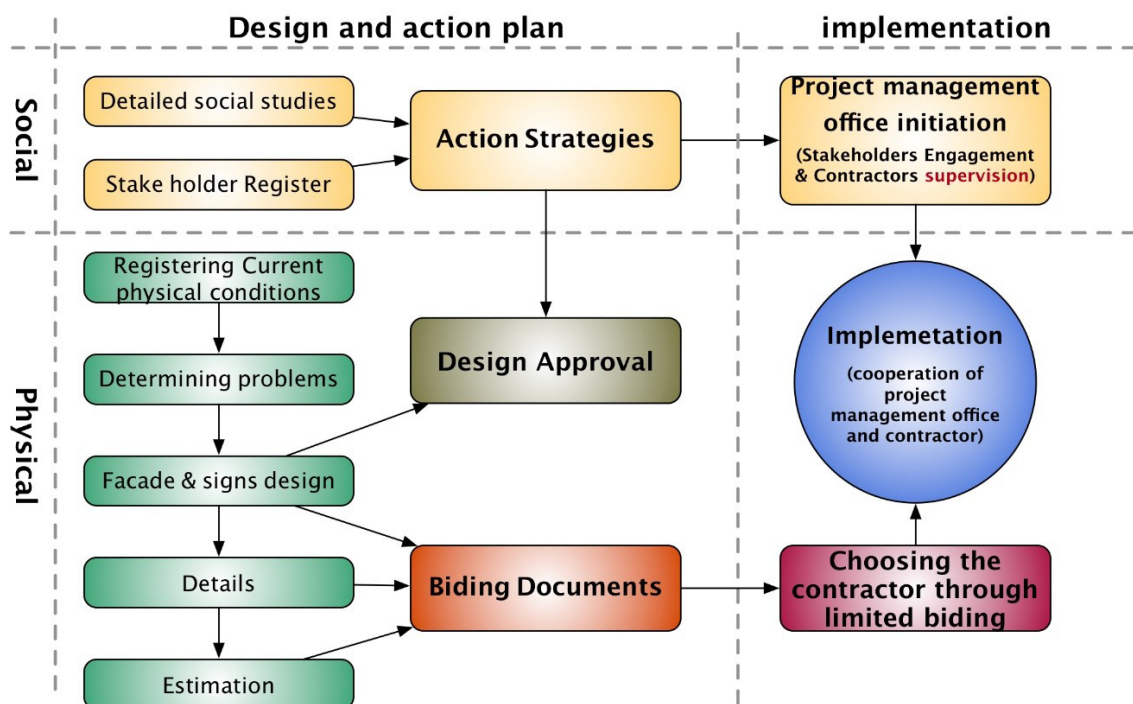


Fig. 7: Design and implementation process of Enhancing urban townscapes projects. Source: Authors.

Conclusion

Enhancing quality of Townscapes through these kind of projects is a must for urban managers. Despite Some objections, implementing these kind of projects has great impacts on qualities of cites specially in historic fabrics and leads to stakeholder's satisfaction most of the time. In some cases, forcing inhabitant to obey a design and neglecting individual identities and delivery system of projects has caused some criticism.

This research shows, best way to implement these kinds of projects is a tailored ordinary construction framework and

processes. After consultant designs the project and deliver all necessary documents, it acts as a project manager, facilitator and supervisor with respect to social, physical and legal aspects of the context. Contractors chosen in a competitive bidding process, execute the project with regarding legal norms. Government and municipalities must only support the project and strongly avoid direct engagement. Collaborations with stakeholders with a win-win mindset, finding an optimized solution for public/private dualities of interest, taking legal aspect into account and observing security and HSE guidelines during implementations are also very important.

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