

THE CHALLENGES OF MANAGING STAKEHOLDER REQUIREMENTS IN A URBAN REGENERATION PROJECT

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ABSTRACT

Traditional project management approaches have been criticised in recent years for being inadequate for the growing complexity of construction projects. Among the main criticisms are the inadequacy to deal with a social and political context, the dynamics of the environment and the need for further judgment during project implementation. Within this context, studies are looking at alternatives to move beyond this traditional view of project management. This paper presents the results from a case study carried out in an urban regeneration project in Brazil. The aim is to illustrate the challenges of dealing with myriad requirements that result from different stakeholders groups involved in complex construction projects. In such complex projects, there is a wide range of stakeholders, which change over time. This is partially due to long periods of project development and implementation. Moreover, their influence cannot always be predicted from the outset. Thus, despite the contributions in the literature regarding the need to manage stakeholder expectations and influences, this empirical study shows that in practice many challenges remain, and alternative solutions are still lacking in the project management literature.

KEY WORDS

Stakeholders management, requirements management, complex programmes, urban regeneration programmes

INTRODUCTION

Winter et al. (2006) argue that the complexity of projects is increasing because organisations are facing the challenge to shift from the delivery of products to the generation of value and benefits. For many organisations, the main concern now is no longer the capital asset, system or facility, but increasingly the challenge of linking business strategy to projects, maximising revenue generation and managing the delivery of benefits in relation to different stakeholder groups (Winter et al., 2006).

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The difficulty of dealing with the complexity and dynamicity of projects have been major reasons why the traditional project management approaches have been criticized in recent years (Williams, 2002; Atkinson et al., 2006). Winter et al. (2006) argue that project management practices should consider projects situated in a social and political context, adequately dealing with the dynamics of this context, the complexity of social interaction and human action and the framing and reframing of projects within an evolving array of social agenda, practices, stakeholder relations, politics and power (Winter et al., 2006).

In construction projects, for instance, requirements are traditionally described in the brief. Early approaches considered the brief as a static document produced at a specific point in time (e.g. RIBA, 2000). However, further research led to the recognition that requirements capture is an ongoing process that evolves throughout design (Luck et al., 2001). Different studies (e.g. Whelton, 2004; Forgues, 2009), attempt to illustrate the difficulties faced by projects based on a traditional project management paradigm, and propose directions to move forward. While Whelton (2004) analyses the project definition phase as a complex adaptive system that changes through collaboration, Forgues (2009) emphasises the importance of moving away from the traditional sequential and fragmented design process into a more collaborative and integrated one.

The aim of this paper is to discuss and illustrate the challenges of dealing with myriad requirements that result from the influence of different stakeholder groups in a urban regeneration project, which is highly complex, dynamic and influenced by a social and political environment. Despite the advances in the literature regarding the need to manage stakeholder expectations and influences, this empirical study shows that in practice there are many remaining challenges in managing stakeholders in a highly complex project, and alternative solutions are still lacking in the project management literature.

The paper presents findings from a case study developed in an urban regeneration programme in Brazil: the City Entrance Integrated Programme (PIEC). This study is part of an ongoing evaluation research project, started in 2004, which aims to understand its development and implementation process (from conception to delivery), including an understanding of the political, social and institutional background. Data collection focused on the views of different stakeholder groups involved in the project. The main sources of evidence were 16 semi-structured interviews with professionals involved in the conception, design, and financial management of the PIEC and other 10 semi-structure interviews with members of the team responsible for implementing the project.

The paper is structured as follows. Firstly, a literature review on project complexity and the specific issues of a multi-stakeholder environment are highlighted. Following, literature on how to better deal with the diverse participants in construction projects is discussed. The main findings from the case study are presented. The discussion then focus on the empirical evidence that current project management practices still lack to provide the appropriate support to deal with such type of projects.

COMPLEX PROJECTS AND STAKEHOLDER REQUIREMENTS

According to Koskela and Howell (2002), construction projects are still managed by traditional project management approaches, as suggested in the PMBOK (Project Management Body of Knowledge) guide, which is based on theoretical assumptions

that are overly simplistic and insufficient to cope with the current project management reality. The traditional view of project management considers that a group of sequential activities are necessary to achieve pre-defined objectives; thus, project management is mainly dedicated to controlling these activities and removing or reducing uncertainty that may affect the achievement of expected objectives (Koskela and Howell, 2002; Atkinson et al., 2006; Winter et al., 2006). The lack of support for dealing with complexity is the main reason why such approaches are being criticised (Winter et al., 2006).

The complexity of projects may come from different sources: the involvement of multiple stakeholders, the wide scope of the product being created, as well as the existence of multiple goals (Williams, 2002). Construction projects are typically characterised by the engagement of several separate and diverse organisations, such as suppliers and contractors, for a finite period of time (Baccarini, 1996). According to the same author, the greater the differentiation and interdependency (or connectivity) of the varied interrelated parts that constitutes a project, the more complex the project is. In addition, the assumptions upon which the tasks of a project are based are often unstable (Jones and Deckro, 1993), leading to uncertainty, which can also be regarded as one type of project complexity (Williams, 2002). Williams (2002) further states that, generally, projects are multi-objective, with conflicting goals. The effects of activities on all goals have to be assessed and trade-offs have to be considered. In addition, many projects have a multiplicity of stakeholders, e.g. owner, champion, the public, public bodies, etc. This will add complexity in a similar manner to the multiplicity of goals.

Atkinson et al. (2006) emphasise the need for managing stakeholder expectations as a way to bring uncertainty into discussion and avoid having stakeholders being surprised by the final outcome of a project. Furthermore, Thiry (2002) argues that sense making and the exchange of views among stakeholders are effective ways to deal with ambiguity in complex projects. Generally, when there are multiple stakeholders involved in a project, management has to include negotiation and discussion (Atkinson et al. 2006). Inadequate management of the concerns of stakeholders often leads to conflicts and controversies about the implementation of a construction project (Olander and Ladin, 2005).

The challenges to achieve an agreed composite view of all stakeholders are acknowledged (Darlington and Culley, 2004). Empirical studies suggest that the non-consideration of some stakeholders and how they can influence projects' results can be a major reason for project failure (Olander and Ladin, 2005; Ward and Daniel, 2006).

Various stakeholder mapping techniques exist (Olander and Ladin, 2005). According to the same authors, there are models that include the dynamism of the environment and the power of the stakeholder relative to the project (e.g. Mendelow, 1981) and models that include stakeholders power and level of interest on the project (e.g. Johnson and Scholes, 1999). By grouping stakeholders in such matrixes, project management can produce a better picture of how communication and relationships between stakeholders can affect the project and its implementation (Olander and Ladin, 2005).

Despite of a greater awareness regarding the need to better consider the diverging interests of stakeholders in project management, empirical studies demonstrate that the lack of alignment among stakeholders leads to a constantly changing list of requirements (Tzortzopoulos et al., 2006). In healthcare projects, for instance,

conflicting requirements are commonplace, and decision-making structures tend to be complex (Campobasso and Hosking, 2004).

The advances on the literature emphasise the need to identify stakeholders and to manage their diverging interests. However, the possibility to identify all the stakeholders in the beginning of the project is an assumption of such approaches. Although the suggestion of a matrix and other mapping tools seem to clarify the influence of stakeholders on projects, they can only provide a picture of the situation in a determined point in time, thus providing poor support for changing environments.

Koskela and Ballard (2006) describe the role of a project definition process for clarifying the purpose for clients' requirements in a construction project. Whelton (2004) asserts that the project definition process can be seen as a complex adaptive process, through which project purposes emerge from group collaboration and learning. Within this process, there is a need to challenge self-understanding, reveal conflicts between client constituencies, confront desire with its consequences and explore alternatives not previously considered (Koskela and Ballard, 2006). Although such literature seem to advance the discussion on defining and agreeing what the clients want, the influences of external stakeholders throughout project implementation is still an unsolved issue. The project management literature seems to still lack on providing appropriate support to deal with the myriad of stakeholders in more complex projects, which is the case of a urban regeneration project.

In the case of urban regeneration projects, the separation of ownership and occupation lead to confusion about even who the main client is (Kamara et al., 2000). Public sector organisations may be classified as a virtual, complex client, as they need to appropriately represent various stakeholder groups, such as the targeted community, the wider society and the government strategic intentions. The support in such context needs to extend the focus on the clients to understand the influences and expectations of other stakeholder groups.

THE CASE STUDY

The City Entrance Integrated Programme (PIEC) is a large urban regeneration project owned by the City Council, which comprises an area of 870 km² and is located in the main entrance of the city of Porto Alegre, in Brazil. The area has an important linking role, being situated in the heart of a metropolitan region and providing different transport connections, such as the airport, the city docks, a suburban train system, and the main interstate highway (

Figure 1).

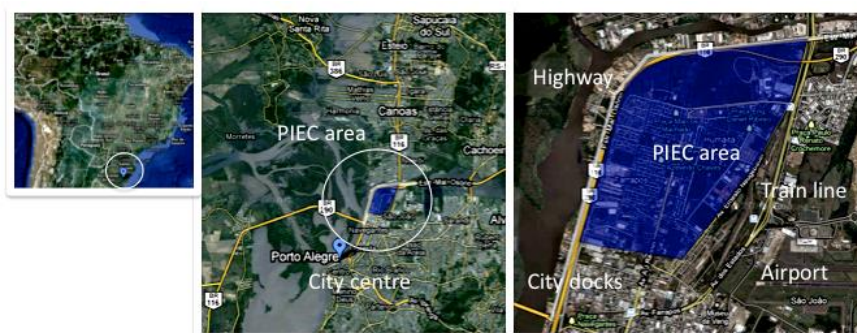


Figure 1: PIEC region

Several irregular settlements of families coming from the countryside were established in that area, occupying spaces once designated to the implementation of new roads and the enlargement of existing ones. These irregular settlements do not have adequate urban infrastructure and offer insalubrious conditions to its inhabitants⁵. Thus, the project's overall aim was to regenerate that area, improving the connections with the city, providing environmental recovery and making sure that families are relocated to safe settlements nearby and included in the formal society. To enable that, five complementary projects were planned: urban infrastructure, landscaping, social housing, income generation and community development.

STAKEHOLDER INFLUENCES IN PROJECT CONCEPTION

In 1999, the targeted area was indicated in the city's master plan as a priority area for low-income housing intervention, the project started to be conceived in that period. Its conception was strongly influenced by the *Habitar Bid Brasil* (HBB) Programme, which was the City's main source of funding for social housing projects. The HBB facilitated a consultancy with the Argentinean Centre for the Study and Development of Environmental Projects (CEPA), which suggested that the scope of housing projects should be broadened, addressing urban development issues and not only the need for shelter. Thus, the PIEC is part of a group of initiatives of the City Council to tackle the housing deficit problem in a more holistic way.

The project follows a traditional bidding process, in which the City Council is responsible for planning and managing project implementation. The private sector enters in the process as the project executor and is monitored by the project managers from the City Council.

A strong influence to the project's conception was the City's Participatory Budget (OP). The OP was implemented in Porto Alegre in 1989 and since then, it has been a way of considering the public perspective on investment decisions. The OP divides the city into 16 regions and gathers public requests by each region. From 1999 to 2007, the region in which the PIEC would be implemented made 229 requests, which were all considered in the project's conception.

Besides the OP, the programme received a percentage of the total funding from HBB designated for social work with families. The HBB was the first source of funding for the project and it has a strong focus on projects that combine social housing with other social actions, such as social work, income generation, community development and environmental & sanitary education. The aim of this social work was to engage the targeted community (HBB required 100% of contracts signed with families). Through the social work a database was created characterising the way of living of every family that would benefit from the project. Data such as the type and size of family, as well as the material and size of current homes were gathered. This data was used to support project planning. A leadership development group was also created. This group met every month to discuss design options for the housing project and the landscaping

⁵ Irregular settlements are defined by the City Council (PMPA, 2004) as those in which the occupants are not land owners and do not have any legal contract assuring their permanence in that land. In the PIEC region 33% of settlements were irregular in 2000, representing 4.53% of total irregular settlements in the city.

project, to visit other similar projects and see the new way of living that was being proposed and to visit the construction sites. These meetings were called “*socialising the design and construction process*” meetings.

The new housing schemes were owned by the City Council and families had to sign a contract for using the space. Neither selling nor modifying the houses was permitted. Modifications had to pass through the housing department’s technical approval. A series of guidelines and a supporting team were made available to give support to families that wanted to modify their houses.

The housing projects were all designed by the housing department, which still had to get building permit from the urban planning department. Also, the design had to follow the minimum specifications of HBB. The funding was given to the project by the completion of planned work.

Another aspect adding complexity to the development process is the fact that the project will be implemented in a specific area and therefore it is subject to the characteristics of that place. The area designated for implementing the project was not totally owned by the City Council. Part of the land belonged to the Federal government and part to companies managed by the public sector. The City Council would gradually acquire the land during the project’s implementation.

In terms of project organisation, receiving funding from the HBB required the City Council to follow some rules. A governmental based unit should be created for planning and implementing the project, as well as for managing the use of the space after the project has been delivered. The unit was created with personnel from different departments of the City Council.

In December 2003, a larger funding contract was established with the Financial Fund for the Development of the River Plate Basin (FONPLATA). The FONPLATA became the project’s main funding agency with 50% of the total investments. This contract also required some procedures to be followed. One of them was the use of the Logical Framework Approach, in which the main goals of the programme are linked to the actions, and key performance indicators are set in the different levels from operational to strategic results. A progress report every 3 months was also requested by the funding agency. The FONPLATA contract not only meant a change on managerial procedures and techniques, but also a change on what would be done. Getting funds from the FONPLATA meant broadening the focus from the housing and social projects and strengthening the road infrastructure project and landscaping. The road infrastructure project had to consider a previous project that implemented in an adjacent area. The highway concessionaire Osório/Porto Alegre also joined the programme with the responsibility of duplicating one of the major roads.

In 2004, when different stakeholders were interviewed and asked about the project goals, different opinions and priorities could be observed. While some would argue that the project was about providing shelter and social inclusion, others would prioritise the environmental recovery aspects and the better connections to the city.

STAKEHOLDER INFLUENCES IN THE IMPLEMENTATION PHASE

During the project’s implementation, there was a drastic reduction in the US dollar exchange rate (currency used by FONPLATA). As a result, the total amount of money received for implementing the project was largely reduced comparing to the original amount requested. Consequently, the scope of intervention had to be re-evaluated, and

alternatives sources of funding explored. This meant new participating stakeholders in the process and new rules to be followed.

In 2004, there was a change in the city government, and consequently in the project's structure. These changes included the admission of new personnel and the reorganisation of responsibilities. The knowledge gained up to 2004 was somehow lost, as the previous team left the project leaving little instructions for the new participants. Consequently, the implementation activities slowed down for some time.

The new project participants had different priorities and a different understanding of how activities should be performed. The major difference after the change in government was that many activities started to be outsourced. Some previously in-house activities were passed on to the private sector, such as the electrical and plumbing design for the housing project; the allocation of families in the new schemes and social work for the community development; new partnerships for the income generation project and the inclusion of the urban cleaning department on the project implementation.

Outsourcing these activities was a result of a change in mentality and also a response to new demands from the alternative sources of funding. One of these sources was the BNDES funding agency. The agency required submission of all detailed designs for the housing project prior to giving building permit. Thus, outsourcing design would reduce timescales. Another example was the income generation project. The later team had a different understanding of this initiative and set a greater emphasis on waste sorting activities. As a result, the city's urban cleaning department was engaged in the project.

The influence of different stakeholders on the project implementation was clearly described in the interviews. The existence of irregular occupants on selected areas was resulting in a lengthy process for determining the legal possession of lands. Also, expectation that construction would soon start in a specific area led to an invasion of additional families that wanted to be included in the scheme. However, including them in the budget would make that particular project economically unviable, and it had to be withdrawn. Also, in some cases, the community would use media channels to give their opinion on the project's implementation. Some decisions were based on those comments, particularly on the landscaping project.

The influence of private sector partners was also observed. There were long bidding processes due to companies not meeting the necessary requirements, proposals were either over budgeted or absent for particular pieces of work. The work delivered by these partners were also non satisfactory. Designs delivered from the private sector had to be redone, as they were not detailed enough to support execution or contained errors.

During an interview, the project manager for the road infrastructure project listed many stakeholders that influenced in the design process and consequently slowed down project implementation. Some of these stakeholders are the electricity provider, the highway concessionaire and the national airport planning agency (INFRAERO). For instance, after the design of a bridge was delivered by the private sector, it had to be approved by the INFRAERO. This agency did not approve the height of the new bridge and the design had to be redone by the project team. A technical team was involved in this process, also giving support to the execution of this bridge. There was a large amount of rework and time spent waiting for approvals to meet the requirements of

these stakeholders. Below is a summary of the main stakeholders and their influences identified in the project's development and implementation phases (Figure 2):

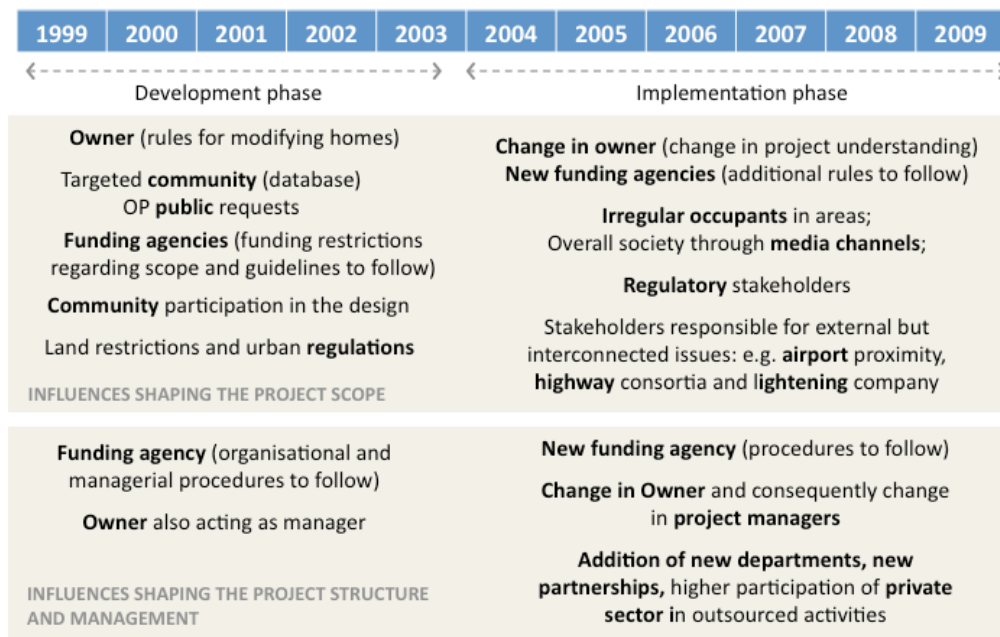


Figure 2: Summary of influences during project development and implementation phases

DISCUSSION

In summary, it could be observed that there are myriad stakeholders influencing the project in different ways. Such influences were analysed both in the project's development and implementation phase. During the conceptual phase, not only the main clients (represented by the owner and the final beneficiaries) were shaping the project's scope and purpose. The opportunities to get funding from different sources also affected the project scope and the understanding of how it should be done. The addition of different funding sources throughout the project implementation lead to changes in the project structure and in its managerial techniques due to need of following procedures. This is evidence that stakeholders cannot only influence project results and the achievement of success, but also can play an important role in determining how the delivery process should be.

Also, this project is highly subject to political decisions. With the City Council's elections in every 4 years, the PIEC is subject to political influences and recurring internal changes. The elections meant a shift on client representatives and in the way the project is understood. Partially due to the shortage of resources, the project's scope had to be re-evaluated and the adaptation was based on what the new team understood as priority. As the City Council represents the client and the project managers, many changes also occurred in the delivery process as a result of a different understanding of how things should be done (aligned to a need for coping with new procedures to be followed).

Thus, many changes in the project occurred due to economical and political influences and the need to search for and take advantage of opportunities within the

external environment. Searching for and taking opportunities from the environment results in the involvement of new stakeholders and the need to consider new influences that were not expected.

Regarding the managerial practices, it was observed that the project is shaped mainly according to the opportunities for funding and political pressures, changing through time and not having consistent managerial procedures and techniques. It is believed that the solution for this case goes beyond managerial practices in a project level. A potential solution could be a greater intervention from the Federal Government, to regulate project management practices in such cases. Increasing regulation and thus the standardization of practices could result in more robust projects, capable of coping with the demands of different national and international funding agencies as well as changes resulting from political elections. A top down intervention from the Federal government could act as a mediator between projects and funding agencies, increasing the consistency of managerial practices and then providing the opportunities to improve these practices on a project level.

This case study has also demonstrated that there is still a lack of support from the management literature do deal with such context, in which stakeholders are diverse and change over time according to external opportunities and economical or political influences. As argued by Winter et al. (2006) current managerial practices do not consider that projects are situated in a dynamic context, which is highly influenced by politics and power. Identifying and understanding how such influences affect projects and its management is a step towards the improvement of managerial practices.

More integrated and collaborative approaches have been suggested to improve the delivery of projects (e.g. Forgues, 2009 and Whelton, 2004). Relational contracts, and a greater support of technical teams on the definition of clients' requirements and project purpose are among the aspects suggested by such authors. Similar principles could be used to improve the issues related to stakeholders' management in projects. Although they cannot always be identified from the outset, it is important to consider ways of taking their perspectives into consideration, adequately managing the ones that need to be directly involved and the ones that can be indirectly involved, to avoid increased complexity. Techniques that can cope with a dynamic environment are fundamental, as the current literature does not seem to provide adequate support to deal with this issue.

CONCLUSIONS

This study is focused on the complexities surrounding a large urban regeneration project and the influences of multiple participating stakeholders. The objective of this study was to illustrate the challenges of dealing with myriad requirements that result from the influence of different stakeholders groups in urban regeneration projects. In such complex projects, the influences are diverse and change over time. This is partially due to long periods of project development and implementation associated to a dynamic environment, which is highly influenced by political and economical changes.

Despite the advances in the literature regarding stakeholder management, this study shows that in practice there are many remaining challenges of dealing with the myriad of influences that affect complex construction projects. Appropriate managerial approaches for such context are still lacking in the literature. Dealing with a highly dynamic environment and the political and economical influences that affect urban regeneration projects requires a solution that goes beyond managerial practices in the

project level. In order to improve such practices there is first a need to solve these issues beyond project scope.

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