

COOPERATIVE PROJECT DEVELOPMENT – INFLUENCE OF PARTICIPANTS ON SUCCESS FACTORS OF REAL ESTATE PROJECTS

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Successful project development is characterized by a multitude of risks and high uncertainties. Particularly for the correct assessment of the input data, such as market and location factors, as well as the right estimation of the requirements of the user, high competences are demanded by the project developer. Many decisions, which are required for a successful project development, therefore have to be made in very early stages of the development process. Based on this it has been postulated that an early involvement of stakeholders in the process of project development has influence on the project success. In this context there was executed a quantitative survey to examine competences of planners, contractors, brokers and operators to influence deducted success factors of project development. Findings revealed that the early integration of the participants influence the project success strongly. Particularly planners have a very high influence on object based factors like building design and layout of the ground plan. For optimizing the market and location factors also an integration of brokers and operators is essential. For developers it is recommended that they are informed of the possibilities of influencing the different success factors by an integration of the main participants. So the security for project relevant decisions in the early stage of the development process can be provided.

Keywords: Partnering, Integration of participants, Value of properties, Project success, Decision-making, Development process, Early involvement.

1 INTRODUCTION

1.1 Initial Situation

Until the end of the 20th Century at most European real estate markets, the demand exceeded the supply of properties. The increasing saturation of the real estate market in Europe led -- and still leads -- to a situation that buildings have to be adapted more and more to the requirements of the users and their increasing expectations (Brauer 2013). To provide market-conformity and valuable buildings it is necessary to give further incentives - beyond the basic expectations of the users - to buy or rent the corresponding property. This can only be achieved by an exact assessment of these expectations as well as a high flexibility for adapting the building to the different subjective demands of the users.

Furthermore, the rapid technological progress and the associated adaptations of standards and regulations, lead to a wealth of required disciplines and knowledge in real estate project development. The number of project participants and the complexity of the projects are increasing rapidly, resulting in higher coordination efforts and increasing project risks. Clients

and builders who usually have little or no expertise in the execution of construction projects are thus often overwhelmed. The consequence is a massive transfer of risks¹ from the builders towards the contractors of building projects (Kochendörfer 2008). Due to the high level of competition at the construction market, it is often not possible to price in these risks in building contracts or control them by the contractors itself. So, conflicts during the project realization phase already are bound to occur (Mosey 2009).

In comparison to the product manufacturing industry the construction sector traditionally is characterized by relatively low profit margins. Despite adjustments in the procurement system, for real estate projects the lowest price is still the most important factor awarding a building contract. There are existing procurement systems which consider other factors to find the best offer but they regularly are arranged in a way that also the price represents the crucial criteria. To be able to operate economically entrepreneurs are forced either to optimize their process efficiency (get the highest achievable result with the least effort as possible) or improve their income by an aggressive claim-management. This is a quite common phenomenon during the execution of building projects. The consequences of this strategy is, that the success of projects massively can be compromised. Lack of quality in planning and execution, cost and deadline overruns or conflicts during the realization of building projects are almost inevitable with this form of project execution (Girmscheid 2014).

The trend of digitalization, which has captured all economic sectors has also profound effects on the construction and real estate industry. Big-data, virtual reality, augmented reality or building information modeling are only some keywords mentioned here. By integrating these tools in a reasonable way into the project development process, they can improve the accuracy of forecasting market data, enable interdisciplinary planning on a virtual building model or allow an early beginning of project-marketing.

1.2 Cooperative Project-Development

The developments in the construction and real estate industry mentioned above do not claim to be complete but are some distinct indicators that there is a demand to react on. The increasing implementation of forms of partnering in construction management, incentive-based contract models as well as the application of lean management are indications that the market participants are trying to react on the changed conditions (Heidemann 2011, ÖBV - Österreichische Bautechnik Vereinigung 2013). When looking at the whole lifecycle of the project development process, starting with the project initiation up to a new development or demolition of the building, these aspects are often not accounted sufficiently, or they are deliberately ignored in favor to a short-term yield optimization or a fast realization of the project.

The traditional process model of project development presupposes a sequential integration of the participants. That means the integration of them is based on the project progress. In case of success-relevant decisions, which often have to be made in early phases, the participants are not yet involved in the project. Competencies which may be relevant for the further course of the project therefore are not available. This affects especially the security of forecasted data as for example the specification of user requirements, the estimation of loan and buying prices, the determination of durable costs and deadlines or the improvement of the qualities of the project. Optimizations of the project are certainly possible and necessary at later phases, but with the ongoing progression of the project the influenceability for major adaptations decrease fast and the costs for them increase rapidly (IG Lebenszyklus Hochbau 2014).

¹For example planning and coordination risks, arrangement of cost-caps or lump sums for insufficient detailed projects, etc.

Not only cooperative project management at planning and execution, also the concept of cooperative project development is characterized by the early involvement and the parallel processing through various participants. For this the participants not only come from the spheres of planning and execution, they are included from all phases of the project development process (Fröch 2013, Harrer and Mauerhofer 2017). Consequently operators, users, real estate brokers, financiers or investors, etc. are integrated in the decision-making process at an early stage. So therefore the different participants are already involved during the phase of project conception where the feasibility and efficiency of the project are checked and the main decisions for the ongoing project are made.

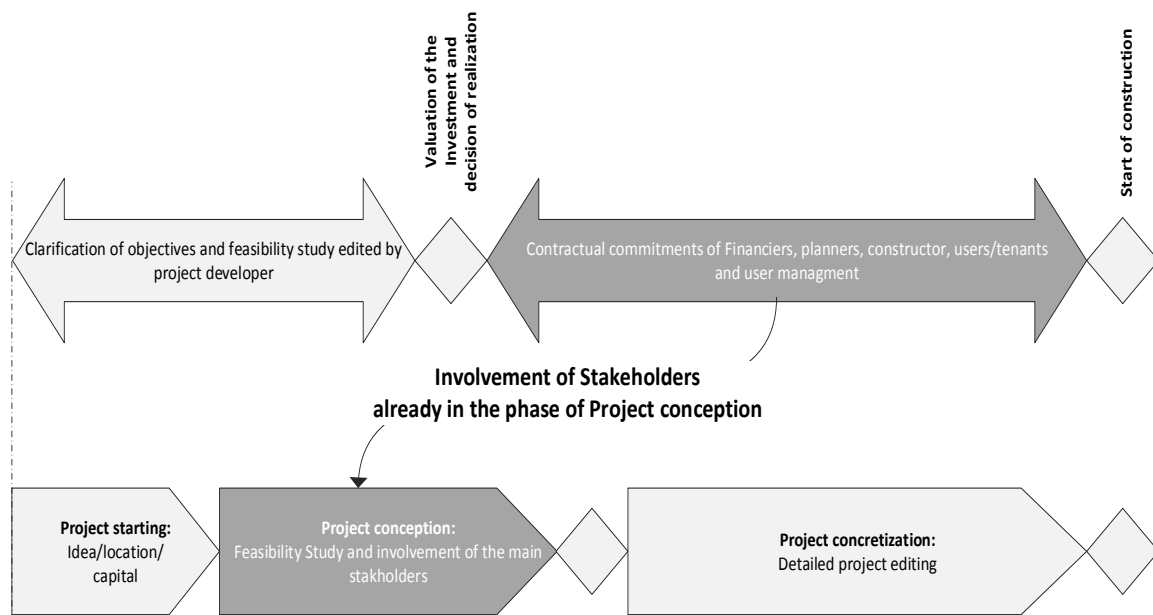


Figure 1. Integration of stakeholders in the phase of project-conception (Harrer 2016).

Based on these considerations it was postulated that project decisions which are regularly made by the project developer can be influenced by the early involvement of the respective actors. The aim of the research is to quantify the influence from essential participants on different success factors of the development process, in order to be able to give project developers an assistance to optimize the value of their project by applying a cooperative process model.

2 METHODOLOGY

Considering the market value of real estate properties as the basis for its recoverability, it can be assumed that all factors affecting its value are reflected by it (Eser 2009). That means, that the willingness of a tenant or investor to pay the appropriate rental or purchase price only will be given if all decision relevant parameters are involved in this price. This approach is also pursued by Fröch (2013) in his work, in which he demonstrates the optimization of project development by integration selected parameters of sustainability. In order to quantify the influence of the participants, based on the parameters to calculate the market value of properties, nine key success factors were defined. These are *location, market, building design, layout of ground plan, outdoor areas, building quality, flexibility of using, interior design and comfort*.

By using a standardized questionnaire, 680 experts were invited to estimate the possibilities of incorporating the competences of planners, contractors, brokers and operators to these factors. 83 questionnaires could be used for the evaluation, reflecting a responding rate of approx. 12%.

To each factor were assigned three to four task areas of the project development process on which the competences of the participants could be estimated by using a five-digit Likert scale. To quantify the answers a score from zero points (no competence) to four points (high competence) was applied.

3 RESULTS

Figure 2 vividly illustrates the possibility of bringing in the competences of the participants for the nine defined success factors of real estate properties.

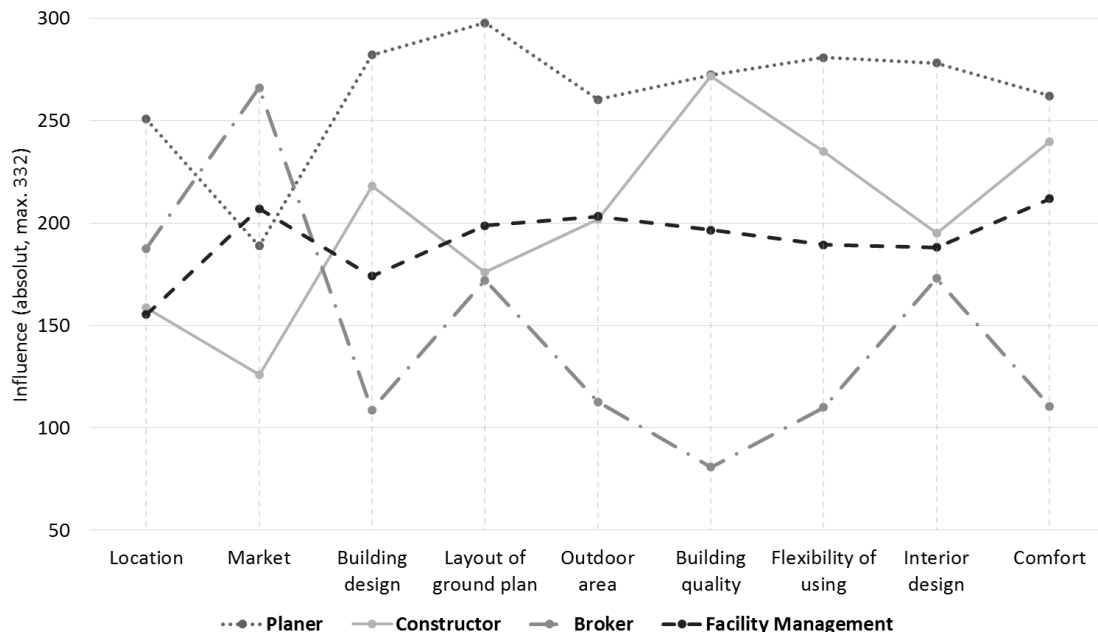


Figure 2. Influence of project participants on success factors of project development.

The integration of *planners* has the highest impact on almost all factors. In particular the object-dependent factors such as building design, layout of ground plan, interior design, etc. can be optimized by planners. The reasons for this are, on the one hand, the high level of competence in the planning of the building, but also the independence of planners to estimate costs and deadlines as well as the securing of building quality during the execution phase.

The early involvement of the *constructor* has the most impact to improve the quality of the building. By setting specific incentives, conflicts between client and constructor can be reduced. The security of predicted costs and target dates also can be increased by the involvement of the constructor in the early phase of project development.

The involvement of the *broker* is mainly important to optimize the assessment of market and location factors. High competencies in forecasting regional developments, the assessment of rental income or retail prices as well as the information on current projects which are standing in competition are crucial task areas which can be affected.

The effects of integrating the *facility management* is estimated in the middle of the defined success factors. This is mainly because of the high experience required for estimating the costs for operating buildings as well as the assessment of durability and lifetimes of used materials. Also, relatively high competences for defining adequate user requirements are attributed to the Facility Management.

4 CONCLUSION AND FURTHER RESEARCH

The results of the conducted expert survey shows the possibilities of the participants to influence the nine derived success factors in the early stage of project development. For an optimization of the individual factors it is obvious which participants should be involved in the project development process early. For the project developer so it is possible to decide which participants are important to improve the success of the project. One of the main key findings is the high influence of planners to mainly all deducted success factors. So it is absolutely essential to implement the planner early in the development process. Also, the integration of the broker is very important for a correct assessment of the market factors like the estimation of user requirements or the regional development.

The next step of the research is to observe the influence of the nine deducted success factors on the determination of the market value. So it is possible to show directly the relative influence of the different participants on the value-determining parameters. An independent part of the further research is to analyze different project organization forms how the participants can be integrated into the project development process. Which project types are suitable for a cooperative processing, what aspects are important for the implementation and so far, an early integration of the participants is practicable.

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