

Key Management Decisions Crucial for the Success or Failure of Construction Projects

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Abstract

The paper deals with decision-making processes in the sphere of project management in construction industry. The current status of the construction sector, and main changes of business and market trends recently operated in the central and south-eastern European countries, are briefly presented in the introductory part of the paper. A particular emphasis is placed on results obtained through analysis of changes in business operation, including changes in management sector. There is a strong perception that the management process in construction sector has not as yet reached appropriate levels so that, compared to other sectors, construction is more vulnerable to negative deviations in the project realization process. Key decisions taken in the process of project management are fully considered and analyzed, based on their significance for the project success or failure. A detailed description of 10-15 key sources of possible project failure is given in the central part of the paper, including recommendations for management actions needed for the successful administration of projects. Brief conclusions as to future steps to be taken to improve project management practices on construction projects are given in the final part of the paper.

Keywords

Construction project, project management, success, failure.

1. Construction sector in new EU members and candidate countries

The sector of construction is very important for all economies and political systems. New EU member countries and current candidates for accession to the EU, as well as the countries planning to join the EU at a later stage (some of the central and south-eastern European countries - C&SEC) are not ranked among the top developed countries in Europe. Despite significant changes made in the economic strategies, production and project development policies, these countries are still oriented towards the labour dominated sectors, such as the sector of construction. Significant share in the GDP (7-10%) of most countries, and a very good and consistent workforce with significant numbers of employees, may be cited as two key arguments for advocating construction in C&SEC.

In previous paper (Radujkovic, 2002), we analyzed and described main changes operated during the transition process, as well as the ways in which they have been influencing construction industry. The changes are made in almost all companies and countries, so that nowadays the construction sector in these countries is largely privatized, adjusted to new regulations, restructured, profiled and specialized. In most of these countries, the number of persons employed in the sector has fallen, but the number of businesses has raised. International operators stepped in these new markets and gained control of some local construction companies. Contractors are increasingly faced with a new profile of more demanding clients, and with a strong foreign competition.

2. Typical features of construction sector

The construction sector has a number of characteristics that differentiate it very much from other sectors. Thus construction is a branch of economy that is quite low on the list of attractive investments principally because it is not dependant on high-end technologies, and the margin of profit is comparatively low. However, the attractive side is a generally high value of bids, and significant employment possibilities for many job seekers. Main characteristics that differentiate construction from other sectors can be summarized as follows (Manseau, 1999.; Carassus 1999; Parova, 2003):

- project-based approach with unique and expensive products,
- contract-based and highly fragmented industry with many stakeholders,
- complex and expensive products which can be durably adapted and modernized,
- on-site production,
- considerable share of human work in the production,
- producer does not control the totality of the process,
- innovation appears to be more limited than in other sectors (R&D, patents,...),
- temporary organizational structures, and multidisciplinary teams.

It is clear that these characteristics are typical for systems that are highly dynamic on the one hand, and very complex on the other. Such systems require very demanding management and sophisticated organizational capabilities.

3. Management and technologies in construction industry

Although highly oriented towards human labour, construction industry operators are continuously seeking new technologies and striving towards a more effective realization of work. Current orientation toward development of technical and technological components is a logical response to the growing complexity of processes, to the more demanding objectives and strife to make hard work easier, and especially to efforts increasingly made to make the industry more productive and cost effective. However, it is known that the development of these components alone, i.e. development without parallel development of other components of the construction process, can not lead to good business results. The experience teaches us that the harmonious development of technology and management has always been difficult to achieve. New technologies require new organization and new management methods, so that the two areas are quite interconnected. The construction industry is currently characterized by faster development of techniques and

technologies, when compared to development of new management approaches and methods. The resulting gap between the current development of construction technologies on the one side and management practices on the other, significantly lower benefits that could otherwise be reaped from the use of new technologies. Current patterns regarding development of new technologies and introduction of novel management practices in the Czech and Croatian construction industries may be described as quite similar (Parova, 2003). Thus in both countries there is a strong need for continuous development of new technologies and for a much faster progress in the sphere of management.

4. Project success criteria

Numerous studies and analyses have so far been made about project success or failure (cf. proceedings of PMI 2002 Seminars & Symposium, or PMI Global Congress North America 2004). According to a basic definition, success may be described as completion of an activity within the constraints of time, cost and performance. The definition of project success has been modified to include completion (Kerzner, 1992):

- within the time allocated for realization of the project,
- in keeping with initially scheduled costs,
- in accordance with appropriate performance or specification standards,
- in accordance with requirements specified by the customer/ user,
- with minimum changes to the scope of work, unless agreed to by the interested parties,
- without disturbance to the planned flow of work on the project,
- without changes to the corporate culture.

The notion of project success can be expressed in much simpler terms as “achieving continuous flow of benefits during the life cycle of a project”. If benefits are properly shared among stakeholders, the latter will define the project as positive. Regardless of the type of definition about project success, it should be agreed upon by key participants at a very early stage, because each of them can have different priorities and very special expectations. It is obvious that success attributes can be both quantitative and qualitative. The success should not be treated as a mere monetary gain, but rather as a harmoniously balanced positive outcome of a business enterprise. Therefore, the attributes of each success formula should be: defined, agreed, measurable and confirmed.

5. Decisions for success or failure

While all stories of project success seem so simple and similar, every failure is quite an original event. This premise can also be applied to decision systems regarded as generators of either success or failure. After the "battle" all positive decisions seem so logical and natural, while negative ones suddenly seem so strange, out of place and silly. Obviously, the decision making is closely related to the availability of information, but the problem lies in the fact that the two are oppositely distributed in time. The process may be described as follows: first we have many decisions while later on we receive feedback with correct information about impacts of such decisions. Therefore, although we are fully aware of the criteria and objectives, i.e. about success variables, this knowledge may be helpful just to a limited extent, as a lot of room will always remain for mistakes that lead to failure. Many authors have suggested different priorities of actions to be taken to

achieve and measure success on commercial projects (PMI World Congress America ,2004). They are in most cases related to some of the project management functions such as the risk management, stakeholder management, scope management, control, knowledge management, etc. Many views have also been expressed about key mistakes committed on a variety of projects. IT projects (Sommer, 2004) can be affected by several negative influences like: project is not a part of a strategic plan, lack of executive sponsorship, poor technology evaluation, no customer involvement, poor planning, rolling out at a wrong time, underestimating business changes, and lack of risk analysis. The question is how does this apply to construction projects?

The construction sector benefits very much from experience gained in other fields of expertise, but also from past mistakes committed in the sector itself. During our recent risk-oriented survey (Radujkovic 2004), we placed the focus on negative project outcome scenarios, and analyzed opinions formulated by key project participants. The participants in the survey were asked to rank five key decisions (and related attitudes) that lead to failure. Responses were collected from 332 individuals that held key positions on a variety of construction projects in the period from 1998 to 2003. The following responses were obtained on an upper level, mostly from clients, in early project phases:

- isolation of project objectives from overall business policies,
- lack of support from stakeholders,
- lack of clear project scope,
- no life cycle criteria,
- lack of risk analysis.

The following responses were gained on an implementation level, basically from contractor groups:

- precarious optimism,
- poor planning,
- inadequate communication,
- underestimation of fragmentation,
- lack of procedures for changes.

Project managers had their own view about the problem:

- insistence of clients on realization of projects without adequate documentation,
- client-generated late changes in project scope,
- unrealistic goals (set by clients and contractors)
- lack of knowledge about PM techniques and insufficient use of such techniques (all participants)
- contract award dominantly based on bid price.

It is interesting to note that all respondents put an emphasis on management, and just a few of them on technology-related issues. In addition, the diversity of responses confirmed that failure scenarios may be quite varied. An attempt was made to obtain consensus of different project participants on some general failure scenarios. It was not simple, because some degree of similarity of opinions could be expected only with respect to some particular project phases. The following scenarios are typical for the project realization phase:

- late changes in scope not accompanied by changes of initial project objectives,

- emphasis on savings in early phases of the project,
- tolerance of inefficient monitoring and inspection practices,
- acceptance of poor implementation planning practices,
- underestimation of communication problems.

Our key results are very much close to some previous suggestions related to the project assurance function (Tilk, 2002). It particularly carries risk, monitoring and control, changes and best practices functions, and ensures proper communication. The assurance should be a regular part of the project management function. However, our experience confirms that it is not the case on many projects. In such instances, it should be set as a separate function by the client, but should also be closely related to management.

6. Conclusions

Project do not fail, people do (Gray, 2002). It happens because of human illusion that something is certain. Although successful construction projects usually have balanced and accepted goals and a defined scope, this can hardly be considered as sufficient. The project success is a defined, agreed, measurable and confirmed outcome of an activity. Successful projects are characterized by the dynamic project management, powerful communication among stakeholders, and a strong synergy of creative decisions. The risk management is an important part of the process, and the project assurance function is integrated in the system.

7. References

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