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Assessing and prioritizing major projects

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1 Project status

The project is primarily proceeding as planned. We have been able to identify factors that are generally used to rank projects. In addition we have familiarized ourselves with the present process that is used in ranking and discussed with the principal about the availability of additional data. Added to that, we have done first drafts for the prioritizing process and found sources from which to collect data based on literature research. However the mathematical aspect of the project is slightly reduced in a sense that estimation of parameter weights may turn out to be challenging. We have just recently obtained historical data on which the estimation will be based on. Lots of the success of mathematical estimation depends on the findings we are able to derive from this information.

The project is on schedule and we should be able to conclude our project on time. However the time buffer for unexpected delays has narrowed and thus we must make sure that the phases are completed on time in the future as well.

2 Findings and results

2.1 Literature review

The problem was firstly approached with a literature review consisting of books in the fields of project management and marketing. We were able to identify factors that are used to rank projects under various circumstances. These are depicted in Figure 1 that describes the division of the factors into categories. Each category includes various measures that may be used in ranking. The suitability of each criterion has been discussed with KONE to find out their availability and suitability for ranking process.

The applicability of each factor at the different phases of tendering process is under review at the moment.

Division of project prioritisation criteria

Project attractiveness						
Financial	Partnership	Strategic	Market	Resources		

Figure 1 Division of project prioritization criteria

2.2 Current Ranking Process

In the Figure 2 the general process in the Major Projects Unit (MPU) is described. The process begins when either the MPU gets a direct request or the country organisation gets a new project through active selling. Once the pre-tender participation has been decided, the sales organisation starts to look after the project. The technical designing follows quickly behind. Their main task is to participate in the planning and designing phase of the building. They also help to decide on the specification of the elevators. This helps the company to win the tendering process. In the beginning of the pre-tender phase a small risk analysis and before the tender phase a more thorough risk analysis is conducted.

The winner of the tender phase gets the project and from that moment on the main responsibility of the project moves on to project management. Project management is in charge of executing the plans. Mat-2.177 Seminar on case studies operation research Intermediate report 3/28/2007

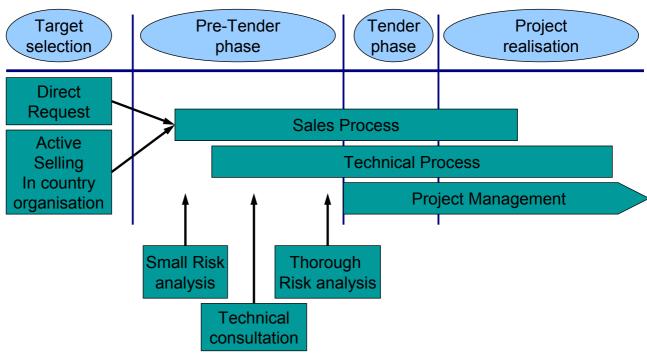


Figure 2 The general major project process at KONE

3 Action plan

As mentioned before the project is on schedule. The first phase (planning) has been completed and the second phase (research) is almost ready. The last task in the second phase, process design, is now in motion. Project schedule remains the same as in initial project plan and responsibilities haven't changed either.

Next steps in the project will be problem solving and reporting. The third phase consists of tool construction, tool testing and reporting. This phase will continue until the week 15. Also the final reporting will begin as soon as possible. The final report submission deadline is 23.4.2007 and the final presentation session will be held 27.4.2007.

3.1 Assessing the present situation and identifying improvements

The interviews at KONE have been done, and on the grounds of those interviews a process chart will be constructed to describe the prevailing sequence of actions. Process chart will then be used to find and identify possible improvements.

Having identified the improvements we construct a standardized procedure for assessing and prioritizing large projects.

3.2 The outcome

The outcome of the project is intended to be a standardized procedure for prioritizing processes. This should include a process chart describing the evaluation phases of a project and required information. Procedure may also contain excel-model.

4 Risks

The possible risks for this project are presented in Table 1. Table 1 Updated risk matrix for the project

Risk	Effect	Probability	Preventive actions
The framework/model for the pre-tender- and tendering phases for major projects could not be found	Large	Very small	Continuous communication with Kone, extensive literature research already conducted
The needed information, historical data etc. not available	Large	Small	Have received data, analyzing in progress
Schedule-related problems	Moderate	Small	Following the schedule and continuous monitoring of the state of the project
The correct factors and their weights for prioritizing could not be recognized	Moderate	Moderate	Most factors found, but their weights remain unclear
The mathematical model could not be found	Small	Moderate	Extensive literary research and getting acquainted with optimization techniques
Problems related with the scope of the project	Small	Moderate	Careful defining and demarcating of the objectives
No information about how the created model works during and after its implementation not available	Small	Moderate	Communication with Kone, well-defined regulations for the process, giving lucid guidelines

5 References

- Rodney Turner, J. 1999. The Handbook of Project-Based Management. Second Edition. McGraw-Hill.
- Walker, Mullins; Boyd, Larreche. 2005. Marketing Strategy: A Decision Focused Approach. Fifth international Edition. McGraw-Hill.
- Kotler and Keller. 2006. Marketing Management. Twelfth edition. Prentice Hall.
- Artto, Karlos; Martinsuo, Miia; and Kujala, Jaakko. 2006. Projektiliiketoiminta. First edition. WSOY Oppimateriaalit Oy.
- Khaled Al-Reshaid; Nabil Kartam; Narendra Tewari; Haya Al-Bader. A project control process in pre-construction phases: Focus on effective methodology. Engineering, Construction and Architectural Management. 2005; 12, 4; ABI/INFORM Global. pg. 351.