Assessing the Importance of Project Management Soft Competencies in an IT and Telecommunication Company

LÁSZLÓ BARNA
PH.D. STUDENT

e-mail: kkkbarna@uni-miskolc.hu

SUMMARY

R&D projects in the IT and telecommunications sector have some special characteristics and managing these requires specialist knowledge. In these projects (as is true in general also) not only project management knowledge and professional expertise, but also soft competencies play a major role. The question is which soft competencies play what role. It is a great challenge to identify and prioritize the required industry-specific soft competencies related to project management. The aim of this research is to identify the key soft project management competencies and furthermore to highlight those competencies that require development. This paper will present findings on the most important soft competencies.
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INTRODUCTION

Project management has been called both an art and a science. The necessary skills are common to both. There is no question that the best project managers are also outstanding leaders. They have vision, they motivate, they bring people together, and, most of all, they accomplish great things. These specific characteristics are consistently found in successful projects in every industry (Verzuh, 2008).

A project manager applies knowledge, skills, tools, and techniques to project activities so as to meet the project requirements. A project manager's job is essentially one of integration. It falls to a project manager to maintain equilibrium between the various project knowledge areas like human resource, risk, communications, procurement, scope, time, cost, and quality and project processes like initiating, planning, executing, Controlling, and Closing (Gokhale, 2005).

As this paper examines IT and telecommunication projects, it has to take into consideration the requirements that technology project managers need to fulfill (Murch, 2011):

➢ Define and review the actual business case and requirements by regular reviews and monitoring to ensure that the client receives the system that they want and need.

➢ Initiate and plan the project by establishing its format, direction, and base lines that allow for any variance measurements and managing change.

➢ Establish partnership with the end users, work with project sponsors and other management levels to establish the progress and direction of the project by achieving goals, reaching targets, solving problems, and mitigating risks.

➢ Manage the technology, people, and change in order to achieve goals, reach targets, and deliver the project on time and within budget.

➢ Manage the project staff by creating an environment conducive to the delivery of the new application in the most cost-effective manner.

➢ Be able to manage uncertainty, rapid change, ambiguity, surprises, and a relatively undefined environment.

➢ Manage the client relationship by using an appropriate, direct yet complete and formal reporting format that complements a respectful and productive relationship.

➢ Drive the project by leading by example and motivating all concerned until the project accomplishes its goal.
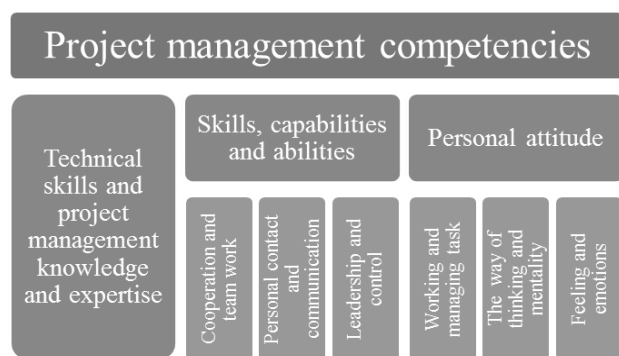
PROJECT MANAGEMENT COMPETENCE ASSESSMENT FRAMEWORK

One of the first challenges of this project is the development of a shared global understanding of what constitutes competence. Competence is a term which is widely used but which has come to mean different things to different people. In my opinion the definition from Parry (1998) is a generally acceptable definition, and the reason I have chosen this definition is that has been applied to a project management context. Parry wrote that competency could be described as "a cluster of related knowledge, attitudes, skills and other personal characteristics that …

➢ affects a major part of one's job,
➢ correlates with performance on the job,
➢ can be measured against well-accepted standards,
➢ can be improved via training and development" (Parry, 1998:60).

A competency is what a successful employee must be able to do to accomplish desired results on a job. Competencies are built up over time and are not innate. It typically takes experience on the job to build competencies. Knowledge, skills and abilities, by contrast, might be brought into the job by entry-level employees (Crawford, 1997).

After examining several types of competency models, systems and groupings (Deák, 2006; Dulewicz and Higgs, 2005; Görög, 2007;Murch, 2011; Pinto, 2009; PMBOK, 2011; Turner, 2007;), I have decided to use the following division. The following figure shows the classification of the project management competencies which has been used in the research work.

(author's own work)

Figure 1. Project management competencies

Personal Attitude and Skills, Capabilities and Abilities

IT project managers must be able to motivate and sustain people. Project team members will look to the project manager to solve problems and help with removing obstacles. IT project managers must be able to address and solve problems within the team as well as those that occur outside the team. There are numerous ways, both subtle and direct, in which project managers can help team members. Some examples include the following (Murch, 2011):

Figure 2. Main considerations for managing IT projects

IT project managers need other key skills besides those that are purely technical to lead and deliver their projects successfully. A good project manager needs to understand many facets of the business aspect of running a project, so critical skills touch on expertise in the areas of organization, communication, finance, and human resources. The following are examples of the management topics used in training efficient IT project managers (Murch, 2011):

Figure 3. Examples of the management topics used in training efficient IT project managers

Technical Skills and Project Management Knowledge

There are two schools of thought about the level needed for technical skills. Some project managers prefer to have little technical knowledge about the projects they manage, preferring to leave the technical management to other junior managers, such as programming managers or network managers. Others have detailed technical skills of computer languages, software, and networks. There is no hard and fast rule. It really depends on the type and size of projects, their structure, resources available, and the project environment (Murch, 2011).

As with all employees, project managers should have the technical knowledge and skills needed to do their jobs. If managers lack these skills, training is one option, and being mentored or coached by a more experienced

individual is another. Senior management should ask the question themselves "Do your project managers need more technical skills than they already possess?"

In larger complex projects, such as systems integration projects or multiple-year projects, there are frequently too many complex technologies for the project manager to master. Technical training that provides breadth may be useful. In smaller projects, the project manager may also be a key technical contributor. In this case, technical training may enhance the abilities of project managers to contribute technically, but it is unlikely to improve their management skills. One thing is abundantly clear — the project manager is ultimately responsible for the entire management of the project, technical or otherwise, and will require solutions to the technical issues that will occur.

RESEARCH METHODOLOGY AND ASSESSMENT RESULTS

A questionnaire was designed consisting of 8+99 statements. The first part of the survey has 8 general or introductory questions about project management experience, the field of the projects, etc. The second part contains 99 statements and each statement represents a soft competency required for managing projects. I have used the six competency groups (see Figure 1), some of them divided into two or three subgroups, in order to help the project managers to see the whole context.

Every competence has to be assessed through answering two questions. The first question is "How typical is the competence in your field?" and the other one is "In your opinion how important is the competence in your field?" Every project manager evaluated each competence from two points of view on a one-to-seven scale.

I have evaluated the survey in three ways. In this paper I will introduce the first, in my opinion the most interesting one. This means I have transferred the results into coordinates, using the standardization method.

A total of 21 project managers who are working on hardware, design and maintenance projects at the examined IT and telecommunication company answered the questionnaire, evaluating each competence in terms of its importance and typicality. It is an online survey and the project managers were asked by the company management to complete the survey. Thus I was able to compare not only the answers of the project managers but also the two dimensions in each sector. The competencies are classified into six groups, so I was able to compare the competency groups also with each other. Another part of the evaluation of the results is factor analysis, so I have identified competency clusters as well. The coordinate system contains the following quarters:

➢ Important and typical,
➢ Not typical but important,
➢ Not typical and not important,
➢ Not important but typical.

In the first quarter are found the competencies which are both important and typical according to the project managers. The second quarter contains the important but not typical or possessed competencies, so this is the most interesting quarter because these competencies need to be improved, according to the project managers. The third quarter contains competencies which are neither important nor typical according to the project managers. The fourth quarter contains competencies which are rated as not important but typical by the project managers. Since this research is based on self-assessment, I assumed that the project managers would mark competencies 'important' which were typical in their field, and give a low grade for importance in the case of less typical competencies. All of the 99 competencies can be seen in the following figure (Figure 4). Most of the competencies are in the first and third quarters, but there are also some of them in the second and fourth quarters. The dotted curve shows my expectation; before the study results were analysed. My expectation based on the fact, the survey is a kind of self-assessment, so people often evaluate their competencies as important, and their insufficiency as not so important.
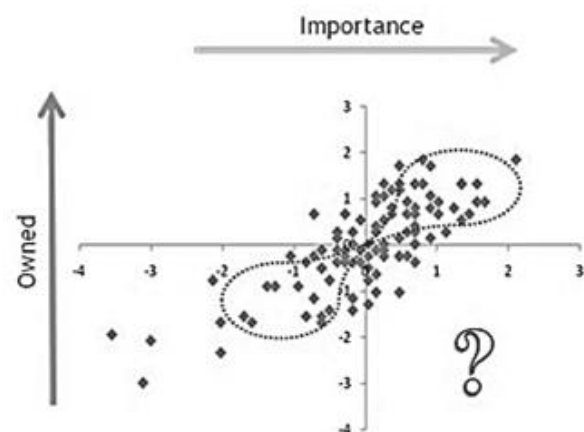

Figure 4. All 99 competencies displayed in a coordinate system; dotted line: author's expectation
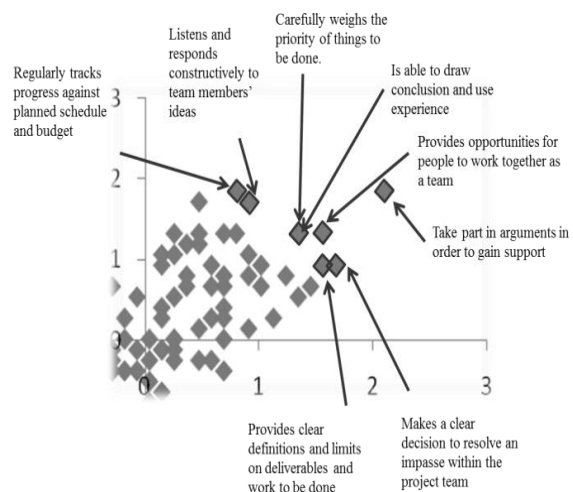

Figure 5. Quarter 1: High importance, high typicality

Figures 5 and 6 show the most relevant points of the research; the highlighted results are the highest rated coordinate points of the competencies. Figure 5 displays the competences rated as most typical and most important, while Figure 6 presents those rated as important but not possessed by the respondents.

The results of Figure 5 show that the project managers of the company examined think the following competencies are both important and typical in their field, so they rated these competencies as crucial in their case and they also evaluated themselves as possessing them:

➢ Regularly tracks progress against planned schedule and budget,
➢ Listens and responds constructively to team members' ideas,
➢ Carefully weighs the priority of things to be done,
➢ Is able to draw conclusions and use experience,
➢ Provides opportunities for people to work together as a team,
➢ Takes part in arguments in order to gain support,
➢ Makes a clear decision to resolve an impasse within the project team,
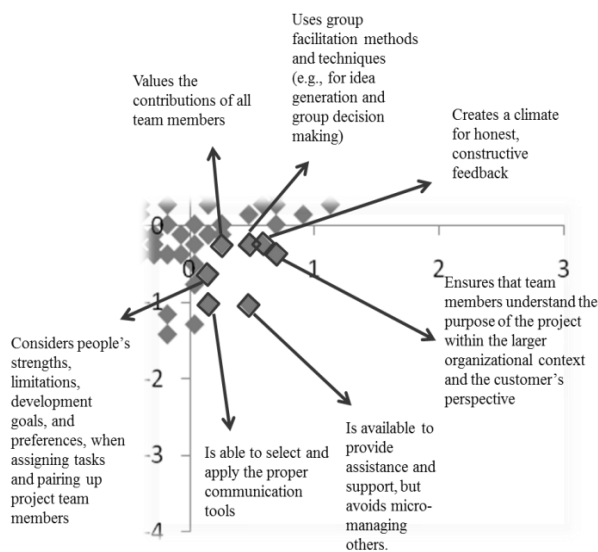➢ Provides clear definitions and limits on deliverables and work to be done.

Figure 6. Quarter 2: Low typicality, high importance

The other quarter of the coordinate system that includes key competencies is the second quarter. In case of the quarters one and two importance ranks higher, so in my opinion these are the key competencies. In my opinion the second quarter (Figure 6) contains the most important information because it presents the competences which require development according to the project managers who responded to the questionnaire. The highest rated points of the second quarter are the following:

➢ Considers people's strengths, limitations, development goals, and preferences when assigning tasks and pairing up project team members,

➢ Values the contributions of all team members,
➢ Is able to select and apply the proper communication tools,
➢ Is available to provide assistance and support, but avoids micro-managing others,
➢ Ensures that team members understand the purpose of the project within the larger organizational context and the customer's perspective,
➢ Creates a climate for honest, constructive feedback,
➢ Uses group facilitation methods and techniques (e.g. for idea generation and group decision making).

The results show that the first step has been taken, for it is a really valuable step that the project managers have realized the need for improvement. It is interesting to note that three of the seven competencies to develop are in the Cooperation and Teamwork competence category and another three are in the Leadership and Control competence category.

My goal is find the key project management soft competencies in R&D projects for different industries and sectors. After carrying out the research I shall be able to forecast the required competence developments in those sectors. This research is the first milestone in a complex research project that I would like to carry out. The goal is to compare several innovative industries and sectors to get a wider picture about key project management competencies in terms of projects dealing with R&D.

The results of this research could be applied during the life of projects because after highlighting the key soft project management competencies of the sectors examined, the identification of the areas to develop will be much easier, this could be very useful e.g. in case of hiring and training project managers. These results could help in a situation when a project manager changes sectors, and he or she arrives in a new, also highly innovative environment, but the new projects deal with different sides of innovation. Based on the results it could be forecast which competencies should be strengthened in order to manage projects appropriately and successfully in the new environment.

CONCLUSIONS

This questionnaire study on competencies of managers of R&D projects was completed by project managers in IT and telecommunications. Here data is presented using a coordinate system, placing competencies by their ratings of importance and typicality. Results show that IT project managers feel that certain skills are especially important and typical in their field, including regularly progress tracking, support team work, clear decisions, listens ideas, priorizing, etc... On the other hand, they identified certain skills as important yet less typical. Interestingly, these tended to fall in the two competency groups of Communication and teamwork and Leadership and control.

Since the research was based on self-assessment, my hypothesis was that in case of competencies with higher importance typicality would also be higher, and vice versa. However, since competencies with higher importance and less typicality were also identified, these are the competencies that require improvement. The results show that the first step toward improvement has been taken in the company examined, for it is a valuable step that the project managers have realized the need for improvement, as shown by skills considered important yet not typical.

This study will continue with analysis of the survey data using other methods, and then be expanded to R&D projects in other areas of industry, in an attempt to provide an industry-specific catalogue of essential competencies for project managers. The findings should be of interest to project managers and companies that invest in R&D projects.

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