

Project Management and Intellectual Property

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Abstract

Recent approaches consider the knowledge as a determinant factor in the current economy, moving from the knowledge-based economy to the knowledge driving economy. (European Commission - Directorate-General for Enterprise 2004) In that context, along with the growing importance of the intangible assets, and along with the changing criteria for defining the competitive advantages, the intellectual property related issues are increasingly addressed. Therefore, the intellectual property management science has evolved in the past few decades and it is becoming more and more important among the overall management science and practice. As a part of this science, the intellectual property management in the field of project management has just started. It is related to intellectual property components that appear, interfere and result from the project management processes. This paper is trying to find out the place that the intellectual property has in project management, to point out the previous similar approaches and to provide directions for further research in the field.

Keywords: *project management, intellectual property, knowledge, intellectual capital, intangible assets, management.*

JEL classification: O34, M00, O31

1. Introduction

As the project management science evolved, becoming one of the most important management fields, the influence of intellectual property components over the general objectives of the projects, has increased. In the same time, the general recognized rules and standards, in the field of project management, were established, offering the base for studying the intellectual property in the project management.

2. Project management, art and science

Projects and project management topics are very common in economic literature today. The multitude of approaches, however, creates some differences in the assumptions, working methods and the obtained results. One of the initiatives

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that attempt a compromise between all these approaches, trying to provide a unified vision on projects and project management, is the Project Management Body of Knowledge (*PMBOK*), published by the Project Management Institute (Project Management Institute, 2004, 2008). This document “provides a framework for project management execution, i.e. a broad set of management dimensions to cover the vast variety of possible projects in many industries”. (Müller & Rodney, 2001)

PMBOK divided its management processes into nine knowledge areas. But there is no consensus in the field of project management regarding the number and type of knowledge areas that has to be considered. (Haapasalo, Pikka, & Kess, 2002)

Thus, different approaches have taken into consideration different knowledge areas for the project management processes, as follows:

- PMBOK – 9; (Project Management Institute, 2004, 2008)
- Paulk et al. – 6; (Paulk, Webr, & Garcia, 1993)
- Shtub et al. – 7 (Shtub, Bard & Globerson, 1994)
- Buttrick – 6 (Buttrick, 1997)
- Kerzner – 5 (Kerzner, 1995)

Therefore, although there is no consensus regarding projects and project management, the PMBOK is trying to become a standard in the field, as it is making efforts to improve edition after edition and as it is becoming more and more used in the field of project management.

This, however, provide only the basic guidance to project management and the implementation and successful application of these processes, tools and techniques used in various processes of the project, are issues to be considered separately. (Morris & Hough, 1987)

Thus, recent studies and research, as well as recent project management applications are less oriented on the operational aspects of projects. (Jugdev, Thomas & Delisle, 2001)

In this context, project management is considered both art and science. Understanding the processes, tools and techniques that are specific to the project are representing "hard skills", on the one side, and knowing the ways they should be applied and detailed are considered as "soft skills", on the other side. (Jiang, 2002)

The latter are considered largely responsible for the success or the failure of various projects (Jiang, 2002), and some researchers argue that the best way to understand them is "experiencing ". (Morris & Hough, 1987)

Therefore, "hard skills" are mostly provided by the literature and PMBOK is an important element in making the processes, tools and techniques generally accepted in the project management practice available to project managers.

In addition, however, "soft skills" are elements of the same importance for a project success. A non-exhaustive list of them is presented as follows (Jiang, 2002):

- Communication;
- Organization effectiveness;

- Leadership;
- Problem solving and decision making;
- Setting up the team;
- Flexibility and creativity;
- Reliability;
- Time management, stress management, customer relationship management, expectations management, mentoring, etc.

To these, we can easily add the following:

- Knowledge management;
- Intellectual property management;
- Standards;
- Safety;
- Rules and regulations;
- Good practice rules;
- Etc.

But we must have in mind that projects are becoming increasingly specialized, and their success depends more and more by specific knowledge and skills in a particular field. For example, although a project to launch on the market of a new food product can be organized as processes, following the basic structure provided by the PMBOK, a project in the nuclear field will be very different, even if the latter could use the same basic structure provided by the same PMBOK. Thus, the term "soft skills" may also include aspects specific to the field of the project.

This is explained in another terms by dividing the specific project management processes in project management processes and product-oriented processes (or processes oriented on the expected result of the project). (Haapasalo, Pikka, & Kess, 2002) As a result, the project management processes are related to the description and the organization (being often found in the specific literature, as PMBOK), while the product-oriented processes are oriented to those aspects that are specific to the expected result of the project. It can be considered, in this way that the project management processes are related to "hard skills" and product-oriented processes are related to "soft skills".

But we have to bear in mind that those two types of processes are interacting and overlap during the project's implementation (for example, the scope of the project cannot be defined without understanding how to create a new product or service), and therefore, the overall success depends on each.

In conclusion, a suggestive representation on those both major sides of project management can be as follows in figure 1.

While the studies and the main results that can be found in the literature, are related, in the overwhelming majority, by those items that are part of the first category ("hard skills"), there is a large gap in terms of knowledge and available experiences for the two categories and the need to study the elements in the second category is increasingly felt.

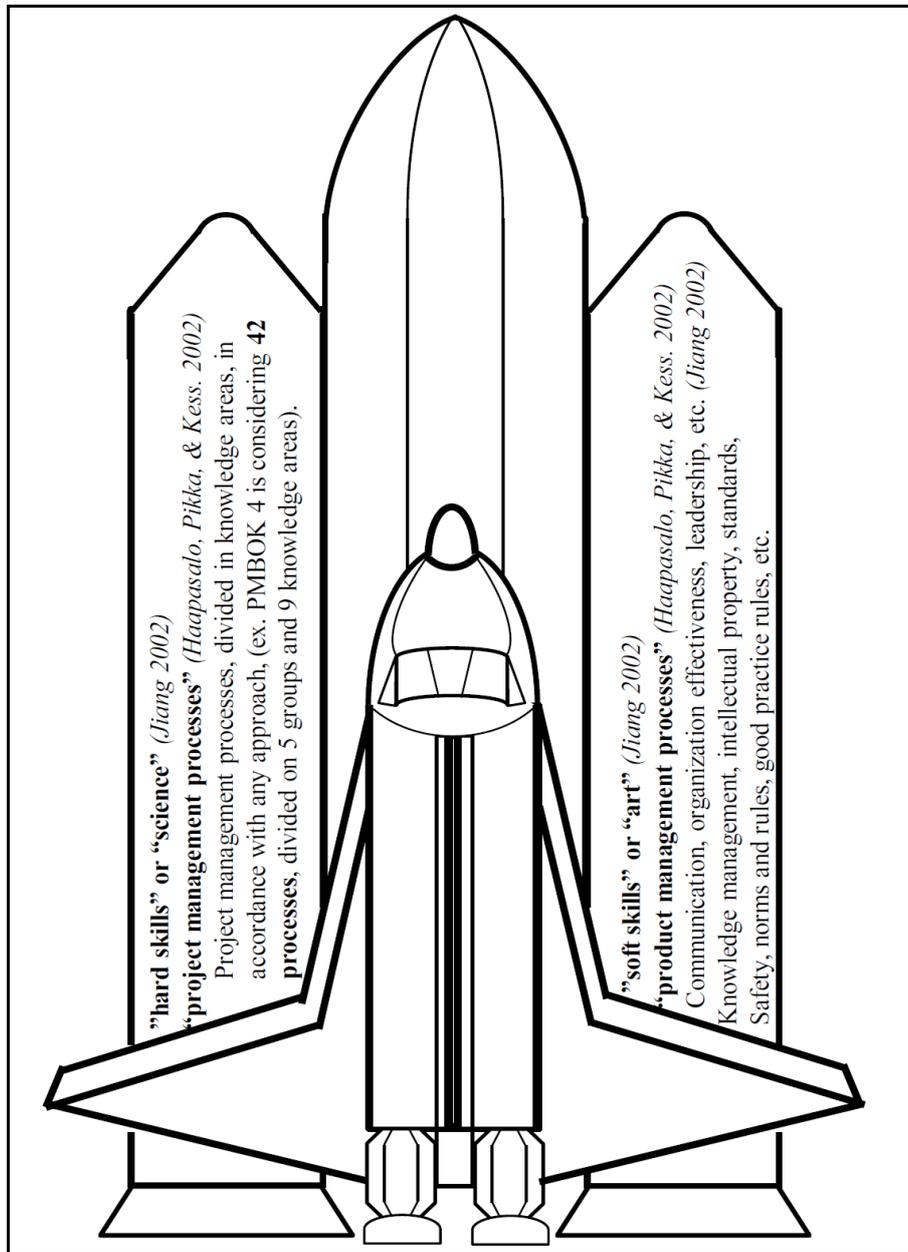


Figure 1 Representation of the "hard" and "soft" skills of the project management

In the same time, studying the latter, it becomes increasingly interesting with the increasing complexity and specialization of the projects and with increased interaction between the two categories.

3. Intellectual property in project management today

Following the same logic, one can easily see that the project management intellectual property fall into the latter category, and it has not been yet coherent approached, which makes it thoroughly interesting.

So far, however, in the literature we could not find a specific term for such a concept and various internet searches that could express it, had the following results:

Table 1: Results of different internet searches

Search engine	Searched terms		
	"Intellectual Property in the Project Management" [1]	"IP into the PM" [2]	"Project Management Intellectual Property" [3]
At 03.01.2011			
www.google.com	No results for "Intellectual Property in the Project Management"	No results for "IP into the PM"	68.300
www.altavista.com	We found 0 results.	We found 0 results.	17.400
www.yahoo.com	We did not find results for: "Intellectual Property in the Project Management"	We did not find results for: "IP into the PM"	17.400
www.bing.com	No results found for "Intellectual Property in the Project Management".	No results found for "IP into the PM"	51.400.000
At 03.15.2011			
www.google.com	No results for "Intellectual Property in the Project Management"	No results for "IP into the PM"	74.200
www.altavista.com	We found 0 results.	We found 0 results.	18.900
www.yahoo.com	We did not find results for: "Intellectual Property in the Project Management"	We did not find results for: "IP into the PM"	18.900
www.bing.com	No results found for "Intellectual Property in the Project Management".	No results found for "IP into the PM"	53.600.000

Note:

[1] The same results were obtained for: "Intellectual Property into the Project Management".

[2] The same results were obtained for the following: "IP in the PM", "IP in the Project Management", "IP into the Project Management", "Intellectual Property in the AM" and "Intellectual Property into the PM"

[3] The overwhelming majority of these results are:

Enumerations:

- "Project Management, Intellectual Property"
- "Project Management, Intellectual Property"
- "Project Management ... Intellectual Property"
- "Project Management - Intellectual Property"
- "Project Management. Intellectual Property"
- "" Project Management ", " Intellectual Property ""

Attached internet menus: Project Management, Intellectual Property

Various enumerations of different competencies of the consulting companies;

Description of various software projects "ensures the intellectual property of the project management";

Among these searches, however, there are also approaches regarding the intellectual property in project management: Harold Kerzner uses the term "Intellectual Property Management Project" (Kerzner, 2003, 2004 (a) (b), 2009). By this term though, Kerzner understand that: "knowledge learned from project management" which are "treated as intellectual property and PMO's (Project Management Office) have been established as guardians of the project management intellectual property, reporting to the senior levels of management and being given the task of capturing best practices in project management". (Kerzner, 2004 (a))

The same Harold Kerzner, in the article "Why Do Executives Stay Awake at Night Worrying About Project Management?" published in 2004, considered that one of the reasons project managers worry, is related to the information (which Kerzner considers as being intellectual property) that is known by the project manager or the superior management, and that change the power balance among all the managers inside the organization because information is power. (Kerzner, 2004 (b))

Therefore, Kerzner through "Project Management Intellectual Property" understands intellectual property of project management, and in particular, knowledge and information resulting from project implementation. However, there is no clear distinction between intellectual property, knowledge and information. Moreover, there is no definition of the term and it is not specified how this project management intellectual property comes throughout the project.

A distinct approach, but which is not using any of these terms, is partially related by several aspects of intellectual property in project management, and is found in the Guide to Intellectual Property Rules for FP7 projects, where the Commission states: "It is a guide to the various issues and potential pitfalls regarding IPR that participants may encounter when preparing and participating in an FP7 project". (ECC Research, 2009)

It should be noted however that this guide is mainly addressed to top scientific research project management and is based on common rules on intellectual property of the European Community.

Another area that deals with issues close to this topic is related to the analysis of the innovation process. On this subject, Fulvio Castellacci affirms that: "The study of innovation is relatively new and rapidly developing as a new direction in social sciences." (Castellacci, Grodal, Mendonca & Wibe, 2005) Even in this field, Arundel and Hollanders argue that the results of innovation and strategies have been considered in only a few small-scale tests or in some case studies. (Arundel & Hollanders, 2006)

Recognizing the importance of this issue, the European Commission has funded the project TEAR (Towards a European Area of Research and Innovation), whose main purpose was to bring together the main pioneers in the field to discuss the main advances that were made so far and the challenges for future research. The most important contribution of this project is the publication of the Oxford Handbook of Innovation (Faberberg, Mowery & Nelson, 2005), which contains the main analytical results, concepts and empirical analysis in the current studies on innovation.

Regarding the main works someone would find about the intellectual property in project management, one of the most elaborated ones is "Intellectual Property Management in Health and Agricultural Innovation – a handbook of best practices" (Kratiger et al., 2009), supported by the Rockefeller Foundation. It is mainly presenting the issues of intellectual property appearing in the public funded projects and their relation with the private companies.

Therefore, even the fields that tangentially address the project management intellectual property are at the beginning and are looking for their own identity among the economic sciences.

In conclusion, as the projects are becoming increasingly important and commonly used and as the intellectual property issues are becoming increasingly important within them, there is a need of a coherent approach of the project management intellectual property issues. This need is also legitimated by the fact that the specific project management intellectual property aspects are different from the conventional approaches in managing intellectual property (for the daily activities of the organizations).

4. Going into further details

Even if it is no dedicated term for the project management intellectual property, there are some individual approaches that explain some parts of such a concept.

Therefore, the World Intellectual Property Organization (WIPO) (WIPO 2005) gives us a sample of a systematic presentation of different intellectual property elements that could appear in different stages of a project oriented in obtaining a new product.

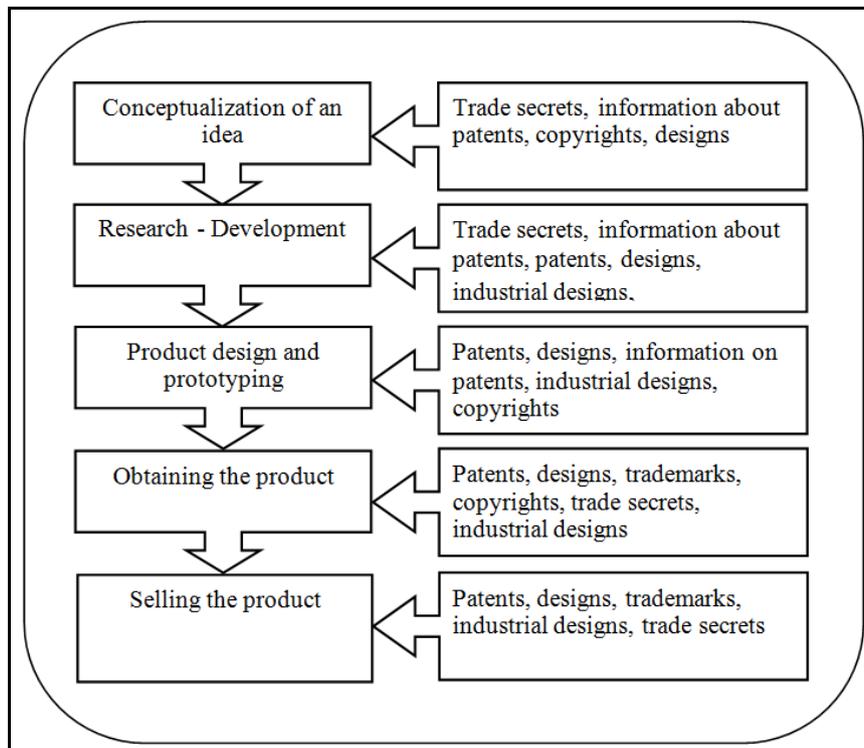


Figure 2: WIPO systematic presentation of different intellectual property elements that could appear in different stages of a project

In the same year, WIPO explains that the “Intellectual property is usually divided into two branches, namely industrial property and copyright.” (WIPO (a), 2005 p. 4, 5, 8, 9, 11, 12, 14, 15)

In the same paper, there are presented the main components of the industrial property (WIPO (a), 2005 p. 4, 5, 8, 9, 11, 12, 14, 15) as follows: patents, utility models, industrial designs, intellectual property with regard to integrated circuits, trademarks, trade names, geographical indications and protection against unfair competition.

Regarding the copyright, it is generally presented as copyright and related rights (WIPO (b), 2005).

But there is also a series of other elements that some authors consider as being intellectual property. A non-exhaustive enumeration of those elements could be the following:

- Information (Kerzner (a) 2004 p. 67, 273);
- Knowledge (Kerzner (a) 2004 p. 67, 273);
- Research tools (Kratiger et al. 2009 p. 14, 15, 43, 55, 57, 65, 85, 98);
- Know-how (Kratiger et al. 2009 p. 14, 15, 43, 55, 57, 65, 85, 98);
- Idea (Annette et al. 2005);

- Formula (Annette et al. 2005);
- Etc.

Therefore, one of the main classifications of project management intellectual property could be made as follows:

- Industrial property;
- Copyright and related rights;
- Other forms of intellectual property.

Taking into account the fact that we are discussing the project management intellectual property, besides this way of structuring the intellectual property, the need for public registration to protect the intellectual property components, will reveal interesting sights. Therefore, patents, utility models, industrial designs, intellectual property with regard to integrated circuits, trademarks, trade names and geographical indications are intellectual property components that need a public registration to come into force.

By contrary, the copyright (Dodds et al., 2007, p. 343), the related rights, the protection against unfair competition and all the other kinds of intellectual property components described above (information, knowledge, etc.), are intellectual property components that do not need any official registration to exist (in certain countries there are some ways of registering the copyright as well as an idea, but generally these are intellectual property components that do not need official registration).

The second main classification of project management intellectual property could be made as follows:

- Intellectual property components that need a public registration;
- Intellectual property components that do not need a public registration.

The intellectual property and innovation literature (at least in the research field) is also dividing those components into the following main parts (Kratiger et al. 2009):

- intellectual property components specific to the consortium level, and
- intellectual property components specific to the project team level.

Other works are dividing those components in external and internal.

Even if it is not a clear correspondence between these two categories (the protected intellectual property corresponds to the components specific to the consortium level and the non protected intellectual property corresponds to the components specific to the project team level), the literature is referring mainly at the protected intellectual property components when it is addressing the consortium level and it is referring mainly at the non protected intellectual property components when it is addressing the project team level (WIPO (c) 2005).

For the case of intellectual property components that are already registered, their use in a project is quite similar with their use in the operational activities of an organization. In this case, in order to protect the intellectual property rights, the project management team needs to ensure the following:

- not to use unauthorized intellectual property registered components that belong to third parties, and;

- to be sure that no one from outside would use intellectual property components belonging to the project team or to the project's organization.

In this context, as there is plenty of literature coping with the intellectual property components that are already protected, the main need for a project manager is to find structured information regarding those intellectual property components that are not protected and often arise in project management.

5. Conclusions

Project management is more and more considered as science and art. Those parts are both extremely important in successfully carrying the projects, but the main results and studies that can be found in the literature are focused, in overwhelming majority, only on the science part of the project management. Therefore, there is a large gap between these two categories in terms of knowledge and available experiences and the need to study the elements related to the art part of the project management is increasingly felt.

Project management intellectual property is a concept that enters into the second category and as it has not been yet coherent approached, it becomes thoroughly interesting.

Even if there is no dedicated term for project management intellectual property in the literature, there are just a few works, in different other related domains, that have explored several scattered aspects related to it.

One of the conclusions resulting from those works is that there are some intellectual property elements that could appear in different stages of a project and that these intellectual property elements could be registered and non registered intellectual property elements.

Another conclusion is that there are also intellectual property elements specific to the consortium level and intellectual property elements specific to the project team level, and even if it is not a clear correspondence between these two categories, the literature is referring mainly at the protected intellectual property components when it is addressing the consortium level and it is referring mainly at the non protected intellectual property components when it is addressing the project team level.

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