

PM WORLD TODAY – FEATURED PAPER – JUNE 2009

Impact of Standards on Project Portfolio Management

By ***Amir Hossein Fazel Bakhsheshi***
and
Sara Haji-kazemi

Abstract

The purpose of this paper is to find the impact of standards on Project Portfolio management and its importance for project management practitioners. For this purpose this work compares Standard Documents of Project Portfolio Management (PPM) from Project Management Institute (PMI®) and Association of Project Management (APM®) under the framework of Standard definitions.

The research was conducted using a qualitative research method. A total of three standard documents, which includes Project Management Standard Institute, Association of Project management (Portfolio), and Gower hand book, reviewed. In addition it figured out a comprehensive characteristic of standard by reviewing both technical and management standard definition from different authors and organization such as ISO, ETSI.

A literature survey shows that while addressing project management standards, there are two main concepts mentioned which are best practices and standard. Best practices come as a result of the actions done in a specific situation, time and conditions. While standards do not guarantee full success and the consequence of following a standard is not clear, best practices are real evidence of success

Through our research we found a reference for standards which has nine characteristics which includes: (1) is Abstract, (2) contains technical specifications, (3) is useful, (4) is accepted, (5) is available, (6) is universal, (7) is subject to evolution, (8) is documented, (9) is not compulsory

We conclude that there is evidence showing that PMI and APM standards fulfil these characteristics. The main characteristics we found are usefulness and containing technical specifications for both standards. This research shows that standards are not objectives and norms but they are tools for achieving project goals. The successes of project portfolios depend on the power of the user in interpreting the contents of a standard in different and specific situations

Keywords: Standard, Project Portfolio Management, Best Practice, Body of Knowledge

Introduction

Different authors have proposed several consequences of standardization on Project Portfolio management which some of them are listed below:

1. Promotion of clear and unambiguous communication between all interested parties in a form suitable for reference illegally binding document.'
2. Use of best practices by organizations to learn through Project life cycle.
3. Guide for achieving strategic goals of an organization.
4. Reference for training and development of skills of inexperienced managers.
5. Guarantee for success of an organization for PPM.
6. Continuous improvement of organizations.

Continuous improvement and success of portfolio management ensure that the appropriate resources are allocated to their authorized portfolio components. Since portfolios rely on projects in order to achieve their strategic goals they are interconnected and the improvement and success of portfolios has direct influence on the success of the projects.

The Scope of this paper is to compare Standard Documents of Project Portfolio Management (PPM) from Project Management Institute (PMI®) and Association of Project Management (APM®) under the framework of Standard definitions based on the articles and book chapters studied.

Finding a definition and attributes that best describe a standard, describing the main characteristics of PMI® and APM® Standard of Project Portfolio, comparing the perspectives of both standards and matching characteristics of each Standard with the main attributes of a standard are the main concern of this study.

Finally, we will also analyze the usefulness of standards and their impact on project portfolio management and project management itself, considering APM and PMI standards as our main examples of project management standards.

Definition of Standards

Different institutes and organizations define “standard” in various ways, some of them are:

1. ISO (International Standard Organization): A documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose. It is a living agreement that can have a profound influence on things that deserve to be taken seriously.
2. ETSI (European Telecommunications Standards Institute): A technical specification approved by a recognized standardization body for repeated or continuous application,

with which compliance is not compulsory and which is one of the following: International, European and National Standard.

3. Jakobs (2006): Standard is a publicly available definite specification of procedures, rules and requirements, issued by a legitimated and recognized authority through voluntary consensus building observing due process, that establishes the baseline of a common understanding of what a given system or service should offer.

According to this definition, different typologies are sketched for standard. Jakobs (2006) represents three classification: (1) The subject matter concerned, (2) The process of developing the standards, and (3) the intend use of standards.

According to De Rossi (2003) Standards are classified to three main types:

- a) De jure standards :Standards that are prescribed by a standards body.
- b) De facto standards: Standards defined as such because they have acquired this credential "not because it has been approved by a standards organization but because it is widely used and recognized by the industry as being standard.
- c) Open standards :A standard in between de facto and de jure standards taking an in-between approach which is very favorable for supporting, spreading and nurturing best practices in any industry.

So, in summary, Standard could be define as document that technical specification or other precise criteria to be used consistently as rules, guidelines, or definitions and publicly is available. It is also should issued by recognizable organization.

But the question is what impacts standards would have on project management. In following, we will touch on some of the important areas.

Development of project management Standards

Kerzner (2004) thinks that standards foster teamwork by creating a common language. On the other hand is mentioned the risks of developing excessive standards (policies and procedures) to cover every possible situation which is not possible. The advice is to use templates, for example, as a guide for a general audience, and do not adopt them as requirements within the project. "The reason for providing templates is not to tell the team how to do their job, but to give the project manager and his or her staff a starting point for their own project initiation, planning, execution, control and closure process," he added. (Kerzner, 2004) All in all, standards should stimulate proactive thinking about what has to be done and possibly ideas on how to do it.

Organizations of Project Management

Association of Project Management (APM®)

Directing Change, A guide to governance of project management (2007), prepared by the Governance of Project Management Specific Interest Group of the Association for Project Management has divided the governance of project management into 4 categories and presents an approach for a board of directors to implement it effectively.

1. Portfolio direction
2. Project sponsorship
3. Project management effectiveness and efficiency
4. Disclosure and reporting

APM guide to governance of project management defines corporate governance as an aspect which involves a set of relationships between a company's management, its board, its shareholders and other stakeholders.

This guide defines governance of project management as a subset of the activities involved with corporate governance. Most of the methodologies and activities involved with the day-to-day management of individual projects lie outside the direct concern of corporate governance. (See Figure 1), Effective governance of project management ensures that an organization's project portfolio is aligned to the organization's objectives, is delivered efficiently and is sustainable. Governance of project management supports the means by which the boards, and other major project stakeholders, are provided with timely, relevant and reliable information. The guide does not guarantee that the information published in the guideline is reliable.

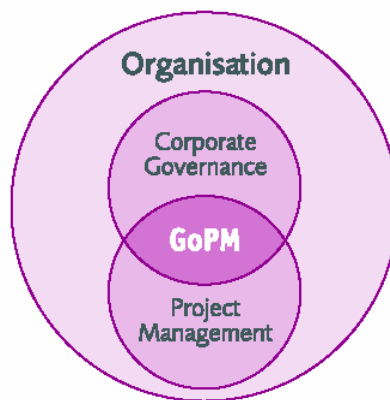


Figure 1. Governance of project management in context (APM, 2007)

Project Management Institute (PMI®)

The Standard for Portfolio Management, Published by: Project Management Institute, Inc is a companion for A Guide to the Project Management Body of Knowledge (PMBOK Guide) – Third Edition and builds on work postulated in the Organizational Project Management Maturity Model (OPM3) and provides a foundational reference for anyone interested in portfolio management of projects and programs. Information and other standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication. This standard describes a documented set of processes that represent generally recognized good practices in portfolio management.

PMI classifies this standard as the facto global standard for the project management of single projects, additionally as an American National Standard. It is highlighted in the document that it does not intend to explain how to implement and utilize portfolio management .Portfolio is defined as *“a collection of projects and/or programs and other work that are grouped together to facilitate the effective management of that work to meet strategic business objectives.”*

PMI Project Portfolio management standard is divided in to three categories: (1) Important definitions in Project portfolio management, (2) Project portfolio management process, (3) Project portfolio management tools and techniques

In fact, PMI disclaims and makes no guaranty or warranty, expressed or implied, as to the accuracy or completeness of any information published in the Standard.

Gower Handbook

The aim of this handbook is on benefit-driven change programmes. Reiss et al. (2006) mention that there are huge benefits on organizations that have adopted programme management thinking and methods.

Program management is defined as “is the coordinated management of a portfolio of projects that change organizations to achieve benefits that are of strategic importance.”(Reiss et al., 2006)

This definition is based in the belief that it is very rare that a single project can deliver a benefit by its own, is the association of projects the ones that deal with real benefits for the organization.

There is a link among the concepts of project, programme, change and benefit management. (Figure 2) “It is the purpose of programme management to define projects and to take the products of those projects, combine them to provide the opportunity for organizational

change, integrate then into the organization and deliver benefit through change.” It means delivery of beneficial change. (Reiss, 2006, pp 17). Change management can be used as a support of project and programme management. Benefit management is described as “a process for the optimization or maximization of benefits from organization change programmes.” (Reiss, 2006, pp 17).

Regards Project Portfolio Management, Reiss (2006) express that this term often refers to the process of selecting and prioritizing projects of work and where that is the case, the term program management is used to refer to the execution of those projects. They propose Figure 3 in order to understand the differences.

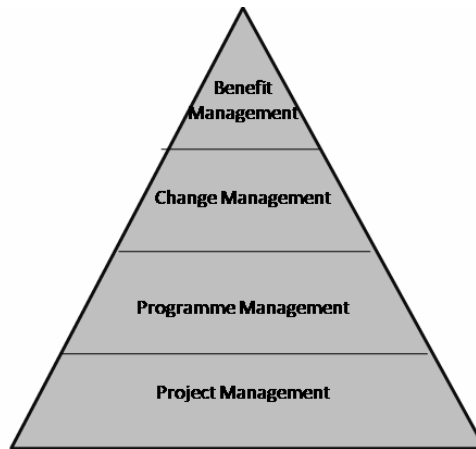


Figure 2. Relating benefit, change programme and project management (Reiss, 2006)

US English		Activity	UK English
Project Portfolio Management		Selecting which program(me)s to invest in	Programme management
	Program management	Managing a number of program(me)s	
		Managing a number of projects	
		Managing benefits	

Figure 3. The relationship between US and UK terminology (Reiss, 2006)

Best practices and benchmarking

A Best Practice as conceived by PMI® in OPM3® (2003) is an optimal way currently recognized by industry to achieve a stated goal or objective. For organizational project management, this includes the ability to deliver projects predictably, consistently and successfully to implement organizational strategies. Kerzner (2004) mentions that best practices in project management are:

- Are reusable activities or processes that continuously add value to the deliverables of the projects
- can increase the likelihood of success of each and every project
- can appear in working relationships, design of templates, and the way the project management methodologies are used and implemented

so it can be inferred that Best practices are defined internally within the company by looking at what worked well for the company and what is most likely to work well in the future if this practice is repeated on every project and for multiple customers.

Role of Standards

Standard is a common language that is set up and established by an authority as a rule or measure of quantity, weight, extent, etc. The development of competencies based on standards, and the overall development of standards, implies there are relevant bodies of knowledge. Certification and assessment of project management competence models, maturity models and best practices reflect this trend. (Bredillet, 2003) Genesis and role of standards: theoretical foundations and socio-economical model for the construction and use of standards]

- a) Standards can be seen as socio-economic constructs reflecting a balance of perspective between stakeholders.
- b) Standards are always subject to evolution but such change is determined by balance, need and perspectives of stakeholders;
- c) Plurality of standards creates the conditions for/of development;
- d) A standard is always independent of cultural aspects;
- e) A standard is a way to resolve and forecast problems using collective cognitive processes.
- f) Agents have free will to adopt or refute such standards.

Discussion

Through our study on the definition of standards, none of the sources we studied mentioned all the characteristics of standard. In Figure 4 we have gathered the main characteristics of standard which we interpreted from the studied sources.

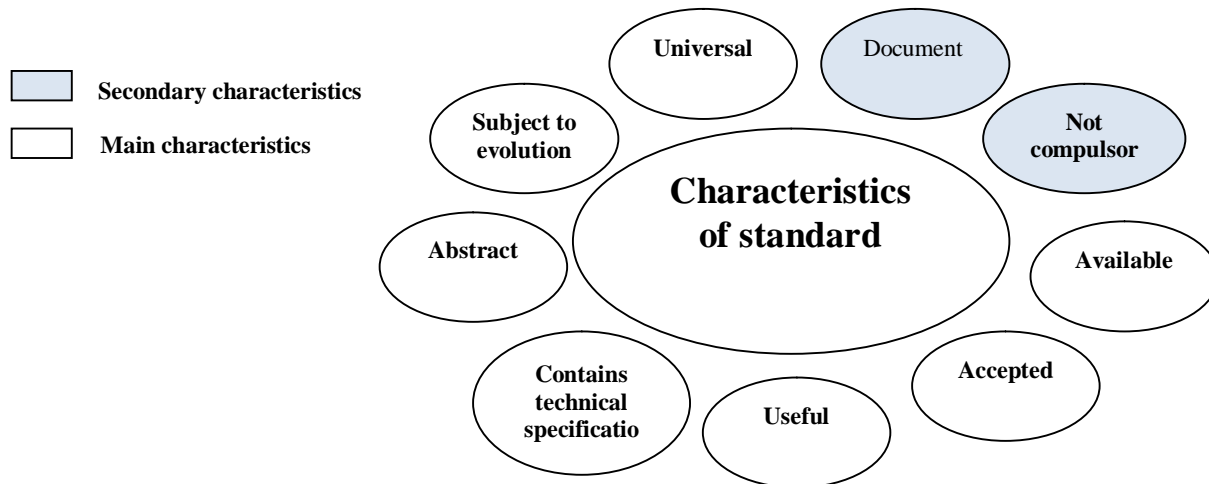


Figure 4. Standard characteristics

Standards are generated because there is a need for them; they are variable in the time and in that way lead us to have a proactive thinking in order to make it useful for the ones that demand the needs for a standard.

According to the typology of standard presented by Jakobs K. (Appendix A.) 3 classifications are shown. Regards the *subject matter concern*, management standards follow the man-man classification since no technical thing is involved. Regards the *actors involved*, the management standards are direct standards which means the users are directly connected to the standard organizations. These organizations are formal associations. The *process of developing* these standards is anticipatory, which means it contains suggestions and guidelines in order to prevent failures and proactive actions for projects. Related to *standard use*, management standards are not oriented to any specific kind of business. They can be used in any business sector. In case of *availability*, we can say management standards are a public standard which means everyone has access to them. They are paid and are produced through a voluntary consensus so they are open for interpretation.

Going deeply through project management concepts about standards, “best practices” is a term that is used as an additional approach. From the perspective of continuous improvement, a Kerzner (2006) mention that best practices in project management are activities or processes that aggregate value to the outcomes in a continuous way. Those activities or processes can be presented in many ways, the most known are the design of templates, but others like working

relationships or methodologies are also used and implemented. The condition is to be supported by the organization.

A best practice is “*a process or procedure that consistently produces superior results*”. But we are never sure that procedure if repeated in a different environmental, political, economic condition will have the same superior results. While a best practice points to a very specific situation, time and condition, a standard talks about general conditions. While in best practices we see clearly the consequences of a series of actions done, a standard never talks about the approach and the results of following it. This can be one of the drawbacks of using a standard by practitioners.

Standards are normalization of the activities, so it can be used by everyone in the same way, but it does not mean it is the best way, it just says is in the same manner.” While standards do not guarantee full success and the consequence of following a standard is not clear, best practices are real evidence of success.

Portfolio is the group of projects that are aligned to achieve strategic business goals. According to PMI, portfolio is the combination of projects and programs, while APM and Gower Handbook present the concept as a collection of projects which produce a benefit.

From APM’s point of view governance of project management is a means by which organization’s project portfolio is aligned to the organization’s objectives, is delivered efficiently and is sustainable. It also supports the means by which the boards, and other major project stakeholders, are provided with timely, relevant and reliable information is known as; while PMI’s equivalent is known as Project Portfolio Management (PPM).

Now we will compare the APM and PMI standards of Project Portfolio Management under the reference of the characteristics of standards we specified at the beginning of the discussion. Through studying the concept of PPM we realized “Project management” as a whole should be understood alongside project portfolio management.

The link between the descriptions bellow with the standards can be seen in Table 1.

In this table the two guidelines have been compared under the framework of standard characteristics by pointing directly to the evidence we have found in the documents and also the information we have from the organizations WebPages.

Table1. Comparison of APM and PMI standards regards standard characteristics

	Standard Characteristics	APM <i>Directing change, a guide to governance of project management</i>	PMI <i>The Standard for Portfolio management by Project Management Institute</i>
1	Abstract	“The guide applies standard governance requirements to your project portfolio. Following a structured approach it lists 42 <i>questions</i> which boards of directors, or their equivalents, should ask to satisfy themselves and their stakeholders. It is short and to the point” - <i>Page 1</i>	It is very detailed and contains several chapters. It is not abstract, it has detailed descriptions. It is process oriented.
2	Contains Technical specification	“This guide is intended solely to provide practical guidance relating to the establishment of good governance of project management”- <i>Page 13</i>	Topics in this standard include: How portfolio management can improve the implementation and maintenance of corporate governance initiatives; Portfolio management’s role within organizational structure and its relationship to the organization’s strategy; <i>page 3</i>
3	Useful	“Adherence to this guide will help boards of directors to Avoid many common failures in project and program performance.” - <i>Page 2</i>	“The Standard for Portfolio Management addresses the need for a documented set of processes that represent generally recognized good practices in the discipline of portfolio management.” - <i>page xi</i>
4	Accepted	“APM is the largest independent professional body of its kind in Europe. With over 15,500 individual and 450 corporate members throughout the UK and abroad.” - http://www.apm.org.uk	“Today the PMBOK Guide continues to be the de facto global standard for the project management of single projects, as well as an American National Standard.” - <i>Page ix</i> PMI has over 260000 members in over 170 countries.
5	Available	Available free on http://www.apm.org.uk	“PMI books are available at special quantity discounts to use as premiums and sales promotions, or for use in corporate training Programs, as well as other educational programs.”
6	Universal	“It applies in most types of organization, across all sectors.” - <i>Page 1</i>	“The Standard for Portfolio Management addresses a gap in the management by projects field across all types of organizations (i.e., profit, nonprofit, and government) that is, the need for a documented set of processes that represent generally recognized good practices in the discipline of portfolio management” - <i>Page 3</i>
7	Subject to evolution	1970’s : professional forums 1990’s : APMBoK 2004: <i>Directing change, a guide to governance of project management</i> 2006: 5 th edition of APMBoK http://www.apm.org.uk	1970’s : professional forums Mid 1980’s : PMBoK 2005: 3 rd edition of PMBoK 2006: 1 st edition of standard of project portfolio management http://www.PMI.org
8	Documented	“This document was prepared by the Governance of Project Management Specific Interest Group of the Association for Project Management between October 2003 and July 2004.” - <i>Page 13</i>	“The standard for portfolio management has been developed by 416 PMI volunteers representing 36 countries in year 2006.” http://www.PMI.org
9	Not Compulsory	“This guide is intended solely to provide practical guidance relating to the establishment of good governance of project management.” - <i>Page 13</i>	“PMI has no power, nor does it undertake to police or enforce compliance with the Contents of this document.” - <i>Page iii</i>

A general overview on APM and PMI guidelines shows:

PMI reflects the PPM processes and guidelines on how to achieve goals by using recommended tools, without mentioning exactly the way for doing this. The way it is addressed is by two processes groups: (1) Aligning (2) Monitoring & Controlling. APM also presents a reference for the PPM by addressing general questions under the following main areas: (1) Portfolio direction, (2) Project sponsorship, (3) Project management effectiveness and efficiency and (4) Disclosure & reporting.

Specific background or technical approach in the case of project management is addressed by the Bodies of Knowledge (BoK) of both associations –which means the common language they have developed. PMI BoK is focused on accomplish time, budget and scope; including the project management framework, definition of the key terms, and general management skills, as well as the project management processes model that maintain through all the standards made by the association. APM reflects a wider view of the discipline, addressing the context of project management and the technological, commercial and general management issues.

A standard is successful when it is used and appears to solve the problem for which it was developed. In that point of view, the problem to be solved by the use of PPM standards is the success of the organization when it works with projects. We believe that the answer for this problem, is not only to deliver projects “on time, on budget, with best quality”, but also to enhance the sponsor or customer satisfaction in the short and long term. APM standard is close to achieving this perspective. PMI has a simpler approach based on the standardized processes. A quantitative measurement of this success connected to the use of standards would be interesting.

PMI and APM are generally accepted standards. PMI as an association of members has a larger number of adopters but of course is more accepted in USA and has also been accepted as a national standard.

PMI standards are available to anyone who becomes a member, paying an annual membership that also allows to other resources; similar situation is faced by APM, but more guidelines are free to get access.

Standards should have universal validity. In the case of project management we realized that human behaviour is involved at the moment of accept the standard, and authors like Kerzner develop the idea that organizational culture can be a factor of rejecting the applicability of a standard.

According to the number of editions of the bodies of knowledge, both organizations have changed several times the editions of the standards with the aim of improvement. Since both organizations are in close contact with practitioners, they frequently receive feedbacks from

them and the result is their willingness to improve their standards. APM has now published its fifth edition of Body of knowledge and PMI has published its third edition.

Both paper and electronic versions of the PMI and APM standards are available. This makes it easy for the users to have access to them. While APM's standard for project governance is brief and compact and presented as 42 questions, the PMI standard for project portfolio management is more detailed and contains more descriptions about processes, tools and techniques.

Both APM and PMI standards are not compulsory documents and are not defined by law and it is not obligatory for managers to be a member of these organizations. Even though these standards are not law necessities, they have grown to be market necessities. It seems that having a PMI certification has become a suggested requirement for practitioners in order to enter the market in the recent years especially in America.

Through our study we found some weaknesses and strengths for each of the two standards. We will briefly describe them in this section. We believe that the foundations of both standards are valid. While PMI standard is based on normalization of best practices – real evidence of success, APM standard is based on research about real problems that occur during projects. Yet we know that best practices are unique (regards the industry, region, type, etc...) and point to specific areas, so they may not be used generally for all type of projects as a standard.

Regards the complexity of each of these standards, PMI addresses the project management terms from the very beginning and makes it easier for the reader to understand the definitions, and it can be used easily by senior, junior and middle managers and even novice practitioners. In contrast, APM uses more complex terms in a broader view, which need previous knowledge to better understand the concepts. According to Turner (Figure 5) the main users of APM standard are senior managers and it seems that it is more open for reflection rather than using specific tools and techniques.

Both standards are useful in international environments, enhance coordination and increase global competitiveness. These two standards are not the only existing project management standards in the world. According to Morris there are also standards published in Japan and Australia (AIPM-Australian Institute of Project Management). So why are these two the most famous ones? Why Norway does not have an own standard? It seems that acceptance and approval of a standard depend on many factors such as political and cultural issues, strategic position of the region which is producing it and general acceptance. These 2 regions- United States and United Kingdom, which are the political poles of the world are the ones who are producing standards for project management which has become a strategic issue in today's world. On the other hand, one of the weaknesses of management standards is that they do not say how to do things and do not say anything about the specific assumptions they were based on.

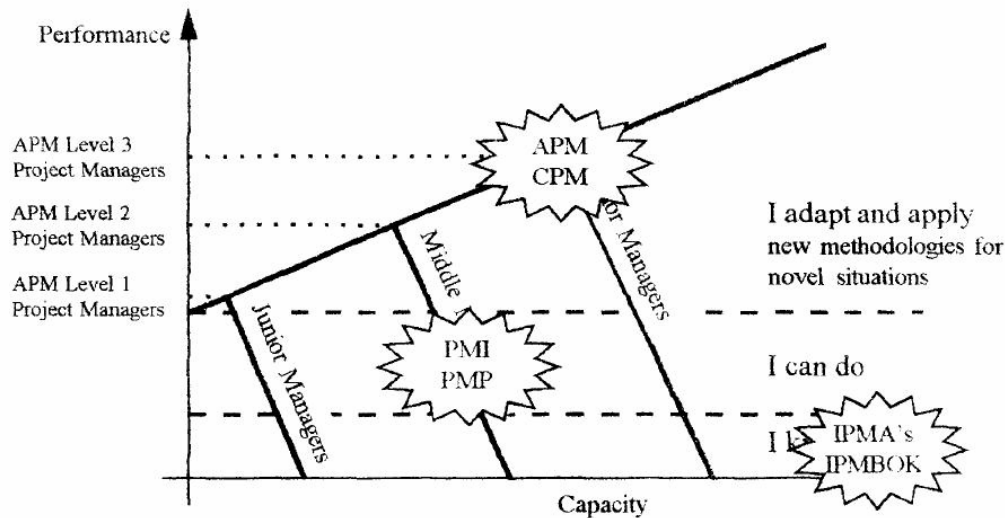


Figure 5. Three dimensional competency model (Turner, 1996)

Although both associations’ standards should be subject to evolution, certification has become a process that makes innovation delays. For example in Middle East and South American countries, the PMP certification has become a market trend for managers to reach to project management positions. If the standards associations keep focusing on this business, their standards would no longer be subject to evolution, since it is very costly for them to update all the certification procedures. APM certifications seem to be less known because it needs more expertise requirements to be achieved and the number of senior managers who are qualified is less than the other positions. The stages of development are shown in Table 2.

Table 2. Basic Framework for professional development of Project Managers and Project Management Professionals (Turner, 1996)

Stage	Position	Age	Qualifications –European view	Certifications
1	Project Management Professional	25	Certificate NVQ Level 4	PMI’s Project Management Professional, PMP
2	Project Team Leader Project “Engineer”	30	Diploma NVQ Level 5 Bachelors degree	
3	Project Manager	35	Master degree	APM’s Certified Project Manager
4	Project Director	40+	Doctoral Level	

Conclusion

Standards are created in order to generate a common language for the people involved in shared activities. They might come as a solution to misunderstandings between different parties involved in a case. From social point of view, benefit of using a standard is that it removes to some extent the barriers. From economical point of view, a standard may cause to saving resources and will prevent resource usage through the same actions.

While addressing project management standards, there are two main concepts mentioned which are best practices and standard. Best practices come as a result of the actions done in a specific situation, time and conditions. While standards do not guarantee full success and the consequence of following a standard is not clear, best practices are real evidence of success. The main results we reach to, applying a best practice in project management are: (1) to achieve strategic goals, (2) to have continuous improvement, (3) to reach to a common language and (4) use as a benchmarking tool.

Through our research we found a reference for standards which has nine characteristics which includes: (1) is Abstract, (2) contains technical specifications, (3) is useful, (4) is accepted, (5) is available, (6) is universal, (7) is subject to evolution, (8) is documented, (9) is not compulsory.

We conclude that there is evidence showing that PMI and APM standards fulfil these characteristics. The main characteristics we found are usefulness and containing technical specifications.

Usefulness of a project management standard can be understood in two dimensions:

1. Who is the user of standard?
2. When should a user use a standard?

Since standards are valuable tools, the user of a standard should analyze the situation from different perspectives (market stability, political, cultural and economical situations) in order to know when to adopt and when to reject using a standard. We have found that there is a classification of users of Project management standards regards their expertise and experience. It seems that the PMI standard has a broader range of users (mostly junior and middle manager), while APM standard users are more experienced practitioners (senior managers).

At the end we would like to answer to this question: Should we, as future project managers, use project management standards? And to what extent should we rely on these standards?

Through our study we found that standards are not objectives and norms but they are tools for achieving project goals. The successes of project portfolios depend on the power of the user in

interpreting the contents of a standard in different and specific situations. The organization's culture is a key issue in acceptance and improvement of standards.

References

Association for Project Management, (2007) *Directing change: A guide to governance of project management*. High Wycombe, APM®

Bredillet, C. (2003) *Genesis and role of standards: theoretical foundations and socio-economical model for the construction and use of standards*. International Journal of Project Management; (21), 463-470.

De Rossi,L;(2003);*Standards: Do We Really Need Them?*, Retrieved January 30, 2008, from [http:// www.masternewmedia.org](http://www.masternewmedia.org)

ETSI, (2008), *What is a standard?*, Retrieved January 30, 2008, from <http://www.etsi.org/WebSite/Standards/WhatIsAStandard.aspx>,

International Organization for Standardization. (n.d.) Retrieved January 21, 2008, from Http://www.iso.org/iso/about/discover-iso_meet-iso.html

Jakobs, K. (2006) *Advanced Topics in Information Technology Standards and Standardization Research, Volume 1*. London. Idea Group Publishing. Available from <http://site.ebrary.com/>

Kerzner, H., (2004) *Advanced project management: best practices on implementation*. New Jersey. John Wiley & Sons Inc.

Kerzner, H, (2005), *Using the Project management Maturity model second edition*, John Wiley & Sons Inc

Morris, P.; Crawford, L.; Hodgson, D.; Shepherd, M.; Thomas, J. (2006) *Exploring the role of formal bodies of knowledge in defining a profession-the case of project management*. International Journal of Project Management; (24), 710-721

Morris, P. (2001) *Updating the project management bodies of knowledge*. Project management Journal; 32(3), 21-30

Project Management Institute. (n.d.) Retrieved January 22, 2008, from <http://www.pmi.org/>

Project Management Institute, (2003) OPM3® *Organizational Project Management Maturity Model. (1st Edition)*, Newtown Square, PA: Project Management Institute®

Project Management Institute, (2004) PMBOK® *A Guide to the Project Management Body of Knowledge. (3th Edition)*, Newtown Square, PA: Project Management Institute®

Reiss, G.; Anthony, M.; Chapman, J.; Leigh, G.; Pyne, A.; Rayner, P. (2006) *Gower Handbook of Programme Management*. Hampshire. Gower Publishing Limited.

Turner, R. (1996) *International project management association global qualification, certification and accreditation*. *International Journal of Project Management*; 14(1), 1-6

About the Authors:**Amir Hossein Fazel Bakhsheshi**

Author



Amir Hossein Fazel Bakhsheshi is currently in the last year of Msc in project management at Norwegian University of Science and technology. Currently he is doing his masters thesis on improving Risk management At Statoil Hydro (a well-known Oil & Gas Company in Norway). His fields of interests in project management are Project Risk management, Project Communication management and Project Portfolio Management. Before he joined NTNU, He has worked as a project planner and controller nearly 2 years in Oil & Gas and Telecommunication companies. This author can be contacted at: Amirhoss@stud.ntnu.no

**Sara Haji-kazemi**

Author



Sara Haji-kazemi is currently in the last semester of Msc. in project management at Norwegian University of Science and Technology. She is working on her masters thesis under the title of "Strategies for avoiding contradictions among project success criteria". She has fulfilled her Bachelor of Science in "Electrical engineering, Telecommunications" at Ferdowsi University of Mashhad - Iran. Her field of interest includes Project Quality and Risk management. She has worked as a program and budget manager assistant in a higher educational institute and has several years of experience in teaching. This author can be contacted at: hajikaze@stud.ntnu.no