



PMUni

INTERNATIONAL NETWORK
FOR PROFESSIONAL EDUCATION
AND RESEARCH IN PROCESS
AND PROJECT MANAGEMENT

Bálint Blaskovics, Csaba Deák and Attila K. Varga (eds.)

CHAPTERS FROM THE ACADEMIC ASPECT OF
PROJECT MANAGEMENT - RESEARCH AND
TEACHING METHODOLOGIES
VOLUME III

**Chapters from the Academic Aspect of Project
Management - Research and Teaching Methodologies
Volume III**

Editors: Bálint Blaskovics, Csaba Deák and Attila K. Varga



PMUni

International Network for
Professional Education and Research
in Process and Project Management
www.pmuniversity.org

Copyright © 2019 PMUni - International Network for Professional Education and Research in Process and Project Management

Copyright © by PMUni - International Network for Professional Education and Research in Process and Project Management

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief citations in academic or scientific publications. For permission requests, write to the publisher to the address below.

Cover images: freepik.com

Publisher:

PMUni - International Network for Professional Education and Research in Process and Project Management

H-1093 Budapest, Fővám tér 8

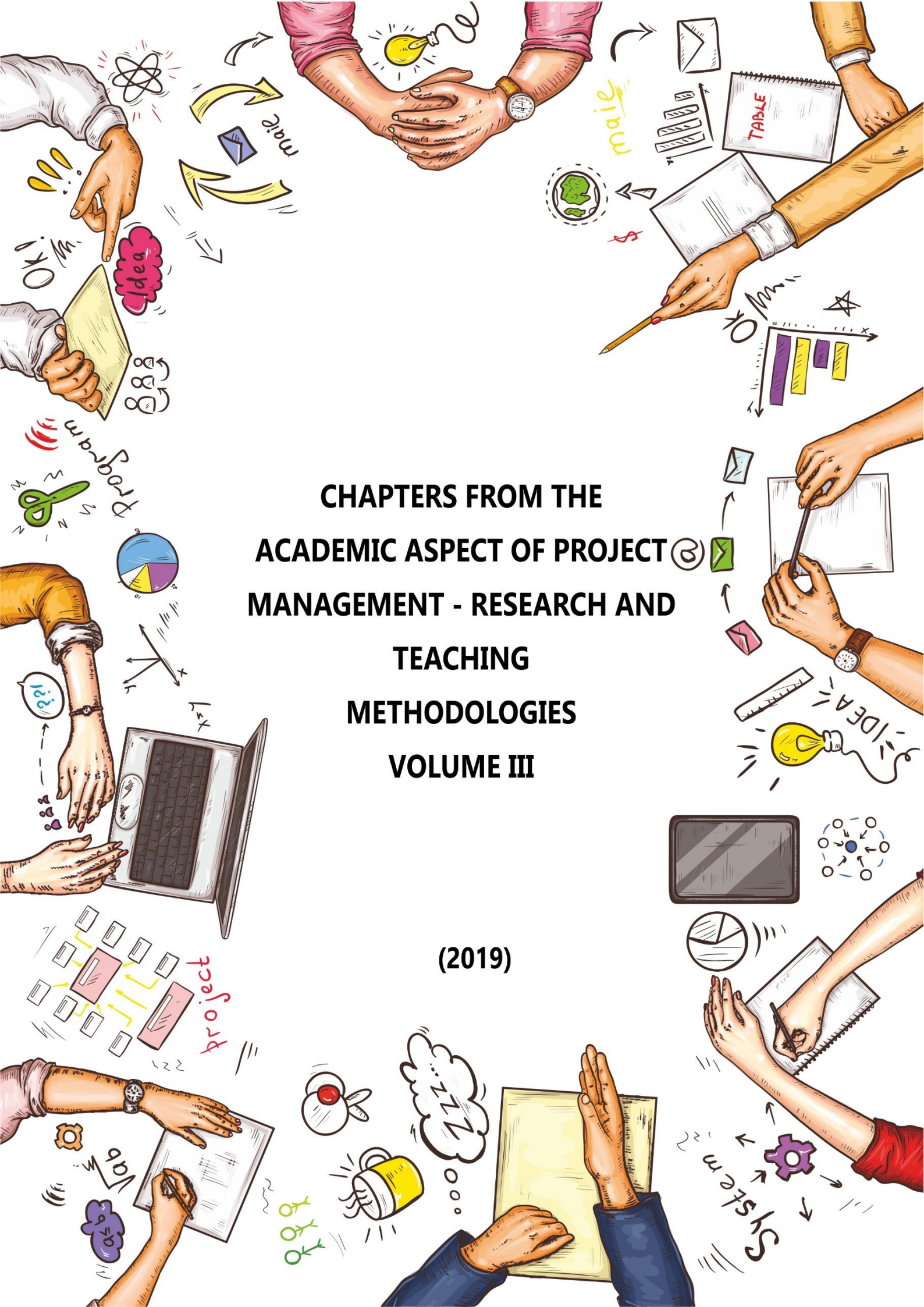
Year of publishing: 2019

Printed at:

Miskolc University Press

H-3535 Miskolc – Egyetemváros

ISBN: 978-615-00-6839-8



**CHAPTERS FROM THE
ACADEMIC ASPECT OF PROJECT
MANAGEMENT - RESEARCH AND
TEACHING
METHODOLOGIES
VOLUME III**

(2019)

**Chapters from the Academic Aspect of Project
Management - Research and Teaching Methodologies
Volume III**

Editors:

Blaskovics, Bálint
Deák, Csaba
Varga, Attila K.

Lectors:

Kása, Richárd
Deutsch, Nikolett

Technical editing and illustrations:

Varga, Attila K.

Authors of the chapters:

Aranyossy, Márta
Berényi, László
Blaskovics, Bálint
Deutsch, Nikolett
Fekete, István
Hoffer, Ilona
Jelen, Tibor
Katona, Viktória,
Klimkó, Gábor
Nachbagauer, Andreas
Tamás, Péter
Tóth, János
Varga, Attila K.

TABLE OF CONTENTS

Foreword.....	4
Recommendation from the Lectors.....	6
Introduction – from the Editors	7
Project Management Tools for e-Government Project Success – Lessons from the Research Literature	8
A Student-based Evaluation of Project Management Teaching Methods.....	23
Standard Project Management: Bigger, Longer and Uncut?.....	37
Communication Principles in Project Management.....	50
Effective and Efficient Program-level Risk Management.....	69
Project Success Indicators and Their Measurement by Kickstarter Technology Projects	92
From Contingency Frameworks to Hybrid Project Management.....	104
On the Influence of Project and Organizational Culture on Managing Turbulences in Projects	120
Competency-based Success Factors Regarding Project Management Experience	152
Development of Massive Open Online Courses	168

STANDARD PROJECT MANAGEMENT: BIGGER, LONGER AND UNCUT?

László Berényi

University of Miskolc, Hungary

szvblaci@uni-miskolc.hu

Nikolett Deutsch

Budapest Corvinus University, Hungary

nikolett.deutsch@uni-corvinus.hu

Abstract: The purpose of standards is to establish a common understanding between the partners. Standardization of project management is getting increasing attention both from scientists and professionals. Improved internal and external communication, well-developed plans and thorough documentation offer reduced costs of failures. At the same time, operating a more developed project management system needs more time and effort. Organizations must find an optimal solution. The 6th edition of the PMBOK® standard is in the focus of this study. The expansion of the knowledge base is clearly reflected in the development of the standard. A core question is the impact of the changes on usability. The increase in volume raises the challenge to find the harmony between the efforts spent on project management and the benefits of the project. This study highlights some key issues for the evaluation of the development. Answering the related questions by considering the organizational characteristics, the standards can give effective support for project management.

Keywords: standardization, project management standards, PMI, PMBOK®

1. Introduction

According to Cleland (1994), running projects by an organization clearly shows that the organization is changing in order to meet future expectations. However, the need for projects is not questionable even today, project management has been developing. Focus points are changing, moreover, both methodology and technical support are improved. In harmony with the development of business and organizational issues, project management must answer emerging problems. Standardization offers a common language and toolset that promotes the success of the projects.

On the one hand, project definitions state the individual and unique characteristics (Verzuh, 2011; Görög, 2013; PMI, 2017) in products, services or other results. Consequently, project management tasks should be individually planned and performed. On the other hand, despite the uniqueness, there are common elements that can be standardized. Some standards give a general framework for project management, others are focused on industry-specific solutions. Ahlemann et al. (2009) include more aspects of their classifications (Table 1). A general standard gives a more superficial approach, but the applicability is much wider. Specific standards may lead to more professional project management in a given field, but compatibility between projects can be limited.

Table 1: Morphological classification of project management-relevant standards

Criteria						
Industry relevance	Industry-specific			Industry-independent		
Compliance Certification	Certification available			Certification not available		
Primary focus	Project management	Other discipline				
		Quality Management	New Product Development	Configuration Management	Software Engineering	Cost Management
Spreading	Emerging		National		Worldwide	

Source: Ahlemann et al. (2009)

The contribution of a project to the operations is a higher level of performance, therefore, the comprehensive evaluation of project success is available much later than the project closure. Due to this characteristic, the resolution of practical contradictions motivates the research of project and project management success (Blaskovics, 2015; Aranyossy et al., 2018). The results confirm the need for a competence-based approach (Tóth et al., 2018). Ultimately, fulfilling this need leads to rethinking the standardization of project management, but simultaneous deal with processes and competences can lead to interesting situations and redundant control.

2. Standardized project management

2.1. Benefits of standardization

A standard can be considered as the common language of the partners, regardless of its scope can be based on product or its part, procedure, information, communication, expected behavior, etc. Standards may be regarded as socio-economic constructs reflecting a balance of perspective between stakeholders (Garcia, 2005). The common understanding allows both internal and external benefits. Among others, improved satisfaction, cost savings, more reliable processes, better products and efficient communication are available (see Zaramdini, 2007; Terziovski & Power, 2007; Szintay, 2005; Berényi, 2017). Certification may further increase trust and employability since it shows the application of the requirements is third-party controlled.

There are both operational and marketing benefits of implementing a standardized solution. Improved problem solving, internal consistency and greater employee involvement pay off in customer satisfaction and better image.

Tarí et al. (2012) made an overview of journal papers about ISO 9001 (quality) and ISO 14001 (environmental) management standards to identify the key benefits. Their conclusions can be projected onto other standards as well. The areas of the opportunities are as follows (Tarí et al., 2012):

- Market share,
- Exports,
- Sales and sales growth,
- Profitability,
- Improvement in competitive position/competitive advantage,
- Improvement in systematization (improved documentation, work procedures, clarity of work, improvement in responsibilities),
- Efficiency (productivity, savings in costs, reduction in mistakes and rework, shorter lead time, improved management control),
- Improved quality in product/service,
- Improved image,
- Improvements in employee results (motivation, satisfaction, teams, communication, knowledge),
- Improved customer satisfaction (reduction in complaints, etc.),

- Improved relationships with suppliers,
- Improved relationships with authorities and other stakeholders.

Accordingly, a fundamental role of project management standards is to harmonize project management terminology, allowing practitioners to communicate without (major) friction (Ahleman 2009).

2.2. PMI standards

Project Management Institute (PMI) is one of the organizations which publishes standards related to project management. With a similar purpose, e.g. the ISO 21500 or the PRINCE2™ standards, as well as APM, P2M or ICB (IPMA) standards are available (see e.g. Berényi, 2015). The maturity of agile methods (Chagas et al., 2014) points towards standardization.

The authors limit the scope of the paper to the PMI standards for technical reasons. Moreover, the development of these standards clearly shows the changes in the approach to project management.

The supply of professional and scientific materials of the PMI is growing dynamically, including:

- Foundational Standards,
- Practice Standards & Framework,
- Practice Guides.

Practice standards and frameworks cover various functions related to project management like scheduling, work breakdown structure, risk management, earned value management or estimating. Practice guides offer a better deeper orientation in applying the knowledge base. The core of project management standardization is covered by the foundational standards including 7 standards (description by the PMI official web-page):

- The Standard for Risk Management in Portfolios, Programs, and Projects: This standard focuses on the “what” of risk management, including core principles, fundamentals and life cycle.
- The Standard for Organizational Project Management: This newly-created standard provides a framework to align project, program, and portfolio management practices with organizational strategy and objectives.

- The PMI Guide to Business Analysis: In recent years, business analysis has grown as a critical leadership competency. Grow your business analysis practices with our latest standard.
- PMBOK® Guide – Sixth Edition (2017): Now available with the new Agile Practice Guide. Together, these two publications are a powerful tool that enables the right approach for the right project.
- The Standard for Program Management – Fourth Edition: This principle-based standard is for individuals and organizations seeking to mature their program management practices.
- The Standard for Portfolio Management – Fourth Edition: An important reference for portfolio managers, as well as project and program managers—regardless of industry or project delivery approach.
- Organizational Project Management Maturity Model (OPM3®) – Third Edition: Organizations benefit from achieving organizational project management maturity — when projects aren’t just executed randomly but are tied to business strategy and support business goals...

2.3. Changes in PMBOK®: a closer look

The first impression of reading the recent edition of the PMBOK® is that its size has increased significantly. While the 2000 Edition (2000) used 216 pages, the 5th edition (2008) in 2013 required 589 pages. However, the 6th edition in 2017 includes the agile approach, it uses 976 pages.

Figure 1: PMBOK® editions



Source: <https://www.4pmi.com/PMBOK-6th-ed-changes.aspx>

The PMBOK® standard tries to remain faithful to its address (Figure 1). It serves as the body of knowledge of project management, i.e. it is the meeting point of other standards as well. Detailed information is to find in the text about the relations between project

management, portfolio management and program management. This allows a basic application without the other standards; however, real benefits are suggested by the combined implementation.

The five process groups from initiating to closing have remained the same for more editions (monitoring is added from the 3rd edition). Similarly, knowledge areas defined in the standards have one additional item (Project Stakeholder Management) from the 5th edition. Nevertheless, the number and the structure of the processes within the matrix of process groups and knowledge areas are usually rethought:

- 39 processes in the 3rd edition,
- 42 processes in the 4th edition,
- 47 processes in the 5th edition,
- 49 processes in the 6th edition.

Removed processes are usually rethought and implemented in other/new processes in a more detailed format. E.g., the presentation of stakeholder management is only new as a knowledge area, formerly it was a process. Parallel with managing project teams, it was a part of the ‘Monitoring and controlling’ process group, then moved to the ‘Executing’ process group (applied from the 4th edition (2008)). These gradual changes clearly show the appreciation of a knowledge area.

A remarkable change is in the approach to organizational issues. Fitting the project management to different organizational structures is discussed in detail up to the 5th edition. The recent edition misses the illustrations, less weight is noticeable to the topic. Of course, organizational fit remains important and the issues are described in the standards, a decrease in the emphasis it to notice.

At the same time, the standard devotes more space to personal characteristics, knowledge level, etc. Competencies of the project manager and project management team is a priority issue in the concept.

Special attention to agile project management is a response to phenomena that agile methods are in spread since it can give fast and efficient responses to some scheduling or product definition problems. Beyond software development, it proved its (partial) applicability in a wider range of projects.

3. Evaluation of changes

Both the number of standards is extended. Adapting to the increasing attention to project and portfolio management, new fundamental standards are developed, and some guides are also included. New requirements are derived from the complexity of the projects. The additional materials (practice standards and others) suggest that issues raised in the standards need a more professional toolset than before. As a result, the extensive content creates a new market for pocket guides to the standards (Zandhuis et al., 2014, Zandhuis & Wuttke, 2019).

The continuous expansion of the knowledge base can be observed in the development of the standards. Parallel, there is a risk that the project management goes beyond the project content. Learning, understanding and preparing project management activities following the process structure of the standard may require excessive efforts. If we consider the standards as a book of ideas for improving project management toolset, the efforts for selecting the necessary items must be considered. Expenditures and time spent on establishing project management should not exceed the benefits available from the project. This includes documentation kept on a reasonable level, time spent on project meetings, staff cost, etc.

There are comprehensive education and exam service developed according to the PMI standards. If somebody would like to do a Project Management Professional (PMP) exam, an increasing amount of material must be mastered. Both the time need for learning and the cost of training may be increased.

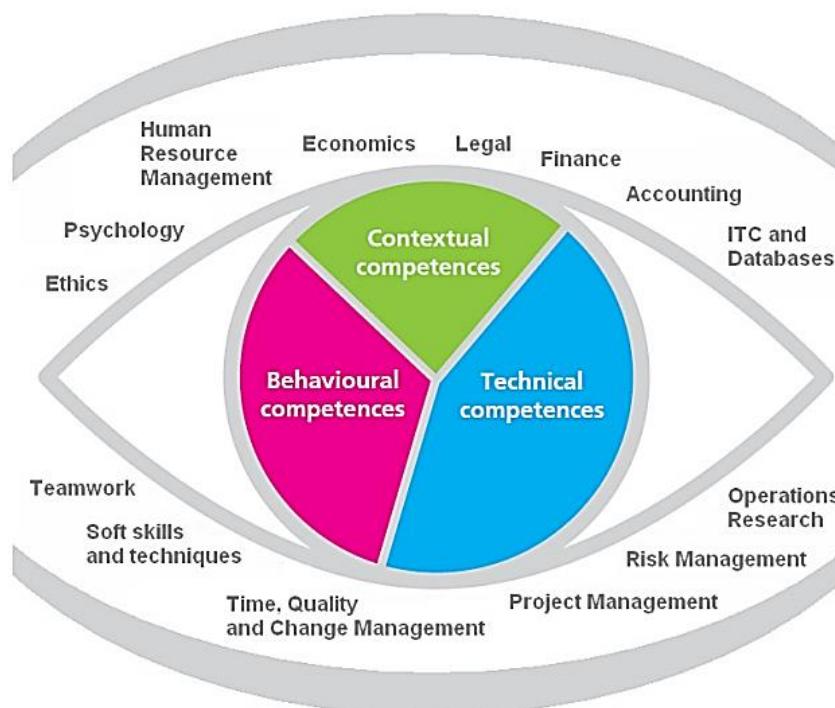
The structure of process groups and knowledge areas is well regulated and stable in time. This gives interoperability with former editions of the standards and other PMI standards. A high level of technical interoperability is also provided by the great similarity to the ISO 21500 standard. The ISO standard describes a comprehensive but more concise system than PMBOK®. Of course, the ISO standards are more superficial.

Opening towards a competence-based approach in project management can be considered a main change in the standards. However, management system standards are usually averse to the technical ones, the process orientation as a spine of management is widely accepted (Szintay, 2005). Quality management standards founded this acceptance, but the application is general. More emphasis on competences brings the human side of management to the fore (Tóth-Kiss, 2012; Barna and Deák, 2012;). Horváth (2018) summarizes the appearance of competence in project management standards. The

description of each competence starts with its relations to other competences by the IPMA standard (Caupin et al., 2006).

Of course, competences cannot be independent of the processes. Managing competences are required for being able to perform different tasks organized into processes. Bartoška et al. (2012) give a good summary of the relations (Figure 2).

Figure 2: The IPMA standard competence “eye” and related specialist areas and courses



Source: Bartoška et al. (2012)

PMI is not the pioneer in the competence-based approach, but the thoroughness of elaboration in the 6th edition of PMBOK is remarkable. Nevertheless, I can empathize with the participants of the training who has to memorize the huge lists.

One sentence should be pronounced about organizational issues. Since project management challenges exceed organizational boundaries more often, the focus of developing new tools is moved from internal issues to supply chains, international cooperation, moreover, working in a virtual environment has also appreciated (Blaskovics, 2019). Although, corporations initially face more classic problems, i.e. the maturity of the organizational project management determines the applicability of the methods and tools.

4. Conclusions

The question of evaluation can be formulated as ‘Bigger, longer, better?’ Both the supply of standards and the knowledge body of the PMBOK® standard are expanded. More does not consequently mean better. Certainly, new elements of the standards emphasize issues that may be critical to success, but organizational capacities and preparedness are required. In the absence of these, cumulative problems must be faced instead of the expected benefits. Reading and understanding the lengthy requirements go beyond the possibilities of smaller organizations. Similarly, selecting the relevant processes may be difficult.

We cannot avoid the conflict between process-orientation and competence-orientation. Competence, as the ability to do something, is elemental for success. Competences are linked to tasks and challenges that should be done. In our approach, defining competences (than managing and developing them) requires detailed knowledge of the task. This knowledge includes the relations of the task, i.e. the processes. Highlighting competences may not be done at the expense of the importance of the processes. Competences certainly add a new approach to the evaluation of project success, it cannot be the only standard. As a result, the expansion of the knowledge base on project management is expected to expand further significantly.

According to the question ‘Bigger, longer, better?’, there is no single right answer. Organizations shall consider their requirements and enablers for selecting the proper toolset. Supply of tools, methods and framework are not the bottleneck of the system at any levels.

5. References

1. Ahlemann, F., Teuteberg, F., & Vogelsang, K. (2009): Project management standards – Diffusion and application in Germany and Switzerland. *International Journal of Project Management*, 27(3), 292–303.
2. Aranyosy, M., Blaskovics, B., & Horváth, Á. A. (2018): How universal are IT project success and failure factors?: Evidence from Hungary. *Information Systems Management*, 35(1), 15–28.
3. Barna, L., & Deák, Cs. (2012): Identifying key Project Management Soft Competencies at a Telecommunication Company. *European Journal of Management*, 12(7), 137–141.
4. Bartoška, J., Flégl, M., & Jarkovská, M. (2012): IPMA Standard Competence Scope in Project Management Education. *International Education Studies*, 5(6), 167–176.
5. Berényi, L. (2015): *Projektmenedzsment: A projektek szervezetbe illesztése*. Miskolc: Bíbor Kiadó
6. Berényi, L. (2017): A minőségirányítás fejlődése és jövőbeli lehetőségei. *Vezetéstudomány*, 48(1), 48–60.
7. Blaskovics, B. (2015): A projektvezető vezetési stílusának hatása a projektsikerre egy hazai vállalat példája alapján. *Vezetéstudomány*, 46(8), 14–23.
8. Blaskovics, B. (2019): Projektvezetési eszközök virtuális környezetben: Project management tools in virtual environment. In: Kőszegi, I. R. (ed.): III. Gazdálkodás és Menedzsment Tudományos Konferencia: Versenyképesség és innováció. Kecskemét: Neumann János Egyetem, pp. 926–932.
9. Caupin, G. (2006): *ICB – IPMA Competence Baseline, version 3.0*. Nijkerk: IPMA, International Project Management Association.
10. Chagas L. F., de Carvalho D. D., Lima A. M., Reis C. A. L. (2014): Systematic Literature Review on the Characteristics of Agile Project Management in the Context of Maturity Models. In: Mitasiunas A., Rout T., O’Connor R.V., & Dorling A. (eds.): *Software Process Improvement and Capability Determination. SPICE 2014. Communications in Computer and Information Science*, vol 477. Cham: Springer.
11. Cleland, D.I. (1994): *Project Management. Strategic Design and Implementation*. New York: McGraw-Hill.
12. Garcia S. (2005): How standards enable adoption of project management practice. *IEEE Software*, 22(5), 22–9.

13. Görög, M. (2013): *Projektvezetés a szervezetekben*. Budapest: PANEM.
14. Horváth, V. (2016): Overview about the Project Management Education. In: Deák, Cs. (ed.) PMUni 2016 Workshop. Budapest: PMUni - International Network for Professional Education and Research in Process and Project Management, 70–83.
15. Horváth, V. (2018): Project Management Competence in Standards – a Comparative Analysis. In: van der Meer, H., Enthoven, G., Schiuma G. (eds.) 13th International Forum on Knowledge Asset Dynamics: Societal Impact of Knowledge and Design. Delft: Delft University of Technology Institute of Knowledge Asset Management, 411-424.
16. PMI (2000). *A guide to the project management body of knowledge: (PMBOK® guide) 2000 Edition*. Newtown Square: Project Management Institute.
17. PMI (2008): *A guide to the project management body of knowledge: (PMBOK® guide) 4th Edition*. Newtown Square: Project Management Institute.
18. PMI (2013): *A guide to the project management body of knowledge: (PMBOK® guide) 5th Edition*. Newtown Square: Project Management Institute.
19. PMI (2017): *A guide to the project management body of knowledge: (PMBOK® guide) 6th Edition*. Newtown Square: Project Management Institute.
20. Szintay, I. (ed.) (2005): *Minőségmenedzsment I. Elmélet*. Miskolc: Bíbor Kiadó
21. Tari, J. J., Molina-Azorín, J. F., & Heras, I. (2012): Benefits of the ISO 9001 and ISO 14001 standards: A literature review. *Journal of Industrial Engineering and Management*, 5(2), 297–322.
22. Terziovski, M., & Power, D. (2007): Increasing ISO 9000 certification benefits: a continuous improvement approach. *International Journal of Quality & Reliability Management*, 24(2), 141–163.
23. Tóth, Z., Tóth-Kiss, A., & Varga, K. (2018): Vezetési kompetenciák, mint a projektek sikertényezőjének meghatározói - elméleti és módszertani áttekintés. In: Kihívások és tanulságok a menedzsment területén. International Scientific Conference. Debrecen: University of Debrecen Faculty of Engineering.
24. Tóth-Kiss, A. (2012): Kompetencia alapú működés a vállalatok humán erőforrás folyamataiban. *Magyar Minőség*, 21(11) 73–78.
25. Verzuh, E. (2011). *The Fast Forward MBA in Project Management, 4th Edition*. Hoboken: John Wiley & Sons.

26. Zandhuis, A., & Wuttke, T. (2019): A pocket companion to PMIs PMBOK® guide: a quick introduction to A guide to the project management body of knowledge (PMBOK® Guide) sixth edition. s-Hertogenbosch: Van Haren Publishing.
27. Zandhuis, A., Snijders, P., Newton, S., & Wuttke, T. (2014): PMBOK® Guide 5th edition: a pocket companion to PMIs: a quick introduction to A Guide to the Project Management Body of Knowledge (PMBOK® Guide). Zaltbommel: Van Haren Publishing.
28. Zaramdini, W. (2007): An empirical study of the motives and benefits of ISO 9000 certification: the UAE experience. *International Journal of Quality & Reliability Management*, 24(5), 472–491.