Project Management Development – Practice and Perspectives

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PROJECTS AND PROCESSES: STRANGERS OR COUSINS?

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Abstract

This paper (work in progress) is intended to explore potential linkages between two fields of research and practice: on the one hand, project management and temporary organizations, and on the other hand, business process management. In practice, projects and processes are interrelated but surprisingly or not, both research fields have developed quite separately. As practice fields, both could be considered to be 'ancient' but as academic fields both are relatively young. However, both fields are emerging and promising. Thus, there are potential research links to be exploited. The rationale for this paper is that in knowledge building, the fragmentation and separation of the two fields that has developed is detrimental and should be overcome. The paper contains a review of the existing literature, based on a loosely structured method, attempting to detect and demonstrate potential synergies. The main findings are that at some points the two fields have already come quite close and the next step(s) could be taken in the near future. Finally, an idea for research and development – to develop a methodology for integrated process and project management for small and medium-sized organizations (particularly in the field of services) – is proposed and argumented. Further developments may lead to the formation of a common body of knowledge for the two fields, and even for related fields, such as business analysis. In turn, this may lead to integration of several management systems and standards.

Key words: *project management, temporary organization, business process management*.
JEL code: *M10*

Introduction

Academic knowledge building has involved (and still does) a typical separation of research fields – researchers tend to remain in their 'silos' and publish their work mostly in highly specialized journals. This has caused separation of communities and damaging fragmentation of knowledge. On the practice side the situation seems to be somewhat better but yet, similar fragmenting mechanisms can also be noticed.

This paper aims to explore potential linkages and synergies between the two academic fields – project management (and temporary organization) and business process management. This will be done via comparative analysis of the two academic fields, and also through connecting academic research to practice. The underlying assumption is that in practice these two fields are essentially related and linked much better and therefore, both academic fields can learn from practice, and not just from their 'own' field but also from the other fields practice.

The paper will provide a comparative overview of the two academic fields and relate the main conceptual approaches to practice. Starting from an overview of the existing academic literature, it will reveal significant existing linkages and subsequently suggest further possible linkages for mutual enrichment. The review of existing literature is based on a loosely structured method, starting with keyword searches in academic databases and followed by examination of the content of relevant publications. Then a 'bottom-up 'approach, following the references of examined articles, is adopted and again the contents of publications have been

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examined. Some sources have been used from the author's previous research and some (especially non-academic) have been found using general internet search engines.

A brief comparative overview of the fields

Project management is an 'ancient' phenomenon but a comparatively young yet developing academic discipline[12]. Up to now the scholars in the field have no solid understanding about the notions of project and project management. This paper will proceed from Artto, Martinsuo, and Kujala (2006) who distinguished three viewpoints on a project: (1) tasks or phases in a process, (2) product or work breakdown structures, and (3) temporary organisations. The first two encompass most 'classical' aspects appearing in understandings of a project where normative approaches (guiding what is appropriate management for the project) are emphasised. Also, the first two comprise the notion of '*project work*' (or **project processes** – this aspect will be explicated later). The third – *temporary organisations* – is more recent, focusing on behavioural aspects and treating projects as organisations (Lundin & Söderholm, 1995). This paper will treat both **projects** and **temporary organizations**, hereinafter labelled as **PM**.

Also, there are several definitions of project management but again, this paper will proceed from afore-cited Artto et al. (2006) who distinguished three aspects: (1) tools and documentation, (2) competences and characteristics (of the project manager), and (3) knowledge areas or (sub-)processes. It is worth to notice that the keyword "process" appears in both specifications by Artto et al. (2006) and several widely renowned definitions are 'process-based'. For instance, APM BOK (2006: 2) states: ''*Project management is the process by which projects are defined, planned, monitored, controlled and delivered ... Projects bring about change and project management is recognised as the most efficient way of managing such change.*'' This definition emphasises a process[13], another innovation that is very essential. Moreover, international standard on project management (ISO 21500: 2012) constitutes: "*A project consists of a unique set of processes...*" and another standard (related, providing guidelines for quality management in projects) determines project as "*... unique process, consisting of a set of coordinated and controlled activities...*" (ISO 10006: 2003).

Project management is not considered to be a mature field yet but significant developments have taken place during recent decades. Turner, Huemann, Anbari, and Bredillet (2010) discern nine schools in project management and show that the field is more developed and diverse than it is used to be in 'classical' understandings, characterised by the 'iron' or 'golden' triangle (time, cost and scope/quality). These schools can support scholars in the development of theory, as well as help practitioners to gain wider understanding of the key issues on their projects. Here it is worth to mention that one of the nine schools is labelled as **process school**. Yet, process school is just one amongst nine and this leads to the conclusion that the discipline of project management is not entirely process-oriented. The relatedness on

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[12] For a more comprehensive overview look at Kuura, Blackburn and Lundin (2014), publication data are in bibliography.

[13] It should be mentioned that the more recent edition of APM BOK (2012: 12) provides a different definition: "*Project management is the application of processes, methods, knowledge, skills and experience to achieve the project objectives*". It also denotes processes (and in the first place among methods, knowledge, etc.) but stresses on the application of all these.

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projects and processes (and their management) will be examined later in this paper. To conclude here, just mention that the past 50-60 years (that is considered to be the age of modern project management) can be characterized by the increasing use of projects and project management, notably for achieving the strategic objectives of organisations and for dealing with increasing complexity, uncertainty and ambiguity in the contemporary socio-economic environment (Bredillet, 2010).

Business process management (hereinafter **BPM**) has gradually developed as a discipline amidst management and information systems and computer sciences (Recker & Mendling, 2015). Because of having roots in both management and computer science, it is difficult to follow the history of BPM but the roots of the discipline can be dated back to the industrial revolution. The focal topic in BPM – productivity – has been increasing due of technical and organizational innovations, and since the 1950s also due to the use of information and communication technology (van der Aalst, 2013).

All organizations – enterprises, governmental bodies and non-profit organizations – have to manage a number of processes. Therefore, they need BPM – the art and science to ensure consistent outcomes and to exploit improvement opportunities. Improvements (typical examples are reducing costs, execution times and error rates, etc.) may be one-off or have more continuous nature. Even BPM can be used for improving individual processes; it is rather about managing entire chains of events, activities and decisions that add value to the organization and its customers. These "chains of events, activities and decisions" are called *processes* (Dumas, La Rosa, Mendling & Reijers, 2013). A *business process* is defined as "*a collection of inter-related events, activities and decision points that involve a number of actors and objects, and that collectively lead to an outcome that is of value to at least one customer*". Following this definition they define BPM as "*a body of methods, techniques and tools to discover, analyze, redesign, execute and monitor business processes*" (ibid: 5). The definition stresses that business processes are focal in BPM but also points out different phases and activities in the lifecycle of business processes.

Exploring the origins and history of BPM, Dumas et al (2013) date back to the pre-historic and ancient times and the Middle Ages. It means that BPM has its roots much deeper than in the industrial era. In the prehistoric times, the consumers and producers overlapped and humans had knowledge of how to produce all goods they needed, thus they were generalists. In the ancient times, people started to specialize, this widespread development led to the guilds of the craftsmen during the Middle Ages and shifted further towards pure specialization during the Second Industrial Revolution (from the second half of the 19th century up to the First World War). In management (both practice and theory) this is reflected in Taylor's approach (known as *scientific management*) where the key element is the division of labour together with emergence of a new class of professionals – managers, responsible for setting goals for individual workers and ensuring that the goals were met. As a result, most organizations became structured along the principles of labour division (called functional organization).

Although BPM has quite protracted history, the most important developments have occurred comparatively lately. Exploring the development of BPM, Lusk, Paley and Spanyi (2005) distinguished two main phases: *Industrial Age* (up to the 1960s) and *Information Age* (since the 1970s); the later (ongoing) phase has three "waves": the 1st (the 1970s -80s) labelled as *Process Improvement*; the 2nd (the 1990s) labelled as *Process Reengineering,* and the 3rd (since 2000) labelled as *BPM*. Exploring the trends in BPM during the past decade, Harmon

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(2015) stated that "process work" (as it is understood today) began about a hundred years ago with Taylor's Scientific Management, which generated the first process improvement movement.

Because its usefulness in increasing productivity, achieving operational excellence and/or saving costs, the recent decades have seen a growing interest in BPM on the practice side. Concurrent developments on the research side have resulted in a plethora of models, methods, tools, etc., helping the practitioners in (re)design, management and analysis of business processes (Recker & Mendling 2015). Like in other academic disciplines (including PM – the author) there are debates about the maturity level of the field. Some scholars are quite sceptical questioning not only the level of maturity of BPM discipline but even if the research is relevant at all (Recker & Mendling 2015; van der Aalst 2013; Recker 2014). At the same time, it is possible to judge that BPM is a mature discipline and several scholars (e.g., van der Aalst 2013) have claimed this. During the past decades, BPM research has been presented at different forums and published in the top journals of various fields (mainly information systems and management science), and there is also a special journal[14] for BPM research. During the recent years, many premium research conferences in various fields have had tracks on BPM. In 2003, the BPM discipline started its own annual conference series (Recker & Mendling 2015).

Concerning coeval developments on the practice side of BPM, it should be mentioned that a professional body[15] was established in 2003. In some respect this was a response to the IT vendor community who was trying to "take over" or redefine BPM as a technology layer, which would come problematic for practitioners. The founders of the professional association for BPM practitioners got inspiration from similar professional societies, including PMI. Moreover, in December 2004 the ABPMP Board formed an Education Committee and its main task was to develop the BPM-BOK[16] and *Professional Certification Program* in BPM (Lusk et al 2005).

Summing up this brief overview it is possible to note that similar developments have taken place in both fields, and both in practice and theory. The main difference can be observed on the time axis – significant developments in the BPM field took place much (some decades) later than in the PM field. The next sections of the paper will continue pointing out similarities and discrepancies between these fields, examining existing literature.

Existing linkages between the fields

The presented brief overview already gives some insight into possible linkages between the examined fields of practice and research. One obvious sign is the existence of *process*

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[14] ***Business Process Management Journal*** (started on 1995, until 1997 as *Business Process Re-engineering & Management Journal*), for more information see http://www.emeraldinsight.com/journal/bpmj. Information about the International Conferences on BPM can be found at http://www.bpm-conference.org.

[15] Association of Business Process Management Professionals – more information is available at http://www.abpmp.org/.

[16] BOK (Body of Knowledge) is a well-known abbreviation in project management, introduced by professional body PMI (Project Management Institute – see http://www.pmi.org/). PM BOK is also used for certification.

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school of thought (one of the nine[17] schools) in the PM field. The process school emerged in the late 1980s, particularly in Europe; its main premise is to define structured processes from the start of the project to achieving the end objectives. This school views project management as converting a vision into reality – as a structured process (or road map) which leads from the start to the desired end state (Turner, Anbari & Bredillet 2013). The greatest proponent of the process school seems to be Rodney Turner. In his book (Turner 2009) he defines specific processes for managing scope, organization, quality, cost, time, risk, covering project life-cycle and its management life-cycle. An important point he made is that project management approach has to be aligned horizontally with the project, not vertically with the functions. In this approach the "project" equals "project processes", thus this is labelled process approach. Turner (ibid) also pays attention to development patterns – at the beginning of the "project era" (in the 1950s) the managers tried to adopt the familiar classical functional approach and started to face problems – and relatedness to the quality management approach (quality procedures following the ISO 9000 series standards) which is essentially process-based. Finally, it is worth to note that Turner (ibid) quotes a piece[18] of BPM literature and the quoted item is about Business Process Reengineering. This is noteworthy because reengineering (which is more or less a change) of business processes are seen as projects and this is an important linking point.

Afore-cited Turner (2009) also hints at another process-based approach in the PM field – the PMBOK (Project Management Body of Knowledge), elaborated by a world-leading professional organization PMI (Project Management Institute). The latest (5th, 2013) version of PMBOK defines 47 project management processes, divided into five process groups (Initiating, Planning, Executing, Monitoring and Controlling, and Closing). Combined with 10 PM Knowledge Areas it represents a matrix which follows the process logic – output of one process becomes an input to another process, or is a deliverable of the project, subproject, or project phase. Processes are shown in groups in which most of certain activities take place – project management is usually iterative and processes from any group may be used throughout the project life cycle. (PMI 2013) When a process takes place in one and will be re-used or updated in another process group, it is not considered a new process. This principle is widely recognized in BPM.

Another confirmation of diffusion of process approach in PM is the international standard on project management (ISO 21500: 2012), as well as cognate standard for quality management in projects (ISO 10006: 2003). As it was mentioned in the overview, both standards represent the process-based view. For ISO 21500, this is accruing from the PMBOK which is the main (or almost sole[19]) basis for the international standard (Reusch, Löhr & Khushnood 2012). For ISO 10006, the same is accruing from the ISO 9000 family of standards (on general quality

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[17] The nine schools are: Optimization, Modelling, Governance, Behaviour, Success, Decision, Process, Contingency, and Marketing. All distinguished schools have metaphoric counterparts for the project, for the process school the metaphor is an algorithm.

[18] Johansson, H.J., McHugh, P., Pendlebury, A.J., & Wheeler, W.A., 1993. Business Process Reengineering, Chichester: Wiley.

[19] As ISO 21500 is based mainly upon PMBOK, it does not have significant links to other concepts (such as IPMA, APM, etc. widely used in the project management community) and this may cause problems in global recognition of this standard (Reusch et al 2012).

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management) which serve as its basis. One (out of eight) principles of quality management[20] in ISO 9000-series is "Process approach" (ibid).

It may seem that "project" processes distinguished in PMI PMBOK (and in ISO 21500 as these are almost the same) cover everything that is important in the management of projects but yet, in some respect there are uncovered areas. For instance, Reusch (2015) proposed several extensions to the 'standard' process, particularly for the management of sustainability in projects. Reusch, Khushnood and Olaso (2012) also proposed a new approach for the management of projects, using *Object Role Modeling* (ORM). Suggested approach should be able to clarify fundamental concepts in project management and support all management levels: operational, managing and controlling, and auditing processes. As they claim, ORM *"... is well established in information analysis and systems design"*, it is supported by several tools and "*can contribute to develop ... architecture for future standards in project management*" (ibid: 144). The main asset of ORM is its aptitude to assign different tasks and roles to team members. As ORM[21] and BPM are inherently linked, an attempt to link ORM and PM is an obvious step towards linking PM and BPM. Yet, there seem to be a shortcoming as well – deficient attention was paid to the impact of time, whereat Halpin (2008) published a paper, discussing various emerging temporal issues at the conceptual level. However, even Halpin was far away from the application of conceptual approaches already existing in the PM field, particularly the seminal work of Lundin and Söderholm (1995).

A recent academic contribution, discovering the global trends in project management (Alvarez-Dionisi, Turner & Mittra 2015) also points to some connections between PM and BPM fields. In addition to 'mainstream' approaches in PM (referred before PMI and APM bodies of knowledge, also PRINCE2, not alluded in this paper) they point to several other linking matters. Speaking about certification systems and bodies, they refer to International Institute of Business Analysis (IIBA[22]) which has developed certifications of *Certified Business Analysis Professional* (CBAP) and *Certification of Competency in Business Analysis* (CCBA), based on specific body of knowledge BABOK. Although Alvarez-Dionisi et al (2015) do not exhibit the connection to BPM, there is an obvious connection and this is also manifested in academic literature (for one, see Mathiesen, Bandara, Delavari, Harmon & Brennan 2011). Furthermore, Alvarez-Dionisi et al (2015) point out several aspects with linking potential, such as agile methods (including SCRUM), comprising different frameworks, particularly the rational unified process (RUP), which is quite common in BPM and can be easily modelled using BPMN[23] (for one, see Delgado, Ruiz, de Guzman & Piattini 2010). Moreover, Alvarez-Dionisi et al (2015) declare another linking concept – *green project management* (GPM), which is defined as "inclusion of SUSTAINABLE methods to the process by which projects are defined, planned, monitored, controlled and delivered" (ibid: 22). Green (or sustainable) does not include only environmental but also social and economic aspects. And finally, a remarkable

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[20] By all rights, it is possible to claim that modern quality management is (almost) entirely process-based and this could be one of the biggest reasons of proliferation of process approach and BPM in general – but as this aspect leads outside of the topic of this paper it will be not discussed any more.

[21] More information about ORM is available at website http://www.orm.net/.

[22] More information about IIBA is available at website https://www.iiba.org/.

[23] BPMN stands for **Business Process Model and Notation**, more information is available at website http://www.bpmn.org/.

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linkage propounded by Alvarez-Dionisi et al (2015) is project governance. This is the linking project management and corporate governance and (especially if defined as a "*process-driven system ...*") also BPM – through the governance of BPM or process in organizations (Hernaus, Bosilj Vuksic & Indihar Štemberger 2016).

Looking at the same matter for the BPM side an important linkage can be noticed. As Hernaus et al (2016) insist, within an organization BPM is usually introduced through a (pilot) project. Understandably, such one-time effort cannot lead to the organization-wide institutionalization of BPM practices – the business environment, customer's needs, etc. tend to change and thus business processes should be changed time to time. Thus, it is important to note that redesign (and/or reengineering, or improvement, or just change – many phrases are used for nearly similar matters) of processes (called also BPM initiatives) are carried out via organizational projects and/or programs. Such projects / programs are aimed to enhance both efficiency and effectiveness of business processes, and thereby competitive advantage. Therefore, all "*BPM initiatives should be properly developed, adequately measured and strategically aligned*" (ibid: 175). Thus, it is understandable why BPM (or process) governance is recognized as an important BPM success factor. As they define governance as the use of rules to manage BPM programs and/or projects, the cited authors (ibid) were very close to the PM field but did not cross the line. Yet, suggesting possible directions for further research they point to a connection with a topic which is quite common in the PM filed – the role of **project management office** (PMO). Here it is worth to mention that this particular issue has already deserved some attention in the literature. On the BPM side "*BPM Center of Excellence*"[24] (CoE) is dominating, standing for an organizational mechanism for institutionalizing BPM initiatives, using a more centralized approach. Thus, there is an essential linkage between a PMO and a BPM CoE (Jesus, Macieira, Karrer & Rosemann 2009). Even PMO-topic is quite common in the PM field, the existing literature tends to be limited with the aspects related project (including program and project portfolio) management but there is exclusion – a paper by Hubbard and Bolles (2012). Taking stock of nearly 15-year history of PMO-related research they present an updated model of PMO – representing "*a beneficial change agent and a unifying force within the enterprise*" (or organization – the author) which "*can be a way of representing what is being called Business Process Management (BPM)*" (ibid: 7). Obviously, such references may lead to an idea to merge a PMO and a BPM CoE. As it might be anticipated, there is already at least one successful example – in the US, at the National Board of Medical Examiners (Burns 2012).

Another linkage seems to exist in competences (knowledge, experience, etc.). This can be noticed while searching for the term "Body of Knowledge" which (as mentioned in Section 1) is used both in PM and BPM. Proper examination and collation of defined competences need more work and space (thus do not fit the scope of this conference article) but even sketchy look will bring out significant links. For instance, in BPM CBOK (ABPMP 2013) the term "*project*" appears 376 times and in PMBOK (PMI 2013) the term "*process*" 1713 times – which should be considered significant. On top of that there seems to be a real linking competence – in business analysis, having a specific body of knowledge called BABOK. As mentioned also before, this competence and qualification is expanding in the PM field and is now recognized by PMI as the "*PMI Professional in Business Analysis* (PMI-PBA)" (PMI 2016), as well as in the

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[24] This source uses abbreviation BPM CoE and notes that labels *BPM Group, Process Team* or *BPM (Support) Office* are also used.

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BPM field (Mathiesen et al 2011). Moreover, Rosemann and vom Brocke (2015) point out *six core elements of BPM* and in each of these six elements (or factors) provide further level of detail called *capability areas* (all together 30 areas, forming a matrix with six columns and five rows). Even (just) two capability areas include "Program & Project Management" one can note that nearly all defined capability areas actually have (at least some) relation to capabilities recognized in project (and program) management field. Furthermore, the cited authors (ibid: 109) claimed: "*Based on this demand for a BPM framework that can be used for project and program management ... and strategy management, we propose a framework that can guide BPM decision makers in all of these challenges.*" The authors (ibid: 117) show great respect for project and program management methods stating that these methods "*... are used for the overall enterprise-wide management of BPM and for specific BPM projects. The latter requires a sound integration of BPM methods with specific project management approaches (e.g., PMBOK, PRINCE2)*". It is certainly easy to agree with this statement.

In addition to (treated before) individual competences, also collective and organizational (level of) competences can be discerned. The last represents the organization's strengths or capabilities (Loufrani-Fedida & Missonier 2015). Organizational competences are related to the organizational maturity and this seems to be another linking stream. In the PM literature, maturity has been an engaging topic during the two past decades. An intriguing fact is that in quite an early stage the project management maturity was related to processes, using a label "*Project Management Process Maturity (PM)^2 Model*" (Kwak & Ibbs 2002). They recognized that (already in 2002!) various PM maturity models existed and most of them were inspired by the CMM (capability maturity model) developed by the Software Engineering Institute (Carnegie Mellon University) in order to assess the maturity of software development processes. Looking at congruous developments in the BPM field one can observe quite similar evolution (for one, Röglinger, Pöppelbuß & Becker 2012: esp. Table 1) but with one significant difference: upturn of maturity models in the BPM field started in the middle of the first decade of the 21st century – about a decade later than in the PM field. Yet, the conceptual basis of the plethora of maturity models in the BPM field seems to be the same as in the PM field (ibid: esp. Table 2). Examining the rate of coherence with project-related aspects it is easy to notice its presence at BPR (business process reengineering – or just change) projects.

As already mentioned, organizational maturity is related to the organizational competences. Looking at appropriate models in the PM field, a recent and significant development is IPMA[25] *Organisational Competence Baseline* (OCB) (IPMA 2013). Here it is good to mention that IPMA's OCB has quite a visible process orientation – just one example: "*Organisational competence ... builds on people and all resources involved and integrates necessary processes, structures and cultures ...*" (ibid: 9). The role of organizational competences is recognised also on the BPM side. For instance, Sobreiro, Morgado, Bento, and Vivas (2015) show (on the case of sport tourism) those (dynamic) organizational competences, especially when operationalized with BPM strategies, work for achieving efficiency and effectiveness.

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[25] IPMA (International Project Management Association – see http://www.ipma.world/) is a leading professional organisation in the PM field, targeting mainly on development of project management competencies. IPMA has also *Individual Competence Baseline* (ICB) latest version (4.0) was published in 2015.

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Summing up this (brief and preliminary) comparison of the two fields, it is good to refer to an interview by M. La Rosa (2016) with Michael Rosemann on "The Role of Business Process Management in Modern Organizations". In the first question the interviewer particularly asked: "*So, Michael ... why hasn't BPM become a structural organizational management discipline, alongside disciplines such as project management, risk management ...*"? Michael Rosemann replied: "*That's a very good question, Marcello, and I think it goes to the core of our discipline. I believe there are three reasons ... and they could be related to: a lack of mandate; a lack in terms of comprehensiveness of the approach; and potentially, but maybe most importantly, a lack in the benefits that we deliver*". (ibid: 89) Considering afore-cited (as well as statement by Rosemann and vom Brocke (2015) cited beforehand) it seems that leading researchers in the BPM field give recognition to the PM discipline. This is obviously amiable for people (researchers, also practitioners) in the PM field. Even if the overall situation in the PM discipline is a bit better, it is not as good as it could be. Despite significant furtherance within the last decades, the PM discipline is still accused of lacking a solid theoretical basis or being immature (Kuura, Blackburn & Lundin 2014).

The presented brief comparison of the fields of practice and two academic disciplines is abridged in Table 1. On the practice side there are several similarities – history and origin, significance and value (for exploiters and other stakeholders). Concerning the development support and status of profession, there are similar patterns but shift on the time axis – the BPM field is lacking behind. Concerning academic disciplines, there are even more similarities but also some shift on the time axis and again, the BPM field is lacking a bit behind.

Table 1

Comparison of the state of project management (PM) and business process management (BPM)

Aspects compared	Project Management (PM)	Process Management (BPM)
A) As practice fields		
- history (origin)	ancient, as old as mankind	ancient, as old as mankind
- significance (value)	'getting things done' – tangible value often declared but not quantified, in-tangible value mostly declared, depend on situation in organisations	contributing to productivity, operational excellence, saving costs, flexibility and customer orientation, measurement and continuous improvement (of processes)
- development support	active professional organizations support development of appropriate techniques, etc. since 1960s	various organizations develop appropriate techniques, tools, etc. since 1980s, and a professional body active since 2003
- profession	up to mid-1970s amateurism, after-wards professionalism, rapidly growing number of (certified) professionals, who seek support for professional procedures	up to the end of 20th century amateurism and/or professionalism in other field (IT, etc.), since the beginning of 21st century developing towards professionalism
B) As academic disciplines		
- history (origin)	having roots in other (general) disciplines (mainly management sciences) emerged as discipline in the middle of 20th century	having roots in management, IT/computer science, emerged during the 20th century, grounded as discipline in the 21st century
- nature	inter-/multi-disciplinary field	inter-/multi-disciplinary field
- main linkage (via)	business analysis	business analysis

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- state of theory	still accused of lacking a solid theoretical basis or being immature **but** significantly evolving within the last decades	accused / conceded lacking of mandate, comprehensiveness of the approach, and in the benefits it delivers **but** appreciably evolving within the last decade

Sources: PM column – adapted from Kuura et al (2014); BPM column – author's constructions based on cited sources.

The next section will take stock of the comparative analysis and try to sketch possibilities for further development of the examined fields, using potential synergies.

Some possibilities for further linkages between the fields

Tightening of linkages between the two fields and further consolidation is probably easier solving practical issues, which are in the agenda on both sides. Thus, there is a need to find out the issues where emersion of potential synergies is most probable. It should be mentioned that one befitting issues was fetched out by Michael Rosemann in the (cited also before) interview (La Rosa 2016). The interviewer stated that BPM initiatives tended to associate with large organizations and asked: "*… is there a role for BPM also in small and medium enterprises"*? Rosemann replied: "*No doubt!*" (ibid: 90) and pointed out three (main) reasons. First, small and medium size enterprises (SMEs) have no buffer; their demand for cost efficiency is brutal. Second, they want to grow and thus need to understand how to scale up processes, avoiding 'bottlenecks'. Third (and possibly the most interesting) is that they need to understand the processes not just within a SME but within ecosystem, because most SMEs contribute to cross-organizational value chains. Understanding of the processes they participate will help SMEs to increase their value propositions (ibid).

Rosemann (La Rosa 2016) asserted that nowadays also SMEs implement BPM, following its rigor but not having the same comprehensiveness and scope (when it comes to process governance, etc.) as it is usual in larger organizations. Following this it is worth to mention a recent initiative – to elaborate *Lightweight Process Modelling* methodology, targeting on the needs of "*non-IT-savvy*" business users, including SMEs and public sector (Schnabel 2012).

On the BPM side there is already more to build on. For instance, Dallas and Wynn (2014) carried out a case study, inquiring the applicability of 'mainstream' BPM tools and techniques in a SME. Their main finding was that in general, the 'mainstream' BPM tools (including BPMN, workflow systems, etc.) in SMEs are as useful as in larger businesses. However, because of lower investment capabilities, the availability of necessary BPM tools on a low or no-cost basis is potentially more important for SMEs. Thus, the main limiters for the adoption of BPM in SMEs are resources, including skills, and (in many SMEs) also the culture could create resistance. The cited authors rely on a number of earlier works on this topic. An example is Chong (2007) who explored and structured the major issues of BPM implementation for SMEs in the wine industry in Western Australia. The main findings were that factors inhibiting BPM implementation SMEs (in ranked order) are the lack of financial resources, time, support from senior management, IT expertise and finally, poor knowledge of process-oriented approaches.

Hereby it is good to note that similar ideas thrive on the PM side. Turner, Ledwith and Kelly (2010) inquired project management in SMEs and came to conclusion that SMEs need a "lite" version of project management. Yet, they see differences. The medium-sized companies

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have specialists whose work needs coordination and therefore they need more formalistic processes than micro-sized and small companies. In turn, the micro-sized and small companies need a "micro-lite" version, supporting generalists who work in small project teams, and more *laissez-faire* type management.

As seen, specific needs of SMEs have been recognised and something has been done in both BPM and PM fields. In order to examine the level of connectedness between research approaches is useful to look at the representation of project (or temporary) aspects on the BPM side and process-related aspects on the PM side. Looking at the afore-cited publications in the BPM field (Dallas & Wynn 2014; Chong 2007) one can notice that they mention projects[26] but just on the traditional level – the "BPM projects" (or BPM initiatives, as treated in Section 2). BPM projects are obviously projects in full extent but the overwhelming majority of SMEs have also many projects of other kinds. Looking at the same matter on the PM side (Turner et al 2010) it is possible to say that process-related aspects deserved more attention – there is even a keyword "Levels of process". This keyword represents a concept or a model, meaning that different companies and different projects require certain (different) amounts of project management methodology. Appropriate levels of process depend on five parameters: size and complexity of project, skill of project team, skill of customer, and willingness of customer to pay (ibid).

Aforesaid contains an interesting point which is worth to discuss and develop further. For better understanding the underlying idea, the parameters which determine the levels of processes (by Turner et al 2010) are placed on Table 2.

Table 2

Parameters positing the levels of processes

PROJECT in permanent organization(s)			Internal CLIENT	
PROJECT WORK (PROCESSES)		TEMPORARY ORGANIZATION		External CLIENT
SIZE	COMPLEXITY	SKILLS	SKILLS	WILLINGNESS TO PAY

Source: Turner et al 2010

As seen, the first three parameters match the understanding of a project as a combination of 'project work' (or project processes) and a temporary organisation (as firmed up in Section 1). Skills are certainly not the only attribute of a temporary organization but skills are probably important.

Skills are also important attribute of a client. Turner et al (2010) had in mind external client but the client may be also inside the focal organisation. Such understanding has emerged and is widespread in the service management field and has gained ground also in the PM field (Burström, Jacobsson & Wilson 2013). This understanding is recognised in the marketing school of PM (see Bredillet 2010; the nine schools are listed in footnote 6).

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[26] There is a notable exclusion: Chong (2007) quotes a paper which is explicitly related to PM: "Murphy, A. and Ledwith, A. (2006) Project management tools and techniques in high-tech SMEs in Ireland. 14th Annual High Technology Small Firms Conference, 11-13 May, Enschede, The Netherlands." It is remarkable that the second author Ann Ledwith is a co-author of quoted PM publication (Turner et al 2010). Thus there is an 'early linkage' between the two fields.

The extension of the client's side (the upper right on Table 2) draws on a recent contribution by Lundin et al (2015) who distinguished three types of organizations, adduced in Table 2.

Table 3

Types of organizations and relations to business process management (BPM)

Types of organizations	Explanations (examples)	Relations to BPM
(a) Project Based Organizations (**PBOs**)	revenue is based on projects (some examples: design, fashion, architecture, film, IT, publishing)	core processes are organised by projects
(b) Project Supported Organizations (**PSOs**),	the project activities (such as R&D, design) support core activities (such as production, servicing) to cope with innovation-based competition	support processes are organised by projects
(c) Projects Networks (**PNWs**)	networking between different actors is dominating (some examples: TV production, special types of construction, also community based projects, serving a societal purpose)	both core and support processes are organised by projects and the projects (or processes) cross the boundaries of focal organisation

Sources: Types of organizations and explanations (examples) – Lundin et al (2015); relations to BPM – author's suggestions.

Modern approaches in PM and in BPM recognise that there is always a client – for PBOs outside, for PSOs inside and for PNWs inside and/or outside of the focal organisation. The last (PNWs) seem to be the most all-embracing and thus the most interesting notion. Moreover, it seems to have perfect fit with the *service-dominant logic* (SDL), its four axioms (Vargo & Lusch 2014). The first axiom (service is the fundamental basis of exchange) and the fourth (value is always uniquely determined by the beneficiary) are more general but the second (the customer is always a co-creator of value) and the third (all economic and social actors are resource integrators) are apparently related to process approach. For instance, Harmon (2015) pointed out ten BPM trends in ten years and one (7.) of ten trends is "customer processes". The idea behind this is quite simple – when drawing process diagrams (following BPMN rules) a pool or a lane for the customer processes are included. This leads to thinking what a customer goes through when interacting with processes of a service provider and thereby allows to design better processes, and in turn better services.

Running total, it comes to an idea for research and development – to *develop a methodology for integrated process and project management for (service) SMEs*. I put service into brackets deliberately: most SMEs are nowadays active in service sector but certainly not all – some act in manufacturing and some in primary sector. Nevertheless, applying service approach or service (dominant) logic on SMEs in other sectors might be useful anyway, this is coming from the current paradigm, characterised as servitization, shift to services, etc.

Besides, one more apologia for the service approach can be found in the literature. Rosemann (2010) proposed an interesting view on BPM as an *Enterprise Service*, basing on an idea that an organization has several (internal) services and to solve problems they need the services blended (or "*loosely coupled*"). And, surprisingly or not – the two services that Rosemann (ibid) considered to be blended were BPM and PM. It should be noted that Rosemann's "*service-based view*" of the organization has roots in *Service-Oriented Architecture* (SOA), which comes from IT-landscapes. To avoid confusing with software entities is the reason why Harmon (2014) used "*Domains of Practice*" instead of "*services*" but kept the overall idea. Harmon's (2014) paper is remarkable also because it discusses the relations of

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BPM to other domains of practice, such as Business Analysis, Operational Management, Enterprise Architecture, IT Development, etc. But (again, surprisingly or not) he pays most attention on Project Management.

Conclusions

Proposed idea for further research and development – to develop a methodology for integrated process and project management for SMEs – is obviously something that needs concerted effort form researchers in both BPM and PM fields, and to seek synergies. Working together on the same or similar empirical cases would certainly be beneficial, particularly considering the closeness of the two areas from a practical point of view. It means that researchers in both fields have to look out of their 'silos'. This will be a challenge but also a risk – to fall into eclecticism – but it should be possible to avoid such risk. Cooperation assumes that researchers in both fields perceive major developments in other fields, and apply appropriate research questions, methods, paradigms etc. to their studies. Entering uncommon field is not easy, especially for established researchers. Thus, there are some specific recommendations. For researchers in BPM field is recommended to consider more 'temporary' perspectives and recognize that an intrinsic part of processes (not just BPM projects or initiatives) have temporary nature and therefore should be treated as projects or programs. Researchers in the PM field should look more beyond projects or programs and to consider their context, in terms of organizational boundaries, resource ties etc.

This should occur between the BPM and PM fields and even wider. For instance, development of a methodology for integrated process and project management for SMEs needs also integration of SME-related topics – small business management and entrepreneurship; adding service-specific aspects also assumes involvement of service researchers, etc. Such developments will probably lead to further convergence of domains of research and practice. It needs that the people (both researchers and practitioners) become so-called *T-shaped* – having wide general competences, covering also related areas, and deeper competences in one (or two, called π-shaped) sub-fields. This concept is already spread in HRM literature and appeared in BPM literature (Müller, Schmiedel, Gorbacheva & vom Brocke 2016). In turn, this may lead to the development of a common body of knowledge (BOK). Carried out comparison of developments in two examined fields leads to deduction that fusion of PM BOK and BPM CBOK may occur in not far future. Furthermore, the new integrated BOK may comprise also business analysis (BA BOK). As competence models are accompanied by management (systems) models or standards, such developments may open a way to the integrated use of management standards, or even to the elaboration of a universal management standard. Integration of several individual management systems and standards is already a topic in the academic literature (see e.g. Rebelo, Santos & Silva 2014). Thus, maybe such imagination of future is not pure fantasy.

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