



Planning and Scoping Business Process Management with the BPM Billboard

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1 Introduction

Business Process Management (BPM) has proven successful in fostering efficiency and productivity in many application areas (Hammer, 2015) and it has also demonstrated great potential to drive innovation in the digital world (Schmiedel & vom Brocke, 2015). However, planning and scoping Business Process Management (BPM) initiatives is a complex task and has been experienced as challenging by many organizations (vom Brocke et al., 2014). A plethora of aspects need to be considered, comprising both deep technical knowledge as well as strategic organizational considerations, just to name a few (Dumas, La Rosa, Mendling, & Reijers, 2018; vom Brocke & Mendling, 2018; vom Brocke & Rosemann, 2015). Instead of focusing on single processes and their management, companies must ensure that

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their BPM initiatives are contributing to their organizations' strategic plans and are designed according to their capabilities. The capabilities required in this context include business competencies, technology expertise, and social skills. To develop such capabilities, organizations must understand their own strategic ambitions and roadmaps, as well as their performance goals, whether improved productivity, compliance, agility, new revenue generation, or something else (vom Brocke et al., 2014). Moreover, the idiosyncratic nature of the organization's processes must be understood, be they crucial, transactional processes (e.g., the billing process in a telco company), data-intensive processes with complex business rules and algorithms (e.g., online advertising in a marketing company), creativity-intensive processes that depend heavily on staff (e.g., postproduction processes in a media company), or low frequency, highly important processes (e.g., annual budgeting in the public sector). All these factors, plus further contextual elements such as culture, economic climate, and regulatory setting, influence how BPM initiatives should be planned and scoped if they are to be successful (vom Brocke, Zelt, & Schmiedel, 2016). Once an organization has mastered the ability to understand and plan all these aspects of its BPM initiatives, it can manage its process portfolio by defining and setting up projects and sketching out how they relate to one another.

Many companies have mastered the management of well-defined process lifecycle models and related methodologies, such as Lean Management, Six Sigma, and Robotic Process Automation. However, the broader strategic management of processes as a corporate asset and its integration into the organizational setting is far less mature in the professional BPM practice and its related academic body of knowledge is still under-developed.

As a result, organizations' broader appreciation of BPM as an essential enterprise-wide capability remains often limited, and BPM is too often seen as a supportive "back-office" activity only.

We developed the BPM Billboard in order to improve the alignment between BPM initiatives and organizational goals, context factors, and capabilities. The BPM Billboard is a framework that supports organizations in planning, scoping, and integrating their BPM projects and programs. It is designed in such a way that all considerations that are relevant to a BPM initiative can be visualized on one page, an approach that has proven popular and valid in the use of strategic tools like BCG matrix (Hambrick, MacMillan, & Day, 1982), Strategy Maps (Kaplan & Norton, 2004) and Balanced Scorecards (Kaplan & Norton, 1996). This "BPM on one page" approach facilitates intuitive and shared planning by various stakeholders, along with transparent and effective communication of actions taken. This chapter introduces the BPM Billboard and outlines how the cases in this book relate to the layers of the BPM Billboard.

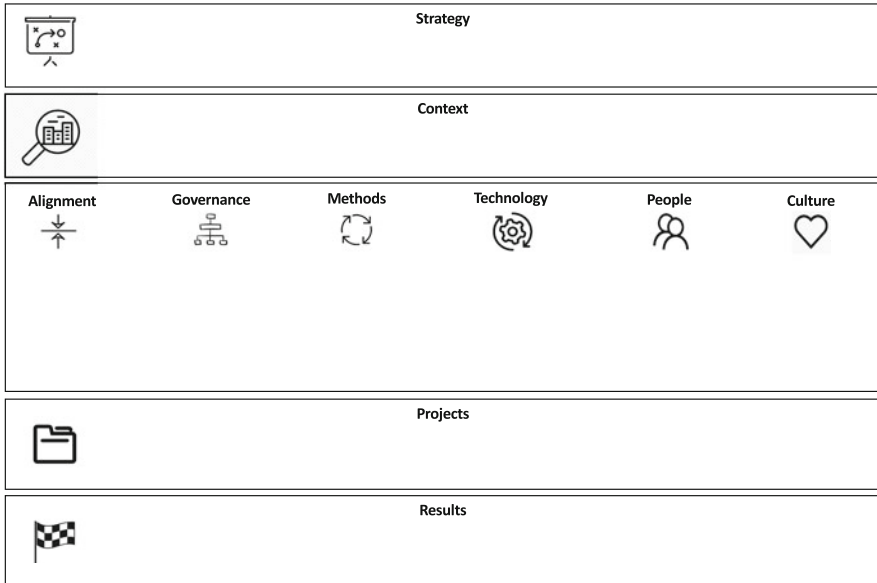


Fig. 1 BPM Billboard

2 The Structure of the BPM Billboard

The BPM Billboard is a one-page visualization of all the key components to be considered when planning and scoping a BPM project or program (Fig. 1). It builds on previous research and in-depth empirical insights gained from global BPM initiatives, including the Ten Principles of Good BPM (vom Brocke et al., 2014), the Six Core Elements of BPM (Rosemann & vom Brocke, 2015), and the BPM Context Framework (vom Brocke et al., 2016; Zelt, Recker, Schmiedel, & vom Brocke, 2019). The billboard is further inspired by the idea of a one-page representation, as it has been suggested and applied in the design of visual inquiry tools (Avdiji, Elikan, Missonier, & Pigneur, 2019), such as the business model canvas (BMC), which has been designed to plan and communicate business models (Osterwalder & Pigneur, 2010).

In the following, we introduce its components and describe how to use the framework to plan and scope BPM initiatives.

The BPM Billboard is a holistic tool that is structured along five interrelated layers. Comparable to other holistic approaches like BCG matrix (Hambrick et al., 1982), Strategy Maps (Kaplan & Norton, 2004), and Balanced Scorecards (Kaplan & Norton, 1996), the BPM Billboard helps to build a consistent, intuitive narrative based on the relationships between five components: strategy (BPM’s strategic alignment with the organization), context (BPM’s relation to the organization’s context), capability (identifying and developing the organization’s BPM-related

capabilities), projects (actual BPM-related projects that provide a strategic impact), and results (achieved by the different projects and programs).

2.1 Strategy

Before taking any action, those involved in a BPM initiative must relate the initiative to a strategic objective: Where does the organization want to go? What is the board currently most concerned about? What is the strategic agenda? What are sources of competitive advantage, and challenges that lie ahead? What does the CEO think about first in the morning, and what would the board be excited about if it was taken care of?

BPM should relate to and help to address these kinds of issues. For example, Porter's generic strategies can serve as a guide for the identification of an organization's strategic position (Porter, 1980). BPM can then contribute to increasing productivity and innovation capabilities (Mendling, Pentland, & Recker, 2020), and it can foster the organization's adaptability to respond to change more quickly and more successfully. Such matters are well known in organizations, but their consideration is typically not part of BPM methodologies, most of which are exclusively concerned with individual processes.

BPM initiatives are an important means for addressing these matters. Indeed, BPM is a means to an end, not the end itself. In our applied BPM research, we observed that many BPM initiatives are centered on the means, that is, for example, how a process architecture is structured, how processes are modeled, or the role description of a process owner. However, successful BPM centers on the ends. What is the net impact of an improved understanding of or performance of a business process? It is not necessary to know all of a car's operational details to be able to drive it; we need to know only a few relevant parameters, such as steering, accelerating, and braking, to drive it. BPM should do the same; it should hide the details most people do not need to know but needs to deliver results that matter.

2.2 Context

There is no such thing as a "one best way" without considering context (Burnes, 1996). To plan and scope a BPM initiative, we must consider the organizational context. Porter's five forces, for instance, show that the buyer and supplier power as well as threats of new entries and substitutes determine competitive rivalry (Porter, 2008). What are constraints and opportunities? Company-specific factors like size, domain, and regulations are key elements of context (Zelt, Schmiedel, & vom Brocke, 2018), but it is not only these kinds of factors that characterize the organization as a whole, as each organization has its own requirements related to the nature of the processes that make up the organization. Some processes might be repetitive and well structured, while others are less frequent, highly variable, data-intensive or require certain kinds of knowledge and skill. When a company scopes a BPM

initiative, it must analyze the spectrum of requirements, which tend to be homogeneous when a certain process area is focused and heterogeneous when multiple processes across the organization are addressed. Some processes benefit from semiformal process models and workflows, while others may benefit from process videos, stories, and social network forums. Many companies have struggled to introduce unified BPM approaches, but there is no one-size-fits-all solution to BPM. Since processes can differ widely, they must be managed individually. Realizing that a unified approach will not work is probably one of the key success factors for introducing BPM in a way that creates value for the organization and is appreciated by the executives, staff, and customers who benefit from high-impact, tailored BPM initiatives.

2.3 Capabilities

Once the strategic environment and the context are captured, the capabilities required to deliver BPM should be addressed. A wide spectrum of capabilities, not only process modeling and process-aware information systems, is needed. In our BPM engagements, we look at organizational capabilities, described as the six core elements of BPM: strategic alignment, governance, methods, IT, people, and culture (Kerpedzhiev, König, Röglinger, & Rosemann, 2020; Rosemann & vom Brocke, 2015).

1. *Strategic alignment* relates to the capabilities that ensure that BPM is aligned with the organization's strategic objectives (e.g., via a hierarchy of process-performance metrics).
2. *Governance* refers to appropriate control of BPM (e.g., by defining roles and responsibilities to ensure all decision-making processes related to a BPM initiative are well defined).
3. *Methods*, which describes how BPM is conducted, consolidates the set of tools and techniques that are specific to the organization's requirements (e.g., process-modeling standards, facilitation techniques), as well as a diverse set of new methods (e.g., design thinking, NESTT) (Grisold, Gross, Röglinger, Stelzl, & vom Brocke, 2019; Rosemann, 2018).
4. *Information technology* covers all direct solutions (e.g., Robotic Process Automation) and indirect solutions (e.g., sensor and distributed ledger technology, analytics, artificial intelligence) that support BPM initiatives (Grisold, Wurm, Mendling, & vom Brocke, 2020).
5. *People* and (6) *culture* account for the human and social aspects of BPM. "People" refers primarily to the BPM skillset, while "culture" relates to organizational values, attitudes, and a process mindset.

A brief assessment of each of these capabilities should be carried out to determine the extent to which the organization's current capabilities suffice or need further development to deliver the project in the given context.

The spectrum of these six core capability areas shows that a multiplicity of measures is relevant to BPM and how to best align these with other areas in the organization. Our research shows that all areas should be considered, although some of the capability areas might be prioritized depending on the strategy and context so they are developed within different timeframes. BPM should not be considered a one-off project but a journey (Trkman, 2010; vom Brocke et al., 2014; vom Brocke, Petry, & Gonser, 2012) that continually develops these capabilities to serve the organization's strategy.

2.4 Projects and Programs

BPM comes to life in process-centric projects and programs. In this regard, by using the BPM Billboard, companies can align their initiatives with the four other layers of the BPM Billboard. By continuously reviewing strategy, context, capability areas, and results, organizations can ensure that new projects that enter the project portfolio make a distinct contribution to strategy.

2.5 Results

BPM initiatives should be directed toward and evaluated based on tangible results. What is it that a project or program should deliver, what is the specific expected result that further develops the organizational capabilities and helps to achieve the strategic objectives in the given context situation? Beyond planning for results when scoping the BPM initiative, concurrent evaluation should be conducted when running the BPM initiative. Which improvements can be substantiated based on key performance indicators and what learning experiences inform the adjustment and further progression of the BPM initiative?

Working with the BPM Billboard, we keep track of the capabilities, how they contribute to BPM projects, and what stage they occupy. Stages in this context are best captured in a simplified Kanban style:

1. **Backlog:** Projects that have not yet been started are assigned to the backlog. When capacity to work on projects becomes available, a project from the backlog can be started.
2. **Ongoing:** Projects that are in progress are assigned to the set of ongoing projects. Projects are meant to be completed, but they are also continually reviewed. In this way, projects that cannot achieve their original objectives can be terminated. The phases of the BPM lifecycle can also be used to represent the projects' status.
3. **Completed:** Projects that have been completed are assigned to this category. To keep track of what results have been achieved and to create templates for future projects, these projects should not be deleted from the BPM Billboard.

When the BPM Billboard is used, BPM contributes to an organization in a way that is clearly aligned with its strategies and objectives. It is not a “stranger” in the organization but a natural means by which to develop projects and programs that help to deliver the strategy. Hence, BPM provides a lens for identifying the projects that are most relevant to strategic goals by building on the body of knowledge and toolkit to assess and develop BPM capabilities in organizations’ specific contexts. This lens makes BPM approaches both efficient and well recognized in organizations. Maintaining BPM projects in the BPM Billboard allows interrelationships (e.g., flow-through effects between projects), synergies (e.g., knowledge spill-over between projects), and hierarchies (e.g., consolidating projects to programs) to be identified.

3 Illustrating the BPM Billboard

Here we present an example of how to apply the BPM Billboard. For illustration purposes, we re-construct the SAP case, “How to Move from Paper to Impact in Business Process Management: The Journey of SAP” (Reisert et al. 2018). We use the BPM Billboard to present the essential elements of the case in the form of “BPM on one page” (Fig. 2).

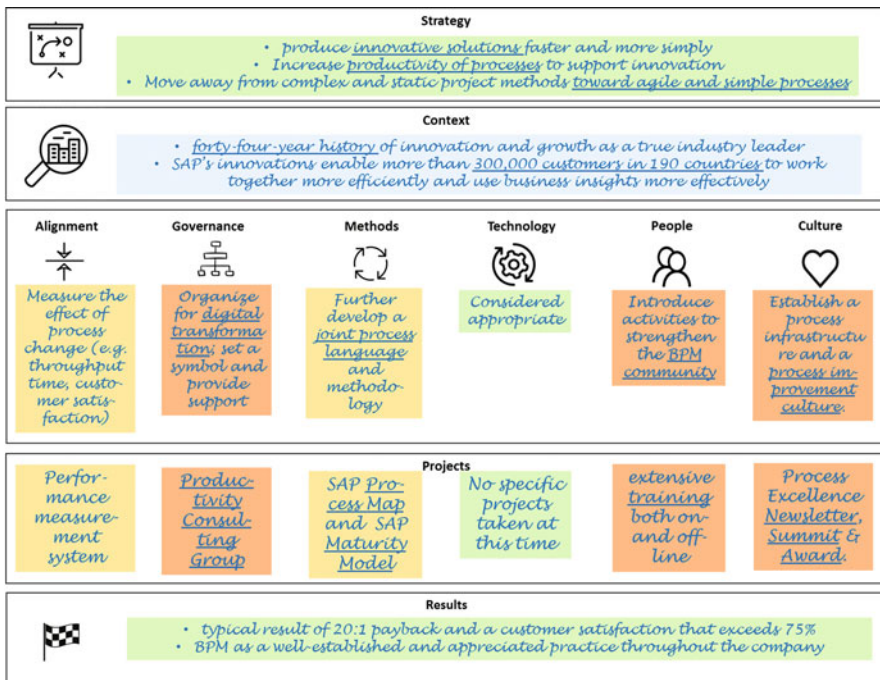


Fig. 2 Presenting the SAP case using the BPM Billboard

3.1 Strategy

The SAP case is oriented to the clear strategic objective of “producing innovative solutions faster and more simply,” which gave focus to the BPM program as was being designed. Countless actions could have been taken, and many objectives may have appeared desirable, but defining a clear focus for the BPM initiative helped SAP deliver tangible, valuable results.

3.2 Context

Planning and scoping the BPM initiative required paying close attention to SAP’s unique context. As the case description states with reference to 2017, “SAP has a forty-four-year history of innovation and growth as a true industry leader, has an annual revenue (IFRS) of €20.793 billion, and employs more than 77,000 employees in more than 130 countries. SAP’s innovations enable more than 300,000 customers in 190 countries to work together more efficiently and use business insights more effectively.” In such a large-scale, demanding context, BPM executives had to set an example in using an effective and innovative BPM approach, although the approach faced a number of challenges, such as those related to the company’s size and the global distribution of the units and people involved.

3.3 Capabilities

SAP initiated a comprehensive approach to develop organizational capabilities in all core areas, including methods, IT, strategic alignment, governance, people, and culture. SAP addressed the governance structure from the outset of the initiative and communicated its vision to move “away from complex and static project methods toward agile and simple processes.” A process map and a process maturity model communicated process thinking and, together with innovative process technologies, enabled the organization to change its processes. SAP also defined metrics by which to measure process performance and process improvement. To make BPM meaningful in the large organization, emphasis was placed on the employees’ role, and a wide range of activities, including the SAP Process Excellence Newsletter, the SAP Process Summit, and the SAP Process Excellence Award, was introduced to build a strong BPM community throughout the organization. Extensive training was provided in classrooms and through virtual training, which helped to build skills and joint values for the initiative systematically.

3.4 Projects and Programs

Each of these measures was implemented in projects like developing the SAP Process Map and analyzing and communicating SAP’s key processes, roles, and

responsibilities. Thus, the BPM initiative was run as a portfolio of projects, each leading to the further development of BPM capabilities to meet the strategic objective to “produce innovative solutions faster and more simply.”

To support the project and program management, the Productivity Consulting Group (PCG) offered a portfolio of well-structured, innovative services that can support BPM experts in their efforts to improve processes, including project management support. SAP developed a service catalog that clustered the PCG’s services along the primary dimensions of improvement and levels of intensity.

3.5 Results

In each of the projects at SAP, a strong emphasis was put on specific results to be achieved. For instance, regarding the development of a process improvement culture, specific artifacts have been defined to deliver such culture, namely the process excellence newsletter, summit, and award. Further, continuous measurement has been conducted in order to evaluate to what extent the strategic objectives have been met by the initiative. Success for SAP’s BPM activities has been defined “as creating measurable and sustainable positive impact by which it contributes significantly to the corporate strategy.” (Reisert et al. 2018, p. 32).

It has been reported that by 2017, when the case study was written, based “on a sample of 100 projects per year, SAP currently achieves a typical result of 20:1 payback and a customer satisfaction that exceeds 75%. In addition, many processes’ processing time has been reduced significantly, including a process in marketing services team that eliminated eleven process steps and reduced processing time by up to 74%.”

Beyond quantitative measures, also wider organizational effects have been observed. For example, the Process Managers’ opinion has changed from “viewing process modelling as an administrative burden to seeing it as a critical activity in fully understanding the complexity and dependencies of processes as a first and necessary step in process improvement initiatives.” (Reisert et al. 2018, p. 32). One manager reports process modeling “actually made an impact on the daily project work of the GCMS Team, as it changed the way we visualize processes. It accelerated and improved our collaboration. . .” (Reisert et al. 2018, p. 32). Also, the SAP process map is used for company-wide idea management and it has been a meaningful reference structure for discussions. Through the well-positioned and scoped projects, processes have become a valuable management focus throughout the organization.

The SAP case reports on a successful, large-scale BPM initiative that not many organizations have been able to accomplish. The case illustrates the key principles of the BPM Billboard. By linking the BPM initiative to a clear set of strategic objectives and by considering SAP’s situational context, the company defined a portfolio of projects that systematically developed the organization’s capabilities in support of its strategic objectives. SAP reported having significantly simplified its internal processes and raised overall productivity.

4 Using the BPM Billboard

The SAP case illustrates the key elements of the BPM Billboard and how they relate to one another. Typically, the BPM Billboard supports a BPM initiative's entire life cycle, as exemplified in four scenarios.

Planning a BPM Initiative The BPM Billboard, a powerful tool for planning and scoping BPM initiatives, is often applied during a half-day workshop in which ideas for impactful BPM projects are generated.

- We start by noting down some key strategic objectives that are meaningful and strategically important to the organization, followed by ideas for how a BPM initiative could help deliver these objectives.
- Then we characterize the context by identifying constraints to be considered, as well as potentially hindering and supporting factors for the BPM initiative.
- In the next step, a round of discussions gives each of the capability areas a rough assessment of the extent to which they need to take action to develop, such that they can contribute to achieving the strategic objectives.
- Then the capability areas are prioritized, as some capability areas may be more important than others. To ensure focus is sustained, for instance, the three most pressing capability areas are identified to work on.
- For each capability area, project ideas are generated, along with how the capability area might be further developed, resulting in a list of strategic BPM project ideas to be further described and evaluated as to budget, timing, interdependence, and so forth.
- Projects of particular interest can then be further sketched out and described in two- or three-page project proposals.
- Projects include specific results to be achieved and continuous assessment is set in place to evaluate strategy delivery through the respective projects.

Managing a BPM Initiative The BPM Billboard serves as a structuring device for managing BPM initiatives. Process managers can use the BPM Billboard to revisit and coordinate the set of projects that are running and planned.

- Revisit the strategy continually in regard to new objectives and priorities coming up, and double-check the initiative's overall direction.
- Revisit the context of the BPM initiative regarding new constraints that might have come up, such as changes in the economic or socio-technical environment.
- Check on the progress of running projects as well as the results achieved to ensure the required capability areas are being developed, and decide on the projects that help with that development.
- Consider re-dimensioning projects and stopping projects or launching new projects in light of the updated situation, as sketched out in the BPM Billboard.

Assessing a BPM Initiative The BPM Billboard helps in assessing BPM initiatives. Many companies want to know where they stand in BPM and what the most valuable next steps would be. Using the BPM Billboard, we evaluate the current state and develop recommendations for future action.

- Capture the set of current BPM activities and structure them according to the six key capability areas.
- Then refer to strategy and identify the organization’s key strategic objectives.
- Check the context of the BPM approach by identifying key constraints.
- Assess the organization’s BPM practice against the background of the strategic and contextual requirements.
- Decide which activities to stop, which to adjust, and which to add based on the assessment of results (to be) achieved.

Communicating a BPM Initiative The BPM Billboard is a useful tool for communicating what a BPM initiative does and how it contributes to strategy. Given BPM initiatives’ complexity, the BPM Billboard’s one-page summary of the initiative’s essential elements is an advantage.

- Clearly state a strategic objective that is also meaningful for people who are not involved in BPM activities.
- Explain how the BPM initiative can help and has helped to achieve the organization’s overall strategy in the given context.
- Clearly communicate how each project delivers measurable results and which strategic objectives it aligns with.

5 Outlook

The cases in this book reflect the intention of the BPM Billboard, as they all deliver strategic value through BPM projects. Each case focuses on a different set of capability areas, strategic priorities, contexts, and results.

The cases cover BPM applications in various industries, including agriculture; manufacturing of paper and paper products; manufacturing of fabricated metal products except machinery and equipment; manufacturing of computer, electronic, and optical products; manufacturing of machinery and equipment; repair and installation of machinery and equipment; building construction; transport; computer programming, and consultancy; financial services; insurance; professional, scientific, and technical services; public administration; education; healthcare; and creative arts and entertainment. The cases are grouped into three categories: process technology and automation, process analysis and monitoring, and governance and strategic alignment.

1. Cases in the categories of process technology and automation discuss contemporary BPM technologies and the challenges and benefits of rolling them out.
 - (a) Marek et al. describe how process automation supported the digitalization journey at a major insurance company.
 - (b) Schönig et al. report how sensor-enabled wearables supported processes in the production industry.
 - (c) Pufahl et al. present the case of a blockchain implementation and how it enabled financing along agricultural supply chains.
 - (d) Ludacka et al. show how the global accounting function of a major European railway operator benefited from process automation.
 - (e) Gutiérrez Fernández et al. share an application of energy efficiency performance tracking at a clean-energy provider.
 - (f) Pauker et al. describe how an industry 4.0 application helped a major energy provider.
 - (g) Geiger et al. discuss how the development of a process-aware information system enabled the agile management of business processes.
2. Cases in the process analysis and monitoring category describe the challenges and benefits of applications of process analytics and prediction.
 - (a) Buijs et al. report on the application of process mining at an insurance company for analyzing customer journeys.
 - (b) Valencia-Parra et al. present findings from adopting process mining at Airbus.
 - (c) Canjels et al. report their analysis of the arthrosis care process at a major Dutch university hospital.
 - (d) Metzger et al. document how a major inland port adopted deep learning to improve terminal processes.
 - (e) Dees et al. discuss lessons learned from applying process predictions at a major Dutch institution.
 - (f) Denagama Vitharanage et al. present insights into the benefits of process improvement at an Australian university.
3. Cases in the governance and strategic alignment category discuss the challenges and benefits of BPM adoption, digital transformation, and holistic approaches to managing business processes.
 - (a) Bandara et al. describe insights from defining BPM governance at a major Australian bank.
 - (b) Alibabaei presents how BPM governance can be realized beyond the BPM office.
 - (c) Kuhn et al. describe the process-based ERP transformation of a major hospital group.
 - (d) Bolboli et al. discuss lessons learned from adopting BPM at a major industrial services provider.
 - (e) Cee et al. report on the adoption of global process standards at a production company.
 - (f) Corallo et al. present a process reference framework for the creative and cultural industries.

- (g) Azemi et al. discuss the adoption and strategic alignment of BPM at a European bank.
- (h) Gabryelczyk et al. describe the development of a business process architecture for a ministry of a European state.
- (i) Schießl et al. report on the integration of BPM with other approaches at a major manufacturing company.

In sum, these cases provide a compelling overview of the diversity, potential, and impact of BPM initiatives. Despite their obvious differences, they have one commonality, i.e., they can be categorized along the five layers of the BPM Billboard, and it is only via this integration of BPM initiatives across these layers that the success documented in these cases has been catalyzed.

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