Integrating Knowledge Management in a Business Strategy Process Operationalized Using Process Management Approach

Carla Vivas[1], Pedro Sobreiro[1] and Rui Claudino[2]
[1]Polytechnic Institute of Santarém, Santarém, Portugal
[2]University of Lisbon, Lisbon, Portugal
carla.vivas@esg.ipsantarem.pt
sobreiro@esdrm.ipsantarem.pt
rclaudino@fmh.ulisboa.pt

Abstract: This paper proposes an integrated approach applied in a business environment, using three organisational layers materialized in the institutional, middle and operational levels. Is suggested a combination of Business Strategy, Knowledge Management and Business Process Management in order to support the clarification of the organisational strategy and the definition of business operations. The work in progress developed uses a theoretical framework based in emergent theories of strategy management combining two types of strategy intended or deliberate and emergent, clarifying important constructs like mission, vision, strategic objectives, stakeholders, business capabilities and knowledge objects, interpreted as a business context that facilitates the following steps of analysis and provides priorities of improvement. The priorities identify targets to improved using Business Process Management (BPM) approaches combined with the knowledge concepts in BPM models. The proposed approach was applied in a public organisation that develops its activities in the areas of Olympic preparation, swimming performance and sport facilities. The outcomes of the work develop, were the systematization of the business processes related to the structured work and the use of knowledge management concepts in the exception handling of the processes. The representation of the unstructured work or the modelling of complex processes was combined with the use knowledge constructs, properly contextualized in business strategy axioms. The research findings identify advantages in the use of knowledge concepts in complex process model, exception handling and in classifying the knowledge used in decisions. This could facilitate the definition of training actions articulated with the organisation real needs.

Keywords: knowledge management, business strategy, business process management, public organisation

1. Introduction

The optimization of the organisation operations has been a concern of the managers to coordinate their activities effectively and efficiently. According to Harmon (2010), this optimization must be performed with an alignment of the strategy with the operations organizing and managing the employees to fulfil the organisation goals. Rummler and Brache addressed this question (1995), referring the importance of improving organisational performance, claiming that process reengineering would be the best approach and that improving the management and performance of organisation employees is the most appropriate strategy to improve processes.

This paper aims to integrate concepts of strategic process, knowledge management (KM) and identify the interconnection between these practices with Business Process Management (BPM). To achieve this objective, the paper describes a theoretical framework that combines strategic process theories, KM and BPM. The framework is then used as a theoretical background to support the double stream analysis in a case study approach of an organisation that has in progress the implementation of a BPM methodology.

The research findings clearly demonstrate the presence of either deliberate and emergent strategies and the importance of KM facing exception elements in BPM implementation, as well as the importance of these links in the identification of opportunities for training human resources and its alignment with the organisation's strategy.

The paper is structured as follows: initially, a theoretical approach will be focused on various streams of strategy, from the prescriptive to the emerging perspectives as well as the framework of BPM as a methodology of operationalization. It will be also analysed KM role as facilitator of the strategic process and then it will be characterized the case study and presented the main results. Finally, discussion and main conclusions will be focused.

2. The process of strategy operationalization

In this section will be addressed the concept of strategy as a process, as well as a double stream perspective of implementation: bottom-up and top-down. BPM will be approached as a methodology for operationalization of the strategy through the definition of organisational processes, using a decomposition based on a three-layer breakdown aligned with the strategic process. It will also be integrated the concept of KM as facilitator in the process of operationalization. Finally, is proposed an approach that combines the theoretical framework in a set of steps supported in commonly adopted tools and associated concepts.

2.1 Business strategy process

Studies on strategy and the literature on that subject converges on some major points (Chandler, 1990; Scott & Davis, 2007): strategy aims at handling environments (internal and external), has a dimension of positioning among competitors and comprises intentions and actions at the same time. Although these general arguments, viewpoints on strategy differ among authors leading to different streams (de Souza, 2011; Fumasoli and Lepori, 2011).

In general, early studies of the field of strategy based on prescriptive bases, support the organisation in understanding what is needed to draw the correct strategy - associated with the development of analytical frameworks. The most representative authors of this classical approach were Ansoff (1965) also Rumelt (1974) and Porter (1980). Despite their enormous contribution to the development of analysis tools, the main criticism of this approach is that it does not meet the complexity of implementing the strategy in organisations (de Souza, 2011). This conception of strategy relate to a more rational-hierarchical organisation, where coordination and control, as well as formalization, are high (Fumasoli and Lepori, 2011).

Another strategy approach considers strategy as a process and it is focused in the analysis of strategy formation (Mintzberg, 1978). The goal is to understand how the strategy is created and performed in the organisation.

Usually the results of studies based in the process theory are analyzes of the internal dynamics of organisations in order to define how strategy is implemented and how it is adjusted (Pettigrew, 1985), demonstrating the presence of emergency plans (Mintzberg and Waters, 1985), pointing out the limits of planning (Pettigrew, 1985) and conferring low importance to process of a formal definition of strategy (Mintzberg and McHugh, 1985).

However, some authors (Jarzabkowski, 2008; Whittington, 1996) consider that the process perspective gives less emphasis to micro-processes involved in the development of strategies and marginalizes tools, activities and practices that are used by professionals.

Framed in this process approach is designed the concept of emergent strategy by Mintzberg (1978) that contrasts with the concept of a deliberate strategy. The latter realized as intended and the first as strategies patterns or consistencies realized despite, or in the absence of, intentions (Mintzberg and Waters, 1985, p. 252). An emergent strategy is essentially an "unplanned strategy" in the sense of a line of action that it is only perceived as strategic for the organisation to as it unfolds or even after it has already happened (Mariotto, 2003).

In the classical approach, the overall objectives of the organisation are defined by top management and further elaborated by management to lower a level through detailed plans. These should be sanctioned by senior management before any commitment is made or any action is performed (Ansoff, 1965). Once decisions are made about the detailed plans, there is almost nothing to be decided by lower level managers when the plans are implemented. That would be the typical division of managerial work in a mechanistic organisation, which often implements the traditional strategic planning - from the top down approach (Mariotto, 2003).

On the other hand, the procedural approach, linked to the concept of emergent strategies, involves greater participation of the lowest management level in strategy formation. In this case, the strategies may arise as a

result of initiatives coming from lower levels of the hierarchy and induced by senior management and certain administrative mechanisms, such formal organisation and reward systems used for managers (Bower, 1970). In this model it is possible to realize a double stream of influences (Mariotto, 2003, pp. 85–86):

- From top to bottom: top management influences the behavior of lower-level managers through the establishment of strategic objectives and control mechanisms;
- From bottom to top: the lowest level managers define new investment projects, middle managers support some of these and take them to top management for approval.

Thus, the model recognizes multiple actors participating in the formation of strategy, giving greater power to the participation of lower level managers where is the detailed knowledge of products and markets (Mintzberg, 1979), even when taking important initiatives that are beyond of the ongoing strategy (Burgelman, 1983).

Some recent research in the public sector (Rose and Cray, 2010) propose a hybrid model that integrates the two approaches, supported the idea that it may be more appropriate to think of deliberate and emergent strategy formulation methodologies as two related portions of a single process. If the strategy as originally crafted is flexible enough to allow the evolution and incorporation of new ideas during its implementation, it takes on the positive aspects of deliberate emergence (Harrington et al., 2004) or planned emergence (Grant, 2003) aligned with that defended "these two form the poles of a continuum along which we would expect real-world strategies to fall" (Mintzberg and Waters, 1985, pp. 258–259).

According with Chia & MacKay (2007) strategy as practice in a post-process view of strategy, turning the focus of study in people, their praxis and practices (Jarzabkowski and Wilson, 2006; Jarzabkowski, 2008; Whittington, 1996). This view shifts the focus, related, in the processual view, to organisational structure and its environment or basic skills of enterprises for the practical skills of managers as strategists. The strategy in this perspective is seen as a social practice that seeks to understand how practitioners in strategy act and interact (Whittington, 2006, 1996) integrating knowledge as a continuously reproduced and potentially converted in interaction between people (Stacey, 2000).

2.2 BPM as an methodology to operationalize the strategy

BPM supports business processes using methods, techniques, and software to design, enact, control, and analyze operational processes involving humans, organisations, applications, documents and other sources of information (Van der Aalst et al., 2003). Jones & Dixon (2011) consider BPM a management discipline that treats processes as assets that directly contribute to enterprise performance by driving operational excellence and business process agility. BPM employs methods, policies, metrics, management practices and software tools to continuously optimize organisation's processes and improve business performance against goals and objectives. Hammer considers BPM a comprehensive system for managing and transforming organisational operations, based on what is arguably the first set of new ideas about organisational performance since the Industrial Revolution (Hammer, 2010).

BPM aims to increase the efficiency of organisations through modeling, organisation and optimization of processes in a continuous manner. Process improvements should be articulated with strategic objectives, increasing its impact on the organisation.

There are several approaches used to integrate strategy and processes, identifying improving actions to move the organisation to a desirable state. Tregear et al. (2010) suggest the identification of improvement projects defined in the context of the process accordantly with a context defined by the strategy. Rummler and Brache (1995) suggest a three level in a matrix of nine performance variables, using organisational, process and activity levels. Harmon (2007) adopts also three decomposition levels and considers the bottom level divided into human resource development and IT development. This approaches assume top-down, based in the definition of the business strategy, decomposing it in the lower levels until the task level (Figure 1). Additionally Harmon also identifies in implementation level the human resources development combining three elements: Job Design, Training Development and Knowledge Management (2007, p. 506). The execution of an activity related to a job, requires specific information and skills needed to evaluate information, make decisions and perform the tasks (Harmon, 2007, p. 266)

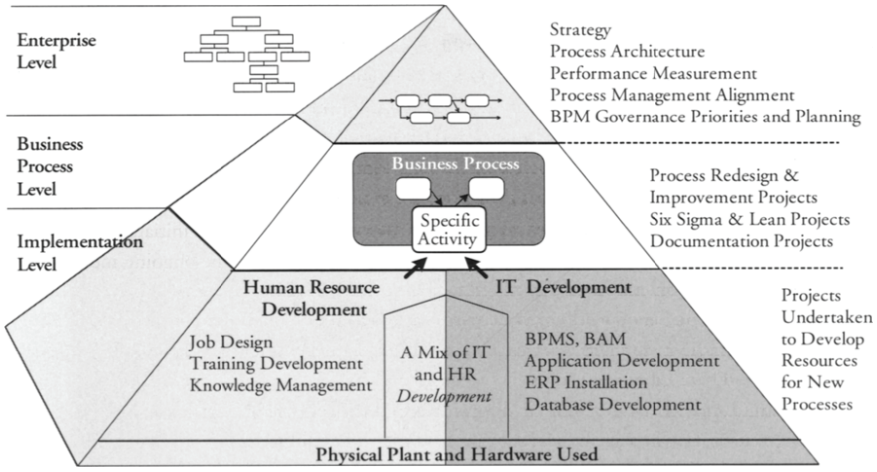

Figure 1: The BPTrends business process pyramid (Harmon, 2007, p. 506)

However, it can be considered also other approaches. Wolf and Harmon (2012), more recently, in a survey developed to clarify the situation of the BPM market. Identify three types of process methodologies divided into top-down, bottom-up or IT-based process automation: (1) top-down are used in the identification of what the organisation ought to be, dealing with major improvements; (2) bottom-up for developing incremental improvements and (3) IT-based is focused in automating processes. Using a mixed approach, Sharp and McDermott (2009) suggests the identification of the context using a top-down approach, assuming a context as the business strategy and the bottom-up approach to identifying the activities involved in a process, to be framed in the business strategy. This defines a double stream approach, supporting the operationalization of the deliberate and emergent strategy formulation, assuming the deliberate strategy as a guideline for the clarification of the lower levels needs of improvement.

2.3 Knowledge as facilitator for process operationalization

According to Mariotto (2003) there is a consensus that organisations of all types need to adapt to rapidly changing environments, learn from their past successes and failures, detect and correct errors, provide opportunities and threats and respond to them, conduct experiments, learn from them and continuously innovate (Nonaka and Takeuchi, 1995; Senge, 1990).

Understanding the process business processes typically involves process modeling and assessment of the environmental factors which enable and constrain the process (Antonucci et al., 2009, p. 29). Process Modeling includes a critical set of skills and processes, which enable people to understand, communicate, measure, and manage the primary components of business processes. The Process Modeling Knowledge Area provides an overview of these skills, activities and key definitions, along with an understanding of the purpose and benefits of process modeling, a discussion of the types and uses of process models, and the tools, techniques, and modeling standards (Antonucci et al., 2009, p. 22)

Business Process Model describe the normal flow of the work being developed, but can occur several deviations caused by non-regular events or exceptions. Dellarocas and Klein (2000) suggest an approach to assure that the process is able to fulfill its organisational goals, incorporating exception handling features as they occur. Providing abilities to avoid processes to deal with non-systematized situations and process deadlocking.

Knowledge brings the ability to deal with complexity and capacity to judge new situations and existing information. It is also a corporate asset that needs to be managed, like other existing tangible assets, enabling to generate value. Using computer and networks as potential infrastructure as storage system facilitating new opportunities for knowledge exchange (Davenport and Prusak, 2000).

Traditionally managers have relied on their experience and understanding of a process to handle their deviations from expected flow of events (Dellarocas and Klein, 2000). Using manager's experience to handling deviations could be an option, but the increasing complexity, regulators demands, changes in the business

processes or the increasing demand for their intervention to solve business issues, difficult the managers ability to articulate their intervention using their experience and intuition supporting processes in more demanding environments.

Knowledge facilitates the design of robust business processes. Rather than requiring process designers to anticipate all possible exceptions up front and incorporate them into their models, this approach is based on a set of novel computerized process analysis tools, which assist designers in analyzing “normal” process models, systematically anticipating possible exceptions and suggesting ways in which the “normal” process can be instrumented in order to detect or even to avoid them (Dellarocas and Klein, 2000). Exceptions are interpreted as a deviation from "normal" collaborative process that uses the available resources to achieve the task requirements on an optimal way (Dellarocas and Klein, 2000).

2.4 Proposed approach

Considering the different perspectives handled is proposed the development of an approach that combines top-down approaches to the definition of the global and bottom-up strategy to clarify what is necessary to accomplish in the organisation and at the same time acts as a validation mechanism for the strategy. The strategy supplies the context and defines the axioms used to make the three layers decomposition.

Using the business context, the identification of work should be developed to engage the alignment of the work level to the business needs. This considers the clarification of what is being done and involves a work adjustment to support the activities. Moving the job being developed from non-value areas to value-ones.

Knowledge management is used as a simplification of the business processes, and as a more effective way to handle exceptions – deviations that occur in the workflow or by inaccuracy in definition of the processes. Is proposed the knowledge identification associated to the processes to handle the exceptions. The knowledge identified can be used as a reference for contents to be included in training plans for employees.

Additionally are used tools to document the information gathered. To support top-down approach is followed the field of research related to enterprise architectures. Enterprise architectures (EA) facilitate the strategic alignment, since all the organisational components can be modelled in an integrated way and visible on a common organisational framework (Cuenca et al., 2010; Gregor et al., 2007). EA also provides an elaborate reference, including architecture development method, an architecture content framework, architecture reference models and an architecture capability framework (Greefhorst & Proper, 2011, p. 27).

Sessions (2007) considers that the more relevant frameworks for enterprise architectures are: (1) Zachman Enterprise Architecture Framework (ZEAF); (2) Open Group Architectural Framework (TOGAF); (3) Federal Enterprise Architecture Framework (FEAF) e Gartner Methodology.

The information gathered related to the top-down is documented in ADOit (BOC Group, 2011) using TOGAF constructs elements. Our approach uses TOGAF for EA, due to the closer proximity of authors to the ADOit tool, which supported TOGAF. The clarification used in a bottom-up approach is documented with Business Process Model and Notation (BPMN) (OMG, 2011) constructs. BPMN is widely adopted (Harmon and Wolf, 2011) and can be obtained easily free available tools. The BPMN models were developed in BizAgi (BizAgi, 2012).

The integration of the two approaches is done considering the processes that realize the business capabilities identified in the EA and clarified in the BPMN model.

The outcomes of the work develop here, were the systematization of the business processes related to the structured work and the use of knowledge management concepts in the exception handling of the processes. The representation of the unstructured work or the modelling of complex processes was combined with the use knowledge concepts, properly contextualized in business strategy axioms.

3. Integration of KM and BPM in a high performance sport center

Our research follows the case study approach as proposed using a single case study (Eisenhardt, 1989; Yin, 2003). The initial steps of our case study were developed using semi-structured interviews with the top-

management for the assessment of the information required. We documented our progress through written notes and design artifacts.

The initial steps of our case study were developed using semi-structured interviews with the top-management for the assessment of the information required for the steps of the methodology used: (1) organisation mission and vision; (2) identification of strategic objectives; (3) stakeholders assessment; (4) identification of business capabilities; (5) assessment of stakeholder concerns and objectives; (6) clarification of operational objectives aligned with stakeholders, business capabilities and strategy objectives; (7) prioritization of improvement areas and (8) definition of an action plan, based in the improvement needs to be identified and materialized in projects. The main goal of the approach used is to identify the real needs of the organisation – its strategy, and after developing the hierarchy decomposition, until the identification of the work done by the employees in the lower levels, with a top-down approximation giving an overall perspective and developing simultaneously also the strategy validations and clarification using a bottom-up approach.

The assessment of the improvement area facilitates the identification where to implement a Business Process Management initiative, aligned it the priorities of the organisation – the improvement initiative is materialized on a project, that represents an effort needed to close the gap between the current business capabilities and the business requirements of the desired level of performance. The impact on business capabilities is defined based on the strategic goals and their actual values that have to be improved by a project to eliminate that gap. The criteria adopted for the priorities for improvement of the organisation were based in the relation between the objectives, improvements to be made and the impact on the business capabilities – in our study capabilities are interpreted as organisational skills, encapsulating several organisation resources, e.g. people or technology.

The outcomes of the study were an operational plan, articulated with the strategy and improvement to be managed by a Business Process Management effort, that clarifies the changes needed in the work done by the employees of the organisation, to fulfill is business strategy. The clarification of the work is done using an analysis based in modeling and design of business process. With the data obtained, it is possible to develop business models to giving a visual representation of the data retrieved. In Table 1, we have the definition of strategic objectives. The Figure 3 represents the stakeholders identified. Figure 2 identifies the top-level business capabilities that the organisation as to possess and that are fundamental for their survival.

Table 1: Strategic objectives

Motivation for Improvement	Strategic objectives	Indicators	Frequency	Type	Current	Goal
Financial	Maintenance of existing financial equilibrium	Revenue from activities developed	Quarterly	Profitability	Net Income =0	Net Income =0
	Increase returns on profitable areas to reduce operating costs in unprofitable area	Revenues from contract programs and projects	Annual	Profitability	25,00%	25,00%
	Reduce costs	Operacional Costs	Annual	Profitability		10,00%
Customers and market	Balanced mix of national/international customers (Stage Center)	% of customers	4 years	Quality	50%	50%
	Reduce prices charged to users of the facility					10%
	Increase customer satisfaction	Customer satisfaction (Net Promoter)	Annual	Quality	???	7..8
Human Resources	Increase collaborators satisfaction	Net promoter	Annual	Quality	???	7..8
Society	Increase sport practice in the county Cooperate in promoting physical activity in the county	Number of citizens who practice sport regularly	Annual	Quality	4	12

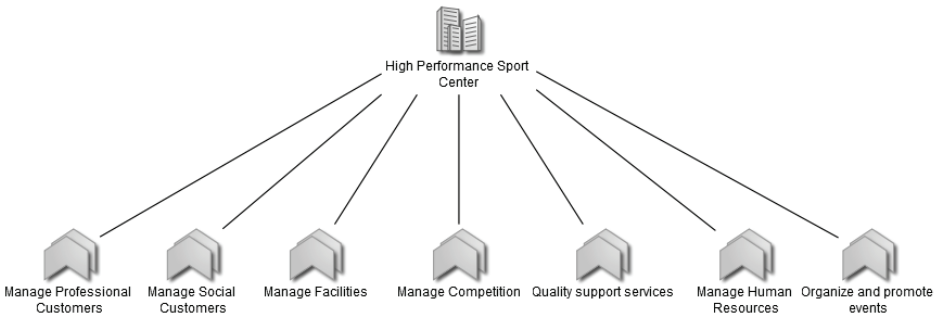

Figure 2: Business capabilities

Figure 3: Stakeholders identified

The next step is to identify the improvement capabilities, crossed with the assessment of stakeholder concerns and objectives in order to identify their impact in the business capabilities assessing improvement priorities. This step was developed in a meeting with the managers of the organisation, leading to “Manage Facilities” as a top improvement priority.

In meetings with operational level workers using a bottom-up approach, to assess this particular business capability, gathering: (1) processes involved; (2) activities performed and (3) sequence of those activities. This evaluation leaded to the process models that define the flow of the work.

The process represented in the Figure 4 exemplifies the integration of knowledge management concepts to handle with exception situations, avoiding process deadlocking and gathering knowledge used in the decision of the manager. This is accomplished incorporating elements in the BPM model to avoid deadlocks process scenarios and gather knowledge used in decision. This integrated conceptual perspective indicates that could be identified the knowledge associated to decisions and classify knowledge areas to be incorporated in human resources trainings, and use model elements to avoid deadlock scenarios.

In our example is suggested an ad-hoc subprocess to include the decision making activities and the knowledge used. The subprocess relies on the knowledge of the manager and acts as a natural exception handling

mechanism. The systematization of the knowledge identified in manager decisions could be used to facilitate the creation of requirements in human resources training.

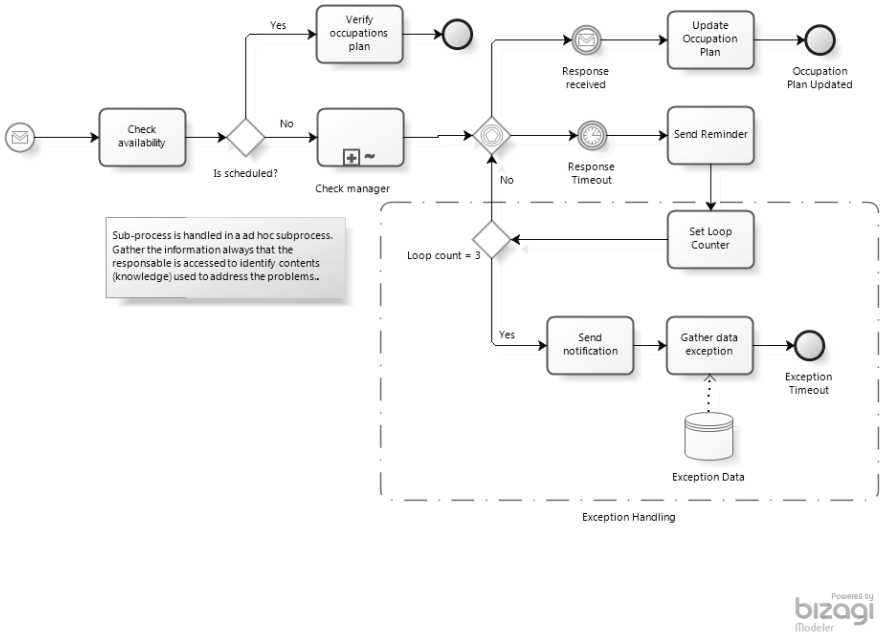

Figure 4: Sample of business process integrating knowledge management concepts

4. Conclusion

The literature review allowed us to identify a strong link between the three thematic focus of this study: the strategy as a process, the BPM methodology and its link to knowledge management.

The way they intersect refers not so much to the authors in the research literature, but in the recent approach that has been given to each of these topics: both deliberate and emergent framework and simultaneously top-down and bottom-up. The starting points in the application of BPM are based on deliberate strategies, identifying organisational structure, processes (and priorities) and goals, aligned with the organisation's strategy. However, the contribution of operational key players in defining the processes, activities and their sequence assumes relevant importance, allowing its participation in strategy formation, conferring emerging character to the strategy formation.

The complexity that covers the definition of processes refers to people, to their experiences and knowledge, giving it an important role and, consequently, to alert the importance of KM facing exception elements in BPM implementation, as well as the importance of these links in the identification of opportunities for training human resources and its alignment with the organisation's strategy.

The identification of the reasons associated to the raising of exception could lead to the need of specific knowledge to deal with the process. This could mean developing training actions (internal or external), and is more easily clarified considering a process context articulated to an overall business strategy.

Acknowledgements

The authors gratefully acknowledge the support and collaboration with this work, namely top manager Dr. Carlos Coutinho, for is availability and orientations.

References

Ansoff, H.I., 1965. Corporate strategy: an analytic approach to business policy for growth and expansion. McGraw-Hill.

Antonucci, Y.L., Bariff, M., Benedict, T., Champlin, B., Downing, B.D., Franzen, J., Madison, D.J., Lusk, S., Spanyi, A., Treat, M., Zhao, L., Raschke, R.L., 2009. Business Process Management Common Body Of Knowledge. CreateSpace Independent Publishing Platform.

BizAgi, 2012. BizAgi Process Modeler. BizAgi Limited.

BOC Group, 2011. The ADOit Method Manual: A Practical Guide to Enterprise Architecture with ADOit.

Bower, J.L., 1970. Managing the Resource Allocation Process: A Study of Corporate Planning and Investment. Harvard Business Press.

Burgelman, R.A., 1983. A model of the interaction of strategic behavior, corporate context, and the concept of strategy. Acad. Manage. Rev. 8, 61–70.

Chandler, A.D., 1990. Strategy and Structure: Chapters in the History of the American Industrial Enterprise. Beard Books.

Chia, R., MacKay, B., 2007. Post-processual challenges for the emerging strategy-as-practice perspective: Discovering strategy in the logic of practice. Hum. Relat. 60, 217–242. doi:10.1177/0018726707075291

Cuenca, L., Boza, A., Ortiz, A., 2010. Enterprise engineering approach for business and is/it strategic alignment, in: 8 Th International Conference of Modeling and Simulation-MOSIM'10-May 10-12, 2010-Hammamet-Tunisia. pp. 1–10.

Davenport, T.H., Prusak, L., 2000. Working knowledge: How organizations manage what they know. Harvard Business Press.

De Souza, C.M.L., 2011. Entre o planejamento estratégico formal e informal: um estudo de caso exploratório sobre a prática de estratégia nas organizações. RAC-Rev. Adm. Contemp. 15, 855–876.

Dellarocas, C., Klein, M., 2000. A Knowledge-Based Approach for Designing Robust Business Processes, in: Aalst, W. van der, Desel, J., Oberweis, A. (Eds.), Business Process Management, Lecture Notes in Computer Science. Springer Berlin Heidelberg, pp. 50–65.

Eisenhardt, K.M., 1989. Building theories from case study research. Acad. Manage. Rev. 532–550.

Fumasoli, T., Lepori, B., 2011. Patterns of strategies in Swiss higher education institutions. High. Educ. 61, 157–178. doi:10.1007/s10734-010-9330-x

Grant, R.M., 2003. Strategic planning in a turbulent environment: evidence from the oil majors. Strateg. Manag. J. 24, 491–517. doi:10.1002/smj.314

Gregor, S., Hart, D., Martin, N., 2007. Enterprise architectures: enablers of business strategy and IS/IT alignment in government. Inf. Technol. People 20, 96–120. doi:10.1108/09593840710758031

Hammer, M., 2010. What is Business Process Management?, in: Brocke, J. vom, Rosemann, M. (Eds.), Handbook on Business Process Management 1, International Handbooks on Information Systems. Springer Berlin Heidelberg, pp. 3–16.

Harmon, P., 2007. Business process change: a guide for business managers and BPM and six sigma professionals, 2nd ed. ed. Elsevier/Morgan Kaufmann Publishers, Amsterdam; Boston.

Harmon, P., 2010. The Scope and Evolution of Business Process Management, in: Brocke, J. vom, Rosemann, M. (Eds.), Handbook on Business Process Management 1, International Handbooks on Information Systems. Springer Berlin Heidelberg, pp. 37–81.

Harmon, P., Wolf, C., 2011. Business Process Modeling Survey.

Harrington, R., Lemak, D., Reed, R., Kendall, K., 2004. A Question of Fit: The Links among Environment, Strategy Formulation, and Performance. J. Bus. Manag. 10, 15–38.

Jarzabkowski, P., 2008. Shaping strategy as a structuration process. Acad. Manage. J. 51, 621–650.

Jarzabkowski, P., Wilson, D.C., 2006. Actionable Strategy Knowledge: Eur. Manag. J. 24, 348–367. doi:10.1016/j.emj.2006.05.009

Jones, T., Dixon, J., 2011. Hype cycle for business process management (Pesquisa No. G00214214). Gartner Research.

Mariotto, F.L., 2003. Mobilizing emergent strategies. Rev. Adm. Empres. 43, 78–93.

Mintzberg, H., 1978. Definition of Strategy. Manag. Sci. 24.

Mintzberg, H., 1979. The Structuring of Organizations: A Synthesis of the Research. Prentice-Hall.

Mintzberg, H., McHugh, A., 1985. Strategy formation in an adhocracy. Adm. Sci. Q. 160–197.

Mintzberg, H., Waters, J.A., 1985. Of strategies, deliberate and emergent. Strateg. Manag. J. 6, 257–272.

Nonaka, I., Takeuchi, H., 1995. The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation. Oxford University Press.

OMG, 2011. Business Process Model and Notation 2.0.

Pettigrew, A., 1985. The Awakening Giant: Continuity and Change in Imperial Chemical Industries. Routledge.

Porter, M.E., 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors. The Free Press.

Rose, W.R., Cray, D., 2010. Public-sector strategy formulation. Can. Public Adm. 53, 453–466.

Rumelt, R.P., 1974. Strategy, structure, and economic performance.

Rummler, G.A., Brache, A.P., 1995. Improving Performance: How to Manage the White Space in the Organization Chart, 2nd ed. Jossey-Bass.

Scott, W.R., Davis, G.F., 2007. Organizations and Organizing: Rational, Natural, and Open Systems Perspectives. Pearson Prentice Hall.

Senge, P.M., 1990. The fifth discipline: the art and practice of the learning organization. Doubleday/Currency.

Sessions, R., 2007. Comparison of the Top Four Enterprise Architecture Methodologies (2007). Disponıvel Em Httpmsdn Microsoft Comen-Uslibrarybb466232 Aspx.

Sharp, A., McDermott, P., 2009. Workflow modeling: tools for process improvement and application development. Artech House Publishers.

Stacey, R., 2000. The Emergence of Knowledge in Organization. Emergence 2, 23–39.
Tregear, R., Alkharashi, B., Leandro, J., Macieira, A., 2010. Establishing the Office of Business Process Management.
Van der Aalst, W., ter Hofstede, A., Weske, M., 2003. Business process management: A survey. Bus. Process Manag. 1019–1019.
Whittington, R., 1996. Strategy as practice. Long Range Plann. 29, 731–735.
Whittington, R., 2006. Completing the Practice Turn in Strategy Research. Organ. Stud. 27, 613–634. doi:10.1177/0170840606064101
Wolf, C., Harmon, P., 2012. The State of Business Process Management 2012. BPTrends.
Yin, R.K., 2003. Case study research: design and methods, 3rd ed. ed, Applied social research methods series. Sage Publications, Thousand Oaks, Calif.