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Strategic project management: a methodology for sustainable competitive advantage

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Abstract

This article aims at discussing the link between project management discipline and strategic planning by applying the methodology of strategic management. Currently, some organizations need to turn project management into a competitive advantage, which are generally reached when aligning them with organizational strategy. Consequently, it is important to make sure that strategic planning stages are clearly aligned with the methodology of project management. Therefore, the analysis, formulation, implementation and definition of the strategic goals have to meet practicability. Some basic concepts of strategic management and the analysis of the project management focus are discussed, referring to PMBoK of the Project Management Institute (PMI) theoretical framework which guarantees a competitive advantage for these organizations. This methodology is known as Integral Management of Strategic Projects.

Keys words

Project management- methodology, project management, strategic planning, development strategies, competitive advantages.

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Gestión estrategica de proyectos:
una metodología para una ventaja competitiva sostenible

Resumen. *Este artículo tiene como objetivo discutir la fusión entre la disciplina de gestión de proyectos y la planeación estratégica, mediante una metodología de estrategia de proyectos. Algunas organizaciones necesitan hacer de la gerencia de proyectos una ventaja competitiva, lo cual se logra mediante la alineación de estos con la estrategia organizacional. Para ello es importante asegurar que las etapas del proceso de planeación estratégica estén integradas con la metodología de gerencia de proyectos en uso. En otras palabras, el análisis, la formulación, la implementación y la definición de las metas estratégicas deben encontrar un punto de contacto con la práctica. Aquí se presentan algunos aspectos básicos de la gestión estratégica y un análisis del enfoque de la gerencia de proyectos, para lo cual se hace referencia al marco de trabajo PMBoK del Project Management Institute (PMI). Finalmente, se discute el vínculo de ambas disciplinas para establecer un marco de trabajo, que brinde una ventaja competitiva a las organizaciones. Dicha metodología se ha denominado Gerencia Integral de Proyectos Estratégicos.*

Palabras clave: *Administración de proyectos – metodología, dirección de proyectos, planeación estratégica, estrategias para el desarrollo, ventaja competitiva.*

Gestion stratègique des projets:
méthodologie pour un avantage compétitif durable

Résumé. *Cet article pose le débat de la fusion entre les disciplines de gestion de projet et de planification stratégique en utilisant une méthodologie de stratégie de projet. Certaines organisations doivent faire de la gestion de projet un avantage compétitif en alignant les projets sur la stratégie organisationnelle. Pour cela, il est important de veiller à ce que les étapes du processus de planification stratégique soient intégrées à la méthodologie de gestion de projet utilisée. En d'autres termes, l'analyse, la formulation, la mise en œuvre et la définition des objectifs stratégiques doivent trouver un point de contact avec la pratique. Nous présentons ici certains aspects de base de la gestion stratégique et une analyse de l'approche de gestion de projet pour laquelle il est fait référence dans le PMBoK du Project Management Institute (PMI). Enfin, le lien entre les deux disciplines sera analysé pour établir un cadre de travail offrant un avantage compétitif aux organisations. Cette méthodologie a été appelée Gestion Intégrale Des Projets Stratégiques.*

Mots clefs: *Gestion de projet - méthodologie, gestion de projet, planification stratégique, stratégies de développement, avantage compétitif.*

Gestão estratégica de projetos:
uma metodologia para uma vantagem competitiva sustentável

Resumo. *Este artigo tem como objetivo discutir a fusão entre a disciplina de gestão de projetos e o planejamento estratégico, mediante uma metodologia de estratégia de projetos. Algumas organizações precisam fazer da gerência de projetos uma vantagem competitiva, o qual se consegue mediante o alinhamento destes com a estratégia organizacional. Para isto, é importante assegurar que as etapas do processo de planejamento estratégico estejam integradas com a metodologia de gerência de projetos em uso. Em outras palavras, a análise, a formulação, a implementação e a definição das metas estratégicas devem encontrar um ponto de contato com a prática. Aqui, apresentam-se alguns aspectos básicos do gerenciamento estratégico e uma análise do enfoque da gerência de projetos, para o qual faz-se referência ao marco de trabalho PMBoK do Project Management Institute (PMI). Finalmente, se discute o vínculo de ambas disciplinas para estabelecer um marco de trabalho que ofereça uma vantagem competitiva às organizações. Dita metodologia denominou-se Gerencia Integral De Projetos Estratégicos.*

Palavras-chave: *Administração de projetos – metodologia, direção de projetos, planejamento estratégico, estratégias para o desenvolvimento, vantagem competitiva.*

1. Introduction

Strategic planning is vital for any organization. Even more important, effective strategic project planning can make a difference between long-term success and failure. Thus, strategic project planning for sustainable competitive advantage in project management needs to consider organizational capabilities such as, interaction amid project team members, management, and employees from different business units, also the roles of various stakeholders in general —i.e. executive project sponsors—, as well as, the corporate structure and culture of the organization. In addition, career development for all project managers in the organization could play a part in the high performance of a company in strategic project management. In the following sections, we will discuss all of the above-mentioned subjects.

Firstly, we present a conceptual framework that includes strategy formulation and strategy implementation. Then, we explain the five main steps of the strategic management process, including, goal setting, analysis, strategy formulation, strategy implementation, and evaluation-and-control, followed by a review of the main concepts in project management. We also analyze two relevant aspects in strategic project management, such as, senior management resistance to strategic project management and strategic planning for project management. Furthermore, we discuss two relevant cases of project strategy: aligning strategy and implementation, and the high cost of low performance for the organization. After we explain the basics about strategy implementation, we present the proposed conceptual framework for project strategy. Finally, we state the conclusions, recommendations, and considerations for future research.

2. Conceptual framework

According to Bergeron, firms where the organizational architecture is in line with the strategy would be less vulnerable to external factors and internal weaknesses, achieving better results (Bergeron, Raymond, & Rivard, 2004). In fact, top management decisions dealing with portfolio priorities and capital expense should take into consideration the overall context involving both external and internal business factors (Patanakul & Shenhar, 2012). Furthermore, projects use the organizational structure and are part of the firm's infrastructure. An example of this is the alignment between the information system strategy and the business strategy. The influence of the former on the latter on the retribution of information technology investment is cornerstone (Byrd, Lewis, & Bryan, 2006). In contrast, the lack of analytical and behavioral techniques is a success inhibitor (Grundy, 2000). Thus, strategic project management is a vital way of bridging strategic management and operational management.

The project strategy should acknowledge the autonomy of a project, as well as its unique position, as part of its complex context. Artto focuses on three types of projects: the project as a subordinate to a parent organization, the

project as an autonomous organization, and the project in a complex environment. In this regard, a new strategic project management approach should include these four types of project strategies (Artto, Kujala, Dietrich y Martinsuo 2008). Moreover, integration is the key to strategic project success. The UCP (Uncertainty, Complexity, Pace) model classifies projects according to the project uncertainty —low, medium, high, super-high—, the project complexity —assembly, system, array—, and the project pace —regular, fast, critical—. Whereas the holistic style approach includes the following five components: strategy, culture and attitude, organization, processes, and tools. Finally, the integrative framework includes three fundamental concepts: Style, learning —Individual, Project, Corporation—, and adaptation (Shenhar, 1999).

Heerkens (2007) defines strategic project management as a series of practices, procedures, processes, tools, and behaviors that define how organizations benefit from the interaction between project management and business practices – all in the name of advancing the overall strategic objectives of the organization. In addition, strategic project management consists of the management of projects aiming at developing organizational competencies and capabilities, which contribute to the firm's sustainable competitive advantage (Porter, 1987; Van Vliet, 2011; Ray, Barney, & Muhanna, 2004). Furthermore, strategic project management is an integrative approach towards achieving the sustainable competitive advantage obtained from aligning strategic business objectives with project management strategy. This paper presents a review of the literature that develops the review of the strategy section that follows.

2.1 Review of strategy

According to Patton and White (2002), strategy is «a comprehensive set of actions or activities, which guide and direct the use of the firm's resources to accomplish the organization's vision and goals, and enable sustainable competitive advantage». In addition, strategic planning is the process of governance by formulating and implementing decisions about the future destination of an organization. This process, which is applicable to all management levels and all types of organizations, is vital to the survival of any organization because it defines the process by which the organization adapts to the ever-changing environment. Thus, strategy implementation follows the adoption of organizational policies and practices that are consistent with corporate strategy (Barney & Hesterly, 2006). Furthermore, according to Johnson, Scholes, & Whittington (2005), making a strategy to be actionable involves the following:

- Defining the organizational structures, processes, and relationships, in order to deliver outstanding business results.
- Achieving success by excelling in resource areas of the organization such as human resources, information technology, finance, etc., aiming to support strategies.

2.1.1 Strategy formulation

Process of deciding where the company wants to go, what decisions must be made, and when they must be made to get there. It is also the process of defining and understanding the business itself and the way to keep it competitive in the market. Strategy Formulation includes the following steps:

- Studying the external environment and industry environment for changing political, economic, social, technological, demographic, and legal conditions.
- Interpreting environmental changes to identify opportunities and threats.
- Scanning the firm's internal environment and resource base in order to asset strengths and weaknesses.
- Identifying the firm's core competency and current business level, and corporate level strategy.
- Achieving sustainable competitive advantage by crafting the organization's mission and vision through a careful matching of the internal resource strengths and weaknesses with the environmental opportunities and threats.
- Setting goals to implement the mission, based on the top management perspective and the results of the previous steps.

2.1.2 Strategy implementation

Translates the plan that was formulated in the previous stage into policies and procedures for achieving the strategic goals of the organization. It involves all levels of management in the organization in acting towards its mission. The implementation process intends to close the gap between the organization's formulated goals and its ongoing activities. As a result, it integrates all the aspects of the firm because all organizational levels are involved cooperatively. After its implementation, the strategy needs to be managed so it remains valid. The following section on strategic management process discusses the basic concepts of this process and its main steps.

2.2 Strategic management process

The strategic management process involves a holistic approach for solving organizational challenges. Moreover, it is also a philosophical approach to business success, along with adapting senior management strategic thought to a process. In other words, the strategic management process guides everyone within the business to understand the strategy (Clayton, 2015). The five stages of the process: goal setting, analysis, strategy development, strategy implementation, and strategy monitoring are described below.

2.2.1 Goal-Setting

The purpose of this stage is to clarify the vision for the business. Goal setting consists of identifying three key aspects:

- Setting short and long-term objectives.
- Identifying the process of how to accomplish the objectives.
- Tailoring the process for the employee base and allocating responsibilities.
- Writing a mission statement that communicates the goals.
- Finally, the organization must perform a reality check in order to make sure that the goals are achievable, the values of the organization match, and there is a contribution towards the vision.

2.2.2 Analysis

This stage involves a systematic examination and evaluation of the data that has been gathered, breaking it down into its components to uncover their relationship to one another, and to understand the cause-effect relationship affecting the strategy, thus providing the basis for problem solving and decision-making. This is a key stage because the information gained here

will shape the next two stages. Furthermore, the focus of the analysis should be on understanding the needs of the business in order to be able to achieve sustainable competitive advantage. In addition, the analysis should help setting strategic direction, and identifying strategic initiatives that will help the business to grow. It is equally important to identify any external or internal issues that could limit the achievement of goals and objectives, hence uncovering the organization's strengths and weaknesses, as well as threats and opportunities that may come up along the path.

2.2.3 Strategy formulation

The first step in forming a strategy is to review the information in order to determine the resources that the business is counting on at the moment, and which of them can help reaching the defined goals and objectives. Then, senior management should identify any areas in which the business must seek for external resources. Furthermore, the company should prioritize the issues that is facing by their importance and contribution to the corporate strategy; once this has been done, the formulation of the strategy can begin. Thus, a sensitivity analysis will help in identifying possible scenarios, taking into consideration that business and economic situations are always dynamic. It is critical in this stage to develop alternative approaches that target each step of the plan.

2.2.4 Strategy implementation

On the one hand, successful strategy implementation is key to the success of any business. On the other hand, strategy implementation makes up the action stage of the strategic management process. Moreover, a major change may be required if the overall strategy does not fit the current structure of the business, so a new structure should be developed. Everyone within the organization must be aware of his/her responsibilities and duties, and how they contribute to the overall goal. Additionally, financial resources must be available at this point, so the organizational structure and the required funding are ready.

2.2.5 Evaluation and control

The final stage in strategic planning is evaluation and control. Strategic evaluation and control actions include the development of key performance indicator (KPIs), performance measurements, and benchmarking, to determine whether the chosen strategy is achieving the objectives of the organization. The fundamental activities in this stage are:

- Establishing the baseline for internal and external factors in the current strategy.
- Carrying out performance measurement.
- Taking corrective actions.

If the above-mentioned actions are not successful, then the strategic management process should be repeated. In the following section, we will present a review of the main concepts in project management.

2.3 Review of project management

The Project Management Approach provides a mechanism for identifying and measuring different project management levels by integrating the nine project management knowledge areas with the five project processes under a consolidated scheme. In addition, a good project management practice can provide increased customer satisfaction and better likelihood of repeated business. According to the PMI, there are five stages in the project lifecycle: initiating, planning, executing, monitoring and controlling, and closing. A detailed table including the 47 processes is arranged in five process groups and ten knowledge areas, as defined by the Project Management Body of

Knowledge (PMBoK) (Exhibit 1). According to the PMBoK (Project Management Institute, 2017), the main knowledge areas to be considered are:

- Project Integration management is a vital core competency of project management; it unifies and coordinates the processes and activities in each process group. Middle-level and lower-level managers spend most of their time on implementation activities. Thus, effective implementation results in stated objectives, action plans, timetables, policies, and procedures.
- Project Risk Management deals with identification, analysis, planning, response planning, and controlling of risk on a project. Its objectives are to increase the possibility and impact of positive events, and decrease the possibility and impact of negative events in the project.
- Project Procurement Management deals with purchasing or acquiring products, services, or results needed from outside the project team.
- Project scope management ensures that the strategy is focused, and the project is contained within its limits.
- Project time management: in general, organizations have a defined time limit to achieve their strategy. It can be either short-term, medium-term, or long-term.
- Project cost management: the project strategy should be cost-efficient. Another goal of strategy implementation is to reduce costs in order to be more competitive and/or achieve higher returns.
- Project quality management: quality is a differentiator. Companies must comply with quality standards, even if quality is not a strategic goal. Companies must ensure high-quality standards and minimize customer complaints as a differentiator, which in turn will affect the credibility of investors.
- Project human resource management: people are the most important resource in a project. In general, projects require specific expertise to complete the deliverables along their lifecycle. On the other hand, employees could be working on more than one project simultaneously since organizations usually work on several strategic projects over the course of a budget year.
- Project communications management: project managers should focus on understanding the communication needs of every person engaged in the project. It also involves determining communication impact over the course of the project. This includes, project status updates, minutes of meetings, and reports on deliverables, along with other project documentation.

3. Senior management resistance to strategic project management

From the corporate perspective, some of the reasons for the resistance to project management that make executives fearful include:

- Authority decentralization: if project management were a core competency, it would require top executives to delegate decision-making to project managers, which will diminish the executive's power and influence.
- In the past, project management was perceived as a scheduling tool for the workers.
- Executives fail to recognize the true benefits that project management could bring, because they consider it to belong to the operational level.

Once the organization sets the strategic foundations and its project management capabilities, it should plan for strategic project management. The following section presents the main concepts on strategic planning for project management.

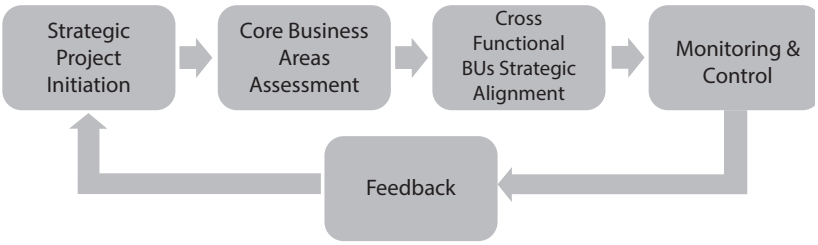
4. Strategic planning for project management

Strategic planning for project management calls for the development of a standard methodology for strategic project management. Such methodology should be applicable without consideration to the industry, sector, geography, or any other boundary, and its goal should be to produce a high probability of achieving the project's objectives while implementing the corporate strategy. Although the use of a strategic project management methodology cannot guarantee breakthrough profits or success, it does improve the chances of success by means of a systematic project strategy planning and execution.

The development of an implementation methodology provides consistency of action to the organization, and the project management approach brings direction to organizations. In addition, project integration management is key in dealing with a growing number of interrelated functional units in organizations.

Strategic Project methodologies do not need to be complex. The figure below shows an outline for the development of a simple strategic project management methodology, beginning with a project initiation process, which is followed by a core business area —technical—, a cross functional baseline —management level—, then monitoring and control for continuous improvement —feedback— (Figure 1).

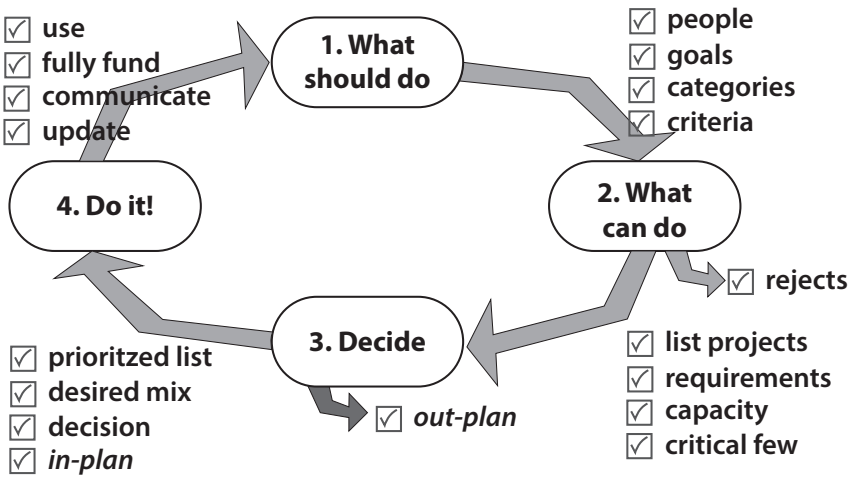
Figure 1. Strategic project methodology outline



Source. Englund, 1999.

The following diagram (Figure 2) depicts some of the project initiation activities (Englund, 1999).

Figure 2. A systematic approach to selecting projects



Source. Englund, 1999.

It is important to understand the dynamics of strategic project management in the organization. The following section examines the implications between implementing a Project Management Office (PMO) and aligning strategy with implementation.

5. Cases of project strategy

Analyzing the organizations to determine what and where improvements are called for is directly related to planning in strategic project management, and it can have an important effect on the corporate performance in how quickly the recommended changes are implemented. In addition, when analyzing the effects of the project management office, the main risk areas include headcount, team members' performance, bureaucracy, organizational restructuring, and trying to service everyone in the organization. Thus, highlighting strategic implementation, strategic alignment, and costs of non-performance are key at this point.

5.1 Aligning strategy and implementation – The PMO office

It is not enough for projects to come in on time and on budget. They must also be in accordance with the strategy. In fact, organizations tend to put too much emphasis on strategy. However, without proper project/programs implementation, even the best strategies tend to fail. According to Greg Wood, managing director of the Corporate Project Management Office (PMO) for Rio Tinto, and a PMI Global Executive Council member in Brisbane, Australia. «A strong PMO delivers two distinct areas of improvement to the organization. It helps organizations to choose the right projects to be delivered, and it helps them to deliver projects correctly.» (PMI, 2014, p 1).

5.1.1 The high cost of low performance of the organizations

According to the PMI's Pulse of the Profession® research: less than 42 % of the organizations report high alignment of projects to organizational strategy, which is high cost if we think in terms of costs of non-conformity. In addition, the report from the Economist Intelligence Unit (EIU) in 2013 confirms that almost 61 % of senior executives participating in the survey admitted that they struggle with executing strategic initiatives. In other words, organizations must put PMOs at the strategic level, if they want to get the most value out of a PMO, so senior management can make the best project decisions for the business (PMI, 2014).

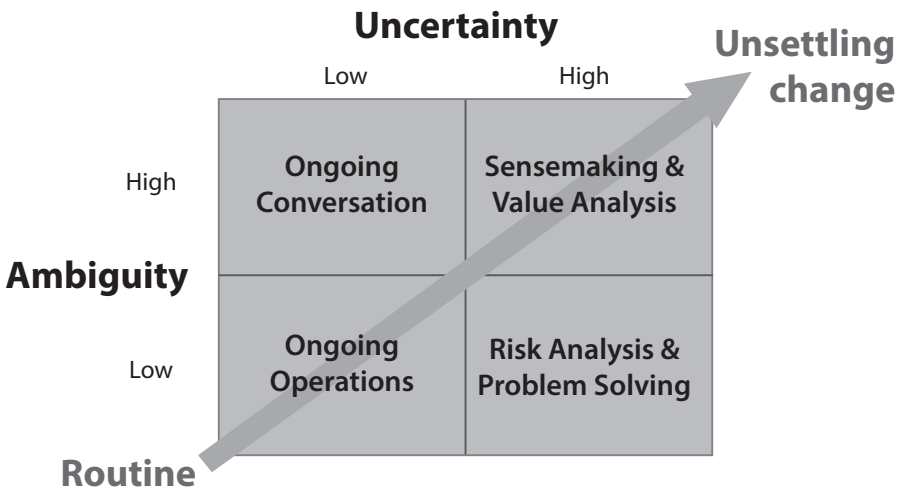
Moreover, creating a PMO does not guarantee an immediate solution to all project and program woes, and not every organization needs a PMO. According to the PMI Pulse in-depth report, only 33 % of respondents recognized that the PMO has brought about business value to the organization. To accomplish that potential, the PMO must ensure that the organization selects projects and programs that will fulfill its strategic vision.

5.2 Strategy implementation

Strategy implementation deals with the relationship among Project Management, Knowledge Management, and Strategic Project Portfolio Performance. In the current organizational context and culture, characterized by an accelerated change, project managers must adapt to large flows -of sometimes- contradictory information. They must cope with the

ambiguity, realm of strategic management, and the real world. Therefore, program managers have to simultaneously deal with both high ambiguity and high uncertainty (Figure 3).

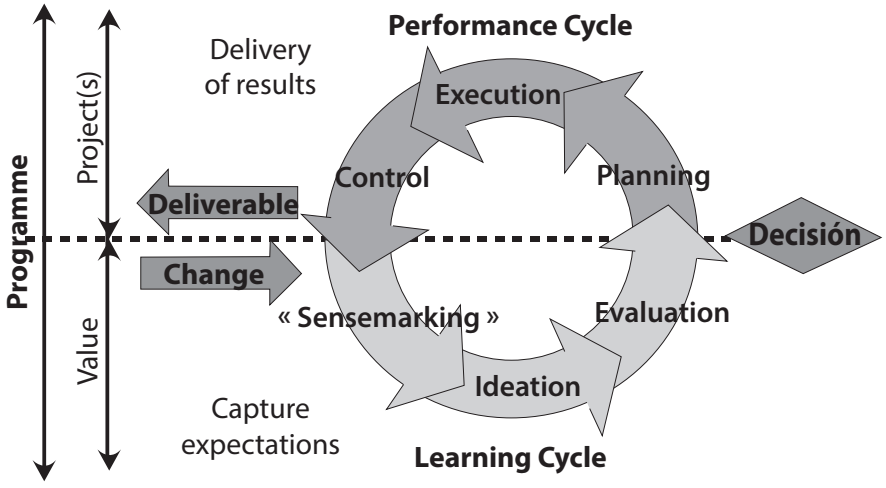
Figure 3. The uncertainty-ambiguity relationship in change situations



Source. Thiry, 1999.

Figure 4 below represents the integrated program management cycle-model. Here, the project is divided into work packages and responsibilities, allocated so that resources can focus on specific tasks where they can contribute the most. Whereas, in the learning cycle, the same resources will need a holistic approach of the project in order to be able to identify a wide range of opportunities. Concisely, the project is a system of complex interactions to which everybody can contribute (Thiry 2002).

Figure 4. The integrated program management cycle model



Source. Thiry, 2002.

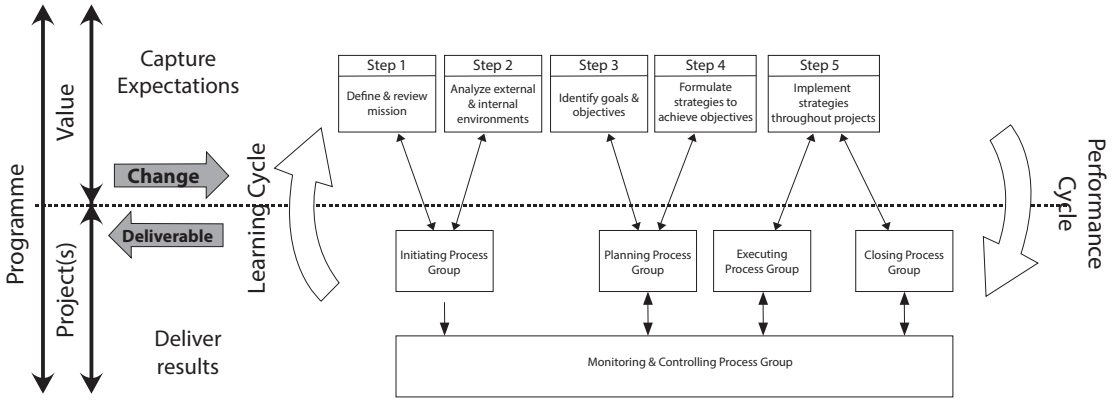
We propose an integrated strategic project management model that helps the organization to achieve sustainable competitive advantage by providing program managers with strategies to achieve efficiency in fulfilling the vision. In this context, team members find their contribution meaningful and senior management feels in control of what is happening. At the same time, the project management approach provides the required KPIs (Key Performance Indicators) to interface with strategic implementation methodologies such as the Balanced Score card as an example. Finally, in the next section we will introduce a conceptual model that summarizes the key concepts about strategy and project management.

6. Proposed conceptual model/framework for project strategy

Strategic project management differs from project management because the first one analyzes the company's projects from different perspectives such as the competitive advantage, strategic capabilities, and tacit knowledge (Green, 2005). Despite its success, project managers face a barrier to progress at the strategic level in the organization when compared with other functional areas of the organization such as marketing, finance, and legal (Green, 2005).

Companies looking for sustainable competitive advantage will benefit from using the proposed model that at the end aims to develop implicit knowledge in the organization. The stages of, evaluation, ideation, and sensemaking contribute to the learning process of the organization or Learning Curve (Figure 5). Furthermore, a systematic approach for strategy implementation will connect the two previously disconnected levels of the organization: strategic planning and tactic implementation and execution. Strategic planning process activities —step 1 and step 2— receive input from the project initiating activities. Then, the planning process group of the project management approach contributes to the identification of corporative goals and objectives —step 3—. Finally, the project-executing group will use the resources already defined in the previous stages to implement the strategic actions delineated in the implement strategy stage —step 5—. This agile approach will allow the organization to effectively communicate senior management initiatives to the execution team. Alternatively, the approach creates value and allows for quick adjustments as the monitoring and control process group constantly checks for quality achievement.

Figure 5. Integrated strategic project management approach



Source. Prepared by the author.

We can exemplify the Integrated strategic project management model by looking at the following example: a clothing manufacturer has been losing market share to its competitors, which upsets the investors. As a result, the senior management of the firm strongly believes that strategic reevaluation is necessary at this point. The marketing team has already used project management approach to produce and launch collections during the previous five years, so they are familiar with the project management approach. To spell out the situation, the firm puts together a group of senior executives and the most experienced project managers to drive the change.

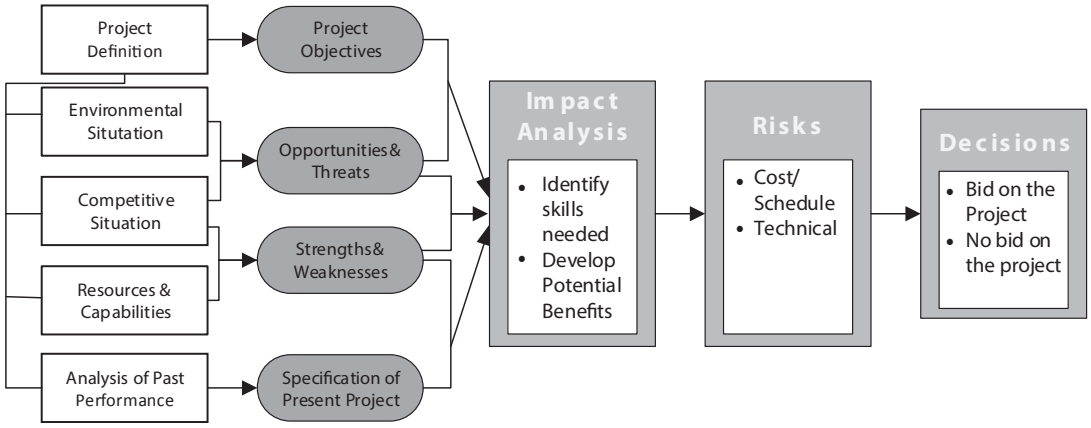
The above-mentioned situation may look as a standard management-consulting mandate to assist the organization in finding its new strategic direction. However, on the contrary, it is an opportunity to apply the integrated strategic project management approach to solve the issues originating the lost in revenue.

After a few weeks of work, the strategic project planning team was able to identify some internal issues. The most salient was that, the marketing, manufacturing, and supply chain divisions have been working in silos during the last years. From that point, the goal was to apply the new strategic planning approach, so the vice presidentsof all these divisions can collaborate towards the initiating activities, mission revision, and the internal and external analysis of the environment. After the environment scan and analysis stages, they would be able to discover that due to changing habits of their clients, manufacturing cannot continue to operate using the same materials and cost structure as when the company was founded 30 years before. Step 3 in the strategic planning will provide updated goals given the available resources within the organization and the estimation that was conducted as part of the Planning Process Group. Soon, the project team was able to propose some strategic alternatives, which are evaluated by the different levels of the organization and require some market validation (project monitoring and control process group). To achieve high performance and create sustainable competitive advantage, the results after each measurement must be valuated and corrective actions generated.

6.1 Strategic project selection

Senior management faces the tension of making strategic investment decisions right. Many decision-making processes have proven successful in identifying and selecting strategic projects. One of them is described by Kerzner and depicted in figure 6 below (Kerzner, 2005). However, only the market and the organization's own performance will determine if the right projects have been selected.

Figure 6. Project selection process



Source. Prepared by the author.

7. Conclusion

After analyzing the theoretical framework of the strategic management tools and the project management approach, it can be said that projects are the final tools used to implement strategies. The literature review presented gave us a better understanding of the interactions and relationships between strategy implementation and project management. In addition, strategic management defines «where» the firm has decided to go, while project management deals with «how» to get there. It is then clear that, project objectives should be aligned with the strategic objectives. Nevertheless, the best way to make sure that projects are aligned to the strategy is to have project objectives defined from organizational objectives, this because projects are started to put the strategy into action.

In general, strategies can be broken down into tactics, which can then be implemented as programs. Therefore, in the long run, projects would then belong to a specific strategic program. Therefore, in any firm, it should be possible to trace projects back to specific organizational objectives. The present work discussed the integrated strategic project management model as a contribution to close the gap between the project management approach and the strategy implementation. In addition, the next section provides some practical recommendations and advice for future research in this topic.

8. Recommendations and future research

Developing a practitioner research with organizations that have already applied similar methodologies will be of interest at this point, as well as a side-by-side evaluation of the proposed approach with other relevant project management methodologies such as IPMA, Prince2, and Project plus among others. In addition, quantitative research to find correlations between the resources of the companies, the type of industries, and projects with success of implementation of the integrated strategic project management model will be highly valuable.

Referencias

Artto K.; Kujala, J.; Dietrich, P.; y Martinsuo, M. (2008). What is project strategy? *International Journal of Project Management,* 26, 4–12.

Barney, J. B., & Hesterly, W. S. (2006). *Strategic Management and Competitive Advantage*: Concepts and Cases. Pearson: Harlow.

Bergeron, F., Raymond, L., & Rivard, S. (2004). Ideal patterns of strategic alignment and business performance. *Information & Management,* 41(8), 1003 – 1020.

Byrd, T. A., Lewis, B. R., & Bryan, R. W. (2006). The leveraging influence of strategic alignment on IT investment: An empirical examination. *Information & Management,* 43(3), 308–321

Clayton, J. (2015). *The Five Stages of the Strategic Management Process*. Retrieved from https://smallbusiness.chron.com/five-stages-strategic-management-process-18785.html

DyReyes, J. (2008). *Strategic Project Management: Aligning Strategic Business Objectives with Project Management Strategy.* University of Oregon, Applied Information Management Program.

Englund, R., & Graham, R. (1999). From Experience: Linking Projects to Strategy. *Journal of Product Innovation Managemen*t, 16(1), 52-64.

Green, S. (2005). *Strategic Project Management: from maturity model to star project leadership*. University College Cork, Ireland.

Grundy, T. (2000). Strategic project management and strategic behavior. *International Journal of Project Management*, 18(2), 93 – 103.

Heerkens, G. (2007). Introducing the revolutionary strategic project management maturity model (SPM3). *In annual North American meeting of the Project Management Institute* (p. 1), Atlanta, GA.

Johnson, G., Scholes, K., & Whittington, R. (2005). *Exploring corporate strategy. Essex*, England: Pearson Education, Ltd.

Kerzner, H. (2005). *Using the project Management Maturity Model.* New York, NY: John Willey & Sons.

Kwak, Y. H., & Ibbs, C. W. (2002). Project Management Process Maturity (PM) 2 Model. *Journal of management in engineering,* 18(3), 150-155.

Office of Government Commerce. (2017). *Managing Successful Projects* with PRINCE2™. AXELOS.

Patanakul, P., & Shenhar, A. (2012). What project strategy really is: the fundamental building block in strategic project management. *Project Management Journal*, 43(1), 4–20.

Patton, J., & White, D. (2002). Closing the strategic vision/implementation gap. Paper presented at Project Management Institute Annual Seminars & Symposium, San Antonio, TX. Newtown Square, PA: Management Institute.

Porter, M. (1987). From competitive advantage to corporate strategy. *Harvard Business Review*, May-June, 2-21.

Project Management Institute (2014). The Project Management Office: Aligning Strategy & Implementation. White Paper, April 2014

Project Management Institute (2017). *A guide to the project management body of knowledge (PMBOK® guide)*, 6th ed. Philadelphia: Project Management Institute Inc.

Ray, G., Barney, J. B., and Muhanna, W. A. (2004), Capabilities, business processes, and competitive advantage: choosing the dependent variable in empirical tests of the resource□based view. *Strategic Management Journal*, 25(1), 23-37.

Shenhar, A. J. (1999). Strategic Project Management: The New Framework. In Management of Engineering and Technology. PICMET'99. Portland International *Conference on Technology and Innovation Management*, 382-386. IEEE.

Thiry, M. (2002). Combining value and project management into an effective programme management model. *International Journal of Project Management,* 20(3), 221–227.

Van Vliet, V. (2011). *Core Competence Model*. Retrieved August 2018 from ToolsHero: https://www.toolshero.com/strategy/core-competence-model/

Exhibit 1 - Project Management Process Group – PMI® PMBoK

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work	4.4 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requeriments 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1Plan Quality Management	8.2 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquiere Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk 11.4 Perform Quantitative Risk 11.5 Plan Risk Responses		11.6 Control Risk	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Egagement	13.4 Control Stakeholder Egagement