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FORMULATING A STRATEGY FOR A PROCESS-PROJECT ORGANIZATION

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Purpose: Although scientific research in the field of process and project management is becoming increasingly common, it is still fragmentary in nature. In particular, it does not address the issue of formulating a strategy that combines reactive and proactive orientations, focused on the exploitation and exploration of processes and projects. The authors of this publication wish to contribute to filling this knowledge gap and describe selected research results aimed at determining how to formulate a strategy in a process and project organization.
Design/methodology/approach: The formulated main objective was achieved in two stages. Stage 1 was based on a case study applied to an entity that is a business environment institution with the highest level of process and project maturity. In this stage, the organization's documents were first analyzed. Next, semi-structured interviews and participant observations were conducted. In the second stage, as part of the discussion, the results of the case study were compared with the solutions indicated in the literature on strategy formulation.
Findings: The research conducted allowed us to map out the process of formulating a process-project organization strategy, which uses a number of methods, such as PESTEL, Porter's 5 forces analysis, SWOT, BSC, and strategy mapping. This method includes specific and new solutions dedicated to process-project organizations in the assumptions for strategy formulation, external and internal analysis, objective setting, strategy selection, and implementation plan development.
Research limitations: The main limitation of the study is the individual nature of the case study, which limits the possibility of generalizing its findings in order to recommend them to other organizations. The study was largely based on observations and interviews, which may reflect the subjective perspective of those involved in formulating strategies within the organization.
Practical implications: The results of the study can serve as guidelines for managers of process- -project organizations on how to formulate proactive and reactive strategies.
Originality/value: To date, no approach has been described for integrating strategic objectives with operational and exploratory processes and projects, while simultaneously determining what incremental or radical changes they should involve. Also noteworthy is the integration of KPIs that combine the perspectives of objectives, processes, and projects.
Keywords: process-project organization, strategy formulation.
Category of the paper: Research paper.

1. Introduction

Contemporary organizations operate in an environment characterized by dynamism, market globalization, and fierce competition, as well as rapidly changing and increasingly high customer expectations. In such conditions, classic strategic management models, which focus on long-term planning, often prove insufficient (Mintzberg et al., 2005) because they are too rigid and unable to respond to dynamic changes (Grant, 2019). It is believed that in order to function properly and achieve success, organizations must operate effectively on a daily basis, continuously improve the quality and efficiency of their work, demonstrate adaptive flexibility, and quickly adapt to customer needs by introducing changes and innovations (Sudoł, 2006; Johnson et al., 2008). This has led to growing interest among management practitioners and theorists in the concept of process-project organization, which focuses simultaneously on processes that ensure the stability and effectiveness of current activities, as well as on projects that enable flexible responses to change and the introduction of innovation (Szpitter, 2020; Sliż, 2021). Two approaches to management are dedicated to this concept of organization in relation to processes and projects: exploitative and exploratory (Raisch et al., 2009), which involves the simultaneous implementation of two strategic orientations (Hu, Chen, 2016; Zhang et al., 2016). The first of these orientations – reactive – refers to exploitation and is focused on productivity, efficiency, updates, modifications, and improvement of current activities to adapt to market needs (Kohtamäki et al., 2010). The second orientation, proactive, refers to exploration and is focused on change, searching for and researching new opportunities, and introducing innovations (Raisch et al., 2009). It is worth noting that the simultaneous use of these orientations, focused on exploitation and exploration, has been one of the most discussed paradoxes in strategic management in recent years (Zakrzewska-Bielawska, 2016). It has been discussed, among others, in the context of technological innovation (Jansen et al., 2006; Andriopoulos, Lewis, 2009; Martini et al., 2013), organizational design (O'Reilly, Tushman 2004; Selcer, Decker, 2012; Chen, Kannan-Narasimhan, 2015), organizational adaptability (Huy 2002; O'Reilly et al., 2009), and strategic management. From the latter perspective, exploration and exploitation were most often considered orthogonal activities, as both are necessary for an organization to survive and grow. The ability to manage activities focused on exploration and exploitation and to seek the ideal balance between them has been termed ambidexterity (Czakon, 2012), which requires outstanding leadership (Skubis, Bijańska, 2024), strategic sophistication, significant resources, thorough knowledge, conflicting structures, and adaptive systems (Gilbert et al., 2015). It should be emphasized that ambidexterity was also the subject of research in the context of strategy formulation (Burgelman, 2002), strategy implementation (O'Cass et al., 2014), and strategic flexibility (Wei et al., 2014), but it was analyzed in terms of the results achieved exclusively in the course of processes. Therefore, no indication was given as to how to formulate a strategy focused on exploitation and

exploration in process-project organization. Such considerations are also absent from the literature on process-project management. And although scientific research in this area is being conducted more and more often, it is still fragmentary in nature (Nowosielski, 2017, 2018; Lichtarski, Osbert-Pociecha, 2019; Strojny, 2019), and has been presented most extensively in only two books (Szpitter, 2020; Sliż, 2021), which do not address the issue of formulating a strategy that combines reactive and proactive orientations, focused on the exploitation and exploration of processes and projects. The authors of this publication wish to contribute to filling this gap and describe selected research results in the field of strategy formulation in a process-project organization with a reactive and proactive orientation. The presented solutions are part of broader research on the problems of managing process-project organization.

2. Basis for research, its purpose, subject, course, and methods used

For the purposes of research on the problems of managing process-project organizations, a model of a ambidextrous process-project organization was adopted (Fig. 1).

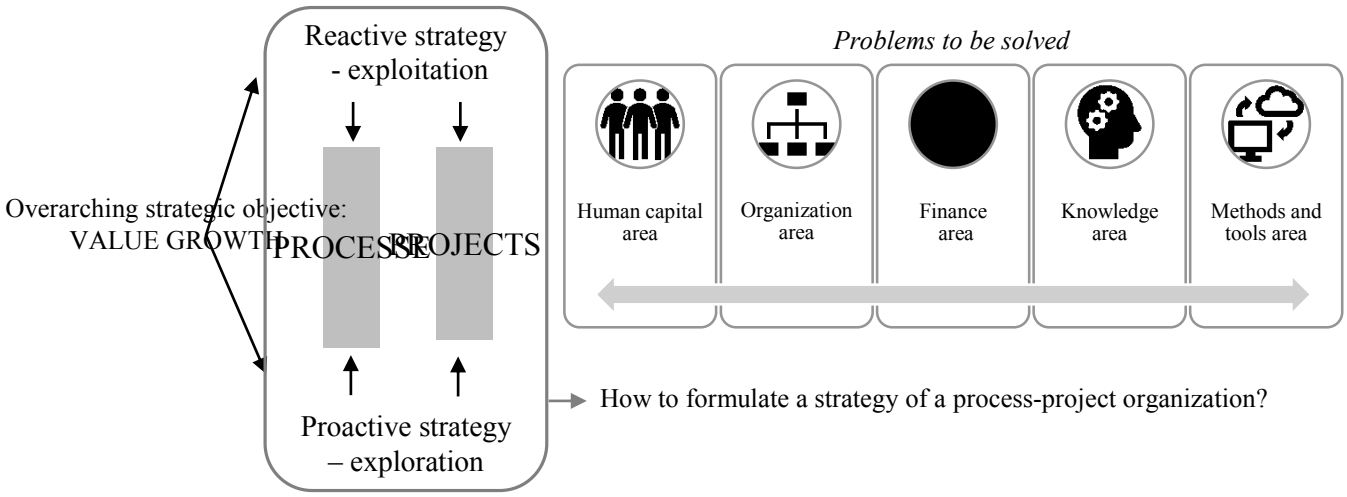

Figure 1. Generalized model of a ambidextrous process-project organization, taking into account the main problem in the area of strategy.

Source: own study.

The model assumes that the overarching strategic objective of such an organization is to increase value, which can be achieved through proper functioning and development, as well as obtaining a sustainable competitive advantage that allows for generating high financial results. This requires the development and implementation of a strategy focused on:

1) reactivity, referring to operations, including the ability to implement incremental changes – improvements for the effective implementation of existing processes and projects,

2) proactivity, referring to exploration, including the ability to implement radical changes – new, adaptive, innovative solutions in existing processes or new processes, as well as in existing and new projects.

The research was conducted in several interrelated areas, i.e., human capital, organizational capital, financial capital, knowledge, methods, and tools. Within these areas, many problems were identified, the solution of which supports the achievement of the overarching strategic objective. The results of the considerations regarding these problems are the subject of other publications.

This publication presents part of the research[1] , which aimed to determine how strategies are formulated in process-project organizations. In particular, it presents the results obtained in the course of a case study, which was exploratory in nature, because, as mentioned in the introduction, the issue of strategy formulation in organizations integrating process and project management is a relatively new and less recognized issue in the literature.

To achieve the research objective, the focus was on answering three questions:

1. How does a process-project organization formulate its strategy?
2. What tools and methods are used for this purpose?
3. What barriers and difficulties may arise during the implementation of the strategy?

The case study method was chosen because of its focus on in-depth understanding of complex phenomena in their natural organizational context (Yin, 2018). This method was applied in an entity that is a business environment institution, operating for 26 years for the benefit of enterprises, local government, and scientific institutions, in which many processes and projects are carried out. The criteria for selecting this organization for the study were its highest (5) level of process and project maturity, assessed on the basis of an appropriate model (Sliż, 2021, pp. 201-211), as well as its many years of experience in creating process and project strategies and the willingness of its top management to participate in the study.

The research was conducted in two stages, which followed initial contact with senior management, discussion of the purpose of the research, and signing of consent forms for access to documentation and for conducting interviews and observations.

In stage 1 document analysis was used (Bowen, 2009), including specific assumptions for formulating the organization's strategy, its current strategy, process documentation, project documentation, reports on the implementation of processes and projects, and internal presentations. The document analysis allowed for the identification of formal assumptions and preliminary understanding of the mechanisms of strategy formulation.

Following that, semi-structured interviews and participant observations were conducted. Semi-structured interviews (Kvale, Brinkmann, 2015), which combine elements of structure and flexibility, allowed for further exploration of the problem of strategy formulation in both

[1] Research in the area of strategy formulation, which is not presented in this publication, also included interviews and discussions within the expert panel.

an orderly and free manner. The interviews were attended by senior management representatives, process owners, and project managers who were involved in strategy formulation. The interviews provided insight into their subjective assessments, experiences, and opinions. Participatory observation (Dźwigoł, 2018) was also used at this stage. In particular, the authors of the 2025 publication were allowed to interactively observe how the new strategy was formulated in the organization under study, which meant that they could ask questions, participate in discussions, and propose improvements. This observation provided a deeper understanding of the practices used in strategy formulation.

In stage 2 as part of the discussion, the results of the case study were compared with the solutions indicated in the literature on strategy formulation.

3. Research results

3.1. The method of strategy formulation and the methods and tools used in it

Based on the results obtained in stage 1 of the research, i.e., analysis of source documentation, interviews, and participant observation, the method of strategy formulation in the studied organization was mapped (Fig. 2). It proceeded in phases, using several methods and tools. The result was a document of over 100 pages.

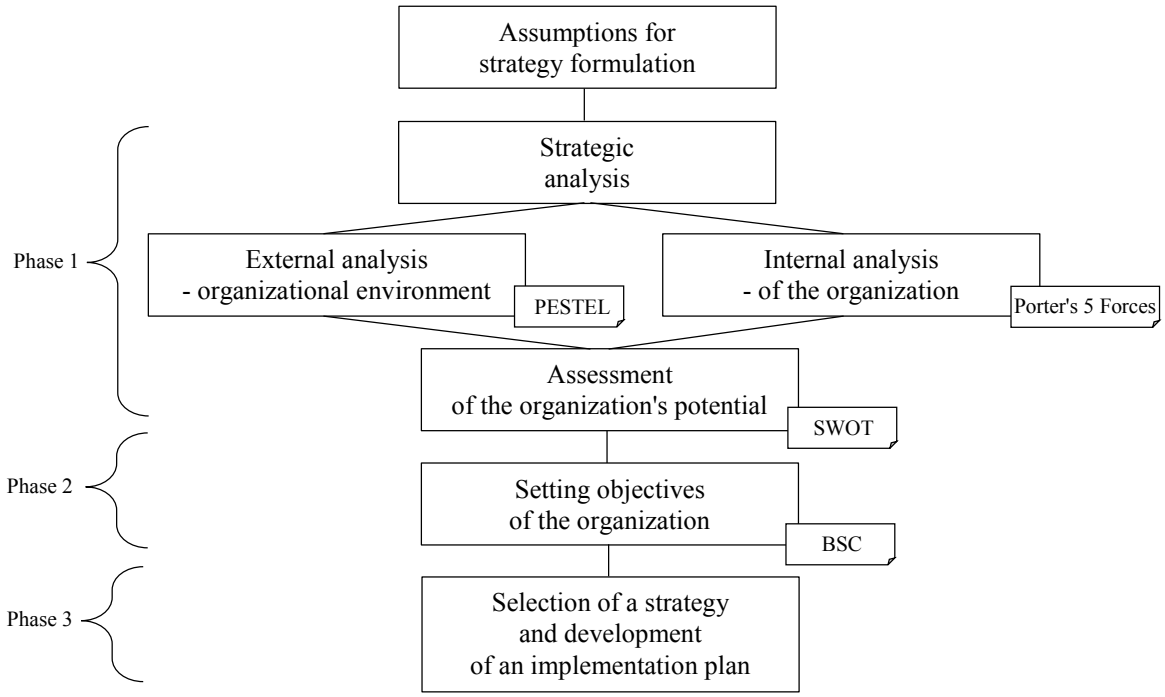

Figure 2. Generalized model for formulating a ambidextrous strategy for a process-project organization, taking into account the methods and tools used.

Source: own study.

The basis for strategy formulation in the examined process-project organization are specific assumptions, in particular its mission, vision, overarching objective, and strategic orientations. Specifically:

- its mission is to provide modern services promoting innovative solutions and involvement in major infrastructure investments,
- its vision is to strive to become a leading center for infrastructure investments in the areas made available, supporting the dynamic development of a competitive economy by creating favorable conditions for new investors and existing enterprises, as well as promoting and supporting innovative technologies and cooperation between science, business, and local government,
- its overriding objective is to increase value by generating high financial results,
- its strategic orientations relate equally to reactivity and proactivity through the exploitation and exploration of processes and projects, thanks to which the organization plays a dual role: a stable partner supporting entrepreneurs in their day-to-day operations and an innovative catalyst for change in the region.

Phase 1. Strategic analysis

Strategy formulation begins with a comprehensive strategic analysis that provides an understanding of both the external and internal conditions of the organization.

The environmental analysis focuses on identifying external factors affecting the organization's operations and the opportunities and threats that arise from them. This analysis is the basis for later adapting the strategy to changing market conditions, as it allows for a better understanding of the organization's competitive position, taking into account anticipated trends in the environment.

In the organization under study, the environmental analysis was conducted by answering questions such as:

- what are the current conditions for the organization's functioning (e.g., economic and social)?
- what are the directions and trends of change in these conditions?
- what solutions are necessary to achieve success in the given conditions, taking into account the anticipated directions of change?

For example, in terms of economic conditions, the level of economic development of the city and region in which the organization operates, the situation of companies in the environment, their financial condition, access to capital, investments, and the level of innovation and technology were discussed. In terms of social conditions, the demographic structure of the city and region, the level of education of the inhabitants, their expectations, and their level of activity were analyzed. This made it possible to identify trends in economic and social changes in the city and region, taking into account, among other things, energy transition, digitization, and the development of the SME sector. A growing need for support for innovative startups and industrial technologies was identified.

In turn, the internal analysis in the examined organization referred to its organizational, financial, material, human, and intangible resources. As before, the analysis was conducted by answering questions such as:

- with regard to organizational resources: which of the organization's processes and projects are most important for creating its value, and which of them require change?
- with regard to financial resources: what is the level of cash available and committed to projects? What is the capital structure?
- with regard to tangible resources: what is the condition of the infrastructure? What needs to be improved?
- in terms of human resources: are the competencies of process owners, project managers, and process and project team members sufficient? Is their number adequate?
- in terms of intangible resources: what is the organization's reputation in local or industry circles?, what are the relationships with customers/stakeholders?

For example, in response to questions relating to organizational resources, it was indicated that:

1) the most important factors for creating value for the organization include[2]:
   - the process of leasing offices, production halls, warehouses, industrial or service areas in several industrial parks, business centers, and other properties owned, as well as the incubation process – support for the development of new enterprises and startups,
   - projects related to the preparation of new land for investors from the aviation industry and for SMEs, as well as those related to the acquisition and preparation of new land for technology investors and the construction of modern laboratories for companies from the medical industry,
2) changes are required, among others, in:
   - the process of servicing customers renting facilities in industrial parks, business centers, and other owned properties, as well as the incubation process,
   - projects related to the acquisition and preparation of new land for investors, as well as the construction of modern laboratories.

It should be emphasized that in this phase of strategy formulation, the organization under study used three methods. These were PESTEL and Porter's 5 forces analyses, as well as SWOT. In particular:

1. The PESTEL analysis, covering macro-environmental factors P – Political, E – Economic, S – Social, T – Technological, E – Environmental, L – Legal, was aimed at identifying external opportunities and threats in the context of their impact on the

[2] The names of these projects have been deliberately omitted due to signed agreements regarding the disclosure of detailed information about the organization under study.

functioning of the organization, as well as enabling better adaptation of its activities to changing environmental conditions.

2. Porter's 5 forces analysis focused on assessing the attractiveness of the industry and identifying sources of threats and ways to minimize them. It covered the power of suppliers, the power of customers, the threat from new players, substitutes, and competition within the sector.
3. The SWOT analysis covered S – Strengths, W – Weaknesses, O – Opportunities, and T – Threats. It was focused on synthesizing the results of previous analyses and assessing the organization's potential in the context of external conditions. It identified how the organization could more effectively leverage its strengths, eliminate weaknesses, respond to threats, and take advantage of emerging development opportunities.

Phase 2. Setting objectives in the organization

When setting objectives, senior management first emphasized what the organization should achieve in the future (in the short and long term). This was the basis for defining several objectives in the following areas: finance, customers, learning and growth. A map of these objectives was developed. It can be seen that this approach is based on the Balanced Scorecard (BSC) method, in which the objectives identified for achieving the organization's overarching objectives are assigned to four perspectives, which means that the internal business processes perspective is missing (Kaplan, Norton, 2001). Next, the defined objectives were directly linked to the relevant reactive and proactive processes and projects, assuming that their achievement is determined by the effectiveness and efficiency of process and project management. For example, the objective defined in the financial perspective as increasing the financial efficiency of the organization by 3% over the year compared to the previous year, measured by net cash flow (NCF)[3], was linked, among other things, to:

- with the processes of servicing customers renting facilities and incubation,
- projects related to the acquisition and preparation of new land for investors, as well as the construction of modern laboratories.

In the organization under study, objectives were defined in accordance with the SMART principle (S – Specific, M – Measurable, A – Achievable, R – Relevant, T – Time-bound), which facilitated their correct formulation and supported their subsequent translation into specific processes and projects. Particular attention was paid to defining the target measurement indicator, its target value, and the time frame for achieving it. The authors of the publication found that there was a lack of common measurement indicators for a specific objective and the related process(es) and project(s). They therefore proposed their adoption, including those with a financial dimension (expenditures/revenues), which would facilitate the assessment of

[3] Monetary values have been deliberately omitted due to signed agreements regarding the disclosure of detailed information about the organization under study.

a specific objective from the point of view of its impact on the achievement of the overarching objective. In addition, they noted that it is worth prioritizing individual objectives. Such ideas are consistent with the Management by Objectives method (Bijańska, Wodarski, 2020). The authors of the publication also noted that an alternative way of setting objectives would be to adopt the missing (from the BSC) perspective of internal processes and to create an additional fifth perspective – projects, which would include objectives directly related to them. An example would be the objective: 80% of projects should be completed according to the agreed schedule this year. The proposed solutions met with interest from those involved in formulating the strategy in the organization under study, and the first of them were applied during the formulation of the current strategy.

Phase 3. Selection of a strategy and development of an implementation plan

The assumptions for the strategy, the results of the strategic analysis, and the specific objectives were the basis for considering two strategy options: growth or stabilization. First, a discussion was held on these options. Among other things, the consistency and feasibility of the objectives were analyzed and assessed in relation to the available resources and the possibility of influencing the risk factors that determine the success of the strategy. After discussion and presentation of arguments, a growth strategy was chosen, i.e., the development of the organization through the skillful use of an integrated combination of its resources, with an emphasis on the importance of processes and projects whose implementation is to contribute to the achievement of related objectives. It was agreed that the implementation of this strategy would take into account its two orientations – reactive and proactive – which would simultaneously refer to the exploitation and exploration of processes and projects for proper day-to-day functioning, ensuring adaptive flexibility and adaptation to the needs of customers or stakeholders.

Next, as part of the reactive strategic orientation for each objective, incremental changes were identified that should be introduced in the processes and projects related to that objective. It should be emphasized that these changes were characterized by a gradual, systematic streamlining and improvement of existing processes and projects, without the need to spend significant financial resources.

For example, for the previously indicated objective from a financial perspective, defined as increasing the financial efficiency of the organization by 3% ..., which was linked, among other things, to the processes of servicing customers renting facilities and incubation, as well as to projects related to the acquisition and preparation of new land for investors or the construction of modern laboratories, the strategy adopted:

1. Improving the customer service process by simplifying the internal customer service procedure, which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - a reduction in the unit cost of customer service, as fewer steps in the procedure will shorten service time and allow more customers to be served at the same time,
     - reducing labor and operating costs by reducing the number of errors and misunderstandings – saving time on necessary corrections, which can be used for other activities,
   - increased revenue, which should result from:
     - additional revenue from new customers acquired through recommendations from existing customers who are satisfied with faster and better service,
     - faster receipt of funds as a result of shorter service times and, therefore, faster invoicing.
2. Improvement of the incubation process through regular updates of advisory programs and workshops based on participant feedback and market needs analysis, which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - reducing the costs of implementing ineffective programs and workshops with little interest by reducing or eliminating them,
     - reducing the costs of promoting new, current programs and workshops, as satisfied participants will recommend them to others,
   - increase revenue, which should result from:
     - higher revenues from fees paid by a larger number of program and workshop participants,
     - additional revenue from new customers acquired through recommendations from satisfied participants in new programs and workshops.
3. Shortening the time needed to complete projects related to acquiring and preparing new land for investors by simplifying and standardizing internal procedures and implementing appropriate document circulation, which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - a reduction in labor costs thanks to less bureaucracy,
     - limiting negative financial effects through better control of the budget and financial flows, implying a faster response to deviations,

- increase revenue, which should result from:
  - earlier revenues from transactions or lease fees and faster recovery of invested funds (faster acquisition and preparation of land enables its faster sale or release to investors,
  - additional revenue from new investors attracted by the efficiency of the organization.

4. Implementation of the project to build modern laboratories in stages that can be used independently (each stage, e.g., one laboratory, should be completed and ready for use before the next one begins), which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - reducing financial costs (interest, commissions), thanks to the possibility of financing the next stage from the revenue obtained from the completion of the previous stage,
     - reducing costs not provided for in the project budget, thanks to a reduction in the risk of errors achieved by eliminating unsuccessful solutions, e.g., technical or organizational, which were in the previous stage,
   - increase revenue, which should result from:
     - earlier revenue inflow, which will shorten the payback period of the invested funds, thanks to the possibility of renting or making available the completed result of the stage, which can be used commercially,
     - the generation of future contracts, thanks to the possibility of conducting promotional activities in the completed stage result, which will increase interest in the offer.

After identifying incremental changes, as part of a proactive strategic orientation for each objective, radical changes were identified that should be introduced in existing or new processes and projects related to that objective. It should be emphasized that these changes, often bearing the hallmarks of innovation, had a significant impact on improving the functioning of the organization, expanded its existing scope of activity, responded to future market needs and the region's development policy, and required significant financial expenditure.

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1. Improvement of customer service through digitization – implementation of a CRM (Customer Relationship Management) system, which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - reducing labor costs through the automation of many activities (e.g., registering contacts, sending messages, reminders, or reports), eliminating document loss, searching for documents, errors, the need for corrections, and additional communication,
     - reducing excess costs, e.g., for campaigns, meetings, reports, thanks to more accurate forecasting of demand for labor, materials, and services, as a result of the system providing up-to-date data on customers, sales, etc.,
     - reducing the costs of paper, printers, binders, and archive maintenance by replacing paper document circulation and manual statements with an electronic system,
     - lower marketing and sales costs, thanks to the ability to monitor customer satisfaction and personalize contact, which will increase the loyalty of regular customers, and retaining them is cheaper than acquiring new ones,
   - increase revenue, which should result from:
     - the ability to respond more quickly and accurately to customer needs, which will increase their loyalty and recommendations to other organizations,
     - collecting data on customer preferences, which will enable better tailoring of offers and promotional activities and allow you to focus on the most promising customers, increasing the effectiveness of promotional campaigns,
     - automatic recording of customer inquiries or reminders about contacts, which will help retain customers and offer them additional services or contracts,
     - providing detailed reports on sales results, customer behavior, and market trends, which will support business decision-making and allow the offer to be directed where it will be most profitable.
2. Improving the incubation process by using AI (artificial intelligence) based on a model dedicated to the organization, which will be integrated with current processes and projects and will analyze submitted business ideas, compare them with a database of successful and unsuccessful ideas, assess their innovativeness, scalability, and compliance with market trends, rank ideas according to their development potential, and select appropriate experts, mentors, analysts, and support programs for specific originators. The use of AI should contribute to increased financial efficiency by:
   - reducing costs, which should result from:
     - reducing labor costs, thanks to the rapid initial evaluation of even hundreds of business ideas by AI algorithms, leaving only the most promising ones to the experts,

- limiting inefficiently spent costs on the work of experts, mentors, and analysts, as AI will predict the likelihood of success of ideas by analyzing market data, trends, and business models,
- lowering the costs of legal consultations and reducing the risk of subsequent disputes, thanks to the use of AI to analyze the compliance of ideas with regulations, patents, and legal risks,
- reducing the costs of marketing campaigns by using AI to analyze the market and identify niches,

– increase revenue, which should result from:
- using AI to support the selection of the best ideas, and a larger number of start-ups achieving mass scale, generating greater revenue for the organization from shares or licensing fees,
- using AI to analyze large amounts of data and detect early signs of trends, enabling the organization to invest in future areas that will soon become profitable and increase revenues,
- the possibility of selling or licensing AI tools for evaluating ideas to other incubators, funds, or corporations, which can be a source of new revenue,
- the possibility of selling or using generated data on trends, customer preferences, and the effectiveness of business models (e.g., start-ups) to formulate a more profitable strategy.

3. Shortening the time needed to complete projects related to acquiring and preparing new land for investors by integrating GIS (Geographic Information System) with AI, i.e., combining spatial data with intelligent algorithms that can independently analyze, forecast, and recommend the best decisions, which should contribute to increased financial efficiency through:
   – reducing costs, which should result from:
     - lowering labor costs by automating the analysis of hundreds of plots and development scenarios (AI) and eliminating the need to manually check maps, plans, and documents (GIS), which will reduce the working time of analytical and urban planning experts,
     - avoiding costly investment mistakes that can generate significant losses, thanks to the ability to quickly detect risks (e.g., flooding, problematic land),
     - lower site preparation costs thanks to better spatial planning – the ability to optimize the layout of roads, water and sewage networks, and functional zones,
     - reducing documentation handling costs thanks to automatic updating of spatial data and investment documentation,

- increase revenue, which should result from:
  - the ability to quickly identify the most profitable locations that are well-suited to the market, which will attract greater interest from investors and increase the value of their sale or lease,
  - opportunities to optimize the use of space and infrastructure – e.g., minimizing the occurrence of vacant lots or unused facilities, thereby increasing revenue from the same area without increasing expenditure,
  - opportunities to sell or share spatial data in the form of services (e.g., "investment potential maps," "risk analyses"),
  - gaining the status of an innovative and reliable partner, which will attract new business partners and customers.

4. Implementation of a project to build modern laboratories using Smart Building systems integrated with BMS (Building Management System), which should contribute to increased financial efficiency through:
   - reducing costs, which should result from:
     - reducing the operating costs of laboratories through automatic control of lighting, air conditioning, ventilation, and heating (depending on the presence of people, outside temperature, time of day), as well as real-time data analysis to avoid waste in media consumption,
     - lowering the technical maintenance costs of laboratories by analyzing data from sensors and detecting irregularities (e.g., pressure drops, excessive power consumption), as well as sending information about potential failures before they occur or planning service when needed,
     - reduce labor costs, as automation will reduce the number of laboratory staff,
     - lower infrastructure development costs, as modern Smart Building systems are modular and flexible – new features (e.g., sensors, AI integrations, automation modules) can be added without major upgrades,
   - increase revenue, which should result from:
     - perception of the organization as an innovative and technological leader, which should increase the number of visiting customers, partners, and business, thereby increasing the chances of contracts and investments, as well as revenue from rentals or demonstration services,
     - the possibility of making modern laboratories available to external partners or startups outside working hours, which should generate revenue from infrastructure rental in a pay-per-use model and attract a larger number of customers,

- shortening the time needed to conduct research in scientific laboratories with BMS, which will enable a greater number of projects to be carried out or laboratory services to be provided at the same time,
- the possibility of selling data and knowledge-based services obtained from BMS and Smart Building, which may generate new sources of revenue.

All of the identified operational and exploratory processes and projects were mapped onto the previously developed strategy map. It visualized the integration of processes and projects from a strategic perspective. In addition, at this stage, KPIs consistent with the objectives were established jointly with the process owners and project managers, which enables monitoring of the degree of strategy implementation – assessment of strategic objectives within a specified time frame. The management team emphasized to the authors of the study that in this phase of strategy formulation, setting KPIs is a key element of the strategic management process, used to track subsequent progress, identify deviations from assumptions, and make corrective decisions. Thanks to KPIs, the organization gains the ability to measure the effectiveness and efficiency of processes and projects related to objectives in all perspectives – financial, customer, learning, and growth. This also promotes transparency, accountability, and employee engagement in the implementation of the adopted objectives.

In the case of exploratory processes and projects, an assessment of the financial effectiveness of significant investment expenditures was carried out, based on the NPV (Net Present Value) indicator. The authors proposed that they also be assessed in terms of the risk of not recovering the invested funds, in the manner proposed for the assessment of the project portfolio (Jamrozy, Wodarski, 2023), which met with interest. Process owners were required to design them taking into account the indicated changes by developing models of their course, while project managers, especially those of new projects, were required to prepare their plans.

3.2. Barriers and difficulties that may arise during the implementation of the strategy

During the interviews, the organization's top management was asked about barriers and difficulties that may arise in the implementation of the strategy, which would increase the risk of not achieving its overall objective. The idea was that the organization's experience would help others overcome the problems they may encounter. The management identified several problems in three areas.

The first area was the formulation of the strategy itself. It was emphasized that initially, it was very difficult to develop a method of integrating processes and projects with a strategic perspective, taking into account the reactive and proactive orientations that should be implemented in parallel. The method presented to the authors of the study was the result of many months of discussions and analyses conducted at the management board level, with the executive staff and with employees distinguished in terms of their competence. This method was refined over several years. It was very difficult to combine the KPIs of processes, projects,

and objectives in the perspectives. It was helpful to adopt the solutions proposed, among others, in the BSC, as well as to hold joint discussions and accept compromises, and sometimes consensus.

Of course, financial resources, and especially their synchronization, are a certain difficulty in implementing the strategy. The organization carries out many projects, which it tries to finance from the cheapest sources, including EU, national, and local government funds. Differences in procedures, schedules, and reporting requirements pose a significant challenge, and the need to meet different formal criteria sometimes prolongs decision-making processes and limits the flexibility of strategy implementation. Another barrier is the limited financial resources, which sometimes force the postponement of capital-intensive investments in processes or projects or the implementation of new, innovative processes and projects. This problem is discussed in more detail in the publication on finance.

The area related to employees was also highlighted. It was noted that initially, a significant barrier was the resistance of some employees to the need to introduce changes that required their involvement. In the case of the organization, some employees were negative about the need to systematically make changes to processes and projects or to introduce new processes and projects. This problem was solved through effective communication focused on highlighting the benefits of these changes and offering help in solving emerging problems, as well as the introduction of an incentive system linked to KPIs. A gradual introduction of changes, adapted to the pace of employee learning, was also declared. An organizational culture was also introduced, whose elements include cooperation, assistance, consulting, and acceptance of mistakes during the implementation of changes.

In addition, there was a problem related to the lack of appropriate employee competencies, mainly in the area of process management and project management. The organization solved this problem through internal training and the hiring of experts within the framework of EU projects. At present, there are no longer any problems in this area, but it was noted that in many institutions this is still a serious barrier.

Finally, it was added that the biggest barrier in this area is the lack of involvement of top management in the process of formulating and implementing strategies, as well as the lack of support, motivation, and appreciation for employees who play important roles in the implementation of reactive and proactive processes and projects, thereby contributing to the success of the organization.

According to management, these barriers should be taken into account when formulating a strategy in a process-project organization, especially when this is done for the first time.

3.3. Discussion of results

The case study and the very good situation of the organization under study allow us to conclude that the integration of the process and project approaches is an effective way to achieve success by responding flexibly to the needs of a dynamically changing market.

As part of the discussion, it is worth asking the following questions:

- are the presented solutions for formulating strategies in a process- and project-based organization novel?,
- can they be generalized in the manner presented in order to recommend them to other organizations?

The authors of the study believe that the presented method of strategy formulation is largely based on solutions, methods, and tools that are well known and described in numerous publications on strategic management, process management, and project management. However, it also includes solutions dedicated to process- project organizations that are novel and have not yet been presented in the literature.

Thus, starting with the general structure of the strategy formulation process, it can be said that it is based on well-known and widely described solutions in this area (e.g., Demecki, Żukowski, 2010; Kaleta, 2011; Niemczyk, Trzaska). The same applies to phases 1 and 2, i.e., external and internal strategic analysis, as well as objective setting. The course of these phases and the methods and tools used are well known and described in the literature (e.g., Johnson et al., 2008, Porter, 2010; Paluch, 2016; Dźwigoł, 2018). However, it should be noted that although the approach used is consistent with the known ones, it takes into account the simultaneous use of proactive and reactive strategic options, for example, in the adopted assumptions or in the manner of achieving objectives, by linking objectives with the implementation of exploitative and exploratory processes and projects. In fact, it can be said that in the presented solution used in the studied organization, the defined objectives are decomposed in parallel into operational and exploratory processes and projects, and the degree to which these objectives are achieved depends on the ability to manage processes and projects effectively and efficiently.

The most novel features can be seen in phase 3 – selection of a strategy and development of an implementation plan. To date, no approach has been described for integrating strategic objectives with operational and exploratory processes and projects, while simultaneously determining what incremental or radical changes they should involve. Also noteworthy is the integration of KPIs that combine the perspectives of objectives, processes, and projects, enabling the monitoring of the degree of strategy implementation – the assessment of the achievement of strategic objectives within a specified time frame.

Taking into account the observations of management regarding the barriers and difficulties that may arise in the implementation of the strategy, it can be concluded that, although they are important, they are part of the scientific considerations relating to the introduction of changes that are described in the literature, with regard to the integration of processes and projects with the strategic perspective (Dinsmore, Cooke-Davies, 2010), challenges related to synchronizing the financing of processes and projects (Yin, 2018), or employee resistance to change, lack of competence, and the need for top management involvement (e.g., Hammer, Champy, 2006; Kerzner, 2017; Bijańska, Wodarski, 2020).

According to the authors, the proposed solutions for strategy formulation and insights into the difficulties and barriers that may arise in its implementation are worth presenting. However, their main limitation is the individual nature of the case study, which limits the possibility of generalizing them to recommend them to other organizations (Yin, 2018). Furthermore, the research was largely based on observation and interviews, which may reflect the subjective perspective of those involved in formulating the strategy within the organization.

Summary

The article presents the results of research aimed at determining how strategy is formulated in a process- project organization. No considerations in this area have been presented to date, although scientific research in the field of process and project management is being conducted more and more frequently.

Case studies were used to achieve the research objective. The research, which included document analysis, semi-structured interviews, and participant observation, was conducted in an organization characterized by the highest level of process and project maturity and several years of experience in formulating a strategy oriented reactively and proactively toward the simultaneous implementation of operational and exploratory processes and projects. The research focused on answering three questions:

1. How does a process-project organization formulate its strategy?
2. What tools and methods are used for this purpose?
3. What barriers and difficulties may arise during the implementation of the strategy?

The research allowed us to map out the strategy formulation process, which is largely based on an approach that is well known and described in the literature on strategic management, process management, and project management. This also applies to the methods and tools used, such as PESTEL, Porter's 5 forces analysis, SWOT, BSC, or strategy map. However, this approach includes solutions dedicated to process- project organizations in the assumptions for strategy formulation, external and internal analysis, and objective setting, referring to the simultaneous use of proactive and reactive strategic options by linking objectives to the implementation of operational and exploratory processes and projects. The most novel features can be seen in the strategy selection and implementation plan development phase. They relate to the integration of strategic objectives with operational and exploratory processes and projects, while simultaneously determining what incremental or radical changes they should involve. Also noteworthy is the integration of KPIs that combine the perspectives of strategic objectives and processes and projects, enabling the monitoring of the degree of strategy implementation. According to the authors, the indicated solutions may contribute to the existing knowledge gap related to strategy formulation in a process-project organization.

The experience of the management staff of the organization under study shows that the greatest difficulties and barriers to strategy implementation relate to the integration of processes and projects with the strategic perspective, the challenges of synchronizing the financing of processes and projects, as well as employee resistance to change, lack of competence, and the need for top management involvement. And although this is consistent with the considerations presented in the literature, it is worth taking these barriers into account when formulating a strategy in a process-project organization, especially when doing so for the first time.

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