

THE ROLE OF IT PROJECTS WITHIN THE STRATEGY: HOW EFFECTIVELY DO WE USE THEM?

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It is a general trend that the role of projects is increasingly appreciated in the life of individual organizations. We have come to the point in the last decade where certain organizations use this method for their entire operation, while large companies implement their priority developments only with project management methods. The project management knowledge is becoming progressively essential also in the case of smaller businesses nowadays as they come into contact with projects through their partners or their own experiences. Although the methodology is constantly spreading and growing, so far, there have been just a few scientific results about where IT projects are located in the organization's goal-system and how they are related to the corporate or organizational strategy. Accordingly, the basic goals of the IT projects will be examined in the framework of the current research, and the questions about that, are these goals related to the corporate strategy and how effective are the individual companies using their IT projects?

Keywords: Strategy; Management; IT project; IT project management.

INTRODUCTION

With the development of modern project management, the planning and execution activities were put into an organized framework. The methodology, together with strategic planning, has undergone an enormous development since the middle of the 20th century, which development continues even today. When we examine the role of the project, we can observe that, while until the 1990s, project management methods were primarily used by large Anglo-Saxon companies, they have since spread as an accepted worldwide planning tool. Nowadays, not only do the partners of the large Anglo-Saxon companies need to know the method, but it has also become of a paramount importance for the most part of the general SME sector, as knowing the basic approach helps navigate in the world of projects. The spread of the approach does not automatically mean that project management knowledge has also developed in a given region. Prior to the research, two main questions were the focus in this regard. On one hand, despite frequent

mention and use, relatively little is said about where the role of IT projects lies in the goal system of a given organization? (e.g. is it part of the strategy or a completely separate output?) On the other hand, an important question is how effectively are Hungarian businesses using IT projects? (Henrie - Sousa-Poza, 2005; Levitt, 2011; Reiff & Schlegel, 2022; Thayer & Yourdon, 2000). This research seeks to answer for the following questions mainly by analyzing the existing literature and using qualitative tools. In examining the questions, special attention will be given to the role of IT projects and the use of digital tools in companies. The current research is an initial step in a multi-stage, long-term study, during which we would like to learn not only about the effectiveness of project use, but also to specifically examine the location of IT projects in the goal system of individual organizations (Erro-Garcés et al., 2020; Rezigalla, 2020; Sungjin et al., 2020).

THEORY AND RESEARCH QUESTIONS

After a primary examination of the existing results and context, it became apparent that previous research had addressed the relationship between projects and strategy, but certain questions regarding IT projects remained unexplored. Overall, it can be said that existing studies have relatively few quantifiable results on the topic. For this reason, it is necessary to explore the existing literature more thoroughly (Ika et al., 2020). Based on the results, the following research questions were defined:

- Q1: Where are projects, and within them IT projects, located in the corporate goal system and in the strategy in the domestic practice?
- Q2: How effective are IT projects among domestic enterprises? To what extent do they fulfill the originally set goal? If the implementation of the project is not completely effective, to what extent can this be attributed to its misalignment within the organizational goal system?

RESEARCH METHOD

For the examination of the location and role of IT projects, the existing literature will be analyzed at first through a review. The aim of the literature review is to demonstrate the basic functioning of corporate strategies and projects, as well as the possible points of connection between the existing literature and the current research. After the general understanding of the context, qualitative sampling will be used to understand research questions Q1 and Q2. Since the first review of the literature showed that there are relatively few quantifiable results in the narrower topic, the aforementioned qualitative approach was chosen, as this approach allows us to understand more complex processes (Denny & Weckesser, 2022). The research tools were determined by an understanding and adaptive review of qualitative and quantitative methodologies (Köhler et al., 2022; Sardana et al., 2023). After choosing the methodology, the characteristics of qualitative sampling were defined, including the sampling framework, place and method. The semi-structured qualitative interview was constructed as follows:

- Leading questions, which may also contain important information
- Questions specific to corporate strategy, which target general operations, goals and market characteristics

- Questions related to projects and IT projects, which examine project operation
- Questions examining the relationship between strategy and projects, which clarify the location of the two tools in the corporate goal system
- Questions regarding the specifics of IT projects, which show how IT projects are different compared to other tools.

During the qualitative research, at least 10 interviews were aimed to conduct. The sampling framework was provided by the Zala County Foundation for Enterprise Promotion. The following filters were applied to the companies in the database:

- A minimum of 5 years of project management experience
- Participation in minimum 3 corporate projects
- At least 1 time lead project manager
- Experience in strategy development and project planning
- Willingness to participate in research

The interviews will be conducted with the first 10 positive respondents according to the order of receipt. The planned time frame is 3 months, from June 1, 2023 to August 31, 2023. The planned location of the research is at the headquarters of each enterprise (Chalmers & Cowdell, 2021; Király & Géring, 2016). The previously formulated research questions will be analyzed as a case study, i.e. the paper does not treat the obtained results as if they point in the direction of generalization, rather it strives to learn about domestic cause-and-effect relationships. Accordingly, based on the chosen research methodology, the paper tries to formulate filtered statements based on the experience of the results obtained.

STRATEGIC PLANNING AND PROJECT MANAGEMENT

In this section, a complex picture of strategy, projects, and IT projects will be presented based on the currently known literature, which was obtained using the previously outlined literature review method. At first, it is important to clarify the main definitions, since we will build the operation and location on this basis. Among the relevant definitions, the organization is cooperation between formalized structures for a certain (company) goal or the functional connection of elements serving to achieve this goal, and to a significant extent, the set of human activities that implement these (Bakacsi

& Takács, 1998). In contrast, strategy also means the achievement of a goal; according to the definition: A strategy is a long-term plan of actions to achieve a certain goal, which is often finished with the so-called “victory” or the solution to a problem (Wagner et al., 2014). The third relevant definition is, of course, the concept of the project, which can be described as a series of activities planned and implemented in a given organizational environment with time, cost, resource and quality constraints, which achieves specific goals and allocates resources to achieve these goals (Vinothina et al., 2012). IT projects are essentially different from this definition only in that these projects have some kind of IT output, such as software or hardware development, data protection, but it can also include network development, or the creation of mobile applications (Baka, 2008). If we look at the individual definitions, we can see that all three achieve certain goals. At this point, the question arises as to what distinguishes the three definitions, especially the strategy and the project, both of which can be considered as some kind of action plan. First, it is worth clarifying the role of the organization and strategy. In this regard, the approaches of Galbraith (1983) and Mészáros (2020) provides an answer, according to which strategy is a kind of modeling of the organizational goals initially formulated and their expansion in the long term. If we want to define it in another way, we could also say that the strategy organizes the initially formalized organizational goals into a kind of easily transparent framework. The most comprehensive interpretation of the relationship between strategy and project is given by Boyne (2010), who considers projects not only as separate entities, but as an integral part of corporate life, so it is essential that they are defined and implemented in accordance with corporate goals and strategy. Thus, today, the project already fulfills a triple role, such as (Aranyosy, et al., 2015; Azanha et al., 2017; Hayat et al., 2019; Kinelski, 2020; Perkins et al., 2018; Szabó et al., 2024; Zhitlukhina et al., 2018; Srivastava et al., 2017):

- process (to produce a specific result, also with specific time and cost constraints),
- temporary organization, and
- strategic building block

This interpretation essentially elevates the role of the project into the strategic goal system. The relationship between the three concepts is thus essentially fully covered in the existing literature. In addition, it is worth examining the operating

mechanism of each definition. In terms of the organization, it can be said that a small group of people formulates a common goal and at first they start working together in a completely unorganized manner to achieve or maintain the goal. Over time, as the goal achievement or maintenance continues from day to day, week to week, the individual members begin to organize themselves into a structure, as this allows them to function more effectively. In simpler terms, after a certain period of time, organizational responsibilities are formed, and the roles of individual members are outlined. Over time, not only organizational tasks are formed, but also the compromises that integrate individual members into the organization. In essence, it is formulated what the given member can offer for the organizational goal (human resources, knowledge, experience or even financial resources, a network of contacts, etc.) and how the organization can reward this contributions in return (e.g. salary, professional development, appreciation). We can already talk about a concrete, real organization in this stage of the formalization (Akbar et al., 2024; Naradda & Sisira, 2020). Of course, organizational functioning is more complex factor than this. In this case, we will only describe a synthesized mechanism that is adequate for the narrower topic. During the next steps, formalization may continue and in many cases the leaders of the organization begin to think in terms of long-term goals. At this point, there are several possible outcomes in the life of an organization. Some organizations remain with their core activities, for them the long-term goal is primarily to maintain the activity. Other organizations, in contrast, want to embark on a growth path, in their case we can talk about strategic planning. Regarding the growth path, organizations formulate a well-defined long-term goal, in other words, a vision, which they want to implement within a given time, resource, and responsibility framework. This essentially brings us to strategic planning, which is nothing more than the description of this plan. In the simplest terms, it is a written material that includes a framework for getting from our current position to the “victory” or the vision (Kaufmann & Alexander, 2022; Pinto, 2022). In comparison, projects also describe some kind of action plan, with operating mechanisms completely similar to strategies. In the case of a project, there is also a well-defined initial position and a final project goal. The project is nothing more than the written action plan of the path connecting the two. If we nevertheless want to formulate some difference between the two tools based on the literature, then, although this is not specifically

named, we can say based on the overall picture that the strategy is created to achieve a "more grandiose" goal, while the project can be described as a "faster-reacting, mobile" intervention tool (Choi & Ha, 2022; George, et al, 2019; Krupa & Hájek, 2024;

Ordoñez et al., 2019; Panda, 2022; Sreedharan-Sunder, 2018). In Figure 1., the location of the strategy and the project in the organization's goal system is presented.

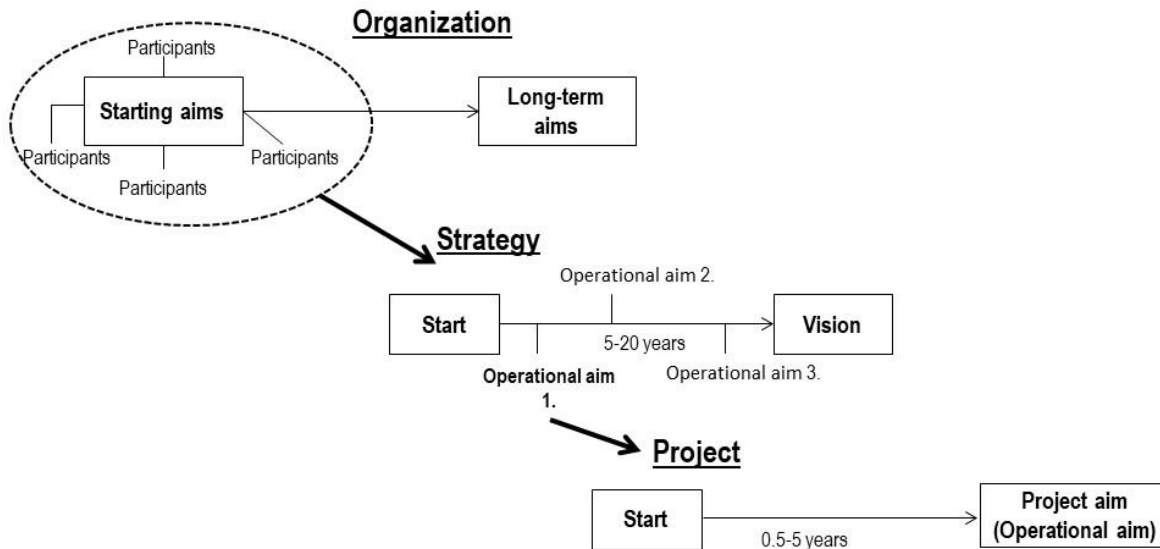


Figure 1: The location of the strategy and the project in the organization's goal system
[Source: Own editing]

The figure above essentially summarizes the combined operation of the three tools. An additional dimension in planning is the effectiveness of development and implementation. If we look at the typical errors and failures of strategic planning and projects based on the literature, we will not be surprised. The most typical problems that occur in practice are fully reflected in the literature. For example, in the case of strategies, a typical error is that an organization creates a strategy, which it then does not use at any level. (It happens quite often at the SME level.) The other extreme outcome of the problem of this type is when an organization creates a strategy and subordinates its entire operation to the strategy, not paying attention to environmental, technological, and other changes. In essence, the organization clings to the implementation of the strategy, even if the vision will have long since become a devalued position by the time the organization achieves it. (It is important to keep in mind that the strategy serves the interests of the organization, not the other way around!) The depreciation of the goal can also occur in the projects. For example, it is particularly typical for IT projects that a technological change occurs during a 5-year project cycle. Underplanning can also be a further problem at both levels. Implementation factors were not included in the

strategy or the project, the budget was not estimated properly, and the allocated time frame is not enough for implementation. Each of these can cause serious problems in achieving goals. Based on the literature, it can be said that projects are part of the organizational strategy. During implementation, the literature reports well-defined types of errors. Accordingly, the research attempts to present Hungarian practice in the light of the previously described literature analysis, paying special attention to IT projects (Alsudiri et al., 2013; Cervone, 2014; Grundy, 1998; Grundy, 2000; Iriarte & Sussy 2020; Lee et al., 2006; Morcov et al. 2020; Müller et al., 2019; Papke et al., 2017; San Cristóbal, 2017; Schwedes, 2017; Srivannaboon et al., 2006; Tereso et al., 2019).

IT PROJECT IMPLEMENTATION IN HUNGARY

Within the results, in the qualitative sampling phase, 10 interviews were conducted with corporate consultants (project and strategy experts) as planned. A total of 14 positive responses were received to the request, but overall, after the first 7 interviews, we did not receive any substantial new information, so due to time management, we ended the sampling with 10 interviews. The majority of the

interviews were conducted in the consultant's office, where only we, as the researcher, and the interviewee were present. We asked the questions in the same order for each interview. We used semi-structured interviews with the same set of questions, allowing the interviewees to answer according to their own responsibility and experiences. The interviewees were not given the questions in advance. The main details of the sampling are summarized in Table 1. The duration of each interview varied, but was typically between 30 and 60 minutes. We interviewed only one consultant at

a time. During the interview, we asked the questions in order, and recorded the interviewee's answers in writing and with a voice recorder. Of the responding managers, two work for micro-sized, two for medium-sized, and six for large companies.

The first set of questions related to the first research question explored the goals of projects and IT projects, as well as the location, for which we received the following results. In Table 2, the grouping of projects and IT projects goals are presented.

Table 1: Qualitative interviews among company consultants

Number	Position	Industry	Location	Date
1.	Owner	SME Consulting, Finance	Szombathely	07/06/23
2.	Microcredit manager	Regional Development, Microcredit	Zalaegerszeg	11/06/23
3.	Project manager	Corporate strategy, construction	Győr	14/06/23
4.	Production Manager	Multinational company, electronics assembly	Veszprém	28/06/23
5.	Logistics Manager	Multinational company, electronics assembly	Szeged	08/07/23
6.	Quality Manager	Multinational company, electronics assembly	Nagykanizsa	15/07/23
7.	Finance Manager	Municipality	Zalaegerszeg	17/07/23
8.	Managing Director	Corporate consulting	Budapest	31/07/23
9.	Consultant	Banking sector	Debrecen	09/08/23
10.	Owner-Manager	General strategic planning	Székesfehérvár	28/08/23

[Source: Own editing]

Table 2: Grouping projects and IT project goals

Number	Position	Operative	Strategic	Other
1.	Owner	x		
2.	Microcredit manager	x		x
3.	Project manager	x		
4.	Production Manager	x		
5.	Logistics Manager	x		x
6.	Quality Manager	x		x
7.	Finance Manager	x		
8.	Managing Director	x		
9.	Consultant	x		
10.	Owner-Manager	x		

[Source: Own editing]

As the table shows, the experts without exception described projects (including IT projects) as a planning and action tool that achieves operational goals. Using a practical example, the deployment of a corporate management software, an IT-type response to some external constraint, the introduction of a web-based subsystem, or a complete transformation at the eBusiness level are not strategic outputs (not strategic goals in planning), but essentially a means to achieve a strategic goal. The question may legitimately arise, what then can be a strategic goal? In their answers to question 2, the experts clearly stated that the best strategies name a desired market position (or, in the case of other organizations, a different type of

position) as a vision. (During the sampling, we disregarded the different strategy-making approaches – schools – and were curious about the respondents' planning tools.) Also, using a practical example, if we started a software development and software distribution company, then we can formulate, as a vision, that we want to be the market-leading software development and software distribution company in Hungary within 15 years. This is basically a vision that can be interpreted in a 15-year perspective, is less affected by inflation, and is a goal with universal value. If we examine the role of projects, then we implement the developments that lead to this path and are outside the core activity using the project method (see

Figure 1). Staying with the outlined software developer and software distributor example, if we have formulated on the path to becoming a market leader in our country that at some point we must complete a general or partial transformation at the eBusiness level (e.g. by the end of the 10th year), then this activity is a means of achieving the vision, and from a strategic perspective, it is an operational goal on which we can build a separate project. Another important aspect of the interviews with the experts was whether we could find projects in the life of the organization that were not part of the strategy. The answers were divided in this case, seven out of ten respondents said that the projects they managed were always part of the strategy, while three answered that although the majority of their projects were part of the strategy, they also had

projects that were outside the strategy. Despite this, the latter three consultants also answered that it would be a more efficient state if these projects were also channeled into the organizational strategy. Based on the overall picture of the answers, since all 10 of the 10 consultants interviewed answered that projects (especially IT projects) implement operational goals, and in terms of their location within the organizational strategy, they can be interpreted as tools of implementing the target system. The second highlighted area of the qualitative sampling was the domestic effectiveness of the results of IT projects. The answers regarding the final outcome of IT projects are presented in the table below. In Table 3, the final outcome of IT projects in Hungary is presented.

Table 3: Final outcome of IT projects in Hungary

Number	Position	Effective	Average	Below average efficiency
1.	Owner			x
2.	Microcredit manager			x
3.	Project manager			x
4.	Production Manager	x		
5.	Logistics Manager	x		
6.	Quality Manager	x		
7.	Finance Manager			x
8.	Managing Director			x
9.	Consultant		x	
10.	Owner-Manager			x

[Source: Own editing]

Since the experts typically managed projects with different outputs and indicator numbers, we considered the projects “successful“, “average“, or “below average” based on the overall picture - considered by them.) Despite the fact that 7 out of 10 respondents answered that the implementation and results of IT projects are mostly ineffective, the result obtained is not clear, as when checking the results, it was clear that the three large corporate experts considered their IT developments effective, while the respondent working in the banking sector (also a large corporate consultant) considered the results average. In terms of the answers, at this point, the independence of size is not proven, which actively affects the entire area, so this question requires further examination in terms of domestic conditions. Regarding IT projects, the other question concerned the causes of development problems. In this case, all experts answered that some of the potential problems are primarily related to the fact that the given project is not properly

aligned with the strategy or the integration with the strategy is not clear. According to the interviewed experts, the typical problems in Hungary are usually the following:

- Inadequate planning (in terms of budget, human resources, time frame, responsibilities, etc.)
- During the implementation, trendor technology change occurs (inadequate monitoring of the environment)
- The technology to be used is not feasible (adaptation and development problems)
- The technology to be used does not satisfy users, does not cover the set goals
- Prolonged development time (among other factors, it can also be a problem if the competition develops faster over time)
- The system contains redundancy (multiple data storage)
- The new system does not eliminate the shortcomings of the old system (lack of completeness)

- The organization does not use the introduced, developed system at all or not effectively

Upon further examination of the responses, it became apparent that the above-mentioned problems can occur also at both SME and large enterprise levels. If we look at the problem types from the perspective of strategic embedding, then resource management, environmental analysis, user knowledge and the effective use of the developed system are clearly part of the goals and tools that appear in the strategy. (The project must be in line with the strategy in these areas.) However, the non-feasibility of the technology, the prolonged development time, and the inadequate elimination of redundancy and the deficiencies of the old system are mostly project-level errors. These issues can be linked to the inadequate planning of the project, based on the answers of the experts. Among the reasons listed, the most typical one for inadequate strategic synergy is the underutilization of IT development, which respondents also described as the most common problem. Using a specific example from the SME sector, a given company introduces an ERP software which is used for invoicing, while continuing to operate logistics in an analogous manner (without the software). This is a very common problem in micro, small and medium-sized enterprises, but at the corporate level there are also many examples where certain elements of a project simply were not utilized. One of the respondents gave the example of when the technical department ordered a 3D printer to print certain parts, but the company continued to order them from an external source. Considering the summary of the answers, starting from the fact that all experts indicated that the problem outlined last is one of the most typical, and this type of problem embodies the situation when the final outcome of projects is not in line with the corporate strategy. Based on the results obtained, it can be said that much more emphasis should be placed on strategic and project planning in the domestic entrepreneurial sector. Resources should be invested at both the educational and governmental levels so that these goals in the domestic entrepreneurial sector are properly planned, well defined and, most importantly, transparent to the members of the organization.

CONCLUSION

During the study, we examined where IT projects (the application, development, introduction of new IT solutions related to the strategic goals of the

organization) are located in the strategic goal system of domestic enterprises, how effective their implementation is, and in addition to this, we analysed that to what extent of the potential problems comes from that factor the project is not being in line with the strategy. The responses to research question Q1 clearly confirmed that the vast majority of projects fulfil operational goals and should be developed as part of the strategy at the planning level, and it is important that the two have to be in line. Among the responses, we found examples of IT projects outside the strategy developed under special circumstances, but the experts clearly indicated that it is much easier to maintain the results of an IT project when the project is in line with the organizational strategy (or it is a part of it). Regarding research question Q2, we got a mixed picture, although we were able to uncover a wide range of problem sources where experts working in the SME sector do not find the implementation and results of IT projects effective, respondents from large companies clearly found their own projects effective, so in the case of IT projects, the organizational size specifics and the key factors leading to success require further examination. In terms of problem sources, the most typical problem was the inappropriate use of the final result, which mostly come from the fact that the final outcome of the project was not in line with the corporate strategy even at the planning level. If we wanted to summarize the results, we could say that we got an initial picture of the domestic project planning and implementation practice, during which we also got to know IT projects. In light of the results, the examination of the main typical errors of IT projects and the key factors necessary for success represents the future direction of the research. Within this, the examination of the differences in IT project management knowledge, planning and implementation between the SME and large enterprise sectors represents an important part. Within this, it became apparent that these factors are worth examining in the next step during a possible large-scale, quantitative sampling. In summary, it can be said that the study has fulfilled its previously set goals. For the next step, we will implement quantitative sampling to deepen our knowledge as part of the long-term research plan.

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ULOGA IT PROJEKATA U STRATEGIJI: KOLIKO IH EFIKASNO KORISTIMO?

Uloga projekata u funkcionisanju organizacija značajno je porasla tokom protekle decenije. Danas pojedine organizacije koriste ovu metodu za celokupno poslovanje, dok velike kompanije svoje prioritete razvojne aktivnosti sprovode isključivo putem metoda upravljanja projektima. Znanje iz oblasti upravljanja projektima postaje sve značajnije i za mala preduzeća, koja dolaze u kontakt sa projektima putem svojih partnera ili kroz sopstvena iskustva. Iako se metodologija upravljanja projektima sve više širi i razvija, još uvek postoji malo naučnih rezultata o tome gde se IT projekti nalaze u sistemu ciljeva organizacije i kako su povezani sa korporativnom ili organizacionom strategijom. U skladu s tim, osnovni ciljevi IT projekata biće ispitani u okviru ovog istraživanja, kao i pitanja o tome da li su ti ciljevi povezani sa strategijom kompanije i koliko efikasno pojedinačne kompanije koriste svoje IT projekte.

Ključne reči: Strategija; Menadžment; IT projekat; Upravljanje IT projektima.