THE IMPORTANCE OF THE PROJECT MANAGER IN PROJECT DEVELOPMENT

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Purpose: The purpose of this article is to examine the role of the project manager in project creation and investigate the multifaceted dimensions of effective project management. The article aims to provide scholarly insights into the requisite attributes and competencies for project managers to effectively and efficiently fulfill their responsibilities.

Design/methodology/approach: A survey was conducted by the method of questioning among 41 people.

Findings: The findings of the research indicate that the effectiveness of project management extends beyond the mere execution of tasks, encompassing the manner in which they are undertaken. The demeanor and conduct of project managers towards stakeholders significantly impact their support and motivation. Crucial attributes and competencies identified for effective project management encompass a sense of inquiry, viewing challenges as opportunities, holistic thinking, meticulous attention to detail, prudent avoidance of premature assumptions, fostering collaborative alliances, proficient and unambiguous communication, demonstrating respect for others, acknowledging exemplary performance, and assuming leadership roles in navigating information, procedures, systems, and personnel.

Research limitations/implications: This study's scope is confined to the exploration of the project manager's role in project creation and the examination of essential attributes and competencies for effective project management. Future research endeavors could delve deeper into specific project management methodologies, tools, and techniques, as well as explore the impact of diverse project management styles on project outcomes.

Practical implications: The research findings have practical implications for organizations and project managers alike. Comprehending and implementing the identified attributes and competencies can enhance project manager efficacy and contribute to successful project outcomes. Organizations can employ these insights to develop training programs and guidelines for project managers, thereby augmenting their performance.

Social implications: Effective project management carries social implications by virtue of its contribution to the successful completion of projects, which, in turn, can foster organizational growth, innovation, and positive societal impacts. Through emphasis on collaboration, communication, and leadership, project managers can cultivate a positive work environment, promoting teamwork and creativity among project team members.
Originality/value: This article offers originality and value by providing a comprehensive examination of the project manager's role in project creation and highlighting key attributes and competencies essential for effective project management. The identified insights serve as a valuable resource for project managers, organizations, and scholars in the field of project management.
Keywords: effective project management, organizational success, project methodologies, project tools, project techniques, project management styles, societal impact.

1. Introduction

The current conditions of the business world are unstable, changeable and constantly evolving. The dynamics of change often determine the methods and strategies of managing an organization – we manage something, we direct someone through someone or something for a specific purpose or for specific reasons. It is the goal and the conditions for its achievement that are the basic determinants reflecting the efficiency of an organization. It should be noted that access to appropriate resources is one of the conditions for the success of various projects, not only those of economic nature. There is a strong correlation between the process of allocating specific categories of resources and their skillful use. Hence, the management process should be viewed from a systemic perspective, i.e., combining various types of resources into one organism to achieve the set goals in constantly changing conditions. It also must be mentioned that the level, quality and availability of resources determine the potential of a given organization. Assuming the fact that projects are one of the areas of basic activity in every organization, especially of a business nature, it can be stated that the above conditions also apply to project design and project management processes. The concept of a project is quite broad and includes both technical and construction activities, strictly design ones, e.g., making a new product, as well as complex economic projects.

Working on a project is a process that can be analyzed and improved with each instance. Projects are more challenging due to their unique nature – each of them is created in response to circumstances and problems that have never occurred before.

The person responsible for projects in an enterprise is usually the project manager (PM). He or she is responsible for completing the project on time and within the specified budget. They are also responsible for the decisions made in connection with the project. Therefore, without the right project manager, the implementation of the project could be very difficult, if not impossible. Therefore, the purpose of this work is to analyze the role of the project manager in creating a project.

With reference to the researched subject matter, the following research problems were formulated:

1. What is a project?
2. What are the project management methods?
3. What are the stages of project implementation?
4. Who is a project manager?
5. What are the competences and duties of a project manager?
6. How does the project manager influence the implementation of the project?

In order to obtain answers to the above questions and to verify the research hypothesis, the following research methods were used:

- an analysis of the available subject literature (included in the references),
- a survey.

As a result of formulating the research premise in this work, a hypothesis was formulated, assuming that the role of a project manager in creating a project includes all aspects of effective project management, and directly affects its effective and efficient implementation. Management of a project aims to lead to its most effective and timely implementation, while optimizing costs.

An additional hypothesis was also formulated, according to which even exemplary project management, in a professional manner, with 100% commitment to its implementation, exercising control activities in order to meet its end date, will not always protect the project from independent factors that affect the schedules and speed up the completion of individual stages.

The paper presents theoretical issues in the field of project management methodology – the definition of a project, project management methods and project environment are indicated. The issue of exercising control during project implementation was discussed and the results of the survey on the PM's role in project creation were presented. In the conclusions, an attempt is made to answer the above research questions, as well as to confirm the hypothesis whose proving was attempted.

2. Project management in the light of the subject literature

2.1. The meaning of a project and its essence

The word project comes from the Latin word proiectus, meaning "extended forward" (Fielding, 2021, p. 4). Thus, they can be interpreted as a proposal for a specific solution to a problem situation.

The word project can be understood both in a narrow way, as part of a whole - i.e. a specific undertaking related to the conception, preparation and production of a specific product or an undertaking aimed at achieving a strictly defined goal, and more broadly – as an unspecified group of activities aimed at achieving the assumed goals, e.g. conducting an advertising campaign in Central Europe in 2011-2013 by company "X" on behalf of company "Y"(O'Connell, 2009, p. 29).

According to A. Stabryła, a project in a broader sense means:

1) a model constituting an improvement of a specific system or organizational object,

2) an innovative solution, which is the basis for achieving a specific goal (Stabryła, 2006, pp. 30-31). In this case, the economic undertaking is of a comprehensive nature, and its components include: a study, models with documentation, as well as tangible (material) effects along with all solutions (e.g., technical and organizational).

A project in the narrow sense is perceived by A. Stabryła as:

1) analytical and research work,

2) the concept of creating a specific product/service/system of operations,

3) technical documentation,

4) action plan.

In recent years, the word project has become increasingly common in the business environment. Almost all feasible tasks, even elementary and/or repetitive ones, carried out on a routine basis, related to the standard scope of duties of the employee in a given position, are referred to as projects. Thus, the term project is often used to refer to undertakings that do not contain a creative element. According to K. Szwarc et al, this type of approach to the term is inappropriate and tends to cause distortions in interpersonal communication (Szwarc, Woźniak, Zaskórski, Tomaszewski, 2021, p. 15). What is more, project in Polish business terminology has different meanings. It can be understood as: a) an intended plan of action; b) a graphically developed plan of action; c) a preliminary version of something (Słownik języka polskiego…).

In other words, a project can be perceived in terms of activity (undertaking) and substance (material or intellectual product of a given system of operation). For example, both an undertaking aimed at carrying out a promotional campaign at a specific time and place, and a prototype of a new model of a family car, can be considered projects. It should also be noted that the identification of the noun project within the meaning of the above definition has strong connotations in the Anglo-Saxon culture, where the term project (noun) is understood as a piece of planned work or an activity which is done over a period of time and intended to achieve a particular purpose (Cambridge Dictionaries Online…).

In the literature on management and project management, there are a number of different approaches to the term project. Selected approaches to the definition of this term are presented in Table 1.

Table 1.
Selected approaches to the definition of the term project

Author	Definition
T. Kotarbiński	"A project – according to the praxeological definition – is a complex, multi-subject action, carried out in accordance with a plan, which, due to its complexity, is sometimes prepared with the use of special methods"
B. Grupp	The project is a "one-time activity". A project is an activity "whose costs can be calculated and estimated"
R. Hammer	Projects are activities "in the planning, direction and implementation of which most often many departments of a given enterprise (or even many enterprises) are involved"
Project Management Institute	A project is a "timed action". "A project (venture) is a temporary activity undertaken in order to produce a unique product, provide a unique service or achieve a unique result"
K. Kukuła	A project is an activity "contained in a finite period of time, with a distinguished beginning and end"
G. Leśniak-Łebkowska	A project is "separated from the daily, routine work, is carried out in parallel with it or with the complete delegation of team members to the implementation of the project"

Source: own work based on: Trocki, Grucza, Ogonek, 2009, pp. 17-19.

The scope of a project includes planning and purposeful use of financial, physical and material resources, combined with human involvement – sharing knowledge, competences, and experience, for the purpose of performing joint work that must be completed within a specified time. Therefore, an important factor directly influencing the effectiveness of project implementation is the skillful management of the project team (Szwarc, Woźniak, Zaskórski, Tomaszewski, 2021, p. 17).

A very important element is the correct formulation of goals, which at the same time allows for an objective assessment of the degree of their implementation. We can distinguish the following dimensions that each correctly set goal has:

- quantitative dimension,
- qualitative dimension,
- the area, activity and resources it covers,
- time in which it is to be carried out,
- parameters – factors based on which the degree of implementation can be measured (Pawlak, 2012, p. 36).

The goals set must be specific and as clear as possible. Foggy, underspecified goals cannot be guidelines for rational action and the basis for evaluating the work of others. Setting the goal must take into account a real analysis of the situation (resources, strengths, threats). The goal should be achievable, but not too easy in relation to the capabilities of the individual or team (Skalik, 2009, p. 13).

The rationality of the goal is related to the fact that the goal makes sense only in relation to the structure of the vital interests of the organization or individual and must be placed in a hierarchy of priorities. In addition, at each stage of implementation, it must be possible to determine whether and to what extent we are approaching the achievement of the goal.

Such monitoring enables corrective action to be taken. It should also be noted that all project goals can be set and defined:

- in terms of subject matter (the scope, the functional area for which we set the goal),
- in terms of target (to whom the goal is addressed),
- quantitatively (quantitative dimension of the goal),
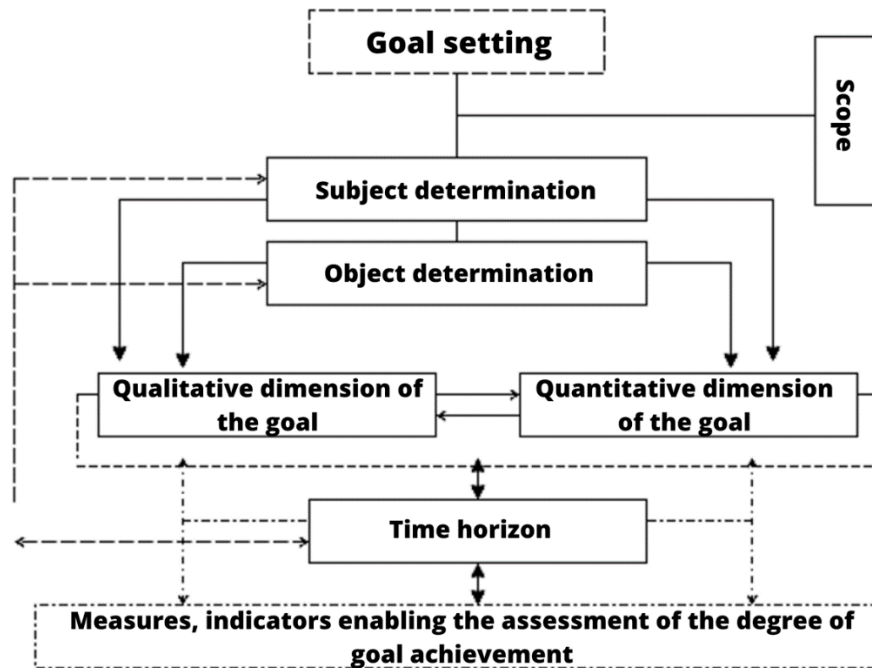- qualitatively (qualitative dimension of the goal) (Sońta-Drączkowska, 2018, pp. 27-30).

Figure 1. Main factors in the goal setting process.

Source: own work based on: Sońta-Drączkowska, 2018, pp. 27-30.

In management practice, these four dimensions are most often intertwined, because when formulating a goal, we try to explain what it will concern and to whom it is addressed; we also provide the desired results and effects which can be expressed quantitatively and qualitatively.

Every project is aimed at achieving a goal. It is therefore worth remembering that each objective must serve something or someone. This means that, against the backdrop of the interdependencies outlined earlier, a solution that will bring the greatest tangible benefit should be sought.

2.2. Project characteristics

Taking into account the fact that the term *project* can be understood in different ways, it can be seen that the universal determinants of a project (in the general sense, including e.g. for a business venture) are the following characteristics (Trocki, Grucza, Ogonek, 2009, pp. 13-15):

1) complexity – a project should be multi-faceted and multi-stage. It cannot, therefore, be a single and autonomous activity generating a specific effect. In a project, there must be a dependency between the various links responsible for carrying out predefined tasks (activities);

2) a defined purpose – projects must have a specific purpose and be carried out to achieve the assumed goal. Hence, the project must serve something or someone, support development by supporting goal-oriented activities (both operational and strategic);

3) a specified implementation time – the project must have a defined start and end time – which is directly linked to both the project timetable and the achievement of the goals. In order to determine whether a (final or stage) objective has been achieved, the end of the project (or its individual stages) must be precisely defined. Thus, the project must be implemented according to a defined plan;

4) innovative character – an undertaking must be characterized by some degree of innovativeness, as well as an element introducing a broadly understood novelty to an organization – an activity which has not been realized before in a similar form. Therefore, any activity of a routine nature cannot be referred to as a project.

The four criteria characterized above make it possible to distinguish projects from the other three categories of activities in the organization, which are: routine activities, improvised activities and functions (Fig. 2) (Trocki, Grucza, Ogonek, 2009, p. 18).
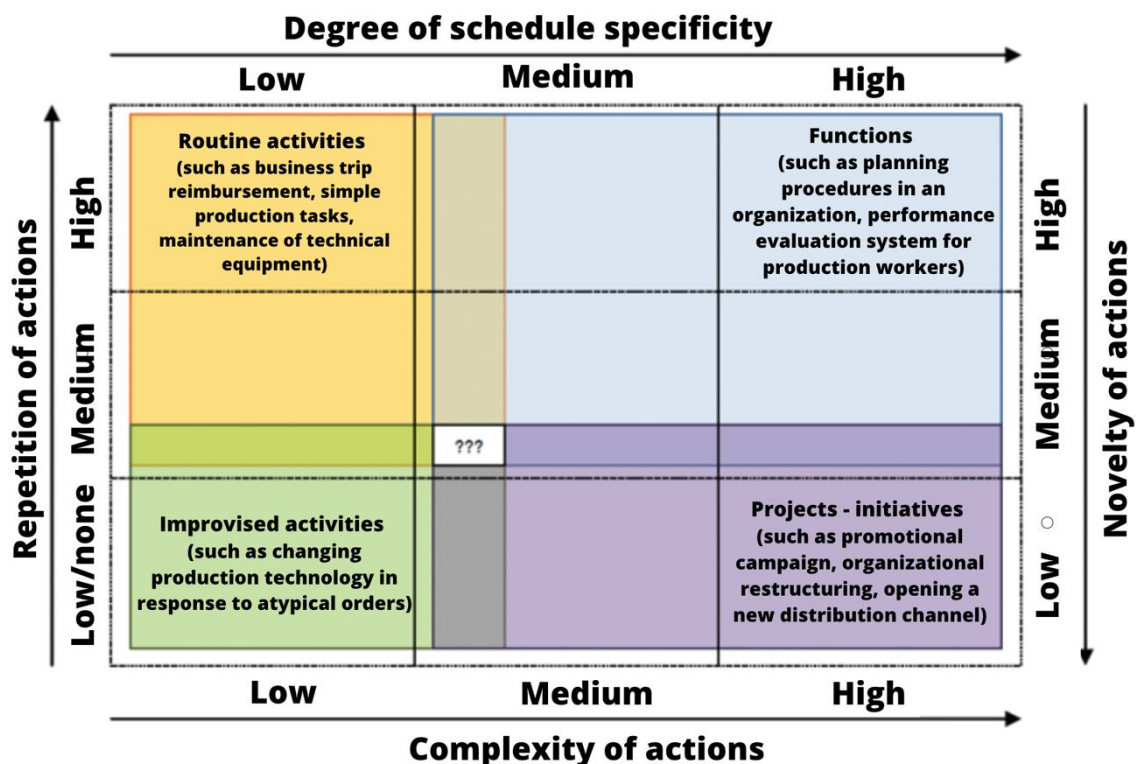

Figure 1. Project as a component of a business organisation's activities.

Source: Trocki, Grucza, Ogonek, 2009, p. 16.

Figure 2 clearly shows that it is difficult to clearly demarcate the boundaries between the different categories of activities. Thus, the four defined fields of the matrix overlap. Indeed, it cannot be unambiguously stated that routine activities are only characterized by low complexity or that the degree of novelty of projects can only be high and the repetitiveness of activities is negligible, etc. For example, a promotional campaign for brand 'X' is undoubtedly a business venture. The degree of novelty is high in this case, as newer (and thus more refined, more accurate) marketing methods and techniques are applied, new campaign goals and market segments are defined, the product is repositioned in the defined markets, etc. On the other hand, the repetitiveness of activities is rather at the 'medium' level, mainly due to the fact that a promotional campaign by its nature is usually an iterative undertaking, with a specific method of implementation (methodology). However, individual editions of a promotional campaign may differ in part from each other in certain (or even most) of the activities undertaken as part of it (Kapusta, 2013, p. 71).

By making a certain generalization of all the determinants of project undertakings discussed so far, it is possible to present a specification of their basic characteristics (Table 2). The considerations presented so far lead to the conclusion that the term *project* will be understood primarily as a specific, complex undertaking (e.g. economic), aimed at developing and improving existing solutions, as well as introducing specific changes (Mingus, 2009, p. 13).

Table 2.
Characteristics of a project

No.	Project characteristics
1.	It creates a unique, inimitable product or service derived from knowledge, experience and potential. It uses specific resources, defined by the category of the project. Thus, they are innovative undertakings, aimed at development, progress.
2.	It is task-oriented and achieves precisely defined goals. It is characterized by relatively high complexity of activities and considerable complexity of solutions.
3.	It has a defined implementation schedule, with timed start and end points for activities. Tasks within a project can be sequential or can be carried out simultaneously.
4.	It is separated from the mainstream of the standard day-to-day work of an organization (or part of it) and carried out by a specially designated team of employees. Conflicts between line manager and project manager are thus possible (given the assumption of limited resources within the organization).
5.	It has an organizational configuration tailored to its specific characteristics.
6.	It is associated with risks and uncertainties.
7.	It is usually associated with considerable expenditure; thus, it can be said that a project is time and capital intensive. Furthermore, the project is conditioned to a large extent by the budget (costs).
8.	It can – and usually does – have an interdisciplinary character.

Source: own work based on: Skalik, 2009, pp. 13-15.

Referring to the relationships shown in Figure 2, special attention should be paid to the box with question marks. This is the area of the matrix where all four dimensions of the action categories overlap. This implies a rather peculiar situation rarely found in economic reality. This is mainly due to the aforementioned inconsistencies in the precision of the boundaries between the different categories of activities. It should also be mentioned here that in the situation of placing certain activities on this type of matrix, being in one of the overlapping

(borderline) fields, in case of doubts as to which category of activities to choose, reference should be made to the specifics of a given activity, as well as comparing it with other implemented activities. In creating and analyzing this type of matrix, it is also necessary to bear in mind the specifics of the organization in question and the conditions prevailing both inside the organization (available resources, goal structure, strategy, mission, etc.) and in the external environment (e.g., industry, socio-demographic conditions), as these very factors determine the nature of all activities carried out in the company. Confirmation of the above classification doubts may be found in the fact that in the management policy of one company, it is standard to run only one promotional campaign (therefore an innovative and unique activity) for each product (information function), because the turnover in the product portfolio is high and the product life cycle is short. In contrast, another company treats a promotional campaign for a specific product as an iterative activity, aimed at extending the maturity phase of that product's life cycle in the market (Wysocki, 2013, pp. 53-55).

The analysis of the project subject and project management processes should include many factors such as:

1) Organization (enterprise, business unit) – perceived in terms of a system of operation. A project can be both an element of an organization/system of operation and a comprehensive system. Moreover, the organization as a system can be both the subject of a project (creating a structural configuration, reengineering), and the ordering party of projects (modification and improvement of specific functions within the company – so-called internal projects) (Kapusta, 2013, p. 71).

2) Resources and assets – the basic categories of resources involved in project design and management processes are human resources, material resources, technical-technological resources, organizational resources (in terms of structural solutions), intellectual resources (human potential, knowledge) and information and financial resources. The set of resources can be more detailed and vary depending on the specifics of the business venture.
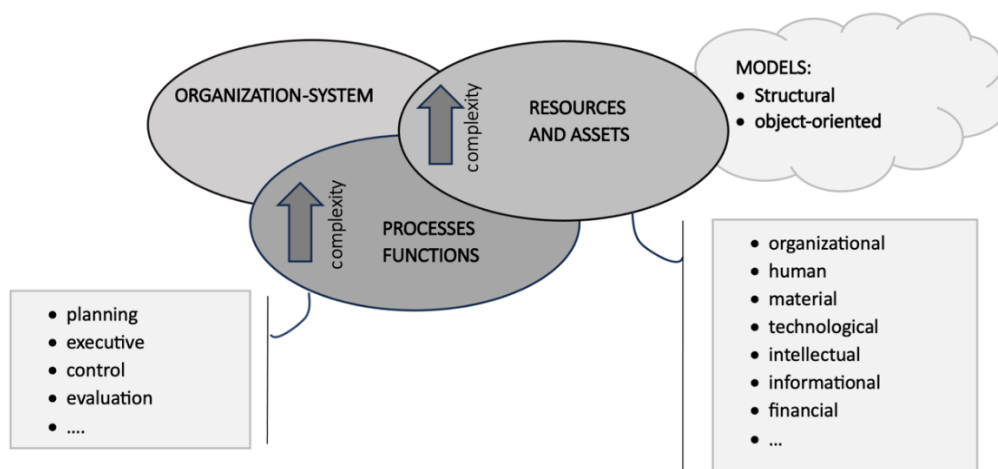

Figure 2. Subject of project design and management.

Source: Kapusta, 2013, p. 70.

3) Models – there are two basic categories of models: structural and subject-oriented. Subject-oriented models focus on the subject of a project and its components/resources in search of analogies between them – the so-called subject classes, which means that it involves a holistic view of the outcome of the project. Structural models, on the other hand, are based on the structure of the functions/tasks of the project subject and refer to the relationships between specific elements (of the system), variables – making visible the nature of the relationships between them and the trends of change. Modelling as a process is a certain simplification of reality and refers mainly to the identification and modelling of relationships between different categories of resources, in order to, among other things, exploit their synergies and ensure optimization of their utilization (Kapusta, 2013, p. 73).

4) Processes (functions, tasks) – the main process categories of both design and management of projects are planning, forecasting and simulation, executive (organizing activities, coordinating, motivating), control and evaluation (supervising, recording, reporting) (Kapusta, 2013, p. 74).

The organization of the project subject and project management processes should take into account the multidimensionality of project undertakings. This is because efforts (in terms of e.g., planning and organizational activities) should not be concentrated exclusively on the project subject. The holistic (comprehensive) approach requires taking into account other factors as well, among which one should distinguish the means and resources, relations between the elements of the project-system, the specificity of the organization (with particular emphasis on the place and role of a given undertaking in the structure of the enterprise), as well as its own development potential and that of the environment. It is also necessary to be aware of the fact that the increase in the complexity of the project structure (processes) and the number of resources may be a source of specific threats to the realization of the assumed goals, connected, among other things, with the problem of appropriate allocation of resources or the emergence of interpersonal conflicts at the stages of planning, organizing and coordinating activities in the project (Szwarc, Woźniak, Zaskórski, Tomaszewski, 2021, pp. 28-30).

2.3. Project environment

Every project activity is very much a behavior of both first- and second-degree environments. By identifying a project with a specific, complex, time- and space-defined activity of an innovative nature, it should be emphasized that the input elements of the project process, its actual implementation, and the output effects are all derived from the conditions of the environment, which can even be called the project supersystem - for the project is created, materialized and undone in it. The project environment is as broad as the scope of the project. The project's environment is therefore determined both by each element feeding into the project and by each element gaining certain values from it (in a positive or negative aspect). It can thus be seen that the aforementioned "supersystem" can influence the project in an indirect or direct

way. Taking into account the principle of reciprocity, it can be expected that also the project influences the environment (indirectly or directly) (Flasiński, 2009, p. 122). Examples of the relation of the environment to a project, e.g., an economic project, are presented in Table 3.

Table 3.
Examples of the relation of the environment to the business venture

Type of relation	Nature of the interaction	
	Direct	**Indirect**
Environment affects the project	- exchange rate fluctuations, - the number of suppliers of a particular service (or material, raw material, etc.) and the quality of their services, - the level of competition on the market, - availability of certain categories of resources, e.g., information and financial resources, - the decisions taken by the company's management and the degree of understanding of the project by its owners, - the number of risk factors and the value of risk for specific activities in the project.	- legal regulations e.g., labor law, commercial law, fair competition principles, development research, environmental protection, - development of tastes and preferences of buyers, - demographic conditions, the phenomenon of the so-called "brain drain", migration of specialists in various fields on a regional and global scale, - development of the education system including higher education, - innovation potential of industries and economic sectors
The project affects the environment	- launching an innovative solution (e.g. product, service) on the market, - development of qualifications of the organization's employees, their gaining experience, - reduction of unemployment in the region, city, or even nationally, - improvement or worsening of the financial condition of the enterprise, - changes in the organizational configuration of the enterprise for the purposes of the project implementation.	- contributing to the development of an industry or economic sector, - shaping the product mix and trends of an industry, - triggering population migration (in search of employment) and increased interest in retraining, - changes in organizational culture, e.g., in terms of senior management's approach to motivation, - the emergence and development of new banking products tailored to the specifics of certain business ventures.

Source: Szwarc, Woźniak, Zaskórski, Tomaszewski, 2021, pp. 31-32.

The classification of the business environment can be done in the same way as in the management of economic organizations. Thus, an external environment and an internal environment can be distinguished. The internal environment mainly includes (Fielding, 2021, pp. 37-38):

- the project management team, the project support office (PSO),
- the implementation team,
- business strategists,
- internal customers,
- the physical environment and organizational (project) culture,
- other employees of the organization/department and the management and owners of the company.

The external environment can be divided into two categories:

1) task environment – i.e., specific groups or organizations influencing the way in which the project is implemented, e.g., market customers, suppliers, strategic allies, regulators (entities that can regulate and control by law the policy and course of action of the organization and thus the mechanisms for the implementation of specific business ventures or otherwise influence it), and competitors,

2) general environment – i.e., the set of broad forces and dimensions within which the project is implemented, forming the general context for the project management processes, e.g., the technical-technological, economic, socio-cultural, political-legal, demographic, natural environment, as well as the international and global dimensions of the environment (Fielding, 2021, p. 41).
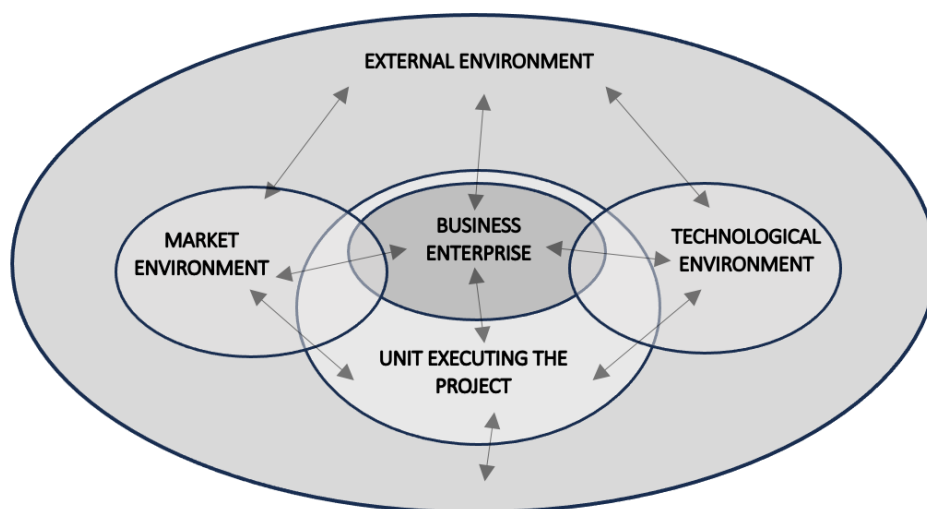

Figure 3. Categories of the project implementation environment and the relationships between them.
Source: own work based on: Bizon-Górecka, 2002.

The external environment determines the nature of project and management instruments, e.g., in business projects the role of the marketing mix, which then directly and often powerfully influences the external effectiveness of the project – in other words, the acceptance of the project results by the environment, mainly by customers (and/or other entities in the defined market) (Trocki, Grucza, Ogonek, 2009, p. 93).

It must not be forgotten that a project is understood as an innovative, unique and complex undertaking – which additionally emphasizes the importance of proper penetration of the external environment already at the stage of project preparation (planning stage). Skipping this stage or carrying it out in a superficial way may result in certain risks during the realization and implementation phases of the project – and, in the end, cause the phenomenon of dissonance between possibilities, expectations and needs (conscious and unconscious) of particular factors of the external environment (mainly potential customers) and lack of interest/demand for the project results (outcomes) (Trocki, Grucza, Ogonek, 2009, p. 95).

The project environment, as already partly mentioned at the beginning of the chapter, can be presented according to a slightly different classification – as first- and second-level environment, which is in a way identical to the division into internal and external environment, but in contrast to it, it emphasizes the role of the project in influencing the environment. Indeed, the first-level environment is related to factors that are dependent on the company/organization creating the project. The second-degree environment includes factors related to the environment within which the project is implemented (i.e., within which the business organization operates), e.g., the country's economy, political system, level of wealth and quality of life of citizens (Bińczycki, Tyrańska, Walas-Trębacz, 2007, p. 23). Selected elements of the first- and second-degree environment are shown in Table 4.

Table 4.
Selected elements of the first- and second-degree environment

First-degree environment	Second-degree environment
- project management structure, - executive and management staff, principles of motivation, personality and qualifications, - research and development work carried out in the field of product design, manufacturing technology and production organization, - the level of technology available for the performance of technological, control, transport, storage and information operations, - organization of supply and material management, - financial means at disposal and the rotation speed of these means, - method of calculating own costs and recording losses incurred by the enterprise in the area of production systems, - methods and forms of management of systems, e.g. production, scientific-technical preparation of production and auxiliary services – quality control, material management, tool management, overhaul, energy management, transport, etc.	- suppliers' production capacities or other potential opportunities for easy procurement of intermediate products, energy, etc., - level and capabilities of competition in the national or regional market (legal, administrative, technical restrictions, etc.), - economic condition of the country, region, stability of money, level of inflation, - the banking system and its functioning, - level of taxation, customs system, - methods and forms of production control by the authorities of the country or region, - the level of modernity and quality and the price of production equipment and machinery and technical means of processing and transmitting information, - the development of the country's or region's infrastructure – the development of the motorway network, the number of logistics centers, etc., - the level of technology, distribution and service – i.e., the ability to purchase intermediate products.

Source: Bińczycki, Tyrańska, Walas-Trębacz, 2007, p. 25.

Generalizing the previous considerations on the classification of the project implementation environment, a specification of the basic environmental factors can be made. The Project Management Institute (PMI) includes primarily:

a) the structure of the organization and its processes, as well as the organizational culture,

b) standards and norms (statutory or industry standards), e.g., quality standards, information security standards, codes of conduct,

c) infrastructure in a broad sense, e.g., buildings, machinery, ICT infrastructure,

d) human resources and personnel administration (HR processes), as well as existing communication channels within the organization,

e) commercial databases and other thematic data repositories, e.g., with regard to risk level, standardized costing data, as well as IT systems supporting project management,

e.g., packages responsible for work scheduling and resource allocation, configuration management system, network interfaces to other on-line systems,

f) the system for work authorization within the organization,

g) market conditions (in terms of the internal market within the organization and the external market),

h) tolerance of project stakeholders to the level of risk (Project Management Institute…).

However, regardless of the conditions resulting from the impact of the project environment on a particular project, it should be remembered that it is and will be an important determinant of the successful implementation of innovation and project undertakings, and its proper constructive analysis can be a guarantee of success. In case of neglect and poor knowledge of the environment, the main source of risks (risk factors) should be sought there.

3. Importance of the project manager in project development according to own research

3.1. Methodological assumptions

The person responsible for a project in a company is usually the project manager. He or she is responsible for completing the project on time and within budget. They are also responsible for the decisions taken in relation to the project. Thus, without a suitable project manager, project implementation could be very difficult, if not impossible. Hence, the aim of this thesis was to analyze the role of the project manager in project development.

The following research problems were formulated in relation to the studied topic:

1. Who is a project manager?
2. What are the competences and responsibilities of a project manager?
3. How does a project manager influence project implementation?

As a result of the formulation of research assumptions in this study, a hypothesis was formed, assuming that the role of the project manager in the creation of a project includes all aspects of effective management of this project, and directly influences its effective and efficient implementation. The aim of project management is to make the project as effective and timely as possible, while at the same time optimizing costs.

An additional thesis was formulated, according to which even exemplary project management, in a professional manner, with 100 per cent commitment to the project, exercising control activities to meet its end date, will not always protect the project from independent factors that have an impact on changing schedules and accelerating the completion of individual stages.

In order to obtain answers to the questions posed above and to verify the research hypothesis, a diagnostic survey was used as the research method, the tool being a questionnaire. The survey was addressed to members of project teams in manufacturing company X.

A total of 41 people took part in the study – 21 men (51% of the group) and 20 women (49%). The gender structure of the people surveyed is shown in Figure 1.
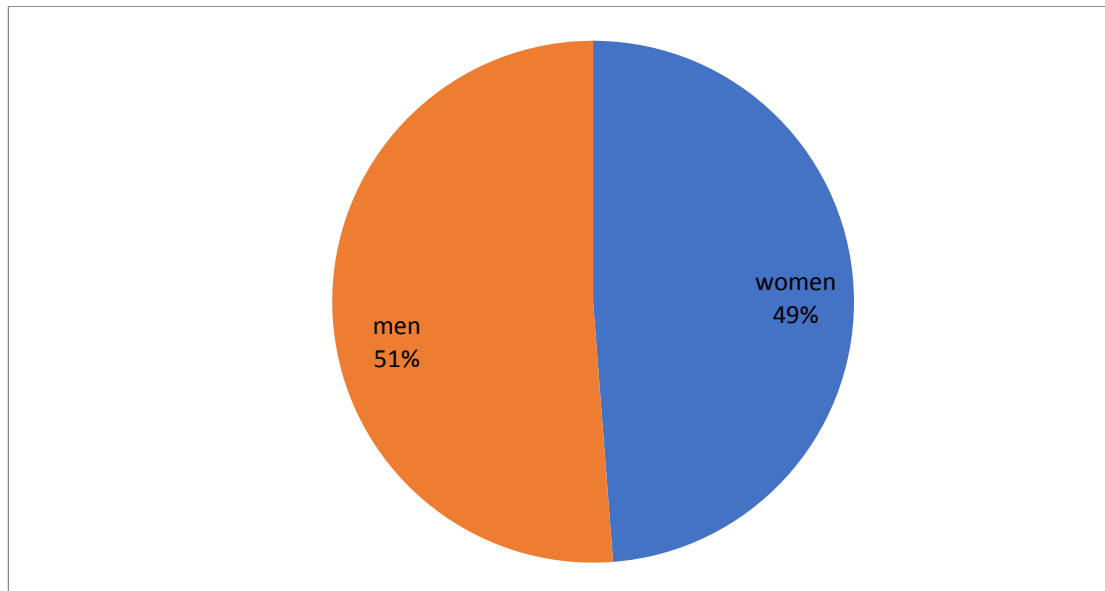

Figure 1. Gender of respondents.

Source: own work.

Data on the age of respondents is shown in figure 2.
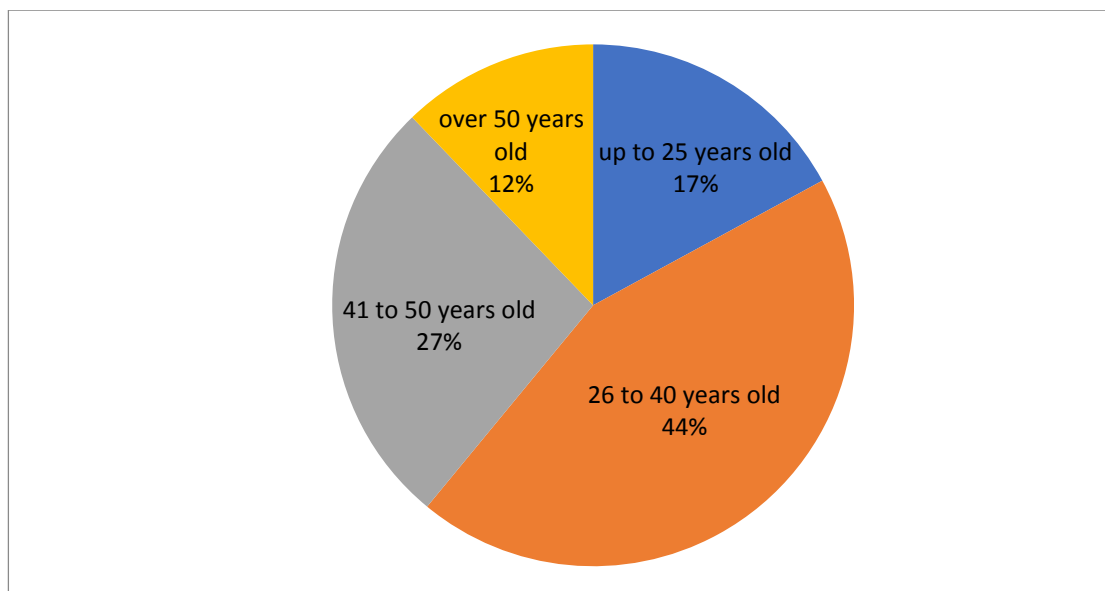

Figure 2. Age of respondents.

Source: own work.

It was found that 17% of the people surveyed were up to 25 years old; 44% were 26 to 40 years old; 27% were 41 to 50 years old; and 12% of the respondents declared that they were over 50 years old.

Respondents were also asked about their level of seniority in the company. This information is presented in figure 3.
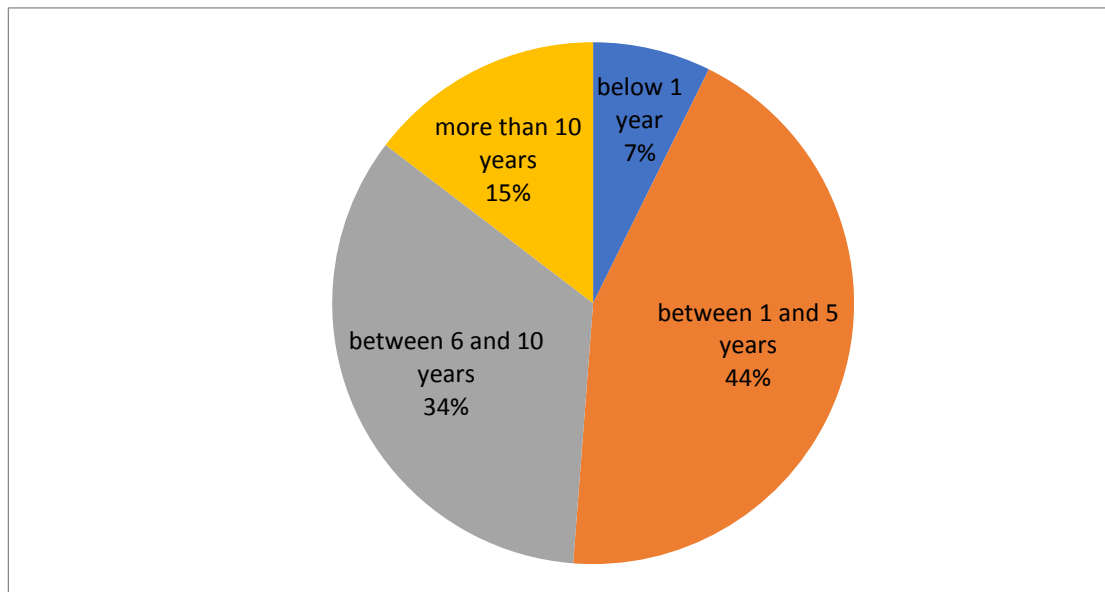

Figure 3. Job seniority of respondents.

Source: own work.

The largest group of people surveyed – 44% – declare a length of service of between 1 and 5 years; 34% of respondents indicate a length of service of between 6 and 10 years; 15% – more than 10 years and 7% – below 1 year.

3.2. Analysis of self-reported research

To begin the survey, respondents were asked how many projects they had participated in so far. The responses in this respect are presented in the chart below.
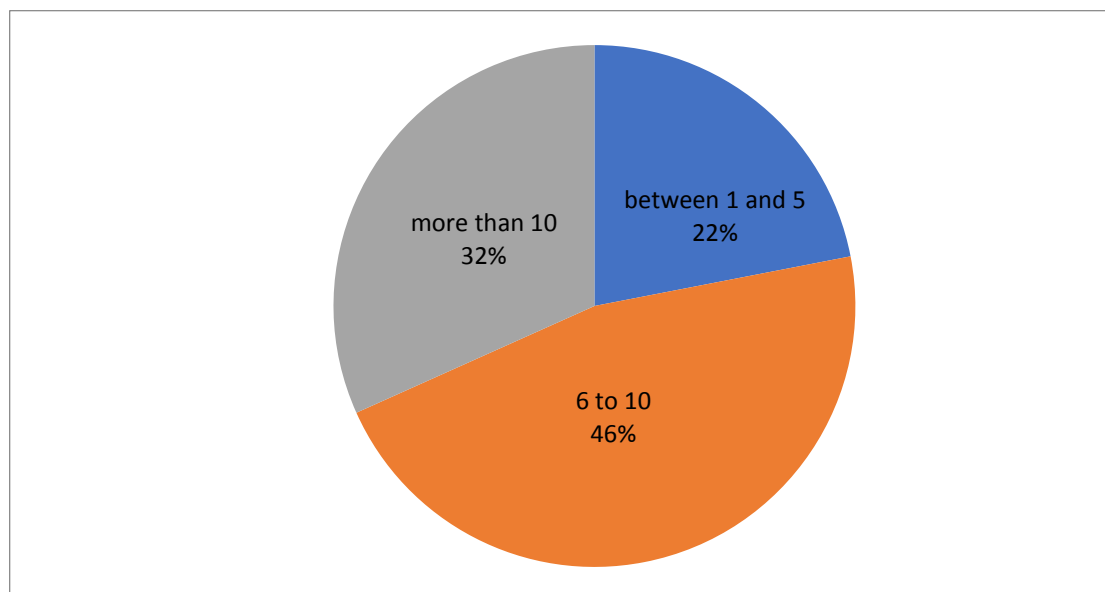

Figure 4. Number of projects in which respondents participated.

Source: own work.

46% of those surveyed were involved in the implementation of 6 to 10 projects; 32% participated in more than 10 projects, 22% participated in between 1 and 5 projects.

The respondents were also asked what criteria should guide the project manager when selecting project team members. The responses are presented in the chart below (multiple answers possible).
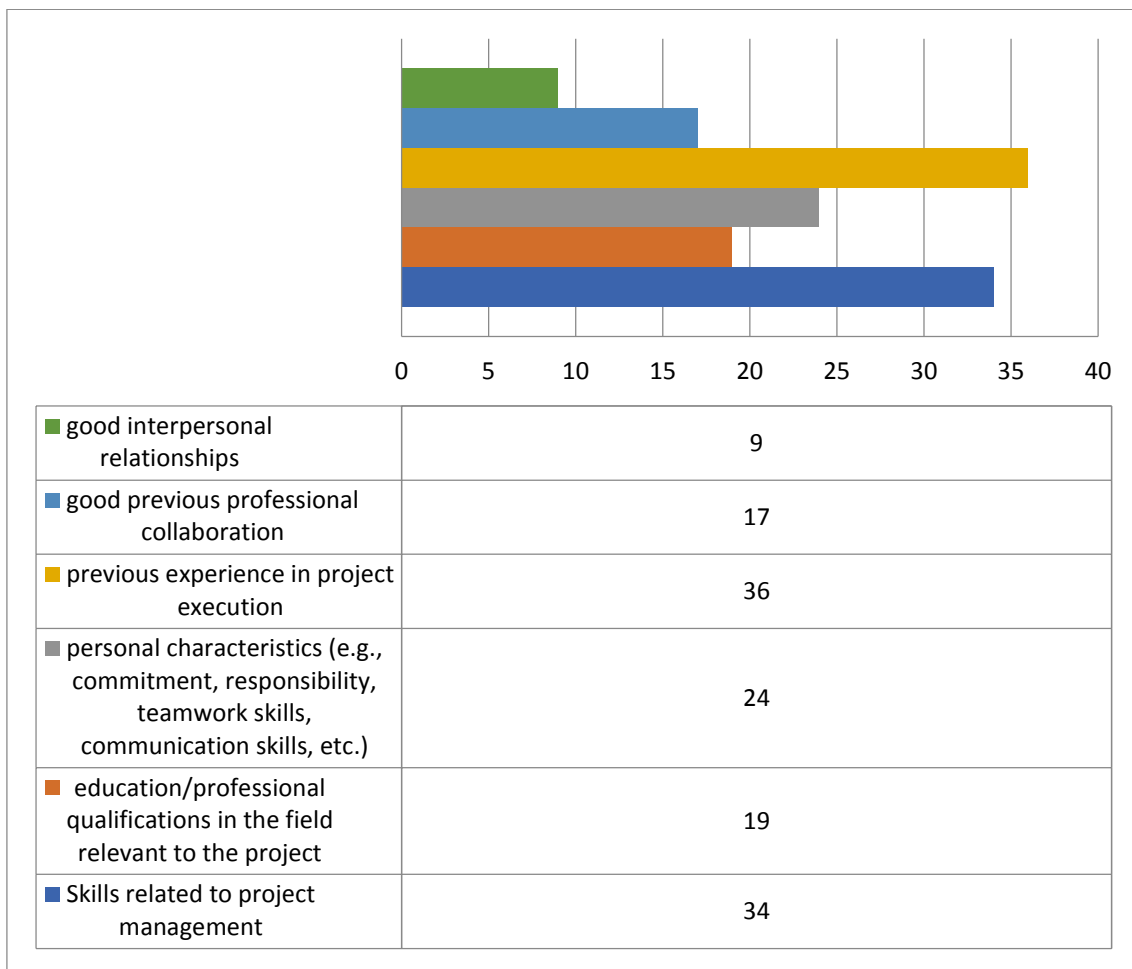

■ good interpersonal relationships	9
■ good previous professional collaboration	17
■ previous experience in project execution	36
■ personal characteristics (e.g., commitment, responsibility, teamwork skills, communication skills, etc.)	24
■ education/professional qualifications in the field relevant to the project	19
■ Skills related to project management	34

Figure 5. Criteria for selecting members of the project team.

Source: own work.

The research found that the most desirable qualities of project team members are:

- previous experience in project implementation – 36 indications,
- project management skills – 34 indications,
- personal qualities (commitment, responsibility, teamwork skills, communication skills, etc.) – 24 indications,
- education/professional qualifications in the field relevant to the project – 19 indications,
- good previous professional cooperation − 17 indications,
- good social relations – 9 indications.

Respondents were also asked what they believed to be the most effective way to lead a project team.
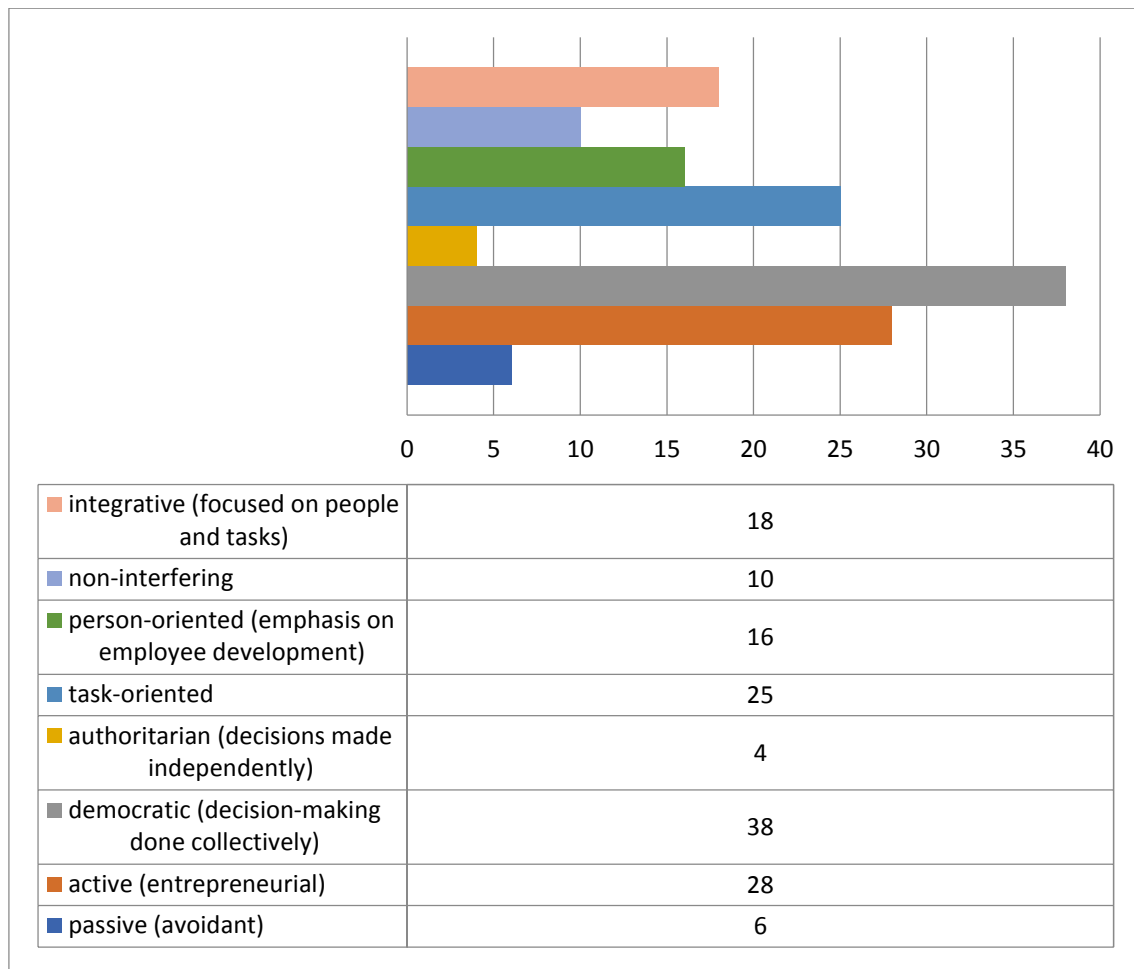
■ integrative (focused on people and tasks)	18
■ non-interfering	10
■ person-oriented (emphasis on employee development)	16
■ task-oriented	25
■ authoritarian (decisions made independently)	4
■ democratic (decision-making done collectively)	38
■ active (entrepreneurial)	28
■ passive (avoidant)	6

Figure 6. Distribution of answers to the question: Which way of project team management do you think is the most effective? (Multiple answers possible).

Source: own work.

In the opinion of project team members, the best team management style is the democratic style, in which the manager makes decisions together with the team (38 indications). The next styles indicated by the persons surveyed were: active style (28 indications), task-oriented style – 25, integrative style (focused on people and tasks) – 18, personal style (focused on the development of employees) – 16, non-interfering style (allowing for any way of performing tasks) – 10, passive style – 6, and authoritarian style – 4.

The respondents were then asked which of the following characteristics a project manager should have. The responses are indicated in the chart below.
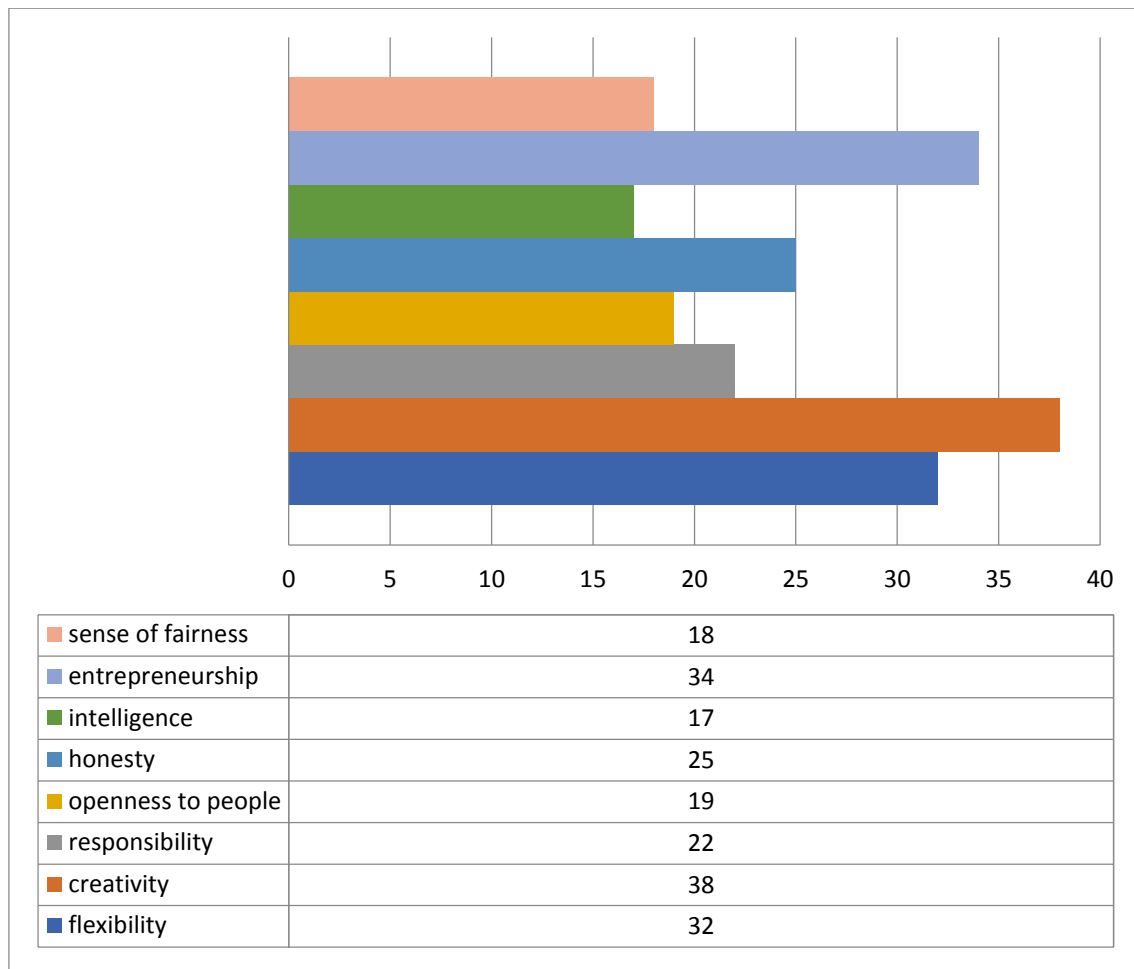
▪ sense of fairness	18
▪ entrepreneurship	34
▪ intelligence	17
▪ honesty	25
▪ openness to people	19
▪ responsibility	22
▪ creativity	38
▪ flexibility	32

Figure 7. Distribution of answers to the question: What qualities should a project manager have? (Multiple answers possible).

Source: own work.

It was found that the most frequently indicated trait that, in the opinion of the respondents, a project manager should possess is creativity – 38 indications. This was followed by entrepreneurship – 34 indications, flexibility – 32 indications, honesty – 25, responsibility – 22, openness to people – 19, sense of fairness – 18, and intelligence – 17.

It was also determined what skills the respondents thought the project manager should have (figure 8).
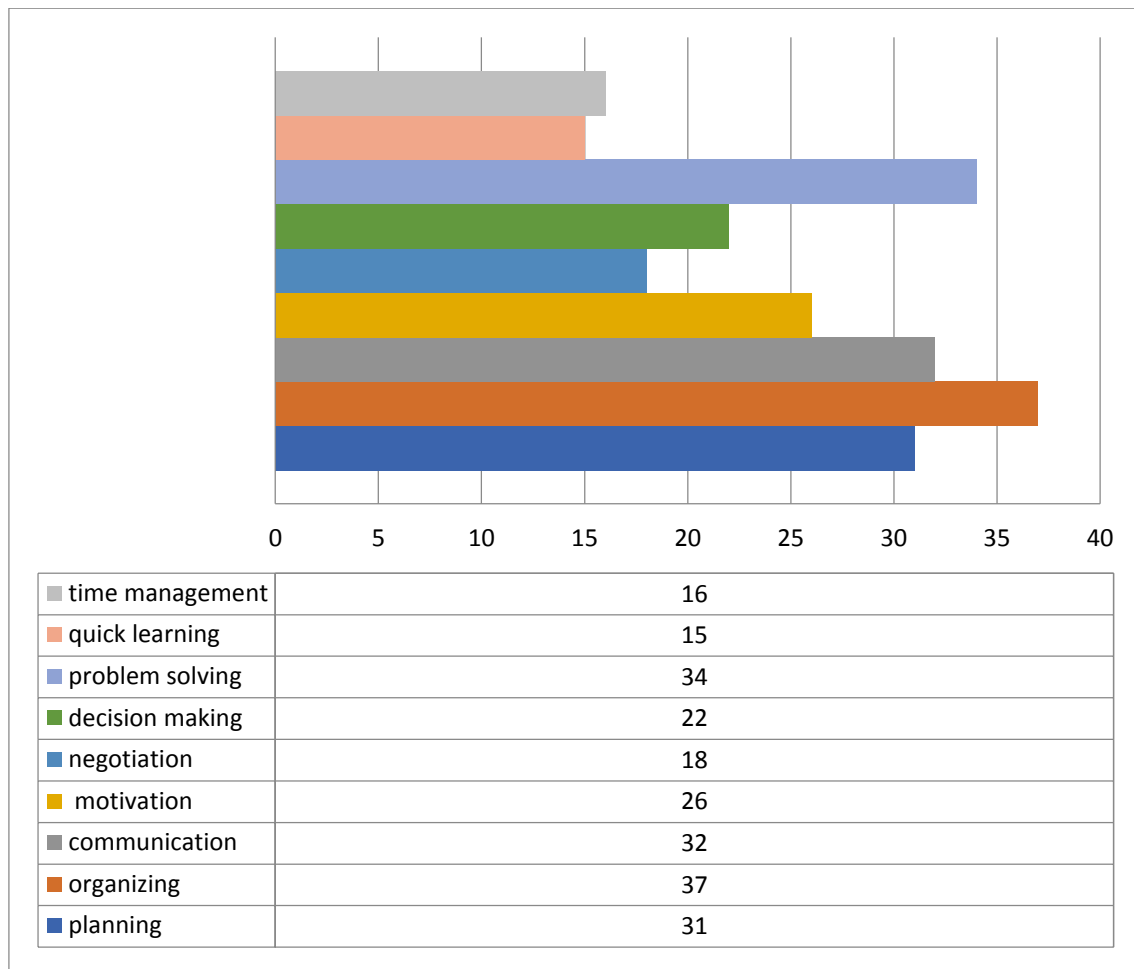
▢ time management	16
▢ quick learning	15
▢ problem solving	34
▢ decision making	22
▢ negotiation	18
▢ motivation	26
▢ communication	32
▢ organizing	37
▢ planning	31

Figure 8. Distribution of answers to the question: What skills should a project manager have? (Multiple answers possible).

Source: own work.

Respondents, in the category of skills a project manager should have, indicated: organizing – 37 indications, problem solving – 34 indications, communicating – 32 indications, planning – 31, motivating – 26, decision-making – 22, negotiating – 18, time management – 16, quick learning – 15.

Finally, the surveyed group was asked which factors they believe influence the effective management of a project team.
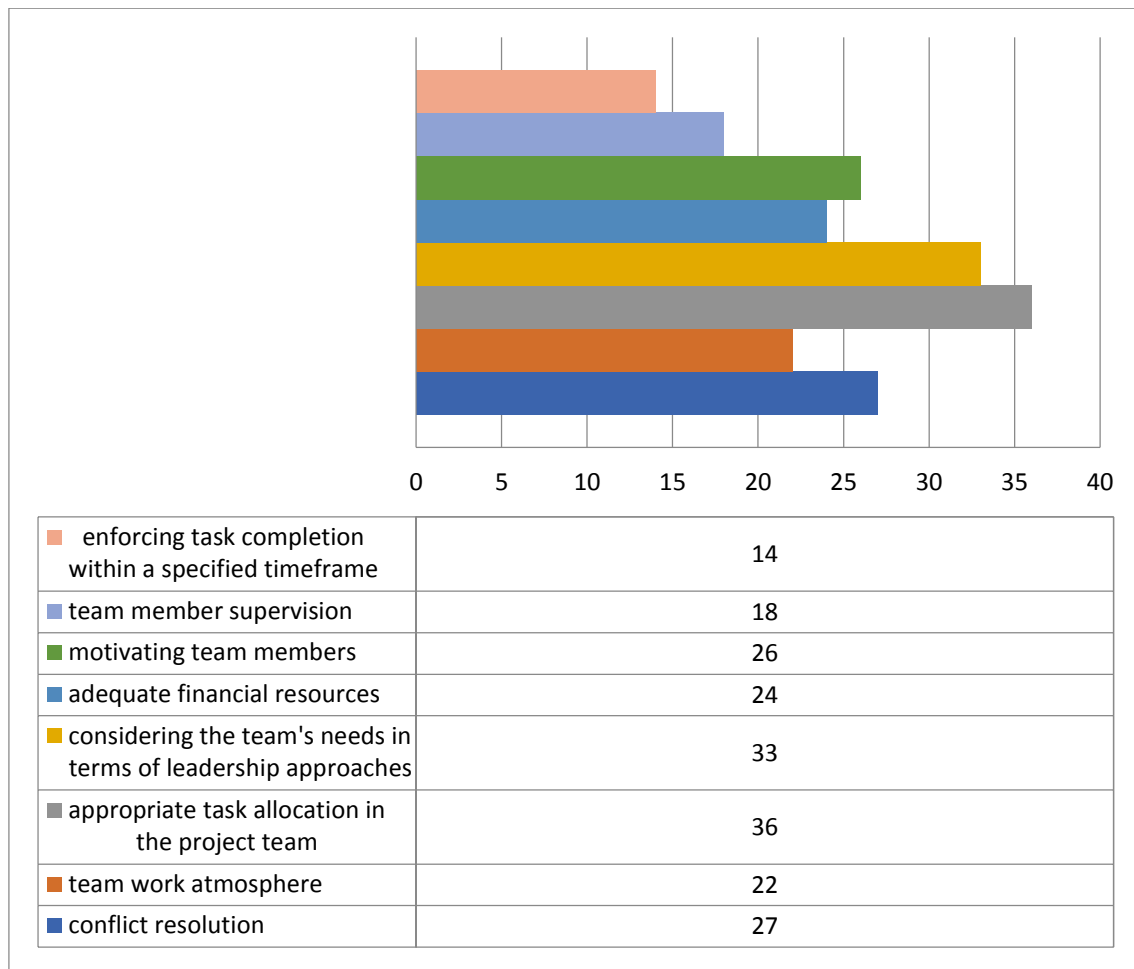
▢ enforcing task completion within a specified timeframe	14
▢ team member supervision	18
▢ motivating team members	26
▢ adequate financial resources	24
▢ considering the team's needs in terms of leadership approaches	33
▢ appropriate task allocation in the project team	36
▢ team work atmosphere	22
▢ conflict resolution	27

Figure 9. Distribution of responses to the question: what factors do you think most influence project team management? (Multiple answers possible).

Source: own work.

In the opinion of the respondents, the proper division of tasks has the greatest impact on the effective management of a project team – 36 indications; next, it is very important to take into account the individual needs of team members in the ways of managing the project group – 33 indications, conflict resolution – 27, motivating team members – 26, adequate financial resources – 24, team work atmosphere – 22, control of team members – 18, enforcing the implementation of tasks – 14.

3.3. Conclusions

Effective project management is not only a matter of what the manager does, but also the manner in which it is done. The PM's attitude and behavior towards others determines their attitude towards him or her. In the course of the research, it was found that in order for a manager to effectively carry out the required tasks, he or she should have the characteristics/skills listed below:

- A manager should be inquisitive – try to understand the reasons behind the actions and wishes of others. This knowledge will allow him or her to respond in the right way to the actions and requests of team members, top management and all other recipients of the project (and this in turn will increase their motivation and support for the manager's actions). Once he or she manages to understand the underlying reasons for the actions and expectations of others, the manager should share the insights with those around.

- A manager should adhere to the principle of "it can be done" – treating all problems as challenges and trying to do whatever is possible to deal with them. Creativity, flexibility and persistence – delving into a problem until it is solved.

- A manager must think in the big picture – consider all events in a broader context, being aware of what he or she wants to achieve and how to accomplish it. The best way out is to analyze the impact of one's own actions on the current and future situation of the project, and this knowledge should be presented to others.

- It is advisable for the manager to focus on the details - to thoroughly analyze all issues. It is the manager's responsibility to think the project through to the smallest detail. The more precisely he or she describes the results to achieve be achieved, the easier it will be for others to realize the benefits of the project. And the more clearly he or she describes the range of activities necessary to obtain these results, the more often the manager's colleagues will ask important and insightful questions about these activities, and the more strongly they will believe that they can successfully complete the tasks before them. Transparency of goals increases motivation and reduces the risk of mistakes (http://abcjakosci.pl/…).

- A manager should not make hasty assumptions - one should always try to establish the facts first, and treat assumptions as a last resort. With every assumption comes the risk of making a mistake. The fewer the number of assumptions on which an action plan is based, the greater the confidence in its feasibility.

- There is an advantage to treating others as allies, not as enemies - focusing on common goals rather than individual interests. Promoting a friendly atmosphere encourages employees to think creatively, to come up with new ideas and to test them in practice. All of these things are essential to project success.

- To achieve the desired goal, a manager must communicate clearly and understandably – try to be as specific as possible about his expectations of others and what they can expect from him or her. It is unwise to leave details unsaid. It may seem that conveying information in a vague manner gives more room for maneuver, but in fact it is only a potential cause of mistakes and misunderstandings.

- A manager must respect others – focus on the strengths of colleagues. It is a good idea to find some trait worthy of respect in every team member. People derive more satisfaction from their work and try harder if their skills and efforts are appreciated by their collegues.

- It is advisable for a manager to appreciate a job well done – to make sure that employees feel appreciated. When someone succeeds in something, it is necessary to tell that person, their boss and other team members that their work and results have been appreciated. Recognition will prove to the employee that their work is being done properly and is valuable to the company and the team; praise from the manager will also encourage the employee and the rest of the team to work with him on future projects. When praising an employee for a job well done, mention what they gave accomplished and how much effort they had to put into it. The manager should be specific about what received his appreciation. Such information should be given immediately, without waiting for a longer period of time (Portny, 2013, pp. 323-325).
- The manager should also be a leader – dealing with information, procedures and systems as well as people. Putting in the effort to communicate your vision to your colleagues is extremely beneficial, but the manager must not forget to instill in them also the desire for order and efficiency. Employees should be motivated to set ambitious goals for themselves and support should be provided which they need to achieve them (Portny, 2013, p. 326).

4. Conclusion

Referring to the key role of decision-making in management, it can be stated that project management is a sequential, deliberate process of making decisions concerning all project resources (financial, physical, human capital) and coordinating the project team's tasks – the time and scope of their execution, taking into account risk mitigation, in order to effectively achieve the project goals with the highest possible quality. Project management consists of a sequence of logically organized and planned processes, which we can assign to the following groups (Portny, 2013, p. 50):

- initiation processes,
- planning processes,
- implementation processes,
- monitoring and control processes,
- project closing processes.

These processes are controlled and managed by the PM, who should have specific competencies, such as motivation skills, personality traits, self-esteem related to functioning in a group, knowledge that this person has acquired and uses, and other skills. The desirable competencies of a project manager consist of such qualities that allow him or her to manage the project effectively.

Answering the questions included in the research assumptions of this work, it can be said that the adopted research hypothesis was verified positively. The role of project manager in the development of a project includes all aspects of effective management of this project, and directly affects its effective and efficient implementation. Project management aims to bring the project to its most effective and timely execution, while optimizing costs. Thus, it is indisputable that the project manager has a key role in its development and implementation.

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