



# PROJECT MANAGEMENT IN CRISIS SITUATIONS

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## ABSTRACT

Nowadays, people interested in project management are increasingly paying attention to crises that develop during project implementation, to avoid and overcome them. Crises are characterized by a high probability of occurrence. Therefore, it is crucial to implement measures aimed at monitoring the effectiveness of project stages to allow early detection of emergencies and diagnose and overcome them appropriately. These actions will not be possible without learning the essence of crises. The hallmarks of crisis are the disturbed activity of the project, the actual or apparent loss of control over the implementation of the tasks, the threatened implementation of the objectives, a high degree of uncertainty resulting in a significant increase in the intensity of fear among employees and a low degree of predictability.

This article focuses on the presentation of the conditions and causes of crises, the essence of projects, and their effective management. The major objective of the paper, however, is to demonstrate how companies implementing projects cope with the occurrence of a crisis situation.

The observation of today's crisis realities in projects and analysis of the subject literature and business journalism lead to the conclusion that crisis constitutes a serious threat to project implementation. Companies ought to gain knowledge in that area that, if necessary, can be used in the future. Crisis is a good opportunity to take corrective action relative to the project, due to the consent and full acceptance given by the team members. The potential benefits may materialize in the project, when the project manager along with the project team learn to observe the surroundings and analyse the crisis symptoms. In addition, the

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way in which the project manager copes with the crisis largely depends on his/her knowledge, skills and competences as well as those of the whole team.

## INTRODUCTION

Activities performed by companies can be classified in two key areas. The first area covers operational activities and the other project activities. The former includes repetitive, routine activities, such as, for instance, manufacturing or providing services. The latter, *i.e.*, project activities, are unique, temporary initiatives the implementation of which often requires the use of an increased amount of resources. It should be emphasized, however, that project management is not devoid of difficulties. Today, while running their business activities, entrepreneurs are exposed to the impact of numerous factors. Those may be the increasing dynamics of the environment, increasing competition, new customer requirements or rapid technological progress. Meeting customers' expectations and needs requires companies to quickly respond to changes and pursue new solutions on an ongoing basis. There is no doubt that the occurrence of crises is nowadays an integral part of economic life. However, efficient and skilful project management is a guarantee for the successful realization of project, even in crises.

Crises arising during the implementation of projects can be considered an interesting phenomenon, which should be looked at in two ways. On the one hand, crisis may cause a serious threat to the completion of the project; on the other hand, it may become a driving force for the project team to work even more diligently and stimulate action. Since such phenomena have a high probability of occurrence within various types of endeavors, it is necessary to detect diagnose and ultimately overcome them early, which, in turn, creates a need to learn the essence of managing projects under crisis conditions. It must be emphasized that crises can arise in the sphere of technical, economic, organizational, legal, or social problems, and can concern individuals or the entire team.

Today's economy is characterised by numerous transformations, which often result in crises in enterprises. The smooth implementation of projects is a safe tool for implementing changes. It is worth stressing that projects are mainly used to implement investments, but this approach is also common when introducing various types of innovation. Knowledge and skills related to projects and their adequate management in crisis are essential in any organization with modern management.

## THE ESSENCE OF PROJECTS AND PROJECT MANAGEMENT

Since the number of projects executed in organizations is growing, the issue discussed is increasingly important. Due to the fact that the efficient and skilful project management is the guarantee of the success of projects implemented in companies, it is necessary to explain the meaning of the following two terms: 'project' and 'project management'.

The definition of these key concepts is closely related to the hallmarks of project. Individual authors select the most important features when taking into account the perspective they adopt. The elements that are most frequently referred to and charac-

terize project include, firstly, the fact that project execution is expected to allow the achievement of a specific goal. Secondly, the project is a new undertaking and that has not been previously implemented in the company and thus differs from routine activities. (Pawlak M., 2016, p. 19). Therefore, it is characterized by uniqueness. The Project Management Institute defines a project as an undertaking of a temporary nature, which is initiated to produce a unique product or service (A Guide to the Project Management..., 2013, p. 7). This uniqueness is also indicated by H. Kerzner (Kerzner H., 2013, p. 21). The temporality points to another feature of the project, which is a closed interval. Therefore, a project should be precisely defined in terms of its beginning and ending dates and of its phases, *i.e.*, it should have a schedule. The fourth feature of a project is its interdisciplinary nature. That means that what is required is the involvement of experts from various fields, due to the fact that performed project tasks go beyond the competences of a single organizational unit. This feature is combined with another feature, which is the necessity to use different resources during the project execution that are frequently limited, such as, for instance, human, tangible (materials, equipment, facilities), financial, or informational. It should be also stressed that projects require the involvement of many people and/or organizational units (Young D., 2015, p. 45).

In this study, the results of which will be referred to later in the paper, it was assumed that a project is understood as a complex undertaking of temporary nature that aims to create a new/modified product or service that has defined beginning and end dates and is implemented as teamwork (Goździewska-Nowicka A., Janicki T., Słupski U., 2016, p. 143). Furthermore, taking into consideration the subject of ongoing research, it seems necessary to cite a definition describing a project as a projection of ideas and activities within a new undertaking, which is accompanied by the element of risk and uncertainty (Lock D., 2013, p. 28).

It is necessary, therefore, to make an effort and determine the meaning of the project management concept. The first to be quoted is a concise definition presented by J. Fortune for whom project management is organizing and coordinating the process of solving the problem (Fortune J., 2013, p. 538). The authors particularly emphasize the assignment of tasks and responsibilities to specific individuals involved in project implementation. This element is especially important from the perspective of the enforcement of effectiveness of various project execution stages.

A group of definitions relating to the management process significantly contributes to the understanding of the concept of project management. It is important to not only define schedule and action plan, but also embed them in a specific space with the recognition of costs and the quality of the results obtained (Lock D., 2013, p. 30).

Other groups of experts in the subject present project management with particular emphasis on the importance of a project manager who is the person dealing with complex projects. Using a set of managerial activities (*e.g.*, job scheduling and control, or allocation of resources), the project manager leads the project to the successful completion (Wysocki R. K., 2013, p. 32). The skilful use of available techniques, according to the accepted standard, within the given budget constraint and within a specified time, allows a high probability of achieving the planned target.

For the purposes of this paper and the study that was carried out, it was assumed that project management is a set of methods and techniques based on the four main functions of management (planning, organizing, leading, and controlling), performed on

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time and in accordance with the adopted budget and requirements. The ability to manage projects in the face of a crisis is an extremely complex undertaking and at the same time a great challenge for the project manager and the entire project team (Goździewska-Nowicka A. *et al.*, 2016, p. 144).

## THE ESSENCE OF CRISES

At present, people interested in project management are increasingly paying attention to crises occurring during project implementation, to both avoid and overcome them. Crises are characterized by a high probability of occurrence. Therefore, it is crucial to take measures aimed at monitoring the effectiveness of the performed project stages, which allows to early detect emergencies and to diagnose and overcome them appropriately. Taking these actions will not be possible without learning the essence of crises.

The subject literature offers various interpretations of crisis, and the majority of them refers to the whole company or the state. From the perspective of a project, a situation which arises from the accumulation of difficulties and which could pose a threat to the successful completion of project tasks can be such a deciding moment. This situation can also endanger the completion of the project and the achievement of its objectives, limit the time available to take remedial actions and surprise project stakeholders with its occurrence and create conditions conducive to strong pressure (Walas-Trębacz J., Ziarko J., 2011, p. 17-18). Many authors, including the ones above, emphasize that crises are associated with potentially negative effects and difficulties with regard to the effective implementation of the project and its unpredictability.

The results presented in this article relate to a survey conducted in April and May 2016. They primarily show the outcome of an in-depth study, which had been preceded by a basic survey carried out on a sample of 96 companies located in the *kujawsko-pomorskie* province (Poland). The sample size of the basic survey was calculated using the formula below (Kaczmarszyk S., 2014, p. 89):

$$n = \frac{N}{\left(1 + \frac{z^2 p q}{2E}\right)},$$

where N is the known population size, and  $q = 1-p$ .

In addition, the population (193,906 entities) comprised all companies registered in the Statistical Office functioning in the aforementioned region (the *kujawsko-pomorskie* province). In turn, the permissible error of the estimation ( $e$ ) was determined at the 10% level, the proportion index of the highlight feature of the examined population ( $p$ ) equalled 50% and the confidence level was 95% (for which  $Z\alpha = 1.96$ ). The sample structure reflected the population structure, *i.e.*, the researched group of companies comprised 92 micro-enterprises, three small, and one medium-sized enterprise (due to the low percentage of large companies in the general population, they were not taken into account in the study). The sample was drawn using the SPSS software (Statistical Package for the Social Sciences).

It is important to consider a crisis from the perspective of the factors that cause it, which fall into the external and internal categories. In this study, the respondents pointed to the factors that caused a crisis situation in the projects implemented by them. Nearly 67% of the crises that arose in the examined projects had been caused by the factors from the external remote environment category. Undoubtedly, the complexity, variability, and a low degree of predictability of the surroundings have a destabilizing influence on the conditions of the functioning of enterprises, which, in turn, can have a negative influence on the effectiveness of projects. The second largest group were the internal environment factors, which were indicated by every third respondent. The causes of the crisis on the side of the company resources are usually sought in incompetent management, which are then combined with, for instance, the lack of communication, improper supervision and control, staff turnover or an incorrect estimation of the project budget. Analysis of the responses indicates that all internal causes of the crises in the projects occurred in combination with the causes from the remote environment category. The situation arose most likely due to the changes in the external environment and the lack of appropriate competence allowing adapting to the existing conditions. The immediate environment factors, which accounted for 17% of the total, can be sought in the relationships with clients and business partners.

Typically, a crisis is not an accidental phenomenon. Before it occurs, some symptoms can be observed that indicate the possibility of its emergence. As indicated in an earlier part of this work, the diagnosis of the causes and the identification of the sources of the crisis form the basis for beginning the process of recovery from the crisis.

Bearing in mind the fact that project management in a crisis situation requires taking a number of actions that are ignored in business practice, a verification of the relevant phases was made in the context of recovery from the crisis.

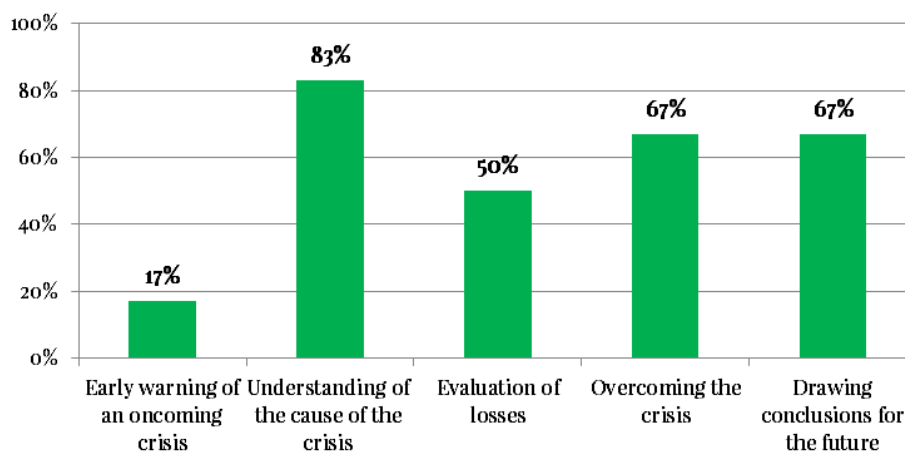


Fig. 1. The determined phases of a crisis

Source: Elaborated by the authors based on the data obtained from the study.

The results obtained explicitly show that the individuals that were responsible for the implementation of the researched projects did not endeavour to search symptoms or warnings of an impending crisis. The managers did not focus on capturing the warn-

ing signals emerging within the project as well as within the external environment. Therefore, the first phase of combating crises in the projects, *i.e.*, an early warning of the oncoming crisis, was neglected. However, the benefit was that almost 83% of the respondents sought to understand the crisis situation from the perspective of the problem that had caused it. The following activities are normally carried out as part of the second phase: identifying and assessing the causes of the crisis, determining the type of crisis and the aftermath, determining the stage of the crisis, specifying stakeholders to the crisis, acknowledging the crisis by the management and all project participants.

As reported in every second project, the estimation of losses was carried out. At this point, it is important to build scenarios, work out a crisis-management plan, appoint a crisis team, set the budget, schedule activities, and determine those elements of the system that will be subject to change. In the same group of projects, *i.e.*, 67% of responses, steps were taken to terminate the crisis and draw conclusions for the future.

#### ACTION TAKEN IN CRISES

In a crisis situation, it is necessary to take steps that will bring the desired results. Sometimes a crisis is of a medium or long duration and is characterized by a slow but gradually increasing intensity. The management has then time to take appropriate action unless they overlook the signals. However, sometimes it happens that during the project execution a sudden crisis hits that is of short duration but high intensity, leading to serious effects (Goodman J., Marshall J. P., 2013, p. 348).

Certain procedures or contingency plans for coping with crises had been developed prior to the commencement of the project in almost 67% of the surveyed projects. As a result, when a sudden and quickly developing crisis hits, the team has a better chance of early intervention, reducing the high level of destruction and alleviating the negative effects of the crisis. In almost a third of the projects, procedures or contingency plans were worked out during the crisis.

Half of the respondents appointed a leader that was to supervise the measures taken to eliminate the crisis. In every third project, in turn, a committee composed of a group of top managers from within the organization was set up in order to coordinate anti-crisis measures within the project. For two projects, a leader was appointed along with the group. In 67% of cases, the project manager took action to optimize costs as part of the measures aimed at limiting the effects of the crisis.

Cost optimization is a clear example of the activities undertaken under the adopted remedial strategy aimed to stabilise the crisis, which is in the long term to improve the situation in the project implemented in the context of finance and competition (see: Górska-Rożej K., Rożej A., 2014, p. 207-208). In nearly 17% of the projects, ongoing observation of the environment was reported. It seems necessary to emphasize that this is an element which together with the detection of warning signals (indicated by 33% of the respondents) should be implemented on an ongoing basis. Regardless of the implementation phase of the project and the phase of a crisis situation, it is important to look for the symptoms and observe the reaction of the environment to the existing phenomenon to be able to adjust activities taken and crisis strategies implemented.

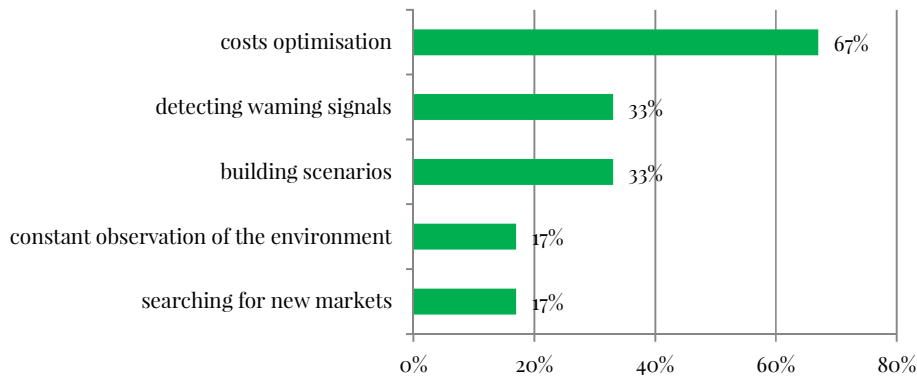


Fig. 2. The measures taken by the project manager aimed at limiting the effects of the crisis

Source: Elaborated by the authors based on the data obtained from the study.

When eliminating the crisis, the examined organizations, in fact, did not take action in the sphere of managing staff and entities relevant for the project. Only 17% of them did so. Also, during the elimination of the crisis, none of the organizations facing crises used external consultants, such as, for instance, crisis management experts. Companies dealing with projects and affected by some crisis coped with it using only its internal resources. On the one hand, it is a favourable situation since it allows the development of the house staff by taking challenges and action in unusual and difficult situations. On the other hand, providing a full and objective assessment of the situation requires looking at it from outside, which was lacking in the projects under study.

#### AFTER-CRISIS MEASURES

Early detection of crisis symptoms or external malfunctions in the organization's functioning as well as their appropriate analysis and assessment, allows preventing the development of a crisis situation. It is often necessary to take restructuring measures allowing restoring a state of balance and completing the project by obtaining its goals.

In almost every third project, there was a decrease in the number of orders resulting from the crisis, and consequently in one case expenditures were constrained, and in another the intensity of work was increased and wages were lowered. Also, in every third project, in the wake of the crisis, changes were implemented in the operation of the project team. In the first case, the focus was probably on detecting the early symptoms of amendments to make faster changes. In the second case, the change in the strategy of the team was probably primarily aimed at a better flow of information and adapting the time range of the project to the needs of stakeholders. Due to crises, in one project only the renegotiation of contracts with suppliers was carried out, in another only spending was constrained. In none of the analysed projects the company faced the need to reduce employment, became insolvent or had a problem with obtaining credit because of debt.

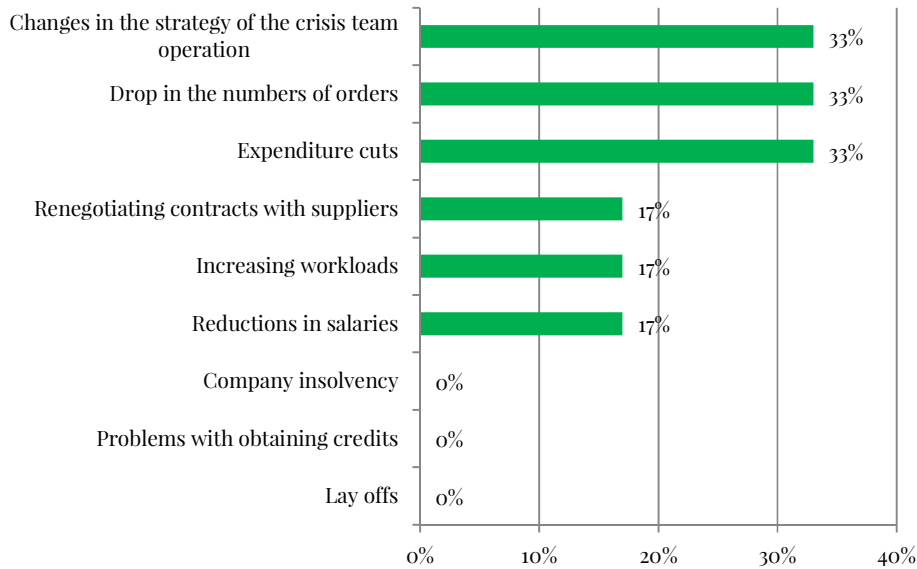


Fig. 3. The most significant effects of the crisis in the implemented projects  
Source: Elaborated by the authors based on the data obtained from the study.

Respondents were asked to indicate the amount of financial losses, which were caused by the crisis hitting the project execution. In every second company, there were no financial losses at all caused by the crisis. In another two companies losses did not exceed PLN 10,000. In turn, the fourth project saw financial losses ranging from PLN 50,001 to 100,000. The greatest financial difficulties among the analysed entities were reported by the second project, in which the amount of financial losses ranged from PLN 100,001 to PLN 250,000.

An important consequence of crisis in projects is a decline in the organization's reputation, which may translate into a decrease in income and financial losses. Half of the respondents reported that they had not suffered from a decline in reputation. A slight decline in reputation was indicated by the representatives of the second project. A moderate decrease was recorded in the case of the crisis affecting the first project, where the order was not completed, as well as in the third one in which the problem was the lack of funds for all projects being implemented. At this point, project managers along with other company staff are accountable for regaining customer confidence, which should constitute one of the major anti-crisis measures.

It is worth noting that in all surveyed projects, in spite of the crisis, the tendency of organizations to keep implementing further projects remained unchanged.



## CONCLUSION

Observation of today's crisis realities in projects and analysis of the subject literature and business journalism lead to the conclusion that a crisis constitutes a serious threat to project implementation. Companies ought to gain knowledge in that area and, if necessary, use it in the future. Crisis is a good time to take corrective actions relative to the project, due to the consent and full acceptance given by the team members. Potential benefits of the effect of the crisis may materialize in the project, when the project manager along with the project team learn to observe the surroundings and analyse the crisis symptoms. In addition, the way in which the project manager copes with the crisis largely depends on the knowledge, skills and competences possessed by him/her and the whole team. At this point it is worth paying close attention to one important aspect. Crisis management in projects is one of the most important areas of ensuring the effective achievement of project objectives. However, it is usually applied to the so-called 'hard aspects' of a project, such as, for instance, time, costs, and quality. Crisis management in projects in the context of the human sphere, *i.e.*, project managers, project team members, and stakeholders, is currently seriously neglected. We must bear in mind the fact that these people are responsible for project success. The article attempted to partially fill this gap. It was also stressed that crisis is an emergency situation that necessitates taking action under time pressure and under superiors' control, which is conducive to making errors. For that reason, the respondents of the surveyed entities recognized that the most important features project team members should display is professionalism, as well as the ability to operate efficiently under varying conditions.

Crises developing during the implementation of projects do not usually happen by chance and do not develop in a short period of time, either. Typically, they develop gradually, sometimes even systematically, in the wake of a number of events combined by the cause-and-effect relationship. The resulting possibility of an early diagnosis of the nature and sources may be a condition for effective remedy. The knowledge and analysis of the conditions conducive to a crisis situation are also crucial. The proof to the above statement is the fact that the vast majority of respondents admitted that their crisis was predictable. It was necessary only to identify and analyse the signals that were coming from the remote external environment. Unfortunately, the respondents admitted that preventing this difficult situation turned out to be impossible. It may have been resulted by an inadequate flow of information between the project team and external stakeholders. Under such circumstances, a company can only seek to alleviate the effects of the crisis. It is important that the project manager does not disregard the existing state of affairs and attempts to efficiently identify the reasons of its emergence, and then develop possible scenarios of overcoming the situation to effectively implement the best of them. The respondents admitted that their project teams had contingency plans in place and that they had been developed prior to the project beginning date.

Crisis may also cause a decline in economic activity of the conducted undertaking and reduce its competitiveness. An inadequate response of a project manager to the crisis, which manifests itself in making erroneous decisions, can really weaken the company and accelerate the escalation of the crisis. In the projects examined, the emergence of a crisis caused serious financial losses, which undoubtedly contributed to the deepening of the problems when implementing the project.

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