

Du an Bobera

Project Management Organization

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Summary

In our work we will try to show, according to recent and by scientific publicity accepted attitudes, three basic organizational forms for project management, with their description, characteristics, advantages and disadvantages, as well as to try to identify the cases in which some of them could be applied. In this sense we will analyze the functional organizational type, where the project is a part of functional enterprise organization, clear project organization and combined or matrix system. According to the fact that each one of the models mentioned above has its own advantages and disadvantages, in this work we will try to pre-sent the procedure for choosing which model will be the most appropriate for implementation in particu-lar cases.

Key words

Project and People Management, Staffing

Introduction

An enterprise, if successful, has a tendency towards growth and development, it employs and trains qualitative staff, provides resources and develops the organizational structure. In general, the structure is focused on specialization of the group staff. If the organizational structure is unable to perform some task, the tendency of its rejection will appear. When such a situation becomes dangerous for the firm, the increasing pressure will be exerted on reorganization.

Every elementary book dealing with management problems includes the elements of specialization, and especially always popular functional organizations dividing and organizing the enterprise to product lines, geographical position of some parts, on the basis of production process, types of consumers, and so on. In addition, large companies can be organized in auxiliary segments, doing it often according to different methods at different operative levels.

Recently, several different forms of project organizations have appeared in professional literature, as "project management", "organization management by means of projects", "project-oriented firms", and so on. The forms are described as "applying project management practice and its tools in the enterprise".

As a potential source of these organizational forms, fast increasing software industry is identified that has developed the long practice in developing big software application programs, decomposing them into the series of comparative small software

projects. When all software projects are complete, they integrate into the whole applicative system.

This has caused that many enterprises, non-software similar to software ones, have accepted the system by means of which they can keep on working their traditional work, already done in the traditional way, in the way which will not change the form of project realization. There are many reasons for the fast increase of number of project-oriented organizations, but in the literature they are usually grouped into four general fields:

- The first cause is speed of the answer to the increasing rhythm of market changes determining the speed of answers to these changes (they can be both danger and chances), as an absolute condition for successful competitiveness. In addition, from the aspect of competitiveness, it is not any more acceptable development of a product or service in the traditional way where in this process it passes from one functional field to the other one without evaluating that it is ready for production and sale. In today's business ambient, realizing the possibility to appear in the market with products or services is considered one of the biggest competitive advantages. The application of modern organizational forms, as well as contemporary software tools has drastically reduced the time of developing new products, and the consequence is a drastic reduction of product living cycle. Similar to this, the possibility of broadening modality has been created in many fields, in

essence the same product; thus, it suits to the consumer's wishes even more.

- Development of new products or services, almost always requires the application of knowledge from different and specialized fields of knowledge. Unfortunately, combination is specific for every field. It means that there is a need of creating ad hoc teams composed of experts needed for that case and which will be disbanded when the work is finished.
- Another characteristic of the contemporary business environment is a strong development and expansion of technological possibilities, causing, as one of the consequences, destabilization of the organizational structure. This is a tendency in different economic and non-economic fields; we consider it unnecessary to list, because it is an obvious fact in all the sectors, for example, from banking to ferrous metallurgy. This is especially present in developed market economies in Western countries, but we consider that this orientation of changes will be generated in our economy by different processes in the future which has already begun by the process of privatization. The process of uniting, some of the enterprise's parts, becomes independent, reducing management levels, and similar serious disturbances of the current practice will require the broad system of answers.
- Transfer of non-routine activities of the enterprises, conditioned by market and technological changes (with a view of using chances and evading danger) in projects, enables forcing the obligations to perform activities as unavoidability of project planning, their integration with all the necessary and related activities and enabling constant reporting about the progress of realization of these activities.

Transfer of a non-profit ambient into that where projects are used for realizing specific tasks, i.e. to the complete project-oriented organization represents for top management an extremely complex transition which should be realized. There are many reasons for such a statement.

This process takes time. Even in case when all the necessary resources are collected and when there is complete readiness of management for such a change, it is still difficult.

Further, we shall try, in accordance with the

recent and professional attitudes, to represent three basic forms of the organization for project management, with their description, characteristics, advantages and disadvantages, as well as to try to identify cases where some of them can be seen.

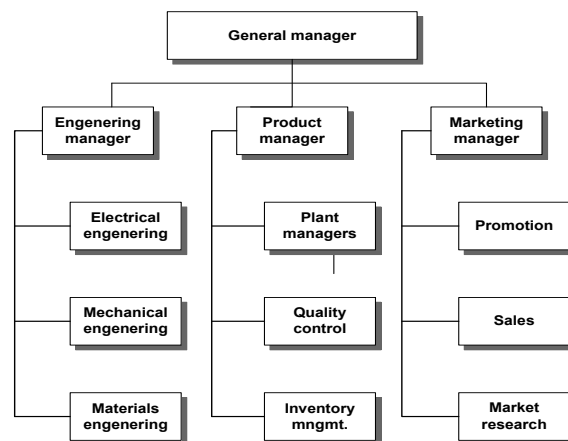
Models planned to be elaborated are:

1. Functional type of organization where the project is part of the functional organization of the enterprise;
2. Pure project organization, and
3. Combined or matrix systems.

1. Functional type of the project management organization

This type, as one of the possible forms of realizing a project in the organization, represents the possibility of its realizing in one, existing, functional part of the enterprise.

Figure1 Functional type of the project management organization



Advantages of this model of realization can be, generally speaking, found in the fact that, in this case, functional dimensions of the existing organization are used. The major advantages of this model can be grouped in the following way:

- There is a maximal flexibility in using the staff. In case that the correct functional department of the organization is selected for realizing the project, the department will have the primary and administrative base for individuals with technical knowledge in the fields relevant for the project. They can be temporarily engaged in cases when their contribution is necessary and then they can be returned to perform their regular activities;

- Some experts can be engaged in many different projects. With the broad basis of the technical staff available to the functional department, if it is the case, the people can be easily moved from one project to the other one.
- Experts in the department can be grouped to exchange knowledge and experiences they possess. Thus, the project team has the access to any technical knowledge existing in that functional group. Further, it can be the big resource of synergic solution for solving some technical problems;
- Functional departments also serve as a basis of technological continuity when some experts decide to quit the project team, and the enterprise, too. It is equally important, both in technological continuity and in the continuity of procedural, administrative and other policies which will result when the project continues in that department of the home enterprise.
- The last, but not the least important is that the functional department possesses the organized way of advancing individuals as experts in their functional fields. The project can be an opportunity for promotion all those who took part in its successful work, but the functional department is their home base and the focus of their professional advancement.

It is normal that so described way of project carrying out, besides all cited advantages, has also its disadvantages which can be grouped as follows:

- The essential shortage of this way for project carrying out is that the client is not in the center of activities and attention. The functional department, namely, has its own major work which, the most often, has an advantage over the work within the framework of the project, therefore, the client's interests are pushed into the background;
- Functional departments have the tendency of orientation to specific activities associated with their activities. This is not an unimportant problem in order to realize the project successfully;
- Sometimes, in projects carried out by this form, neither individual is completely responsible for the project. The lack of this precision usually means that the project manager is authorized and responsible for

some part of the project, but some other person is authorized for other parts. This is obvious lack of coordination which is very important in realization;

- The same reasons bring to the lack of coordinated efforts which can have tendencies to reduce the responsibilities for the client's needs because there are several management levels between the project and the client;
- There is also a tendency of suboptimal execution of the project that some people working in the department where the project is realized very carefully and efficiently, are interested in realizing some segments of the project and so neglecting and even ignoring, more or less, the other ones;
- Motivation of the people working in the project has a tendency to grow weaker because the project is not paying appropriate attention and some team members can understand assigning their activities in the project as going astray from their basic activities;
- This organized approach does not enable the holistic approach to the project. Complex projects, technically considered (development of complex and sophisticated products, and similar) cannot be qualitatively designed by this method. Mutual inter departmental communication and necessary knowledge exchange is insufficient.

2. Pure project management organization

The pure project organization is at the other end of the spectrum of organizational possibilities for project management. The essential characteristic of this approach is that the project is separated from the home organization. It becomes an independent segment with its special technical staff, its own administration, connected with the home organization by weakened links which are manifested in the periodical reports on the project advancement and some exceeding. When we talk about the way of work performance, there are different solutions in business practice. Some home organizations issue rules of administrative, financial, staff and control procedures in detail. Contrary to this, some home organizations give the project an absolute freedom. The previously cited points to the fact that there is a wide spectrum of

possible organizational varieties between these two extreme modalities; the choice depends on many factors. Figure 29 is a graphical illustration of the model of a pure project organization for project management.

The pure project organization has its advantages and disadvantages, identically as the functional model of project management organization.

The advantages of this approach to project management can be classified as follows:

- The project manager is fully responsible and authorized for the project. Although he has to report senior management of the home organization about the advancement of project realization, the complete labor is allocated to the project.

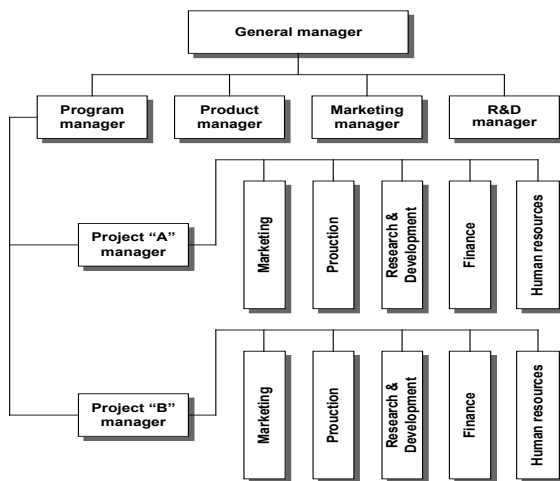


Figure 2 Pure project management organization

- The complete labor, engaged in the project is directly responsible to the project manager. In this case, permits and advices of department bosses are not necessary. The only director in this model is the project manager;
- In case of realizing complex projects, when some phases are moved from one to another functional department, communication lines are shortened because the whole functional structure is bypassed, and the project manager communicates directly with the top management structure;
- If several, similar projects are realized successfully, the pure project organization can enable permanent, more or less expert staff which can develop necessary skills for some technologies. This can be very

important because, in case these groups exist, it can be a good reference for the organization and it will attract consumers;

- The project team, having a strong and its own identity, has a tendency of developing the high level of communications and the exchange of knowledge and experience among its members;
- As the authority is centralized, the possibility of fast decision-making is increased. In this way, the organization is enabled to react fast on the demands of clients or top management;
- The rule of the united management is respected. The value of particular organizational principles cannot be exaggerated, and the quality of subordination is doubtlessly bigger when this subordination is done by one person;
- The pure project organization is structurally simple and flexible; it enables its relatively simple application and understanding;
- This type of the organizational structure has a tendency to support the holistic approach to the project. The tendency of focusing and optimization of project segments, relating to the whole project, can often result in technical errors in the project.

As any model used for carrying jobs, generally speaking, so this form of project management has its advantages and disadvantages. We have previously pointed to the very important advantages of the project organization. Similarly, this form has very serious weaknesses. In addition, we shall point to the disadvantages of this organizational form of project management:

- If the home organization has taken several projects at the same time, it is logic to expect that every of them (if the same organization model) be completely equipped and supplied by all resources. This may double or tripled, as a consequence, the efforts in every fields, from the office staff to the most sophisticated (and most expensive) units for technological support;
- In essence, the need to ensure the accessibility to technological knowledge results in the attempt of exaggerated accumulation of equipments and technological supports with a view of ensuring that they will be available in every moment when it is needed. Therefore, the people with critical technical skills can be

engaged in the project longer than it is necessary. Similarly, there may be a tendency that the project manager wishes to keep them in the project longer than they should be in order to protect them from possible bad events;

- Keeping the project out of the technical control of the functional department may have its advantages, but also serious disadvantages, especially in cases when it belongs to the fields of “high technologies”. The functional departments are still the base of technological knowledge and it is not so simple to determine that only some of them can be part of the pure project team;
- In the pure project organization, we have already cited, during defining one of the characteristics of the project, the project has its own independent life span or cycle, with the beginning and the end. The team members are strongly associated with the project and among themselves. The increase of division “we – they” deforms the relationships between the team members and the other team members and the relations in the home organization. Rivalry among friends can become keen or hostile competition;
- At the end, but is not the least important. At the beginning, we have pointed that the project has the life span with the beginning and the end. Within this context, there is a question: what to do after the project? It is necessary to emphasize great uncertainty of the team members’ future after finishing the project, their further engagement, equipments, and so on.

3. The matrix form of project management organization

From the above-cited, it is obvious that considered forms have their serious advantages, each of them separately, which qualify them as acceptable, but there are also serious disadvantages. Trying to collect advantages of the pure project organization with determined and desired characteristics, as well to avoid disadvantages of any of them, a matrix organization for project management has been developed. In essence, careful consideration of all the cited, as well as all that is appearing in practice, draws a conclusion that the previous two forms, functional and matrix, represent the extremes on the spectrum of varieties of possible forms for organizing project management. Thus, the matrix

organization can be considered as the combination of these two forms so we can find in the professional literature that it is about covering the pure matrix organization over the functional departments in the home organization.

The fact that it represents the combination of two extreme forms generates the existence of different modalities and which will be differentiated if it is more similar to functional or pure matrix ones. If the form of project management organization is more similar to the pure project organization of project management, then we talk about the “strong matrix organization”. If contrary to this case, then we talk about the “coordinating”, “functional”, or weak matrix organization more similar to the functional one. As there is the middle in every dilemma, there is the so-called “balanced” matrix organization being between these two. In the project practice of case studies in this field, there is unlimited number of varieties of organizational forms, between these extremes, and the primary difference between these forms is determined by the level at which the power of decision-making is, i.e. it is concentrated in the project or functional manager.

Methodologically considered, it is easier to explain the “strong matrix organization”. Instead of standing aside in relation to the home organization, as in case of the pure matrix one, it is not separated. This form of the organization is illustrated in Figure 3.

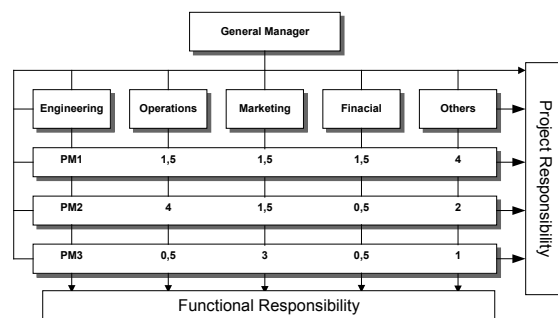


Figure 3 Matrix organization for project management

The matrix organization is balanced between these extremes which is nothing else but the balance of the cited approaches where there are many different mixtures of project and functional responsibilities. So, for example, in cases when projects require the group work, before all, it is usual to prefer the group work to their transfer in projects.

As for the previous models, the matrix approach also identifies some advantages and disadvantages.

Advantages can be classified as follows:

- The project is paid the central attention, as with the pure matrix organization. The individual, i.e. the project manager, takes over the full responsibility for project management, its realization as planned, within the framework of in advance defined budget, specifications and quality;
- The fact that the project organization includes functional departments, temporary taking over workers and their skills from these departments, draws the logical conclusion that this enables the use of all resources from all functional departments. This is especially important when many projects are carried out at the same time and experts for all departments are available to all projects; it drastically reduces the multiple resource use, as with the pure project organization;
- Here, the team members are not so much afraid for their destiny after finishing the project, even in case of their strong association with the project because they are the personnel of the home department;
- The answer to the client's needs is equally fast as with the project approach, but the matrix is more flexible because it is included into the organization which already functions and it has to adapt to these needs;
- With this type of organization, management will have the possibility to use the existing administrative staff. The result of this is the consistency with policies, procedures and practice of the existing enterprise which will be saved.
- In case of simultaneous realization of several projects, the matrix organization enables better resource use, from the aspect of the company on the whole. This, holistic, approach of considering the enterprise, as an entirety, enables the supply of needed resources for the period which enable the optimization of using resources of the whole company.
- Contrary to the pure project organization representing the extreme in the spectrum of possible varieties, the matrix organization tries to include the wide field of these extreme approaches.

These cited advantages of the matrix approach sound very strongly, but disadvantages, which will list, are also very serious and they are mostly

manifested in the conflict of two diametrically supposed principles.

- In the functional approach of organizing the project, all the power for decision-making is doubtlessly concentrated in the functional department while in the project approach, it is with the manager. This power, which can be very important in relation to the project destiny, is very balanced in the matrix approach. If there is any doubt about the responsibility, the project suffers. If there is uncertainty about the positive result of the project, the struggle for the prestige according to the question "who is responsible for praise and glory" can increase;
- We have already cited that one of the advantages of this approach is manifested in the possibility to carry out several projects simultaneously and control time, costs and performance quality. This possibility, however, has its shortages. The set of projects must be considered on the whole although it is very difficult. In addition, transferring resources from project to project with the need to satisfy different term plans of every project can specially increase conflicts between project managers. The consequence of this cannot be optimal performance of objectives of the organization;
- Similar to the existing problems relating to the end of the projecting, they are present in the project organization and they cannot be simply evaded because it is the work with the beginning and the end.
- The project management controls administrative decisions in matrix organized project realization; technical decisions are controlled by the responsible manager in the functional department. This distinction explained in the handbook in this way sounds logical and understandable, but it can be very delicate in the concrete project management of job distribution and authority in decision-making and division of responsibilities. The capability of the project manager to negotiate about all resources for technical support and their delivery on time can be of the key importance for the whole work;
- This management model directly violates one of the principles of the management-unity command. The staff involved in the

project has at least two managers, their functional, as well as permanent, and the project manager, whose function stops when the project ends, but its realization is in progress and he is the key manager. This represents a very serious problem.

4. Conclusion

After all the previously cited, we can put the question what model to choose. In other words, the question is how we should establish connection between the enterprise and its business which exists in a definite time having the characteristic of continuity, on the one side, and the project having the characteristic that it is unique and temporary. In any case, it is necessary to consider the nature of the potential project, characteristics of different projects, advantages and disadvantages of every organizational form, different preferences in the culture of the home organization, as well as to reach the best possible compromise.

It is generally considered that the functional model would be the best choice for projects where the major focus is oriented on the qualitative technology application, not on cost minimization, making determined plans or fast response to changes.

If the enterprise is engaged in realizing many and similar plans, the pure project form can be preferred. The similar thing can be suggested in case when the enterprise is faced with one, very specific, unique task (project definition, in essence) which is not appropriate for realizing in none of existing departments of the enterprise, i.e. new product development.

However, when the product requires the integration of inputs from different functional fields and which understands sophisticated technology where experts should not be engaged the whole project time, the matrix structure could be recommended.

Disregarding the above-cited, it is considered that selecting the model for realizing the project should pass the following procedure:

- Define the project with defining the objectives which will determine the final project evaluation;
- Define the key tasks associated with every objective and define organizational units of the home organization which can serve as places for task performing;
- Group the key tasks with every objective and define jobs in detail;
- Determine organizational units responsible for performing these jobs and units for mutual cooperation;
- Make a list of specific characteristics or evaluations associated with the project, as, for example, the level of needed technology, possible length of lasting and project scope, all possible problems with possible individuals who can be included in the project, previous experiences of the organization in realizing projects, and so on;

Select the model based on the above-cited, taking into consideration all the factors pro and contra.

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Du an Bobera, Ph.D.

University of Novi Sad, Faculty of Economics Subotica
 Segedinski put 9-11
 24 000 Subotica
 Serbia

Email: bobera@ef.uns.ac.rs
