

Multi-Project Management

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Multi-project management (MPM) is a highly contemporary issue for the conceptual design of an improved (multi-) project organization. It is based less on a uniform standard but rather on a variety of ideas for improved and integrated project work. Existing approaches vary in relation to their areas of application, consistency, and operability through which the creation of a uniform multi-project management design only partially exists (Grübler 2004).

Organizations are now facing the challenge to realize diverse and complex projects such as the introduction of a quality management, the implementation of multiple valuations and surveys of personnel, finance controlling, IT projects, and process optimizations.

Multi-project management can be the concept utilized to respond to these challenges. The purpose of this work is to demonstrate how this concept must be designed and used to support the project work and how it can result in an increase in efficiency and significant cost savings within organizations.

1. Introduction

Nowadays, one of the biggest challenges in project management is finding an answer to the question of how one can realize a variety of projects in an efficient and timely manner. The problem is that this challenge is hampered by many external and internal factors. Resources are not always available, we face increased market competition, both at a national and international level, and the pressure to perform as well as the cost factors increasing steadily.

Now, the question arises what can we do to counteract these problems? And finding an answer to that question is exactly what this work is about. The goal was to design a concept of multi-project management which is applicable, marketable and most notably efficient. In order to accomplish this goal, the project management itself was contemplated holistically, and the practical applicability of the concept was considered as stringent. Due to the fact that the complexity of individual projects has been tremendously increased during the last years, it is logical

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consequence that companies above a certain size must use a standardized methodology which will ensure a superior steering, coordination, and control of their projects. And such a holistic view of project work can be achieved by the implementation of multi-project management which should be clarified in the course of this work.

2. Problem Statement

This work is concerned, as the title of the work implies, with the problems of how one can integrate multi-project management, and of how one can make the concept itself workable. This involves answering the question of where should the multi-project management be situated in the organizational hierarchy (capacity for the integration) and on what components should the conceptual shape/structure of MPM be composed so that this concept "works" (functional capability).

The present study deals therefore with an analysis of appropriate tasks to be processed by the multi-project management. Both, the individual project approach and its associated issues as well as the basic sphere of activity of the multi-project management to the existing organizational units - in terms of the aspired integration - play an important role, because the sphere of activity of the MPM should help to eliminate, or at least to decimate the problems which may/definitely arise within the individual project management. Furthermore, these tasks must be set in a way which ensures that the MPM itself will be functional. As there are almost none identical-looking statements in the literature with regard to the task distribution of the MPM, this is one of the problems which has to be addressed in this work (Kunz 2007).

Another problem which has to be addressed arises from the distinction made in the literature about the definition of roles within the multi-project management. The description of roles is widely represented in the literature. However, due to the fact that different authors have different opinions about the role description, the problem arises that there is no consensus about what role has to be responsible for what task(s). This in turn leads to a subjective and oftentimes illegitimate allocation of tasks which does not guarantee an efficient workflow within the MPM. Similarly, the allocation of names of the respective roles is often different, so that there is again a contrary formation of the various players. But a common understanding about the allocation of roles between the project- and multi-project- initiative is very important, because it makes a substantial contribution to the functioning of the MPM. Only if there is a clearly defined role description, the interplay of all multi-project management parties can be guaranteed (Lomnitz 2004). Therefore, the most important roles and a description of their duties will be stated in this work.

3. Disambiguation and Definition of MPM

In the literature multi-project management is defined amongst others as “an temporal indefinite management tool that performs the implementation of all conceptual and informational activities as well as the coordination of duties which support the management and control processes of the entire project portfolio, thus creating favorable conditions for the successful implementation of individual projects.” (Kwasniok 2007, 18.)

Accordingly, the individual project approach is explicitly included in this definition as it has to correspond with the overall multi-project management initiative in order to achieve the desired steering and control effects. Only this holistic view of the importance of individual projects in conjunction with the entirety of all projects enables an efficient and effective multi-project management.

Building on that, this work describes the term multi-project management as a holistic approach that improves the project work of a company. This approach is built on the basic tasks of the multi-project management, involves a clear division of roles and allows a (permanent) improvement or development of the multi-project management itself. This means that the MPM can already be conceptually designed by some basic conditions which again can be enriched through company specific innovations and adaptations. Thus, the multi-project management is understood as a concept that can adapt to the dynamic realities of our time and of the company, and is therefore able to make significant contributions to an improved, holistic project work.

Finally, multi-project management can be therefore defined as "a concept which allows through a detailed consideration of each individual project, a superior planning, steering and controlling of all project that are done within a company, which in return accelerates the efficiency and the effectiveness of the project management itself."

4. Problem Analysis and Method of Resolution

As already mentioned in the problem statement, it is important to identify individual problems that may arise within the individual project management in order to deduce the fields of activity of the multi-project management. It should be noted that the individual project management is in fact a subject matter of MPM. However, the individual tasks which arise in the actual project management do not fall naturally into the remit of MPM. This means that the tasks of multi-project management are generally stemmed from the (individual) project management problems. However,

there must be a draconian separation of the subject areas of the project- and the multi-project-initiative, because multi-project management should contribute to an increased efficiency and effectiveness of the project work. But these improvements can only be achieved when the multi-project management starts, where the individual project management reaches its limits or when problems arise which require a higher-level of control. Both, multi-project management and project management are complementary. However, the areas of activity but must be considered in isolation insofar as the multi-project management will never be engaged in the actual tasks of the project management. This statement will be justified in the course of this work as this mutual interplay between the project- and the multi-project management initiative will be clearly described and demonstrated.

4.1 Analysis of the Allocation of Tasks of the MPM

The following table shows in the first column individual problems which may arise within the project management. The second column states the necessary MPM measures which will help eliminating the presented problems of the project management and the last column includes the name of the respective MPM division responsible for the correct implementation of the individual tasks.

Table 1. Problem areas, MPM duties, and MPM divisions

Project Management Problems	Duties of the MPM	Responsible MPM division
Project selection	<ul style="list-style-type: none"> Implementation of an objective project selection process Project evaluation on the basis of this approach 	MPM-Planning
Overrun of budgets	<ul style="list-style-type: none"> Implementation of an approach which calculates uniformly the project costs per project Monitoring the compliance of this process Calculating the overall project costs of the company Determining the total project budget in consultation with the company management 	
Disadvantageous allocation of project resources	<ul style="list-style-type: none"> Determination of clearly defined decision-making authority with regard to resource allocation Implementation and execution of a superior capacity planning 	
Prioritization of projects	<ul style="list-style-type: none"> Implementing a project portfolio management Execution of the project portfolio management in terms of a superior steering and controlling of all projects Evaluation and visualization of project interdependencies 	MPM-Prioritization
Missing/No risk analysis (and its impact on the project landscape)	<ul style="list-style-type: none"> Implementing a risk management Safeguarding the adequate execution of the risk management 	
No control of the project landscape	<ul style="list-style-type: none"> Execution of regular controls of the entirety of all projects through the deposit and usage of relevant data 	
No control of the progress of individual projects	<ul style="list-style-type: none"> Implementing standardized reporting processes Controlling the existence and completeness of the respective report 	MPM-Control
No efficiency control	<ul style="list-style-type: none"> Implementation and execution of an efficiency control for each individual project 	
Missing/No decision making power	<ul style="list-style-type: none"> Setting its own decision-making authority in consultation with the company management 	MPM-Steering
Lack of know-how transfer	<ul style="list-style-type: none"> Implementing an enterprise knowledge management 	
No information supply	<ul style="list-style-type: none"> Implementation of an appropriate information system (MPM tool) that enables the acquisition of data 	
Lack of skill among the project participants	<ul style="list-style-type: none"> Staff training in order to make it clear how to use the new documents and the MPM-tool 	

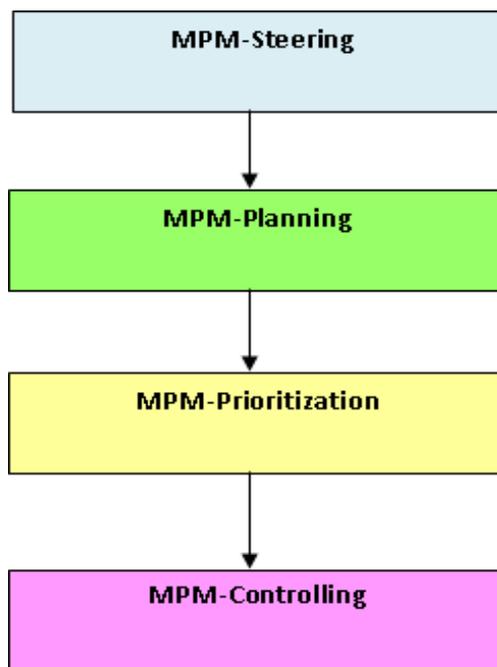
Source: Nicole Bircks, 2009, in dependence on Kunz, Strategisches Multi-Projektmanagement, 2007

4.2 Interplay of the MPM-Divisions

The interplay of the different areas within the multi-project management can be chronologically presented as follows:

1. In order to implement and to build the MPM-department the MPM-steering comes to the fore of needed actions.
2. Afterwards the necessary prerequisites of the MPM-prioritization are created through the MPM-planning.
3. The MPM-prioritization ensures the efficiency and effectiveness of the project portfolio and is supported by the deposited reports.
4. The MPM-control then ensures that the completed projects will get a final check, so that the "circle" of an efficient and effective project work is closed.

Figure 1. Functional MPM-Divisions



Source: own creation

5. Analysis of the Role Allocation of the MPM

In order to ensure a common understanding regarding the respective actors which occur in conjunction with the multi-project management, a description of the respective roles must be made. The role description is an important aspect within the multi-project management theme as an unclear definition of roles can lead to conflicts and reconciliation measures, which in turn can lead to a waste of time and energy (Adler-Sedalczyk 2005). Therefore, the question of what tasks and responsibilities the individual project team members should have, must be answered, because the interplay of all MPM players can only work if there is a clear delineation of all individual roles. Therefore, the individual tasks of the multi-project participants will be shortly described afterwards.

5.1 Duties of the Top Management within the MPM

Even with the introduction of a multi-project management, the top management is in their power to make decisions and is not restricted in giving instructions in any way. The company management ultimately decides which projects will be implemented and with what priority. Likewise, they can decide the postponement of larger projects (Lomnitz 2004). They also retain the final decision-making on continuation, suspension and removal of individual projects. As the multi-project management in direct contact with the top management, and as they can inform the top management of the current state of each project any time, the duty of the MPM incorporates giving advice and assistance to the company management.

5.2 Duties of the Multi-Project Executive Committee (MPEC)

This body has, unlike a "normal" steering committee, not the task of making a decision about a single project or program, but rather adjudicating upon priorities within the project portfolio and deciding on them. Their duties and competences should therefore include:

- Final decision on whether or not a project will generally be included in the project portfolio
- Prioritization of project proposals by dividing projects into project classes (priority A, B, C)
- Determining the composition of the (normal) steering committee for approved projects
- Determining project managers for respective projects
- Approval of budgets (the project portfolio budget/total budget will be approved by top management; the approval of certain amounts within the already approved budget is a duty of the MPEC)

- Superior approval of resources for project portfolios
- Decision-making in the case of resource shortages between projects, if problems cannot be solved by the MPM
- Conflict resolution among various projects, if they cannot be resolved by the MPM
- Supporting the implementation and development of the MPM

The relationship between the multi-project management and the MPEC is self-explanatory: The MPM provides the MPEC with relevant data/information so that this committee is able to make decisions.

5.3 Duties of the MPM-Manager

In the literature, tasks of MPM-managers are described very differently. Sometimes they are limited on only a few duties, such as the ongoing coordination and steering of the project portfolios, or they are presented in a way so far-reaching that the multi-project manager is responsible for almost all functions of the MPM-department.

At this point it is therefore proposed that the responsibilities of the multi-project managers are generally determined according to enterprise size, respectively to the number of projects to be coordinated. This will mean that in smaller companies, which want to control holistically a few projects, the scope of tasks of the multi-project manager has to be bigger, whereas in medium or large businesses his/her duties has to be restricted, especially because it has to be expected that in such companies the MPM department consists of a larger number of other employees who can take over some/many tasks for the multi-project manager. In those companies the multi-project manager therefore acts as a head of the department and has to ensure that its employees are properly managed. Among his duties as a supervisor he has to “ensure the achievement of the given and agreed objectives and has to foster the motivation of employees and ensure the preservation of groups led by them.”(Olfert 2004, 37.) So he certainly has the power which legitimized him to place orders and instructions.

But finding an answer to the question of what tasks he has to take over within the multi-project management itself is obviously of greater importance. Therefore, it is essential to ensure that the range of tasks assigned to him, is designed in a realistic and achievable dimension.

Notwithstanding the literature, this work sees the multi-project manager as a person who especially has to ensure the smooth running of his department. Specifically, this means that all areas of responsibility which have been determined in consultation with senior management must be initiated by the multi-project manager. Thereby, it should be irrelevant whether the multi-project manager does

some of these tasks personally or delegates them to his staff. Focus should therefore be on a successful implementation of the required sphere of activities for which the multi-project manager is held responsible. The multi-project manager is therefore responsible for both, the success or non-success of the introduction of the multi-project management as well as for the performance of work after the implementation.

To get this working, first of all the rules about the decision-making authority should be defined in collaboration with the company management as well as with the project organization. This task must be done personally by the multi-project manager, because only if these basic conditions are set out, including the "limits" for each area, the multi-project manager can start his work.

Ideally, the multi-project management should consist of the previously mentioned organizational units: the MPM-planning, -steering, -prioritization, and -control. Through this differentiation of organizational units it is obvious that the multi-project manager should not be charged with a variety of specific tasks, but rather has to ensure that these tasks will be done properly (by his staff).

However, there are some duties that the multi-project manager has to carry out in person. First, he must personally gather important information and needed decisions from its own employees, from employees of the project organization, from senior management as well as from the multi-project executive committee. Second, he has to mediate in conflict situations, for example between members of the MPEC, or between project participants, which will be mainly achieved by the neutrality and objectivity of his position. Furthermore, he also has to identify existing problems between different projects, to analyze the relationships within the project portfolio, and to prepare relevant information, so that the management or the MPEC can use them as a useful decision memo (Adler-Sedalczyk 2005).

It is apparent that the multi-project manager should be seen as a person, who accumulates all of the departmental information. He is the coordinator of the project work and enables the interplay between management, multi-project executive committee, project organization, and the MPM department itself. He is the one who creates with the help of his staff a well-functioning multi-project management, provides all necessary information and establishes all standards for the further development of the MPM. He is: the initiator, coordinator and decision maker within the multi-project management.

5.4 Duties of the MPM Personnel and Project Office Staff

The areas of responsibility of employees who work in multi-project management department are not described in the literature, except those who work in a so-called project office or the department of project management. The reason for this is probably because there is no concept of multi-project management as it is described

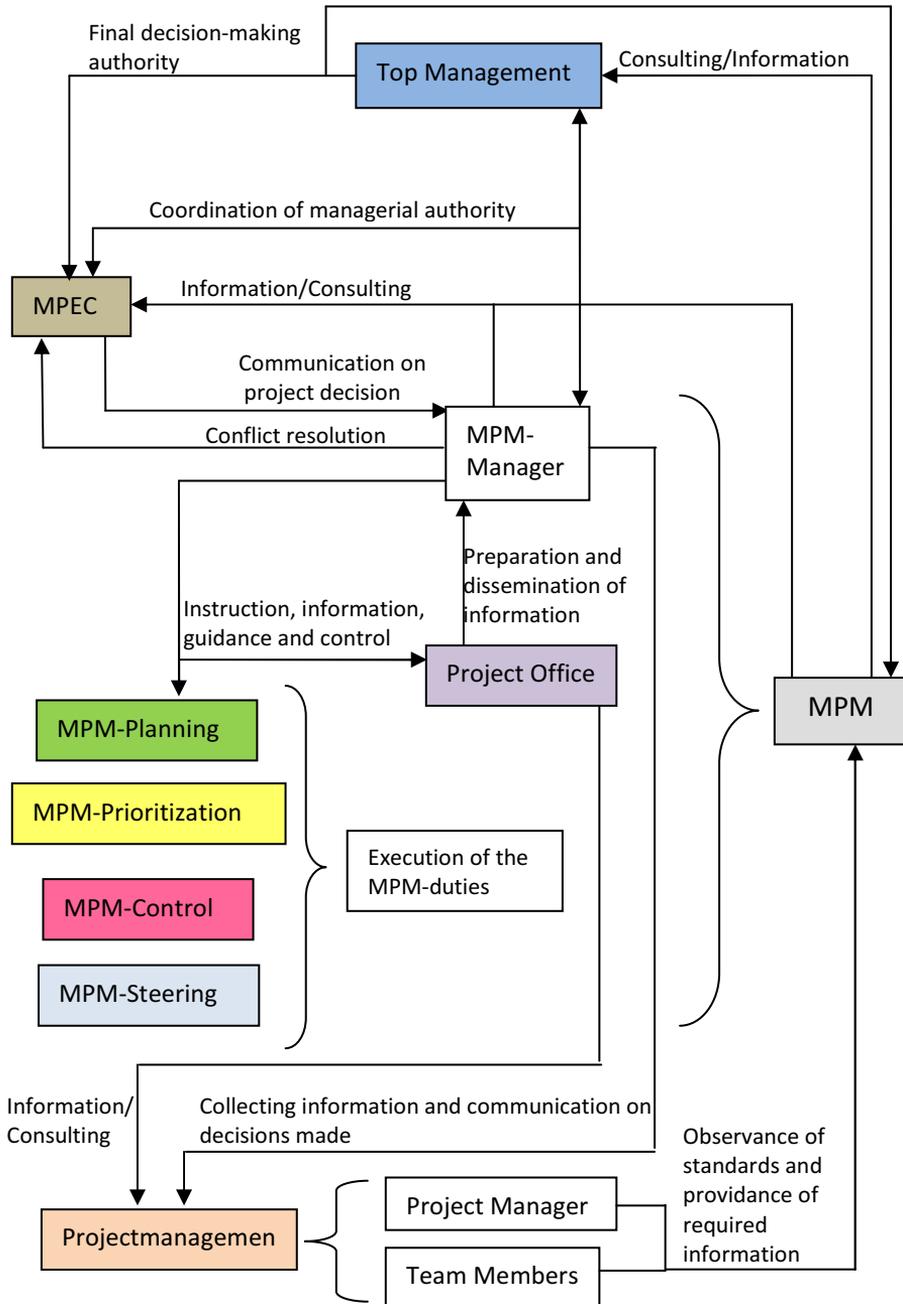
in this work. The duties of those employees who work in the MPM-department result from the previously described scope of tasks in the table. For example, those employees who work in the MPM-planning are obligated to take over the tasks of the division “MPM-planning”, and those who are work in the MPM-prioritization have to take over the duties described therein, etc.

The project office, however, should also be seen as a permanent facility within the multi-project management department, which takes over the administrative activities for this area. This office should on the one hand ease the workload of the multi-project manager through the providence of necessary information, such as those which the multi-project manager intends to submit to the MPEC as a basis for their decision making. On the other hand, the project office should support the project manager as well as the project staff by providing assistance to project applicants in formulating their requests, or by answering questions regarding to the use and recruitment of data of the multi-project management tool. The project office can therefore be seen as a service unit that provides project information such as the current status of project applications and provides information about the current stand of a project. Furthermore, another administrative task of the project office is the provision and maintenance of a project management manual (Pfetzig-Rhode 2001).

5.5 Results of the Role Description

The main roles of the multi-project management and their respective duties have been described in the previous section. It is apparent that multi-project management builds on a close collaboration between the actors and that their effectiveness can only thrive if each person is familiar with the tasks assigned to him/her, edits them properly and knows the boundaries of each work area. The following figure will demonstrate the interplay between the different roles and their duties:

Figure 2. Interface of MPM Participants



Source: own creation

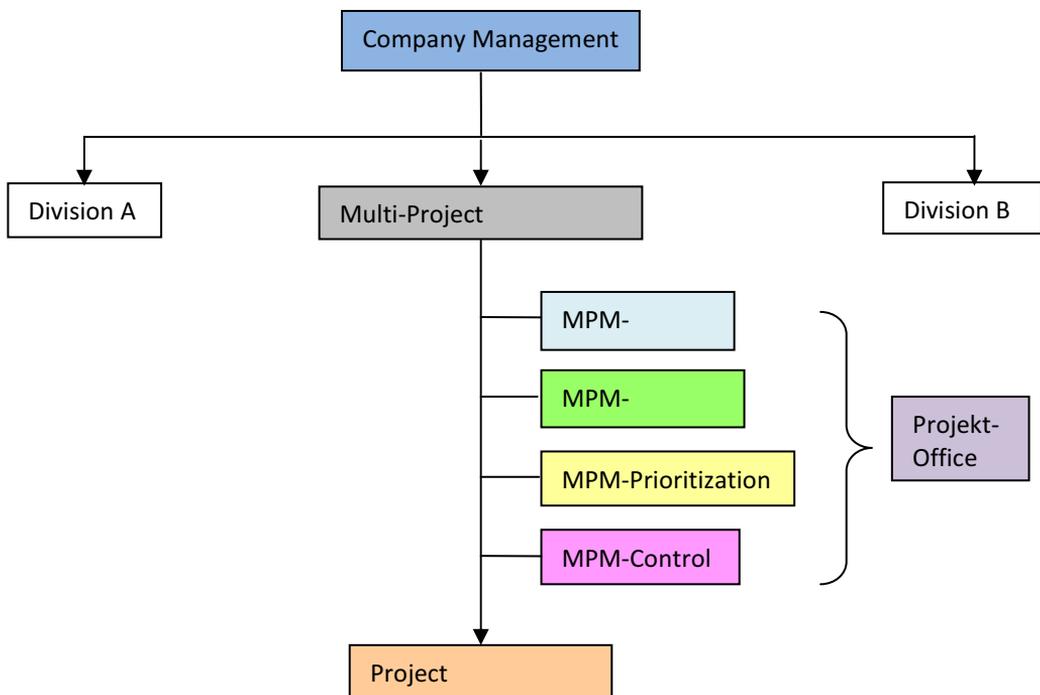
6. Implementation of Multi-Project Management

Since the main problems like defining the term of multi-project management, determining the duties of this department as well as the definition of roles has been described, it is essential to develop a solution for the introduction of a multi-project management.

6.1 Organizational Structure

To make it possible that the multi-project management can act as a separate division, it is important to embed this unit in the organizational hierarchy of a company. Since the multi-project management is a complex management, it must be positioned in the organizational structure in a way that a cross-project planning and steering can be ensured. The MPM department should therefore be located directly under the company's management (Lomnitz 2004). The company's organizational chart can be pictured as follows:

Figure 3. Organizational Structure



Source: own creation

6.2 Operational Structuring

Generally the operational organization is concerned with the design of work processes; in that case with those that occur within the multi-project management. To successfully implement the multi-project management, it is important to establish a chronology of the described tasks. It should be noted that in this work only the one-time tasks will be positioned in a chronological order as they the basic prerequisite for the implementation of a well-functioning MPM.

In the description of the duties it has already been mentioned that the first step for the implementation of a multi-project management is "the definition of the decision-making authority". This determination shall refer to the decision-making powers between the multi-project management, the project organization, and the line instances, as well as the related determination of the managerial authority over resource allocation.

A next step would be the establishment of an appropriate multi-project-management tool, as the provision of such a tool enables the overall planning, steering and control of the MPM. In this tool the required, standardized forms for the project work will be deposited. Afterwards, appropriate procedures for the project selection, the capacity planning, and for the project cost evaluation must be deposited.

Thereafter, the project portfolio management and the risk management have to be introduced. In order to guarantee the multi-project management control, standardized reporting processes will be deposited and an efficiency control for each project will be introduced.

A final step would then be to establish a multi-project knowledge management, so that the project-relevant knowledge and experiences for future (multi-) project work will be available. Thus, the cycle to ensure efficient and effective project work will be closed.

Summarized the sequence of activities which are necessary in order to implement a multi-project management can be pictured as follows:

Figure 4. Operational Structuring



Source: own creation

7. Conceptual Implementation of the Sphere of Activities

This section deals with a detailed description of problem areas that need to be processed by the multi-project management. This description refers to the one-time tasks which need to be implemented in order to design a well-functioning MPM.

As the determination of the decision-making power as well as the introduction of a multi-project management tools, should depend on the individual notion of each company, these two fields of activity will not be described in this work.

The description of the scope of duties takes place after the designation of the respective, corresponding organizational unit within the MPM.

7.1 MPM-Planning

The division “MPM-planning” is responsible for all activities that are associated with an effective and efficient project selection. This means that this area introduces all measures and covers areas of responsibility that allow an objective selection of projects.

7.1.1 Deposit of Standardized Forms and Establishment of a Project Cost Evaluation System

The deposit of a uniform template management is the first performance of this division. The forms that need to be uniformly deposited are:

- The project proposal
- The authorization letter
- The rejection letter

Furthermore, it is the responsibility of this division to deposit a method for a uniform project cost evaluation. This involves the deposit of a procedure that can determine the project cost of a single project. Generally, one distinguishes two main categories: the global cost estimation procedures and the analytical costs estimation procedures (Patzak-Rattay 1998).

The difference between the two methods lies in the accuracy of their statements: the analytical methods are much more detailed and therefore more accurate, since they are based on individual work packages of each project. The project manager evaluates together with the respective responsible person the costs for each work package. The individual costs per package will then be aggregated to the total project costs. The cost estimation procedures, however, relate as the name suggests on estimates. In order to determine the cost of the project this procedure uses appropriate benchmarks or adequate metrics so that the total project costs can be estimated.

As at this point the multi-project manager just needs to get an overview of the possible incoming costs, it is suggested to use the cost estimation procedure in order

to save time and therefore money. It is just about getting an answer to the question of whether or not the project will be incorporated into the project portfolio which can be answered through this basic evaluation process.

In order to evaluate the project costs there are at least three factors which should be considered:

- “Transfer pricing for the internal project team
- Material costs, e.g. hardware, travelling, equipment, etc.
- Costs for external consultants” (Lomnitz 2004, 117.)

To avoid "uncertainty" by doing those calculations, it is still advisable to not only calculate one cost estimate, but to make an estimate by an optimistic, realistic and pessimistic value (Patzak-Rattay 1998). Through this distinction the project manager has on the one hand greater "elbowroom" because he does not need to refer his project proposal to a certain-size budget cost. On the other hand, the decision-makers can consider whether or not they are willing to take into account even the "worst scenario", the pessimistic value. It is apparent that the project costs can roughly be determined by this procedure and that the decision makers are able to make a decision based on the provided estimates. The duty of the multi-project management now is to ensure that this procedure for the project cost estimation is uniformly applied by the project managers and team members.

7.1.2 Implementation of a Standardized Project Selection Procedure

The selection process should review the project requests in terms of their "project appraisal", their "project classification", including the "project attractiveness", and their "project potential".

In the case of the project appraisal one determines whether or not the future project plans are generally projects in their true sense. Thereby, the individual project characteristics will be proved and separated from line activities. The project classification refers to a classification in terms of “must-do-projects”, “shall-do-projects”, and “can-do-projects”.

Must-do projects are those projects that must be carried out, e.g. because of legal and technological constraints. They have therefore a supremacy over all other projects. Shall-do projects are determined after the determination of the must-do projects and are related to strategic and/or economic criteria, such as projects with the highest economic benefit or with the highest cost savings. Can-do projects are classified as those projects that are deferred from the current plan period. They will be conducted only if the necessary resources for their implementation are (additionally) available (Lomnitz 2004).

As the must-projects are defined by their necessity, only the remaining shall-do and can-do projects have to be proved in terms of their “project attractiveness”. The project attractiveness should mainly appeal to the strategy compliance and the economic benefits of the respective projects. The attractiveness of the individual

projects will be visualized by a portfolio analysis. Thereby, the strategy conformity as well as the profitability of a particular project should be related to each other.

This classification of projects in the project portfolio may lead to additionally generated must-do projects. These kind of must-do projects do not result from a legal or technological necessity, but from a highly profitable contribution of the project itself. Therefore, these projects “should” also be in the category “must-do projects”, and thus necessarily implemented.

The final step is identifying the “project potential”. The identification of the project potential is already closely related with the project portfolio prioritization (MPM-prioritization), as the project potential is the company’s ability to provide the required operational resources (resources and budget), and the general willingness to implement this project at all.

The general willingness to do a certain project is incumbent upon the multi-project executive committee and ultimately the company management. However, the multi-project management should ensure that the MPEC and the top management are able to make well-founded decisions. Therefore, the MPM has to provide sound documents and helpful information. Therefore, the MPM-planning must make two actions in the context of determining the project potential:

1. The determination of the overall project budget per period
2. The establishment of a comprehensive capacity planning

The determination of the overall project budget can be done through using three methods: “top-down”, “bottom-up”, and the “iterative approach”, whereas the iterative approach is the one recommended in here.

The budget planning based on the iterative process can be described as follows: The top management suggests a project budget according to their financial capabilities and their willingness to invest. The MPM-planning also suggests on her part a total project budget based on the aggregated project costs made by project managers in their project proposals. Subsequently, a vote takes place between the multi-project manager and senior management about the “actual” amount of the overall project budget. The multi-project management will underlie its proposals through detailed information, whereas the senior management will make the final decision about the amount of the project budget.

The last duty of the MPM-planning is now the deposit of an overall capacity planning. The capacity planning shall ensure that all necessary human resources for individual projects are available; respectively that in case of insufficient resources this scarcity is identified early. This aspect also plays a crucial role in the subsequent prioritization of projects by the MPM-prioritization.

The capacity planning should also be built on the iterative approach described above. This time, the MPM has to find an agreement between the line management and the respective project leaders. In terms of a top-down approach the line management must suggest how many employees can work in projects. The project applicants in turn must estimate in advance how many employees are needed for

their project. The task of the multi-project management is to add up the number of employees across all projects, so that the required "overall number of employees" for project work is known.

The coordination of human resources is designed a little more complex than the previously described project budgeting, since the potential project team members must be determined from all divisions. This means that each department needs to make a proposal on how many people could be working in projects.

The task of the multi-project management is then to collect the proposals made by line managers, to balance the available staff and the required number of staff, and to make, if necessary, appropriate adjustments.

7.2 MPM-Prioritization

The MPM-prioritization has basically the task to prioritize the (new) projects set by the MPM-planning. That means that this division has to make a ranking for project implementations, then set them into a project portfolio and visualizes the interdependencies within the portfolio, even to existing projects.

7.2.1 Implementation of Risk Management

Another task of this division is the introduction of a risk management. The risk management shall ensure that individual project risks will be estimated and evaluated before a project will be realized. The MPM-prioritization has to deposit a form that allows a standardized risk assessment for each project. The project managers are responsible for evaluating the risks of their projects on the basis of normative criteria. The filled-out risk checklist should then be forwarded to the MPM-prioritization, so that this division can make a clear risk presentation of all projects. The result shows how many projects have a high, medium and low risk (A, B, C), so that it can be decided across all projects which projects should/could be incorporated into the project portfolio.

Generally, there should be a balanced ratio of A, B, or C projects within the project portfolio. Because even though projects in risk category A (high risk) often promise the greatest opportunities, such as above-average sales increases or significant cost savings, they still contain the previously identified highest risk, which in turn can quickly transform the vaunted future "potential" in a future "disaster". If more than one A-project simultaneously does not keep its promise and many of the identified risks arise, the project landscape will be affected which in turn can lead to a dramatic situation within the whole company.

7.2.2. Implementation of Portfolio Management

First of all, it should be mentioned that the introduction of the project portfolio management is basically a static process that deals with the deposit of all required data. The execution of the project portfolio management, however, is a dynamic process and represents the main task of the MPM-prioritization.

The introduction is therefore static, because it creates the basic conditions to visualize the different project portfolios. These conditions may be regarded as the "planning" of the project landscape. The execution of the project portfolio management is a dynamic process, since it deals with the ongoing steering and controlling of the project portfolios. The project portfolio management shall ensure that the project landscape is permanently supervised in terms of interactions, inconsistencies, etc.

The overall objective of the project portfolio approach is the "clear presentation of all projects and their assessment based on comparable criteria." As the MPM-planning has determined the amount of the total project budget, the data of the general availability of capacity (human resources) as well as the expected cost per project, and has made a classification of the proposed projects, the MPM-prioritization should now design the project landscape. Therefore, it is important to bring together the various data of the MPM-planning as well as to take into account the data collected by the risk analysis in order to get an overview of all relevant data, which are important to the prioritization of projects within the project portfolio.

Before the MPM-prioritization pictures all data, the division must still set the likely cost of each project against the predetermined total project budget. Therefore, the MPM-prioritization puts the identified individual project budgets into a table while taking into account the individual project classification. It then distributes the overall budget to individual projects. So it can be determined for what projects the given overall project budget is sufficient, and what projects can therefore be included into the project portfolio. The continuous acquisition and processing of data has the dual advantage that the MPM-prioritization is always in a position to ensure the superior planning, steering and controlling of the project landscape. Secondly, the multi-project management is able to give advice on the totality of all projects to the company's management at any time.

Summarized one can say that through the introduction of the project portfolio management as well as through the introduction of the risk management, one could determine which (new) projects should be included into the project portfolio. Therefore, the static process is completed. Now the company knows what projects can and should be actually implemented and realized. These projects will now be placed in the project portfolio(s) and the planning process of the project portfolio management with respect to the totality of all projects is completed.

7.3 MPM-Control

The MPM-control deals first of all with a superior single project control, intending to ensure that the set objectives of the MPM-planning have been actually achieved by the completed project. In this regard, the division deposits and uses standardized forms and implements a generally applicable reporting process that must be used by the respective project leaders. Another task carried out by the MPM-control is executing a final efficiency control for each project. Here, the results of a project will be compared with what was originally intended, so as the actual improvement achieved by the project can be demonstrated.

Therefore one can say that the MPM-control is concerned with monitoring all currently running projects as well as with the final examination of all projects already undertaken. The multi-project management is therefore on the one hand always informed about possible drawbacks and is able to take appropriate countermeasures. On the other hand, the multi-project management is able to consider any interdependencies among projects, and thus is able to prevent that the course of individual projects will be jeopardized through others projects. Furthermore, the MPM-control is in a position to give advice and offer support to current or future project team members through the deposit of field reports and the usage of former project closing reports.

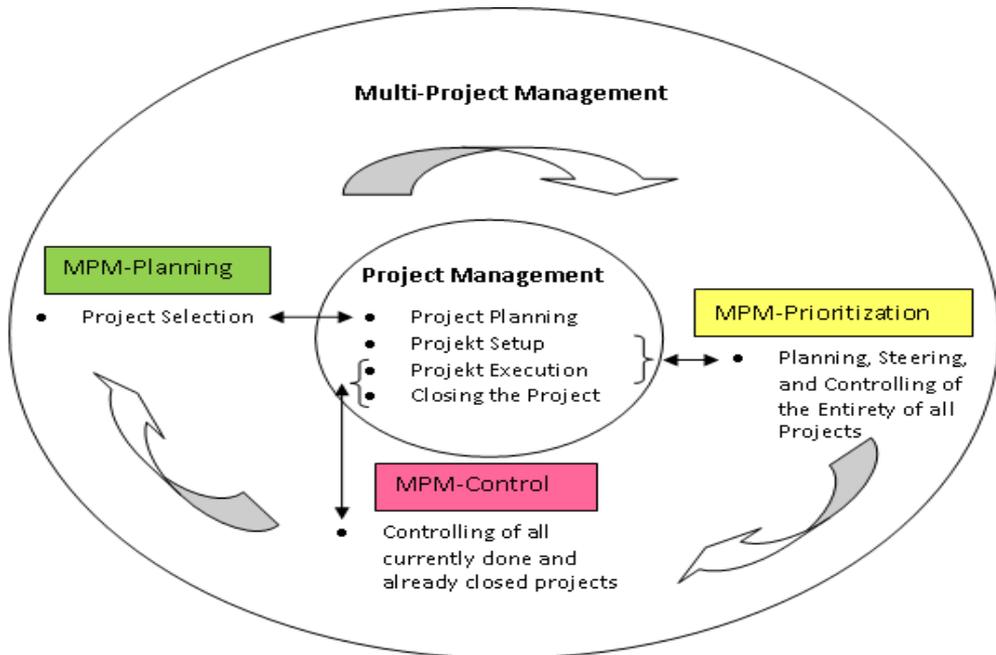
8. Conclusion

This work² has tried to demonstrate the various aspects of multi-project management and what activities must specifically be taken over. The aim has been to structure the concept of multi-project management in a way that the interaction of all stakeholders can be guaranteed in a logical and workable manner. The conceptual implementation began with the selection of projects which should be included in the project portfolio, and a standardized and appropriate selection process was deposited (MPM-planning). After the selection of potential projects had been completed, it was necessary to test their general feasibility and to set all the approved projects into the project portfolio. The permanent control and monitoring of the project landscape has been identified as the main task of this area, because of the associated complexity and variety of tasks (MPM-prioritization). Finally, it was pointed out

² One has to mention that this article is just a very small excerpt of the original work. The complexity and task identity can probably be better understood, if one reads/sees all corresponding processes, activities, tables, figures, etc. in detail.

how both, individual projects as well as the entirety of all projects have to be controlled. Through embedding the last division - the MPM-control - into the multi-project management framework, the cycle of "planning, steering, prioritizing and controlling" projects and the project landscape can be closed.

Figure 5. The MPM Cycle



Source: own creation

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