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Winning team results! – a team-based approach to project management in cross-cultural environments

The challenge of global markets today requires not only competitive new products but also **competitive processes**. This applies particularly to large companies but often also to medium-sized and small companies.

Large companies in particular experience the limits of functional organization. They often face a “silo” mentality among employees who also fear the risks of innovation. These are factors which discourage and undermine positive programs towards a winning behavior. The consequence is that large companies often lose the initiative to drive a potential new product idea via project management through the pipeline on time.

Medium-sized companies are seldom in a position to work effectively in cross-cultural environments. Their implicit strengths depend on their home culture and often they are not able to communicate these for cross-cultural learning.

Small companies, such as start-up companies, have a lack of organization structure. Often the links to customers are not professionally established and the relationship between those involved in research and those conducting product and business development is unsatisfactory.

The negative aspect which concerns all three company sizes involves **insufficient** processes and organizational structures.

The more international the situation is, the more complex the problem becomes!

One approach to being more successful and adapting **organizationally and culturally** to the requirements of global competition is to establish a team-based project management organization.

In the following, we shall focus on this **project management type** and present a working concept which has been validated in practice.

On the one hand, this concept is based on **new values, roles and responsibilities** between line and project organization. On the other hand, it focuses on team-based **competitive practices**.

The objective of this team-based (leadership) approach is to create competitive working processes with a cross-cultural, cross-functional team.

All necessary processes and learning cycles are organized in a new framework called “**the house of project management**”. The new concept is used to both create new, as well as to re-engineer current, processes under conditions of competition.

When playing in a bigger ballpark at world class level the **basic challenges** for the project leader are **team building processes** which can lead to a **high performance project team culture**. If this culture can be established, then the mutual planning, organizing and re-engineering processes of the project and the related line work will be more effective.

The case study experience shows that you easily gain half a year if you invest in team building and team-based planning.

We will discuss the **requirements** of a cross-cultural, team-based project management for the **line functions** and **the team members** and especially for **the project leader’s role** including responsibilities, leadership style, skills and his toolbox!

Contents

Summary

- 1 Introductory remarks**
- 2 Challenges of global collaborative product development, manufacturing and marketing:**
- 3 Prerequisites for a team-based project management**
 - 3.1 No project without a strategic target!**
 - 3.2 Partnering: Partnership between line and project organization**
 - 3.3 Seven learning circles which must be controlled in order to achieve global success.**
 - 3.4 Philosophy of the team-based project management approach**
- 4. „The house of project management“ as a controlling and learning approach**
 - 4.1 Philosophy of the model of the house**
 - 4.2 Floor descriptions**
 - 4.2.1 Project origination**
 - 4.2.2 Project planning**
 - 4.2.2.1 Project team formation**
 - 4.2.2.2 Basic planning**
 - 4.2.2.3 Advanced planning**
 - 4.2.5 Project execution**
 - 4.2.6 Project termination**
- 5. Further paradigms to play successfully in the first league**

1 Introductory remarks

With regard to international projects, the article concentrates on global /sub-global projects of product development. In our view, these projects consist of teams of specialists who work in an integrated manner towards a joint project target within the enterprise across several continents, economic regions, countries and cultures.

2 Challenges of global collaborative product development, manufacturing and marketing

In our opinion, to be continuously successful globally, the following is necessary:

- to open up ethnocentric attitudes
- to gradually abolish stereotypes, prejudices and fears
- to find a balanced view towards national attitudes
- to put his/her „way of life“ into perspective towards other cultures
- to permit and promote acculturation
- to respect all cultures, countries and nations
- to appreciate people who are different
- to perceive and to accept the needs of persons and groups
- to be attractive as a project/enterprise for talented people world-wide and to promote and preserve these persons
- to monitor and evaluate the technological development world-wide
- to make available the financial, organizational, technical, strategic, knowledge and human resources where global, competitive product development can take place
- to find partners for joint ventures and strategic alliances and to manage the cooperation successfully.

In the first nine points above, we have deliberately placed the human challenges at the beginning of the list because, due to the deficits in performance resulting from the lack of social and cultural awareness, they concern often between 60-80 % of human ineffectiveness in global cooperation.

Furthermore, there are challenges to be exploited in the current environment of international project work. The following forces have great influence and characterize the international situation:

- customer orientation
- global competition at low growth rates
- shortening of product life cycle due to rapid technological developments
- rapid development of third world and closed economies
- corporate downsizing
- hostile takeovers
- knowledge explosion
- international political crises of confidence.

The requirements for success - to which participants and delegates in the project team must dedicate themselves - are derived from the customer demands, the competitive conditions, the strategic targets and the peripheral conditions within this distribution of forces.

Here, it goes without saying, that particularly those enterprises who are in a position to drive product ideas through the development/manufacturing/sales pipeline in the fastest time (time to market) at reduced costs will have particular advantages in winning new market shares. (unique product advantages and quality are prerequisites here.)

Thus product innovation is only successful from an economic point of view if it is carried out on the basis of competitive processes (organization/procedures).

Strategically this means that the pursuit of product innovation and process innovation must be suitably adjusted to each other globally and that talent, know-how and infrastructure site advantages within the enterprise group must be exploited globally to realize an attractive added value.

From an organizational point of view, line functions within the enterprise are simply not adequate for this. Interdisciplinary, interdepartmental and cross-cultural temporary cooperation requires a stable environment which corresponds with the needs and targets of this cooperation. The functional line organization must be enhanced by an effective project organization which permits and preserves the competitiveness of the processes in the product development process.

On the basis of the above defined conditions, we regard one way of achieving success with global product development to be the team-based project management approach.

3 Prerequisites for a team-based project management

3.1 No project without a strategic target!

A focused coordination at several levels is necessary in order to align product development processes globally.

Projects are one way of realizing a global strategy and strategies are a means of fulfilling the entrepreneurial vision (figure 1). Projects therefore are positioned within the interrelation between targets and means. If projects are just quickly conjured up without any connection to the competitive strategy, then resources are dispersed within the company which will not be available for the actual competition. In order to establish the coordination between creative

ideas, projects and competitive strategies, a practical approach is to set up an arena in which ideas can be discussed and examined to establish whether they should be further pursued. The target of interfunctional and cross-cultural cooperation is then to establish the candidates with the greatest success prospects where it is worthwhile setting up a corresponding project.

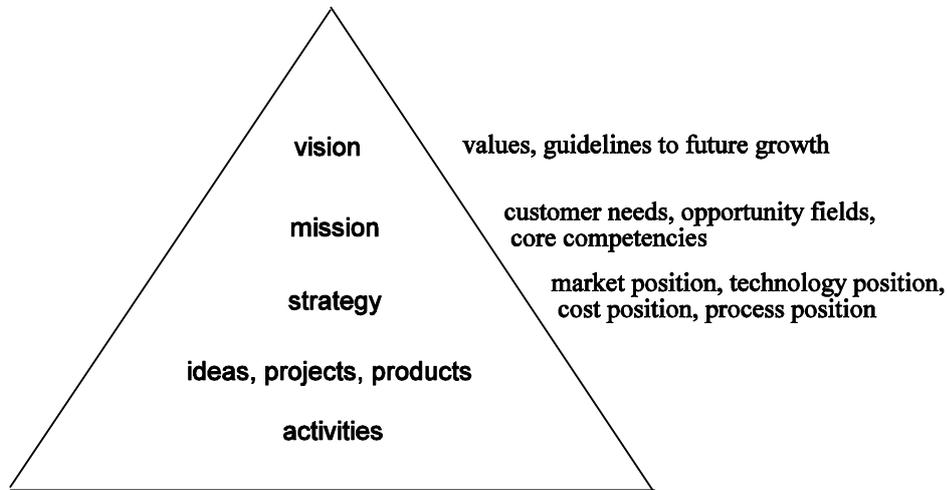


figure 1: Target-means interrelation between different coordination levels within the enterprise

3.2 Partnering: Partnership between line and project organization

In many enterprises, the turbulences of the 90s have shown the limits of the classical organization forms. When situation become more dynamic, complex and insecure the functional form of organization is no longer in a position to meet the requirements of interfunctional and cross-cultural cooperation and information processing. They fail as a rule due to:

- functional, national orientation
- functional knowledge
- too comprehensive division of working processes
- the „silo mentality“ of employees
- implied rules or paradigms and, last but not least,
- attitudes such as: considering the customer as someone „disturbing the peace“

The functional line organization is a suitable organizational means for other requirements where high effectiveness and efficiency are required, for example management situations characterized by limited changing processes and standard procedures such as „manufacture of sophisticated products in high volumes and at a reliable quality“.

The interfunctional and cross-cultural innovation processes must be given highly efficient organization structures in order to develop, extend and maintain global power positions. A project organization form at the „caretaker level“ within the line organization is simply inadequate for global competition!

Too little attention would be paid to and too little realization initiative given to „the new“ in comparison with daily business matters. However, in order to obtain prosperous permanent growth in global competition both elements are necessary: interfunctional and cross-cultural „development business“ and daily business.

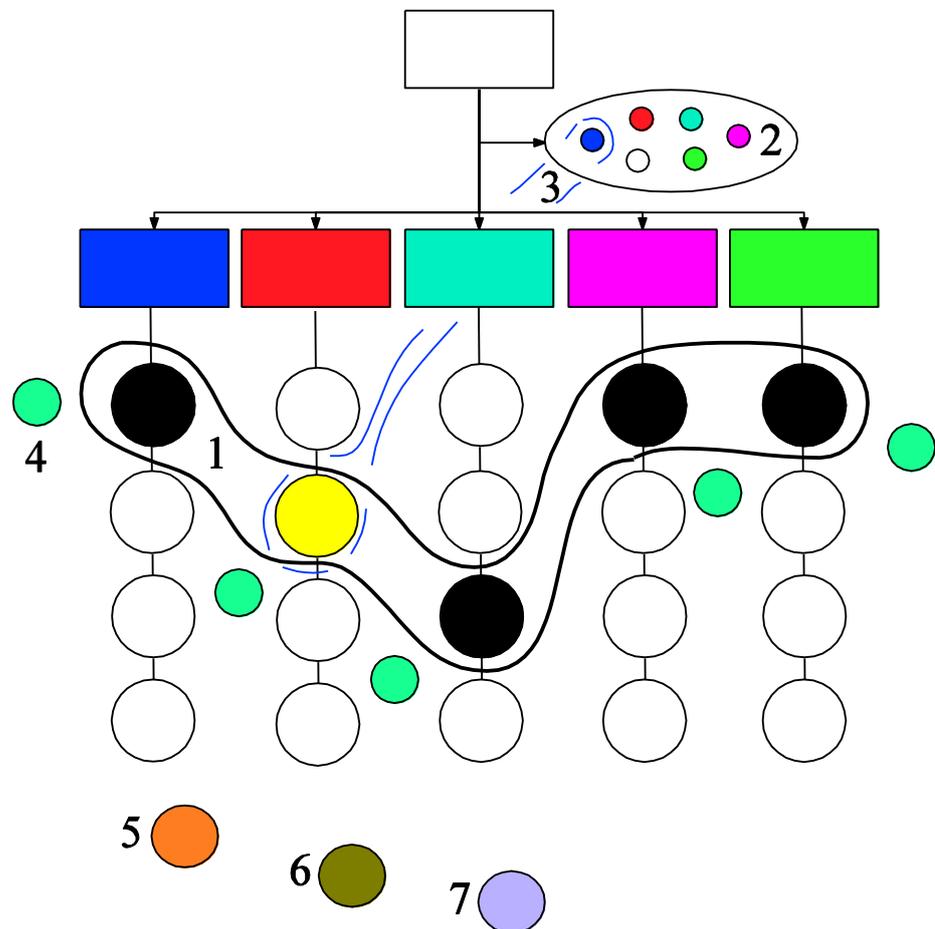
Modern concepts of globally effective enterprise organizations therefore take the balance and equal rights into account stressing the partnership-type of integration into the organization as a whole. The target is to carry out both „the new“ as well as the daily business with excellence.

3.3 Seven learning circles* which must be controlled in order to achieve global success

Depending on the global enterprise organization, the cooperative responsibility must be organized situationally.

For the sake of providing a clear overview, we simplify the complex, global organization structure and assume one strategic business unit (figure 2).

Here, we have identified 7 fundamental learning circles which must be controlled if a team-based project management approach is to be successful.



- 1 projektteam with projekt leader (black and yellow)
- 2 steering group
- 3 power promotor with project leader
- 4 functional supervisors (who delegate project-teammembers)
- 5 involvement of key suppliers
- 6 involvement of key customers
- 7 internal or external process consultant

figure 2 : Seven fundamental learning circles which must be controlled

The **1st learning circle** is the interfunctional and cross-cultural project team. Put simply, its task consists of the project definition, the drafting of creative solution concepts, the project planning, the project implementation and the presentation of the project results to the client. The project team is led and coordinated by a named project leader.

The **2nd learning circle** is the steering group at the business unit level. The heads of the functional units of the business units are represented in this controlling circle. This body has international members when cross-cultural projects are concerned.

The controlling members are responsible for the choice of the project theme and examining the target-effectiveness within the scope of the competitive strategy. They deduce the priority of the project theme from the strategy. They have the overview of the overall targets of the business field, the agreed functional targets and the available resources. On the basis of initial estimates, the possible resource framework of the project is defined in order to allocate the available resources.

From their overview and in agreement with their group leaders, the department heads propose the corresponding project leaders. The project leaders then receive the task within the steering group or from an authorized member. The authorization can also be delegated further. The internal client must however be able to represent the customers and the enterprise.

In order to avoid overloading with work, a distinction can be made between an operative and a strategically steering group. The strategically steering group then only focuses on strategic aspects. In exceptional cases, it is always free to request a report on non-strategically but important projects.

The operative steering group shares many of the professional skills of the project team thus enabling an effective review of the project work and putting the group in a position to give the project leader and the project team the necessary support within the line organization.

According to this organizational design, the steering group holds equal responsibility for both the projects and the daily business. The degree to which this balance can be maintained in practice depends on the behavior of executive management or on the head of the steering group.

A review of this concept in three large enterprises after three years of experience showed however that only those projects deliver successes which are armed with the corresponding power from the line organization – either from the client himself or from other high level „godfathers“.

The **3rd learning circle** is a result of these experiences. It is necessary to recognize who is supporting the project within the system and who can protect it from negative influences should this case occur. We call supporters with these properties power promoters. The 3rd learning circle is formed between power promoter and project leader. The power promoter has access to important committees. He supplies the project leader with early warning information, regulates conflicts at a higher level, provides (together with the steering group) back-up support in obtaining promised resources and generally uses his relations network to assist the project. The cooperation is built on a win/win situation. In order to provide the project leader with a faster start, he supports the project leader together with the client at the kick-off meeting. The power promoter is not a sort of chief project leader however. Power promoters also have limitations and their behavior must be in accordance with the strategic targets of the enterprise.

Who decides on the power promoter? There are several possibilities here, e.g. the decision can be taken by the steering group or another possibility, in a large company, is that the project leader is given the choice of choosing the power promoter himself. In this case, it is part of the projects culture for line managers to reflect on the requests for support from project leaders and, when there are mutual interests, to take on the role.

Seen positively, the power promoter is a background support role who represents the importance of the project in the organization. Particularly in exceptional cases, where there is a disturbance in the balance between development business and daily business and where the project is suffering, the power promoter can have an important protection function. He can be a member of the steering group but this is not obligatory.

The **4th learning circle** consists of the middle managers with line responsibility who delegate the members of the project team. There are often conflicts here when the aims of the departments are not clearly agreed with interdepartmental projects, or when turbulences in daily business require the resources of the project team members. In order for the line managers to be able to better coordinate their functional targets with the project targets, it is a sensible measure, after the joint project planning in the team, for the project leader to invite all the superiors of the team members and to agree on resource requests in the presence of the client and the power promoter.

The **5th learning circle** consists of the acquisition of important suppliers into the project team from whom one also expects innovative solutions. These important external suppliers are partners in the overall solution and, depending on the degree of innovation, they must be included in the planning and reviewing process.

The **6th learning circle** can result from the choice of an important key customer by whom the development of the product can be tested at an early stage under real conditions. Fears regarding secrecy must be countered by non-disclosure agreements.

Everything does not always go according to plan within a project team. In the „ups and downs“ of group dynamic processes and interdisciplinary and/or cross-cultural arguments there may be friction and latent conflicts. Because the project leader is usually involved in this field of tension himself it makes sense to carry out an exchange of experiences workshop with external moderation in order to improve the project work in the team. Because the cooperation in the project team is the subject of the meeting we talk about the **7th learning circle** here.

Further learning circles can be added if the project subject becomes more complex (e.g. in the development of a new crop protection agent, new vehicle development etc.) and functional expert teams must be included in the project organization..

We regard the important factor of the learning circles to be that the project leader and the other members of the project team recognize that the steering activity within the project team alone is not sufficient. The role of the project must be considered in the enterprise as a system. Important stakeholders must be recognized and a proactive initiative should be taken by the project leader.

If we consider the control of these learning circles as a sort of degree of maturity scale, then our experience shows that many enterprises have established learning circles 1 and 2 as the state of maturity. However, we consider learning circles 1-4 to be necessary, 5-7 are optional.

* Under a learning circle we understand a composition of employees from the enterprise (or also together with external experts) who can collectively have an important effect on project

progress but who must first recognize and learn their influencing effect within the dynamic process.

3.4 Philosophy of the Team-based Project Management approach (TPM)

The team-based approach is based on the assumption that global, complex task assignments can only be accomplished competitively by a project team representing different professional backgrounds.

There are different nuances in this approach depending on how project leader and team members are „empowered“. In any case, this will have consequences for the role and the behavior of the project leader. The project leader must be aware of the facts that no single person can oversee everything and that the advantage must be sought in the exploitation of the synergies and the innovation potential in the team. Therefore, the role of the project leader must be acquiescent towards the team members regarding subject content and concentrate more on the service function of leadership.

The project leader role must concentrate on target-focused cooperation, problem-solving planning, coordination, reviewing and reporting. In exceptional cases, he is however granted the right to make a final decision which must be accepted by team members so that the enterprise remains in operation during critical disputes within the team.

The project team should have a functioning team character. This requirement limits the number of team members to 9 due to the necessary control span. The skills of these members must cover the necessary knowledge/function areas of the project team which will be permanently required for a certain phase or during the whole project. The limitation to a maximum of 9 members requires compromises with regard to knowledge, we therefore talk about a core team. Core team members must be able to meet the requirement of performing multifunctional work. This means that they also represent other functions which are located in the extended project team. The extended project team consists of the core team and experts required on a case by case basis. The core team members represent and are responsible for important functions in the project. Projects which are large and complex require additional functional expert teams to support the project team. The task of the expert team is to carry out the concrete fine planning, development and implementation of solutions to achieve the project targets. In the expert teams, the core team member takes on the role of the team leader.

4. „The house of project management“ as a controlling and learning approach

There were several reasons why we chose to develop „the house of project management“.

- 1) We required a procedure which we could use to set up a global team quickly for a project subject and which would establish a joint project plan in the shortest possible time (time to market).
- 2) We were looking for concepts with which project processes could be collectively mentally penetrated and where the results could be made available in visual maps so that a good balance between project framework and project plan would be possible for every team member (process security and control by mind mapping).
- 3) Project leader, client, steering group members, trainers, moderators and consultants must be in a position to orient themselves quickly in order to perform a diagnosis in a new project case (diagnosis)

- 4) Team members and participants in training wanted interactive conditions with concrete experiences in order to learn the methods in the process and to apply them appropriately to the situation (learning approach).
- 5) The principles of action should be easy to learn for all cultures and easy to apply and also give pleasure in case of success. (easy to use).
- 6) The elements should supply a model on which clients can build their own guidelines for team-based project management

4.1 Philosophy of the model of the house

The house is thought of as a framework for team-based project management. It is oriented to the life cycle of a project. Its floors represent suitable information processing phases and learn phases via which the project leader and the project team must jointly drive forward and control the project subject. The floors are built on each other in accordance with the information processing in the project. The better the cooperation was on one floor, the lesser the information which has been forgotten. There are then correspondingly less delaying detours and backward movements. If backward movements do take place there is process security as to how one has to work on this floor. In this way, it is less probable that floors are worked on due to ignorance or impatience for which the information basis is not yet available. If this does happen however, then it is much easier to establish the foundations which are still missing and to treat any estimations which have been made with the appropriate caution. The principles and tools of the house are chosen according to the needs of the project team to carry out the project work in the given situation.

In this approach, there is an important role for the moderator in the floors product planning and realization. Therefore, to be successful, it is necessary for the project leader either to already have or quickly develop moderator skills. Alternatively, the project leader is helped by a competent moderator throughout the process.

Basically, the house (figure 3) can be subdivided into 4 floors

- I. Project origination
- II. Project planning
- III. Project execution
- IV. Project termination

4.2 Floor descriptions

In order to remain within the scope of this article, we shall concentrate in the following on the floors project origination and project planning.

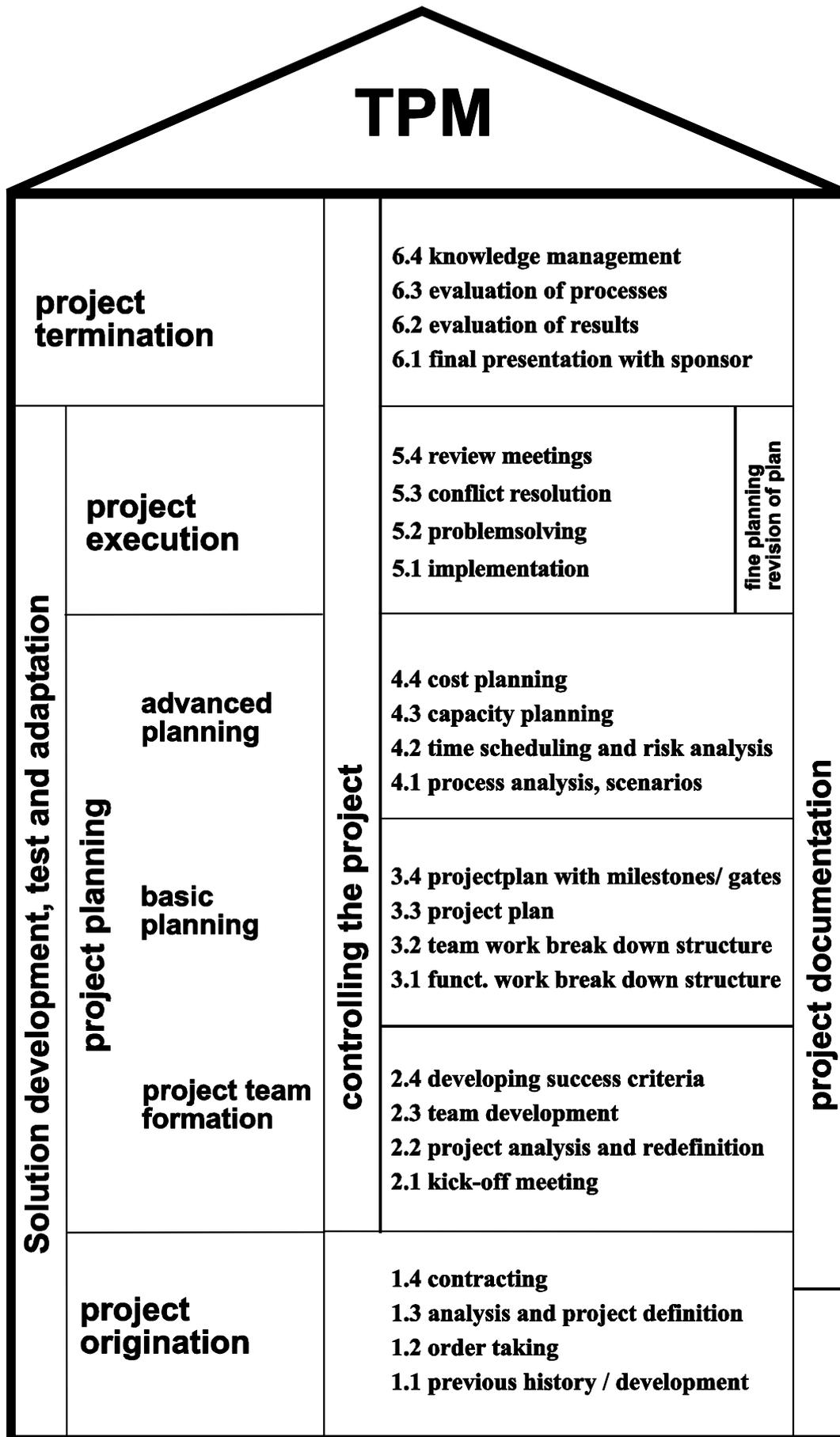


figure 3 : House of Team-based Project Management

4.2.1 Project origination

We differentiate between the following 4 information processing phases in the floor of project origination*:

*The numbering relates to the information processing phase on the floors, figure 3

- 1.1 Analysis of the previous history and previous developments
- 1.2 Order taking meeting
- 1.3 Analysis of order and project definition (project scope / project charter)
- 1.4 Contracting

on 1.1 Analysis of the previous history and previous developments

One must know what has happened in the past in order to be able to fully understand a project team. What were the initiators or driving forces which have led to the project?

If the enterprise is aligned strategically, future events will be evaluated and, if relevant, will be made part of a preliminary development. If the preliminary developments are promising a development project as such can begin. Previous histories and preliminary developments can represent an important know-how base for the start of projects.

on 1.2 Order taking meeting

The point of taking on the order is one of the most important events in the originating phase. The team-oriented project management considers client (project sponsor) and supplier to be partners. Taking on the order means that there has been a change in leadership. As a supplier, it is highly recommendable to accept the order under the proviso of further examination before final acceptance and at the end of the meeting to repeat the order in ones own words. In this way time-consuming misunderstandings can be quickly rectified. Check lists are a useful support in carrying out a structured conversation. As the supplier, one first of all agrees to look into the matter more deeply and familiarize oneself with the subject matter with the support of the client and proposes a date for contracting.

on 1.3 Analysis of the client's order and project definition (Project charter)

In this phase it is important to examine the client's order and to analyze it according to the principles of project management. If a team has taken over, the order will be clarified within the team. If the project leader has taken over, he needs an analysis team to support him. With complex projects, such examinations can require feasibility studies. The clarified project emerges (project charter) from the written analysis. This contains the purpose and the requirements of the project. In this manner, client and supplier can negotiate in a more professional manner.

on 1.4 Contracting

In the contracting meeting, client and supplier come together to negotiate on the clarified task. On the knowledge basis of the project charter, the supplier requires a global team and the client and steering group support the process of putting this team together.

(For project subjects where the functional requirements are known, the core team members to take on the task are chosen by the steering committee)

4.2.2 Project planning

The project planning is divided up onto three floors:

- 1 Project team formation
- 2 Basic planning
- 3 Advanced planning

4.2.2.1 Project team formation

On the floor of project team formation, we differentiate between the following 4 information processing phases*:

*The numbering relates to the information processing phase on the floors, figure 3

- 2.1 Planning and realization of the kick-off meeting
- 2.2 Project analysis and redefinition
- 2.3 Team development
- 2.4 Development of measurable success criteria

on 2.1 Planning and realization of the kick-off meeting

The project leader calls together the kick-off meeting. If the project team has not taken on the task then this is the first official meeting of the group. A global group is by no means a team! It is important to invite the client and the power promoter to this meeting so that the project leader can be supported in discussions. The target of the meeting is:

- to introduce the project group to the subject
- to allow the opportunity for the subject to be examined and accepted
- to personally quickly make oneself at home in the group and in the subject

As well as a simple kick-off meeting, it is also possible to hold a kick-off workshop in which phases 2.1-2.10 of the house can be worked through in one event. As a rule, these workshops last three days. The advantage of such a workshop is combining the team building phase with the planning phase and establishing the basis for performance-oriented transcultural project work. A further advantage is the later reduction of travel expenses.

on 2.2 Project analysis and redefinition

After the project subject has been taken over by the team members, they, as experts, also receive the opportunity to examine the subject, the target and the peripheral conditions in detail and if necessary to make corrections. This integration of the core team members has a strong motivating effect. The in-depth analysis can lead to redefinitions – in the worst case even to a break-off of the project.

on 2.3 Team development

As stated above, a group is not automatically a team – especially a global group. In the introduction, we have already noted some of the challenges involving cross-cultural

cooperation. Group members are far too often delegated to global teams without the corresponding cultural, social and linguistic preparation. Having English as a business language does not mean that one can make a verbal contribution at the usual professional level as one would make in one's own language. The task of the steering group here is, with the assistance of the line managers, to perform a casting and delegate the competent employees to the project. In order to work together with each other quickly, we have developed a method which the participants enjoy and which involves their understanding of culture and their own previous experiences in teams and projects.

Together, the group reflects on the reasons for the negative and positive experiences in completed projects. In a second step, the group establishes which behavior patterns it considers necessary for successful cooperation on the project subject. The resulting proposals are developed into 5-7 ground rules and used as the basis for transcultural cooperation (team charter). Security in team work thus emerges from this confrontation and a cooperatively agreed intervention basis at the relationship level is established.

on 2.4 Developing of measurable success criteria

Under the project control basis, we understand that all requirements can be reformulated into measurable targets. Then, all team members, via the target performance comparison, can see which deviations have occurred and it is clear to everybody which results have to be achieved.

4.2.2.2 Basic planning

On the rough planning floor, we differentiate between the following 4 information processing phases in order to set up the project plan in the team*:

*The numbering relates to the information processing phase on the floors, figure 3

- 3.1 Departmental work break down structure
- 3.2 Team work break down structure
- 3.3 Project plan
- 3.4 Project plan with milestones/ gates / phases

on 3.1 Departmental work break down structure

In order to make the necessary contributions to the project plan, all activities must be recorded and documented in an overview scheme. Due to the conflicts in the functional and culture-related perception as to which activities are necessary, the best approach is to start with the functional perception and to develop the approach out of the various conceptions submitted by the different team members. This supports both the intense involvement with the project subject and strengthens the ties within the team.

A 4-level subdivision of the overall project is useful here, e.g.:

- sub-project,
- main task
- sub-task
- work packages (terminal elements)

The final level has such a concrete degree of dissolution that times and costs can be estimated. These activities are therefore described as terminal elements.

If a structure can be established which is free from existing project standards, then, to avoid conflicts of misunderstanding, we recommend that, either individually or in small groups, the group members with similar functions think about aspects of the project, e.g.: group 1: research and development, group 2 technical and commercial marketing etc.

The team members should each record the activities for the overall project and allocate them into the 4 levels. Pin walls and pin cards are used as tools here. In this way, plans are created with different work break-down structures which are influenced by the knowledge and the origins of the participants. We therefore talk about departmental project structure plan. The diversity comes to the surface. Now the challenge is to make a structure which is accepted by the global team from these different elements and which corresponds with the aspirations of the project subject.

on 3.2 Team work break down structure

In this step, the integration of the functional work break-down structure of the small groups to form a team-work break-down structure for the core team takes place. Because the team members or small groups have designed their structuring starting from different professional point of view, we now choose a communal „guiding criterion“ to ensure rapid integration.

The effectiveness of cooperation can be characterized by 4 criteria according to which the registered activities are clustered:

- Which activities fall within the range of knowledge and responsibility of a core team member. These activities are the new final elements in the core team no matter how complex they are. It is possible that a core team member must work on these activities as a functional project supported by his superior and a functional expert team (criterion: 1 functional area / department is involved)
- Which interdisciplinary activities must a core team member undertake with his department and other departments – but not all - because he would otherwise not be in a position to carry out this activity or he needs to be involved early (criterion: several functional areas / departments are involved)
- Which activities must always be carried out within the core team, all activities where project meetings are necessary (criterion: all functional areas / departments are involved)
- Which activities must be performed outside the project team (criterion: within / outside the enterprise) and which can be outsourced

This structuring then clearly shows what must actually be worked on within the core team, what must be performed by interdisciplinary work and what the individual core team member (including the project leader) with the assistance of his department must do him/herself. As a rule, the group members are surprised how quickly they can agree on the new work break-down structure. Because this is now the result produced by the global core team we talk about the team-work break-down structure. With this subdivision of tasks, at the same time, the allocation of the project work to the individual core team members has taken place. Digital safeguarding of these results in a photo protocol is perfectly adequate at this stage.

on 3.3 Project planning

The formulation of the work break-down structure has created an overview or library of activities which have to be performed. The question is when and in what connection? For this, we apply the classical elements of project planning. We also use pin wall chart techniques here in order to insert an imaginary unbroken thread from the beginning to the conclusion of all activities. The project plan is created in 2 steps using sequential and parallel allocation of the activities in a network plan.

Within the team, on the basis of this functionally logical network plan, the critical path is identified and the responsibilities of team members along this path are recorded.

We now have a visual map which shows all participants how the target can be reached.

on 3.4 Project plan with milestones / gates / phases

In this step, in order to simplify the overseeing this process, further milestones for the team will be added along with the milestones of the client and the steering group. Milestones or gates cut up the process into clearly arranged segments which can be treated as phases. As well as the advantage of the overview, there are further criteria for using milestones. As a fundamental rule, we place milestones at places where the subsequent activities involve a high risk and we must be ready to fall back into prepared positions if necessary.

4.2.2.3 Advanced planning

On floor 4 advanced planning, we differentiate between the following 4 information processing phases*:

*The numbering relates to the information processing phase on the floors, figure 3

- 4.1 Process analysis / scenarios
- 4.2 Time schedule and risk analysis
- 4.3 Capacity planning
- 4.4 Cost planning

on 4.1 Process analysis / scenarios

Non-linear thinking processes are particularly necessary in turbulent times!

It is worthwhile carrying out further examinations on the basis of the project plan. A vitally important factor is the recognition of critical delay loops which are inadequately detected by the linear viewpoint of the critical path. Furthermore, it may be necessary to accelerate the project in view of strong competitive conditions. Strategies such as paralleling, rapid prototyping and simultaneous engineering etc. must be considered here. In this way, other scenarios and deduced alternative plans can be formulated.

on 4.2 Time scheduling and risk analysis

From the point of view of logical contents, the process has now been planned. Therefore, all the prerequisites are now given for making a more professional estimate of the time schedules for activities. A sensible approach is to allow only those team members to make estimates for those processes within the enterprise of which they have first hand knowledge and for which they are responsible. Inexperienced team members must request the appropriate times from their departments. All times given are estimated to be either optimistic, realistic or

pessimistic. To check on the plausibility of the estimates, reasons must be provided for stating that a time is either optimistic or pessimistic (regarding success or disturbance factors). In order to recognize the residual entrepreneurial risk, the team must establish the information about who can have influence on which factors within the enterprise and who must therefore be involved in the project.

Activities, time estimates and the associated reasoning are recorded in a time schedule estimates list.

The project plan can now be definitively calculated by the use of computer programs, such as e.g. MS-Project. The qualitatively recorded critical path can now be quantitatively corrected if necessary. Now it is possible to compare the realistic estimates via the critical path with the performance targets of the client.

This is often something of a shock!

on 4.3 Capacity planning

As a rule, the comparison between the capacity requirements of the project with the capacity specifications from the business planning and the capacities which are actually available in the participating departments reveals deviations and bottlenecks. Thus the real picture shows:

- Project running times are often underestimated
- The department's own functional targets are more strongly favored
- That the dynamics of daily business tie up the resources
- Priorities
 - o are not established
 - o are not sufficiently differentiated
 - o have indeed been established but not enforced

The effects of the established priorities on the available capacity have not been correctly considered

Projects are learning processes requiring active steering!

Communication and negotiation processes between the steering group, power promoter, line superiors, project leader and core team members are necessary in order to reach agreement on the real capacities. Peak capacity loads can be reduced in this way - as well as by using special strategies.

on 4.4 Cost planning

As well as the actual project targets and the time factor, the costs are the third controlling factor for the success of the project. Here, using the methods of budgeting and cost planning, the task of the project leader and core team members is to clarify the expenditure volume and risk and thus subject this factor to controls. Any deviations from the planned costs can then be immediately countered.

The rights to carry out budgeting vary depending on the organizational structure of the enterprise and the authority which has been given to the project leader and the team members. In cases where projects have been given budgets, the means for the project team are administered by the project leader for example. He must then alone, or together with the core team members, report to the steering group or project controlling with regard to expenditure.

4.2.5 Project execution

After the planning has been completed by the core team, and the project plan has been agreed with the client and steering group, the project team can start with the execution of processing the terms of reference. To both remain flexible and avoid „overplanning“, the fine tuning takes place during the realization phase. The project plan is therefore subject to reviews and updating.

The agreement of clear, measurable targets with the project leader is important for the core team members. Project meetings should have a subject-related target-oriented agenda and terminate with obligatory action planning. The measurable targets are the basis for the effective self-organization of the core team members. Along with the concentration on the subject, particularly transcultural project teams require a member-oriented beginning and a member-oriented conclusion.

The project leader should concentrate on his service role and act as the chairman. If the core team members have also been trained in the moderator role, the preparation and implementation of project meetings can be passed on from one member to another and the project leader can restrict himself to a framework moderation role.

In the meetings, as well as the accompanying fine planning of the project, particularly the examination of the results from the functional, interdisciplinary and ,if necessary, outsourced activities is important. These results must be coordinated by the core team who also agree on further steps and measures.

4.2.6 Project termination

The closing meeting has the target of presenting the final results to the client.

For developments where the client has been informed of the intermediate results, here it now „only“ involves e.g. submitting the final report. The product or the service must show that it fulfills the requirements of the client as agreed. If the client is satisfied then project core team and project leader can be relieved from the project task..

In order to establish the „lessons learned“ , the results which have been achieved, the project processes and the cooperation should be examined with regard to their disturbance/innovation potential. This is not only important for transcultural projects. Experiences and future possibilities must be specifically exchanged and safely archived in the participating units in order to be able to start the next project with this knowledge basis. For this purpose, workshops between 1st, 2nd , and 4th learning circles including the situational participation of expert teams have proven successful.

Targeted knowledge management is necessary in order for others within the enterprise to profit from the fact that innovative expert and process knowledge can be exploited on a wider basis, and, so that models and experiences of transcultural joint working can contribute to a competitive enterprise culture!

5. Further paradigms to play successfully in the first league

What do members of transcultural, interdisciplinary project teams and their companies have to accept in order to be able to play in the first league?

We began our reflections here in chapter 2 with the fundamental challenges of global product development. We want to return to these thoughts and enhance them with considerations of attitude and behavior which support global success:

Attitudes towards global competition:

1. The world is the market, the reservoir for chances, the reservoir for creativity.
2. The requirements for products and services are decided by the customer and not a technology-driven enterprise.
3. The requirements are determined by the international or the country-specific customer and not an enterprise specific to one country.
4. Which needs and requirements of the customer can be accepted by the enterprise / project team is a decision derived from the vision, mission and competitive strategy of the enterprise.
5. Playing in the first league requires the commitment to a permanent top competitive position.
6. New technologies must satisfy potential, latent and future needs to be successful. This process must be actively coordinated.
7. The development of laws and peripheral conditions of different countries must be monitored and complied with.

Attitudes to the organization as an institutions / discipline

8. Organization and processes are only the means to an end. They must be designed according to the requirements of the market / project.
9. Functional organization forms and the knowledge of functional disciplines are only the means to an end. They must contribute to the interdisciplinary solution.
10. Knowledge, experience, skills, creativity, infrastructure, research & development and production plants will be used in locations where they are most competitive globally.
11. Capital works round the globe and therefore round the clock. This effect should be exploited for the project.
12. People are working round the globe and therefore round the clock. This effect should be exploited for the project. ("Software" such as plans, research results, programs etc. can be passed on via email so that work can then continue in another time zone.)

Attitudes to global teamwork:

13. Team members from other cultures are ambassadors. Ambassadors of their culture and their discipline in the team. On the other hand, they are ambassadors of the global project in their country, in their functional unit. Ambassadors mediate!
14. The language of work is not a dogma! It must be chosen so that many team members can exchange their knowledge fluently and quickly. The minority should communicate in the second language spoken by the majority. This also applies to individual participants who can be involved thanks to expert translation services (colleagues).

International English is an alternative if the participants are well trained. In order to fully understand another culture and to feel at home there, one must learn the language of this guest country.

15. Global cooperation requires positive thinking, self-discipline, a high level of patience, social and cultural empathy and a resources buffer for flexibility.
16. The focus on joint cultural aspects (e.g. values, experiences, events) is a better driving force towards joint targets than the focus on cultural differences.
17. Global cooperation requires explicit values and ground rules as the basis for a performance-oriented, transcultural working culture.
18. Global cooperation requires explicit, acceptable, multi-lingual procedure instructions, interventions, techniques and working processes.

Reference

Weinreich, Herbert (1993-2003): unpublished manuscripts, presentations for project management training, reorganization, coaching and consulting in research and development for many different German national and international enterprises.