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The role of project management in achieving project success

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The role of different project management techniques to implement projects successfully has been widely established in areas such as the planning and control of time, cost and quality. In spite of this the distinction between the project and project management is less than precise. This paper aims to identify the overlap between the definition of the project and project management and to discuss how the confusion between the two may affect their relationship. It identifies the different individuals involved on the project and project management, together with their objectives, expectations and influences. It demonstrates how a better appreciation of the distinction between the two will bring a higher possibility of project success. Copyright © Elsevier Science Ltd and IPMA

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It has been recognised over the last 30 years that project management is an efficient tool to handle novel or complex activities. Avots[1] has suggested that it is more efficient than traditional methods of management, such as the practice of functional divisions in a formal hierarchical organisation, for handling such situations. The process of bringing new projects on stream and into the market imposes demands on established organisations and necessitates different management techniques from those required to maintain day-to-day operations. In such circumstances, where companies have a finite, unique and unfamiliar undertaking, the techniques of project management can be successfully implemented. These undertakings would call for more and faster decision making techniques than possible in a normal operation and making the right choices will be critical to company success.

The use of project management has become associated with such novel complex problems, which are inevitably called a project. Consequently the success of project management has often been associated with the final outcome of the project. Over time it has been shown that project management and project success are not necessarily directly related. The objectives of both project management and the project are different and the control of time, cost and progress, which are often the project management objectives, should not be confused with measuring project success. Also, experience has shown that it is possible to achieve a successful project even when management has failed and *vice versa* (see, for example, Wit[2]). There are many examples of projects which were relatively successful despite not being completed on time, or being over budget, e.g. the Thames Barrier, the Fulmar North Sea oil project or Concorde, all of which turned out to be relative successes, even though the project control aspect of them failed. It can therefore be argued that the relationship between the two is less dependent than was first assumed, and in order to measure project success a distinction should be made between the success of a project and the success of the project management activity.

This paper attempts to provide a logic for the distinction between project management and the project. Starting from a definition of the two terms, it will outline the factors which affect their success, the individuals involved and their respective orientations and the relationship between these elements. It also discusses the implications of the situation where the project fails but the project management process is perceived to have succeeded or *vice versa*.

Definitions

In order to distinguish between the project and project management it is necessary to develop distinct definitions for the two terms. A project can be considered to be the achievement of a specific objective, which involves a series of activities and tasks which consume resources. It has to be completed within a set specification, having definite start and end dates.

In contrast, project management can be defined as the process of controlling the achievement of the project objectives. Utilising the existing organisational structures and resources, it seeks to manage the project by applying a collection of tools and techniques, without adversely disturbing the routine operation of the company (See, for example, Kerzner[3]). The function of project management includes defining the requirement of work, establishing the extent of work, allocating the resources required, planning the execution of the work, monitoring the progress of the work and adjusting deviations from the plan.

Initially these two definitions may appear to overlap. Both are heavily orientated to the achievement of the project. The important distinction lies in the emphasis of both definitions. The project is concerned with defining and selecting a task which will be of overall benefit to the company. This benefit may be financial, marketing or technical, but this will tend to be of a long-term nature, oriented towards the expected total life span of the completed project. In the case of a construction project the benefits could be extended over 50–100 years, depending on the anticipated building life. In contrast, project management is orientated towards planning and control. It is concerned with on-time delivery, within-budget expenditures and appropriate performance standards. This is the context of the short-term life of the project development and delivery. Once delivery is achieved the management, as it relates to planning and control of the development and delivery, will cease. A new, or different form of management, will then establish the operation and control of the project use from this point on. The focus, therefore, of project management is distinct from that of the project because it is short term, until delivery of the project for use. In contrast the project itself is long term, based on the whole life rather than just the development cycle.

Having established this distinction between the project and project management it is possible to start to distinguish between success and failure of the two.

Project success or failure

The definition of a project has suggested that there is an orientation towards higher and long-term goals. Important parameters within the goals will be return on investment, profitability, competition and market ability.

A range of variables and factors will affect the ability to achieve these goals, which have been identified by various authors. The following list has been derived from the writings of Cash and Fox[4], Baker *et al.*[5,6], Kerzner[3], Wit[2] and Kumar[7]: (a) objectives; (b) project administration; (c) third parties; (d) relations with client; (e) human parties; (f) contracting; (g) legal agreements; (h) politics; (i) efficiency; (j) conflicts and (k) profit. The current literature, for example, Morris and Hugh[8], would imply that the success of a project is dependent on having:

- a realistic goal;
- competition;
- client satisfaction;
- a definite goal;
- profitability;
- third parties;
- market availability;
- the implementation process;
- the perceived value of the project.

Only two of the items from this list would lie directly within the scope of project management as previously defined. These are the definitions of a goal and the implementation process. This would indicate that project management and its techniques are only a subset of the wider context of the project. Project management plays a role in project success but that role is affected by many other factors outside the direct control of the project manager. This would start to explain why projects can succeed or fail independently of the project management process.

Project management success or failure

The definition of project management suggests a shorter term and more specific context for success. The outcomes of project management success are many. They would include the obvious indicators of completion to budget, satisfying the project schedule, adequate quality standards, and meeting the project goal. The factors which may cause the project management to fail to achieve these would include (see, for example, Avots[1]):

- inadequate basis for project;
- wrong person as project manager;
- top management unsupportive;
- inadequately defined tasks;
- lack of project management techniques;
- management techniques mis-used;
- project closedown not planned;
- lack of commitment to project.

These factors would suggest that successful project management requires planning with a commitment to complete the project; careful appointment of a skilled project manager; spending time to define the project adequately; correctly planning the activities in the project; ensuring correct and adequate information flows; changing activities to accommodate frequent changes on dynamic; accommodating employees' personal goals with performance and rewards; and making a fresh start when mistakes in implementation have been identified.

The narrow definition of tasks in successful project management provides an indicator of why project management success and project success are not directly correlated. A project may still be successful despite the failings of project management because it meets the higher and long-term objectives. At the point when the project management is completed the short-term orientation could be one of failure but the long-term outcome could be a success, because the larger set of objectives are satisfied instead of the narrow subset which constitutes project management.

The majority of literature on project management (see, for example, Kerzner[3], Duncan and Gorsha[9]) stresses the importance of techniques in achieving project objectives. They stress how successful implementation of techniques contributes to a successful project. Avots[1] and Duncan and Gorsha[9] both claim that project management is an important part in project success. Avots[1], in studying the reasons for project management failure, argued that failure could be avoided by paying careful attention to the project management factors which caused failure. Duncan and Gorsha[9] identified three problem areas which indicate the success of a project. These are under-costing, overspending and late delivery. It is suggested that project planning is needed to overcome these problems.

Lackman[10] has discussed the different tools available to a project manager to achieve success. These include work breakdown structures, client information sheets and project plans, among others. The early development of strategies, philosophies and methodologies of project implementation have been stressed by Kumar[7] as the most important factor in achieving success. He suggested that by gathering sufficient site information and being aware of project considerations and constraints; it is possible to tailor strategies and methodologies which are specific to a certain situation. Such well-defined strategies will assist in providing a satisfying and successful implementation of a project.

The concentration on techniques may be considered as the 'hard' issues in project management. They are the easily measured and quantified concepts of time and cost. Other writers have incorporated what might loosely be called people skills alongside these more administrative functions. These people skills are 'soft' issues in management. For example Randolph and Posner[11], Posner[12] and Jaafari[13] stressed personal, technical and organisational skills as being necessary to help control projects and achieve successful results.

Implicit in all the above literature is the claim that projects end when they are delivered to the customer. That is the point at which project management ends. They do not consider the wider criteria which will affect the project once in use. Two writers who have made a distinction between these orientations are Wit[2] and Nicholas[14]. They make a distinction between project success and the success of project management, bearing in mind that good project management can contribute towards project success but is unlikely to be able to prevent failure. They also emphasise that a project can be a success despite a poor project management performance.

If, as this argument implies, project management is purely a subset of the project as a whole, then it is suggested that the broader decisions in selecting a suitable project in the first place are more likely to influence the overall success of the project than can be achieved merely through the techniques of project management. The techniques may help to ensure a successful implementation of the project, but if the project is fundamentally flawed from the start it would be unlikely that techniques alone could salvage it. The techniques may help to identify the unfeasible nature of the project, and indicate that it should be abandoned or changed.

Individual responsibilities

Given a clear distinction between the project and project management it would imply a requirement for a corresponding distinction between the individuals responsible for success in both areas. Kerzner[3] states that "the major factor for the successful implementation of project management is that the project manager and team become the focal point of integrative responsibility". This would suggest that the focus for success in both spheres should lie with the project management team and would tend to exclude the client from any role in project success, contradicting the earlier assertion that the early decision making on a project dictates success. The client is responsible for these decisions and therefore has an important role in determining success.

The completion of a project requires input from a variety of groups including the client, the project team, the parent organisation, the producer and the end user. Each party has a role in defining and determining success. They all have specific tasks and responsibilities that they must fulfil in order to achieve success (Kumar[7]).

The client is expected to be the main party concerned about the success of the project in the long term. In most cases, the project was instigated at the behest of the client, and the financial and other rewards for the client hinge on its successful implementation. The client cannot expect to abdicate responsibility by passing all duties to the project team. It has already been intimated that the team will be orientated towards objectives which are only a subset of the overall aims of the project. The client must ensure that an emphasis on the subset does not threaten the achievement of the wider aims from which it is drawn. Facilitating the team is important for the client, but in the final analysis the project was not instigated to facilitate the team. The project originates from a requirement to meet a need that exists for the client. That initial need must be kept in focus by all those involved on the project.

The user is the group or individual who makes use of the completed project or product. In some situations this might be the client, but for goods sold on the open market the end user and client may be two distinct groups. Project success will be considered by the users as the ability to satisfy their needs. These needs may take the form of practical requirements and be in vivid contrast to those of the client. Satisfying end users needs is one facet of quality assurance that has come to the fore recently. Oakland[15] defines quality as "the satisfaction of users needs". Success for the user will be oriented towards long-term utilisation of the project outcome rather than project management techniques. As such, the project team concerned with the development, may have little or no direct contract with the user, who may remain unaware of the management processes and whether these have been successful or not.

The parent organisation will be involved in the project by providing resources. They may also exercise a controlling influence over the project in determining factors such as profitability, market share, quality and scope of service. Their responsibility towards the project is important and the commitment and support of a parent organisation is a vital requirement to project success. Unless the parent organisation is willing to commit company resources and provide any necessary administrative support, project management can be very difficult. In this role they will have two differing interests in the project. In allocating resources they will have an interest in the efficient use of the resources during development. The project team will be responsible for the planning and control of the use of these resources, consequently the parent organisation will be interested in the success of the project management process. The team will be accountable for their use of these resources, and if they fail to be effective they must expect to give an account for their actions. The parent organisation will have a second concern, because they will want a return on their allocation of resources to the project. There will be an interest in the success of the project as a whole as well as the project management aspects.

The project team will shape the implementation of the project. It is important for the team to employ the correct management techniques to ensure that planning, controlling and communication systems are all in place. Without these systems the co-ordination and control of all individuals and resources within the team is difficult. The orientation of the project team will be towards the task rather than the people. This will be particularly true as deadlines for achieving work are stressed and become paramount in people's thinking. The scope of interest here will be the completion of work and delivery of the project. Any rewards for the team will occur at the end of this management phase, therefore their primary concern will be to reach the end of this phase successfully.

The context of the producer can be viewed from two aspects. In the first instance the producer will have a task-oriented view of the project similar to the rest of the project team. The producer's commitment to the project will end once it is handed over to the client. The commitment is therefore towards short-term rather than long-term goals. In the second instance the producer is a user of the project in the sense that information generated by the project team is used to manufacture the end product. The producer will now be concerned with the ease of final assembly, but again in the short-term context of the project development and not the longer-term use.

This discussion has highlighted how the various individuals involved in a project will have different orientations towards the final project outcome. Success will be viewed differently by each group because their expectations for the project will vary. To return to the quote from Kerzner[3] which opened this section, it would seem inappropriate to place all the responsibility for integration on the project team. Because the involvement of the project team is concerned with only a small subset of the total project it would seem more logical to make an individual who has a wider view responsible for the project. The client has the longer-term and wider orientation and there is a logical argument for making the client responsible for the end project.

The overlap between project and project management

It was suggested earlier that there is an overlap between project management and projects, in that the former is a subset of the latter. Yet confusion does exist between the two in practice. This confusion could have arisen because of three factors:

1. *Time frame*—project success is often commented on at the end of the project management phase. At this time knowledge about the project management success will be known because the budget, schedule and quality criteria can be measured. Here each of the parties will be able to compare original data requirements to what is achieved. In terms of quality standards it could be monitored by the amount of rework or by the degree of client satisfaction. The long-term indicators will not have been realised yet and consequently they cannot be measured. Therefore, it is convenient to judge success at this time by whether the project management criteria have been satisfied rather than the project criteria. So project management success becomes synonymous with project success, and the two are inseparable.
2. *Confusion of objectives*—the objectives of project success and project management success are often intertwined. Instead of clearly identifying the two as separate groups they are shown to be a single homogenous set. Because of this lack of distinction the two sets of objectives are seen to be correlated. For example 'completion to budget' might be placed alongside 'profitability' as objectives. Budget is primarily a project management issue, yet profitability is a project objective. To suggest that a client instigates a project just to see it completed to budget reduces the importance of the project objectives.
3. *Ease of measurement*—two of the objectives within project management are common across all projects and are easy to measure quantitatively. These are compliance with budget and schedule. Because of these readily identifiable measures it is easy to concentrate on project management and its success rather than the wider context of the project. Many of the project objectives will tend to be either qualitative and not easily measured in any objective manner, or longer-term and not measurable immediately. This makes it convenient to use measures of project management success as a means of determining overall project success.

The confusion outlined above can be avoided by an improved appreciation of the role of project management within the project. The role of project management is to use the resources available effectively to accomplish a set goal within certain criteria. This role of project management needs to be placed within the context of a wider project. *Figure 1* shows a six stage model of the life of a project, the stages being as follows:

1. Conception phase—the idea for the project is birthed within the client organisation and its feasibility determined.
2. Planning phase—the method to achieve the original idea is planned and designed.
3. Production—the plans are converted into physical reality.
4. Handover—the finished project is handed over to the client for use.
5. Utilisation—the client makes use of the finished project.
6. Closedown—the project is dismantled and disposed of at the end of its useful life.

The diagram illustrates how each of the parties previously identified interact with the project during this life-cycle. It also highlights the role of a new group—that of third parties. There are various third parties which could influence the development and use of a project. These include: statutory authorities, both local and national; the media; environmental groups and the general public.

The diagram illustrates where the distinction between success and failure differs between the project and project management view. The project team will be involved with stages 2–4, whereas the client is interested in stages 1–6. As *Figure 2* shows the team will be focused on the narrow task of successfully reaching the end of stage 4, at which

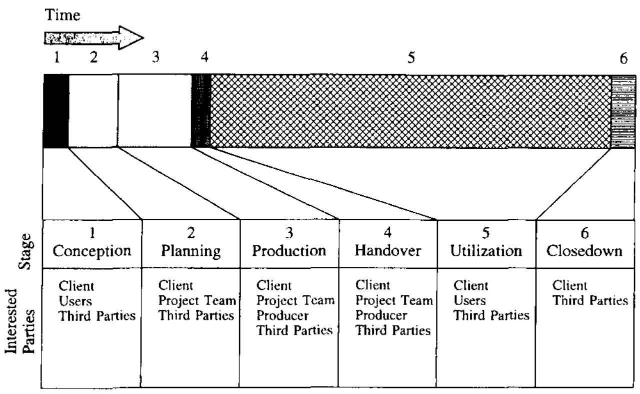

Figure 1. The stages in a project life cycle, and the parties interested in each stage

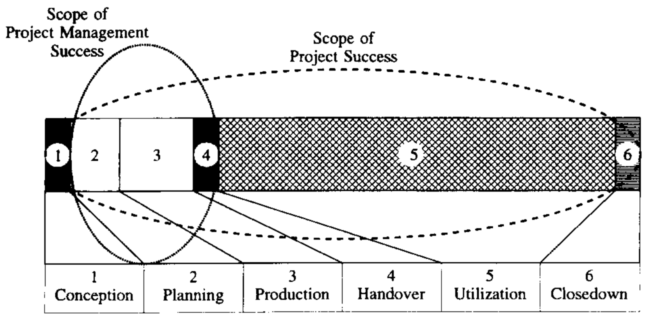

Figure 2. The scope of success within the project life cycle

point they will terminate their involvement and progress to the next project. The client is left to cope with the outcome, which must be effectively utilised until it reaches the last stage. Throughout this process the project performance can be assessed in one of three ways:

1. *The implementation*—this is completed in stages 2–4 and is concerned with the project management techniques and their implementation.
2. *Perceived values*—this is the view of users who will interact with the project during the utilisation phase.
3. *Client satisfaction*—at project closedown when the client can examine all influences on the project and an assessment can be made as to the satisfaction of the original goals.

The three assessment criteria illustrate the notion that project management techniques are not solely important for project success. There are other external criteria which are at least as important, if not more so, for the successful implementation of projects. Perceived values and client satisfaction will persist for a longer period than implementation. Although at stage 4 the implementation is paramount because it is the only available criteria to judge the project, as the project progresses through stage 5 the significance of project management will decline. Consequently different criteria for judgement will come to the fore and their significance over implementation will increase with time.

The natural tendency for the project management team will be to concentrate on completing stage 4 within the set criteria. The resulting emphasis of project management techniques is towards achieving specific and short-term targets. Hence the interest in project management literature on issues such as project planning, estimating, quality and control, all of which are tools targeted at reaching stage 4 within the set criteria. There is less significance placed on satisfying stage 5 and 6 targets because the team will probably have little or no direct involvement with the project at this time. So parameters of return on investment, profitability, competition and marketability are likely to become secondary.

This leads to a reference to the link between project and project management success. Consider the situation where the project has failed whereas the project management process was perceived to be successful. In this situation the project has failed because it has not been used as it was initially intended, could not be marketed, or did not get its return on investment to the client; while its implementation process was produced on time, to budget and according to scope. The project management could not have prevented the failure of the project. This arises because of the project management criteria being a subset of all project criteria. Although the subset has been satisfied, the wider set has not been. The only possible criticism of the project management is that the early processes of feasibility should have discovered the potential for the project to fail, and should have warned the client of the need to abandon or redefine the scope of the project.

In this case the importance of project management success will be of little or no value to any party except the project team, unless they are concerned with the utilization phase of the final outcome. The implementation success is of no importance because the client is not able to use the investment, and the project team should have been more satisfied if the outcome of their efforts had been properly used. For example a new factory which is not occupied will lay empty and the client will spend extra money on upgrading, securing, servicing, making changes, or accepting lower offers. Obviously the investment will be a failure from their point of view even if the control aspects of it went according to plan.

The second scenario is where the project implementation was either delayed or cost more, but in the end the client was able to make profitable and good use of it. In this case the project management failure is of little significance in the longer term. In the short term the project management failure may be an inconvenience because use of the development was delayed by the schedule overrun. Alternatively, more finances have to be established to fund the budget overspend. Yet the inconvenience may only involve a brief embarrassment at the handover of the project. In both scenarios we see that project success and failure is not totally dependent on project management success and failure, the exception being when the project is too late or too expensive and can no longer be used. Then there will be a link between project management failure and the failure of the whole project, but here the breakdown in project management must be extreme.

The result is that three issues need to be addressed by all those involved in projects. These are the project definition, the client role, and the evaluation process.

The project definition and early decision making is critical to overall success. The efforts of the project team will not redeem a project that is doomed to fail because of poor early decision making. There is, though, the possibility that poor project management could threaten a potentially good project. The client is responsible for the creative processes in identifying possible ideas for a project. The role of project management can help in this process by ensuring that the feasibility study identifies ideas which are unlikely to succeed and recommending to the client that they are abandoned. Feasibility should not be confined in this case to the feasibility of the development process, but should be extended to the subsequent use. Even in this situation the project team is not involved in the creative process of producing ideas, but with the checking of ideas generated by the client.

For the client role in projects two courses of action can be adopted. Either the client has to become actively involved in the planning and production phases, or the involvement of the project team has to be extended into the utilisation phase. Increased client involvement in planning and production will help to ensure that the wider set of objectives continues to be emphasised. Although there will be some additional cost to the client in terms of time and resources this should be small compared to the total cost of the project. To make the project team responsible for the project after handover and into the utilisation phase is not new. For example when the contract for the Tunnel Bridge was awarded in 1730, the contractor, who was in effect offering a turnkey package including design and production, was required to ensure that the bridge remained serviceable for the first 20 years of use. Any failure during this period was to be corrected at the contractor's expense. Such a condition would force the project team and the producer to consider the longer-term project objectives, but this must be balanced against the costs associated with such a requirement. No team will accept such additional responsibility without adequate recompense. The likely cost of this extra requirement may far outweigh the cost to the client of increased involvement in the earlier stages.

An evaluation process which examines the whole project from conception to close down is required, to complement the project management evaluation process. Such a process will include issues of project economics and viability, at least, which are broader than merely how to accomplish the project on schedule, to budget and to scope. It will give less attention to the management and implementation aspects of projects and concentrate on the economic, financial and utilisation aspects. This technique will probably require more input from producers and the project team into the utilisation phase, which may form a closer partnership between two or more parties in a 'win–win' situation. Consequently the term 'project management' may be replaced by the 'management of projects', the focus being not so much on the tools and techniques of bringing the project in on schedule, to budget and to technical performance, but on the wider phenomena of the project and of how it can be successfully managed throughout its life.

Conclusion

This paper has highlighted the overlap that exits between projects and project management and the confusion that can arise from the common use of these terms. It has also attempted to highlight how the objectives of a project and project management are different and how the emphasis of project management is towards achieving specific and short-term targets compared to the wider aims of a project. The conclusion is that to make the project management team totally responsible for success would appear to be inappropriate and that the client should take an increased interest in the development and use of the project.

There also needs to be an improved distinction between success and failure for the project and project management interests. Project success could be assessed using three assessment criteria based not only on project management techniques but on other external criteria which are important for the successful implementation of projects, from conception through development and use, to the final closedown.

Thus, for a project to be successful there must, first, be an improved appreciation of the role of project management within projects, and this role must be placed within the context of a wider project alongside other outside criteria and long-term expectations. Second, the project manager must allow the client to contribute actively in the planning and production phases and at the same time the project team involvement has to be extended into the utilisation phase. This would be accommodated properly in a project evaluation technique that examines not only the implementation processes but also the economic and financial performance.

Finally, one must always bear in mind that successful project management techniques will contribute to the achievement of projects, but project management will not stop a project from failing to succeed. The right project will succeed almost without the success of project management, but successful project management could enhance its success. Selecting the right project at the outset and screening out potentially unsuccessful projects, will be more important to ensuring total project success.

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