Management Innovation of IT Project Managers

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Abstract—Compared with other projects, information technology (IT) projects are unique, which are characterized by emergency, uniqueness, one shot, short term and uncertainty. To implement an IT project successfully, problems in the IT project management must be found, analyzed and solved and there must be successful project management and management innovation as well. Then, what are the major problems in IT project management? Who can conduct IT project management successfully? How to conduct IT project management successfully? How to innovate IT project management? This paper discusses all these questions. And on the basis of the above, it also draws the following conclusion: The project managers play a key role in both implementing and controlling stages of IT projects. The project managers should regard IT project management as a system, deal with various relationships with the parties concerned in the system well, and conduct management innovation. By adequate communication channels, the project managers should communicate with all the stakeholders, i.e. the factors in the system, including the client, the management, and the team members to know their requirements, needs and the problems respectively. Only by so doing, can they give satisfactory responsiveness to the client, get support from the management, lead and control the team outstandingly, and make the team work efficiently. While by management innovation, the project managers can make all the factors in their management system interact effectively and efficiently with each other to create a synergy effect. Only by so doing, can the IT project management be successful, and finally, can the IT projects be implemented successfully.

Keywords-management innovation; IT project management; IT project managers

I. INTRODUCTION

The Standish Group International, Inc. reported in 2001 that 31% of all information technology (IT) projects were canceled before completion, that only 16% of projects were completed successfully, and that 88% of all projects were over budget, over schedule or both. Standish reported an average cost overrun of 189% and an average time overrun of 222% of original estimates [1].

One of the reasons for the high failure rate is that many companies don't have process for selecting the project manager or they have little idea what management skills and personality traits are needed for the project manager to succeed in IT project management.

In fact, many people associate the term "IT project management" with technical skills not management skills.

Companies typically ensure that their employees have the technical skills they need to work on whatever tasks they are assigned, but, as Jim Johnson, Chairman of The Standish Group, has said, "When projects fail, it is rarely technical."[1].

IT projects are characterized by emergency, uniqueness, one shot, short term and uncertainty. To implement IT projects successfully, what is essential is successful IT project management. After an IT project has been planned and designed, the next thing to do is to implement it. At this stage of the IT project, both managing and controlling play an important part. But who plays an important role in both managing and controlling of an IT project?

A comparative analysis of various studies on factors which are considered critical to the success of a project identified nine common factors: clearly defined goals, competent project manager, top management support, competent project team members, sufficient resource allocation, adequate communication channels, control mechanisms, feedback capabilities, and responsiveness to clients [2].

On the basis of clearly defined goals, if the competent project managers can get top management support, work together with their competent project team members, have sufficient resource allocation, adequate communication channels, control mechanisms, and feedback capabilities, and give responsiveness to clients, surely, their IT project management will be successful, so will the IT projects be. Therefore, other things being equal, among the nine factors, the competent project manager is the most important, that is to say, the successful IT project management and management innovation that the project managers conduct is the most important. Then, how should the project managers conduct IT project management successfully? How should they innovate in their IT project management?

II. WHO CAN CONDUCT IT PROJECT MANAGEMENT SUCCESSFULLY

In IT project management, project managers play a critical part in implementing and controlling stages of IT projects.

As an IT project manager, the more versatile, the better. For an IT project manager, especially a competent project manager, technical skills are essential, but management skills are more important. Broadly speaking, the project manager's technical skills are good enough, in other words, the project manager is technically qualified. In practice, if an IT project

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is a failure, it usually results from the project manager's lacking management skills and good personalities not technical skills. Various studies on management skills and good personalities of a competent project manager show that a competent project manager has the following characteristics: excellent communication skills-knowing when and to whom to communicate; strong leadership skills-leading teams; love of work-embracing the challenges; clear vision-communicating this vision; strong team building skills-setting positive tones; structure and alignment-creating the environment and direction; and discipline-completing each phase of the project properly [3].

Frank Toney reports in the newsletter Project Management Best Practices Report that a study of The Top 500 Project Management Benchmarking Forum identified traits of a best practice project manager. According to the study, the best project managers: are recognized by stakeholders as the single most important factor in project goal achievement; are truthful in all dealings and relationships; exhibit eagerness to organize and lead groups; exhibit evidence of a strong desire for goal achievement; are even-tempered; have faith that the future will have a positive outcome; and have confidence their personal performance will result in a positive outcome [3].

A competent project manager sets priorities up front. So everyone on the team knows where they are all going, what they are all fighting for. They feel like a team. They want to succeed, they want the project manager to succeed, and they want the corporation to succeed. They feel inspired [4].

A competent project manager is much more interested in the individual, in the individual's value, in how the individual is doing and feeling, in the individual's opinions and thoughts and ideas. He/She is interested in everyone else on the team as well, in motivating everyone en masse, in making it fun, and exciting for the team, in articulating an end point, a direction, and keeping the team focused as a team on that end point, in the right direction [4].

A competent project manager knows what the end client wants, and he/she knows that the end client will be happy when it is delivered. And he/she knows what management wants and how happy they will be at the end of the project [4].

Therefore, the competent IT project managers can conduct IT project management successfully.

III.   MAJOR PROBLEMS IN IT PROJECT MANAGEMENT

In IT project management, the major problems from the perspective of the project managers are as follows:

A.   Lacking Communication with the Client

During the whole process of an IT project, the project managers should keep contact with the client. But some project managers just focus on the IT project activities including time management, quality management, cost management etc. They do communicate with the client at the outset of the project, but when the project begins, they seldom communicate with the client. Therefore, when things such as a change in the client's needs take place, the project

managers can't know in time, which usually results in dissatisfaction from the client.

B.   Passive Communication with the Management

Some project managers, because of their personalities, feel shy to talk with the management. In the IT project management, they avoid communicating with the management except that they have to do so, which often brings about wrong decision-making in project management.

C.   Only Paying Attention to Team Members' Performance

In the IT project management, the project managers often emphasize the significance of completing the project on time in front of the team members. They tend to adopt penalty when team members make mistakes no matter what reason it is. They seldom pay attention to the team members' psychology, interest, thinking and so on, which results in the demission and less loyalty of the team members.

IV.   HOW IT PROJECT MANAGERS SHOULD MANAGE AND INNOVATE

The above problems indicate that the IT project managers didn't regard project management as a system. In their project management, they separate project activity management from the client, the management, and the team members. In fact, the project activity management, the client, the management, and the team members are all closely related to the project. The project managers should know that they are factors of the project management system, they interact with each other in the system, and they together have an effect on the success of the project. The IT project management system is shown in Figure 1. So, the IT project managers should conduct their management in the following ways:
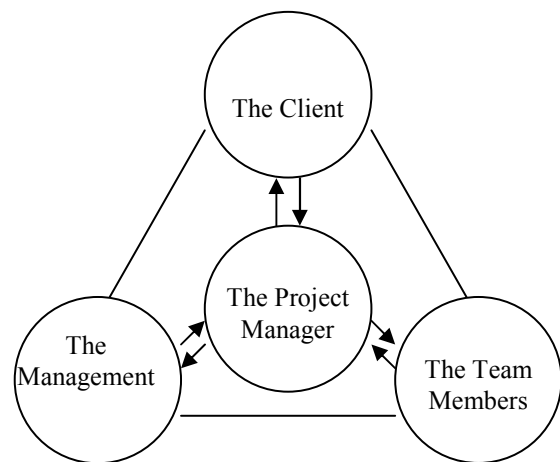

Figure 1.   IT Project Management System.

A. Paying Regular Visits to the Client

An IT project is special, because the client participates in the whole process including design, implementation and evaluation of the project. Sometimes it's complained that the client is always changing his/her requirements. As a matter of fact, there are three reasons for the changing: the project manager doesn't have good communications with him/her; the client himself/herself can't articulate his/her requirements clearly and accurately; and the client's requirements are changed as a result of some objective factors such as the natural disaster. So in this case, from the viewpoint of the project manager, he/she should spend a lot of time interfacing with the client and working hard at building a relationship based on trust and respect with the client. He/She must pay regular visits to the client and try to have through communications with the client, so that he/she can know what requirements the client has. If the client wants to change some items of the project, the request for change should be recorded first; then the necessity of change should be analyzed; and then, the effect that the change has on the progress, cost and so on of the project should be analyzed; the project manager should communicate with the client about both the effect and the change in costs; and finally, only when both sides reach an agreement, can the change be implemented. The project manager builds and can keep a friendly, mutual benefit and cooperative relationship with the client. As a result, by means of adequate communication channels, when the project manager gives responsiveness to the client and the latter is satisfied, then both are satisfied. This may leave the client a good image which can result in more projects for the project manager to do.

B. Communicating with the Management Flexibly

Without support from the management, it's difficult for the project managers to succeed in IT project management. The project managers should communicate with the management flexibly, i.e. the project managers should talk with the management according to the specific situation of the IT project activities. On the one hand, they can know the management's requirements and instructions, so that they can submit reports to them about the progress, performance, demand for resources, etc., and in time deal with or adjust the plan as told. On the other hand, they can get support from the management as they expect. So the above can ensure smooth IT project management of the project managers.

C. Paying Attention to All Aspects of the Team Members

All IT project activities are executed by team members. Whether the project can be successful to a large degree depends on the team members. It is the project manager that can directly lead them, control them, manage them, and motivate them. Therefore, the project managers should pay attention to all aspects of the team members, not just their performance in their work. The project managers should pay attention to the following aspects:

1) Recruiting: With the support of the top management, the project managers recruit team members according to the specific requirements of the IT project. When recruiting, the

project managers should take into consideration the candidates' skills, personalities, interests, etc. Also the project managers should consider the candidates' responsibility, professional ethics, cooperative capability, etc.

2) Informing: The project managers inform their team members of the rules and regulations, the common goal of the team, value of the project, all details of the specific requirements of the project such as the progress of the project, scope control, quality control, project approach and so on, so that all team members know what goals they must achieve.

3) Atmosphere Creating: The project managers try to create a kind of atmosphere in which all team members can cooperate closely, unite and work like one person. Whenever a team member encounters a problem, others are all willing to help him/her without any hesitation. There is a Chinese saying: "Two heads are better than one." Moreover, it's well known that 1+1 is equal to or more than 2. That is synergy. The project managers try to make the team members respect each other, help each other, cooperate with each other, and know that only by so doing, can the project succeed, can their competence be shown, and can their individual values be actualized. If the project managers can lead the team to the right direction in the right way, then it's first the key to the success of the IT project management, and afterwards the key to the success of the IT project itself.

4) Distributing: The project managers distribute the entire project activities to the team members based on their skills, personalities, interests, etc. Different members have different skills, different competences, and different personalities. Some are good at requirement analysis; some are good at design; some are good at programming, some like to innovate, and so on. In the meantime, the project managers empower the team members so that they can make full use of their advantages and avoid their disadvantages.

5) Communicating: Communication is needed at all stages of the IT project. The project managers communicate with all team members regularly and effectively by email, telephone, or by means of talks in person, meetings, reports, etc., depending on the specific situation. By so doing, on the one hand, team members know all what they should do; on the other hand, the project managers know their needs in time. The project managers try to adopt as many motivation methods as possible to motivate team members, and make them know how to deal with the relationship between personal interests and organizational interests. The project managers should establish credibility with the team, and use power properly. There are various motivation methods that the project managers can use. Besides material motivation, the project managers can apply spiritual motivation methods. For example, most team members' work is mental; they often have pressure to bear. The project manager can

offer them either opportunities to take part in laughter activities or humor consultants to help them to relax.

6) Cross-cultural Management: Team members may come from different cultural backgrounds. It is a challenge for the project managers in management. The project managers should try to know cultural differences as many as possible first, and then provide team members with as many opportunities as possible to communicate with each other, get to know each other well, cooperate with each other closely, and complete the IT project successfully together.

V. CONCLUSION

Based on the above, a conclusion can be drawn: whether IT project management is successful or not depends on whether the requirements and needs of the stakeholders including the client, the management, and the team members are met. In meeting the requirements and needs of the stakeholders, the management methods and management innovation of the project managers play a key part. Only when the project managers are competent, only when the project managers regard IT project management as a system, deal with various relationships with the parties concerned in the system well, and conduct management innovation, only when the project managers communicate with all the factors in the system, i.e. the client, the management, and the team members by adequate communication channels and know their requirements, needs and problems respectively, only when the project managers lead and control the team outstandingly, can they give satisfactory responsiveness to the client, can they get support from the management, and can they make the team work efficiently. And only when the project managers innovate in IT project management, can they make all the factors in their management system interact effectively and efficiently with each other to create a synergy effect, can the IT project management be successful, and finally, can the IT projects be implemented successfully.

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