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SUMMARY OF CHAPTER 7 (PROJECT RISK MANAGEMENT)

This chapter talks about the occurrences of risk in a project. Risk management is about anticipating risks and having a plan in place that will resolve it when it occurs. It saves time, money and effort. Risk management reduces unnecessary stress on the project team. It helps prevent many problems and helps make other problems less likely. This chapter also talks about identifying risk and listening them in ranks according to their probability of occurrence and the impact if they should occur. After identifying and listing out the possible risk the process of risk appraisal and analysis can be used to eliminate the most improbable risk arising. While analyzing the risk it is necessary to consider the possible causes and effects any risk and they can be analyzed either by the Qualitative or Quantitative risk analysis.

The Qualitative risk analysis has to do with considering each risk in a purely descriptive way so as to imagine various characteristics of the risk and the effects it might have on the project. The Qualitative risk analysis goes at least one stage further than the quantitative analysis because it attempts to quantify the outcome of the of the risk event. There are some methods used in analyzing the causes and effect analysis if Qualitative and they include the:

1. Fault-trees and
2. Fishbones

They are methods commonly used by reliability and safety engineers to analyze fault in the design and construction.

The Quantitative analysis methods has to do with the attempts to assign numerical vales to risk and their possible effects. They examine the probable impact of project time and cost. Though the quantitative methods produce the actual numbers they can give a false sense of precision. On has to remember that the results are based on estimates, assumptions and human judgement.

There are also different methods when it comes to dealing with risk and, the project manager usually have a range of options which include:

1. Avoiding the risk
2. Taking precautions to prevent or migrate the risk impact
3. Accepting the risk
4. Sharing the risk and
5. Limiting the risk

Also Insurance is also an important aspect of risk management. It is the financial impact of many risks that can be offset by insuring against them. Insurance has been categorized into four main classes which are:

1. The legal abilities which is the payments to others as a result of statutory, contractual or professional commitments
2. Protection against the loss or damage to property which include the temporary works and work in progress
3. Covering relating to personnel and
4. Pecuniary loss.

 When dealing with insurance there are some risk that can and cannot be covered by insurance. Risk that can be covered are:

1. Risk insurance for construction and engineering projects
2. Decennial insurance
3. Accident and sickness insurance
4. Key person insurance
5. Pecuniary insurance

While the risk that cannot be covered by insurance arises under the following circumstances:

1. Where the chances against a loss occurring are too high that means the risk is seen as more of a certainty than the reasonable chances .e.g. losses made through speculative trading
2. In situations where the insurer is not able to spread its risk over a sufficient number of similar risk
3. In situations where the insurer does not have the access to sufficient data from the past to be able to quantify the future risk
4. In situations where by the insured would stand to gain as a result of a claim.

In the case of risk we have to plan for a crisis. Risk can have such a potential impact on a project that special crisis management contingency plans has to be made. The contingency plan will extend the projects that would need to be set up specially and rapidly to deal with the sudden crisis .E.G. in areas that are particularly liable to epidemic diseases flooding hurricanes etc.

SUMMARY OF CHAPTER 9(PROJECT ORGANIZATIONA STRUCTURE)

This chapter talks about the properties that are essentials for an efficient organization. It describes the possible organization options together with their advantage and disadvantages. Firstly and foremost it talks about the effective organization and communications for every members of a project that will make them know what they are meant to do to or what is expected for a successful project. When working on a project a well monitored group can be a bundle of joy to work with, while a poorly informed group will be very slow in achieving results on the project, they will be very expensive to run and extremely frustrating to work with. A good management communication will allow progress to be monitored and difficulties to be reported back to executive management. Secondly, it talks about the organization charts. When discussing organizational structures in details it is not possible without the aid of charts. When creating an organizational chart it must have a standard conventions as follows:

1. Each box must represent an organizational role or job
2. The convention is to write job titles in the boxes in preference to the jobholders personal names
3. The authority and status of each role reduces from top to bottom of the chart in hierarchical fashion
4. Dotted and unbroken rules indicate specifically designated lines of communication
5. The various department depicted on the chart are usually grouped by their specialist functions to enable these charts to be often called line and function charts
6. Roles lying outside the line reporting structures and are called staff roles. The people in staff roles have no direct line authority but they can enjoy status and indirect power through the support of their line manager.

It also spoke about the shirt comings of Organigrams. Organigrams cannot possibly show every communication channel and they are certainly incapables of defining every subtle influence that one person might be able to exert over another, even though organization thrive on fast and effective communications whether by electronic or face to face. Organigrams with all their deficiencies and potential for causing individual discontent are the best, although they are the only practicable way of depicting on organizational structure.

Moving on it spoke about the work management in a conventional manufacturing organization, how a clearer picture of some of the problems encountered in handling the project can be seen by studying the management organization structure of the manufacturing company. When dealing with project organizations there is always a need for communications throughout the project cycle and the need for a project manager. In in engineering projects in common with most other customer-funded projects are partly cyclical in nature. The project is given life when the customer issues a purchase order or when some other contract document is signed. Thereafter many other stages must be passed through in turn, until the work ﬁnally arrives back at the customer as a completed project. Clockwise rotation around the cycle only reveals the main stream. Within this ﬂow many small tributaries, cross-currents and even whirlpools are generated before the project is ﬁnished. When talking about project matrix organizations itbwas categorized into two which are:

1. Matrix organization for a single project and
2. Matrix organization for multiple projects

Matrix organizations for a single projects shows how a project manager might be introduced into a company that is undertaking a special, complex project alongside its more routine manufacturing activities. It could apply, for instance, to one of the ﬁrst projects undertaken by Street Components Ltd. This arrangement is fairly common. It allows the general line organization of the company and its departmental management structure to continue normally, but the project manager is asked to give undivided attention to the ‘intruding’ project. Here the project manager acts principally as a coordinator, and has no direct line authority over any other manager or their staff. The names given to this organizational arrangement are a ‘functional matrix’ or a ‘coordination matrix’.

While matrix for organizations for multiple projects described the functional matrix becomes a little more complicated when a company is handling several projects at the same time. It is an organization chart for a manufacturing company which customarily handles several projects simultaneously. In this example, each project is either big enough to justify its own full-time project manager or it can be coupled with one or more other suitable projects to allow sharing so that one project manager looks after two or more projects.

There are different matrix strengths which are categorized into the weak matrix and the strong matrix. In a weak matrix the each project manager’s degree of authority and control is less than that enjoyed by the managers of the functional departments. Each project manager is expected to plan and coordinate the project work, but is not empowered to issue direct commands through the line organization. Thus every project manager in a weak matrix is entirely dependent on the departmental managers for the provision of people and equipment for project tasks. The project managers, although key people, have to be content with a coordinating role. The weak matrix can encourage conﬂicts. EG., different project managers might compete with each other in claiming attention and resources for their own projects, and they can also come into conﬂict with the departmental managers over the allocation of people, machines and other facilities to project tasks. While the strong forms of matrix have the authority of each project manager takes precedence over the authority of the functional managers, at least as far as the allocation and progressing of work is concerned.

Finally When dealing with project managers in customer/ supplier chain there is often more than one project contractor, especially in projects involving construction work. In multi-contractor projects it is probable that one contractor would be nominated by the project customer (the project owner) as the main or the managing contractor, with overall project responsibility to the owner for managing or coordinating all the other contractors and subcontractors. The managing contractor, in addition to serving the project customer, will itself be a signiﬁcant purchaser (that is customer) for all the expensive equipment and other goods or services to be provided by suppliers and subcontractors. For large projects some of these subcontracts could amount to signiﬁcant projects in their own right, each needing planning and project management procedures similar to those used by the managing contractor. Some equipment manufacturers and construction subcontractors would therefore need to assign project managers to manage their own internal subprojects. Indeed, the managing contractor might even insist that such project managers are appointed, and could wish to question and approve the project management methods to be used, possibly as a precondition to awarding the purchase orders or contracts.