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**MATRIC NO:** 15/ENG02/027

**COURSE:** CSC 408 – PROJECT MANAGEMENT

**ASSIGNMENT:** NEW ASSIGNMENT AND NEW TOPIC TO STUDY

**QUESTION**

1. Please read Chapters 7(seven) and 9(nine) titled on risk management and Project Organization respectively
2. Kindly provide a summary of 1000 words each for chapter 7 and chapter 9 respectively

**ANSWER**

**CHAPTER 7 - RISK**

There is risk attached to the things we do. Projects achieve new things but also come with risks that can be predictable or unforeseeable. Risks can have various origins. It could be physical, political, economic, commercial, technical or operational. The effects of these risk range from trivial inconvenience to project disaster. Risk can occur at any stage of a project. The occurrence of some risks may cost the project more than others based on what phase of the project they occur.

Project risk management is concerned with attempting to identify all possible and foreseeable risk, looking at the severity of those risks and deciding what might be done to reduce their possible impact on the project or completely avoid them. As a project begins, a risk management strategy must be developed to identify potential risks and decide how to deal with them. A risk manager may be appointed in the case of larger projects.

There are methods for assessing and handling risks. First is identifying the possible risks. We first identify the risks that might affect the project because they can occur at unexpected times causing huge losses of money or expending more resources to fix them. Using checklists can help in listing foreseeable risks and studying the history of similar projects. Brainstorming meetings where participants can suggest anything is another means of identifying risks.

Second is risk appraisal and analysis. When risks have been identified they should be ranked according to the possibility of their occurrence and the severity of the impact they will have. Risk analysis can be qualitative involving a descriptive approach and imaging characteristics of the risk and the effect they will have. Quantitative risk analysis quantifies the outcome of a risk event to aid preventive action. Under qualitative cause and effect analysis, fault trees and ishikawa fish bones are methods commonly used by safety engineers to analyze faults in design and construction. The diagrams analyze reasons why a risk may occur and could do so by expanding on the details. Another approach is the failure mode and effect analysis (FMEA). This looks at the effect the risk happening will have as well as the risk itself. Attention would be paid to the actions to take and at what stage of the project the risk may occur. Lastly, is the risk classification matrices. A matrix made up of sections highlighting the chance a risk will occur and the impact it could have. This matrix is then used to assess and visualize a potential risk event.

The quantitative analysis method attempts to assign a numerical value relevant to project time and costs. This value could be used to denote the priority that a risk claims but care should be taken as the numerical value can give a false sense of precision. The FMEA used for qualitative analysis can be adapted to quantify risk thus becoming Failure Mode Effect Criticality Analysis (FMECA). Three assessment columns are provided in which the risk analyst provides numbers to express the degree of significance. A Risk register or a risk log is needed to list all the potential risks that have been assessed and ranked. The risk register should be reviewed and updated regularly throughout the life of the project.

There are a lot of methods for dealing with risks which include avoiding the risk, taking precautions to mitigate the risk impact, accepting the risk, sharing the risk, limiting the risk and transferring the risk. Another option is the use of insurance. Insurance is a huge asset that can offset the financial impact attached to risks. Insurance companies are contracted to handle the risks that may arise. Insurance company customers can be defined as a retail customer who is a natural person or a commercial customer who is someone acting within their normal profession. Insurance can be classified into legal liabilities, protection against loss or damage to property, cover relating to personnel and pecuniary loss. It is possible for an insurance policy to combine cover for two or more of the above classes of risks.

Obligatory insurances try to ensure that companies get protection against some risks. This implies that some required items are insured in order to comply with laws and regulations. These regulations in the case of engineering projects include the periodic inspection and certification of plants and systems. It is necessary that clients are provided the relevant written inspection certificates so they can operate legally. Inspection is also necessary to see that there is compliance with established regulations to protect the organization from liabilities and prosecution by inspection authorities.

Contractual requirements and other legal liabilities cover the contract between the company and the insurer where some requirements are expected by both parties. Such example is liability insurance which the contractor expects to provide protection against legal liability in the event of some occurrences like injury, accidents, environmental damage, property loss and damage etc. Professionals must have adequate insurance to cover liabilities that may occur while working.

There are risks that cannot be insured against or the insurance company may consider the premium demanded prohibitive. Some examples are when the chances of a loss occurring are too high, when there is not enough data from past events to quantify a future risk and when the insured will stand to gain as a result of a claim.

To obtain an insurance, it could be through an underwriter or a broker. The insurer will need sufficient information from the contractor including information that can lead to change in circumstance. Insurance agencies are at liberty to carry out investigations. Liability insurance is becoming expensive which is forcing some insurers closing because they cannot affect this much needed insurance policy.

It is necessary that a contingency plan is put in place considering if a crisis occurs. We may not be very good at predicting disasters but we can be prepared in the event of their occurrence.

There can also be a select group of people who will take charge of the crisis management. They will be considered a sleeping organization or crisis committee ready to act as the need arises. After the selection of these people, they should meet to design appropriate contingency plans and update the plans as well. Another activity the crisis action committee will handle is to assess what might happen should the crisis arise. A tabletop exercise can contribute to this process where the members of the committee assume roles to consider exactly what might happen and what they want done if the crisis happens. There can be testing of the plans using field exercises because they are real and can help identify some shortcomings in the planning process. These plans must eventually be documented with all the lessons learnt so they can be put into action with minimum delay.

**CHAPTER 9 – PROJECT ORGANIZATION STRUCTURES**

The organization of a project is important if the objectives of the project need to be achieved. As there are different companies so also will their organization structure be different and all the various structures may be successful since organizations will adapt it to their need.

Effective organizations will have well laid out authority and every member of the project team will know what is expected of them. Motivation will keep the team going to achieve the expected results. If there is good management communication, feedback will be provided from the members which will help coordination and eliminate faults. Communication is a very vital tool if you want to have an effective team.

There are various charts and organigram made of boxes to show a job or role and lines to show the flow of command and establish hierarchy but these charts have some shortcomings like, ignoring the informal communication and feedback links since they are not usually what is expected and the fact that the organization structure chart remains unchanged even when a new project is taken. Irrespective of these caveats’ organization charts remain one of the best ways to depict an organization structure.

As a project begins departments share information and work together with the feedback they receive. Errors are corrected based on the feedback that is received. As all this is happening there is the need for coordination and proper management. This is where the project managers role exists and the need for one. He / She will ensure that all activities are planned, coordinated and directed towards the clear aim of achieving the project activities and objectives.

There are primarily two matrix organizations: One for a single project and another for multiple projects and they have their strengths and weaknesses. For instance, the balance of power can vary from one matrix as there could be various managers that have to share power and the senior management will be responsible for sharing power and making interventions in some cases. There could be conflict among departmental managers over the allocation. In the case of a single project functional matrix the project managers will depend on their ability and skills to resolve disputes that cannot be solved at the project level.

An alternative to the matrix way is the use of teams made for each project with respective project managers. Here the project manager takes full responsibility of his team. Communication in this setting is much easier as members easily identify with the team. A task force on the other hand is a team that is setup with a particular urgency and common sense of purpose. For example, if a project is running extremely late and in need of a rescue operation it will be advisable for the company to set up a task force to handle the remainder of the project. The constituting members of the task force and its manager must be chosen in line with the specific demands of the project. In some projects not all departments will be involved directly but they should still be considered in the organization as they perform supporting functions.

What is the best type of project organization? The truth is that not one size fits all and every success conscious organization will make the best use of the people within their reach. It is true that some team managers may be limited by the choices made by the senior members of the organizations. In such cases the project manager has to accept the choices that way and see how she can make the best use of what is available. Putting the case of having a dedicated project team against a matrix, it is immediately obvious that project teams have the advantage as they can reach their single purpose which is the successful completion of the project. It is also clearly easier to establish a team spirit when a project team actually exist, as opposed to the case where the people are dispersed over a matrix organization that is handling multiple projects. Also, if the work is being conducted for a government or if the project requires a secret or confidential environment, the establishment of a project team greatly helps the organizers to contain all the work and its information within closed, secure boundaries. But it should also be noted that if the project is very big, the individual specialist subgroups set up to perform all the varied activities within the project team will be too small to allow sufficient flexibility of labor and other resources. The matrix option allows the establishment of specialist functional groups which, in theory, have eternal life, independent of the duration of individual projects. An environment is created that facilitates the building of long-term trust and loyalty. Pooling specialist skills give greater flexibility in allocating resources to projects. Concentration of specialist skills enhances the organization’s collective technical ability and quality. Performance assessments of each individual, and recommendations for promotion, improved salary, are carried out by a manager of the same professional skill within the stable group. This is more likely to result in a fair assessment and employee satisfaction.

The argument continues as to which is the better of the two organizations. As a general rule, large projects of large duration will probably benefit from the formation of project teams. Matrix organizations are indicated for companies which handle a number of relatively small simultaneous projects in the same environment. In some cases, there is still the option of adopting the solution of a hybrid organization which means operating a matrix organization in general, but with teams set up for certain projects when the need arises.

For any project that is significantly large there is the possibility to have multiple project managers. Like in construction projects where there are different contractors the owner of the project will nominate a project manager among the contractors or hire a professional project manager to oversee the project in return for a management fee. Each suborganization within the overall project is likely to have its own project manager and they will often be able to nominate and supervise as appropriate information coordinators.