Learning Journal Week 3

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Course: Software Project Management

Journal URL: https://github.com/raemonx/SOEN6841/tree/main

Weeks: 25 January – 3 Feb and 4 Feb – 10 Feb

Date: 4 February, 9 February

Key Concepts Learned:

- ❖ **Importance of Risk Management -** resource unavailability, service breakdown problems, technology obsolescence, wrong selection of project tools can hamper project progress.
- ❖ **Risk -** The combination of the probability of an event and its negative consequences
- ❖ **Risk category –** Type of risk. E.g. Requirements Risk, People Risk, Legal Risk, Technical Risk, etc.
- ❖ **Risk assessment -** Risk Identification, Risk analysis, Risk prioritization
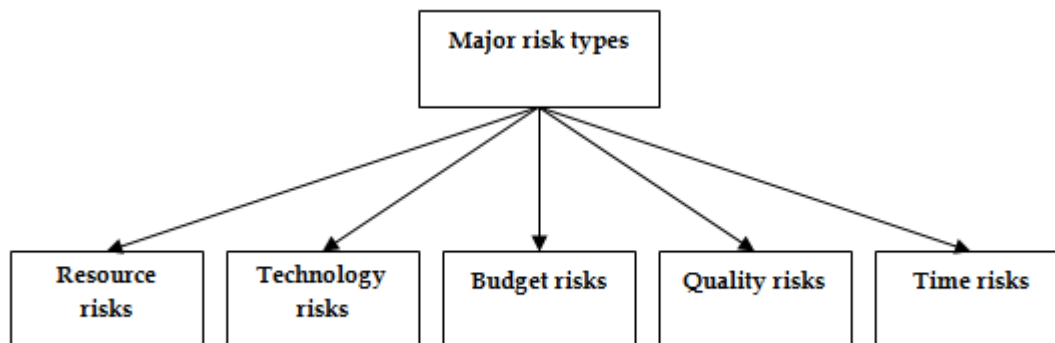
- ❖ **Risk analysis –**
  - ➢ Likelihood
    - ▪ Qualitative : Scale of likelihood (E.g. Low, Moderate, High)
    - ▪ Quantitative : Probability
  - ➢ Impact on project
    - ▪ Qualitative : Scale of impact (E.g. Low, Moderate, High)
    - ▪ Quantitative : Numerical value of risk affect
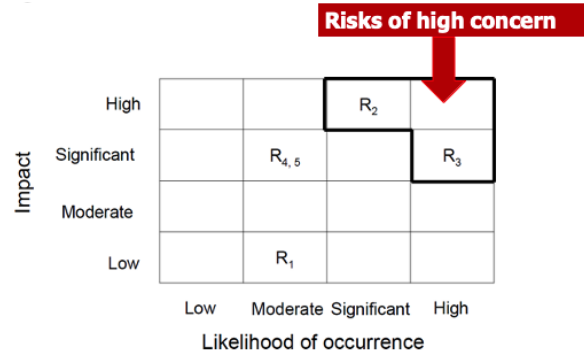
- ❖ **Risk exposure = Risk probability × Impact**
- ❖ **Risk prioritization**
  - ➢ Set priorities to focus risk mitigation efforts.
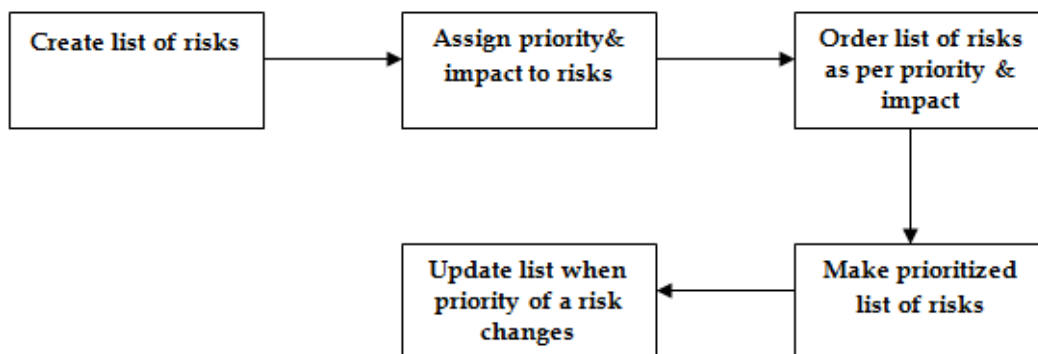- ❖ **Risk control**
  - ➢ Risk planning
    - ▪ Develop strategy to manage each negative risk item.
    - ▪ Strategies – Acceptance, Avoidance, Risk transfer,
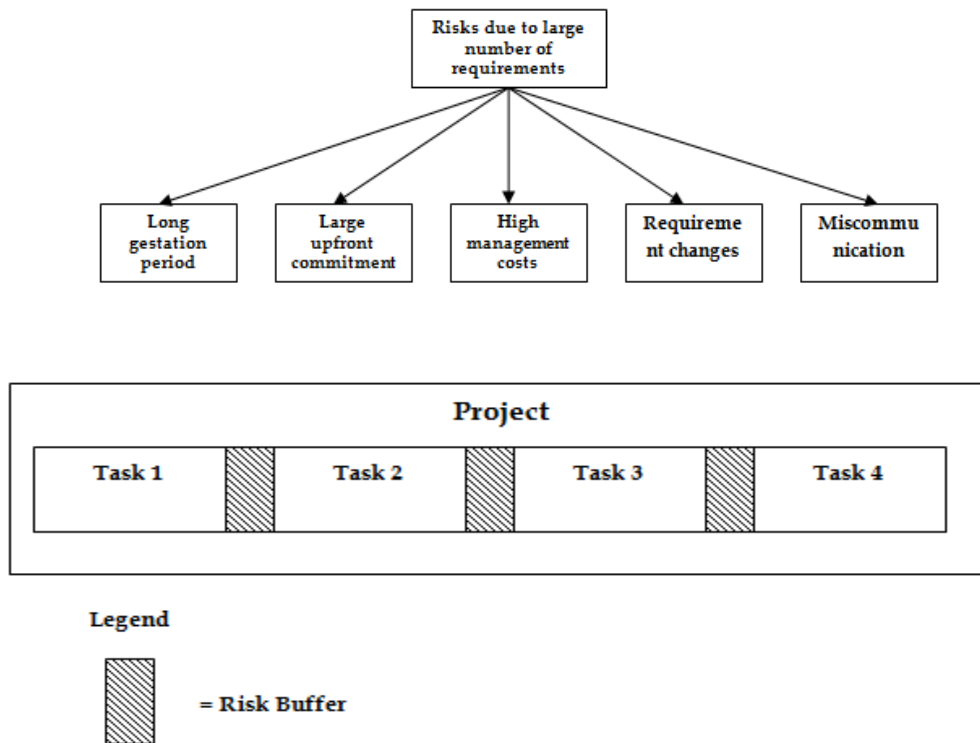   - ▪ Contingency measures
  - ➢ Resolution
  - ➢ Risk monitoring
- ❖
  $$Risk\ reduction\ leverage\ (RRL) = \frac{RE_{before} - RE_{after}}{Cost\ of\ risk\ reduction}$$
    - ▪ RRL > 1 means cost effective
    - ▪ RRL < 1 means non cost effective
- ❖

❖ Iterative software development better to mitigate risk than waterfall model.

❖ **New Terms -** Risk exposure, Risk probability, Risk prioritization, Risk control, RRL (Risk-Return Level), Risk Mitigation, Risk Acceptance, Risk Avoidance ,Risk Transfer
❖ **Methodology** - Iterative Software Development, Risk Identification, Risk Analysis
❖ **Frameworks** - Risk Management Framework, Risk Matrix for Assessing Risks of High Concern, Strategies for Risk Control

Application in Real Projects:

Suppose we consider the launch of a SaaS platform designed for remote team collaboration. We can consider some of the following Risks

Technical Risks: Risk of Security Vulnerabilities, Risk of Service Outage
Operational Risks: Risk of Overestimating Market Demand
Compliance Risks: Risk of Non-Compliance with Data Protection Laws

Impact\Likelihood	Low	Moderate	High
High			Software Security Vulnerabilities
Moderate	Inadequate Funding	Service Outage	Non-Compliance with Data Protection Laws
Low			Underperformance

Benefits of applying the risk management techniques:
- Likelihood of delivering the project on time
- Security and reliability of the platform
- Customer trust and satisfaction.

Challenges
- Expertise to identify and assess risks
- Management for unexpected risks

Peer Interactions:
- During discussions, we discussed about the often-overlooked risks associated with software development project.
- We tried to imagine risks for a team collaboration software and creating a risk matrix.
- Discussed about the case study in the book and how it identified the risks

Challenges Faced:
- **Understanding Risk Interdependencies:** One of the main challenges I faced was understanding how different risks can be interdependent and distinguished
- **Risk Mitigation Resource Allocation:** Determining how to allocate resource for risk mitigation posed a challenge.
- **Integration of Risk Management with Project Lifecycle:** I faced issues understanding how risk management is integrated in the lifecycle and which phase is responsible for it.
- **Understanding Risk Reduction Leverage:** Understanding the formula for calculating Risk Reduction Leverage was a bit hard for me.

Personal development activities:

- **Online Research**: I searched the internet for various risk management strategies and understanding different types of risks
- **Case Study**: I studied the case study provided in the coursework which gave me more insights to the whole risk management process
- **Risk Matrix**: I tried to create and fill the risk matrix for a hypothetical scenario and arrange the risk according to the severity.

Goals for the Next Week:

- For the next week, I will be studying the chapter 5 and 6 and the related case studies.
- More specifically, I will try to understand what a configuration management system. The parts of the configuration system will be also better understood.
- The strategies to deploy a configuration management system will be investigated.
- Also, I will try to understand how project planning actually takes place and how resources are allocated for different tasks.
- I will also focus on project scheduling and artifacts like – Gantt charts, activity diagrams.