NATIONAL INSTITUTE OF TRANSPORT



DEPARTMENT OF BUSINESS AND ENTREPRENEURSHIP STUDIES

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QUESTIONS

- 1. Define project management
- 2. The project planning requirements as applied in IT project management
- 3. Formulate monitoring and control measures of IT project
- 4. Explain procurement and stakeholder's management as applied in IT project

1. Define project management?

According to Project Management Institute (PMI) defines project management as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements."

According to International Project Management Association (IPMA) defines project management as "the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements within the constraints of scope, time, cost, quality, and risk."

At its core, project management aims to ensure the successful completion of projects by balancing competing constraints, such as scope, time, cost, quality, resources, and risks. It provides a structured approach to guide project teams in achieving their goals while adhering to established project objectives and delivering the desired outcomes.

Information technology (IT) project management

According to James P. Lewis in the book IT Project Management: A Practical Guide, 2nd Edition(Lewis, J. P. (2002) IT project management is the art and science of planning and leading software projects, from inception to completion, on time, within budget, and to the satisfaction of the client. It is a specialized discipline that requires a unique blend of technical, managerial, and interpersonal skills."

Harold Kerzner, in the book "Project Management: A Systems Approach to Planning, Organizing, and Controlling. Defines IT project management as follows:

IT project management is the process of planning, organizing, and controlling the resources, procedures, and protocols necessary to achieve specific goals and objectives of an IT project. It involves the application of knowledge, skills, tools, and techniques to meet the project requirements, while effectively managing risks, stakeholders, and changes throughout the project lifecycle."

2. The project planning requirements as applied in IT project management

IT project planning requirements encompass the specific considerations and tasks related to planning IT projects within the broader discipline of project management. These requirements involve understanding and addressing the unique aspects of IT projects, such as technology infrastructure, software development, system implementation, and IT-specific risks and challenges

- i. Project scope: The project scope defines the work that will be included in the project. It is important to define the project scope as early as possible in the planning process to avoid scope creep. For example, the project scope for the NIT student Information management system was specifically for NIT stakeholders including students, NIT staff and NIT administration.
- ii. Project objectives: The project objectives define the goals of the project. They should be specific, measurable, achievable, relevant, and time-bound. This include main objective and specific objectives for example, for the National Institute of Transport student information management system project, main objectives was to design and develop NIT student information system while specific objectives was to create subsystem for lecturers to add student results in the system, to create subsystem for student to add his or her field attachment details, to create subsystem that will generate student results.
- iii. Stakeholder Identification: Identify all stakeholders involved in the project, including project sponsors, users, customers, and any other individuals or groups with a vested interest in the project's success.
- iv. Requirements Gathering: Conduct thorough requirements gathering by engaging with stakeholders and understanding their needs and expectations. Document and prioritize these requirements to guide the project's planning and implementation.
- v. Project Team Formation: Assemble a project team with the necessary skills and expertise to execute the project. Define roles and responsibilities for each team member and establish clear lines of communication and reporting.

- vi. Project schedule: The project schedule defines the timeline for completing the project. It should be realistic and achievable..
- vii. Project budget: The project budget defines the financial resources that are available for the project. It should be based on the project scope, objectives, and deliverables.
- viii. Risk management: Risk management is the process of identifying, assessing, and mitigating risks to the project. It is an essential part of IT project planning to ensure that the project is completed successfully. For example, one risk to the National Institute of Transport student management system project might be that the development team will not be able to complete the project on time or within budget.
 - ix. Change management: Change management is the process of managing changes to the project plan. It is important to have a change management process in place to ensure that changes are implemented in a controlled and coordinated manner. For example, if the National Institute of Transport student management system project is required to add a new feature, the change management process would be used to ensure that the new feature is added in a way that does not disrupt the project schedule or budget.
 - x. Communication: Communication is essential for successful IT project management. Project managers must communicate regularly with stakeholders, including the project team, management, and users. For example, the project manager would need to communicate the project schedule, budget, and deliverables to the project team and stakeholders.
 - xi. Quality Assurance: Define quality standards and processes to ensure that project deliverables meet the required level of quality. Establish quality control checkpoints and conduct regular inspections and reviews to monitor and assess project progress.

xii. Documentation: Create a documentation plan to capture and maintain project artifacts, including project charters, requirements documents, design specifications, test plans, and user manuals. These documents serve as a reference for future maintenance and support activities.

By carefully planning for these requirements, project managers can increase the chances of success for their IT projects.

3. Formulate monitoring and control measures of IT project

Monitoring and control measures in IT project management involve the systematic tracking, evaluation, and adjustment of project progress to ensure that it stays on track and meets its objectives.

- Project status meetings: The project manager can hold weekly or biweekly status
 meetings with the project team to review progress and identify any potential problems.
 The project manager can also use these meetings to communicate with stakeholders and
 keep them informed of the project's progress.
- ii. Project reports: The project manager can create regular reports that track the project's progress, identify any potential problems, and communicate the project's status to stakeholders. These reports can be used to keep stakeholders informed of the project's progress and to identify any potential problems early on.
- iii. Variance analysis: The project manager can use variance analysis to identify any deviations from the project plan. This information can be used to identify potential problems and to take corrective action as needed. For example, if the project is behind schedule, the project manager may need to adjust the project plan or reallocate resources.
- iv. Change control: The project manager can use a change control process to manage changes to the project plan. This process helps to ensure that changes are made in a controlled and coordinated manner. For example, if a stakeholder requests a change to the

- project scope, the project manager can use the change control process to evaluate the request and make a decision about whether or not to approve the change.
- v. Risk management: The project manager can use risk management to identify, assess, and mitigate risks to the project. This process helps to reduce the likelihood of problems occurring and to minimize the impact of any problems that do occur. For example, the project manager can identify risks such as delays in the delivery of hardware or software, and then develop mitigation plans to reduce the likelihood of these risks occurring.
- vi. User acceptance testing: The project manager can conduct user acceptance testing to ensure that the project's deliverables meet the users' needs. This testing can be done by having actual users test the deliverables and provide feedback. For example, the project manager can have students test the NIT Student Information Management System to ensure that it meets their needs for tracking their academic records.

- 4. Explain procurement and stakeholders management as applied in IT project Procurement and stakeholder management are two important aspects of IT project management. Here's an explanation of each:
- i) Procurement Management in IT Projects: Procurement management involves the processes and activities related to acquiring goods, services, or resources from external vendors or suppliers to support an IT project. In IT projects, procurement management typically includes acquiring hardware, software licenses, cloud services, or other technology-related resources. The key steps involved in procurement management are:
 - a. Identify Procurement Needs: Determine the goods, services, or resources required for the IT project and document the procurement needs.
 - b. Vendor Selection: Identify potential vendors or suppliers through a formal selection process. Evaluate their capabilities, cost, quality, reputation, and other relevant criteria to select the most suitable vendor.
 - c. Contract Negotiation: Negotiate the terms and conditions of the procurement contract with the selected vendor. This includes pricing, delivery schedules, warranties, service level agreements and other contractual obligations.
 - d. Contract Management: Monitor and manage the vendor's performance, adherence to contract terms, and delivery of goods or services. This includes regular communication, reviewing vendor deliverables, and addressing any contractual issues or disputes that may arise.

- ii). Stakeholder Management in IT Projects: Stakeholder management involves identifying, analyzing, and actively engaging with individuals or groups who have a vested interest in or can influence the IT project's outcomes. Stakeholders in IT projects can include end-users, clients, project sponsors, IT teams, executives, regulatory bodies, and other relevant parties. The key steps involved in stakeholder management are:
 - a) Identify Stakeholders: Identify and document all stakeholders who have an interest in or impact on the IT project. This includes understanding their roles, responsibilities, and expectations.
 - b) Stakeholder Analysis: Assess the interests, influence, and potential impact of each stakeholder. Understand their attitudes, concerns, and potential risks or conflicts.
 - c) Stakeholder Engagement: Develop and execute a comprehensive stakeholder engagement plan. This includes establishing effective communication channels, addressing stakeholder concerns, involving them in decision-making, and ensuring their support and buy-in throughout the project.
 - d) Stakeholder Communication: Regularly communicate project progress, updates, and changes to stakeholders. Tailor the communication approach to the needs and preferences of different stakeholders.
 - e) Issue Resolution: Address stakeholder issues, conflicts, and concerns in a timely and proactive manner. Seek win-win solutions and manage expectations to maintain stakeholder satisfaction.

Effective procurement management ensures that the IT project obtains the necessary resources at the right quality, within the allocated budget, and according to the project schedule and Effective stakeholder management in IT projects ensures that project objectives align with stakeholder expectations, enhances project outcomes, and minimizes potential risks or resistance

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