**IT Project Planning and Scheduling**

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**Introduction to the Plan:**

The IT equipment and services are evident in this hard competitive era. The organizations are opting for the latest tools, techniques and equipment to help improve their overall infrastructure. The improvement and introduction of IT equipment, particularly the networking equipment, is one of the most important aspects that the organizations consider connecting with the outside world and managing business transactions effectively (Walker, & Lloyd-Walker, 2019). This Project involves tracking the purchase, installation, and testing of its IT equipment and network infrastructure. Abacus Consulting Group (ACG) has approved a project to install the IT and Networking Equipment. The purpose of this Project is to move forward towards the initiation of the Project. The company is going to set up new infrastructure for its new office. Therefore, the company has planned to install new equipment in its office.

**Project Scope:**

The scope of IT project planning and scheduling consists of several steps: incorporations initiation, planning, procurement, installation, testing, and closure of the Project. This Project is limited to purchasing IT equipment, including network servers, desktop computers, corporate software, ethernet cabling, wireless projectors, lab computers, network printers, and voice-over-internet protocol (VOIP) phones. The procurement, installation and testing of the equipment mentioned above will be part of this Project. This Project not only involves meeting the IT equipment needs of ABG but also enables the organization to carry its services effectively. This project also involves the thorough testing of all equipment. Furthermore, this Project comprises the documentation and training of the ABG employees for using the system and equipment and effectively carrying initial troubleshooting.

The project involves the testing of all equipment through internal as well as external procedures. For this purpose, ABG would conduct various tests to ensure the proper functioning of the equipment. For example, functionality, compatibility, performance, networking, and usability tests would be carried out once all of the equipment has been properly installed and implemented within the organization.

**Project Scope Management Plan:**

The Project Manager of ABG company would be solely responsible for the effective execution of the Project. It is important to note that the work breakdown structure and project scope contain the proper information about this Project's scope. It is important to note that the project manager will review the project scope weekly to look for changes in the project scope and determine if there is a need to enhance the scope of the Project. If changes are required, then the project control procedures will be reviewed to incorporate the changes. Furthermore, the project sponsor, which in this case is the CEO of ABG company, will be responsible for accepting the final deliverables. The project deliverables include the proper testing of all IT equipment. Furthermore, the acceptance procedures involve the equipment installation, documentation, testing and training of the preliminary staff for initial troubleshooting.

**Project Schedule:**

**Project Schedule:**

Major milestones of the IT Project Planning and Scheduling have been presented in Table 1 given below. The milestones table indicates that the initial milestone was the procurement of necessary equipment for the Project. It is important to note that the Project required the purchase of equipment by 08/05/2021. Furthermore, the Project's second milestone is installing the hardware and equipment within the company premises, which is expected to be completed by 08/27/2021. The third milestone is the testing by location and training. The testing procedures are to be carried out in various departments of ABG, which are to be completed by 11/12/2021. Finally, this Project is expected to be closed by 31/12/2021. The complete list of tasks can be found in the project schedule document. However, suppose there are some scheduled delays. In that case, the project manager must take immediate actions and proactive measures to achieve the scheduled project goals and objectives promptly.

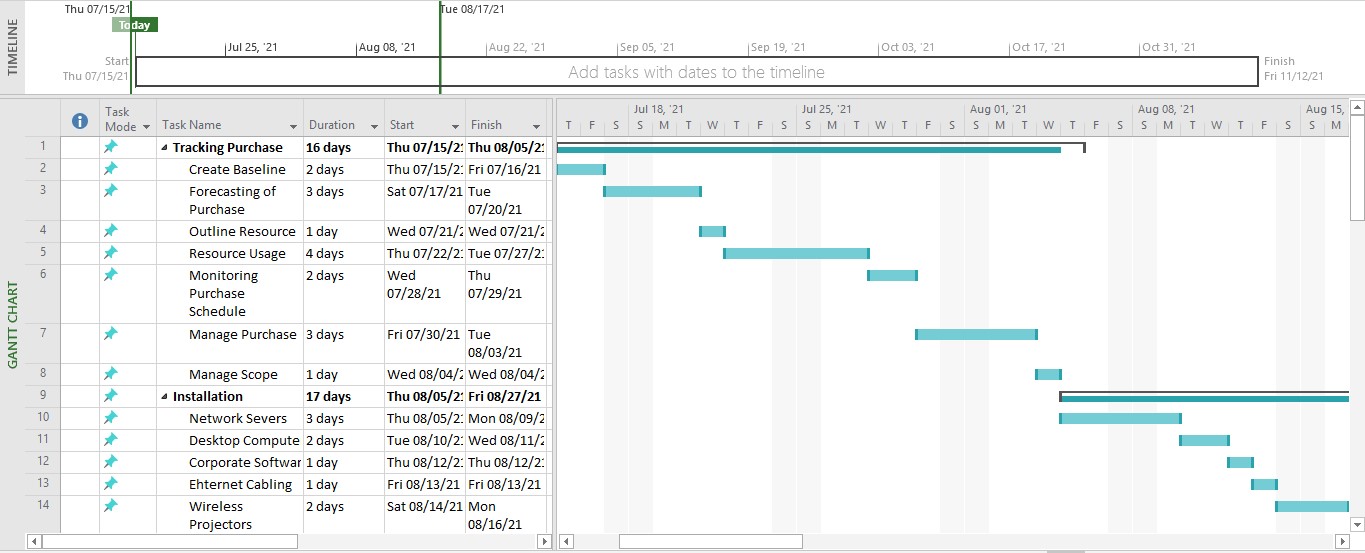
**Table 1: Project Milestones:**

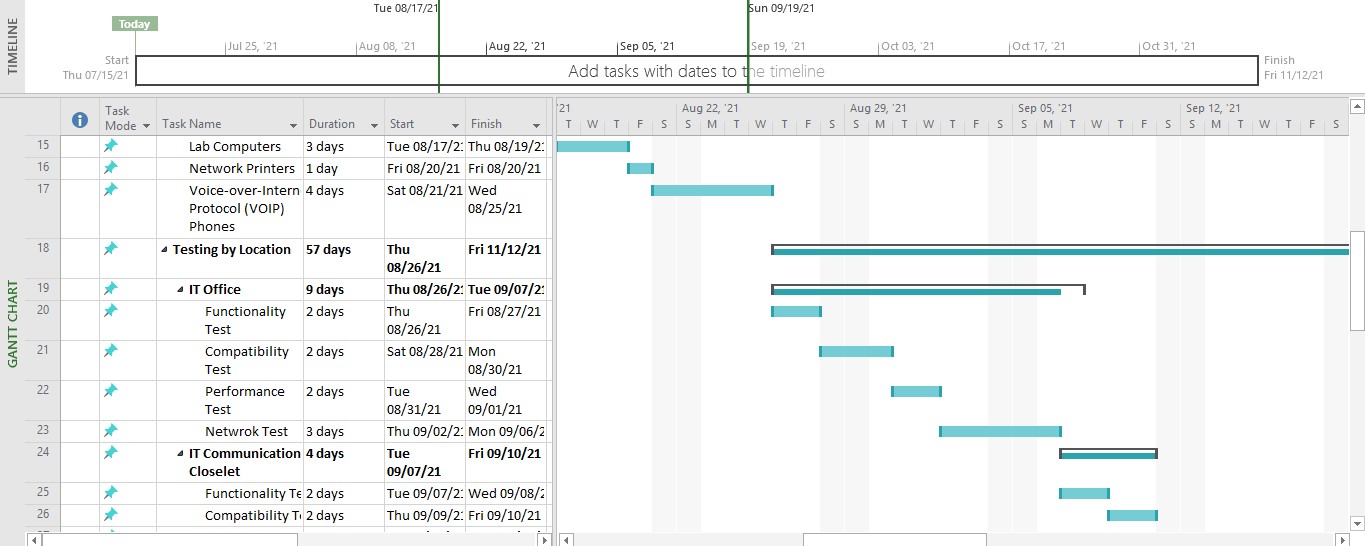
|  |  |  |
| --- | --- | --- |
| **Milestones** | **Description** | **Expected Delivery Date** |
| Tracking Purchase | Creating baseline, forecasting the purchase, outlining the resources, monitoring the purchase schedule and managing the Project's scope. Ensure that all of the required equipment has been purchases. | 08/05/2021 |
| Installation | Installation of the network servers, desktop computers, ethernet cabling, wireless projectors, etc. by ensuring that proper communication can be carried out within the organization | 08/27/2021 |
| Testing by Location and Training | Testing in various locations of the ABG company, which includes IT office, IT communication closet, speciality rooms, computer labs, administrative areas, individual offices and hallways. | 11/12/2021 |
| Closure | Releasing human and physical resources, returning the financial resources to the company, and closing the Project. | 31/12/2021 |

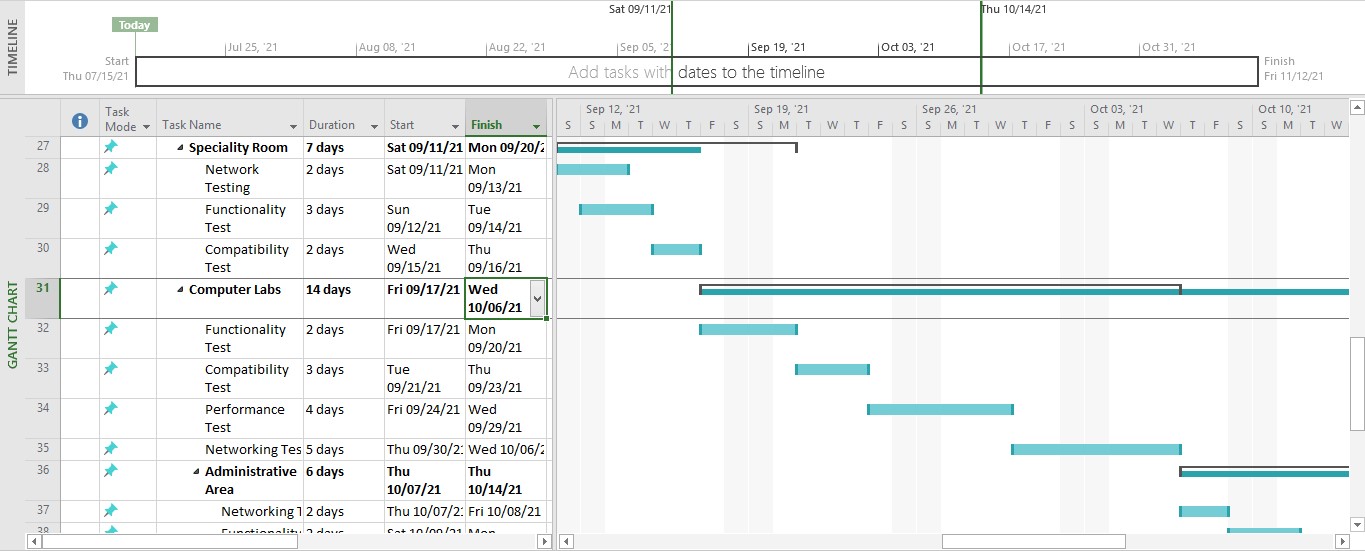
**Project Schedule Baseline:**

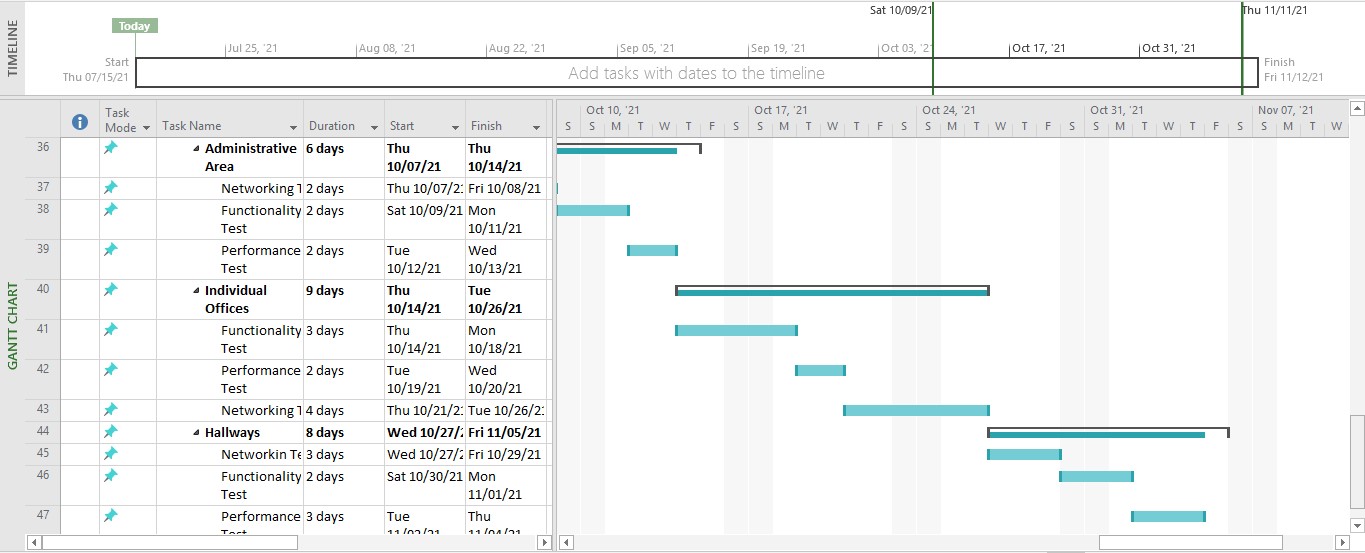
The Work Breakdown Structure of IT Project Planning and Schedule consists of the smaller tasks and activities that require at least 4 hours but not more than 40 hours of labour to complete. The working procedures have been developed based on the close collaboration of the project manager and project sponsor. Furthermore, the project team and stakeholders were also involved in this process.

The project sponsor had initially reviewed and approved the project schedule. Furthermore, the Gantt Chart of the Project has also been presented in figure 1 below. It is important to note that any upcoming changes in the Project will be required to follow the change control process of ABG. If the changes required are beyond the boundary control of the schedule, then a change request will be initiated to the project manager to accommodate the changes. The project manager and the team will be required to review the changes required and their likely impact on the project scope, costs, resources, timelines, milestones, risks, and constraints. If the project manager and team determine that the expected change in the Project is beyond the boundary conditions, then the change request will be forwarded to the project sponsor. The boundary conditions of the ABG company include Cost Performance Index (CPI) and Schedule Performance Index (SPI) to be less than 0.7 and greater than 1.3. If the project sponsor approves the required change, the project manager must update the project schedule and implement the change effectively. Furthermore, the project manager will also be required to prepare the necessary documentation and communicate the required changes to all IT Project Planning and Scheduling Project stakeholders.

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**Figure 1: Gantt Chart**

**Schedule Management Plan:**

The project schedule of IT Project Planning and Scheduling had been prepared using the MS Project Management software by considering the Project's work breakdown structure. There are three primary tasks of the Project: tracking purchase, installation, and testing by location. All of these tasks are dependent upon the completion of the previous task. Furthermore, the resource requirement and duration of the tasks has also been represented.

***Roles and Responsibilities:***

The establishment of the project schedule is an important and complex task. After establishing the project schedule, it is important to assign roles and responsibilities to the relevant persons. The project manager would be the primary individual responsible for the whole Project. However, the Head of the Information Technology Department would also be held responsible for the installation and deployment of the Project. Therefore, roles and responsibilities will be delegated to ensure the commitment of the project team to implement and install the equipment. It is also important to note that the responsibilities are also held with the middle and low-level managers to effectively implement the plan. The project sponsor will be primarily responsible for holding the review of the project schedule. The project manager's responsibilities involve defining work tasks, estimating the duration of jobs, and resource estimation. The project manager will also be responsible for effectively executing all tasks, implementing and incorporating changes into the project schedule, and getting approvals from project sponsors. The responsibilities of the project team incorporate the participation in installation and testing of the IT equipment being installed. Project stakeholders are the people who would be using the new equipment, including all of the ABG employees.

**Project Budget:**

**Cost Management Plan:**

The project manager is primarily responsible for managing all costs associated with the IT Project Planning and Scheduling. The project manager has the responsibility of allocating and reviewing the cost performance of the Project. The cost performance will be shared with the project sponsor every month in the project status reports. The project manager will carry out the earned value analysis to determine whether the Project is going on track or there are some deviations in the Project. Furthermore, the project manager would also suggest the project sponsors bring the Project back on the project costs as decided. It is important to note that all budget-related authorities are held by the project sponsor, which is the CEO of ABG company.

The project manager is responsible for calculating the CPI and SPI every month. The variance of 10% in CPI and SPI would impact the Project significantly. Therefore, such costs will be highlighted in yellow colour for the project manager to take necessary actions. Furthermore, when it is identified that there is no likely impact on the project schedule or cost, then no indication in terms of yellow will be marked. Furthermore, the cost variance of 20% will be considered critical and marked with the red colour in the project status report. Therefore, the project manager would be required to take appropriate corrective measures for such tasks. The project cost baseline has been presented in table 2 below.

**Table 2: Project Cost Baseline**

|  |  |  |
| --- | --- | --- |
| **Project Phase** | **Budgeted Total** | **Comments** |
| Initiation | $250,000 | Consists of the working hours of the team members and project managers for project initiation. |
| Planning | $250,000 | Consists of the working hours of the team members and project managers for project planning. |
| Tracking Purchase | $850,000 | Consists of the working hours of the team members and project managers for project initiation. Moreover, the costs of equipment purchase. |
| Installation | $120,000 | Consists of the working hours of the team members and project managers for project installation. |
| Testing by Location and Training | $450,000 | Consists of the working hours of the team members and project managers for project testing. The testing process consists of 57 days. |
| Closure | $50,000 | Consists of the working hours of the team members and project managers for project closure. |

**Procurement Management Plan:**

All of the procurement activities will be controlled and monitored by the project manager. It is important to note that the project manager can approve all budgets falling under $40,000. The equipment procurement or any other items exceeding $40,000 will be referred to the project sponsor for further approval. However, it is important to note that the Project primarily involves the procurement of Network Servers, Desktop Computers, Corporate Software, Ethernet Cabling, Wireless Projectors, Lab Computers, Network Printers, and Voice-over-internet protocol (VOIP) phones. The project manager would collaborate with the team to arrive at the cumulative costs to procure the items mentioned above effectively. The procurement of the products and equipment will be carried out through specified vendors offering quality products at cheaper prices. The selection of the appropriate vendor will be the primary responsibility of the project manager. The project manager will also assess vendor performance and the quality of the equipment.

**Project Risk:**

Risk assessment is a process in which the project team identifies, categorizes, prioritizes, and mitigates the risks associated with the Project. Risk assessment is a step in the risk management process (Linh, et al., 2019). The project team will identify and track the risks associated with the Project every week. Furthermore, the risks that likely impact the project schedule and cost structure will be immediately communicated in the weekly status report, which the project sponsor will review.

This Project has different types of risks that may get affected by the competitor's demands and influences. Similarly, the Project may also get affected by unforeseeable hazards such as financial or political crises. The Project may also be affected by the recent COVID 19 situation. Proctor & Gamble has hired different professionals to deal with different risks in an effective manner. Risk mitigation strategies will be adopted according to the contingency plans of the company. The risks considered urgent will be raised to the project sponsor.

**Risk Matrix:**

Risk rating has been carried out using the probability and severity of the risks, shown in table 3 below. The risks have been classified based on the rating.

**Table 3: Risk Matrix**

|  | | *Severity* | | |
| --- | --- | --- | --- | --- |
| Minor | Moderate | Major |
| *Probability* | Probable | Medium | High | High |
| Possible | Low | Medium | High |
| Unlikely | Low | Low | Medium |

The severity and probability of the risks have been categorized below. The categories of the severity have been presented below.

* Minor – The risks associated with the Project would likely cause delays. However, these risks may not affect the critical path of the Project. Furthermore, these risks will have a negligible impact on the estimated time of the Project.
* Moderate – The risks may cause additional delays in the Project while increasing the Project's cost. However, there is a minimal impact on the critical path of the Project.
* Major – The risks associated with the Project require additional time and resources associated with the Project. Furthermore, the risk impacts the critical path of the Project, due to which the Project will be required to pass through the re-planning phase.

The categories of probability have been presented below.

* Unlikely – The risk may not occur. This possibility has been included because there may be risks that have occurred only once or twice in the past.
* Possible – It is likely that the risk may occur because it has occurred several times in the past.
* Probable – There are more than possible chances for occurring the risk. This possibility has been included because there is a possibility of reoccurrence.

The combination of probability and severity has been used to determine the risk rating to be low, medium, or high.

**Risk Management Plan:**

The project manager will analyze the risks every week and analyze the likely impact of these risks. The project manager will also analyze any improvements in consultation with the team.

**Project Organizations:**

**Staffing Management Plan:**

The project sponsor will approve the staffing plan of the Project. The project team has been located at the company office and consists of the following members.

**Project Manager:**

The ABG organization will appoint one project manager for the completion of the task. The project manager is responsible for planning, negotiating, allocating resources, communicating, reporting, evaluating, staffing, internal and external communication, vendor management, etc.

**Network Engineer:**

One network engineer of the organization would manage the network infrastructure of the company.

**System Engineer:**

One system engineer would manage all of the servers and computers associated with the Project.

**Testing Specialist:**

One testing specialist would be responsible for performing and conducting Functionality Test, Compatibility Test, Performance Test, Networking Test, and Usability Test.

**Change Control:**

**Change Management Plan:**

Following steps would be followed as part of the change control process to introduce the change within the organization.

1. Identify whether there is a need for change and involve all stakeholders
2. Enter the change in the change request register
3. Establish an evaluation of the change to be introduced
4. Ask the Change Control Board to consider the request for change
5. Discuss and decide the change process with Change Control Board.
6. Implement and follow up the change.

**Communication:**

**Communication Management Plan:**

The communication management plan has been established, which has also been presented in table 4 below.

**Table 4: Communication Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Communication** | **Description** | **Frequency of communication** | **Procedure** | **Participants involved** | **Responsibility** |
| Status Report | Provide status report to the project sponsor | Weekly basis | In-person as well as email | The project sponsor and project manager | Project Manager |
| Team Meeting | Conduct team meetings to discuss the project progress, risks and changes | Weekly basis | In-person | Team members | Project Manager |
| Monthly Review | Evaluate the monthly progress of the Project | Monthly | In-person | Team members, project manager and project sponsor | Project Manager |
| Technical Evaluation | Analyze the technical requirements and design of the Project | Bi-weekly | In-person | Testing specialist | Project Manager |

**Communication Conduct in Meetings:**

The project manager will share an agenda of the meeting with all of the team members one day before the meeting. The project manager will decide the meeting's time duration, and a check will be established during the meeting. The project manager will assign the duty to note down the meeting minutes, which will be shared via email to all participants after the meeting is over.

**Communication Conduct in Email:**

Email communication and response should be frequent and error-free. All team members are required to reply on the same day on which the email had been sent.

**Quality Management Plan:**

All members of the project team are responsible for quality management. Therefore, all team members are required to ensure the quality standards are followed. For this purpose, the procurement of renowned companies will be carried out.

**Roles and Responsibilities:**

The roles and responsibilities of the project team have been presented below.

**Project Sponsor:**

The project sponsor would be responsible for disseminating the quality standards for the procurement of the products and equipment.

**Project Manager:**

The project manager is responsible for ensuring the quality standards are followed throughout the Project.

**Testing Specialist:**

The testing specialist would be required to perform all tests based on the company's quality control standards.

**Quality Control:**

ABG will use various tools and techniques to ensure that all of the deliverables of the Project have been provided. The project manager is responsible for establishing the process and measures to evaluate and accept the Project. The testing specialist would assist the project manager in making sure that the equipment purchased complies with the standards.

**Quality Baseline:**

IT Project must meet the established criteria for quality standards established in the quality baseline in Table 5 below. It is required that the equipment must meet or exceed the quality baseline parameters established.

**Table 5: Quality Baseline**

|  |  |
| --- | --- |
| **Item** | **Acceptable Level** |
| Network Servers | 98% packet transmission |
| Desktop Computers | Latest 10th or 11th generation |
| Corporate Software | Working condition |
| Ethernet Cabling | Plastic coating |
| Wireless Projectors | Renowned company |
| Lab Computers | Latest 10th or 11th generation |
| Network Printers | Unlimited printing capacity |
| Voice-Over-Internet-Protocol (VOIP) phone | Proper Communication |

**Sponsor Acceptance:**

Project plan approval by the project sponsor.

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*Project Sponsor Name and Designation*

**References:**

Linh, N. D., Hung, P. D., Diep, V. T., & Tung, T. D. (2019, February). Risk management in projects based on open-source software. In *Proceedings of the 2019 8th International Conference on Software and Computer Applications* (pp. 178-183).

Walker, D., & Lloyd-Walker, B. (2019). The future of the management of projects in the 2030s. *International Journal of Managing Projects in Business*.