

Project Dissertation Report on

**“STUDY OF PROJECT MANAGEMENT LIFE
CYCLE AND ROLE OF PROJECT MANAGER (A
CASE STUDY OF DELL TECHNOLOGIES)”**

SUBMITTED BY

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UNDER GUIDANCE OF

.....



DELHI SCHOOL OF MANAGEMENT

Delhi Technological University

Bawana Road, Delhi

TITLE OF THE PROJECT

**“STUDY OF PROJECT MANAGEMENT LIFE
CYCLE AND ROLE OF PROJECT MANAGER (A
CASE STUDY OF DELL TECHNOLOGIES)”**

CERTIFICATE

This is to certify that Mr. Vikrant Rana has completed project titled “**STUDY OF PROJECT MANAGEMENT LIFE CYCLE AND ROLE OF PROJECT MANAGER (A CASE STUDY OF DELL TECHNOLOGIES)**” under the guidance of Professor _____ as the part of Master of Business Administration (E-MBA) curriculum of Delhi School of Management , New Delhi. This is an original piece of work and has not been submitted elsewhere.

Mentor Name and Signature

**Head of Department
Delhi School of Management
Delhi Technological University**

DECLARATION

I hereby declare that this project work titled “**STUDY OF PROJECT MANAGEMENT LIFE CYCLE AND ROLE OF PROJECT MANAGER (A CASE STUDY OF DELL TECHNOLOGIES)**” is my original work and no part of it has been submitted for any other degree purpose or published in any other form till date.

Vikrant Rana
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CHAPTER – 1

INTRODUCTION TO THE STUDY

Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder's needs and expectations from a project. **Project management** involves more than just what a project manager does, all team managers engage in some level of project management, whether meeting deadline, communicating with others, or estimating task durations. Everyone involved in the project contributes to its success. Over the past quarter of a century Software Industry development has drawn considerable attention from governments and practitioners around the world. As a result of this attention and the growing realization that there is a genuine need for the industry to improve its performance and image, a number of reviews of the industry have been conducted in many different countries that have identified problems related to the industry of that particular country and then provided practical suggestions for bringing about the changes necessary for developing its Software Industry.

Projects are temporary endeavors made up of a related set of activities undertaken to create a unique product or service within specified requirements. This specific nature of projects makes it easy to stay isolated from its environment focusing solely on the delivery of activities. It is not unusual to see project working hard to accomplish all the tasks and activities designed on the log frame while ignoring the subtle changes that are occurring around its environment. Development Projects must operate in a broader environment, and project managers need to consider projects within this greater context. To be effective

at managing complex situations, project managers need to take a holistic view of the project and understand how it is situated within the larger environment. By taking this holistic view of projects, project managers are better prepared to understand the external factors that will impact the project.

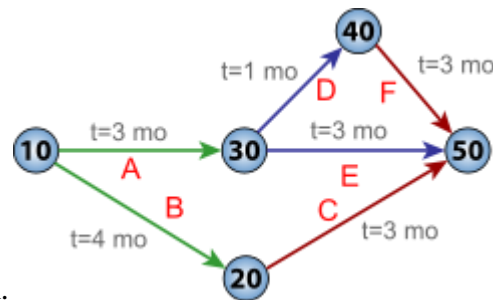
A Project is like a "system" is a dynamic and complex whole, interacting as a structured unit with information flowing between the different elements that compose the system. Using a system approach for project management is a holistic and analytical approach to solve the complex problems a project will face. As such, the project is a system that has a set of interdependent and temporally interacting phases, all working within an environment to fulfill a purpose. Project management uses system analysis as a problem solving approach, it requires defining the scope of the project, dividing it into its component parts, and identifying and evaluating its problems, opportunities, constraints and needs. The analysis then examines the possible solutions for improving the current situation, identifies an optimum solution and an action plan; and finally, it continuously examines the plan against any changes in the environment.

Traditional methods involve a linear cause and effect relationships. By taking a systems approach, projects can see the whole complex of bidirectional interrelationships. Instead of analyzing a problem in terms of an input and an output, we look at the whole system of inputs, processes, outputs, feedback, and controls. This larger picture provides more useful results than traditional methods, and allows the project to see change as a continuous process.

Project management encompasses the intricate process of strategizing, coordinating, motivating, and overseeing resources to accomplish specific objectives. It involves the systematic execution of a temporary venture that aims to generate an unparalleled output, be it a product, service, or outcome, possessing a well-defined commencement and culmination (typically governed by time, funding, or deliverables). The primary purpose of such endeavors is to fulfill distinctive goals and aspirations, often fostering advantageous transformations or value additions. Contrary to routine business operations, which involve repetitive, enduring, or semi-permanent functional undertakings to deliver products or services, projects are transient in nature. Consequently, the management approaches applied to these distinct systems often diverge significantly, necessitating the acquisition of discrete technical proficiencies and administrative strategies.

The fundamental task in project management revolves around successfully attaining all the predetermined goals and objectives, while respecting the established limitations. These limitations primarily encompass the scope, time, quality, and budget of the project. Additionally, a secondary and more ambitious challenge lies in optimizing the allocation of essential resources and integrating them harmoniously to fulfill the predefined objectives.

PERT and CPM share a similar approach, yet they exhibit certain distinctions. CPM is employed for projects that rely on deterministic activity times, where the precise timing for each activity is known in advance. In contrast, PERT accommodates stochastic activity times, where the timing of each activity is uncertain or variable. This fundamental disparity leads to the utilization of CPM and PERT in distinct contexts. These mathematical techniques swiftly permeated numerous private enterprises, gaining



widespread adoption.

PERT network chart for a seven-month project with five milestones

At the same time, as project-scheduling models were being developed, technology for project cost estimating, cost management, and engineering economics was evolving, with pioneering work by Hans Lang and others. In 1956, the American Association of Cost Engineers (now AACE International; the Association for the Advancement of Cost Engineering) was formed by early practitioners of project management and the associated specialties of planning and scheduling, cost estimating, and cost/schedule control (project control). AACE continued its pioneering work and in 2016 released the first integrated process for portfolio, program and project management (Total Cost Management Framework).

The International Project Management Association (IPMA) was founded in Europe in 1967, as a federation of several national project management associations. IPMA maintains its federal structure today and now includes member associations on every continent except Antarctica. IPMA offers a Four Level Certification program based

on the IPMA Competence Baseline (ICB). The ICB covers technical, contextual, and behavioral competencies.

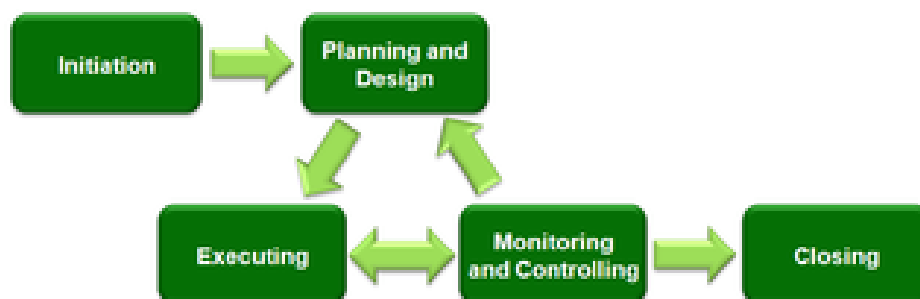
In 1969, the Project Management Institute (PMI) was formed in the USA. PMI publishes *A Guide to the Project Management Body of Knowledge (PMBOK Guide)*, which describes project management practices that are common to "most projects, most of the time." PMI also offers multiple certifications.

Approaches:

Managing project activities encompasses various approaches, such as lean, iterative, incremental, and phased methods. Irrespective of the chosen methodology, it is crucial to thoroughly contemplate the overarching project objectives, timeline, and cost, alongside the roles and responsibilities of all individuals and stakeholders involved.

The traditional approach:

The conventional phased approach entails the identification of a sequential series of tasks to be accomplished. Within the "traditional approach," there are five discernible developmental elements of a project that can be distinguished (comprising four stages and control):



Typical development phases of an engineering project

1. initiation
2. planning and design
3. execution and IT
4. monitoring and controlling systems
5. completion

Various industries employ variations of these project stages. For instance, in brick-and-mortar design and IT projects, the typical progression includes pre-planning, conceptual design, schematic design, design development, IT drawings (or contract documents), and IT administration. In software development, this approach is often referred to as the waterfall model, where tasks are carried out sequentially in a linear fashion. While many organizations have adapted the Rational Unified Process (RUP) to fit this methodology, RUP does not explicitly require or recommend it. Waterfall development proves effective for small, well-defined projects but often falters in larger projects with undefined and ambiguous characteristics. The Cone of Uncertainty offers insight into this phenomenon, as the planning undertaken in the initial project phase is subject to a significant level of uncertainty. This is especially true in software development, which frequently involves the realization of new or innovative products. In projects where requirements are not yet finalized and subject to change, requirements management is employed to establish a precise and comprehensive definition of software behavior that serves as the foundation for development.

Agile project management:



The iteration cycle in agile project management

Agile project management approaches, rooted in the principles of human interaction management, are centered around a process-oriented perspective of collaborative human work. These approaches are predominantly utilized in software, website, technology, creative, and marketing industries. This stands in stark contrast to the traditional approach. In agile software development or flexible product development, projects are viewed as a series of relatively small tasks that are conceived and executed in an adaptive manner, responding to the demands of the situation, rather than adhering to a fully pre-planned process. Proponents of this technique assert the following:

- It is the most consistently effective project management technique as it involves frequent testing of the ongoing project.
 - It is the only technique that actively involves the client in the project's development.
 - The only drawback of this technique is that it is suitable only if the client has sufficient time to be actively engaged in the project intermittently.
- Examples of Agile Project Management tools and techniques include:

- Scrum (software development) - A holistic approach to development that focuses on iterative goals set by the Product Owner through a backlog, which is developed by the Delivery Team through the facilitation of the Scrum Master.
- Extreme Programming (XP) - Also called Pair Programming this method uses small groups and has a highly prescriptive Test Driven Development (TDD) model.
- eXtreme Manufacturing (XM) - An agile methodology based on Scrum, Kanban and Kaizen that facilitates rapid engineering and prototyping.
- Crystal Clear (software development) - An agile or lightweight methodology that focuses on colocation and osmotic communication.
- **Kanban** - A lean framework for process improvement that is frequently used to manage WIP within agile projects. The Kanban process improvement framework has been specifically applied to software development, as Kanban (development).

Lean project management:

Lean project management uses the principles from lean manufacturing to focus on delivering value with less waste and reduced time.

Extreme project management



Planning and feedback loops in Extreme (XP) with the time frames of the multiple loops.

In critical studies of project management it has been noted that several PERT based models are not well suited for the multi-project company environment of today. Most of them are aimed at very large-scale, one-time, non-routine projects, and currently all kinds of management are expressed in terms of projects.

Using complex models for "projects" (or rather "tasks") spanning a few weeks has been proven to cause unnecessary costs and low maneuverability in several cases. The generalization of Extreme Programming to other kinds of projects is extreme project management, which may be used in combination with the process modeling and management principles of human interaction management.

Benefits realization management:

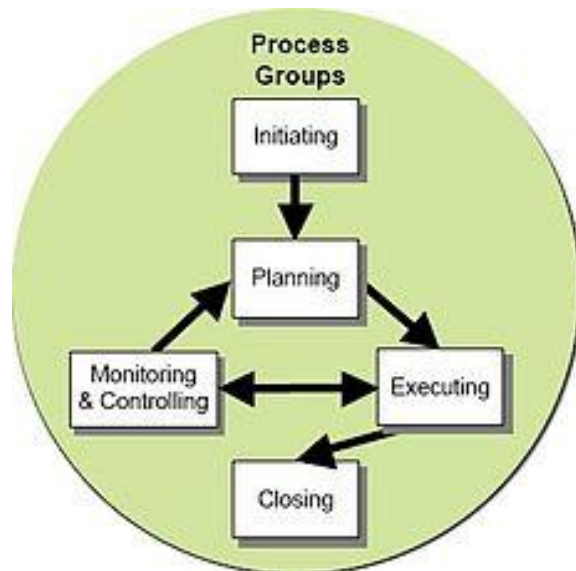
Project Realization Management (BRM) supports the traditional management process by emphasizing the outputs or results of the project rather than focusing on the products or outputs. It involves measuring and monitoring results to make sure the project is on track.

By adopting BRM, the risk of the completed project being considered a failure is reduced, as it ensures not only recommendations and results are delivered, but the desired results are achieved.

To illustrate this, consider a project that focuses on providing a computer system that processes employee data and manages various human resources such as salary, leave, and employee information. With BRM, approval of the project will go beyond the proper delivery of the system. It could include a specific objective, such as achieving a defined reduction in the number of staff hours required to process and maintain staff data. By focusing on

benefits and aligning project goals with these measurable outcomes, BRM provides a framework for ensuring the true value and impact of a project are realized.

Processes:



The project development stages

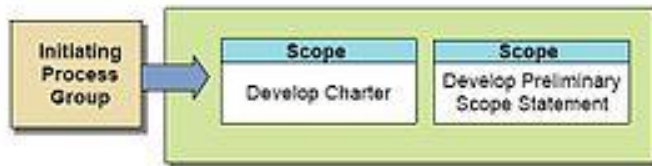
Traditionally, project management includes a number of elements: four to five process groups, and a control system. Regardless of the methodology or terminology used, the same basic project management processes will be used. Major process groups generally include:

- Initiation
- Planning or design
- Production or execution
- Monitoring and controlling
- Closing

In project environments with a significant exploratory element (e.g., research and development), these stages may be supplemented with decision points (go/no go

decisions) at which the project's continuation is debated and decided. An example is the Phase-gate model.

Initiating



Initiating process group processes

The initiating processes determine the nature and scope of the project. If this stage is not performed well, it is unlikely that the project will be successful in meeting the business' needs. The key project controls needed here are an understanding of the business environment and making sure that all necessary controls are incorporated into the project. Any deficiencies should be reported and a recommendation should be made to fix them.

The initiating stage should include a plan that encompasses the following areas:

- analyzing the business needs/requirements in measurable goals
- reviewing of the current operations
- financial analysis of the costs and benefits including a budget
- stakeholder analysis, including users, and support personnel for the project
- project charter including costs, tasks, deliverables, and schedule

Planning and design:

After the initiation stage, the project is planned to an appropriate level of detail (see example of a flow-chart). The main purpose is to plan time, cost and resources

adequately to estimate the work needed and to effectively manage risk during project execution. As with the Initiation process group, a failure to adequately plan greatly reduces the project's chances of successfully accomplishing its goals.

Project planning generally consists of:

- determining how to plan (e.g. by level of detail or rolling wave);
- developing the scope statement;
- selecting the planning team;
- identifying deliverables and creating the work breakdown structure;
- identifying the activities needed to complete those deliverables and networking the activities in their logical sequence;
- estimating the resource requirements for the activities;
- estimating time and cost for activities;
- developing the schedule;
- developing the budget;
- risk planning;
- gaining formal approval to begin work.

Additional processes, such as planning for communications and for scope management, identifying roles and responsibilities, determining what to purchase for the project and holding a kick-off meeting are also generally advisable.

For new product development projects, conceptual design of the operation of the final product may be performed concurrent with the project planning activities, and may help to inform the planning team when identifying deliverables and planning activities.

Executing



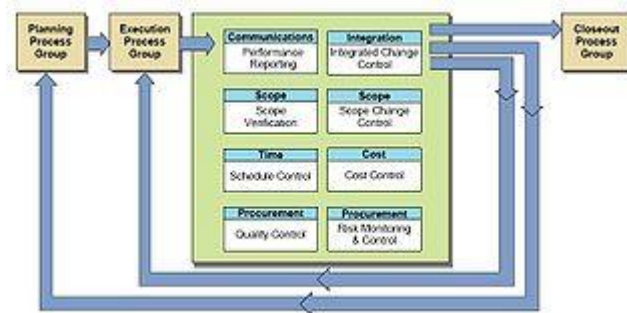
Executing process group processes

Executing consists of the processes used to complete the work defined in the project plan to accomplish the project's requirements. Execution process involves coordinating people and resources, as well as integrating and performing the activities of the project in accordance with the project management plan. The deliverables are produced as outputs from the processes performed as defined in the project management plan and other frameworks that might be applicable to the type of project at hand.

Execution process group include:

- Direct and manage project execution
- Quality assurance of deliverables
- Acquire, develop and manage Project team
- Distribute information
- Manage stakeholder expectations
- Conduct procurement
- Test the deliverables against the initial design

Monitoring and Controlling



Monitoring and controlling process group processes

Monitoring and controlling consists of those processes performed to observe project execution so that potential problems can be identified in a timely manner and corrective action can be taken, when necessary, to control the execution of the project. The key benefit is that project performance is observed and measured regularly to identify variances from the project management plan.

Monitoring and controlling includes:

- Measuring the ongoing project activities ('where we are');
- Monitoring the project variables (cost, effort, scope, etc.) against the project management plan and the project performance baseline (*where we should be*);
- Identify corrective actions to address issues and risks properly (*How can we get on track again*);
- Influencing the factors that could circumvent integrated change control so only approved changes are implemented.

In multi-phase projects, the monitoring and control process also provides feedback between project phases, in order to implement corrective or preventive actions to bring the project into compliance with the project management plan.

Project maintenance is an ongoing process, and it includes:

- Continuing support of end-users
- Correction of errors
- Updates of the software over time



Monitoring and controlling cycle

In this stage, auditors should pay attention to how effectively and quickly user problems are resolved.

Over the course of any IT project, the work scope may change. Change is a normal and expected part of the IT process. Changes can be the result of necessary design modifications, differing site conditions, material availability, contractor-requested changes, value engineering and impacts from third parties, to name a few. Beyond executing the change in the field, the change normally needs to be documented to show what was actually constructed. This is referred to as change management. Hence, the owner usually requires a final record to show all changes or, more specifically, any change that modifies the tangible portions of the finished work. The record is made on the contract documents – usually, but not necessarily limited to, the design drawings. The end product of this effort is what the industry terms as-built drawings, or more simply, “as built.” The requirement for providing them is a norm in IT contracts.

When changes are introduced to the project, the viability of the project has to be re-assessed. It is important not to lose sight of the initial goals and targets of the projects.

When the changes accumulate, the forecasted result may not justify the original proposed investment in the project.

Closing



Closing process group processes.

Closing includes the formal acceptance of the project and the ending thereof. Administrative activities include the archiving of the files and documenting lessons learned.

This phase consists of:

- **Contract closure:** Complete and settle each contract (including the resolution of any open items) and close each contract applicable to the project or project phase.
- **Project close:** Finalize all activities across all of the process groups to formally close the project or a project phase

Project controlling and project control systems

Project controlling should be established as an independent function in project management. It implements verification and controlling function during the processing of a project in order to reinforce the defined performance and formal goals.^[29] The tasks of project controlling are also:

- the creation of infrastructure for the supply of the right information and its update
- the establishment of a way to communicate disparities of project parameters

- the development of project information technology based on an intranet or the determination of a project key performance index system (KPI)
- divergence analyses and generation of proposals for potential project regulations
- the establishment of methods to accomplish an appropriate project structure, project workflow organization, project control and governance
- creation of transparency among the project parameters

Fulfillment and implementation of these tasks can be achieved by applying specific methods and instruments of project controlling. The following methods of project controlling can be applied:

- investment analysis
- cost–benefit analyses
- value benefit Analysis
- expert surveys
- simulation calculations
- risk-profile analyses
- surcharge calculations
- milestone trend analysis
- cost trend analysis
- target/actual-comparison

Project control is that element of a project that keeps it on-track, on-time and within budget. Project control begins early in the project with planning and ends late in the project with post-implementation review, having a thorough involvement of each step in the process. Each project should be assessed for the appropriate level of control needed: too much control is too time consuming, too little control is very risky. If project control

is not implemented correctly, the cost to the business should be clarified in terms of errors, fixes, and additional audit fees.

Project managers:

Project managers are experts in project management. A project manager may be responsible for planning, executing and closing any project, typically involving business communications, engineering, architecture, computing and communications. Project managers are available in many job-intensive fields besides design engineering and design engineering. A project manager is someone who works to achieve set goals. Key project management responsibilities include setting clear and achievable goals, developing project requirements, and managing the three constraints of cost, time, and quantity.

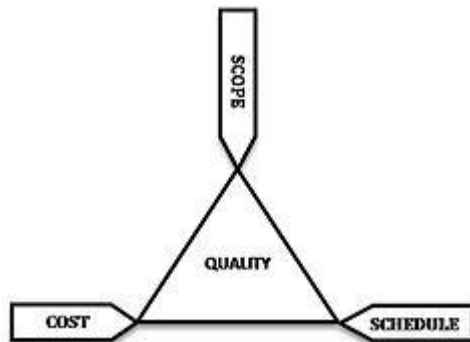
Project managers are often middlemen and must use their knowledge of the company they represent to identify and meet customer needs. It is important for contractors to be able to adapt to their various internal processes and to establish good relationships with elected representatives to ensure that important issues such as cost, time, quality and most importantly customer satisfaction are captured.

Project management types

Although project management is a discipline in its own right and can be applied to any project designed to provide a solution to any problem, it is often addressed to suit the unique and repetitive needs of different and specialized industries. For example, the telecommunications industry, which focuses on the delivery of goods such as buildings, roads and bridges, has created its own project management profession called IT project management, where project managers can be trained and certified.[33] Information Technology. The business was also created to create your own form of project management, called IT project

management, dedicated to the provision of assets and services that must go through various lifecycle stages such as planning, design, development, testing and deployment.

Project management triangle



The project management triangle

Projects, like all humanitarian work, must be carried out and delivered within certain limits. Traditionally, these parameters are defined as "scope", "time" and "cost".

[2] These are also known as the "Project Management Triangle" and both represent a constraint. One side of the triangle cannot be changed without affecting the other side. Further optimization of parameters separates product "quality" or "performance" from function and turns quality into four parameters.

Time limit refers to the amount of time available to complete a project. Cost limit refers to the budget available for a project.

Scope limits refer to what needs to be done to reach the end of the project. These three constraints are often competing constraints: Increasing rate often means increasing time and cost, constrained time constraints can mean increasing costs and reducing resources, and a tight budget means increasing time and decreasing resources.

Discipline management is about providing the tools and techniques that enable the work team (not just the project manager) to organize their work to meet the requirements that limit.

Work breakdown structure

Work Breakdown Structure (WBS) is a tree structure that breaks down the work that needs to be done to achieve a goal, such as projects, tasks, and contract words. A WBS can be hardware, products, services, or processes (see, for example, the NASA Reporting Structure (2011)).

A HRM includes everything that needs to be built and done, starting with an end goal and continuing with manageable items based on size, time, and responsibility (for example, systems, subsystems, components, activities, subtasks, and work packages). . Steps. [21] The job breakdown structure provides an overall framework for the overall planning and management of the contract and provides the basis for dividing jobs into orders. Higher increases from employment conditions can be developed with employment. , programs, prices and hours Reports can be created.

Project management framework

Project (Investment) Lifecycle combines the project management and systems development lifecycle with activities directly related to delivery and operations.

By design, project management and related activities take place after the project is complete and are not documented in these guides (see Example IT Project Management Framework).

For example, to consider the integration of OMB Exhibit 300 project (investment) management activities and all, see the project management lifecycle described in the United States Department of the Land Forces (VA) and the overall VA IT project management framework. budgeting process. The VA IT project management framework diagram shows Milestone 4 occurring after delivery and project closure. VA's Project Closing phase activities continue from System Deployment to System Operations to explain and explain the acti

vities that we see as part of the project. Diagram showing the activities and related components of the we IT project and project management process.

Project portfolio management

Many organizations use what is known as Project Portfolio Management (PPM) as a way to select the right projects and then have private or nonprofit organizations use the processes to manage the project based on the outputs in the form. from the results.

Project management software

Project management software has a capacity to help plan, organize, and manage resource pools and develop resource estimates. Depending on the sophistication of the software, resource including estimation and planning, scheduling, cost control and budget management, resource allocation, collaboration software, communication, decision-making, quality management and documentation or administration systems. Today, numerous PC-based project management software packages exist, and they are finding their way into almost every type of business. Software may range from the high-end Microsoft Project to a simple spreadsheet in Microsoft Excel.

Virtual project management

Virtual Project Management (VPM) is management by virtual teams, although it rarely refers to tasks carried out in a virtual environment in terms of teleconferences.

PLM - ROLES & RESPONSIBILITIES:

ROLE	PROFILE	PRIMARY PROJECT DUTIES	OTHER PROJECT RESPONSIBILITIES
Project Sponsor	Member of the Executive Committee	<ul style="list-style-type: none"> • Recommends and advocates project to organization • Resolves funding, policy and/or resource issues 	<ul style="list-style-type: none"> • Reviews and approves Project Proposal and Project Charter • Monitors and addresses project status and issues with Service Owner and/or Project Manager, as needed • Assures completion of project scope on time and within budget
Service Owner	An individual, multiple individuals, a service provider and/or a department	<ul style="list-style-type: none"> • Delivers and/or utilizes the expected business benefit(s) 	<ul style="list-style-type: none"> • Develop Project Proposal • Responsible for overall delivery of Business Requirements • Responsible for overall delivery of User Acceptance Test (UAT) Plan • Responsible for Project Sign-off • Responsible for overall delivery of the Training Plan • Approves Project Proposal and Project Charter • Validates business objectives and project requirements • Manages service unit to deliver service benefits • Provides Subject Matter Experts to project
Project Manager	A single individual with knowledge and	<ul style="list-style-type: none"> • Reports project progress, plans and issues to Project Sponsor & Service Owner 	<ul style="list-style-type: none"> • May develop Project Proposal • Develops Project Charter • Develops and manages/updates

	skills in Project Management; can be from IT or the Functional side	<ul style="list-style-type: none"> • Manages all day-to- day project activities. • Responsible for overall project delivery and closure 	<p>Project Plan and all related project documentation and reports</p> <ul style="list-style-type: none"> • Determines and manages resource requirements • Manages project budget • Develops Project Close Checklist • Responsible for Project Sign-off • Addresses and resolves issues with project team; escalates issues to Project Sponsor and Service Owner as needed • Identifies and secures the necessary technical skills and resources for the project • Plan, schedule, and manage Project Lifecycle Management activities • Tracks, manages, and reports risks, issues, and project status information
Subject Matter expert (SME)	An individual from Functional side and/or IT	<ul style="list-style-type: none"> • Provides knowledge and/or skills of a particular domain critical to the management, development and/or completion of the project 	<p>Collaborates with project team members</p> <ul style="list-style-type: none"> • Communicates project status and issues to the Service Owner and Project Manager • Assists with clarification of project objectives • Works with Project Manager to define the project's deliverables and requirements
Project Team	Individuals from both Functional site	Delivers project requirements within scope and schedule	<ul style="list-style-type: none"> • Communicates project status and issues to Project Manager. • Assists with clarification of

	and IT		<p>project objectives</p> <ul style="list-style-type: none"> • Responsible for Project deliverables.
Business Analyst	An individual from IT	<p>Delivers project requirements within scope and schedule</p>	<ul style="list-style-type: none"> • Responsible for Business Requirements document. • Assists the Technical team with clarification of questions that arise regarding Requirements. • Acts as resource to QA analyst for information to create Functional Test Plan.
QA Analyst	An individual from IT	<ul style="list-style-type: none"> • Ensures quality assurance testing • 	<ul style="list-style-type: none"> • Responsible for quality assurance testing and defect reporting. • Responsible for Functional Test plan and Defect Log. • Document Test results.
Technical Lead	An individual from IT	<p>Oversees the technical development efforts.</p>	<ul style="list-style-type: none"> • Responsible for Technical Requirements, Unit Test plan, Production Readiness Checklist and Technical Design, System/Data Architecture (if applicable). • Provides programming assistance on Requirements. • Responsible for the underlying architecture, as well as for overseeing the work being done by other developers working on the project.

RATIONALE OF THE STUDY

The main purpose of this study is to identify the role of project management and project manager at Dell Technologies. Project managers can play an important role in moving the software industry forward. Successful managers often become senior leaders in their organizations responsible for decision-making and legislation. They bring positive attitude and thinking to different projects and ultimately improve the business as a whole. The traditional role of managers in managing time, cost, quality, safety and environmental issues can now be fulfilled with change agent roles to ensure business continuity.

Their current role can only be expanded by understanding the needs of the business as a whole. Project managers play an important role in supporting this vision and will be an important part of the software industry community in making this vision a reality. Interest in project management is growing and lately the software industry has evolved around project management and education. The most common constraints in the software industry in developing countries are an oversupply of unskilled workers and limited management. It is worth noting that the development and improvement of management capabilities is important for the development and growth of the software industry..

SIGNIFICANCE OF THE STUDY

Effective project management and the successful implementation of its life cycle are essential for achieving timely completion and maximum efficiency. Every project goes through distinct stages of development. A clear understanding of these stages enables project managers and executives to maintain better control over the project. In the software industry, projects have defined start and end points and progress through several development stages known as life cycle phases. While these phases may vary depending on the specific industry, they generally follow a similar basic structure. It is important to note that the project life cycle can differ for each project, both in terms of the number of phases involved and the level of detail within each phase.

COMPANY OVERVIEW

Dell is an American technology company that specializes in the development, sales, repair, and support of computers, as well as related products and services. It operates as a subsidiary of Dell Technologies, its parent company.

Dell offers a wide range of products including personal computers (PCs), servers, data storage devices, network switches, software, computer peripherals, HDTVs, cameras, printers, and electronics sourced from various manufacturers. The company is renowned for its efficient supply chain management and expertise in electronic commerce, which includes direct sales to customers and customization of PCs based on customer preferences. In 2019, Dell expanded its offerings by acquiring Perot Systems and entering the IT services market. The company has also made significant advancements in storage and networking systems, aiming to provide a comprehensive range of technology solutions for enterprise customers.

As of January 2021, Dell is ranked as the third-largest personal computer vendor. It is the sixth-largest company in Texas in terms of total revenue, and the second-largest non-oil company in the state. After going private in 2013, Fortune magazine no longer ranked the company. Previously, it was publicly traded on Nasdaq (DELL) and included in the NASDAQ-100 and S&P 500 indexes.

In 2015, Dell acquired EMC Corporation, a leading enterprise technology firm. This led to the formation of Dell EMC as a division within Dell Technologies. Dell EMC specializes in data storage, information security, virtualization, analytics, and cloud computing solutions.

We are a diverse team with unique perspectives, united in our purpose, strategy, and culture. We are driven by our ambition and the transformative power of technology to propel human progress. Our commitment to equality, trust, and advocacy for one another remains unwavering.

Leadership

At Dell Technologies, our leadership embodies a spirit of innovation and a relentless drive to propel the technology revolution. Whether as individuals or as a cohesive global team, our unwavering commitment to our customers serves as the foundation for every idea, concept, and solution we generate.

Our Team

Our investment team brings unique domain knowledge, operating insights, customer connections, and board experience to our portfolio companies. We leverage our collective networks and experience to help our founders with optimal go-to-market, product and hiring strategies.

- President- Scott Darling
- Managing Director- Raman Khanna
- Managing Director- Daniel Docter
- Managing Director- Deepak Jeevankumar
- Managing Director- Gregg Adkin
- Managing Director- YairSnir

CHAPTER – 3

OBJECTIVES AND SCOPE OF THE STUDY

OBJECTIVES:

1. To study about the role of Project Managers in Dell Technologies.
2. To find the project management challenges in software industry faced by project manager.
3. To determine the benefit of project management and project manager in Dell Technologies.
4. To study about Project management process, Lifecycle and Project Planning Stages at Dell Technologies.
5. To identify the competency skills that a project manager should have to influence a successful project performance.

SCOPE:

Our study focuses on the project management life cycle and the pivotal role of project managers. We have undertaken a comprehensive examination of the diverse factors that impact the company's project management practices. The scope of our study is broad, encompassing various aspects and considerations within the field.

CHAPTER – 4

RESEARCH METHODOLOGY

Research methodology in a way is a written game plan for conducting research. Research methodology has many dimensions. It includes not only the research methods but also considers the logic behind the methods was used in the context of the study and complains why only a particular method of technique was used. The basic task of research is to generate accurate information for use in decision making. Research can be defined as the systematic and objective process of gathering, recording and analyzing data for aid in making business decisions.

RESEARCH DESIGN:-The research design was used in this study is both ‘Descriptive’ and ‘exploratory’.

DATA COLLECTION METHOD: The data was collected using both by primary data collection methods as well as secondary sources.

PRIMARY DATA: Most of the information was gathered through primary sources. The methods that was used to collect primary data are:

Questionnaire

Sample Size : 50

Sample Composition

- i. Manager : 5
- ii. IT department : 5
- iii. Supervisor : 10
- iv. Staff : 30

Structured Interview

Sample Size : 50

Sample Composition

i.	Manager	:	5
ii.	IT department	:	5
iii.	Supervisor	:	10
iv.	Staff	:	30

SECONDARY DATA: The secondary data was collected through:

- a) Internet
- b) Magazines
- c) Text books
- d) Newspapers,

SAMPLE SIZE : A survey of approximately 50 respondents.

UNIVERSE: Universe refers to the total of the units in field of inquiry. Our universes were selected through random method among the employees of Dell Technologies in Delhi-NCR. All these employees are from IT sector.

SAMPLING UNIT: Sampling frame is the representation of the elements of the target population. Sampling unit of our study was in Delhi.

SAMPLING TECHNIQUE: The selection of respondents was done on the basis of convenience sampling (Non- Probability).

CONVENIENT SAMPLING: It is that type of sampling where the researcher selects the sample according to his or her convenience.

STATISTICAL TOOLS: MS-EXCEL was used to prepare pie- charts and graphs and MS-WORD was used to prepare or write the whole project report.

METHOD YOU WILL USE TO PRESENT DATA:

Questionnaire – It consists of both open ended and close ended questions.

Data Analysis & Interpretation – Classification & tabulation transforms the raw data was collected through questionnaire in to useful information by organizing and compiling the bits of data contained in each questionnaire i.e., observation and responses are converted in to understandable and orderly statistics are used to organize and analyze the data.

- ◆ Simple tabulation of data using tally marks.
- ◆ Calculating the percentage of the responses.

Formula used = (No. of responses / total responses) * 100

CHAPTER – 5

DATA ANALYSIS& INTERPRETATION

Evaluation of the Study:-

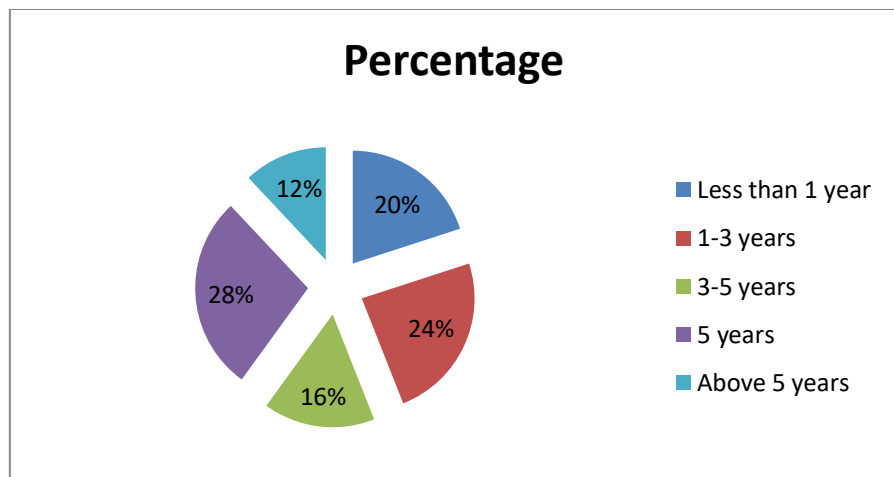
Research needs to be analyzed to compare actual theories with practice, to analyze changes that will form the basis for improvement. With this in mind, and to complement the different measures that could form the basis of research objectives, an attempt was made to categorize different respondents from questions based on something they wrote.

Explain with words and pictures.

At the end of this project, provide a copy of the questionnaire administered, for example, for 50 participants. All calculations and comments are 100%.

1. How long have you been working in Dell Technologies?

Criteria	Frequency	Percentage
Less than 1 year	10	20%
1-3 years	12	24%
3-5 years	8	16%
5 years	14	28%
Above 5 years	6	12%

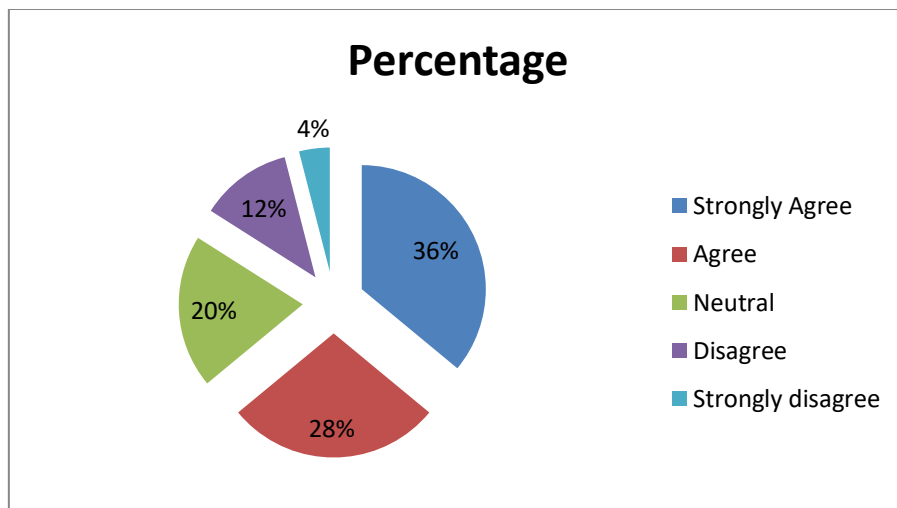


ANALYSIS:

In the above pie chart show that 20% of the respondents have been working in Dell Technologies less than 1 year. 24% of the respondents said 1-3 years, 16% of the respondents said 3-5 years. 28% of the respondents said 5 years and 12% of the respondents said above 5 years.

2. Do you agree that the role of Project Managers in the IT Industry or project is very important?

Criteria	Frequency	Percentage
Strongly Agree	18	36%
Agree	14	28%
Neutral	10	20%
Disagree	6	12%
Strongly disagree	2	4%

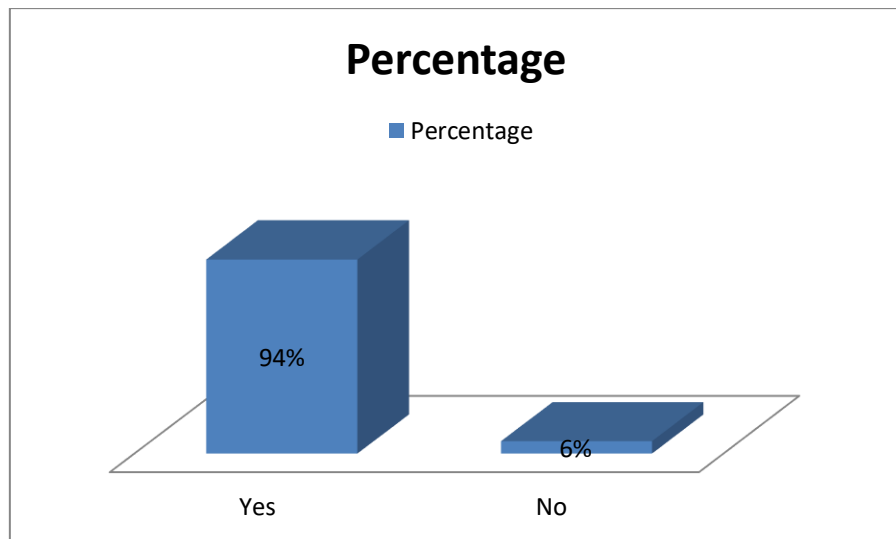


Analysis:

In the above pie chart show that 36% of the respondents strongly agree with the role of Project Managers in the IT Industry or project is very important. 28% of the respondents agree, 20% of the respondents neutral with the same and 12% of the respondents disagree with the above statement.

3. Do you know about Project management process, Lifecycle and Project Planning Stages?

Criteria	Frequency	Percentage
Yes	47	94%
No	3	6%

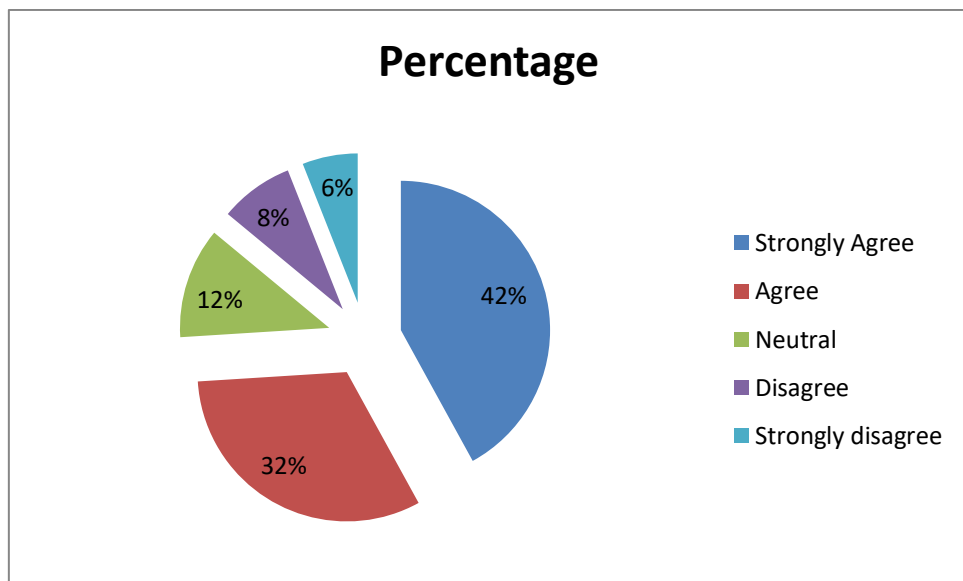


Analysis

In the above pie chart show that 94% of the respondents said yes that Project management process, Lifecycle and Project Planning Stages. 6% of the respondents said no with the same.

4. The project goals and objectives need to be clearly defined.

Criteria	Frequency	Percentage
Strongly Agree	21	42%
Agree	16	32%
Neutral	6	12%
Disagree	4	8%
Strongly disagree	3	6%

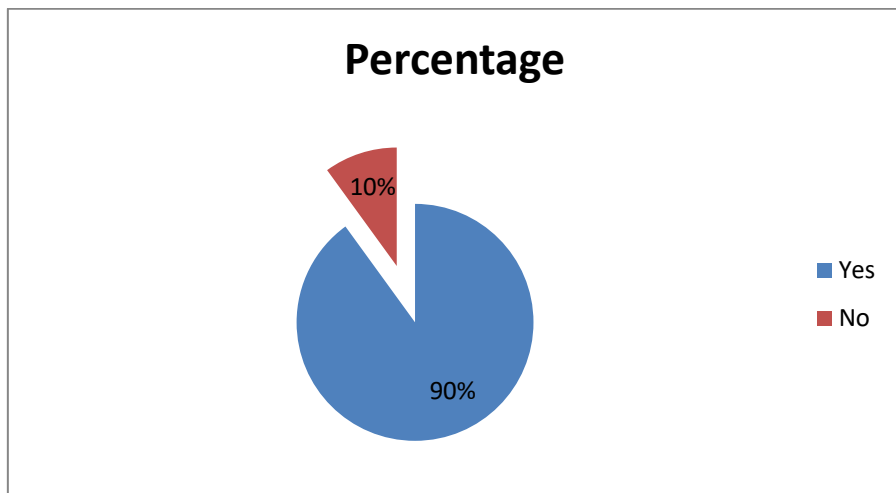


Analysis:

In the above pie chart show that 42% of the respondents strongly agree with the project goals and objectives need to be clearly defined. 32% of the respondents agree, 12% of the respondents neutral with the same and 8% of the respondents disagree, 6% of the respondents strongly disagree with the above statement.

5. Do you feel that Project goals and objectives have to be socialized in Dell Technologies?

Criteria	Frequency	Percentage
Yes	45	90%
No	5	10%

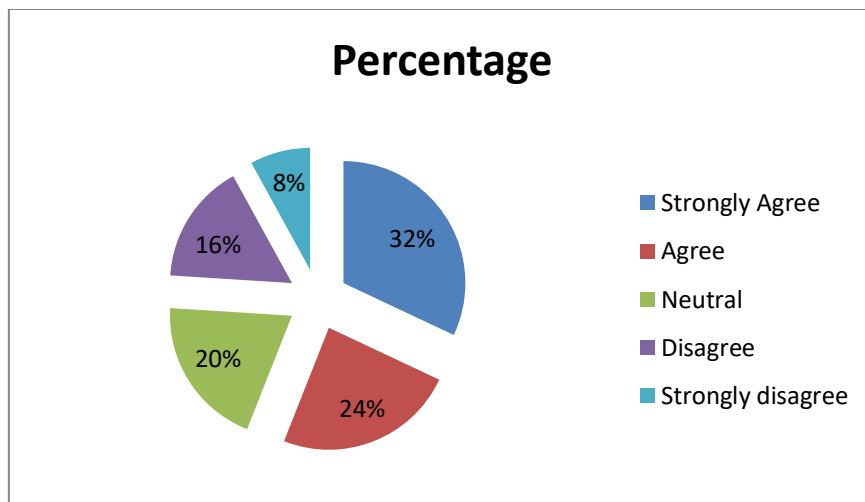


Analysis:

In the above pie chart show that 90% of the respondents said yes that Project goals and objectives have to be socialized in Dell Technologies. 10% of the respondents said no with the above statement.

6. A model of stages of project life cycle is needed when managing projects by project manager.

Criteria	Frequency	Percentage
Strongly Agree	16	32%
Agree	12	24%
Neutral	10	20%
Disagree	8	16%
Strongly disagree	4	8%

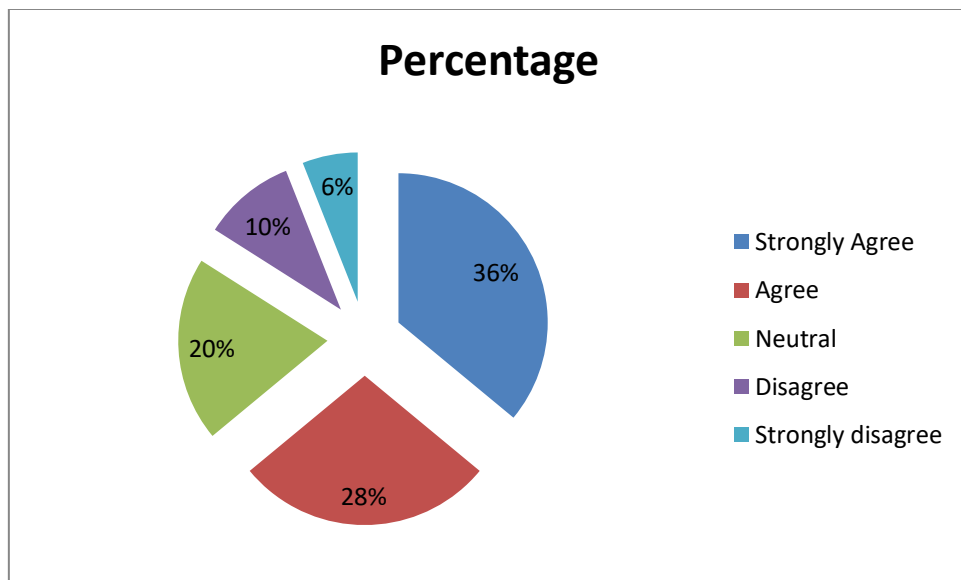


Analysis:

In the above pie chart show that 32% of the respondents strongly agree with the model of stages of project life cycle is needed when managing projects by project manager. 24% of the respondents agree, 20% of the respondents neutral with the same and 16% of the respondents disagree with the above statement.

7. The project management process must be clearly visualized and describe by project manager.

Criteria	Frequency	Percentage
Strongly Agree	18	36%
Agree	14	28%
Neutral	10	20%
Disagree	5	10%
Strongly disagree	3	6%

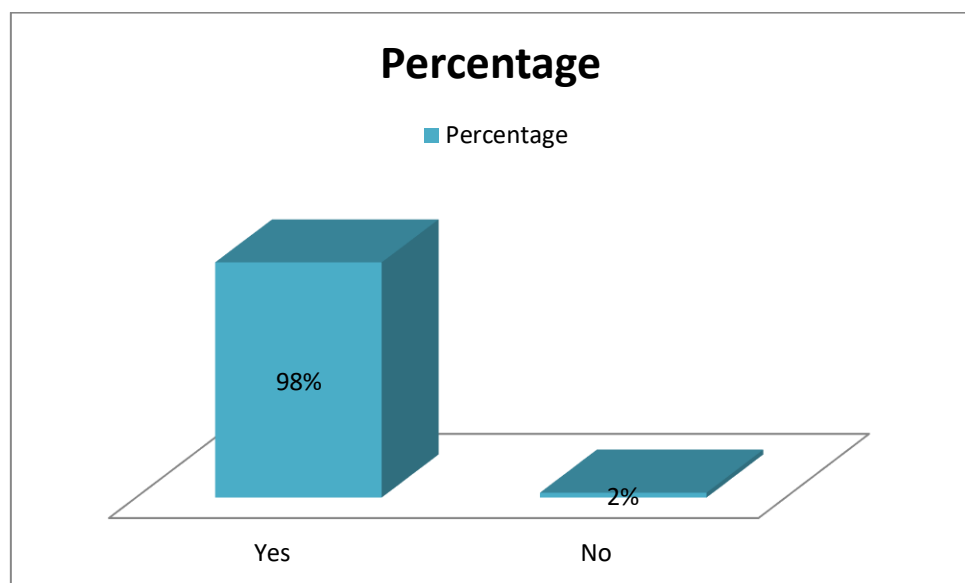


Analysis:

In the above pie chart show that 36% of the respondents strongly agree with the project management process must be clearly visualized and describe by project manager. 20% of the respondents neutral with the same and 6% of the respondents strongly disagree with the above statement.

8. The project manager must have a combination of skills including an ability to ask penetrating questions, detect unstated assumptions and resolve conflicts, as well as more general management skills.

Criteria	Frequency	Percentage
Yes	49	98%
No	1	2%



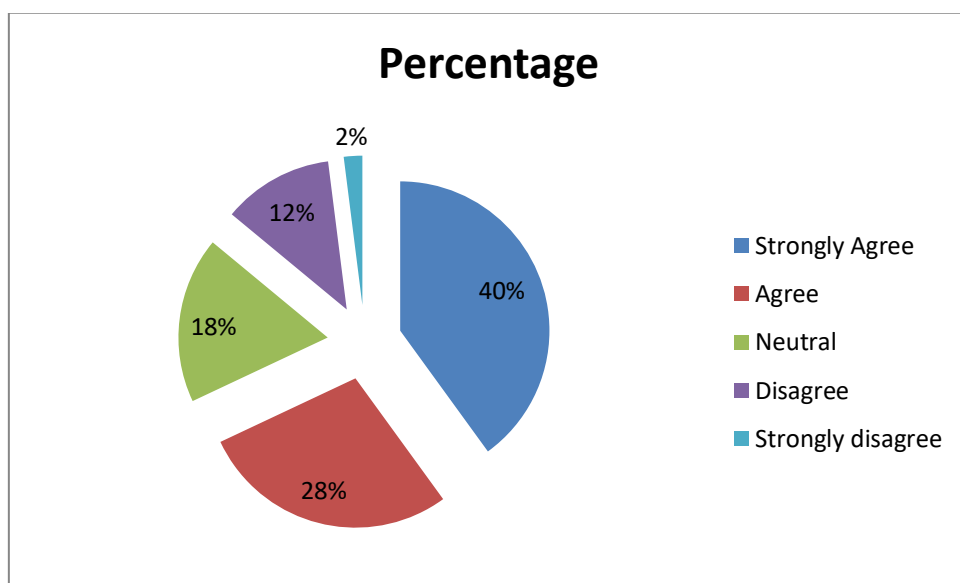
Analysis:

In the above chart show that 98% of the respondents said yes that The project manager must have a combination of skills including an ability to ask penetrating questions, detect unstated assumptions and resolve conflicts, as well as more general management skills.

And 2% of the respondents said no with the above statement.

9. Do you agree that role of project managers in improving project performance in IT industry?

Criteria	Frequency	Percentage
Strongly Agree	20	40%
Agree	14	28%
Neutral	9	18%
Disagree	6	12%
Strongly disagree	1	2%

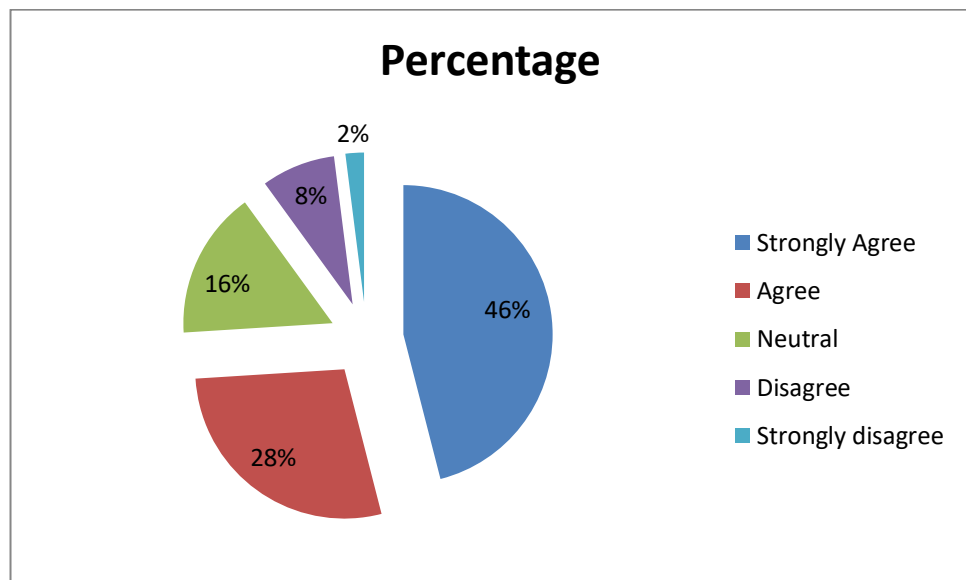


Analysis:

In the above chart show that 40% of the respondents strongly agree with the role of project managers in improving project performance in IT industry. 28% of the respondents agree, 18% of the respondents neutral, 12% of the respondents disagree with the same and 2% of the respondents strongly disagree with the above statement.

10. Do agree that the competency skills that a project manager should have to influence a successful project performance in IT industry?

Criteria	Frequency	Percentage
Strongly Agree	23	46%
Agree	14	28%
Neutral	8	16%
Disagree	4	8%
Strongly disagree	1	2%



Analysis:

In the above chart show that 46% of the respondents strongly agree with the competency skills that a project manager should have to influence a successful project performance in IT industry. 28% of the respondents agree, 16% of the respondents neutral, 8% of the respondents disagree with the same and 2% of the respondents strongly disagree with the above statement.

CHAPTER – 6

FINDINGS AND RECOMMENDATIONS

Findings:

- 20% of the respondents have been working in Dell Technologies less than 1 year. 24% of the respondents said 1-3 years, 16% of the respondents said 3-5 years. 28% of the respondents said 5 years and 12% of the respondents said above 5 years.
- 36% of the respondents strongly agree with the role of Project Managers in the IT Industry or project is very important. 28% of the respondents agree, 20% of the respondents neutral with the same and 12% of the respondents disagree with the above statement.
- 94% of the respondents said yes that Project management process, Lifecycle and Project Planning Stages. 6% of the respondents said no with the same.
- 42% of the respondents strongly agree with the project goals and objectives need to be clearly defined. 32% of the respondents agree, 12% of the respondents neutral with the same and 8% of the respondents disagree, 6% of the respondents strongly disagree with the above statement.
- 90% of the respondents said yes that Project goals and objectives have to be socialized in Dell Technologies. 10% of the respondents said no with the above statement
- 32% of the respondents strongly agree with the model of stages of project life cycle is needed when managing projects by project manager. 24% of the respondents agree, 20% of the respondents neutral with the same

- 36% of the respondents strongly agree with the project management process must be clearly visualized and describe by project manager. 20% of the respondents neutral with the same and 6% of the respondents strongly disagree with the above statement.
- 98% of the respondents said yes that The project manager must have a combination of skills including an ability to ask penetrating questions, detect unstated assumptions and resolve conflicts, as well as more general management skills. And 2% of the respondents said no with the above statement.
- 40% of the respondents strongly agree with the role of project managers in improving project performance in IT industry. 28% of the respondents agree, 18% of the respondents neutral, 12% of the respondents disagree with the same and 2% of the respondents strongly disagree with the above statement.
- 46% of the respondents strongly agree with the competency skills that a project manager should have to influence a successful project performance in IT industry. 28% of the respondents agree, 16% of the respondents neutral,8% of the respondents disagree with the same

RECOMMENDATIONS:

A well-defined life cycle brings order and structure to the project. The Project manager should have the overall responsibility for the successful initiation, planning, design, execution, monitoring, controlling and closure of a project.

The project manager must have a combination of skills including an ability to ask penetrating questions, detect unstated assumptions and resolve conflicts, as well as more general management skills.

Key among a project manager's duties is the recognition that risk directly impacts the likelihood of success and that this risk must be both formally and informally measured throughout the lifetime of a project. Risks arise from uncertainty, and the successful project manager is the one who focuses on this as their primary concern. Most of the issues that impact a project result in one way or another from risk. A good project manager can lessen risk significantly, often by adhering to a policy of open communication, ensuring every significant participant has an opportunity to express opinions and concerns.

CHAPTER – 7

CONCLUSION

Project management is a complex role that requires more than just following the steps of a methodology. A successful Project Manager must be a master negotiator, communicator, and problem solver. Project Lifecycle Management includes the experiences, results, benefits and lessons learned from successful Project Managers across a number of IT industries. In the project life cycle, the most influential factors affecting the outcome of the project often reside at the early stages. At this point, decisions should be based on competent economic evaluation with due consideration for adequate financing, the prevalent social and regulatory environment, and technological considerations. Architects and engineers might specialize in planning, in its field management, or in operation, but as project managers, they must have some familiarity with all such aspects in order to understand properly their role and be able to make competent decisions.

CHAPTER – 8

LIMITATIONS OF THE STUDY

- The study was restricted to the particular area only.
- This is not an inclusive survey due to time and resource constraint.
- There was limitation on part of the respondents as they sometimes shirked to give the related information due to their busy schedules.
- The convenient sampling technique adopted in the study may not be the representative of the universe.
- Since the sampling size was 50, so the findings and conclusions of the study are only suggestive and not conclusive.
- The respondents were likely to give wrong information regarding their personal issues in an organization.

APPENDIX

QUESTIONNAIRE

Dear respondents,

I, **Vikrant Rana** doing **MBA (IT&MARKETING)**.I am underlying a project named “**STUDY OF PROJECT MANAGEMENT LIFE CYCLE AND ROLE OF PROJECT MANAGER (A CASE STUDY OF DELL TECHNOLOGIES)**”. So by filling this questionnaire please help me in completing my research project.

Policy on Confidentiality: Please feel free to give your honest responses. The confidentiality of the information provided by the respondent is completely assured

Name :

Age :

Address :

Gender :

Contact No. :

Designation :

Q1. How long have you been working in Dell Technologies?

- A. Less than 1 year
- B. 1-3 years
- C. 3-5 years
- D. 5 years
- E. Above 5 years

Q2. Do you agree that the role of Project Managers in the IT Industry or project is very important?

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

Q3. Do you know about Project management process, Lifecycle and Project Planning Stages?

- A. Yes
- B. No

Q4. The project goals and objectives need to be clearly defined.

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

Q5. Do you feel that Project goals and objectives have to be socialized in Dell Technologies?

- A. Yes
- B. No

Q6. A model of stages of project life cycle is needed when managing projects by project manager.

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

Q7. The project management process must be clearly visualized and describe by project manager.

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

Q8. The project manager must have a combination of skills including an ability to ask penetrating questions, detect unstated assumptions and resolve conflicts, as well as more general management skills.

- A. Yes
- B. No

Q9. Do you agree that role of project managers in improving project performance in IT industry?

- A. Strongly Agree

- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree

Q10. Do agree that the competency skills that a project manager should have to influence a successful project performance in IT industry?

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly disagree