Journal of Advances and Scholarly Researches in Allied Education
Vol. 19, Issue No. 6, December-2022, ISSN 2230-7540

An Overview of the Agile IT project Management

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Abstract - ***Agile IT project management has been a paradigm shift in the information technology industry. Traditional project management techniques often failed to keep up in an era marked by quick technical breakthroughs and constantly changing client needs. But agile provides a flexible and dynamic framework that is well suited to the dynamic nature of IT projects. This strategy places a high value on teamwork, adaptability, and customer focus while encouraging a culture of responsiveness and continual development. This review will dive into the core principles, processes, and essential ideas that make up Agile IT project management. We'll examine how this approach has transformed the way IT projects are carried out and why it has become crucial for businesses looking to flourish in the digital era. An outline of agile tech project management is provided in this document.***

Keywords - ***Project management, paradigm, IT, digital, technological.***

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INTRODUCTION

Projects including hardware, software, and networks are only a few examples of what fall within the purview of ITPM Components of both IT and project management are incorporated into the final product. projects are singular and limited in time, and project management will continue for as long as the projects themselves.[1]

IT project management, like any other discipline, is focused on achieving the project's stated objectives.The success or failure of a project may be measured by whether or not the desired outcome was achieved while also meeting the needs of the organization and other interested parties.Therefore, a project manager must do everything it takes in terms of money, activity, and partnerships to ensure the success of each project undertaken.However, the associated organization's primary concern the limits of time, money, and quality make it difficult to pursue this goal without careful planning .

The topic of ethics arises in the context of pursuing these objectives, which include ensuring the success of the project and pleasing all concerned stakeholders while preserving appropriate professional standards in selecting which measures to take and which to refrain from doing. Ethical questions of what constitutes good and incorrect behavior in the pursuit of one's objectives are so shown by this scenario.

Background of the Study

Due to the constant upheaval in the business landscape, it is imperative that companies develop new methods to ensure their long-term viability. They are more reliant on initiatives to effect major changes in the company's culture. Business processes are reimagined, customer emphasis is redirected, and internal and external information and decision flows are coordinated via projects .An rise in project competence throughout a company and the completion of these projects are essential to its continued existence in the modern business world1. Although businesses and sectors rely heavily on projects, achieving project success has proven difficult. 2 As a result, project failures are becoming an increasingly pressing issue, and a growing number of businesses are taking steps to investigate and learn from them.[2]

An whole market has sprung up to provide education and training specifically in the field of project management as businesses attempt to improve by studying their own mistakes . Multiple guidelines for increasing professionalism in managing projects have arisen during the last two decades. Some of the most widely used standards to guarantee project quality, procedures, and results were supplied by IPMA, AIPM, the Association for Project Management in England, and lastly PRINCE25. The Project Management Institute (PMI) did, however, create one of the universally accepted benchmarks for project management back in 1984. The Project Management Institute's (PMI) PMP credential is required of all prospective project managers (PMs) and is widely recognized by businesses (Zwerman and Thomas, 2006). The Project Management Institute (PMI) published PMBOK reference in 1996, which was later adopted by the American National Standards Institute (ANSI), Standards Australia, and a vast number of other organizations throughout the globe. 6 The Project Management Body of

Knowledge (PMBOK) issued by PMI has become the de facto worldwide standard for program management thanks to its widespread adoption and several revisions.

However, as the personal and behavioral capabilities of PMs beyond the area of codified project management guidelines become increasingly essential to workplace success, concerns have emerged about these standards and qualifications. Despite the complexity of projects, there is no evidence to suggest that PMs with formal training or certification are any more effective than their "accidental" counterparts.[3]

OBJECTIVES

1. To study the project management institute.
2. To study the project management body of knowledge.
3. To study the project management information systems.

3. RESEARCH METHODOLOGY

Its is a secondary data based study. The article was used normative analysis as its foundation. Understanding the project management institute will rely on using content analysis to reduce the impact of bias in data gathered mostly from secondary sources. Additionally, discourse analysis was used to analyse the texts& linguistic content in order to grasp their context-specific meaning.

in the field of project management have come to acknowledge the significance of such factors as the ambiguity of PMs' roles, the disorderliness of their processes, and the unpredictability of their surroundings. Researchers were Studies aware of the change from results to procedures in project management because of this . There was a fine line that project managers had to walk in order to make the "correct" option, one that would satisfy all of the project's stakeholders without compromising quality. The ethical foundations of these paradoxes were often explored.

RESULTS

Project Management Institute: An Overview

The Project Management Institute (PMI) was established in 1969 by a group of five dedicated volunteers. They set out to create a community where those interested in project management could meet regularly to talk shop. The Project Management Institute (PMI) is the largest and most well-known non-profit organization dedicated to advancing best practices in project management. PMI was established to look out for the best interests of the program management sector as a whole. PMI's primary tenet is that, despite the many contexts in which projects are implemented, fundamental approaches to planning, organizing, and controlling such efforts are universal. In 1984, PMI launched PMP examinaion. More than 590,000 people all across the globe can now say they are Project Management Professionals (PMPs), thus the industry has finally caught on.

The Project Management Institute (PMI) published PMBOK Guide in 1987 to assist keep project management words and ideas consistent and understandable. It has had five editions since its first publication in 1996: in 2000, again in 2004, again in 2009, and most recently in 2013. Presently, there are more than a million copies of a PMBOK Guide in use. It is now the de facto standard for project management at the highly recognized Institute of Electrical and Electronic Engineers (IEEE). In addition to being the first company to have its certification program get International Organization for Standardization (ISO) 9001 approval, PMI has the distinction of being authorized as an ANSI standards developer in 1999. Over 260,000 people from more than 171 countries were members as of 2008. PMI has regional service centers in Singapore, Brussels (Belgium), & New Delhi, in addition to a headquarters in Pennsylvania, USA, and offices in Washington, DC, Canada, Mexico, and China (India). A new location popped up in Mumbai not too long ago (India).[4]

Because of the importance of projects, the discipline of project management has evolved into a working body of knowledge known as PMBOK – Project Management Body of Knowledge. The PMI is responsible for developing and promoting PMBOK. PMI also administers a professional certification program for project managers, the PMP. So if you want to get grounded in project management, PMBOK is the place to start, and if you want to make project management your profession, then you should consider becoming a PMP.

PMBOK

The Project Management Body of Knowledge (PMBOK) enumerates the ten categories of expertise required for successful project management.

1. **The Integration Management Process**: Since projects have many moving parts, it's important to keep everything, as a whole, moving forward by coordinating the many dynamics at play. The process of managing integration includes drafting a project charter, scope statement, or plan to guide, manage, monitor, and control the evolution of the project.

2. **Controlling the Big Picture**: A work breakdown structure, or WBS, is used to design and monitor a project's parameters and scope. Planning, defining, developing a work breakdown structure (WBS), verifying,

and controlling scope are all essential parts of scope management.

3. **Scheduling and time management**: There is always a starting and an ending date for a project. As a result, it's important to keep track of the allocated resources in accordance with the project timeline. Time and schedule management include defining and ordering activities, estimating time and resources needed, creating and adjusting plans, and monitoring progress.

4. **Limiting spending**: Projects need investment, and that investment must be managed with the goal of producing value in mind . In order to keep expenses in check, one must engage in careful planning of available resources, accurate cost forecasting, careful budgeting, and strict management.

5. **Methods for Quality Management**: Deliverables are the final results of a project's efforts. The project's goals and performance requirements must be met by these deliverables. Planning for quality, assuring quality, and controlling quality are all part of quality management.

Introduction To The Project Management Knowledge Areas

We've seen that good project management requires knowledge in a wide range of fields. Subsequent chapters will go considerably deeper into each of these subdisciplines. Let's look more closely at them right now to better prepare you for the following chapters.[5]

Project Start-Up and Integration

Similar steps are taken when starting a new initiative as when establishing a new company. It is the job of the project manager to lay out the guidelines that will be followed throughout the project's planning and execution. The project management group's first order of business in the defining phase is to try to get an agreement among the project's key stakeholders. The project leader will have one or more launch meetings, often called alignment sessions, to get everyone on the same page and get everyone working together efficiently.

The management team often finalizes all tasks to be accomplished, prepares a preliminary timeline, and defines a rough budget at the early phases of a project. The project team creates a plan for completing the project based on the information provided in the project profile. Planning for the creation and implementation of the complete schedule, the procurement of essential materials, and the establishment of a financial plan including cost estimates and monitoring is all done during the initiation phase. During the initiation of a project, preparations are made for IT, communication, and the monitoring of client satisfaction.[6]

Work processes associated with executing the project plan may be documented with flowcharts, diagrams, and responsibility matrices. The first version of the project method documents the team's collective historical and intuitive knowledge. The development and evaluation of such systems and practices may be used to track an organization's development on a certain project.

Project Scope

The project scope is a document that outlines the parameters—factors that define a system and govern its behaviour—of the project, what work is done inside the bounds of the project, and the work that is beyond the project boundaries. Usually documented in writing, a project's scope of work lays out in detail what must be done in order to successfully complete the endeavor. What has to be done is laid out in the project's scope, while how that work will be done is laid out in the project's execution plan.[7]

No template fits for all tasks. There are projects with extensive scope documents and others with brief overviews. One way to evaluate a project's scope is by how well the project manager & stakeholders agree on the outcomes they expect to see from the work. As the complexity level of a project rises, the scope of the project expands and becomes more specific. An in-depth and thorough scope document is usually necessary for a more complicated project.

The PMI recommends include the following in the scope statement:

- Description of a scope
- Standards for accepting a product
- Project deliverables
- Project exclusions
- Restrictions on the Project
- Considerations for the Future: Assumptions

The scope document provides the foundation for acceptance by all parties. A precise project scope document is also crucial to managing change on a project. Because the project scope is a reflection of the work that will be completed, any unrecorded shift in expectations might lead to misunderstanding. The gradual enlargement of a project's scope is a regular occurrence. This process is dubbed “scope creep.” The tiny but cumulative expansions in scope need extra resources that weren't originally budgeted for, putting the project at risk of failing. It is normal for a project's scope to expand, necessitating revisions to the project's budget and timeline. When these adjustments are misunderstood or poorly handled,

scope creep develops. In many cases, a project manager's capacity to foresee prospective modifications is directly proportional to the thoroughness of the documentation outlining the project's scope.[8]

Project Schedule and Time Management

Timely completion is often cited as an essential characteristic of a successful project. A project manager's primary responsibility is the creation and maintenance of a schedule that will allow the project to be completed on schedule. This is because meeting this deadline requires the creation of a realistic plan and the effective management of that plan. For less complex initiatives, the project manager may be responsible for determining the overall approach and preparing the schedule. For larger, more intricate projects, a dedicated project controls group will help the project management team create the plan and monitor progress against by the plan by centralizing and streamlining the tasks of cost and schedule control and planning.[9]

(Multi) Project Management

Planning, managing, and coordinating projects are all aspects of project management that are included under its umbrella (Ahleman, 2009: 19–20). Even in a simple project setting, managing all the moving parts and juggling a huge number of moving parts makes for a difficult process (Mota et al., 2009). It is normal practice for a single project manager to oversee many different initiatives at once in a multi-project setting

See Table 1 for a summary of research that cover a variety of topics connected to (multi)project management. Resource allocation, managerial issues like delayed projects, stress, and a lack of overview (Blichfeldt & Eskerod, 2008), single- and multi-project environment projectification&programmification, & planning and control have all been the focus of empirical studies on (multi) project management. All of these analyses have a focus on organizational structure and project administration. However, there has been no research done on the effectiveness of PMIS for managing several concurrent projects.[10]

Managers in charge of many concurrent projects often have to split scarce resources among competing demands. Managing the throughput times & resource allocations of several projects at once is a difficult task that necessitates balancing the interests of many parties. Organizations may maximize the effectiveness of their utilization of scarce resources by pooling them for use on a number of different initiatives. In addition to cutting down on wasted time, knowledge may be shared and accumulated through pooling resources. However, when projects use common resources, it is more probable that disruptions to one project will have an effect on the others.

Project Management Information Systems (Pmis)

"Comprehensive systems that support the whole existence of projects, project programs, or project portfolios," as PMIS are now described, are a key component of modern project management (Ahleman, 2009: 19). They may help project managers with evaluation and reporting in addition to planning, organization, control, reporting, and decision making.[11]

Several crucial reasons have been identified via research that motivate project managers to use PMIS. First, the quality of the information produced by the PMIS has a significant impact on the extent to which project managers would utilize it. In addition, if a project manager is given the proper amount of information for their purposes, they are more likely to embrace the usage of an information system Third, it's crucial that the produced information is simple, straightforward, and straightforward for project managers to discuss with the members of the project team . Last but not least, PMIS allows for constant tracking of results .**Project overload**

Project managers have finite capacity in terms of the number of concurrent projects they can oversee effectively. By having uniform processes throughout a project, routines and procedures may assist ensure that employees are consistently producing high-quality results. However, when the effort and payoff are not in harmony, having considerably fewer routines may become a strain for project personnel. Both an abundance of processes and the accompanying administrative load divert focus away from the real project management duties at hand, while a lack of routines may leave managers wondering what to do next . Other concerns include controlling lead times and addressing dependencies and interactions across projects . In a multi-project setting, where schedules of separate projects (partially) rely on one other, understanding the available resources and time at any given time is critical for project success. Time constraints and lack of downtime may emerge from having to divide your attention among many ongoing tasks. The value of project evaluation is widely recognized by project teams. However, time constraints mean that in reality, project participants move on to the next project before they have a chance to reflect on what went well and what may be improved upon . This shows that when project managers are overburdened, they may not have enough time to provide high-quality data both at the conclusion of the project and while it is being completed in order to properly populate a project management information system.[12]

Information overload

O'Reilly (1980) notes that if there is an excessive amount of information to process, productivity may suffer. There is a risk that having too much

information might impair judgment. As O'Reilly (1980) points out, having access to an overwhelming amount of data might make it hard to go through it and find the nuggets of knowledge that will be most useful. When many projects are being worked on at once, a project manager has access to four times as much data. It might be challenging to handle a significant number of project data in a multi-project environment. Multi-project ecosystems are characterized by a lack of transparency in either the quantity or quality of the information on the individual projects that make up the ecosystem. Increased complexity leads to ambiguity, which in turn leads to personnel on the project being unsure of who needs what information, when it has to be delivered, and in what format. Managers may have difficulty locating relevant data in such settings.

PMIS information quality

Our research shows that higher-quality data in the PMIS has a direct and indirect bearing on better decision-making and, by extension, better project outcomes.

Project success and sound decision making were shown to have a strong statistical correlation with information that was timely, relevant, and of good quality by Dietrich and Lehtonen (2005). For businesses, this highlights the need of high-quality data as a tool for efficient project management. Many management proceed/kill decisions, according to Cooper et al. (2001), are problematic because they are made without sufficient information. When project managers have quick access to the right information—data that is timely, relevant, reliable, and trustworthy—they are better able to make sound decisions. Studies focused on complex projects, but did not single out PMIS as a data collection method.[13]

Information systems are the focus of Saeed &Abdinnour-(2008) Helm's research. Specifically, they investigate what factors affect users' assessments of the data system's value. They think it's crucial for a project manager to have access to accurate data inside an information system since it helps them make better decisions. Conversely, the utility of information management systems is negatively impacted by their provision of users with inaccurate and misleading data. prove the importance of accurate time and effort estimates for project management.

According to studies on risk management, technology is commonly used by businesses for risk assessment, monitoring, and control. Several strategies that, according to Raz & Michael (2001), might be very helpful in risk management, were uncovered. Primavera and Microsoft Project, two examples of PMIS software, provide features like risk impact assessment and risk classification and rating that are designed to facilitate and enhance decision making.[14]

Based on the literature, we postulate that the ability to make sound decisions across several projects is closely linked to the level of satisfaction with the PMIS's informational output.

Project manager satisfaction with PMIS

The term "user satisfaction" refers to the feeling of contentment one has when their wants and requirements are met . User satisfaction with a data system has been linked to factors like its relevance, correctness, availability, dependability, consistency, and timeliness, as evaluated by Ali and Money (2005). They arrive to the conclusion that the quality of the information being used in conjunction with project management software is critical. It has been found that project managers are more receptive to PMIS when the value of the information output is high . This means that project managers are more likely to embrace PMIS if the software they use provides them with information that is sufficiently detailed, suitable to their work needs, free of complexity, and simple to understand and share with the rest of the project team. Seddon and Kiew (1994), in their research on departmental accounting systems, discovered that the quality of the information produced by a system is a significant factor in the degree to which its users are satisfied with it. Further, the confidence of the project manager is boosted by the high quality of the data in the PMIS, as discovered by Raymond and Bergeron (2008). PMIS adoption increases when users have easy access to comprehensive project details.[15]

CONCLUSION

This paradigm change in IT project management is what makes agile so revolutionary. It promotes malleability, focus on the customer, and teamwork as guiding principles that help organisations succeed in today's complicated, rapidly evolving technology environment. Agile enables teams to successfully adapt to changing needs and produce better outcomes by placing an emphasis on iterative development, constant feedback, and a dedication to producing value. To be competitive and inventive in today's increasingly digital world, organisations must continue to depend heavily on technology, making Agile IT project management more than a nice-to-have.

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