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Digital Project Management as A New Work Environment Innovation Post-Pandemic

Amrulloh Ibn Kholdun¹, Olivia Bistolen's Fantasies²

¹Trisakti Institute of Transportation and Logistics, East Jakarta, Indonesia, ibnu.10@gmail.com

²Trisakti Institute of Transportation and Logistics, East Jakarta, Indonesia, fanesiaolviby@gmail.com

Corresponding Author: fanesiaolviby@gmail.com¹

Abstract: Organizations engage in projects that bring about change, such as the creation of new goods and services or the improvement of business processes to achieve value. According to Williamson and Wu (2019), projects are “time-limited, goal-driven, and often unique endeavors intended to create an outcome, service, product, or final result.” These projects can include improving existing products and creating new services, improving an organization through a transformation process, launching a new marketing campaign to increase market penetration, organizing an event such as a conference or sports match, and Projects have several challenges that make them more difficult than many management ventures, such as scope of work, time, resources, and budget.

Keywords: Projects, challenges, and management

INTRODUCTION

Data has become a very valuable strategic commodity for information technology-oriented organizations in today's rapidly developing digital era. To ensure that organizations can optimally utilize the potential of big data, big data analysis projects require systematic, strategic, and integrated management. Big data project management requires special expertise and attention for each stage, from careful planning, accurate data collection, large-scale data processing, integration of various sources, to data analysis and interpretation. (Siahaan, 2024)

Technological progress is increasingly rapid, supported by many digital adaptations (digitalization), the Internet of Things such as web and mobile applications, etc., as well as adaptations that occur in various fields including projects. Management activities through digitalization are becoming increasingly important. More and more project developers are using digital tools such as social media to manage their projects and achieve project results. The COVID-19 pandemic has further accelerated this digitalization trend. Layoffs in most work projects and the replacement of human roles with technology in many cases have given rise to a new trend towards remote and virtual work. According to a survey of 120 project organizers conducted by consulting firm PMO Advisory, remote work has increased by almost 61% and digital tools are no longer limited. The convergence of these two trends has resulted in the emergence of a new and evolving concept of “digital project management”: Digital Project Management (DPM). According to Williamson and Wu (2019), a project is “a time-

limited, focused, and often unique effort to produce an outcome, service, product, or end result.” Projects can include improving existing products or creating new services, improving organizations through process transformation, launching new marketing campaigns to increase market penetration, and organizing events such as conferences. (Wu, 2022) .

One of the important elements in information system management is project management, not only monitoring how the project is running, but also ensuring that resources are used efficiently. Organizations can achieve their goals well and efficiently with proper project management. The main purpose of project management is to ensure that the project successfully achieves its stated goals based on the available budget and resources. Effective communication, risk assessment, cost management, and timely decision making are the keys to the success of every project. Project management in information management systems is one of the integrations that is very important for the success of an organization. (Ertri et al., 2023) . In today's digital era, big data-based project management is very important. This means having a clear strategy, an integrated approach, and a commitment to innovation and continuous improvement in the management and utilization of big data. (Siahaan, 2024)

Objectives And Benefits

This research aims and is useful for:

- a. To find out how productive project teams were before and after the start of the pandemic.
- b. To find out what impact digital projects have on project performance.
- c. To find out the challenges and solutions as well as the benefits that companies experience when managing projects virtually.
- d. To introduce project management approach methods, namely traditional project management methods and predictive methods.

METHOD

The research of this project uses several approaches, namely field surveys to obtain data. According to Sugiyono (2018), the survey method is a quantitative research method used to obtain data that occurs in the past or present, about beliefs, opinions, characteristics, behavior, relationships of variables and to test several hypotheses about sociological and psychological variables of the sample. (Simbolon et al., 2022)

According to Fraenkel and Wallen (1993), survey research is research by collecting information from a sample by asking them through questionnaires or interviews to describe various aspects of a population. Meanwhile, Guy (1983) stated that: " A survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to or more variables ". This means that a survey is a study that attempts to collect data on one or more variables taken from members of the population in the study. The word current status in the formulation put forward by Guy implies that the survey attempts to find out various information regarding attitudes, opinions, characteristics, certain phenomena that occur when the survey is conducted. (Maidiana, 2021)

Relating to the Digital Project Management implementation method. DPM can also be applied to traditional project management methods. There is no major incompatibility between using Web tools and predictive project planning and organization. Predictive methods rely on thorough planning, while agile management places more emphasis on teamwork, customer collaboration, and flexibility. DPM has excellent tools that can be used to plan comprehensively, handle change, and encourage teams to develop strong plans. For example, Microsoft Project has a cloud-based version that works well for both predictive methods such as the software development life cycle with phases that include requirements, design, development, implementation, testing, deployment, and agile project management.

RESULTS AND DISCUSSION

1. DPM is defined as a combination of traditional project management and the full adoption of digital tools and technologies in project management. DPM has the advantage of accessibility, as many of its tools and outputs, such as reports, are available online. Roles and responsibilities of a Project Manager:

- a) Estimating Project Costs And Plans;
- b) Prepare And Manage Progress;
- c) Prepare And Track Project Schedules, Scope, And Budgets;
- d) Managing Workload And Team Morale;
- e) Provide Regular Status Reports For Projects;
- f) Organize And Lead Meetings;
- g) Facilitate Communication; And
- h) Managing Interactions Between Stakeholders

2. Digital challenges and benefits Working remotely, virtually:

In the digital era, the rapid development of technology has a major impact on various aspects of life, including the world of work. This technological development and progress changes the way of working, opens up new opportunities, and presents challenges for professionals and job seekers. Because of these changes, career planning becomes an important opportunity for people who have clear career goals to find their way. (Sintani & Nurlianti, 2024)

Based on research results at the project level, the obstacles that occurred included the effectiveness of working collaboratively, managing tasks and performance, clarifying goals, working across different geographies and time zones, overcoming cultural and language barriers, and developing and maintaining trust between team members.

While the challenges of remote working are complex, the benefits remain strong. Post-pandemic, project work will not go back to the old ways. After working remotely for a while, people and organizations develop new work habits. Many companies think twice about maintaining expensive office space. Technology is advancing rapidly, and the adoption of digital tools is increasing dramatically. According to McKinsey, 20-25% of the workforce in developed countries can work from home 3-5 days a week, a multiple increase from before the pandemic. DPM will remain a strong trend in the future. (McKinsey Global Institute et al., 2021)

3. Managing Projects During a Pandemic Crisis

When the world first began restricting in-person work in offices around the world in March 2020, PMO Advisory, a project management consulting and training firm headquartered in New Jersey, conducted a survey to understand the impact on project management. The survey, sent in April 2020, targeted project managers. A total of 122 responses were received from 18 countries, although the majority, or 78%, came from the United States. Of the 27 questions in the survey, the two most relevant to this article were:

- a) Question 1. How was the productivity of the project team before and after the start of the pandemic?
- b) Question 2. What impact does it have on project performance?

Tabel 1 Lokasi tim sebelum dan sesudah penutupan pandemi			
Lokasi tim	Sebelum (%)	Setelah (%)	Perubahan (%)
Colocation - anggota tim proyek paling penting berlokasi di satu tempat	47	15	—32
Beberapa lokasi - anggota tim proyek yang paling penting terletak di beberapa tempat khusus Terdistribusi dan virtual tanpa lokasi proyek permanen dan orang-orang yang bekerja dari jarak jauh	39	9	—30
	15	76	61

Table 1 shows the drastic change in project team collaboration before and after the office closures. Previously, almost 50% of teams were co-located, but this number dropped drastically to 15% after the closures. In addition, teams working on-site dropped from 39% to 9%. Instead, teams dispersed and virtual activities grew rapidly from 15% to 76%. This creates a need for technology that enables team productivity. (Wu, 2022)

4. Roles and Responsibilities of a Digital Project Manager

According to Ritz (2000), a project manager comes from an institution or entrepreneur. Administrators, executives, supervisors, and bosses are other names. According to Badiru and Pulat (2000), the job of a project manager is to use available resources to achieve goals and objectives. To ensure that a project runs according to plan, the project manager liaises with many people inside and outside the project. A project manager must be flexible, assertive, and effective in dealing with problems that arise during the project phase. One of the most important aspects of the project function is the selection of the project manager. The project manager must have credibility in both administrative and technical areas, have the ability to complete tasks quickly and satisfactorily, and must also be a good recorder. (Yusuf, 2022)

The role of a digital project manager is not significantly different from a regular project manager, but with differences in “how” the tasks are carried out. (Wu, 2022) . Although the form of work is not the same, most project managers share the same core tasks, such as:

- estimating project crafts and plans;
- prepare and manage progress;
- prepare and track project schedules, scope, and budgets;
- managing workload and team morale;
- provide regular status reports for projects;
- organize and lead meetings;
- facilitate communication; and
- managing interactions between stakeholders

CONCLUSION

Rapid technological developments and increasingly widespread digitalization have driven adaptations in project management, which are now increasingly moving towards digital. The Covid-19 pandemic has further accelerated this digitalization trend, with many projects shifting to remote and virtual work. The convergence of digitalization and remote work has driven the development of a new concept known as Digital Project Management (DPM). DPM encompasses traditional project management methods and digital tools to plan and organize projects effectively. Traditional project management relies on thorough planning, while DPM emphasizes teamwork and flexibility in managing projects. DPM provides better accessibility with fairly comprehensive online tools.

Project managers in DPM have responsibilities that include project assessment, managing progress, monitoring schedules, scope, budgets, and providing regular reports and facilitating communication. Challenges in working remotely include the effectiveness of

collaborative work, task and performance management, and managing different time zones. However, the benefits remain significant, including more flexible hours and better efficiency. Digital Project Management (DPM) is predicted to remain a strong trend in the future with technology continuing to advance rapidly.

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