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## Asana and Trello: A Comparative Assessment of Project Management Capabilities

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**Abstract**—Project management tools are essential for streamlining project management activities and providing a variety of functionalities to assist organizations in executing projects efficiently. The selection of an appropriate tool is crucial, given the many options available in the market. This scholarly article employs a comparative analysis methodology to scrutinize two prominent project management tools, Asana and Trello. The aim is to assist companies and organizations in making informed decisions based on their specific needs. The comparative analysis delves into the strengths and weaknesses of Asana and Trello, assessing their features, functionalities, and suitability in the context of knowledge management areas. Both tools are evaluated for their capability to address project management challenges and improve organizational processes. The study concludes that the choice between Asana and Trello hinges on factors such as project scale, managerial requirements, and the preferred level of complexity. With its comprehensive features, Asana is ideal for larger, agile-oriented projects. In contrast, Trello's simplicity and user-friendly interface suit relatively more minor projects well. This analysis provides valuable insights for organizations to align their project management tools with specific project conditions, facilitating optimizing project execution processes to meet their unique goals and requirements. In terms of features, Asana outshines Trello by providing a more extensive range of functionalities that effectively support the mapping of knowledge management areas.

**Keywords**— Project management tools; Asana; Trello.

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### I. INTRODUCTION

In supporting the sustainability of a project, the utilization of project management tools is imperative to facilitate project management by the project manager. A project management tool serves as an instrument to aid companies or organizations in monitoring, managing, and orchestrating the course of a project to ensure that it proceeds according to the agreed scope, time, and cost from the outset. Additionally, these project management tools are instrumental in ensuring that the project runs effectively and meets the project's requirements [1]. To support the course of a project, such tools need to encompass features that align with the ten knowledge management areas. Generally, project management tools fulfill various functions to provide and support processes involved in a project, from the initiating phase, planning, executing, controlling, and monitoring to closing [2].

An appropriate project management tool aims to assist and support project implementation activities. Even though project management tools are adequate for a project, this does

not imply that failure in project execution can be entirely avoided. Given the abundance of project management tools, organizations must choose tools that can best accommodate the needs of a project. The application of tools and techniques in project management must be tailored to the conditions and criteria of the related project. Thus, project management tools can effectively support project management activities, ensuring effectiveness, efficiency, and maximized performance until the project is successful [3].

Currently, many project management tools are available in the marketplace. This scholarly article specifically discusses Asana and Trello as project management tools. Asana is a web-based software and mobile application accessible online and used to organize and manage the course of a project. Its features support collaboration and interaction among various parties [4]. On the other hand, Trello is software accessible through a website designed to support monitoring and managing tasks in a project. Trello employs a Kanban board view to facilitate the visualization of task distribution within a project.

This scholarly article compares Asana and Trello as project management tools. It aims to determine the mapping of knowledge areas based on PMBOK version VI to Asana and Trello and identify their strengths and weaknesses. Through this analysis, it can be discerned which types of projects and project conditions are best supported by Asana or Trello.

## II. MATERIAL AND METHODS

### A. Project Management

Project management is a method for planning and overseeing activities involved in the execution of a project by a company or organization. Project management encompasses various stages. Before a project produces its output, it goes through several stages, including initiating, planning, executing, controlling & monitoring, and closing. This process or stage is known as the project management lifecycle. To achieve a successful project outcome, an effective project manager is required to oversee the course of the project [5].

### B. Selection of Project Management Tools

Using appropriate project management tools significantly influences the smooth progression of project stages. The positive impact of using these tools is realized when they are maximally employed according to the project's needs. This includes ease of use by all parties involved in the project, the quality of deliverables, functionality, and overall user experience [29]. Conversely, if a company or organization fails to select the right tools for managing a project, these tools may not facilitate users but have a negative impact [27, 30]. The selection of project management tools depends on the output produced during the project execution process. Hence, it is crucial to review the tools' functionality, strengths, weaknesses, features available, and alignment with the ten project management knowledge areas [6, 28].

### C. Project Management Knowledge Areas as Reference in Selecting Project Management Tools.

Knowledge is a combination of information and experience that is a valuable resource for decision-making and acting [22]. All organizations aim to implement business strategies successfully, achieve goals, make the most of their human resources, and gain a competitive edge. That's where effective knowledge management comes in, helping organizations deal with challenges, boost productivity, and pave the way for development and innovation [23]. Per the PMBOK Guide, project knowledge management involves leveraging existing knowledge to generate new insights to fulfill project objectives and contribute to organizational learning. Sharing knowledge accumulated during projects is crucial for easing future organizational tasks and projects [24]. Therefore, specific technological tools can facilitate this knowledge-sharing process [25], [26]. The following are the ten project management knowledge areas based on PMBOK Version VI.

- Project Integration Management
- Project Scope Management
- Project Schedule Management,
- Project Cost Management,
- Project Quality Management,
- Project Resource Management,

- Project Communication Management,
- Project Risk Management,
- Project Procurement Management,
- Project Stakeholder Management.

These knowledge areas serve as a reference framework for selecting project management tools, providing a comprehensive guide to align tools with the specific requirements of each location during the project management lifecycle [7].

## III. RESULTS AND DISCUSSION

Asana and Trello are project management tools that offer various features to support companies' and organizations' project management activities. The availability of features distinguishes the utility of both tools in accommodating projects.

### A. ASANA

Asana, classified as a Content Management System (CMS), is a workplace packaged as a website and a mobile application. Asana can be customized to assist companies in achieving their organizational needs and serves as a project management tool. The key features of Asana include task management tools designed to facilitate the distribution and monitoring of task execution [4]. The following elaborates on the features available in Asana [8].

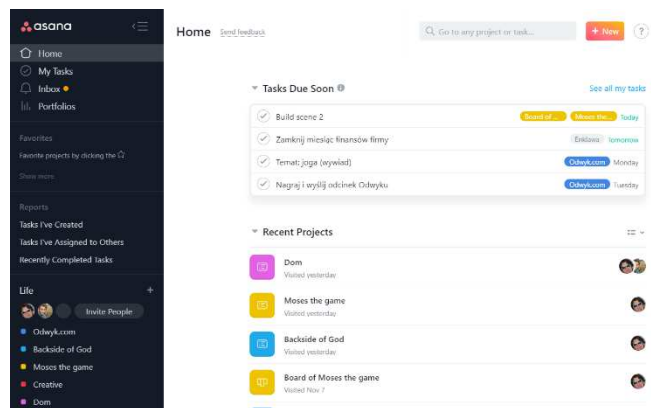


Fig. 1 The features available on Asana's homepage (link: <https://forum.asana.com/t/new-homepage/31781/28?page=3>)

1) *Work, Project, and Task Management Features:* This feature organizes tasks related to a project as lists or Kanban boards. These tasks can also be further subdivided into sub-tasks. This feature also has a Gantt-style view of tasks and timestamps indicating when a task starts and ends. Users of Asana can upload various attachments from local computers, Google Drive, OneDrive, Dropbox, or Box to the relevant task page. Furthermore, users can create a new project and share it with other team members for collaboration. Through this, task progress can be monitored as Asana displays task assignments among team members, revealing which member is working on a specific task.

2) *Communication Feature:* The communication feature in Asana enables users and involved project members to interact directly. Users can provide comments and mention involved members in a task. Additionally, members can

exchange messages, provide reviews, and upload announcements on the project or task page.

3) *Views Feature*: Asana also provides a feature that facilitates users in viewing lists of tasks that need to be completed and the workload of each task. Through these views features, Asana users can search for desired tasks, view task timelines or schedules through a calendar, check the inbox for project-related notifications or messages from other members, and explore files in the gallery view.

4) *Reporting Feature*: The Reporting feature in Asana enables the establishment of project goals, project milestones, portfolios to organize and monitor project interests in one place, status updates to inform stakeholders of project progress, and dashboards that provide various customizable charts.

5) *Team Management Feature*: The Team Management feature in Asana clarifies task assignments among team members. Additionally, through this feature, members can collaborate on tasks. Furthermore, there is a feature where an individual can act as an admin or a team member. Admins have more extensive capabilities than regular Asana website or application members. Thus, an admin can control and manage permissions for member accessibility.

6) *Integrations Feature*: Asana also integrates with other applications such as Adobe Creative Cloud, Dropbox, Google Drive, Zoom, Jira Cloud, and Microsoft. Asana users can maximize project management by leveraging the integration features provided by Asana.

These features enable project managers to easily manage projects remotely, ensuring smooth project progress [9].

## B. Trello

Trello is a web-based project management tool that presents projects or tasks as a Kanban board. With this approach, tasks are organized and presented visually as cards for a neat visualization [10]. The following are some key features of Trello [11].

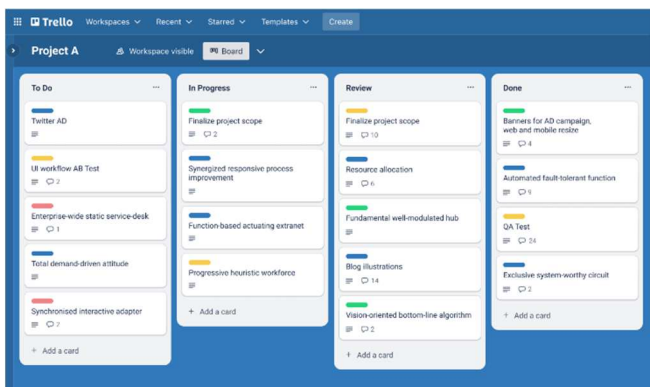


Fig. 2 Trello's Kanban Board. <https://planyway.com/blog/trello-kanban-principles>)

1) *Templates Feature*: Within Trello, the Templates feature provides users with a diverse range of free templates tailored for various purposes, including sales, marketing, design, team management, and more. These templates serve as pre-designed structures that users can readily apply to their projects or tasks, streamlining the setup process and ensuring

consistency across different projects. The availability of templates in Trello enhances efficiency by offering a starting point that aligns with common project categories, saving users time and effort in creating boards from scratch.

2) *Butler Feature*: The butler feature in Trello empowers users to create rules and commands on Trello boards to streamline repetitive tasks. Consequently, this feature automatically executes predefined commands set by the user.

3) *Cards Feature*: The primary display of task lists on Trello consists of an arrangement of cards. Within these cards, users can input details of tasks, including task descriptions, attachments, sub-tasks, task deadlines, and task assignment allocations. Users can customize these cards by changing colors to facilitate categorization based on task types. Moreover, cards can be moved and grouped, allowing users to organize tasks.

4) *Trello Boards Feature*: The Trello Boards feature is a pivotal organizational tool, amalgamating cards based on user preferences and project requirements. With Trello Boards, users can categorize and visualize tasks in a structured manner, facilitating a comprehensive understanding of the project's progress. Each board represents a specific project or initiative, and users can customize these boards to reflect different aspects, stages, or categories of their projects. The visual representation of boards enhances collaboration and communication among team members, offering a centralized space for project tracking and management.

5) *Integrations Feature*: Trello's Integrations feature expands its functionality by allowing seamless connectivity with various external applications, enhancing collaboration and workflow efficiency. The integration with Microsoft Teams, for example, enables users to synchronize and consolidate project-related discussions, documents, and notifications within the Trello interface. By integrating with external tools and platforms, Trello users can leverage a broader spectrum of functionalities, promoting a more unified and interconnected project management experience. This interoperability contributes to a more streamlined workflow, as users can access and manage diverse project-related information without switching between different applications.

## C. Mapping Project Management Tools to Knowledge Areas of PMBOK Version 6

### 1) Asana

- Project Integration Management

Asana effectively organizes all tasks within a dashboard or project overview. A project manager can easily monitor the project's progress through the features available in Asana. This allows for tracking incomplete tasks, and the messaging and comment features enable effective communication among team members. Additionally, Asana offers integration features with other applications, supporting project integration management.

- Project Scope Management

In Asana, the project scope management is supported by features such as status updates and reporting. The status updates feature allows users to communicate the progress and status of tasks or projects, ensuring the scope is well-defined

and understood. Additionally, the reporting feature provides a structured way to gather and analyze data related to the project scope. Asana's project management scope plan further aids users in clearly defining and outlining the scope of a project or task, aligning it with the specific requirements and duration needs.

- Project Schedule Management

Asana offers features like start date, due date, and time for project schedule management. These features provide a visual representation of when a project or task commences, its deadline, and the allocated time for execution. This visual representation simplifies the tracking of time and scheduling tasks, allowing project managers and team members to manage and adhere to the project timeline efficiently. As a result, Asana contributes to effective project schedule management by providing tools to plan and track project timelines.

- Project Cost Management

Asana does not provide a direct feature for mapping to project cost management. However, users can leverage other applications to support financial activity management through app integration features. By integrating with external financial tools, users can enhance their ability to manage project costs efficiently.

- Project Quality Management

Features such as rules, portfolios, and goals map to project quality management in Asana. These features enable users to monitor the quality of work and provide feedback or evaluations on the deliverables produced. This aids in ensuring the quality of the work being carried out and promoting continuous improvement through iterative feedback processes.

- Project Resource Management

Asana supports project resource management through its workload feature. This feature allows organizations to allocate resources based on the roles or responsibilities of each team member in performing tasks. This clarity in task distribution and project allocation ensures that each team member's role is well-defined, contributing to effective project resource management.

- Project Communications Management

Asana facilitates project communications management through features like messages and task comments. Team members within an organization can coordinate, discuss, and communicate regarding task execution using these features. This robust communication platform ensures effective communication management within a project.

- Project Risk Management

Asana users can leverage the templates to anticipate and manage risks during project execution. These templates aid in identifying potential risks and guide how to mitigate them. Using templates, users can proactively assess and address risks that may arise throughout the project lifecycle.

- Project Procurement Management

As a collaborative platform accessible to various stakeholders, Asana supports project procurement management. Features such as user reports and milestones facilitate coordination with external parties involved in the project. This inclusive approach ensures seamless

communication and collaboration across the project's procurement aspects.

- Project Stakeholder Management

Asana includes features that help identify individuals or entities involved in a project. Features like project overview, status updates, and custom fields support effective management and integration of stakeholders to create a stakeholder register. This enables a comprehensive understanding of and stakeholder engagement throughout the project's lifecycle.

## 2) Trello

- Project Integration Management

Trello organizes and categorizes projects into boards containing cards that can be titled, described, and detailed according to tasks. These cards can be arranged or moved as needed. Through the arrangement of cards and the board view in Trello, project members can easily have an overview of the project's progress. This simplicity ensures that every progress can be well-monitored.

- Project Scope Management

Despite the availability of templates that users can adapt and modify to define project scope, Trello does not offer a specific feature dedicated to directly inputting the project's scope.

- Project Schedule Management

Trello lacks a built-in feature for displaying a project's schedule or timeline. However, users can manually download Trello Power-Ups to access features beyond the built-in ones.

- Project Cost Management

Trello supports project cost management with features for estimating income or expenses, invoicing, cost acceptance time, and more. The cost management feature allows users to input and track a project's financial aspects.

- Project Quality Management

Trello currently does not support mapping to project quality management and lacks features specifically designed for monitoring project quality.

- Project Resource Management

Trello still needs a direct feature that assists in allocating project resources. Users can create new cards and include them in tasks to distribute or allocate resources.

- Project Communications Management

Trello does not have a built-in feature that supports communication among parties or team members involved in a project. However, with Trello Power-Ups, some features can notify members of updates on tasks or projects.

- Project Risk Management

Trello currently lacks a dedicated feature for project risk management, but users can utilize available templates to manage and anticipate risks effectively.

- Project Procurement Management

Integrating project procurement management is currently out of stock as a feature in Trello. Consequently, Trello users must leverage third-party applications and integrate or combine them with Trello, such as using plugins or other tools.

- Project Stakeholder Management

Although Trello does not have an inherent feature supporting stakeholder management, Trello Power-Ups, specifically the "Includer" plugin, allows stakeholders to provide feedback on project progress or execution [12].

#### D. Advantages and Disadvantages of Each Project Management Tool.

##### 1) Asana

The following are the advantages of Asana as a project management tool [13], [14].

- Asana is well-suited for projects employing an Agile approach in their implementation or execution. Organized task management enhances project flexibility, allowing organizations to update project and task details easily.
- Asana facilitates seamless collaboration among team members and external parties such as project stakeholders. This fosters effective communication and teamwork.
- Asana can integrate with various applications, providing robust support for user activities by connecting with other tools and platforms.
- Using web and mobile applications, Asana ensures accessibility and flexibility in project management, allowing users to stay connected and updated.
- Asana includes features designed to assist individuals with color blindness, promoting inclusivity in project management.
- Asana boasts a straightforward and user-friendly design, which is especially beneficial for new users who want to understand and navigate the platform quickly.

The following are the disadvantages of Asana as a project management tool [15].

- Asana has limitations in assigning multiple people to a task, which may be restrictive for projects requiring extensive collaboration.
- Several of the features available on the mobile application are less comprehensive than those on the website, potentially limiting user functionality on the go.
- Users may experience an influx of unrelated emails, which can contribute to information overload and potentially distract from project-related communication.
- Asana's features that support time-tracking are limited, which may be a drawback for projects requiring detailed time management.
- Access to advanced features in Asana often requires a more expensive payment plan than Trello, potentially making it a less cost-effective choice for some users.

##### 2) Trello

There are several advantages of Trello as a project management tool [14], [16]-[18]

- Trello boasts a straightforward interface that is easy to use, especially for new or non-technical users.
- The Butler feature in Trello reduces repetitive and manual tasks, streamlining project management processes.

- Trello offers numerous features and plugins, enhancing its functionality and adaptability, primarily through Trello Power-Ups.
- Using boards and cards, following the Kanban system simplifies grouping, enabling users to monitor project progress easily.
- Trello's user-friendly nature suits small businesses well, offering ease of use and efficient collaboration.
- Trello provides quick and up-to-date notifications, promptly informing users about project updates.

There are several disadvantages of Trello as a project management tool [16-18].

- Trello has several built-in features that may not fully support mapping certain knowledge areas.
- Trello may not be suitable for large-scale projects due to its inherent limitations in handling complex and extensive tasks.
- To access more comprehensive features, users must install Trello Power-Ups, which may require manual additional effort.
- Trello needs a comprehensive range of charts, potentially limiting visual representation and analysis of project data.
- Trello limits the size of attachments that can be uploaded, which may be a constraint for projects with larger files.

#### E. Analysis of Project Conditions Suitable for Each Tool.

1) *Asana*: Compared to Trello, Asana suits more extensive projects. However, considering that Asana does not allow the assignment of multiple individuals to a single task, its utilization may not accommodate project management activities where multiple people handle one task. Furthermore, due to limitations in certain features essential for project management, Asana may be less suitable for very large-scale projects. Additionally, given the additional costs associated with accessing more features, Asana may not be the optimal choice for smaller projects [19].

Asana is well-suited for projects that embrace an Agile approach. This is attributed to Asana's flexibility, which facilitates organizations implementing an Agile methodology and change projects. With its available features, project progress can be efficiently managed and organized [20].

2) *Trello*: Trello's design simplicity makes it an ideal choice for organizations engaged in smaller-scale projects. The user-friendly interface allows for quick comprehension, making it particularly accessible to users without an IT background. This simplicity is advantageous for efficient onboarding and rapid adoption within teams. However, Trello's strength lies in its ability to handle projects of modest complexity. Trello may need more support for larger-scale projects due to its less extensive feature set, hindering its capacity to comprehensively map and manage the diverse aspects covered by knowledge areas. In other words, Trello might lack the depth needed for intricate project structures and extensive task dependencies.

Therefore, Trello is most effective when deployed in organizations undertaking relatively straightforward projects, where the simplicity of its design and ease of use contribute to a streamlined project management experience. The tool is

particularly well-suited for small to medium-sized projects where its straightforward approach aligns with the scale and requirements of the undertaking.

#### IV. CONCLUSION

In any project, the critical factor is knowledge. Hence, creating a space where knowledge can be built, shared, and applied to attain project goals is crucial. Knowledge plays a vital role in every project, emphasizing the necessity of cultivating an atmosphere that encourages the generation, exchange, and practical use of information to reach the project's intended goals [21]. Hence, selecting the appropriate project management tool plays a pivotal role in determining the success of project implementation. A thorough analysis and comparison of Asana and Trello shows that these tools offer unique functionalities, each with strengths and weaknesses. In summary, Asana is more suitable for handling large-scale projects, while Trello is better for smaller projects. In terms of features, Asana outshines Trello by providing a more extensive range of functionalities that effectively support the mapping of knowledge management areas. Despite Trello's inherent simplicity and a feature set that might not match Asana's depth, its user-friendly interface makes it particularly accessible, especially for individuals new to project management or those lacking an IT background. Regarding collaboration, both Asana and Trello facilitate effective communication throughout task execution, ensuring seamless teamwork. Recognizing that each tool possesses its advantages and limitations, organizations can choose between them based on their specific needs.

Ultimately, the decision between Asana and Trello is contingent on each organization's unique requirements. Project management tools extend beyond a singular application, as companies can harness available technology to integrate various applications or tools. This integration strategy enables organizations to maximize the utility of these tools, fostering smooth and successful project execution.

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