

**SOEN 6841 – Software Project Management (Fall 2024)**  
**Project Team 8**  
**Topic: Remote Team Collaboration Platform**

**Group Members:**

**Praneet Avhad** (ID: 40279347)  
**Vaibhav Diwan** (ID: 40279252)  
**Soham Sakaria** (ID: 40275636)  
**Gaurav Sharma** (ID: 40284996)  
**Yashesh Sorathia** (ID: 40267022)

**Problem Statement**

**Objective:**

As remote work becomes increasingly common, teams face significant challenges in maintaining effective collaboration, especially when members are spread across different time zones. Traditional tools often fall short in providing a unified solution that can handle the complex needs of modern teams, such as real-time communication, task tracking, and workflow management. The objective of this project is to create an intuitive, all-encompassing platform that facilitates seamless collaboration among remote teams, regardless of their location or time zone.

Our platform will offer integrated features like ticket management, to-do lists, customizable workflows, and real-time communication channels, all within one system. In addition, automation tools will further streamline repetitive tasks, helping teams maintain high productivity. The platform will allow third-party integrations and offer flexibility in customizing workflows, enabling teams to align the system with their specific Agile methodologies. By ensuring that teams remain organized, and tasks are tracked and prioritized efficiently, the platform aims to significantly enhance collaboration and task resolution.

**Problem Statement:**

In today's globalized work environment, organizations increasingly rely on remote teams to achieve their objectives. However, this shift has introduced a variety of challenges when it comes to collaboration, especially with respect to coordination across different time zones, tracking task progress, and maintaining team efficiency. Existing collaboration tools often do not fully address these challenges, resulting in decreased productivity, miscommunication, and delays in task resolution.

Remote teams often struggle with managing and tracking multiple tasks at once, as the current platforms typically lack an integrated ticket management system that can streamline the assignment and resolution of tasks. Additionally, without

comprehensive to-do lists and checklists, remote workers may miss deadlines or fail to prioritize tasks correctly. This lack of structure makes it difficult to maintain an organized workflow, which is critical in Agile project management where iterative development and task prioritization are key.

Another issue is that current tools often do not offer enough flexibility for teams that work under specific Agile processes. A one-size-fits-all approach can limit the team's ability to customize workflows to their specific needs, leading to inefficiencies. Moreover, manual task creation adds unnecessary overhead, as it consumes time and increases the chances of human error. Teams would greatly benefit from automation features that trigger task creation based on specific actions, reducing repetitive manual work and improving overall efficiency.

Real-time communication, a vital component of successful remote work, is often fragmented across different platforms, leading to scattered conversations and delays in team decision-making. Teams need a centralized system that facilitates both real-time and asynchronous communication to ensure that all team members, regardless of time zone, remain aligned on key tasks and objectives.

### Teams and Roles:

The development of this platform will involve a multidisciplinary team of software developers, UI/UX designers, project managers, and QA engineers. Each team will work under an Agile framework, ensuring that the platform evolves iteratively based on user feedback and changing requirements. Moderators will play a crucial role in overseeing the quality and functionality of the platform. They will ensure that the workflows are properly customized to fit different Agile methodologies and that any emerging issues are resolved promptly. Additionally, feedback loops with users will be established to ensure continuous improvement and adaptation of the platform.

### Stakeholder Analysis

#### **1. Remote Team Members (End Users)**

- **Interests:** A user-friendly platform for seamless collaboration, task management, and real-time communication across time zones. Integration with tools they already use to boost productivity.
- **Concerns:** Usability, data security, reliability of automation features, and potential disruptions due to integration issues.

#### **2. Project Managers and Team Leads**

- **Interests:** Efficient task tracking, customizable workflows for Agile processes, and automated task management to enhance team productivity.
- **Concerns:** Task visibility, platform complexity, workflow rigidity, and risk of communication breakdowns.

#### **3. Software Development Team (Platform Developers)**

- **Interests:** Building a scalable, user-friendly, and customizable platform with secure integrations and automation.
  - **Concerns:** Integration challenges, maintaining security, balancing complexity with usability, and meeting development deadlines.
4. **Organization Leadership (Stakeholders and Executives)**
- **Interests:** Boosting team productivity, streamlining operations, reducing costs, and improving cross-functional collaboration.
  - **Concerns:** Cost of implementation, resistance to new technology, and disruptions during adoption.
5. **Moderators and Administrators**
- **Interests:** Ensuring smooth platform configuration, managing user roles, and overseeing system performance and security.
  - **Concerns:** Platform stability, ease of setup, ongoing maintenance, and data security.
6. **Third-Party Tool Providers (Integration Partners)**
- **Interests:** Seamless integration of their tools into the platform to enhance user experience and functionality.
  - **Concerns:** Avoiding technical issues or conflicts during integration and ensuring continued support with platform updates.
7. **IT Departments**
- **Interests:** Easy deployment, maintenance, and ensuring strong security protocols and system reliability.
  - **Concerns:** Data privacy, security vulnerabilities, and technical complexity in integrating with existing systems.

**Statement** -To create an intuitive and all-encompassing platform that facilitates effective collaboration among remote teams, regardless of their location or time zone differences. The platform will offer a comprehensive ticket management system that streamlines task tracking and resolution, helping teams stay organized and productive. To-do lists and checklists will ensure tasks are prioritized and deadlines are met. The platform's flexibility allows for integration with other tools and customization to fit specific Agile workflows. Automation features will automatically create tasks based on triggers, reducing manual work and improving efficiency.

## **Solution Overview**

There is a need for a comprehensive collaboration platform that integrates all these functionalities into a single, user-friendly interface. The platform will address the following key areas:

### **Real-Time Communication and Collaboration:**

The platform will provide instant messaging features similar to Slack, allowing teams to communicate effectively and stay updated on project progress, regardless of their location or time zone. It will support both real-time and asynchronous communication, ensuring team alignment across different time zones.

### **Integrated Ticket Management System:**

An intuitive ticketing system will enable the tracking of tasks, issues, and bugs. This will streamline the assignment, monitoring, and resolution of tasks, ensuring nothing slips through the cracks.

### **To-Do Lists and Checklists:**

By incorporating to-do lists and task checklists, the platform will ensure tasks are organized, prioritized, and deadlines are met, making it easier for teams to track progress and manage workloads.

### **Customizable Workflows and Agile Process Support:**

The platform will allow teams to fully customize their workflows to align with specific Agile processes, providing the flexibility needed for iterative development. Teams will be able to set up unique workflows for different projects, ensuring smooth task management and project execution.

### **Third-Party Integration and Automation:**

To further enhance productivity, the platform will integrate seamlessly with popular third-party tools like GitHub, Jira, Google Workspace, and more. Automation features similar to Zapier will allow tasks to be automatically created based on specific triggers, such as the submission of a form, status changes in other tools, or completion of related tasks, reducing manual effort and improving efficiency.

### **Document Collaboration:**

The platform will include document collaboration features that enable team members to edit and work on documents simultaneously. Shared editing capabilities, version control, and cloud storage will ensure that all team members have access to the latest version of a file, avoiding conflicts and improving the collaboration process.

### **Team Collaboration Tools:**

To facilitate effective teamwork, the platform will offer shared calendars, team chat rooms, and secure file-sharing features. Shared calendars will help teams schedule meetings and track project milestones, while chat rooms and file-sharing tools will

ensure that communication and resource management are centralized and easily accessible.

### **Analytics and Reporting:**

The platform will provide built-in analytics and reporting features to track team performance, task completion rates, and overall project progress. Project managers and stakeholders will be able to generate custom reports, gaining insights into productivity and identifying areas for improvement. These data-driven insights will support informed decision-making and enhance workflow optimization.

### **Mobile App:**

A mobile version of the platform will ensure that team members can access all essential features while on the go. The mobile app will offer the same core functionalities—real-time messaging, task tracking, document access, and notifications—so users can stay connected and manage tasks regardless of their location or device, improving overall flexibility and responsiveness.

## **2. Market Analysis**

Objective: Perform an extensive market analysis to understand the target audience, main users, and competitors in the remote team collaboration space. This analysis will have the requirements and preferences of remote teams, project managers, and businesses when managing workflows remotely and communicating. Additionally, perform an in-depth analysis of existing solutions like Slack, Microsoft Teams, and other team collaboration tools to evaluate their features, advantages, and limitations. Investigate potential opportunities for partnerships with industry players, such as third-party integration services and automation platforms, to expand the platform's functionality and strengthen its market position. The purpose of this analysis is to gather important information about the market that will help develop a plan for the development of this platform. This will ensure that the software meets the needs of the stakeholders.

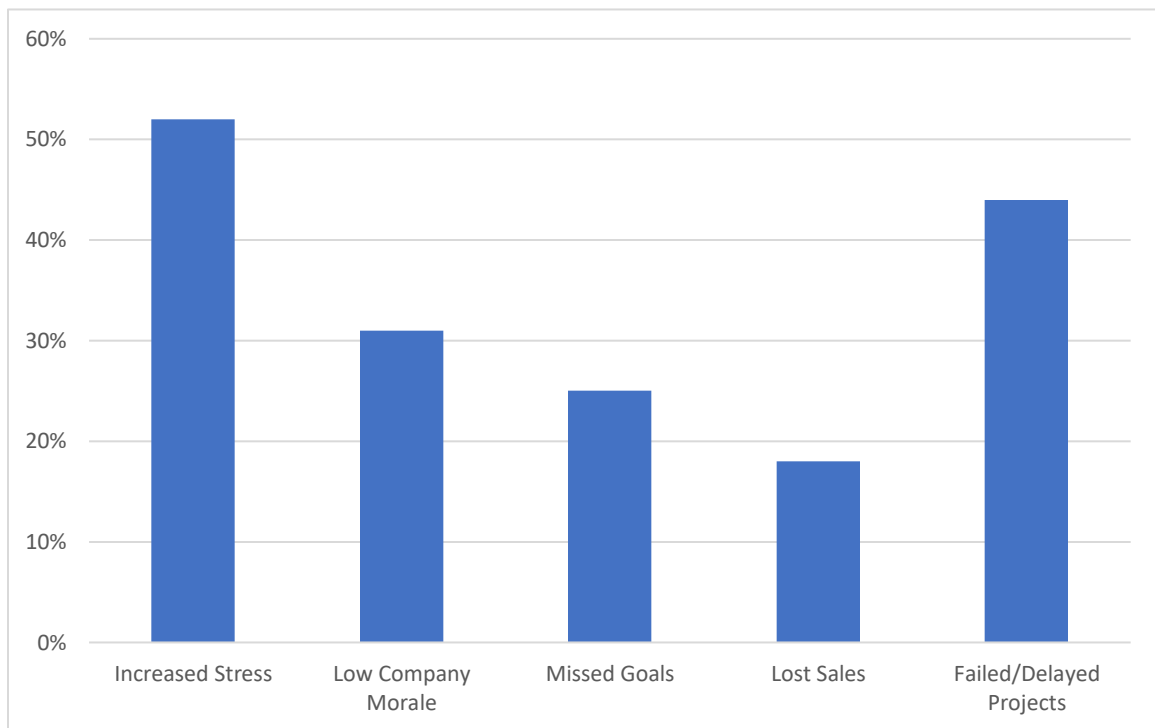
### **Target Audience Identification:**

The primary target audience for the remote team collaboration platform will include remote development teams, small to medium-sized enterprises (SMEs), including startups, as well as government teams and agencies.

#### **1. Understanding Demographics**

- **Remote Development Teams:** The platform should provide an interface for teams working in software development with various roles ranging from developers to project managers and quality assurance. Each department's needs should be met, starting with code reviews, ticket management, and task tracking.

- **Government Teams and Agencies:** Many government agencies nowadays are adopting work from home, for which, they need secure and minimalist communication and task management tools. This platform should comply with high privacy standards and be flexible to support diverse departmental workflows
- **Small to Medium-Sized Enterprises (SMEs):** These companies operate with limited budgets and resources. The platform should have multiple levels of subscription which are adaptable for growing teams and have enough collaboration tools in each level. This will offer an all-in-one solution without affecting their overall market plan and resources.



Effects of poor virtual communication [1]

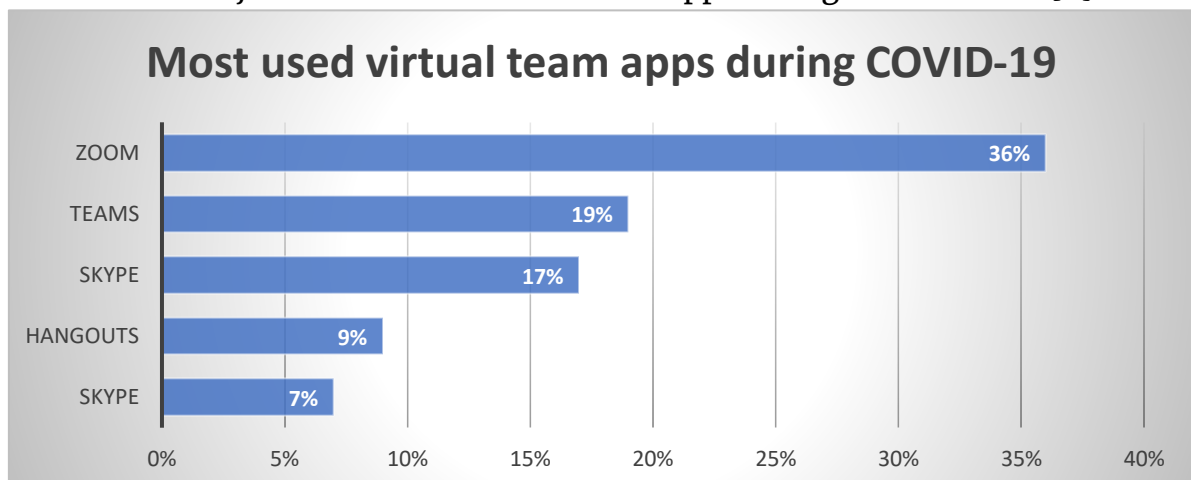
When analyzing the effects of poor communication, we found that:

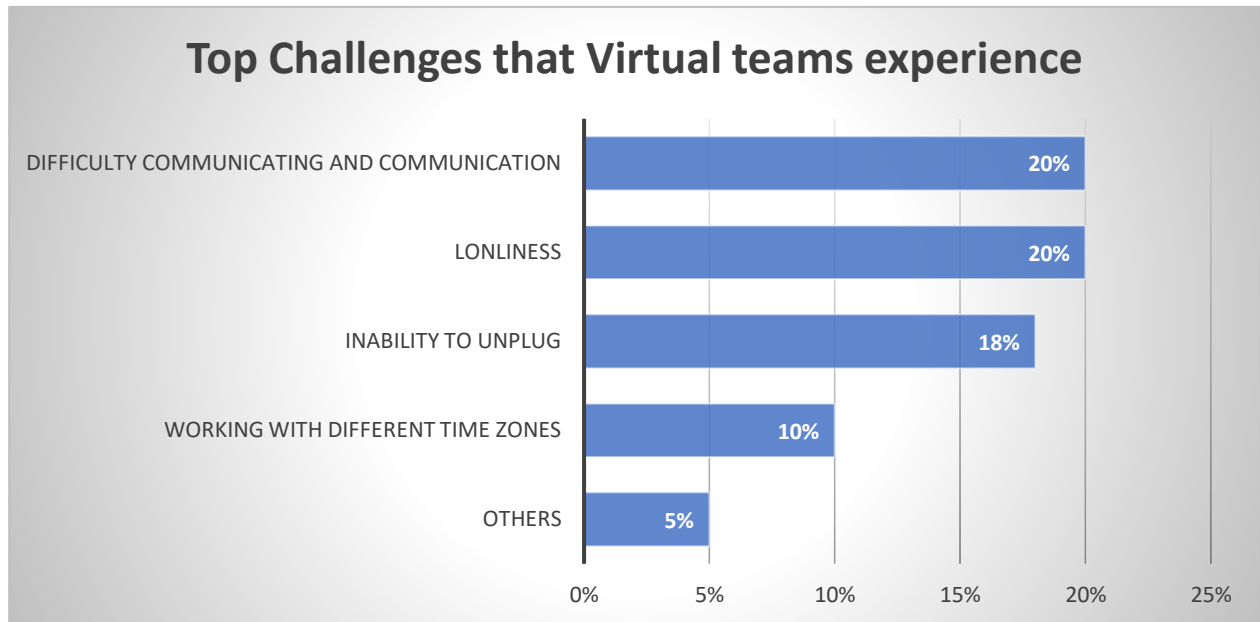
- 52% felt increased stress levels due to unclear communication.
- 44% faced project delays or failed to complete them on time.
- 31% experienced a drop in company morale from miscommunication.
- 25% missed performance goals as a result of ineffective communication.
- 18% lost sales opportunities due to poor client and team communication.[1]

## 2. Psychographic Considerations:

- **Efficient Team Collaboration and Communication:** The target audience for this platform considers seamless communication and collaboration of key importance. Hence, the platform should streamline real-time communication and task management in a way that reduces integration of third-party vendors.
- **Customizable Workflows:** Teams often want their tools to adapt to their processes of development, such as agile, kanban, or even their custom workflows. Hence, the platform should have a feature for teams to customize where the teams can set up a workflow and automate tasks regarding their project needs.
- **Automation of Repetitive Tasks:** The teams are always looking to minimize effort spent on redundant tasks, which means a certain automation is required for repetitive activities. This might include moving tasks between sprints, updating the status of tickets, or creating a workflow for a specific task. Therefore, integrating automated workflows, courtesy of Zapier will be much appreciated by the teams who strive for maximum productivity without redundant tasks.

Ever since the pandemic, online team collaboration has been essential to keeping businesses up and running through this difficult period for various sectors. A staggering 80% of the Fortune 1000 companies adopted virtual and hybrid models for team communication during the early part of the crisis. Zoom boomed as the top platform for virtual teams in the US, which shows that communication tools are by far the most important thing for remote team collaboration and more time should be spent on the quality of those tools. Virtual teams also report that the use of remote collaboration has made the job effective for 75%, and 62% of employees are contemplating switching to remote jobs. Most used collaboration apps during the Pandemic [2]





Challenges for virtual collaboration [2]

Virtual teams, in turn, have become critical today, but they also have their own set of complications. [2]

- The CultureWizard survey of 2018 depicted that virtual teams can't avoid time zone differences—with as many as 88% struggling through it—while the dissociation over different locations makes communication quite difficult for 86%. Further, conflicts and relationships, which usually get sorted out through face-to-face interactions, are reported by 86% of teams. Other challenges are responsiveness at 80% and understanding of different accents at 80%.
- The 2019 SHRM Globalization Partners Global Teams Survey further reinforces these issues and finds that 49% of virtual teams face difficulties in collaboration across time zones. International laws contribute to complexity in managing global teams by 44%, in scheduling by 38%, and in cultural differences by 33%. Companies also reported struggling to source.
- On the other hand, remote employees have their specific set of personal problems: 28% feel burnt out and disconnected from work (GitLab, 2020); and 26% report feelings of social isolation (Amerisleep, 2021). For 12% of remote workers, several distractions at home are problematic, while collaboration with colleagues, especially those in other time zones, is tough for 20%.
- These studies point to problems that are both cultural and logistical, which could be better resolved by improved communication tools and robust strategies to manage teams in virtual settings.



## Competitor Analysis:

### 1) Slack:

Slack is a cloud-based communication and collaboration platform for teams. It offers real-time messaging, file sharing, and integrations with various third-party tools to streamline team workflows, particularly for remote and distributed teams.

#### Advantages:

- **User-friendly Interface:** Easy to navigate.
- **Wide Integrations:** Works with numerous tools like Google Drive and Trello.
- **Search Capabilities:** Efficiently finds past messages and files.
- **Supports Remote Teams:** Ideal for distributed workforces.

#### Weaknesses:

- **Notification Overload:** Too many notifications can be distracting.
- **Limited Free Plan:** Restricts message history and app integrations.
- **High Costs:** Expensive for larger teams or advanced features.
- **Disjointed Conversations:** Threaded messages can become hard to follow.
- **Limited Support for GitLab, Jira and Zapier:** Lacks native ticketing and automation integration with GitLab, Jira and Zapier.

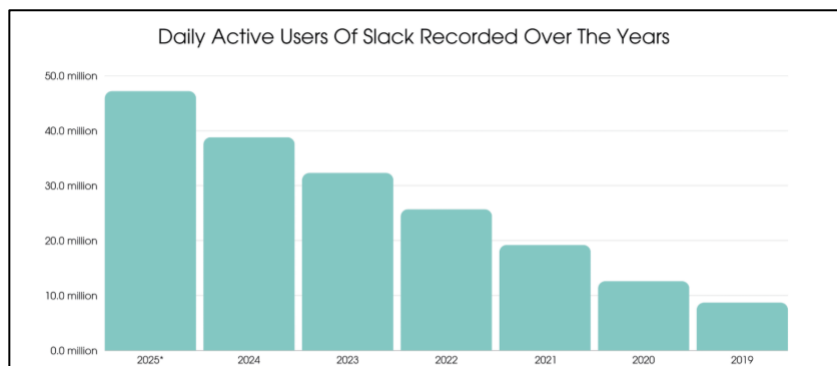
#### Opportunities:

- **AI and Automation:** Leverage AI for productivity enhancements.
- **Remote Work Boom:** Growing demand for remote collaboration tools.
- **Expansion into New Markets:** Tap into emerging industries and regions.

#### Threats:

- **Competition:** Rival tools like Microsoft Teams and Zoom.
- **Security Concerns:** Increasing focus on data privacy.
- **Platform Fatigue:** Overuse of communication tools may push users away

Slack has also experienced significant **user growth over the years**, as demonstrated by the following projections. [3]



Daily Active Users of Slack over the Years [3]

Slack has also seen substantial growth in revenue over the years, reflecting its expanding user base and increased adoption across industries.



Slack's Revenue over the Years [3]

## 2) Microsoft Teams:

Microsoft Teams is another cloud-based productivity application that is package with Microsoft 365, offering many collaboration tools such as chatting, video conferencing, file sharing, etc. It is widely used especially within the corporate market for those who use the Microsoft products.

### Advantages:

- **Microsoft 365 Integrations:** It works very well with Office applications such as Word and Excel.
- **Inbuilt Video Conferencing:** High-quality calls are possible for large groups.
- **Security and Compliance:** Enterprise-grade security features are offered.

### Weaknesses:

- **Complex Interfaces:** Teams has a complex interface, making it difficult to use for new users.
- **Limited Third-party Integrations:** Fewer integrations with software such as Jira, zapier and GitLab.

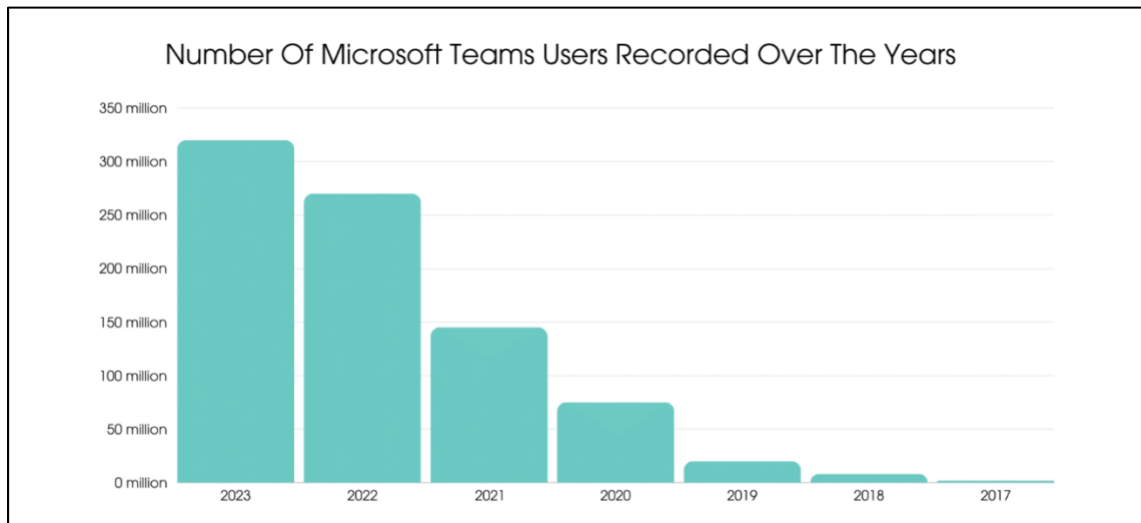
### Opportunities:

- **Demand for Collaboration:** The need for collaboration with the workforce expands to meet increased requirements since the companies are expanding their business processes.
- **AI and Automation:** Use AI to enhance Workflow and automation.

### Threats:

- **Severe Competition:** Slack, Zoom, Google Workspace.

- **Safety:** Confidentiality of issues regarding cyber security and network risks.



Teams Active Users of Microsoft Teams over the Years [4]

### **Business Values:**

#### **1. Seamless Real-time Collaboration Across the Globe**

**Why users need it:** In the modern, fast-moving, and dispersed work environment, one cannot afford delays in communication. Our platform enables instant messaging, voice calls, and video conferencing to keep your team connected at any moment in time and from any place. Time zones should not drag you back. Keep projects moving with real-time interactions-whether individual or group-no matter where your team may be located.

#### **2. One-stop Solution for Task Management with Integrated Tickets**

**Why they need it:** An end to juggling a lot of apps to keep track of your tasks! Immediately centralize everything in an integrated ticket management system - from task tracking to issue resolution-so nothing falls through the cracks. Increase efficiency, accountability, and transparency with one single task board that helps maintain the laser-like focus of your team.

#### **3. Streamline Productivity with Automated To-do Lists & Checklists**

**Why users need it:** Boost your team's productivity by turning chaos into clarity. Our to-do lists and checklists ensure that every task is done at the right time with priorities and no confusion. And since everything will be in plain sight, teams

can meet their deadlines with ease-no more missed milestones or forgotten tasks!

#### **4. Seamless Integration with Your Favourite Tools**

**Why users need it:** Already in love with your tools? That's totally fine! Our platform seamlessly integrates with third-party apps, such as Google Workspace, Slack, and Jira. Seamless preservation of workflows you already had, now enhanced with new functionality thanks to our platform. Make it easier, get rid of hassle, and work your own way!

#### **5. Fully Customizable Workflows for Any Business Need**

**Why the user needs it:** No team works alike. That's why we have fully customizable workflows that conform to the processes your team uses-whether you're using Agile, Scrum, or something unique to your business. Don't let rigid software bend your workflow-on our platform, that will mold to fit you, enhancing operational efficiency and flexibility.

#### **6. Automate Repetitive Tasks & Boost Efficiency**

**Why the customer needs it:** Manual handling of such repetitive tasks spends precious time. With our automation features, you will enable the creation of tasks with certain actions-like new customer tickets or project updates-which saves your team hours of tedious work. This, in turn, translates to more hours for strategic tasks and fewer errors from manual input.

#### **7. Centralized Document Collaboration & Version Control**

**Why the user needs it:** Collaborating on documents can be a nightmare-with lost versions and miscommunication around questions such as, "Is this one the latest?" You will never have to worry again about outdated files with our real-time document collaboration and version control. Everyone is working from one source of the truth. Consistency and accuracy are ensured across the board.

#### **8. Advanced Analytics & Performance Reporting**

**Why users need it:** On track? Pulling in the best team performance? With our analytics and reporting features, take action on team performance and productivity, project progress, and more. Confidently make data-driven decisions, identify bottlenecks, and give your workflow a tune-up to deliver results faster.

**9. Stay Connected on the Go with Our Mobile App**

**Why it's needed:** Whether in the office or on the go, our mobile app keeps your whole team connected and productive. Be able to manage tasks, check progress, and update your team—all from your smartphone. Give your team the flexibility of working anywhere with the confidence your projects will continue regardless.

**10. Ultimate Scalability for Growth Teams**

**Why the user needs it:** Be it a startup or an enterprise, our platform grows with you. As your team grows, you are going to want a system that scales up with the demands and doesn't slow you down. Equipped with robust infrastructure and scalable architecture, our platform ensures frictionless collaboration for your team at the exact moment when your organization is taking shape.

## References:

1. <https://www.b2breviews.com/workplace-collaboration-statistics/#:~:text=Online%20collaboration%20tools%20scale%20up,online%20collaboration%20tools%20as%20challenging.>
2. <https://financesonline.com/virtual-team-statistics/>
3. <https://www.demandsage.com/slack-statistics/#:~:text=Slack%20Has%2038.8%20Million%20Daily%20Active%20Users&text=Slack%20is%20estimated%20to%20have,recorded%20over%20the%20past%20years.>
4. <https://www.demandsage.com/microsoft-teams-statistics/>
5. <https://www.linkedin.com/pulse/rise-remote-work-its-impact-future-rashedur-rahman-/>