# PRODUCT REQUIREMENTS DOCUMENT (PRD)

**Product:** (TBD – AI Planning Assistant)
**Version:** 0.0 → 1.1
**Team:** ATC – Team 2
**Document Type:** PRD

## 1. PURPOSE

The purpose of this PRD is to define **what the system must do** from MVP (v0) through v1.1.
The system connects to user communication channels, extracts actionable items, prioritizes them, and automatically plans their day by writing tasks + meetings to their calendar.

The goal is to deliver a **trusted, external planning brain** that eliminates manual task management and reduces mental load.

## 2. PRODUCT SUMMARY

The system follows a simple loop:

**Capture → Clarify → Prioritize → Plan → Sync → Notify**

Version 0 establishes the loop.
Version 1.x improves accuracy, intelligence, and user control.

## 3. USER STORIES

**Primary User Stories**

1. *"As a user, I want the system to automatically identify tasks and deadlines from my messages so I don't have to manually track them."*
2. *"As a user, I want my tasks automatically scheduled on my calendar so my day is organized without effort."*
3. *"As a user, I want the system to prioritize tasks based on urgency and importance so I work on the right things at the right time."*
4. *"As a user, I want to receive updates when new critical items appear so nothing falls through the cracks."*
5. *"As a user, I want to control which channels or threads the system has access to so I feel safe using it."*

## 4. VERSION SCOPE OVERVIEW

**Version 0 (MVP)**

Goal: Build full end-to-end functionality with the simplest workable system.

**Channels Supported:**

- Gmail (read-only)
- Slack (read-only)

**Core Deliverable:**
A daily schedule auto-generated from messages.

**Version 1.0**

Goal: Expand intelligence, add WhatsApp, improve accuracy, add preference learning, and allow overrides.

**Version 1.1**

Goal: Improve reliability, context-awareness, and introduce meeting prep summaries + smarter notifications.

# 5. FUNCTIONAL REQUIREMENTS

## VERSION 0 (MVP)

### 5.1 Channel Integrations

**FR-0.1** System connects to Gmail via OAuth (read-only).
**FR-0.2** System connects to Slack via OAuth (read-only for DMs + @mentions).
**FR-0.3** Users can choose which email labels / Slack channels to include.

### 5.2 Data Ingestion

**FR-0.4** System pulls new messages every X seconds/minutes.
**FR-0.5** Only messages containing "trigger signals" are processed:

- Question with deadline ("Can you send by tomorrow?")
- Task-like phrasing ("Please update the doc")
- Time-based request ("Meet today at 2")

### 5.3 Task & Event Extraction

**FR-0.6** Extract explicit tasks.
**FR-0.7** Extract explicit deadlines.
**FR-0.8** Extract meeting requests with dates/times.
**FR-0.9** Associate extracted items with sender identity.

Accuracy target: **≥70%** in v0.

### 5.4 Priority Engine (Basic)

**FR-0.10** Score each item using simple rules:

- P1 = deadlines today or requests from important senders
- P2 = this week
- P3 = no deadline

**FR-0.11** Reflect scoring transparently in UI.

### 5.5 Planner (Basic)

**FR-0.12** Convert tasks into 30–90 min time blocks.
**FR-0.13** Use free time in user's Google Calendar.
**FR-0.14** Do not override existing meetings.
**FR-0.15** Respect user's working hours.

**5.6 Calendar Sync**

**FR-0.16** Create Google Calendar events for scheduled tasks.
**FR-0.17** Update when user manually moves or deletes tasks.
**FR-0.18** Do not double-book under any condition.

**5.7 Daily Plan Summary**

**FR-0.19** Generate a simple text summary:

- Key tasks
- Meetings
- Priorities
- Reasoning

Delivered via UI and/or email.

**5.8 User Configuration**

**FR-0.20** Users can toggle:

- Gmail on/off
- Slack on/off
- Working hours
- Focus hours
- Notification preferences

**5.9 Notifications**

**FR-0.21** Notify users for:

- New P1 tasks
- New meeting requests
- Important deadlines approaching

**5.10 Dashboard (Simple UI)**

**FR-0.22** Display:

- Extracted tasks
- Priority score
- Proposed schedule
- Sync status

## VERSION 1.0

### 6.1 New Channel: WhatsApp

**FR-1.1** Ingest messages from WhatsApp via approved method:

- API integration (if access)
- OR trigger-based local processing (privacy-safe)

**FR-1.2** Extract tasks from voice notes (basic transcription).

### 6.2 Advanced Extraction

**FR-1.3** Extract implicit tasks (e.g., “Let’s finish this today”).
**FR-1.4** Extract multi-step tasks.
**FR-1.5** Detect follow-up requests.
**FR-1.6** Recognize deadlines hidden in context.
Accuracy target: **≥85%**

### 6.3 ML-Based Prioritization

**FR-1.7** Move from rule-based to ML ranking:

- Sender importance
- Historical completion habits
- Urgency prediction
- Time sensitivity
- Message type

**FR-1.8** Explain “Why this priority?” to user.

### 6.4 Smart Auto-Rescheduling

**FR-1.9** When new high-priority tasks arrive, rearrange the day.
**FR-1.10** Ask user for confirmation before major changes.

### 6.5 User Preference Learning

**FR-1.11** Learn:

- User’s preferred meeting times
- Preferred task block length
- High-focus periods
- Days they tend to overload
- Time spent per task category

### 6.6 Improved Dashboard

**FR-1.12** Add:

- Timeline/planner view
- Edit/override controls
- Delete/ignore extracted tasks
- Task grouping by project/sender

# VERSION 1.1

### 7.1 Meeting Prep Summaries

**FR-1.1.1** Generate short summaries before meetings:

- Recent related messages
- Documents mentioned
- Open tasks
- Suggested agenda

### 7.2 Context-Awareness

**FR-1.1.2** Identify the project/initiative associated with each message.
**FR-1.1.3** Link tasks to ongoing threads for easier understanding.

### 7.3 Smart Notifications

**FR-1.1.4** System detects “missing follow-ups” (e.g., no response for 3 days).
**FR-1.1.5** Notify user when they are overcommitted today.
**FR-1.1.6** Suggest moving tasks ahead of time instead of last minute.

### 7.4 Habit & Weekly Planning System

**FR-1.1.7** Recognize repeating patterns and form habits.
**FR-1.1.8** Weekly planning suggestions based on:

- Deadlines
- Workload
- Past behavior

# 8. NON-FUNCTIONAL REQUIREMENTS

### Security

- User chooses specific threads/chats to give access to.
- Trigger-based capture: system processes minimal data.
- Data encrypted at rest and in transit.
- Compliance path for enterprise later.

### Performance

- Extraction should occur within seconds.
- Calendar write must be reliable and atomic.

### Accuracy

- v0: 70% extraction
- v1.0: 85%
- v1.1: 90%

**Reliability**

- No double-booking under any conditions.
- If conflict occurs, system must fallback to user approval.

**Transparency**

- Always show users why something was prioritized or scheduled.

## 9. SUCCESS METRICS

**Version 0**

- Extraction accuracy ≥70%
- 50% reduction in planning time
- Daily active usage ≥50%
- Calendar sync reliability ≥95%

**Version 1.0**

- Extraction accuracy ≥85%
- 20% fewer missed commitments
- Daily schedule usage ≥70%

**Version 1.1**

- Meeting prep usage ≥60%
- Auto-rescheduling accepted ≥75% of the time
- User trust: “system planned my day correctly” ≥80%

## 10. RISKS & MITIGATIONS

**Privacy Risk**

Users may hesitate to share all messages.
→ Mitigation: Thread-level permissions + trigger-based capture.

**Accuracy Risk**

Incorrect extraction reduces trust.
→ Mitigation: Human-readable explanations + overrides.

**Over-Automation Risk**

Users may feel loss of control.
→ Mitigation: User approval for major schedule changes.

**Channel Integration Risk**

WhatsApp access is limited.
→ Mitigation: Local processing or phased release.

High Level System Design

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# **PRD:** AI-Powered Employee Productivity Assistant

**Product Name:** AI-Powered Employee Productivity Assistant
**Version:** 1.0 (MVP)
**Prepared For:** Management / Product Leadership
**Prepared By:** Team 2
**Date:** November 2025

**Vision Statement:**
Empower employees to focus on high-impact work by consolidating tasks across multiple platforms, prioritizing intelligently with AI, and automating scheduling, enhancing productivity, reducing stress, and ensuring nothing is missed.

**Objective:**

- Streamline task management by unifying tasks from multiple platforms.
- Use AI to intelligently prioritize tasks and automate scheduling.
- Enhance productivity, reduce missed deadlines, and improve collaboration.

**Product USP:**
The first AI assistant that acts like a co-worker: aggregates tasks, prioritizes intelligently, and schedules meetings automatically, reducing cognitive load and improving productivity.

**Key Differentiators:**

- Unified task aggregation from multiple platforms
- AI-driven priority ranking based on urgency, deadlines, and context
- Automatic scheduling and meeting suggestions
- Customizable task categories
- Collaboration-friendly features

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## 1. User Stories

- As a user, I want the system to automatically identify tasks and deadlines from my messages so I don’t have to manually track them.
- As a user, I want my tasks automatically scheduled on my calendar so my day is organized without effort.
- As a user, I want the system to prioritize tasks based on urgency and importance so I work on the right things at the right time.
- As a user, I want to receive updates when new critical items appear so nothing falls through the cracks.

- As a user, I want to control which channels or threads the system has access to so I feel safe using it.

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## 2. Version Scope Overview

**Version 0 (MVP)**

- Goal: Build full end-to-end functionality with the simplest workable system.
- Channels Supported: Gmail (read-only), Slack (read-only)
- Core Deliverable: A daily schedule auto-generated from messages.

**Version 1.0**

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**Version 1.1**

- Goal: Improve reliability, context-awareness, meeting prep summaries, and smarter notifications.

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## 3. Functional Requirements

**MVP (v0)**

- Multi-platform channel integration (Gmail, Slack, Notion)
- Data ingestion with trigger-based processing
- Task & event extraction (explicit tasks, deadlines, meeting requests)
- Basic priority engine (rule-based: P1/P2/P3)
- Planner to convert tasks into time blocks respecting working hours
- Calendar sync (create/update Google Calendar events, no double-booking)
- Daily plan summary (tasks, meetings, priorities, reasoning)
- User configuration and notifications
- Simple dashboard with extracted tasks, priority score, proposed schedule, and sync status

**Version 1.0 Enhancements**

- New channel support (WhatsApp, basic voice note transcription)
- Advanced extraction (implicit tasks, multi-step tasks, follow-ups, hidden deadlines)
- ML-based prioritization (sender importance, historical habits, urgency prediction, explainable)
- Smart auto-rescheduling with user approval
- User preference learning (preferred meeting times, task block length, focus periods)
- Improved dashboard (timeline view, edit/override controls, task grouping)

**Version 1.1 Enhancements**

- Meeting prep summaries (related messages, documents, agenda suggestions)
- Context-awareness linking tasks to projects and threads
- Smart notifications (detect missing follow-ups, overcommitment alerts, task rescheduling suggestions)
- Habit and weekly planning system (recognize patterns, provide weekly suggestions)

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## 4. Non-Functional Requirements

- **Security:** Users choose which threads/chats to give access; trigger-based capture; data encrypted at rest and in transit; compliance path for enterprise.
- **Performance:** Extraction occurs within seconds; calendar writes are reliable and atomic.
- **Accuracy Targets:** v0: 70%, v1.0: 85%, v1.1: 90%.
- **Reliability:** No double-booking; fallback to user approval if conflict occurs.
- **Transparency:** Always show users why something was prioritized or scheduled.

- **Usability:** Fast UI (<2 sec), cross-platform access, intuitive design.
- **Scalability:** Supports 1,000+ tasks per user.
- **Compliance:** GDPR and HIPAA compliant.

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**5. MVP Scope (Version 0)**

- Connect and aggregate tasks from Gmail and Slack
- AI identifies and prioritizes tasks automatically
- Alerts and reminders for priority changes and deadlines
- Basic task categorization (Work, Urgent, Low-priority)
- Simple collaboration: share tasks, assign tasks to team members
- Dashboard overview for easy visibility

**Exclusions for MVP:**

- Predictive analytics, personalized recommendations, full enterprise integration

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## 6. Versioning & Timeline

- **V0 (MVP):** Core aggregation, AI prioritization, alerts, categorization, collaboration (6 weeks)
- **V1.0:** WhatsApp integration, advanced extraction, ML prioritization, smart rescheduling, improved dashboard (+4 weeks)
- **V1.1:** Context-aware enhancements, meeting prep summaries, smart notifications, habit/weekly planning (+6 weeks)

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## 7. Wireframes / Screens (Low-Fidelity) Workflow: High Level System Design

- **Home Dashboard:** Consolidated tasks with priority indicators; color-coded cards
- **Task Detail Page:** Task info, source platform, due date, AI priority suggestion, edit options
- **Settings Page:** Integration setup, task category customization, alert/break preferences
- **Team View(v1.0+):** Shared tasks, assignments, progress indicators, comments
- **Meeting Scheduler (v1.0+):** AI suggests optimal time slots based on priority and availability

A clickable low-fidelity mobile prototype demonstrating the user onboarding, task extraction, prioritization, and automated scheduling experience. Built using the requirements defined in the PRD to validate user flow, usability, and interaction logic prior to development.

**Figma link:**

https://www.figma.com/make/R7jlBf5CxRfDnt4wrBcXHZ/AI-Powered-Employee-Productivity-Assistant?node-id=0-1&t=TRcotXucdWVsmEcv-1

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## 8. Success Metrics

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**Version 1.0:**

- Extraction accuracy ≥85%
- 20% fewer missed commitments
- Daily schedule usage ≥70%

**Version 1.1:**

- Meeting prep usage ≥60%
- All screens/ layouts compatible
- Auto-rescheduling accepted ≥75% of the time
- User trust (“system planned my day correctly”) ≥80%

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## 9. Risks & Mitigation

- **Privacy Risk:** Thread-level permissions, trigger-based capture
- **Accuracy Risk:** Human-readable explanations, manual overrides
- **Over-Automation Risk:** User approval for major schedule changes
- **Channel Integration Risk:** Phased release, local processing for WhatsApp

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## 10. Dependencies & Assumptions

- API access for Gmail, Slack, and WhatsApp
- Reliable AI engine for task extraction and prioritization
- Users provide necessary permissions
- Internet connectivity for cloud-based operations

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**Prepared By:** Team 2
**Approved By:** #
**Date:** November 2025