项目文档

# Functional Requirement

ID Function Requirement  
Email-Integration-FR-1.1 Email Integration The system shall automatically detect and suggest adding new contacts from incoming emails.  
Email-Integration-FR-1.2 Email Integration The system shall identify potential meeting suggestions within the email subject or body and prompt the user to create a calendar event.  
Email-Integration-FR-1.3 Email Integration The system shall display the previous communication history with a contact when an email is received or opened.  
Calendar-Integration-FR-2.1 Calendar Integration The system shall support the creation of calendar events based on email content or meeting suggestions.  
Calendar-Integration-FR-2.2 Calendar Integration The system shall display upcoming events along with their associated contact or email context.  
Calendar-Integration-FR-2.3 Calendar Integration The system shall allow scheduling of follow-up meetings directly from email threads.  
Contact-Management-FR-3.1 Contact Management The system shall automatically update contact information based on interactions with emails.  
Contact-Management-FR-3.2 Contact Management The system shall maintain a centralized contact database that includes associated email history and calendar events.  
Mobile-Features-FR-4.1 Mobile Features The system shall provide access to dashboards, notifications, and task approvals on mobile devices.  
Mobile-Features-FR-4.2 Mobile Features The system shall send push alerts for urgent tasks or updates.  
Mobile-Features-FR-4.3 Mobile Features The system shall support touch gestures and have an optimized UI for mobile devices.  
Follow-Up-Reminders-FR-5.1 Follow-Up Reminders The system shall trigger a pop-up reminder if an email is received but not responded to within 4 hours.  
Follow-Up-Reminders-FR-5.2 Follow-Up Reminders The system shall send a second reminder the next morning if no action has been taken after the first reminder.  
Follow-Up-Reminders-FR-5.3 Follow-Up Reminders The system shall suppress reminders if the user has already responded or taken action on the email.  
Meeting-Suggestion-Handling-FR-6.1 Meeting Suggestion Handling The system shall flag potential meeting connections based on email content and provide suggestions for event creation.  
Meeting-Suggestion-Handling-FR-6.2 Meeting Suggestion Handling The system shall allow the user to confirm or reject any suggested calendar event.

# External Description

# 5. Constraints  
  
## 5.1 Regulatory/Legal Constraints  
  
- \*\*CON-REG-001\*\*: The system shall comply with all applicable data privacy regulations, including the General Data Protection Regulation (GDPR) for European Union users and the California Consumer Privacy Act (CCPA) for users in the United States.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: Compliance with legal frameworks is essential to protect user data and ensure the system can operate in diverse jurisdictions.  
 - \*\*Source\*\*: SRL-2.4-Assumptions  
 - \*\*Acceptance Criteria\*\*: The system must pass legal and regulatory audits and include appropriate data handling documentation.  
  
- \*\*CON-REG-002\*\*: The system shall not store or process sensitive user data (e.g., Social Security Numbers, bank details) unless explicitly required by the user or by legal mandate.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To minimize legal exposure and align with data minimization principles in privacy laws.  
 - \*\*Source\*\*: SRL-5.4-Security  
 - \*\*Acceptance Criteria\*\*: System must implement a data classification mechanism and enforce storage rules based on user-defined or legal policies.  
  
## 5.2 Hardware Constraints  
  
- \*\*CON-HW-001\*\*: The system shall be optimized for mobile devices with at least 2 GB of RAM and 10 GB of free storage.  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To ensure the system is accessible on a wide range of mobile devices, including mid-range and older models.  
 - \*\*Source\*\*: SRL-5.1-Hardware  
 - \*\*Acceptance Criteria\*\*: The system shall launch and operate smoothly on devices meeting the minimum hardware requirements.  
  
- \*\*CON-HW-002\*\*: The system shall support mobile devices with screen resolutions ranging from 480x800 to 1920x1080.  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To provide a consistent user experience across different device sizes and aspect ratios.  
 - \*\*Source\*\*: SRL-2.4-Assumptions  
 - \*\*Acceptance Criteria\*\*: UI elements shall be responsive and usable across all specified screen resolutions.  
  
## 5.3 Interface Constraints  
  
- \*\*CON-INT-001\*\*: The system shall use only the officially supported APIs of external email and calendar services (e.g., Gmail API, Google Calendar API).  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure stability, future compatibility, and avoid potential legal or technical issues from using deprecated or unofficial APIs.  
 - \*\*Source\*\*: SRL-5.2-Software  
 - \*\*Acceptance Criteria\*\*: All external API usage must be validated against the official documentation and supported versions.  
  
- \*\*CON-INT-002\*\*: The system shall not alter or manipulate email or calendar data outside the bounds of the permissions granted by the user.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To respect user control and ensure the system operates within defined boundaries.  
 - \*\*Source\*\*: SRL-2.2-Major Capabilities  
 - \*\*Acceptance Criteria\*\*: All system actions on external data must be explicitly authorized by the user and logged for audit purposes.  
  
## 5.4 Design & Implementation Constraints  
  
- \*\*CON-DI-001\*\*: The system shall not create calendar events or modify contact data without explicit user confirmation.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To prevent unintended or unauthorized changes to user data and maintain user trust.  
 - \*\*Source\*\*: SRL-4.4-Non-Functional Requirements  
 - \*\*Acceptance Criteria\*\*: All system-generated or suggested changes must include a confirmation prompt before execution.  
  
- \*\*CON-DI-002\*\*: The system shall not implement any automation logic that requires access to data not explicitly shared by the user.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To avoid privacy violations and ensure the system adheres to user consent and data access policies.  
 - \*\*Source\*\*: SRL-2.4-Assumptions  
 - \*\*Acceptance Criteria\*\*: The system must enforce a data access policy that respects user-defined boundaries and permissions.  
  
- \*\*CON-DI-003\*\*: The system shall maintain an atomic and verifiable requirement traceability matrix (RTM) for all functional and non-functional requirements.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure compliance with international standards and support future testing and maintenance.  
 - \*\*Source\*\*: System-level requirement  
 - \*\*Acceptance Criteria\*\*: RTM shall be generated and updated automatically during the development lifecycle.  
  
## 5.5 Other Constraints  
  
- \*\*CON-OTH-001\*\*: The system shall not assume or enforce notification preferences without user input.  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To respect user autonomy and avoid conflicts with personal workflow habits.  
 - \*\*Source\*\*: SRL-4.3-Non-Functional Requirements  
 - \*\*Acceptance Criteria\*\*: Notification settings shall be user-configurable and not set to default unless explicitly allowed.  
  
- \*\*CON-OTH-002\*\*: The system shall not override user-defined meeting suggestion rules or thresholds without explicit user consent.  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To maintain user control over automation features and avoid unintended event creation.  
 - \*\*Source\*\*: SRL-3.6-Functional Requirements  
 - \*\*Acceptance Criteria\*\*: The system must include a settings interface where users can define or modify meeting suggestion rules.