项目文档

# Functional Requirement

ID Function Requirement  
Contact-Propagation-001 Contact Management The system shall automatically propagate contact updates (e.g., email address, phone number) across all integrated components (email, calendar, shared tools).  
FollowUp-Detection-001 Follow-Up Management The system shall automatically detect follow-up needs in emails based on contextual cues (e.g., phrases like “I’ll get back to you”).  
FollowUp-Task-001 Follow-Up Management Upon detecting a follow-up need in an email, the system shall create a task with a suggested follow-up date.  
Email-Archiving-001 Email Management The system shall enable automated archiving of emails based on user-defined rules (e.g., time-based, tag-based).  
Retention-Policy-001 Compliance Management The system shall support setting retention periods for different email categories to ensure compliance with organizational or regulatory policies.  
Daily-Summary-001 Task Management The system shall provide a daily summary of pending follow-up tasks to the user to aid in task prioritization.  
Calendar-Integration-001 Calendar Integration The system shall integrate with the user’s calendar to suggest optimal follow-up times, avoiding scheduling conflicts.  
Contact-Preference-001 Contact Management The system shall utilize contact preferences (e.g., best time to reach out) to personalize follow-up suggestions.  
Shared-Contact-Exception-001 Contact Management The system shall allow exceptions for shared contacts (e.g., team or project-specific) with a confirmation or logging mechanism to prevent accidental overwrites.  
Audit-Trail-001 Data Management The system shall provide an audit trail or log of archiving actions, including what was archived, when, and by whom.

# External Description

# 5 Constraints  
  
## 5.1 Regulatory/Legal Constraints  
  
- \*\*Constraint-R-001\*\*: The system shall comply with all applicable data protection regulations, including but not limited to GDPR and HIPAA, as specified by the user’s organization.  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To ensure the system is legally compliant and can be deployed in regulated industries without risk of non-compliance penalties.  
 - \*\*Source\*\*: SRL-2.4-1 (Compliance standards provided by stakeholders)  
 - \*\*Acceptance Criteria\*\*: The system shall be configurable to meet the requirements of the specified regulations, with documentation available to confirm compliance.  
  
- \*\*Constraint-R-002\*\*: The system shall not store or process user data in jurisdictions that conflict with the user’s data residency or sovereignty policies.  
 - \*\*Priority\*\*: Should Have (MoSCoW)  
 - \*\*Rationale\*\*: To prevent potential legal and compliance issues arising from data being processed in unauthorized regions.  
 - \*\*Source\*\*: SRL-2.4-1 (Compliance standards provided by stakeholders)  
 - \*\*Acceptance Criteria\*\*: The system shall provide documentation on data storage locations and allow configuration to enforce data residency preferences.  
  
## 5.2 Hardware Constraints  
  
- \*\*Constraint-H-001\*\*: The system shall operate on client devices with at least 4 GB of RAM and 2 GHz CPU for smooth task detection and synchronization.  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To ensure the system remains responsive and efficient on a wide range of modern computing devices.  
 - \*\*Source\*\*: SRL-5.1-1 (Client devices with sufficient processing power and memory)  
 - \*\*Acceptance Criteria\*\*: The system shall be tested on devices meeting the minimum hardware specifications and shall maintain a response time of under 2 seconds for 99% of operations.  
  
- \*\*Constraint-H-002\*\*: The system shall be compatible with both cloud-based and on-premise server infrastructures.  
 - \*\*Priority\*\*: Should Have (MoSCoW)  
 - \*\*Rationale\*\*: To provide flexibility for organizations with varying infrastructure preferences and compliance requirements.  
 - \*\*Source\*\*: SRL-5.1-2 (Server infrastructure with scalability and redundancy)  
 - \*\*Acceptance Criteria\*\*: The system shall provide installation and deployment options for cloud and on-premise environments, with documentation for each.  
  
## 5.3 Interface Constraints  
  
- \*\*Constraint-I-001\*\*: The system shall integrate with email platforms using standard APIs (e.g., Gmail API, Microsoft Graph API).  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To ensure interoperability and ease of deployment across commonly used email services.  
 - \*\*Source\*\*: SRL-5.4-1 (Integration with email platforms)  
 - \*\*Acceptance Criteria\*\*: The system shall support integration with at least three major email platforms, with API usage logs available for audit.  
  
- \*\*Constraint-I-002\*\*: The system shall integrate with calendar platforms using standard APIs (e.g., Google Calendar API, Office 365 API).  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To ensure seamless follow-up scheduling and avoid conflicts with existing calendar events.  
 - \*\*Source\*\*: SRL-5.4-2 (Integration with calendar APIs)  
 - \*\*Acceptance Criteria\*\*: The system shall support integration with at least two major calendar services and shall correctly detect and suggest available time slots.  
  
- \*\*Constraint-I-003\*\*: The system shall integrate with shared tools using standard APIs (e.g., Slack, Notion, Trello, SharePoint).  
 - \*\*Priority\*\*: Should Have (MoSCoW)  
 - \*\*Rationale\*\*: To allow for collaboration and centralized task management across multiple platforms.  
 - \*\*Source\*\*: SRL-5.4-3 (Integration with shared tools)  
 - \*\*Acceptance Criteria\*\*: The system shall support integration with at least three shared tools, with logs for all shared actions.  
  
## 5.4 Design & Implementation Constraints  
  
- \*\*Constraint-D-001\*\*: The system shall not interfere with the user’s existing email, calendar, or shared tool workflows.  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To maintain user productivity and avoid disruption of established processes.  
 - \*\*Source\*\*: SRL-2.1-1 (Minimizing manual intervention), SRL-3.1-1 (Automatic contact propagation)  
 - \*\*Acceptance Criteria\*\*: The system shall be transparent in its operation and shall not modify user data unless explicitly authorized.  
  
- \*\*Constraint-D-002\*\*: The system shall maintain data integrity and shall not overwrite user-defined contact data without confirmation or logging.  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To prevent accidental data loss and ensure user confidence in the system’s reliability.  
 - \*\*Source\*\*: SRL-3.2-9 (Exception handling for shared contacts)  
 - \*\*Acceptance Criteria\*\*: The system shall log all changes to shared contact data and shall require explicit confirmation before overwriting any existing user-defined preferences.  
  
## 5.5 Other Constraints  
  
- \*\*Constraint-O-001\*\*: The system shall not require administrative privileges on client devices for installation or operation.  
 - \*\*Priority\*\*: Should Have (MoSCoW)  
 - \*\*Rationale\*\*: To ease deployment in enterprise environments where users may not have full system control.  
 - \*\*Source\*\*: SRL-5.1-1 (Modern desktop/laptop computers, tablets, and mobile devices)  
 - \*\*Acceptance Criteria\*\*: The system shall be installable and operable without requiring elevated user permissions.  
  
- \*\*Constraint-O-002\*\*: The system shall not impose a minimum time period for retention unless explicitly defined by the user or by organizational policy.  
 - \*\*Priority\*\*: Must Have (MoSCoW)  
 - \*\*Rationale\*\*: To provide flexibility in defining retention periods while ensuring compliance with regulatory requirements.  
 - \*\*Source\*\*: SRL-3.1-5 (Retention policy enforcement), SRL-2.4-1 (Compliance standards provided by stakeholders)  
 - \*\*Acceptance Criteria\*\*: The system shall allow users to define retention periods per email category, with default values configurable by IT administrators.