项目文档

# Functional Requirement

ID Function Requirement  
UESP-Email-001 Unified Email and Scheduling Platform The system shall provide a single platform where users can send emails, schedule meetings, and archive messages without switching to external tools.  
UESP-Scheduling-001 Scheduling The system shall allow users to schedule a meeting directly from the email composition or reply interface, using a dedicated "Schedule Meeting" button.  
UESP-Email-002 Email Management The system shall automatically detect and suggest the appropriate distribution group based on the email recipients, minimizing manual input.  
UESP-Archive-001 Archiving The system shall enable users to archive important emails with a single click from the email preview or reading pane.  
UESP-Archive-002 Archiving The system shall allow users to apply both user-defined and system-generated tags to archived emails to facilitate classification and retrieval.  
UESP-Archive-003 Archiving The system shall suggest archiving an email based on predefined criteria such as keywords, sender domains, or message content.  
UESP-Archive-004 Archiving The system shall prompt users to archive important emails if they have not done so within a configurable time threshold after receiving the email.  
UESP-Archive-005 Archiving Each reminder for archiving shall include a direct option to archive the email, enabling users to complete the task with minimal effort.  
UESP-Search-001 Search and Retrieval The system shall allow users to search and filter archived emails using tags, dates, sender information, and other metadata.  
UESP-Email-003 Email Management The system shall provide users the ability to manually override any system-generated suggestions for distribution groups, archiving actions, and tagging.

# External Description

The system shall comply with all applicable data protection and privacy regulations, including but not limited to the General Data Protection Regulation (GDPR), the California Consumer Privacy Act (CCPA), and any industry-specific compliance requirements.  
  
- \*\*The system shall restrict access to archived emails to only authorized personnel as defined by the organization's compliance policies.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-REG-001  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure that sensitive information is not accessed by unauthorized individuals and to support audit and legal requirements.  
 - \*\*Source\*\*: SRL-3.10, SRL-4.4  
 - \*\*Acceptance Criteria\*\*: Only users with the required permissions can access archived emails. Access logs must be generated and stored for audit purposes.  
  
- \*\*The system shall not retain or process any data outside the jurisdiction defined by the organization's compliance policies.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-REG-002  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To prevent potential legal issues and data sovereignty violations.  
 - \*\*Source\*\*: Stakeholder (Legal Team)  
 - \*\*Acceptance Criteria\*\*: Data is stored and processed within the organization’s defined geographic boundaries.  
  
- \*\*The system shall support audit trails for all archiving, tagging, and scheduling actions, including timestamps and user identifiers.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-REG-003  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To meet internal and external audit requirements and ensure accountability.  
 - \*\*Source\*\*: SRL-5.1, SRL-4.5  
 - \*\*Acceptance Criteria\*\*: All user actions are logged with sufficient detail to trace back to the responsible user and action type.  
  
## 5.2 Hardware Constraints  
  
The system shall be designed to operate in a scalable cloud-based environment and shall not require any specialized hardware on the client-side.  
  
- \*\*The system shall function on any modern web browser and shall not impose any hardware requirements beyond a standard computer with a stable internet connection.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-HW-001  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure broad accessibility and compatibility with existing user devices.  
 - \*\*Source\*\*: SRL-5.1  
 - \*\*Acceptance Criteria\*\*: The system shall be fully functional on all supported browsers across Windows, macOS, and Linux.  
  
- \*\*The system shall support deployment on a Linux-based cloud infrastructure with containerization and orchestration tools such as Docker and Kubernetes.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-HW-002  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure scalability, redundancy, and high availability for enterprise use.  
 - \*\*Source\*\*: SRL-5.2  
 - \*\*Acceptance Criteria\*\*: The system shall be deployable using Docker and managed via Kubernetes in a cloud environment.  
  
## 5.3 Interface Constraints  
  
The system shall integrate with existing enterprise systems via standard APIs or middleware and shall not require proprietary or custom integration solutions.  
  
- \*\*The system shall integrate with enterprise email systems (e.g., Microsoft Exchange, Google Workspace) using standard APIs.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-IF-001  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure compatibility with existing email infrastructure and minimize integration costs.  
 - \*\*Source\*\*: SRL-5.3  
 - \*\*Acceptance Criteria\*\*: The system shall be able to send and receive emails using the standard APIs of supported email platforms.  
  
- \*\*The system shall integrate with enterprise calendar systems (e.g., Outlook, Google Calendar) using standard APIs.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-IF-002  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To enable seamless meeting scheduling without requiring users to switch tools.  
 - \*\*Source\*\*: SRL-5.3  
 - \*\*Acceptance Criteria\*\*: The system shall be able to create and manage calendar events using the standard APIs of supported calendar platforms.  
  
- \*\*The system shall support integration with enterprise identity providers (e.g., LDAP, SAML, OAuth 2.0) for authentication and authorization.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-IF-003  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To align with existing enterprise security policies and reduce the burden of managing separate authentication systems.  
 - \*\*Source\*\*: SRL-5.4  
 - \*\*Acceptance Criteria\*\*: Users shall be able to authenticate using the enterprise identity provider configured by the IT team.  
  
- \*\*The system shall support integration with external search engines (e.g., Elasticsearch) for metadata-based filtering and searching.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-IF-004  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To enable fast and efficient searching of archived emails based on tags and metadata.  
 - \*\*Source\*\*: SRL-5.4  
 - \*\*Acceptance Criteria\*\*: The system shall be able to index and search archived emails using an external search engine.  
  
## 5.4 Design and Implementation Constraints  
  
The system shall be designed to maintain modularity and scalability, and shall not hard-code any compliance rules or archiving criteria.  
  
- \*\*The system shall not hard-code compliance rules for archiving emails; instead, it shall use a configuration-based approach.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-DI-001  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To allow flexibility in compliance policies and reduce the need for code changes when rules are updated.  
 - \*\*Source\*\*: SRL-3.6, SRL-4.6  
 - \*\*Acceptance Criteria\*\*: Compliance rules can be configured without modifying the system source code.  
  
- \*\*The system shall maintain a consistent and predictable behavior in detecting and suggesting actions for similar types of emails.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-DI-002  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To ensure reliability and reduce user confusion when system suggestions are made.  
 - \*\*Source\*\*: SRL-4.6  
 - \*\*Acceptance Criteria\*\*: For a given set of input emails with similar content or metadata, the system shall provide consistent suggestions.  
  
- \*\*The system shall not require users to manually navigate away from the email interface to perform archiving or scheduling actions.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-DI-003  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To reduce user effort and streamline workflow.  
 - \*\*Source\*\*: SRL-3.4, SRL-4.4  
 - \*\*Acceptance Criteria\*\*: All archiving and scheduling actions shall be accessible from the email preview or reading pane.  
  
## 5.5 Other Constraints  
  
The system shall support secure and scalable deployment, and shall not interfere with existing enterprise systems or workflows.  
  
- \*\*The system shall support secure HTTPS communication for all user and system interactions.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-OTHER-001  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To protect user data and maintain the integrity of the system.  
 - \*\*Source\*\*: SRL-5.4  
 - \*\*Acceptance Criteria\*\*: All client-server communications must be encrypted using TLS 1.2 or higher.  
  
- \*\*The system shall be compatible with corporate proxy and firewall configurations.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-OTHER-002  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To ensure that the system can be deployed and used within organizations with strict network security policies.  
 - \*\*Source\*\*: SRL-5.4  
 - \*\*Acceptance Criteria\*\*: The system shall be able to operate behind corporate proxies and firewalls without requiring additional configuration.  
  
- \*\*The system shall not alter or interfere with the existing email and calendar systems.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-OTHER-003  
 - \*\*Priority\*\*: Must Have  
 - \*\*Rationale\*\*: To ensure that the system enhances, rather than disrupts, current workflows and data integrity.  
 - \*\*Source\*\*: Stakeholder (IT Administrators)  
 - \*\*Acceptance Criteria\*\*: The system shall only add metadata or archive emails without modifying the content or structure of the original email or calendar entries.  
  
- \*\*The system shall support multi-tenancy to accommodate organizations with multiple departments or teams.\*\*  
 - \*\*ID\*\*: CONSTRAINTS-OTHER-004  
 - \*\*Priority\*\*: Should Have  
 - \*\*Rationale\*\*: To allow for efficient deployment and management of the system across multiple organizational units.  
 - \*\*Source\*\*: SRL-5.4  
 - \*\*Acceptance Criteria\*\*: The system shall allow for the isolation of data and configurations per tenant.  
  
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