

Introduction

The aim of this document is to gather and analyze and give an in-depth insight of the complete **ADDDED247 system** by defining the problem statement and high-level product features. The detailed requirements of the **ADDDED247 system** are provided in this document.

Purpose

To develop a leading construction collaboration and document management platform for the global construction industry. The platform connects owners, contractors and their project teams in the construction, infrastructure, energy and resources sectors, providing project-wide visibility and control between the many different organisations collaborating across their projects.

Definitions, Acronyms and Abbreviation

Term	Information	
CRUD	Create, Read, Update, Delete	
HTML	Hyper Text Markup Language	
CSS	Cascading Style Sheets	
React	Frontend Web Framework	
Python	Programming Language	
Django	Python Web Framework	
API	Application Programming Interface	



Reference Chart for developer roles and responsibilities:

SDE: Software Developer Engineer
DE/DS: Data Engineer/Data Scientist
UI/UX: UI/UX Developer/Designer

	SDE	DE/DS	UI/UX
Roles & Responsibil ities	 Building Microservices Database queries API management DevOps Network Security Cloud Maintenance 	 Database Management Building Microservices Mange and build data pipelines ETL Data Migration 	 Building UI/UX designs Mobile/Web UI development.
Tech-Stack	 Git Jenkins/TravisCI IAAS/Terraform Flask/Express.js/fa sthttp Monitoring Tools Cluster Orchestration Tools 	 NoSql/Sql Databases Cloud Databases Al/ML Big Data Queues Stream Processing 	 React Flutter Adobe-XD/UX designing tools. Firebase/Aws amplify
Languages	PythonGOC/C++Node.jsBash	JavaScalaPythonC/C++Bash	JavascriptFlutterBash

Administration

User & Project module is one of the key components of the system. This module should be one individual microservice. Below are the key features to be implemented for Pre MVP

Item No	Key Feature	Detailed Requirements
1	Create User	 Ability for users to Sign Up/Create User Account



-		CONNECTING PROJECT TEAMS
		 First name, Middle Name and Last name Username/Login Name Email Phone Password Confirm Password Terms & Conditions Division (Drop down option to choose – Administration, Construction, Design, Project Management, Site, Facilities Management) For a given email only one account should exist
2	Organization Registration	Ability for registered user to create an organization Attribute includes -
3	Create Project	Ability for the first user or Admin registered



		CONNECTING PROJECT TEAMS
		user should be able to create a project Project attributes includes - Project Names: Project Short Name Project Code Contacts: Phone Fax Number Address City/Suburb State Post Code Country Project Info: Project Info: Project Description: Description Project Type Commercial or Residential Government and Infrastructure Energy & Resources Access Level Normal Read Only
4	Project Settings	NOTE: All fields and attributes to be able to ADD/DELETE/EDIT or AMEND - Project Details - Project Name - Project Short Name - Project ID - Project Code - Project Start Date - Estimated Completion Date - Project Type - Project Address, City, Country - Project Description - Project Working Week (Check working week days) - Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday - Document Field - Document Number (Manual or Auto) - Revision (Plain Text) - Title (Plain Text) - Type (See below options)



- Status (See below options)
- Discipline (See below options)
- Phase (Phase 1, 2)
- Area/Building/Location (To be able to select from options) eq. (Building 1, 2,3)
- Confidential (Check box)
- Date Modified (choose from calendar)
- Created By Org name (auto capture)
- Revision Date (auto capture)
- Document Type Should be able to add more (Audit Reports, Certificate, Checklist, Contract, Data Sheet, Drawing, Form, List, Manual, Meeting Minutes, Model, Photographs, Images, Videos, Plan, Program, Register, Report, Schedule, Shop drawing, Specification, Technical data, Time sheet, work method statement)
- Status Approved, Approved subject to comments, As Built, Draft, For Construction, For Information, For Review, For Tender, Not Started, Rejected.
- Discipline Administration, Architectural, Civil, Commercial, Electrical, Environmental, Fire, Geotechnical, Health & Safety, HVAC, Hydraulics, Internal Fitout, Landscape, Mechanical, Structural, Sustainability.

DOCUMENT Numbering

Sample: Org code – Discipline – Type – Zone – 4 digits AD - ARC - AR - Hotel – 0001

- Mail Types
- Advice
- Approval
- Change Request
- Daily site report
- Design Query
- General Correspondence
- Inspection Report
- Internal Memorandum
- Letter
- Non-Conformance Report
- Rejection Notice
- Request for Information
- Site Instruction
- Variation



		CONNECTING PROJECT TEAMS
		 Mail Attributes To CC Response Required (Choose from calendar) Subject (Plain Text) Discipline – Administration, Architectural, Civil, Commercial, Electrical, Environmental, Fire, Geotechnical, Health & Safety, HVAC, Hydraulics, Internal Fitout, Landscape, Mechanical, Structural, Sustainability. Area/Building/Zone (Hotel, Utility, Retail) Reason for Issue Issued for Action, Issued for Approval, Issued for Construction, Issued for Information, Issued for Quotation, Issued for Review, Issued for Tender)
		Drag and drop option to create workflow graphics Straight or parallel workflow to be created Approval Workflow 1. Review status label (APPROVED, Approved with Comments, Review and Resubmit) 2. Document Status on Completion (Approved, approved with comments, Revise & Resubmit, Rejected) 3. Document status on entry (For Review) - Design Review Workflow 1. Review status label (Reviewed, Reviewed with comments, Revise & resubmit) 2. Document status on completion (Reviewed, Reviewed with comments, Revise & Resubmit, Rejected) 3. Document status on Entry (For Review)
5	Project Setting Preferences	 Project-wide password strength - Standard (8 - 100 characters, at least 2 letters & 2 numbers) Project-wide password access rule - Expire 6 months - Password expiry 6 months, 5 incorrect password attempts Project-wide session time duration - 5 minutes



		CONNECTING PROJECT TEAMS
6	Invite organizations to project	 Restrict participants' Directory view to their own organization and the Project Owner Select project invitation method – Email or ADDDED platform Enable project wide auto-numbering of documents Make 'Reason for Issue' compulsory for Transmittals Use project mail auto-numbering scheme by default for organisations Lock project mail auto-numbering scheme across all organizations so only the project owner can change these settings Ability for project admin to edit project attributes Ability for project admin to invite or revoke organizations Ability to view all organizations and their users Organisation admin to be able to add or deactivate users No delete button Ability for organization admin to add remove user from organization Ability for organization admin to view all users based on category Invited Ability to resend invite Verified (after accepting invite) Ability for project admin to search and invite organizations Organization admin should receive an email
		 Organization admin should receive an email that 'organization X has been invited to Project Y' Email should have a link for organization admin to accept the invite. Once invite is accepted all users of the organization should be added to project
7	Add users to organisation	 Organisation admin to be able to add users to the organisation Organisation admin to be able to assign user roles to the users All users should receive an email 'You have



1	-	CONNECTING PROJECT TEAMS
8	User Role Configuration – Documents Module	been added to Project X' Organisation admin to be able to deactivate users Ability for organization Admin to invite users into organization using Email Select Project Ability to select multiple projects or a single project Permission Basic Admin Default permission Invited user - Email Should receive an email. User X is invited to Y organization Should have a verification link to set password. User should be able to click on the link and set password. Password should have basic policy Upload a document – Basic, Project Admin, Organisation Admin – Grant All
	Documents Module	 Search document - Basic, Project Admin, Organisation Admin – Grant All Download document – Basic, Project Admin, Organisation Admin – Grant All Supersede document – Basic, Project Admin, Organisation Admin – Grant Al View document history/Revisions - Basic, Project Admin, Organisation Admin – Grant Al Transmit a document - Basic, Project Admin, Organisation Admin – Grant All Documents transmitted to auto register the documents to the receivers document register
9	User role configuration – Mail module	 Draft Project Mail - Basic, Project Admin, Organisation Admin – Grant All Send Project Mail - Basic, Project Admin, Organisation Admin – Grant Al View Project Mail Register of the users org - Basic, Project Admin, Organisation Admin – Grant Al Search project mail - Basic, Project Admin, Organisation Admin – Grant Al Reply, forward Project Mail - Basic, Project Admin, Organisation Admin – Grant Al



	1	CONNECTING PROJECT TEAMS
		 Documents attached to mails to auto registered in sending and receiving organisations Document Register.
10	User role configuration – Workflow module	Create/edit a workflow - Basic, Project Admin, Organisation Admin – Grant Al
		 Initiate a workflow - Basic, Project Admin, Organisation Admin – Grant Al
		 Save workflow templates - Basic, Project Admin, Organisation Admin – Grant All
		 Create Workflow templates - Basic, Project Admin, Organisation Admin – Grant All
11	User role configuration – Task module	Mails Unread To Unread CC Outstanding Overdue Awaiting your approval
		 Documents Unread Transmittal To Unread Transmittal CC Outstanding Transmittals Overdue Transmittals Awaiting for Review Workflow – View and action awaiting for review mails and documents
12	Configure User Role	 Configure each task by selecting if the user role will be (Grant, Deny, N/A) for each role by each task.
13	Assign Users Role to Users	 Each user to be assigned as Basic Project Admin Organisation Admin



For MVP should we support -

- 1. Delete organization NO
- 2. Delete Project Paul NO
- 3. Deactivate Project Yes
- 4. Deactivate Organisation Yes

Step 1: Addded User (Will be the project admin & create the project)

- Step 2: Addded User will configure the project settings
- Step 3: Addded User will send an invite to Org 1 to register the org and create users
- Step 4: Project Admin rights will be transferred to Org 1
- Step 5: Org 1 is the project admin and the first user created under Org 1 will be the Org admin
- Step 6: Org 1 can invite multiple other organizations to the project. Each org will register their organization and have access to the project
- Step 7: Each Org admin can create users under their organization.

Project 1

Org 1	Org 2	Org 3	Org 4
User 1	User 1	User 1	User 1
User 2	User 2	User 2	User 2
User 3	User 3	User 3	User 3

Yes the hierarchy of data will be Project..... Organization... Users...

There will be Project Admin and Organization Admin....

Addded247 consultant will be the Project Admin initially. After the project is set up and settings are completed, he will change the Project Admin rights to a different organization. UI is in "Change Project Admin" slide

Project Admin:

- Project Admin will decide which organizations to admit into the project and will have the right in project settings...
- Each project can have one or multiple project admins...
- Project Admins there can be more than one are responsible for managing the way their project is run on Addded247.

ADDDED247 Software Pvt. Ltd. Software Requirements Specifications



- Project Administrators work for the project-owning organization.
- Project Administrators in the project-owning organization can make changes to project settings. These settings apply to all organizations working on their project.

Organization Admin:

What does an Org Admin do?

- Manage organization preferences.
- Organization admin will manage users creation
- Create and disable Aconex accounts for users in the organization.
- Configure and assign Aconex user roles (permissions) for users in your organization.
- Keep your Organization's details up to date.
- Each user can have one or multiple organization admins.
- Whoever registers the organization in Aconex becomes the Org Admin by default, but can always add a new Org Admin or change the org admin

Design & Documents

Document module is one of the key components of the system. This module should be one individual microservice. Below are the key features to be implemented for Pre MVP

Item No	Key Feature	Detailed Requirements
1	Upload Document	Ability to upload a document with following attributes Document No - Mandatory Field Revision - Mandatory Field Title - Mandatory Field Type - Mandatory Status Discipline - Mandatory Category Confidential File Print Size



	1	CONNECTING PROJECT TEAMS
		 Revision Date - Auto Date Uploaded - Auto created Created By - Auto Comments
2	Search Document	 Ability to search document on any of the above attributes Google like search option All uploaded documents should be visible to everyone unless marked as confidential. All uploaded and received documents as submittals placed in the documents registry should be visible to all users who belong to that particular organisation. Documents marked as confidential should be accessible to users with specific rights and users of other organisation should not be able to view the documents placed in the document registry of each others document registry)
3	Download Document	Ability to download document to local
4	Supersede a document	 Ability to supersede a document Ability to change any attribute while superseding a document All attributes previously selected to remain as is. While superseding the version will be changed but ok to have the ability to change any attribute. Version change should be auto or drop down.
5.	View Document History/Revisions	 Ability to see document revisions Also to be able to download the previous version or make it as the latest version.
6	Transmit a Document	 Ability to send document as transmittal to external organisation Document attachments to auto register in the receiving organisations document register Ability to attach any number of documents while creating a transmittal Ability to attached any document and any size of document When transmitting a document if 100MB is transmitted then 100MB should not travel via internet but the receivers to be able to access the documents from the cloud.



Summary -

Actors -

- Basic User
- Project Admin
- Org Admin

Actions -

- CRUD Documents and attributes
- View Document History

Project Mails & Forms

Project mail module is one of the key components of the system. This module should be one individual microservice. And have basic functionalities of a simple email web client. Below are the key features to be implemented for Pre MVP

Item No	Key Feature	Detailed Requirements
1	Create a Project Mail	Ability to create a project mail, the following attributes to fill in: - Type (Drop down) - To (Pick from Directory) - CC (Pick from Directory) - Response Required - Subject (Plain Text) - Attributes 1, 2 or 3 - Mail Content - Mail Signature
2	Send Project mail	Ability for users to send a mail with attributes Type To



		 Cc Response Required Subject Attribute 1 Attribute 2 Cost implication? Discipline Message (Editor)
3	Mail Register (Inbox for each organisation) –	 Ability for users to see project mails in mail register Ability for mail register to contain all users emails for that particular project. Confidential mails to be accessible by only the users with access rights
4	Search Project Mail	Ability for users to search mails from any of the above attributes or content
5	Draft	Ability for users to see unsent mail in draft
6	Reply to Project mail	 Ability for users to Reply to Project mail Reply all to Project mail Forward the Project mail

Summary -

Actors -

- Basic User
- Project Admin
- Org Admin

Actions -

- CRD Project Email
- Search Email
- Reply Email

Notes:

- 1) All Project mails will be created and sent from Addded platform
- 2) A notification to the email account will be sent to the receiver
- 3) Email notification will consist of a link to Addded platform
- 4) Receiver can click on the link and open the Addded platform to view the project mail
- 5) All users will use their own email IDs (Official or gmail, yahoo etc)



Workflow & Process

Workflow module is to record the quality process. Documents and Project Mails will be routed through the workflow for review and approval. Below are the key features to be implemented for Pre MVP

Item No	Key Feature	Detailed Requirements
1	Create/edit a workflow	 Ability to create straight line, parallel and complex workflows Drag and drop to create workflow for graphycal Assign users to each stage for TO and CC Assign number of days needed for performing task in each stage Ability to name each stage Ability to define if the if the document to move to the previous stage or move to the initiator if rejected
2	 Initiate a workflow 	Ability to start a workflow for documents or mails
3	 Save workflow templates 	Store workflow templates that can be used later

User 1 - User 2 - User 3

My Tasks

Tasks module will list the Mails and Documents received by logged in user in their home page. Below are the key features to be implemented for Pre MVP

Item	Key Feature	Detailed Requirements
No		



1	Tasks - Mail	Logged in user will be able to view and action:
		 Mails in Unread "To" Mails in Unread "CC" Mails in Outstanding Mails in Overdue
2	Tasks - Documents	Logged in User will be able to view and action: - Documents in Unread Transmittal To - Documents in Unread Transmittal CC - Documents in Outstanding Transmittals - Documents in Overdue Transmittals
3	Workflow – Mails and Documents	Logged in User will be able to view and action: - Mails and Documents "Awaiting for Review"
4	Dashboard	Logged in User will be able to view live dashboard

Meetings Module

Meetings module will be used for web meetings. The Pre MVP will include functions like video call, screen sharing and chat option

Item No	Key Feature	Detailed Requirements
1	New Meeting	 From the messaging module create a new meeting Get a link that can be shared with participants
2	Start meeting	 Click start meeting to begin the voice and video call Meeting screen will display the participants who joined the meeting and available to chat



		 Mic option, Video option and Share screen option avaulable
3	End meeting	- Option to end meeting or leave meeting
4	Join a meeting	 From the messaging module Click join the meeting Enter the code provided by the organizer Start meeting