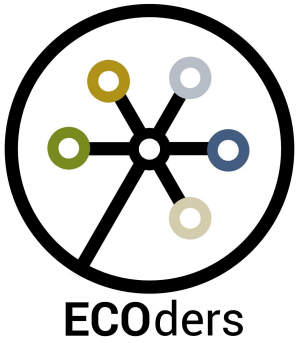
CPCESU Project Management System

Design Review 3

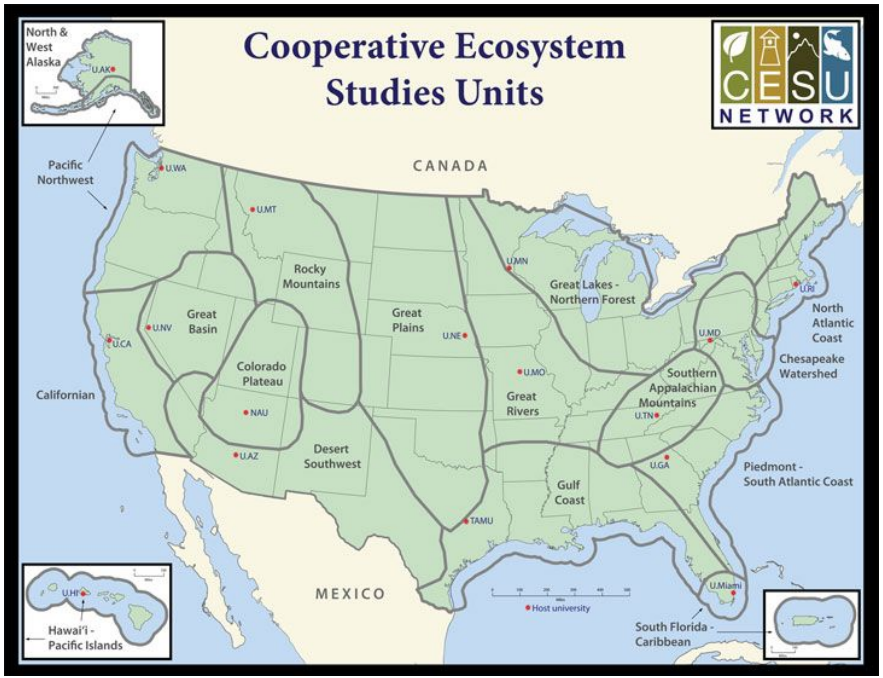
+



Joseph Remy [Team Lead], Colton Nunley, Jasque Saydyk

Faculty Mentor: Ana Paula Chaves Steinmacher

Colorado Plateau Cooperative Ecosystem Studies Unit



- CPCESU is a part of a national consortium for resource stewardship
  - Dozens of projects
  - Hundreds of modifications
  - Millions of dollars

Project Workflow

Proposal

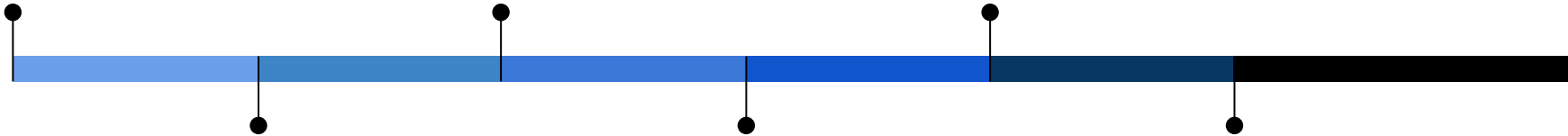
Federal agency starts inquiry to non-government contractor

Acceptance

Both parties sign and work begins

Termination

Parties end project. Final report is created



Drafting

Proposal is passed back and forth

Tracking

CPCESU tracks project including modifications

Reporting

Project archived and used for statistics and reporting

Problems

Proposal

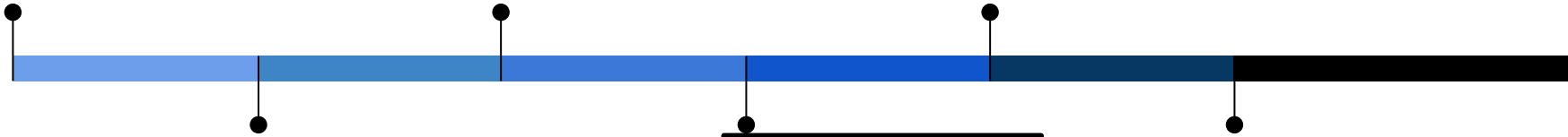
Allow organizations to **Submit** proposals

Acceptance

Notify work has started

Termination

Archive projects



Drafting

Validate information on the contract

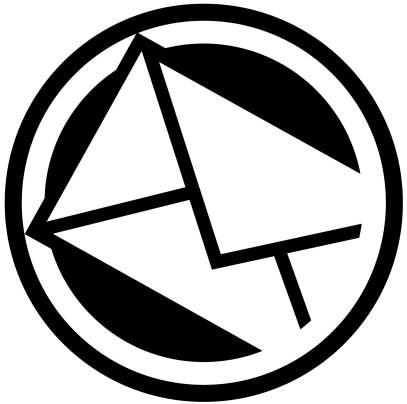
Tracking

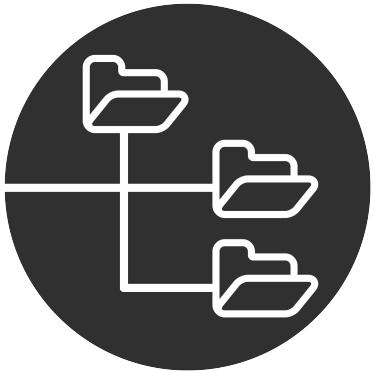
Track and **Modify** projects

Reporting

Distribute information to management and public

Current Technology

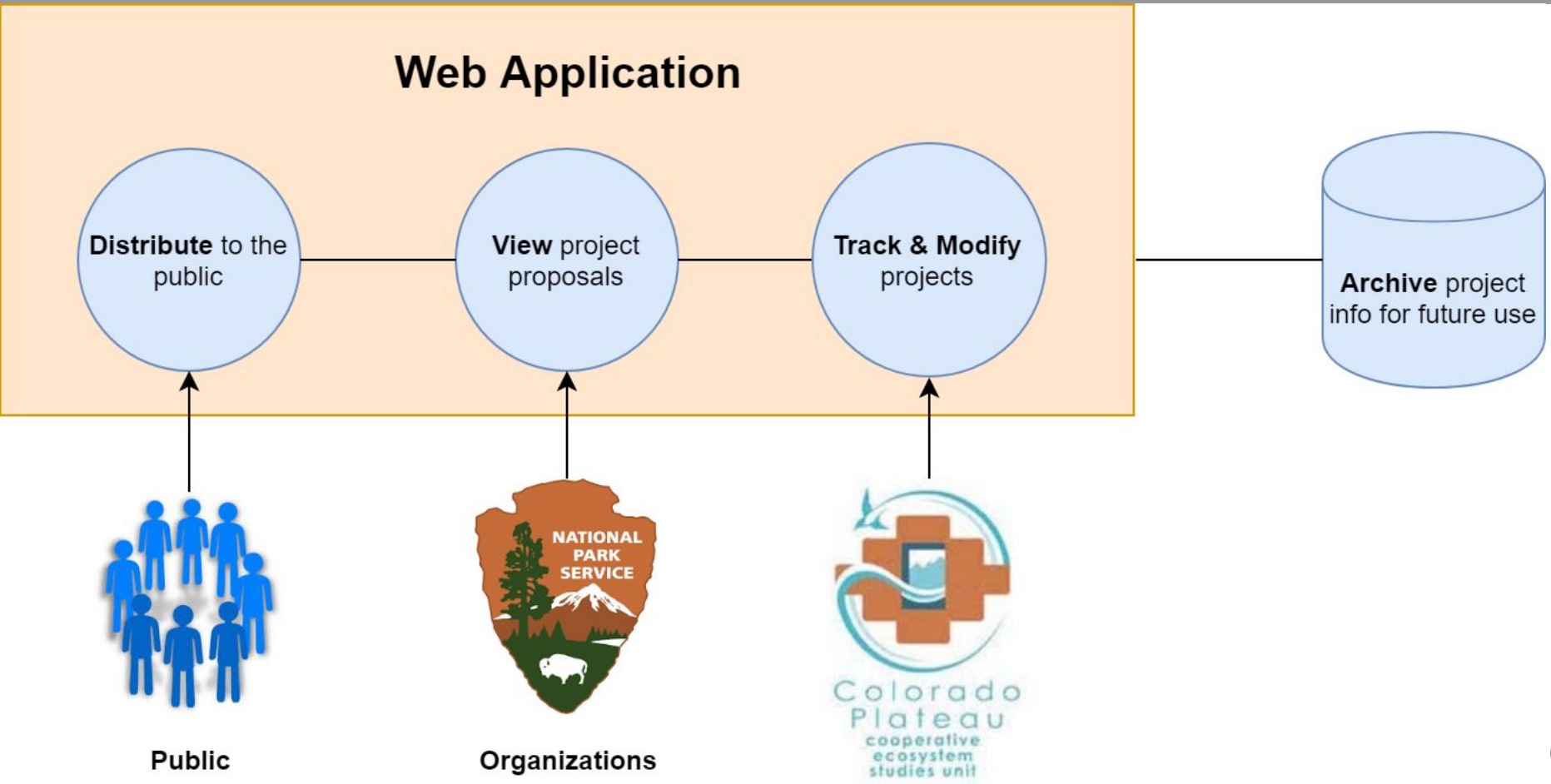




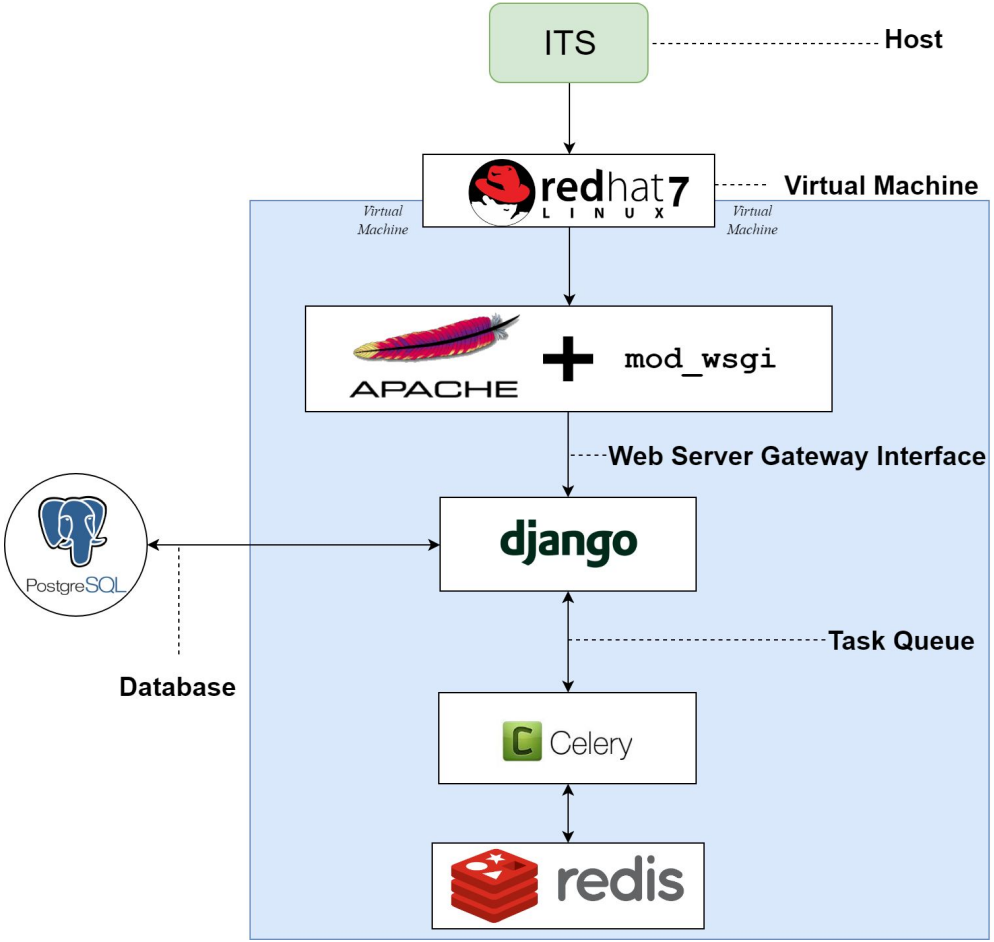
Problems:

- Disconnected
- Entry Lag Time
- Data Fragmentation
- Data Loss & Redundancy

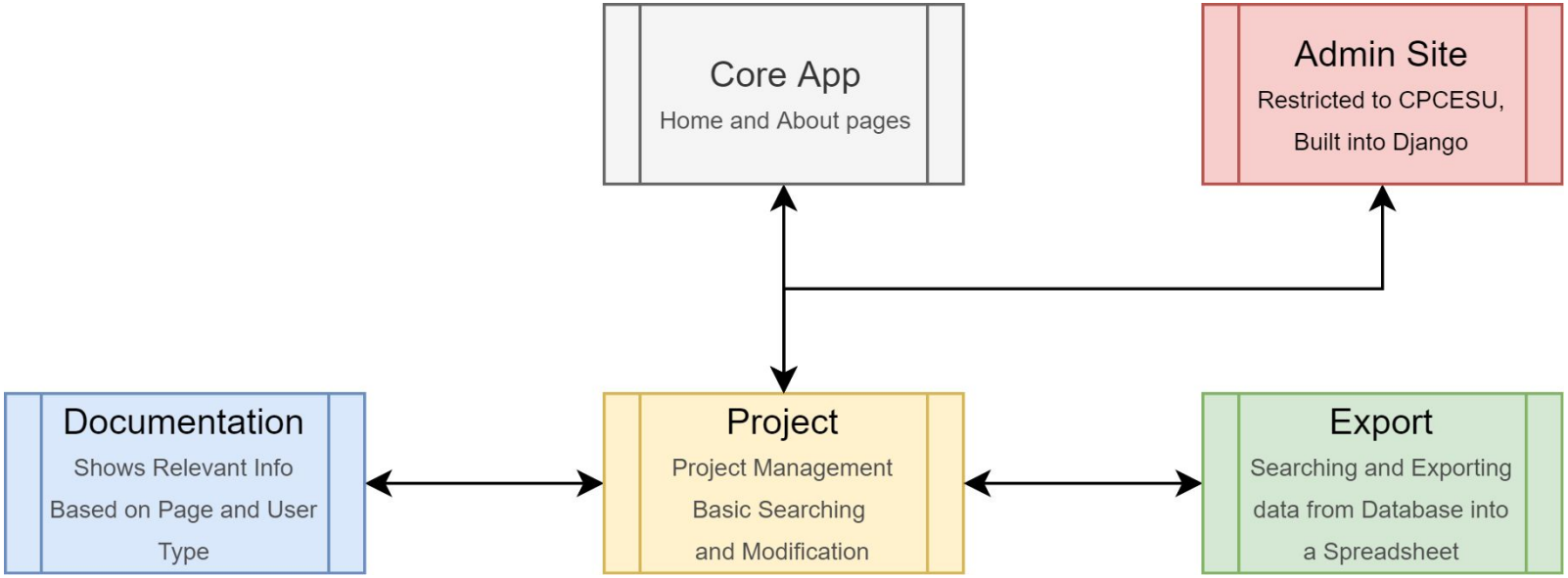
Solution - “Summit”



Solution System Diagram

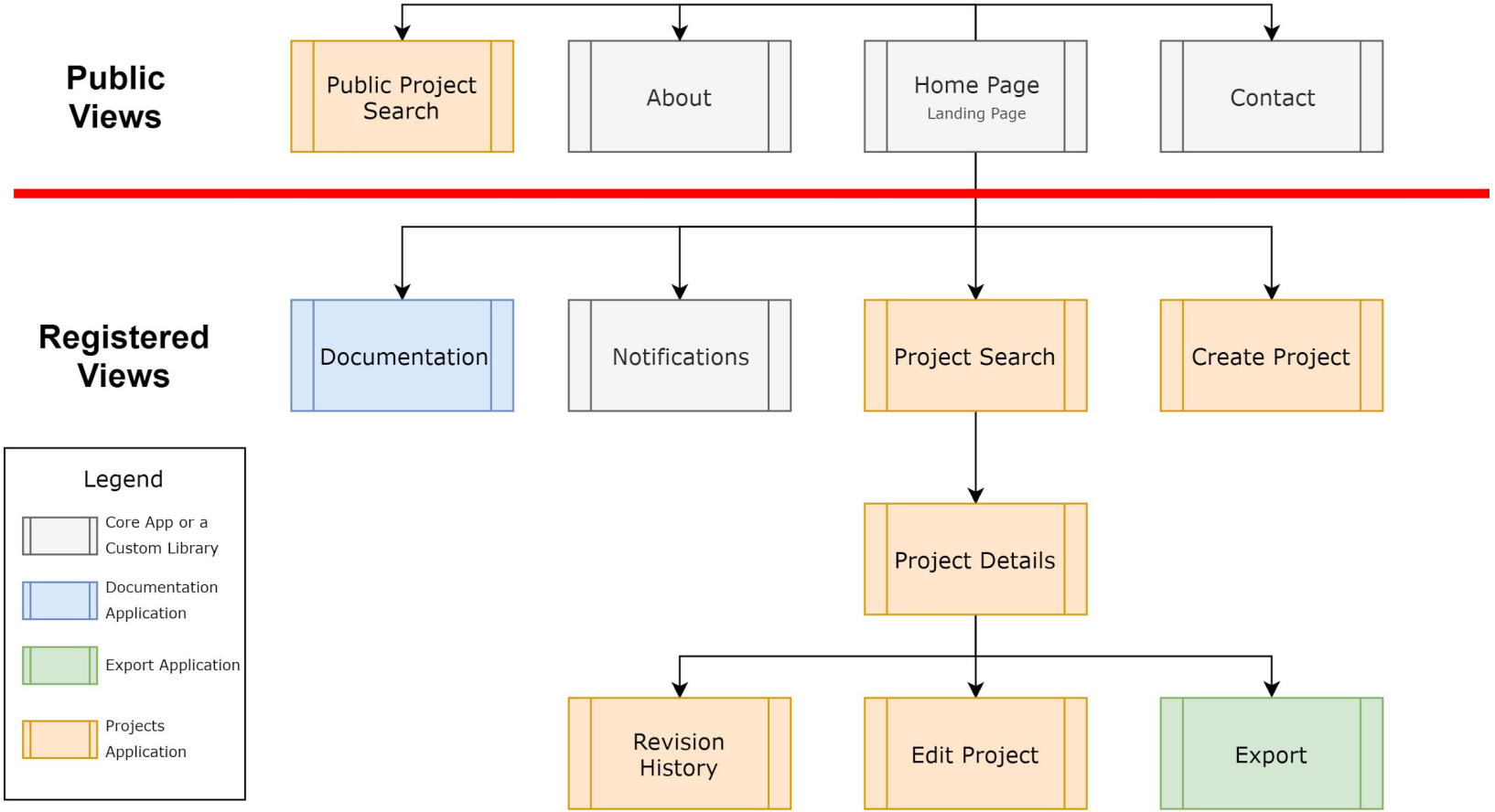


Modular App Design

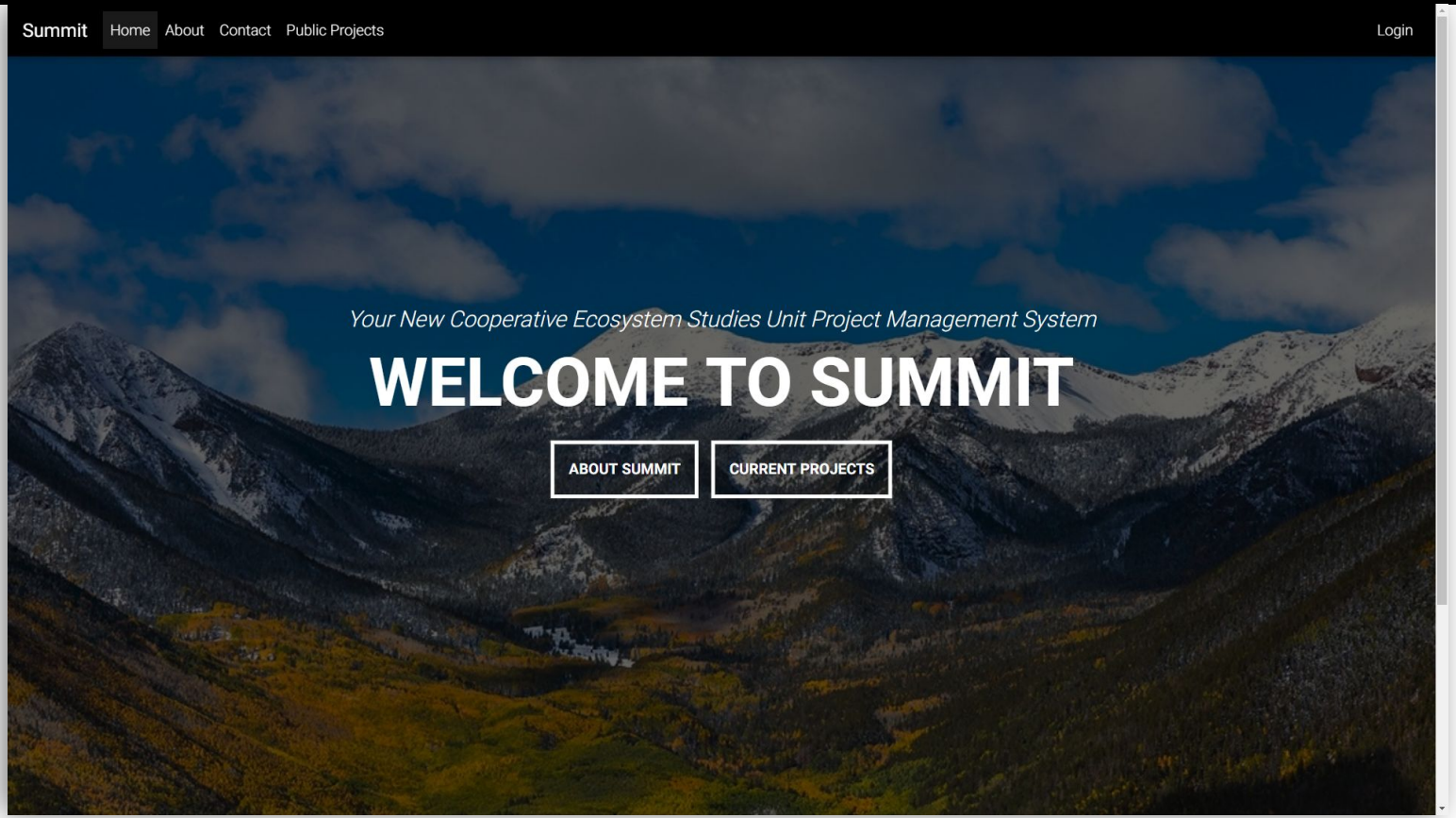


Each app is connected via Python imports and URL configurations

Simplified Sitemap for Authenticated Users

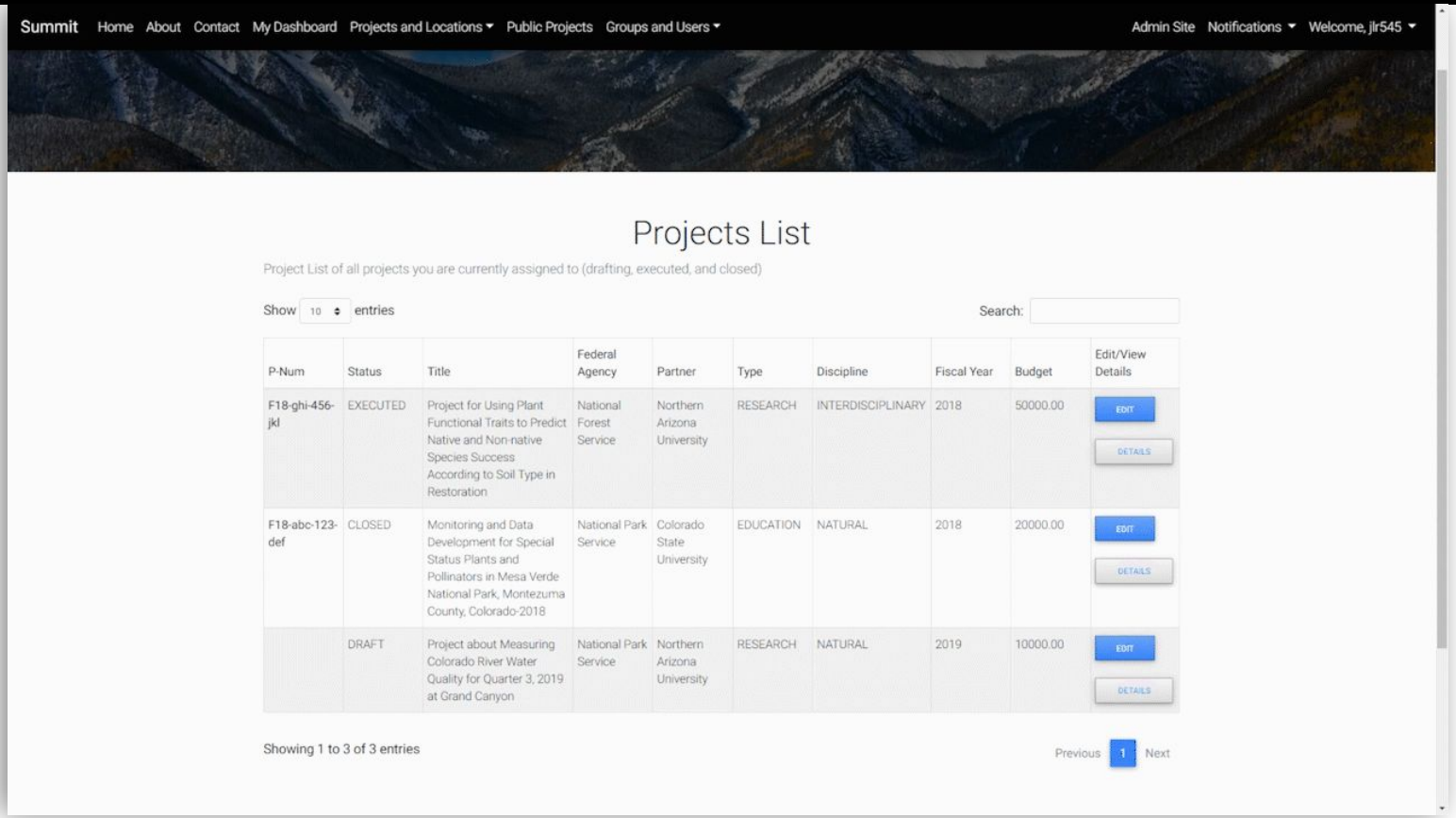


Current Status - Homepage



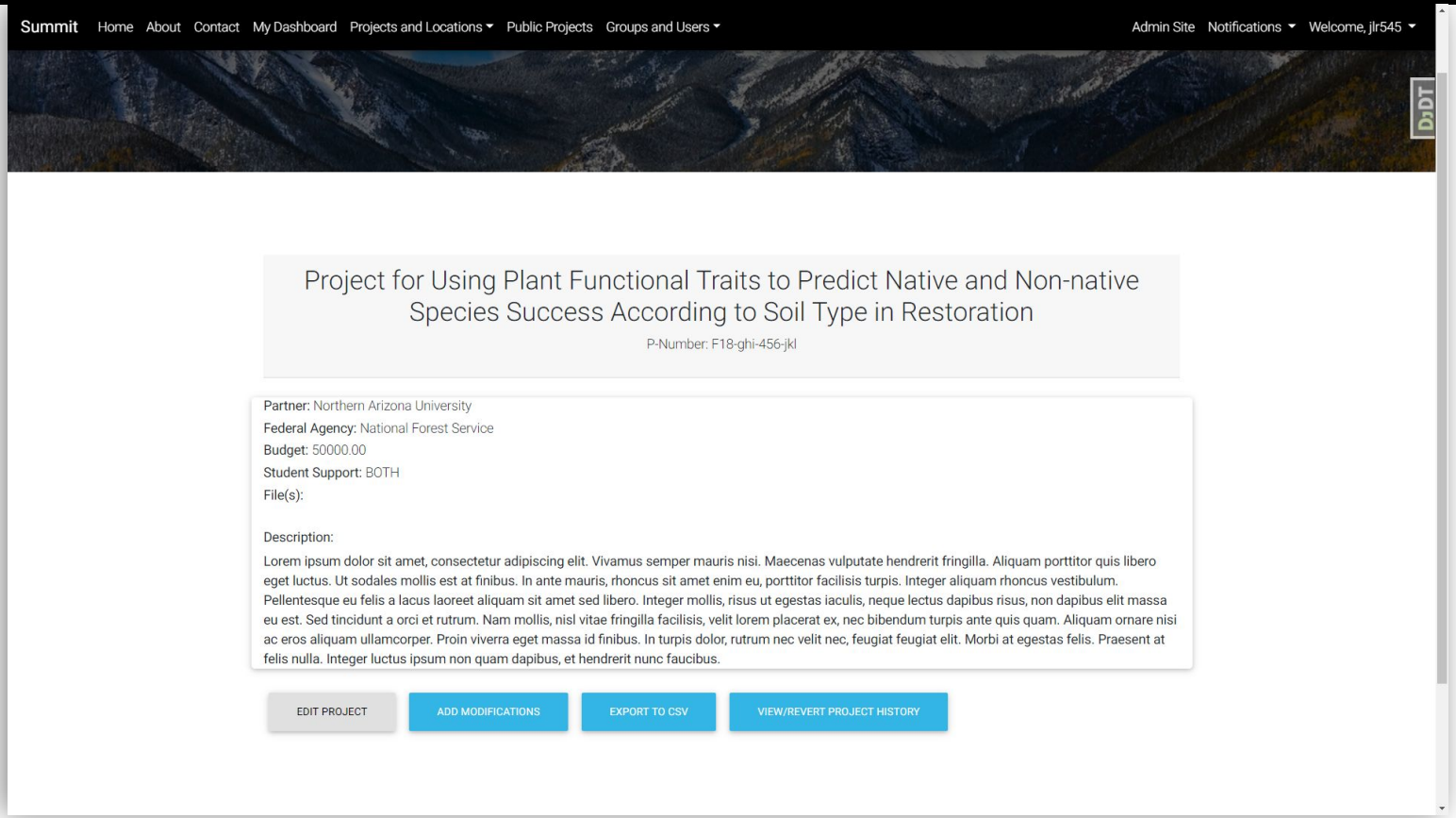
Centralized functionality and **data accessibility** by different user groups

Current Status - Project List and Search



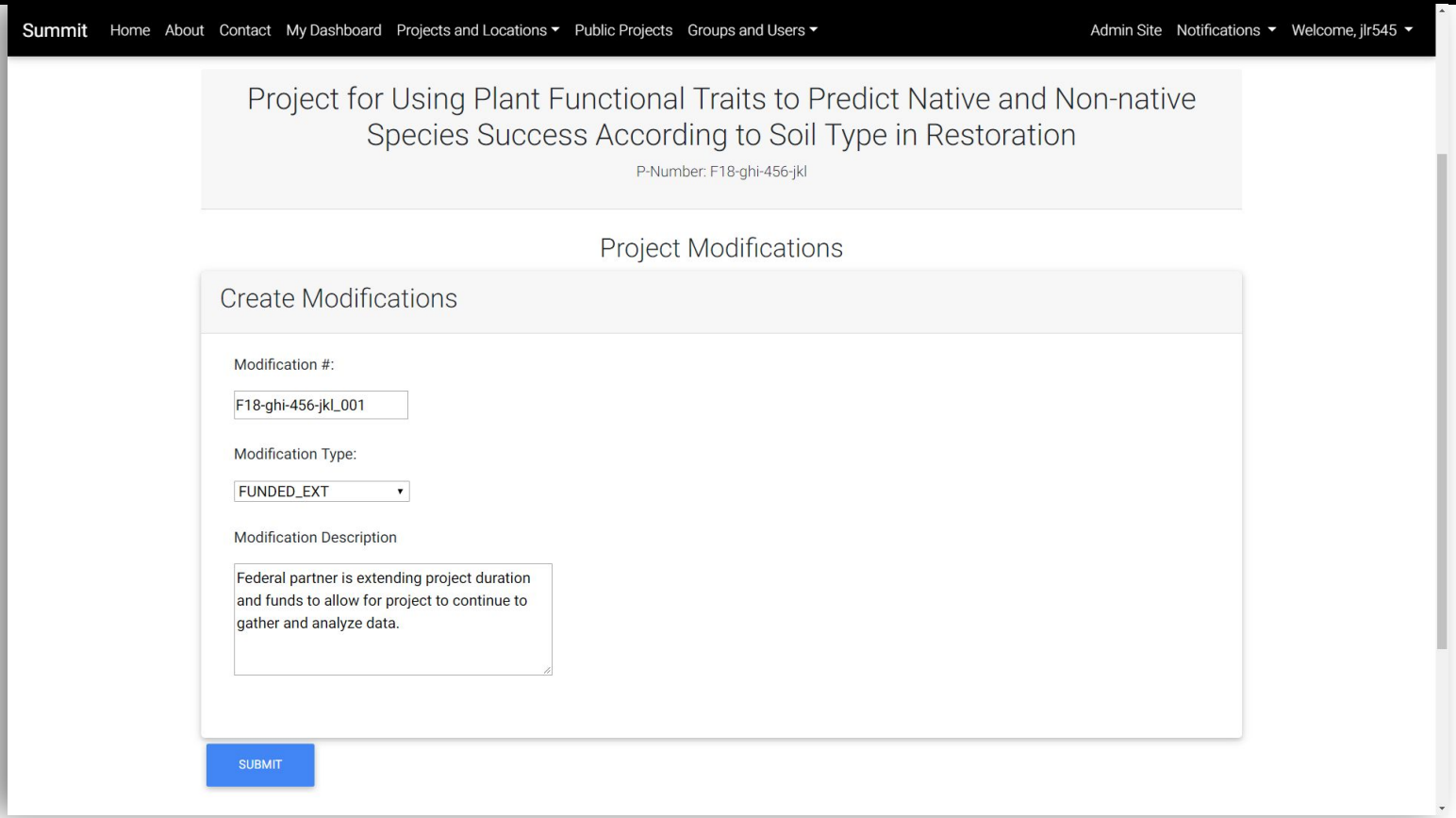
Tracking and searching for projects for different user groups

Current Status - Project Details



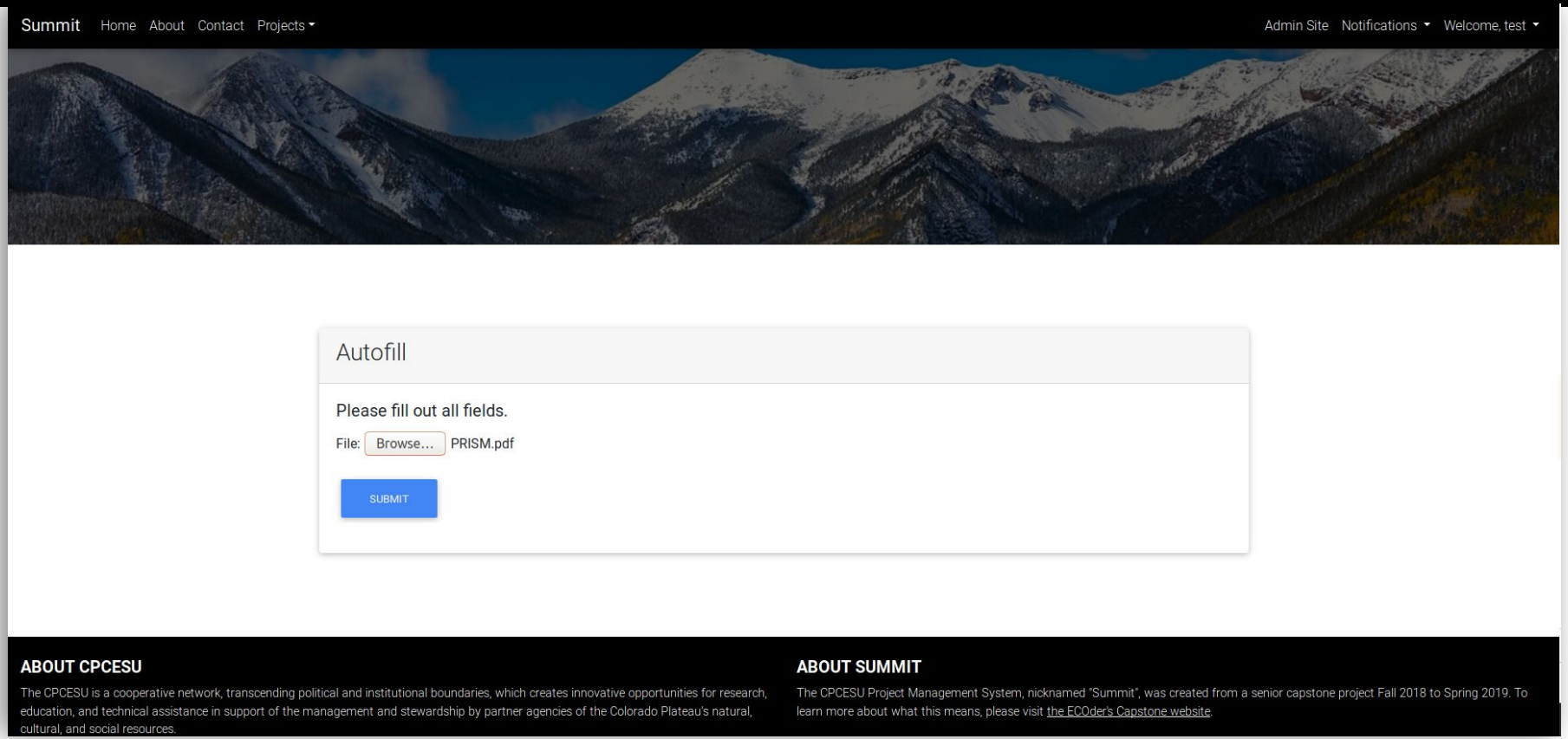
Easier access to project data to **decrease overhead** and **increase efficiency**

Current Status - Project Modification



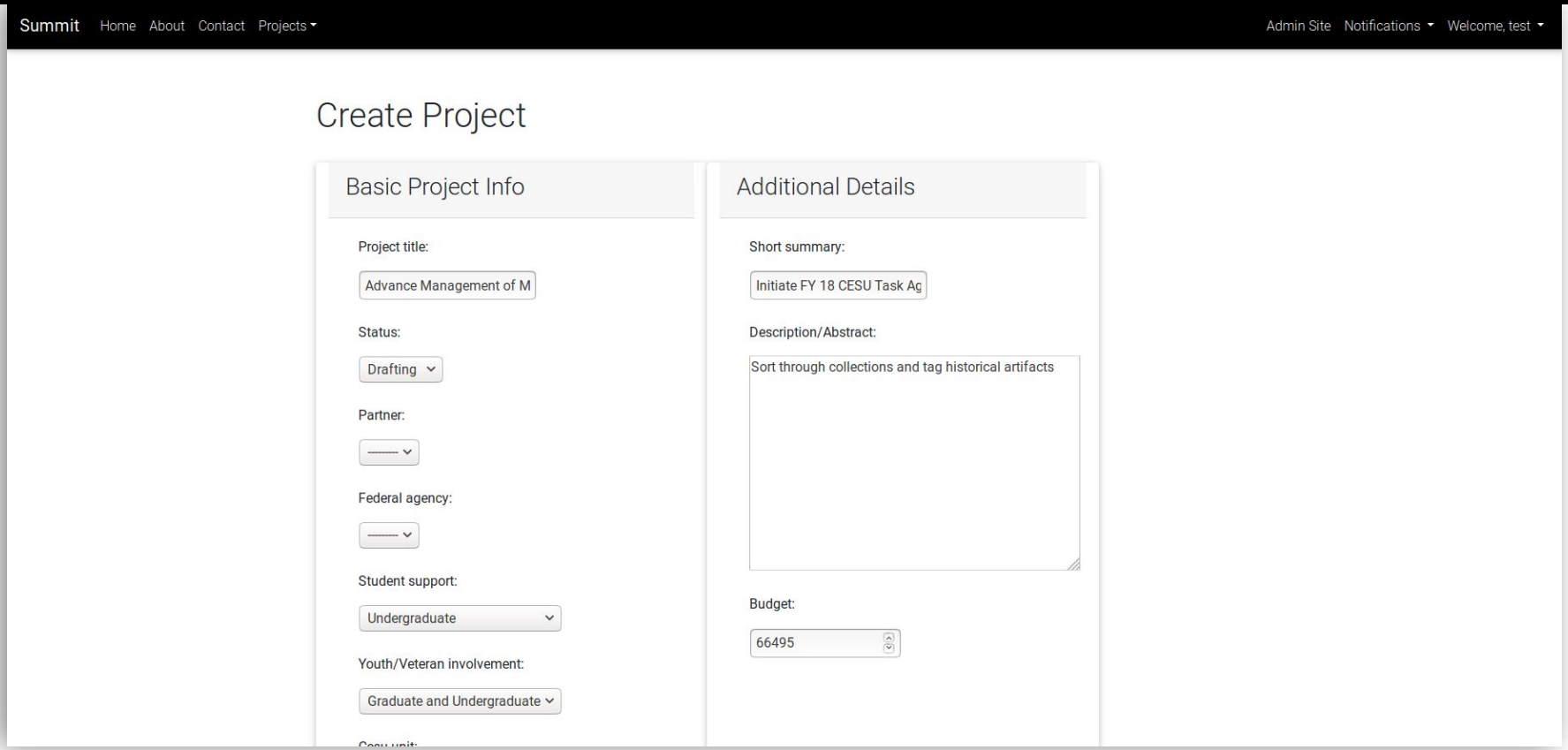
Projects can be **modified** in real-time using **one consolidated application**

Current Status - Autofill



Submitting projects automatically for our client and federal agencies

Current Status - Autofill



Validating user data to prevent fragmentation and assure data integrity

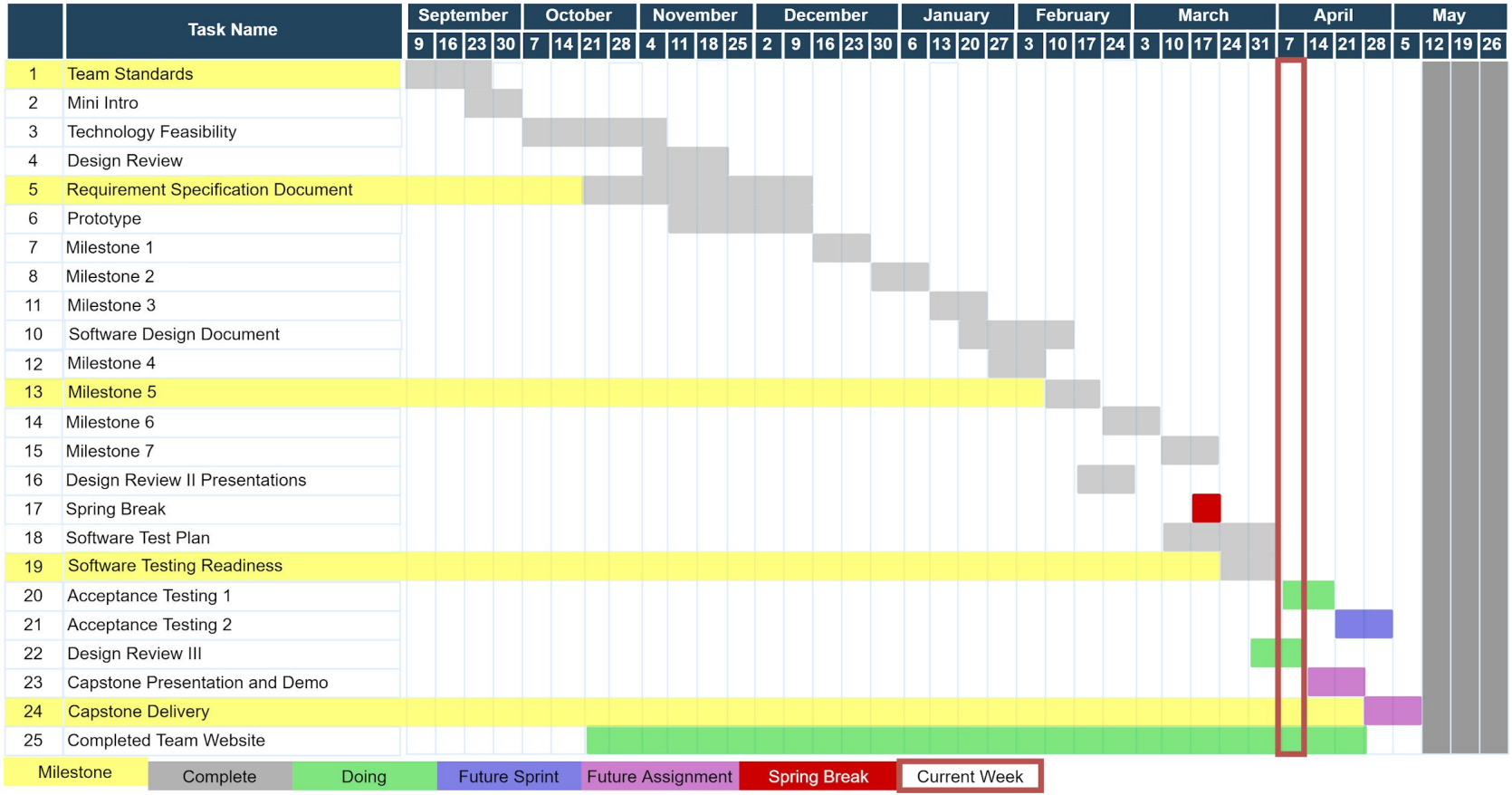
Challenges and Resolutions

- **Expectation Gap** | 20% | *High*
  - Overcome with frequent meetings and communication and user testing

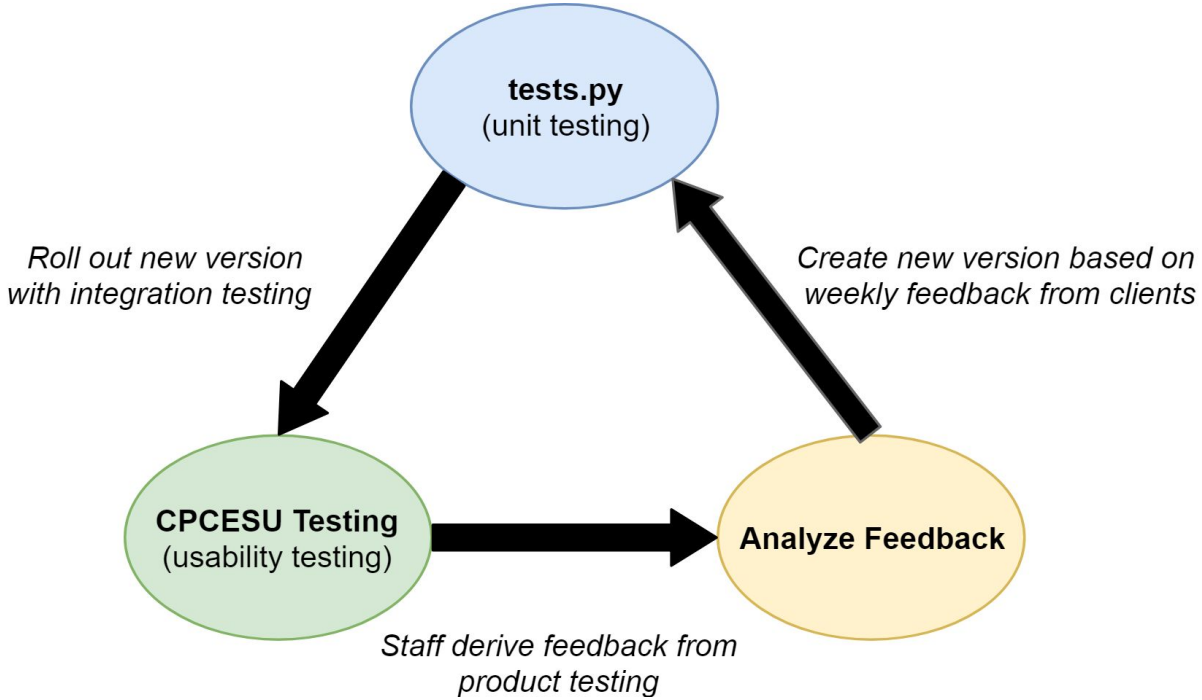
- **Optical Character Recognition (OCR)** | 5% | *Low*
  - Asynchronous processing using Celery

- **Deployment Issues** | 5% | *Low*
  - Early and constant communication with ITS

Year at a Glance



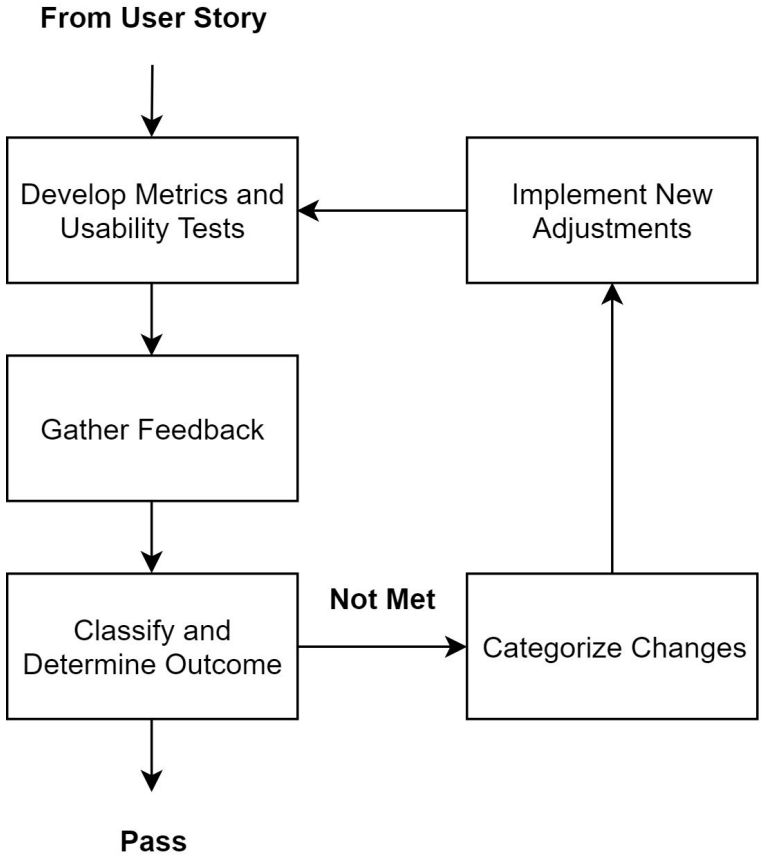
Testing Plan Overview



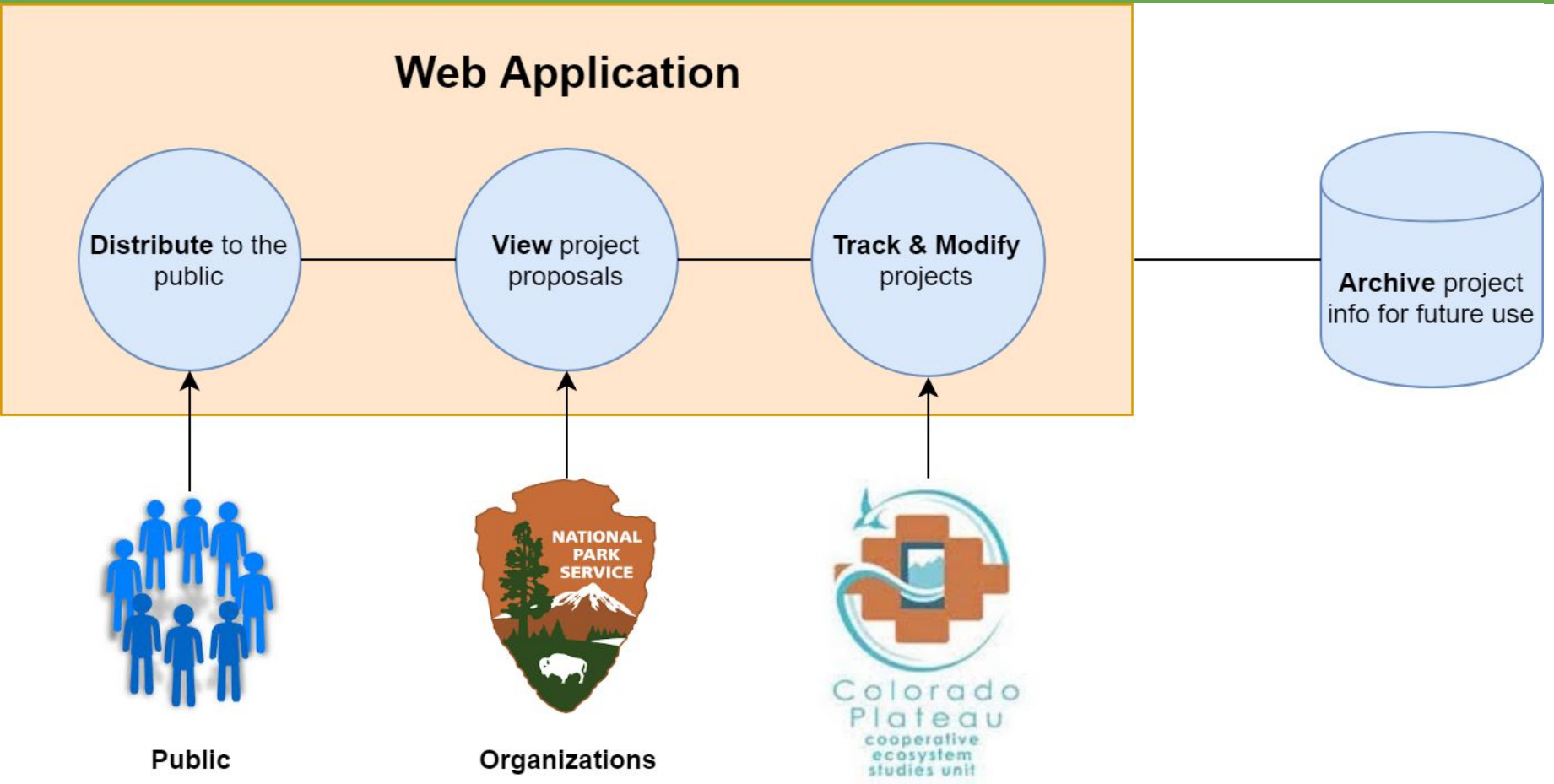
Usability Test Flow

Example Metrics:

- Timing how long it takes to create a project
- Counting clicks to create project

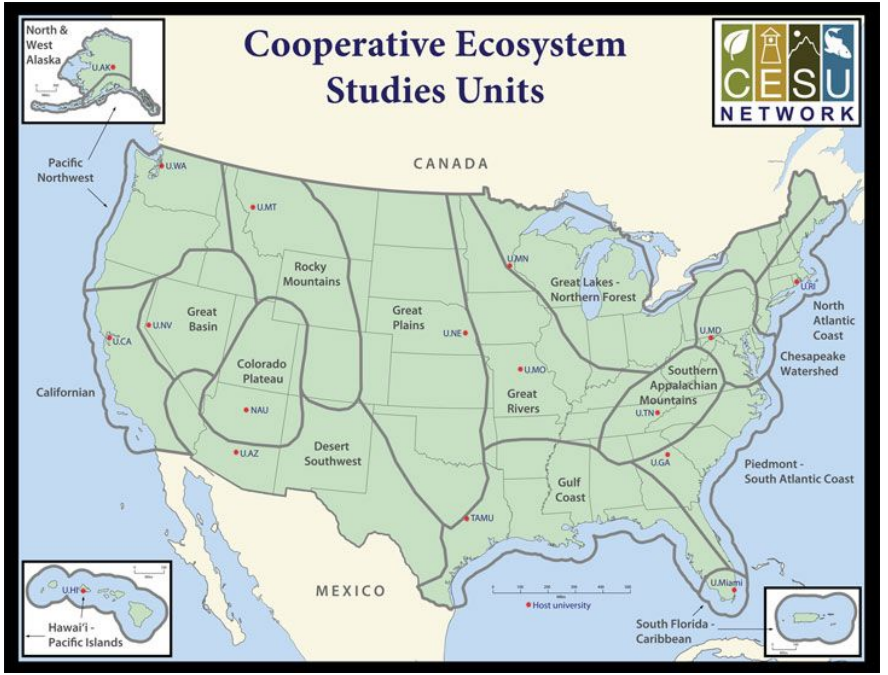


Conclusion

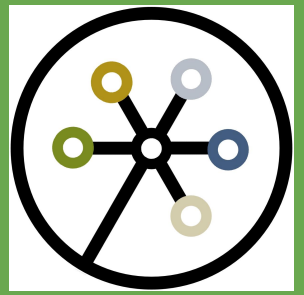

Web Application
Distribute to the public
View project proposals
Track & Modify projects
Archive project info for future use
NATIONAL PARK SERVICE
Colorado Plateau
cooperative ecosystem studies unit
Public
Organizations

Broader Impacts

- Better reporting to NAU and other organizations
- Can become the national network's system
- Aiding conservation projects and the environment



CPCESU Project Management System



Joseph Remy

Team Lead
Editor-in-Chief
UI Designer Lead

remy@nau.edu

Colton Nunley

Architect
Customer Communications
QA Manager

crn79@nau.edu

Jasque Saydyk

Business Analyst
Recorder
Release Manager

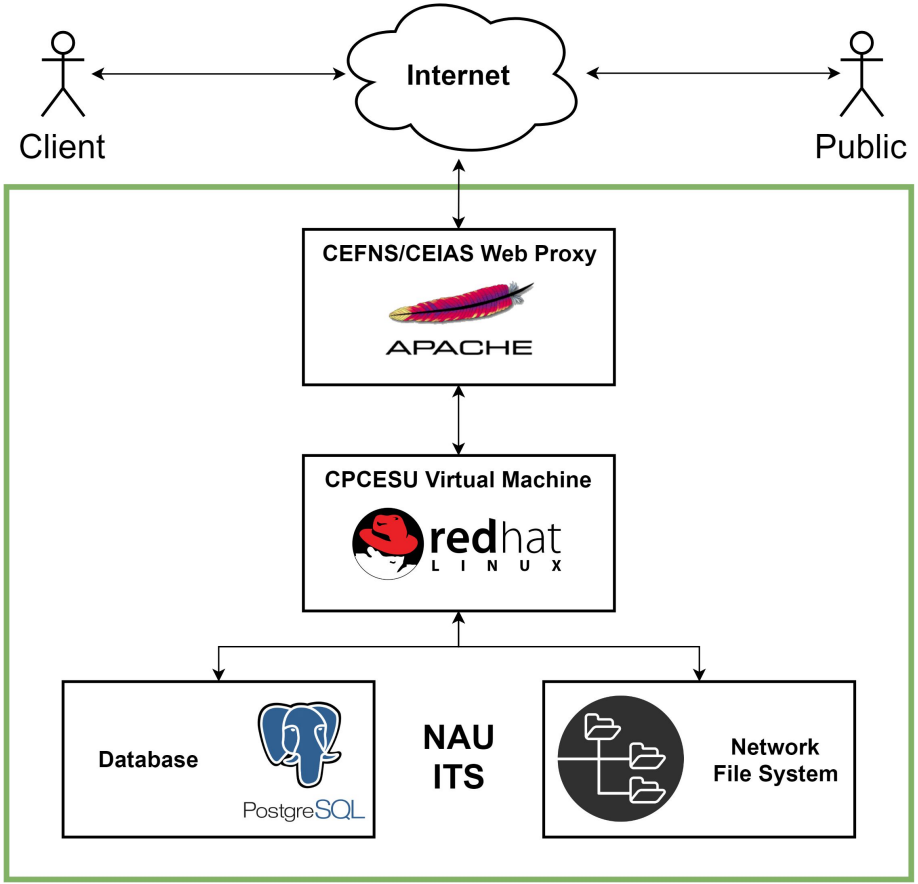
jrs496@nau.edu

http://bit.ly/ECOders

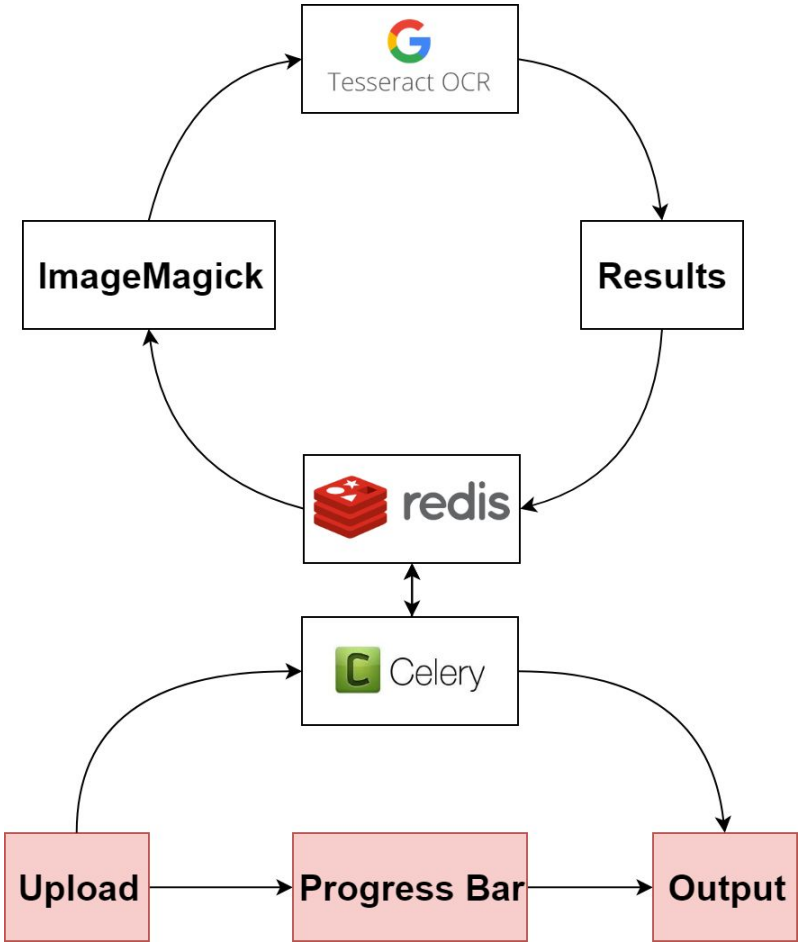
Key Requirements

- Track and modify projects
- Notified of project deadlines
- Ensure correct data
- Autofill from a document
- Export data from searches
- Public searching through projects

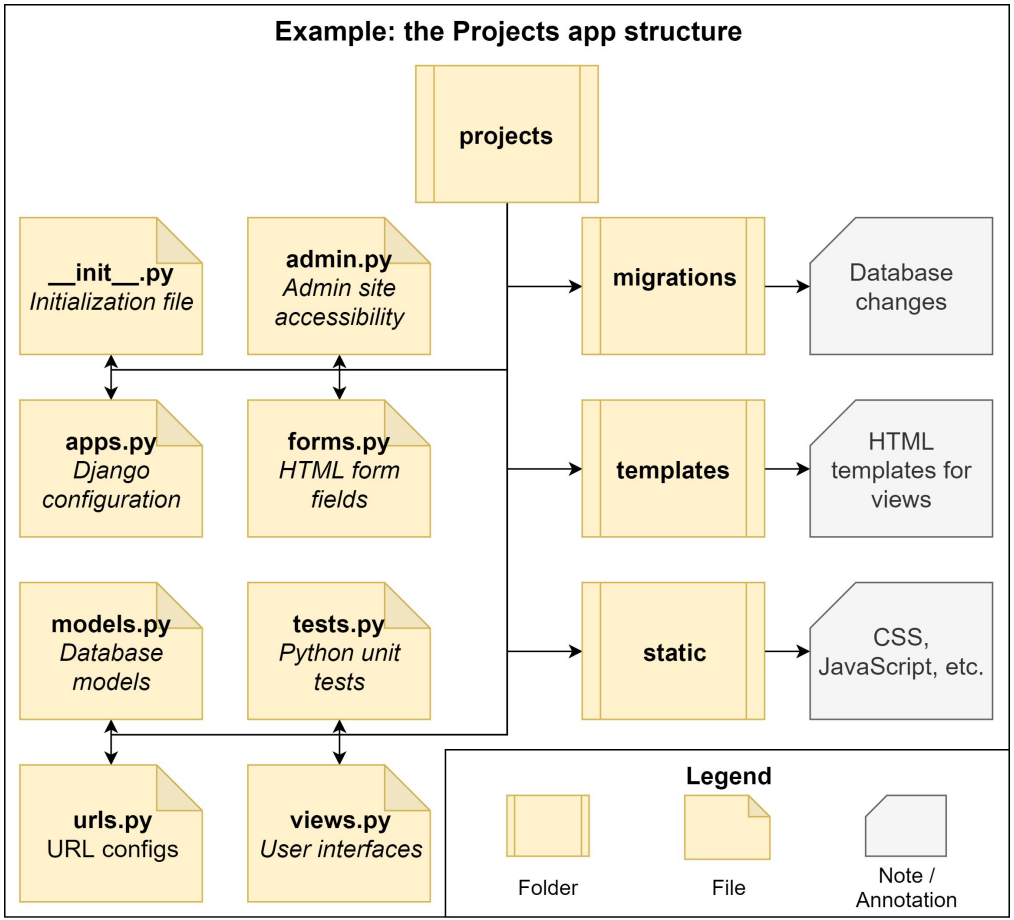
Solution Server Deployment Diagram



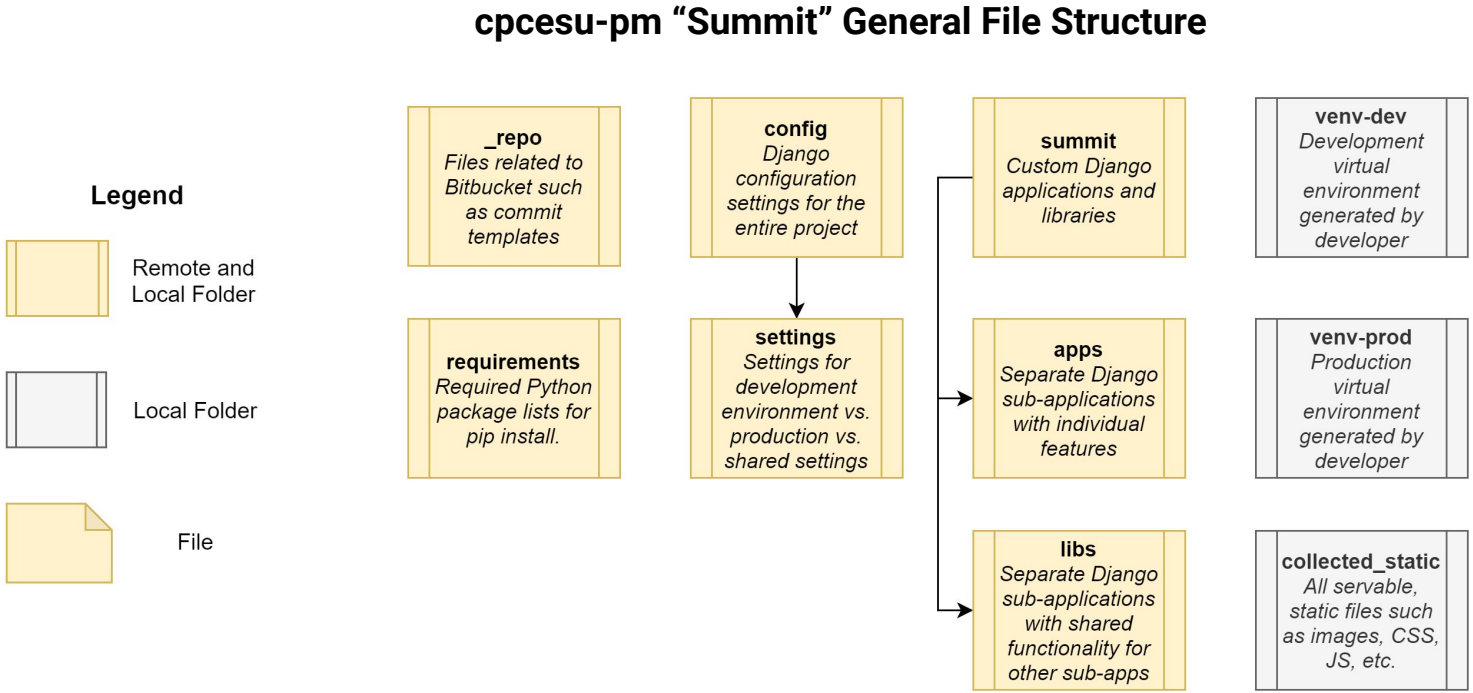
Autofill System Diagram



Sub-application Structure



File System Tree

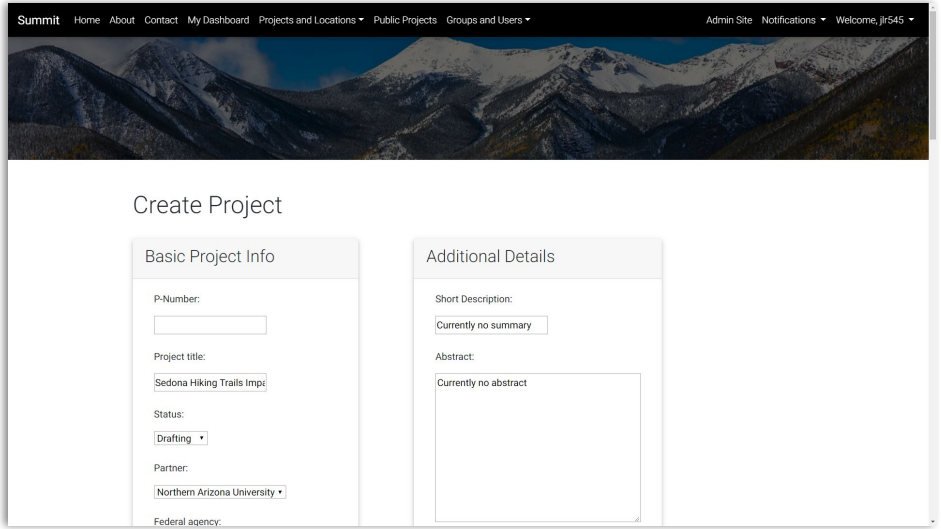


A Few Core Sub-app. Files

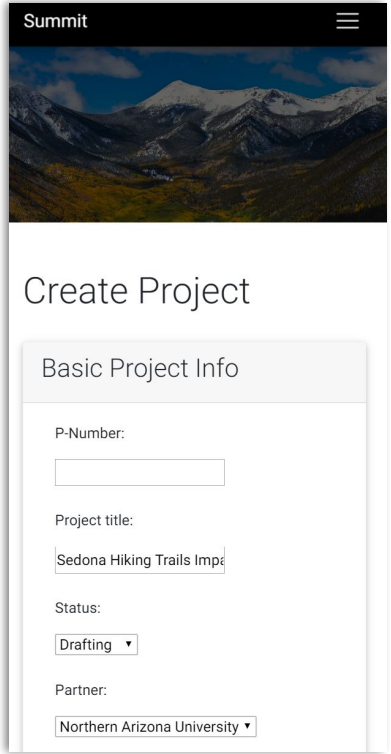
Ex: the projects app.

summit/apps/projects folder		
models.py	**urls.py**	**views.py**
Database Models	Route Controller	Generating Views
Project Modification Revision	Index "/projects" Add Project "/projects/add" Project Details: "/projects/detail/<id>" Edit Project: "/projects/edit/<id>"	Index - List View "templates/index.html" Add Project - Create View "templates/project_create.html" Project Details - Detail View "templates/project_list.html" Edit Project - Update View "templates/project_update.html"

Current Status - Responsive Design

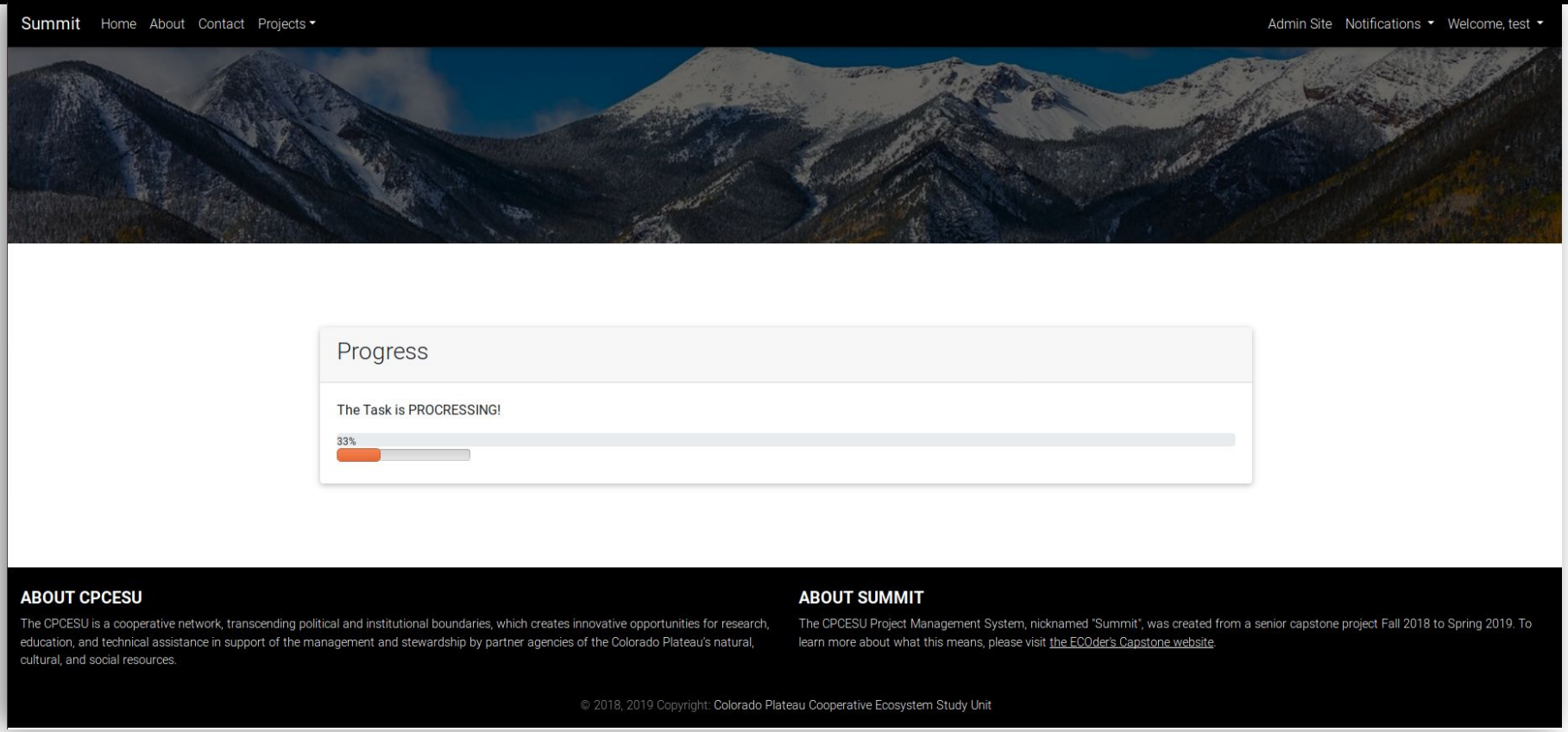


Desktop



Mobile

Current Status - Autofill



Decreasing entry lag time of project data

Proposal

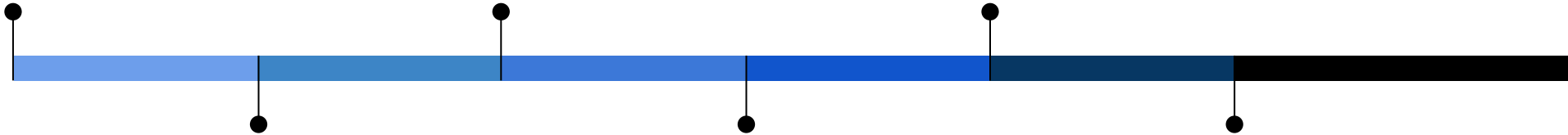
Federal agency starts inquiry to non-government contractor

Acceptance

Both parties sign and work begins

Termination

Parties end project. Final report is created



Drafting

Proposal is passed back and forth

Tracking

CPCESU tracks project including modifications

Reporting

Project archived and used for statistics and reporting