

Project Proposal

Malcom Daggett | Mercer University
B.S. Information Technology and Informatics
Planning baseline: October 20, 2026

Network Outage Coordination and Automated Notification System

This project proposes a browser-based prototype that centralizes outage requests, affected-service selection, recipient review, approval tracking, and notification preparation. It targets a narrow group of technical practitioners, including me, who coordinate network maintenance and communicate service impact.

Problem and rationale

An outage request can be difficult to coordinate when scope, timing, recipients, and approval status are handled separately. In particular, product outages and entire-SSP outages require different input paths. Unclear scope can affect the details entered and the audience identified. A future maintenance request must also remain distinguishable from approved work so customers do not plan around an unapproved outage.

Proposed solution

The prototype will explain the two scope options at entry, collect consistently labeled UTC times, flag requests inside the standard 10-day waiting period for urgent classification, identify fictional recipient groups, and display a notice preview. Internal submission and approval updates will precede customer notifications for planned work. Urgent classification will not automatically grant approval.

Research and evaluation questions

1. How can generalized practitioner knowledge be translated into explicit outage-workflow requirements?
2. Does the prototype produce the expected results for scope, schedule, urgency, recipients, and approval state?
3. Which interface or workflow problems emerge during structured practitioner walkthroughs, and how are they addressed across versions?

Method: practitioner case study and structured self-testing

I will complete this project as a practitioner case study grounded in my generalized professional knowledge and experience as an intended user. No interviews or recruitment of outside prototype testers are planned. Represented stakeholder roles inform the design without requiring those individuals to participate.

The qualitative evidence will consist of process-analysis worksheets, structured walkthrough notes, design rationales, and revision reflections. The quantitative evidence will consist of scripted test pass/fail counts, recipient-set comparisons, defect counts, and retest outcomes. Self-recorded task times may be included as descriptive development evidence. No participant questionnaire or population-level usability estimate is planned.

Evidence collection and analysis

Each requirement will receive an identifier and a linked test. Each test record will contain prototype version, date, fictional input, expected result, actual result, pass/fail status, evidence reference, defect identifier, revision, and retest outcome. I will summarize tests passed over tests executed, unresolved defects by severity, and recurring problems in the reflection notes. Failed tests remain in the record after a correction.

Existing preliminary feedback

A coworker previously found the product-versus-entire-SSP choice confusing. I changed the initial Create Outage popup to explain both options. Other feedback concerned UTC entry, urgent selection within the 10-day waiting period, and internal approval updates before planned-outage customer notices. This historical feedback is context for requirements; it is not a commitment to conduct a new participant study. No numeric pilot results are claimed.

Limits of the evaluation

Because I am both developer and evaluator, familiarity and confirmation bias may hide issues that unfamiliar users would encounter. Explicit expected results, negative tests, saved evidence, and versioned retests will make the evaluation reviewable. The findings support this case and technical readiness; they will not establish usability for a wider population. Any course-specific requirement for independent usability testing remains subject to instructor clarification.

Scope, deliverables, and resources

The deliverable is a working fictional-data prototype, source package, setup instructions, user help, design documentation, test evidence, and final report and presentation. Core features are outage creation, UTC scheduling, urgency validation, recipient review, notice preview, approval state, and history. Production integration, real customer delivery, and live network monitoring are outside scope.

A proposed lightweight stack is HTML, CSS, JavaScript, a Python/Flask application service, and SQLite. Final technology choices will be recorded with the development evidence. Resources include my existing computer, browser, code editor, version control, and document tools. No purchase or production access is assumed.

Milestones and estimated effort

Deadline	Deliverable
October 19	Project planning baseline; this revision is dated October 20.
October 26	Personas, scenarios/storyboards, task list, architecture, database design.
November 2	Midterm report and recorded presentation.
November 23	System specification, technology record, prototype versions and tests.
November 30	Structured evaluation report, reflection, and revision evidence.
December 7	Final prototype and user-help documents.
December 10	Capstone report, final slides, and presentation recording.

The separate timeline estimates 116 hours (6,960 minutes) from October 19 through December 10. Hours are planned effort, not actual completed work.

Success and completion boundary

All critical scripted cases must pass: scope routing, required fields, UTC interpretation, lead-time rules, recipient mapping, and approval-gated planned notices. No unresolved critical or high-severity defect may remain at release. Each core requirement must link to a test and evidence. The separate Success Measurements document defines the acceptance checks and limitations.

Data and responsible practice

All demonstrations and test records will use fictional sites, services, contacts, and outage details. The case study will not collect operational records, interview responses, or new participant data. Public portfolio evidence will avoid employer-specific information. Any change in study scope will be discussed with the instructor before collecting new participant data.