Site Manager

“Right people. Right equipment. Right on time.”

POV and EXP

- Human Computer Interface
- Semester Project Phase 2
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Project Domain

SiteManager is a construction project management app designed for managers and foremen to:

- ★ Track employees, equipment, and projects in real time.
- ★ Streamline resource allocation and reduce inefficiencies (e.g., misrouting, manual tracking).
- ★ Focus on automation to minimize manual data entry and errors.

Initial POV

Construction managers need a digital dashboard to track all projects, employees, and equipment in one place because current systems lack real-time visibility and lead to inefficiencies.

This POV was based on our early observations but lacked specific insights into user pain points like maintenance tracking or material lists.

Needfinding Results

Misrouting is common:

★ Employees and equipment are frequently sent to the wrong locations.

★ Quote: “Misplacement happens all the time.” — Gideon Banman

Manual tracking is inefficient:

★ Paper-based systems for materials and delays are error-prone and time-consuming.

★ Maintenance records (e.g., oil changes) are not centrally tracked.

Additional Needfinding Results

Live tracking is less critical:

★ Users prioritized simplicity and automation over real-time GPS tracking.

Drones and equipment condition tracking emerged as unexpected interests.

Revised POVs

POV #1

A construction foreman needs a visual map of project locations and resource allocation because employees and equipment are frequently sent to the wrong sites, causing delays and inefficiencies.

POV #2

An equipment operator needs a system to track maintenance records and material lists per project because manual tracking is error-prone and leads to miscommunication about equipment condition and project needs.

POV #3

A construction manager needs a simplified way to log daily work results and delays because current paper-based systems are inefficient and don’t provide real-time insights into project progress.

HWM STATEMENTS

HWM #1

- **“How might we create a visual map interface that helps foremen and managers allocate employees and equipment to the correct project sites?”**

HWM #2

- **“How might we design a maintenance tracking system that reduces manual data entry and ensures equipment is always in optimal conditions?”**

HWM #3

- **“How might we streamline the process of logging daily work results and delays to provide real-time project insights for managers?”**

EXPERIENCE PROTOTYPES

Prototype #1: Maintenance Tracking

Maintenance Tracking Prototype

Equipment	Last Maintenance	Next Due	Issue	Severity
Excavator #1	09/01/2025	10/01/2025	Oil Change	Low
Crane #2	08/15/2025	09/15/2025	Hydraulic Leak	High
Truck #3	09/10/2025	12/10/2025	Brake Check	Medium

Log New Issue

Equipment: Excavator #1 Issue: Describe the issue Severity: Low Log Issue

Prototype #1: Maintenance Tracking

What worked:

★ Severity scale helped prioritize repairs.

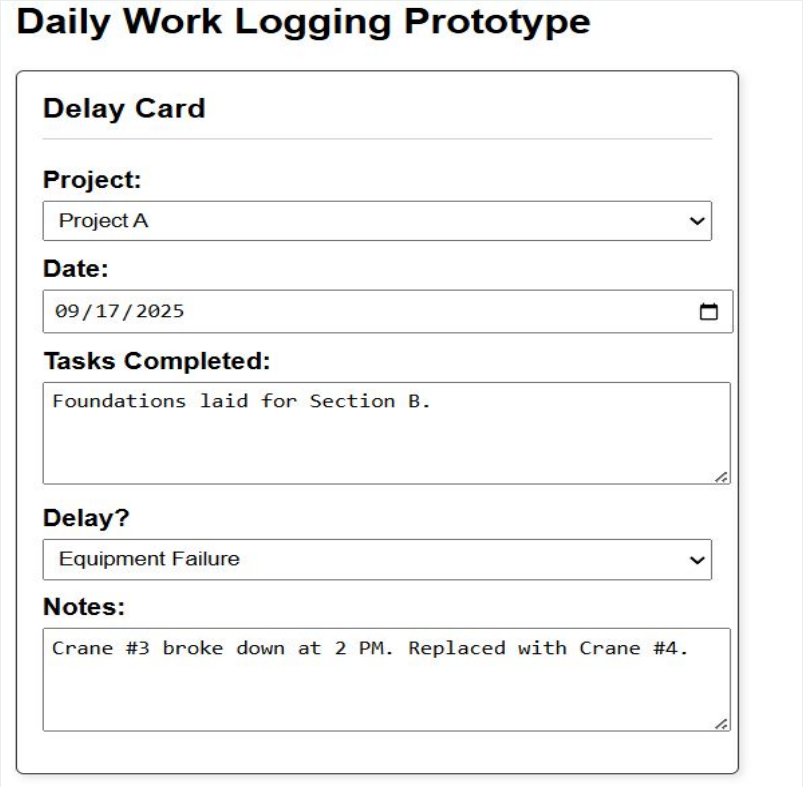
What didn’t work:

★ Manual entry was still seen as tedious; users wanted automated reminders.

Validity of Assumption:

★ Partially valid: Simplified logs help, but automation is key.

Prototype #2: Daily Work Logging



Prototype #2: Daily Work Logging

What worked:

★ Standardized delay reasons reduced ambiguity in reporting.

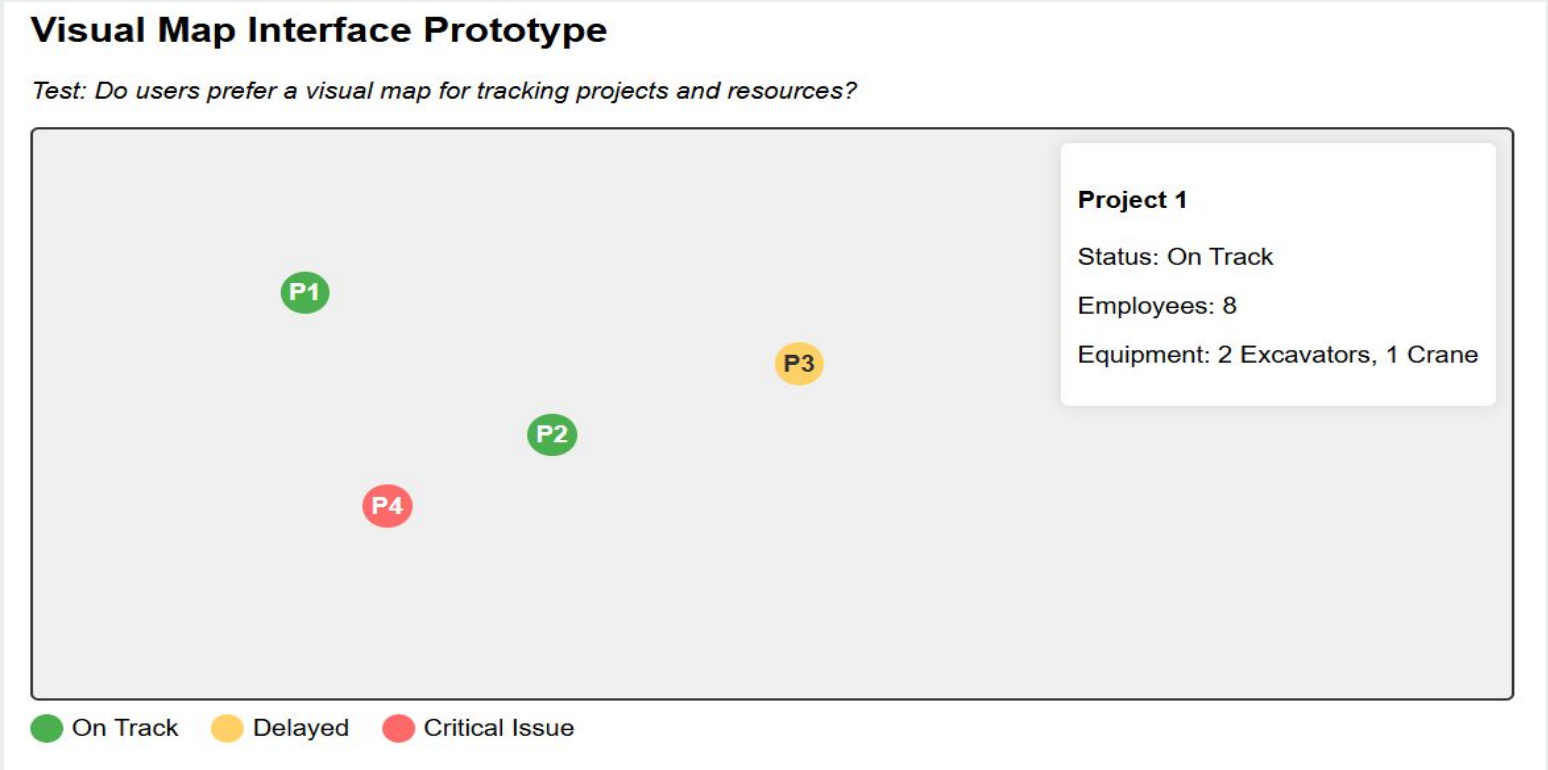
What didn’t work:

★ Cards were easily lost; users preferred a digital form.

Validity of Assumption:

★ Valid: Structured logging is helpful, but digital is preferred.

Prototype #3: Visual Map Interface



Prototype #3: Visual Map Interface

What worked:

★ Users liked the visual clarity of seeing all projects in one place.

What didn’t work:

★ Static maps lack real-time updates (users wanted digital integration).

Validity of Assumption:

★ Valid: Visual maps are useful, but they need interactive features.

Summary

Key Learnings:

★ Automation > manual entry: Users reject systems that require excessive manual input.

★ Unexpected needs: Equipment condition and material tracking are as important as project progress.

Next Steps:

★ Interactive map with real-time updates.

★ Maintenance alerts and delay reporting.

Thank You