
JUNE 2025 – SEPT 2025

# Pharmaceutical Stability Test Management Tool

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# / Introduction

# / Product Space

This project aimed to help pharmaceutical team leaders and respective scientists (analysts) create a new process of managing their stability tests.

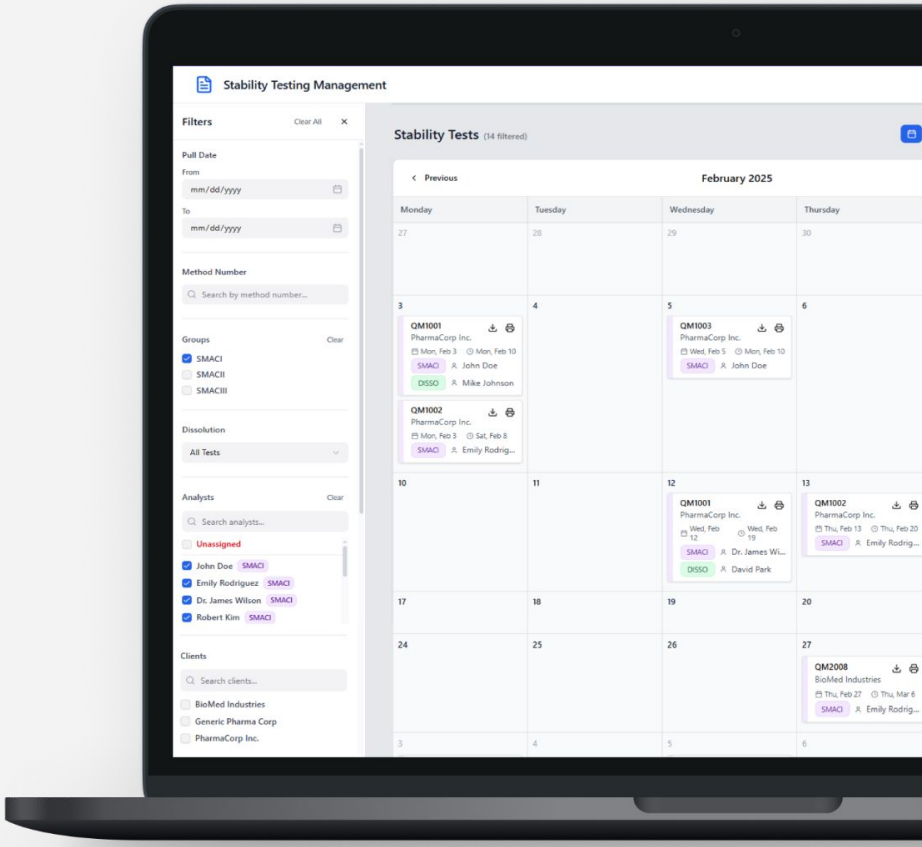
Stability tests are scientific tests that test how a medical product (e.g. drug, medical device) changes over time under different environmental conditions (e.g. temperature, humidity).

# / Executive Summary

Define the future state experience for managing stability tests.

My top achievements on the project include:

- Prototyping a fully functional prototype via vibe coding
- Improving redesigned system usability score by 74%
- Documenting vibe coding learnings and best practices for our design team



# / Problem Discovery

# / Current State Problems

Conducted a **Problem Framing Workshop** to align on the problem to be solved

- Highly manual process of creating testing calendars
- Scavenger-hunt-like process of finding respective testing documents for each test
- New analysts need to search through documentation twice. Once to find what equipment to use for the test, and once when they need to execute the test.


**TOP VOTED PROBLEM STATEMENT**

Scientists at [redacted] are experiencing inefficiencies when creating or maintaining, or using different team calendars. This occurs during collaborative planning phases, where each team has developed its own method for managing calendars, and when using paperwork described by the testing in the calendar. As a result, this manual process creates inefficient workflows, which undermines the company's patient-first priority and achieving quality test results to clients in a timely fashion.

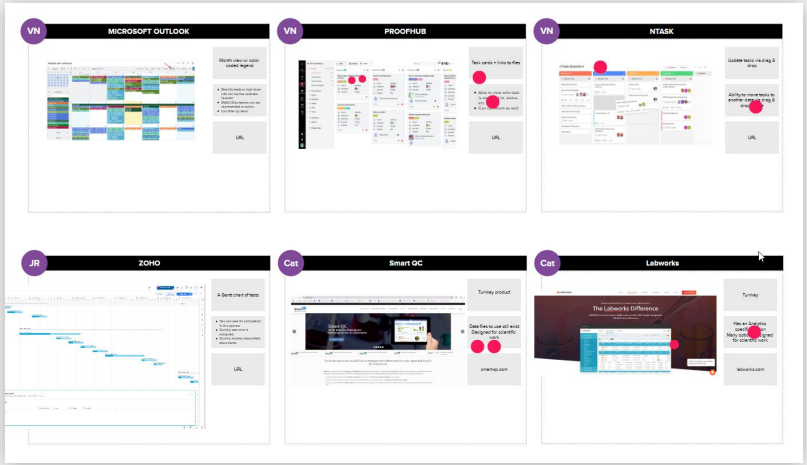
It's important to solve this problem because scientists are spending too much time in administrative duties and not able to fully prioritize the patient and spend more time in meaningful tasks.

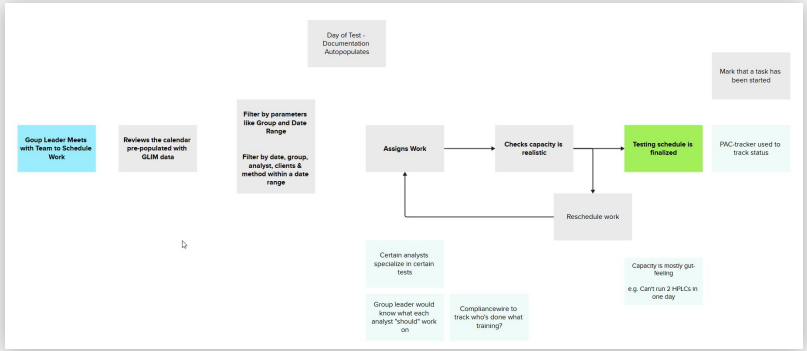
**How might we improve the scheduling calendar experience using artificial intelligence so that Scientists can reduce calendar creation time from 30–60 minutes to zero and not have to manually search for documentation—enabling faster, more consistent collaboration?**

# / Future-State Discovery

Conducted a condensed **Design Sprint** to ideate on solution to the problem, including how AI can help

- Use AI to read through documents and identify IDs to required testing paperwork
- Collaborated with our Solution Architect to explain capabilities of AI
- “Lightning demos” to provide participants inspiration
- Focused on fleshing out future state user flow to avoid confusion during prototyping



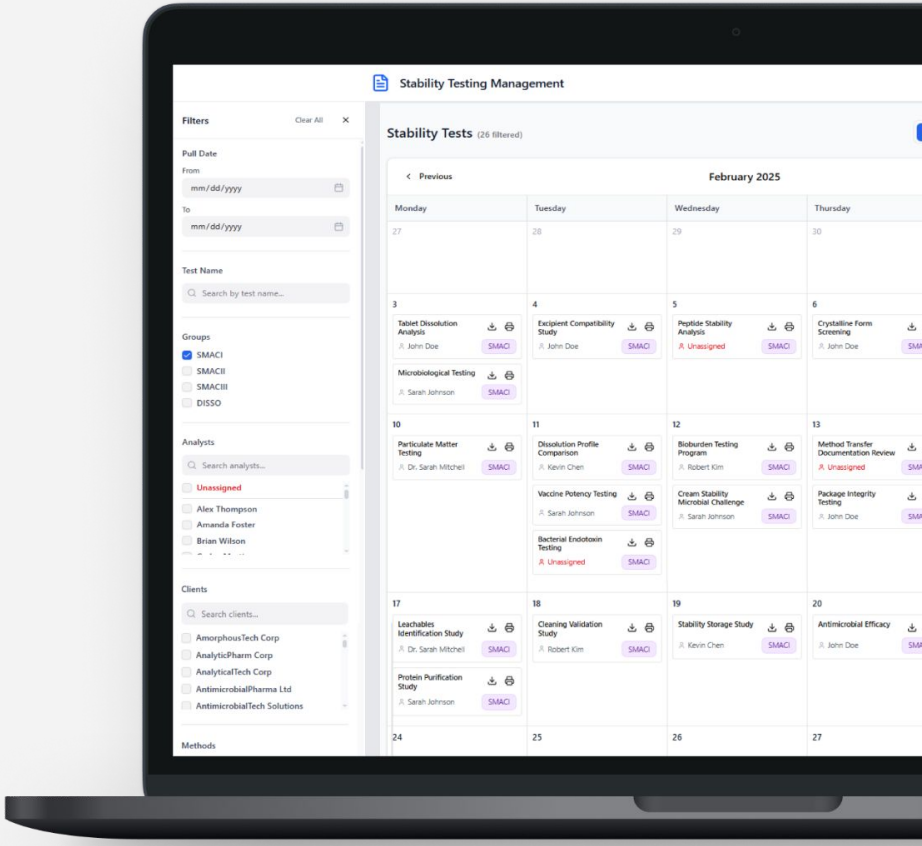



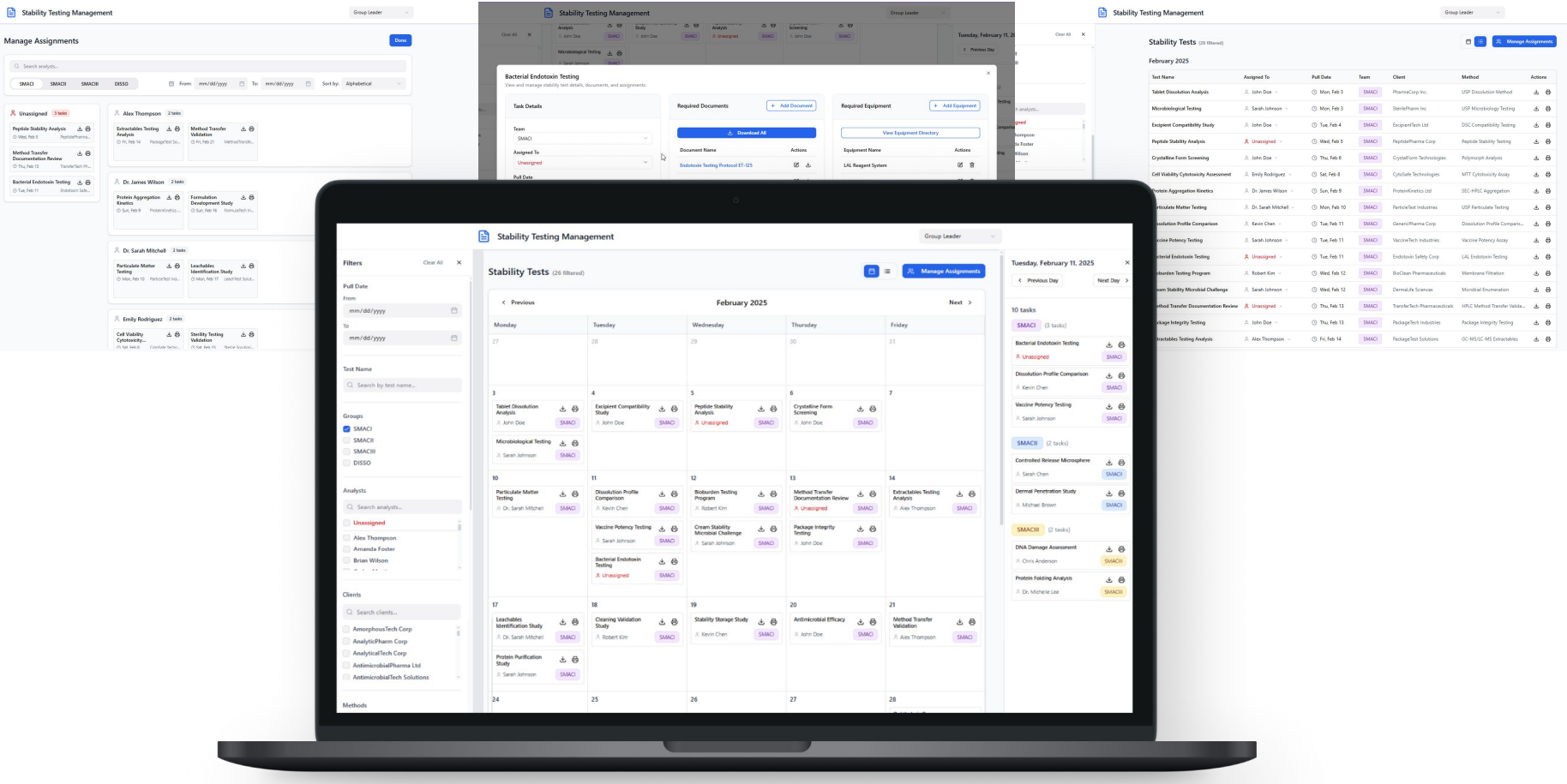
# / Prototype Creation & Testing

# / Design Execution

- Created a rough paper sketch to put a visual to the user test flow
- Utilized Figma Make to create a fully functional prototype
- Hosted fast-follow feedback sessions to receive stakeholder approval prior to user testing

**Prototype →**



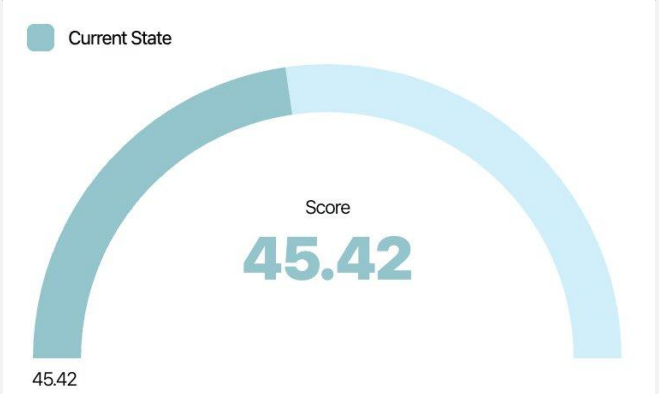

Stability Testing Management
Group Leader
Manage Assignments
Done
Unassigned
Alex Thompson
Dr. James Wilson
Dr. Sarah Mitchell
Emily Rodriguez
Bacterial Endotoxin Testing
Task Details
Required Documents
Add Document
Download All
Required Equipment
Add Equipment
View Equipment Directory
Stability Tests (26 filtered)
Manage Assignments
February 2025
Test Name
Assigned To
Pull Date
Team
Client
Method
Actions
Filters
Clear All
Pull Date
Test Name
Groups
SMACI
SMACII
SMACIII
DISSO
Analysts
Clients
Methods
Previous
Next
Monday
Tuesday
Wednesday
Thursday
Friday
Tuesday, February 11, 2025
Previous Day
Next Day
10 tasks
SMACI (3 tasks)
SMACII (2 tasks)
SMACIII (2 tasks)

# / User Testing

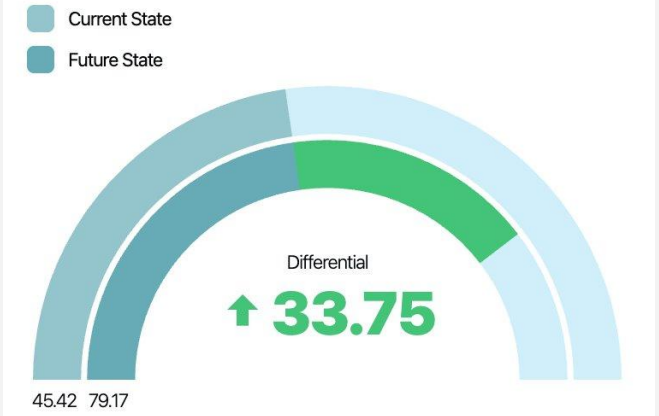
- Drafted and conducted a moderated user testing session with 6 participants to validate our design approach.
- Used the System Usability Score methodology to benchmark our success.
  - 45.42 (F) to 79.17 (A-)
- Analyzed and documented the results into a report that is easily shareable with stakeholders.

**User Testing Artifacts →**

**Previous System (F)**

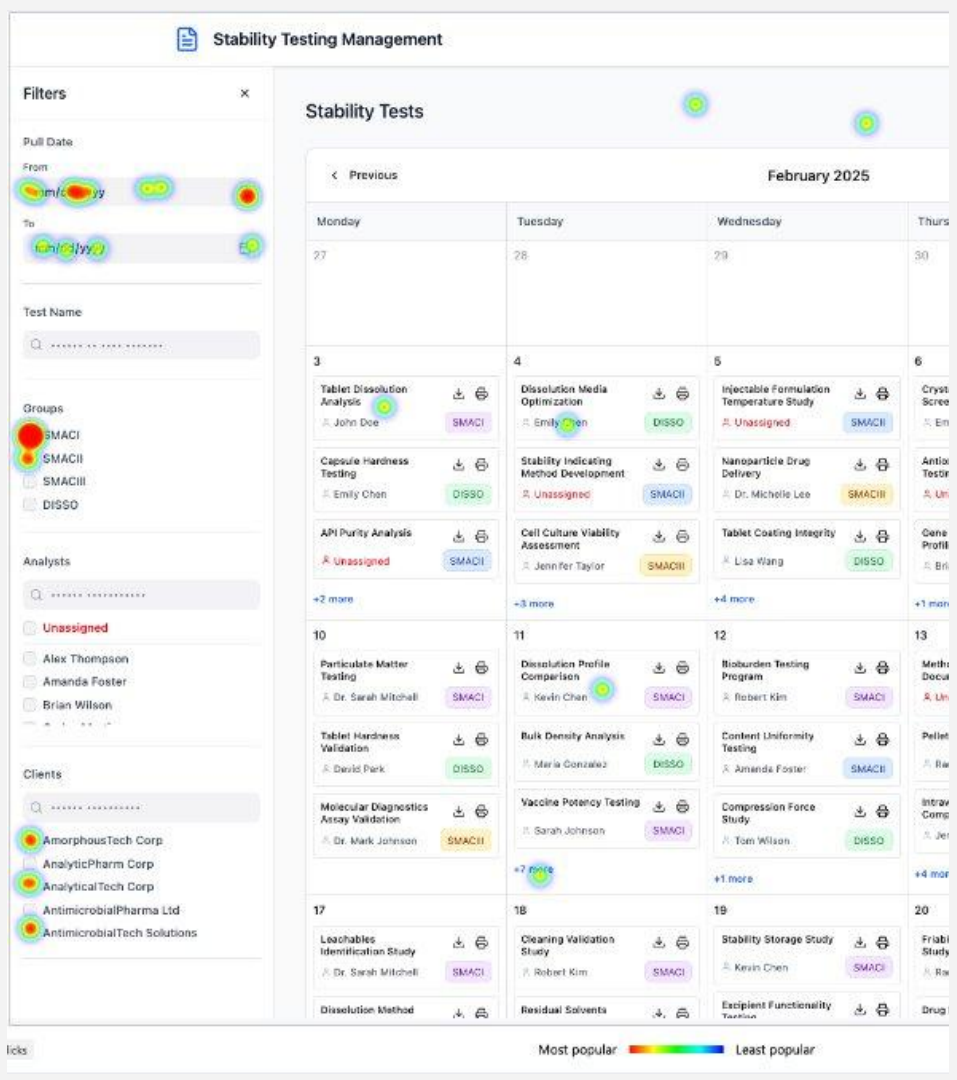


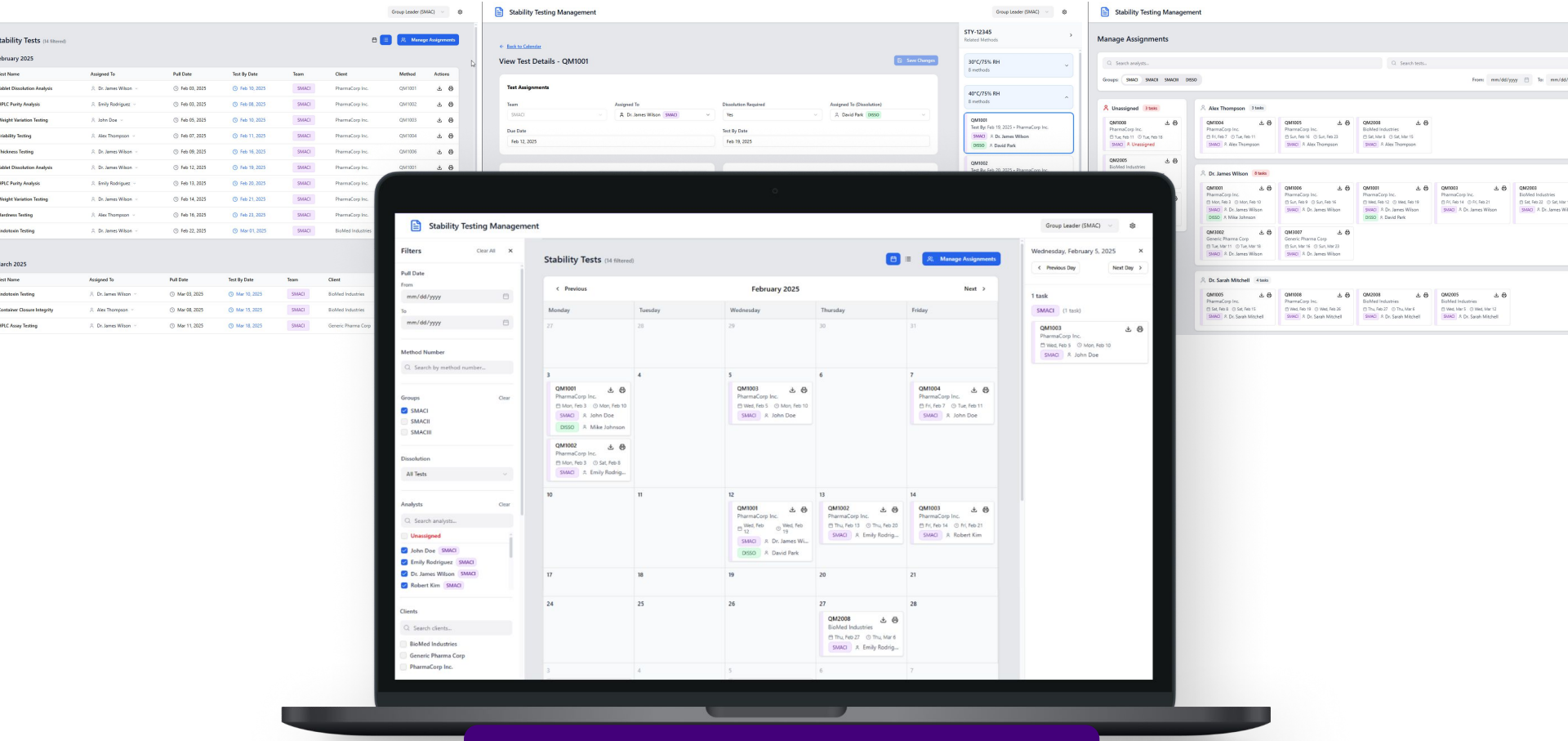

**New System (A-)**



# / Experiments with Microsoft Clarity

- Utilized Microsoft Clarity to track click events, heatmaps, etc.
- Experimented with techniques to track smart events in Clarity via the code in the Figma Make Prototype
- Discovered information in Clarity would be more valuable with a higher quantity of users over time, but this was still a great learning experience.



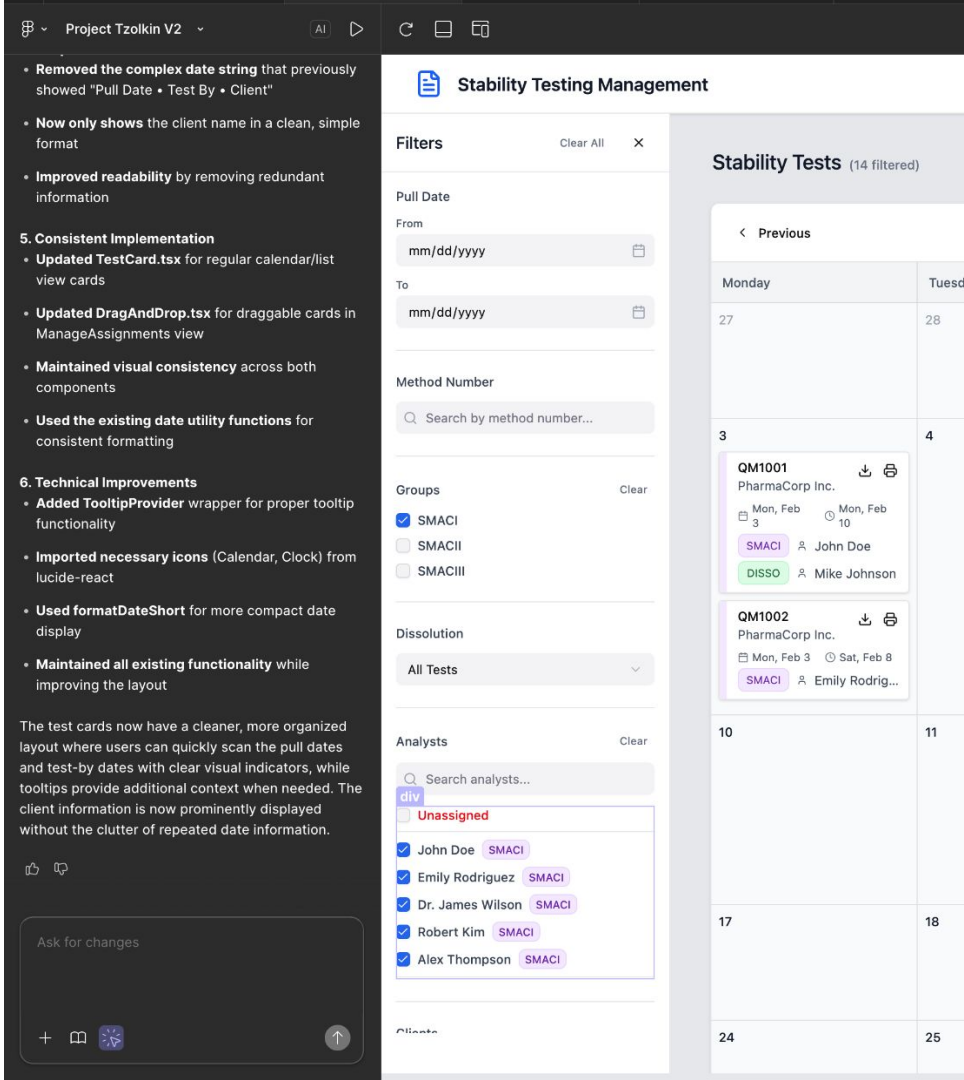

Stability Testing Management
Group Leader (SMAC)
Manage Assignments
Stability Tests (14 filtered)
Filters
Clear All
Pull Date
Method Number
Search by method number...
Groups
SMACI
SMACII
SMACIII
Dissolution
All Tests
Analysts
Unassigned
John Doe
Emily Rodriguez
Dr. James Wilson
Robert Kim
Clients
BioMed Industries
Generic Pharma Corp
PharmaCorp Inc.
Previous
February 2025
Next
Monday
Tuesday
Wednesday
Thursday
Friday
QM1001
QM1002
QM1003
QM1004
QM2008
Wednesday, February 5, 2025
1 task
Previous Day
Next Day

[Prototype →]

# / Project Learning

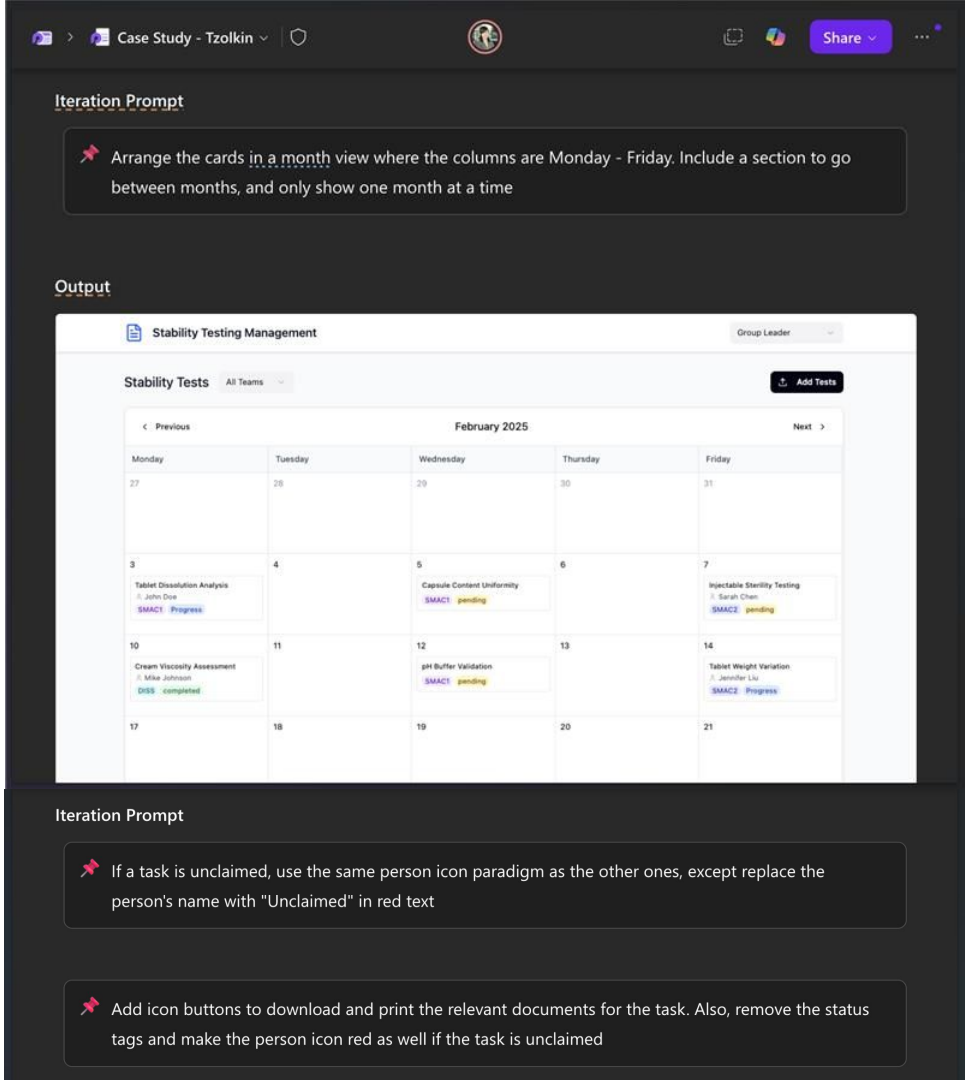
# / Vibe Coding Learnings

- Provide app description, persona and user flow contexts in the initial prompt
- Avoid giving too much contextual information (e.g. company info) as the AI will get confused. Human interpretation of this information and using it as guidance is still required (at least for now)
- Chain requests together to save on credits
- Utilize toolbar features (e.g. “magic cursor”, margin / padding settings) to make more nuanced changes



# / Documenting Learnings

- Created an “input prompt vs vibe coded output” case study document
- Created a best practices document listing learnings for the design team’s reference



# / Conclusion

The project is currently still in progress with development starting in the coming weeks.

Throughout this process, I learned some valuable key lessons:

- Regularly check for understanding
- Don’t be afraid to pivot if something isn’t working
- Vibe coding is a powerful tool to master, even if it’s constantly changing
- AI is ultimately a tool that should be intentionally utilized to solve a relevant problem (vs shoehorning it into every project)

# / Q&A

# Thank you.