

Joel Heaton

UX & Product

"A UX and Product Designer with 11 years of multi-industry experience, I specialize in translating intricate technical requirements into seamless, high-stakes industrial solutions by bridging the gap between rapid prototyping, design system advocacy, and collaborative engineering relations."



11 years
30 years

**UX & Product
Designer**

Skills & Experience

Industries & Sectors

I have deep roots in 6 major business worlds, and within those worlds, I've successfully navigated 12 different specialized neighborhoods.

6 Industries

12 Niches

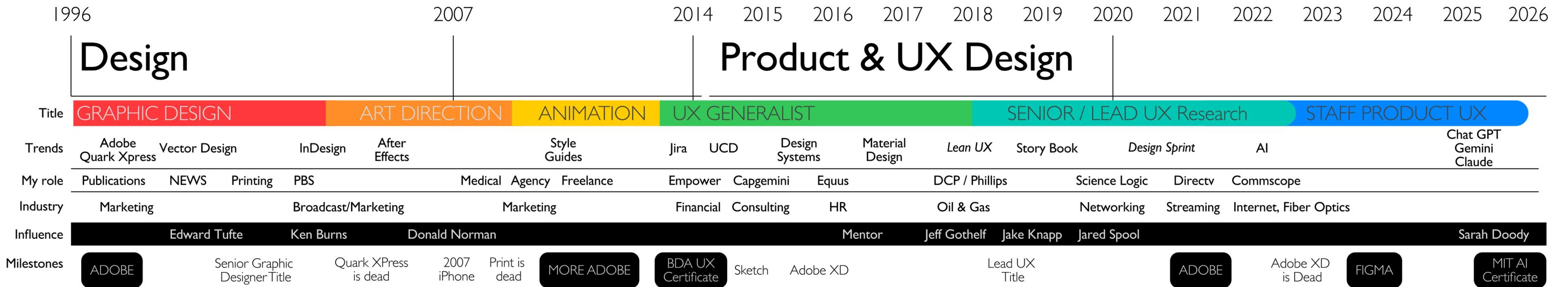
- Telecommunications & Information Technology
- Energy, Oil, and Gas & Midstream
- Healthcare Medical
- Enterprise HR and Workforce Mobility
- Financial Services

- Broadcast
- Internet & Networking Infrastructure
- Geospatial
- Field & Plant Operations, Engineering
- Medical Technology
- Animation & eLearning
- Marketing
- Software Development, SaaS
- Admin & Participant Investments

Career Timeline

My career

My UX and Product career leverages a long-standing design background to masterfully coordinate designers, stakeholders, and developers. I apply my years of practiced empathy and refined methodologies to lead research, manage usability testing relationships, and architect design workflows that provide clarity across the entire product ecosystem and complex portfolios.



What I want in my next role

To: Lead and mentor designers and researchers while staying hands-on.
 Direct cross-functional stakeholders and high-priority design work.
 Facilitate end-to-end UX research, methodologies, and design sprints.
 Manage long-term relationships with users, patients, and field techs.
 Deliver artifacts that direct product roadmaps and strengthen portfolios.

Strengths:

- Architecting agentic systems to drive clarity, efficiency, and business goals.
- Analyzing complex ecosystems and cross-product collaborations.
- Translating usability findings into actionable, time-boxed UX results.
- Extracting business requirements through personas, flows, and interviews.
- Designing for visualizations, geolocation, and task management.

Case Studies

EVE: Environmental App for Oil and Gas

- Lead UX Design, research, usability testing, pilot and full product launch

Slug Catcher: Ecosystem cross product visibility

- Lead UX Design, research, usability testing and user management

Employee Portal: Global mobility relocation App

- Portfolio Design, research, documentation, Design Sprints, full product lifecycle design, collaboration and future design states

DCP Midstream, Environmental Events



Demanding Environmental Oil & Gas Compliancy for State Regulations

Lead UX Designer in EnergyLab

Joel Heaton

Presentation

2018-2020

What are Environmental Events in Oil and Gas

Environmental events are:

- Gas leaks to the atmosphere
- Spills to soil
- Spills to water

Every state has specific regulations and workflows:

- Some are rigorous
- Some are relaxed

OPSTools by DCP had a bad rap and low adoption

Learn - Problem

We don't want to be a headline.

U.S. NEWS

Leak in Keystone pipeline spills 9,000 barrels of oil in North Dakota

It's the second significant spill on the Keystone system since 2017, when around 4,700 barrels spilled in South Dakota.

380,000 Gallons

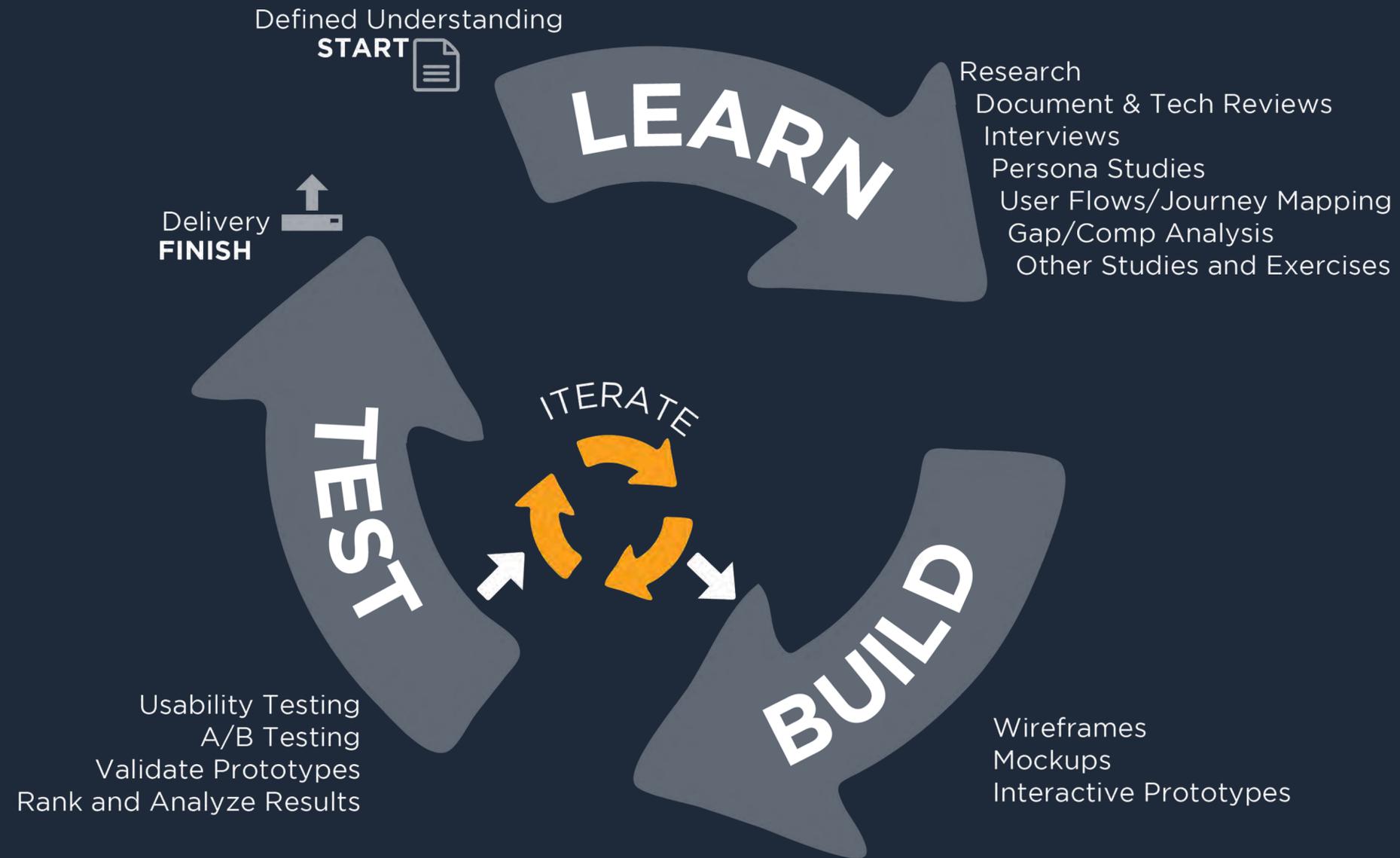
October 29, 2019



UA Pipefitters work on construction of the Keystone XL Pipeline, AP

- The second of two oil spills in two years along the Keystone pipeline resulted in half an Olympic-sized swimming pool's worth of crude oil **spilling onto** a North Dakota wetlands area.
- **The Associated Press reports** that the leak was discovered Tuesday night and that crews shut down the pipeline, which extends through 7 US states and into Canada.
- TC Energy, the company that owns the pipeline, estimates about 383,000 gallons – or more than 9,000 barrels of oil – were spilled, though North Dakota **regulators say** drinking water sources were not affected.
- Activists opposing the proposed Keystone XL pipeline extension were outraged by the spill, especially because **TransCanada claims** safety is a "top priority" and says spills are "unlikely."

Methodology



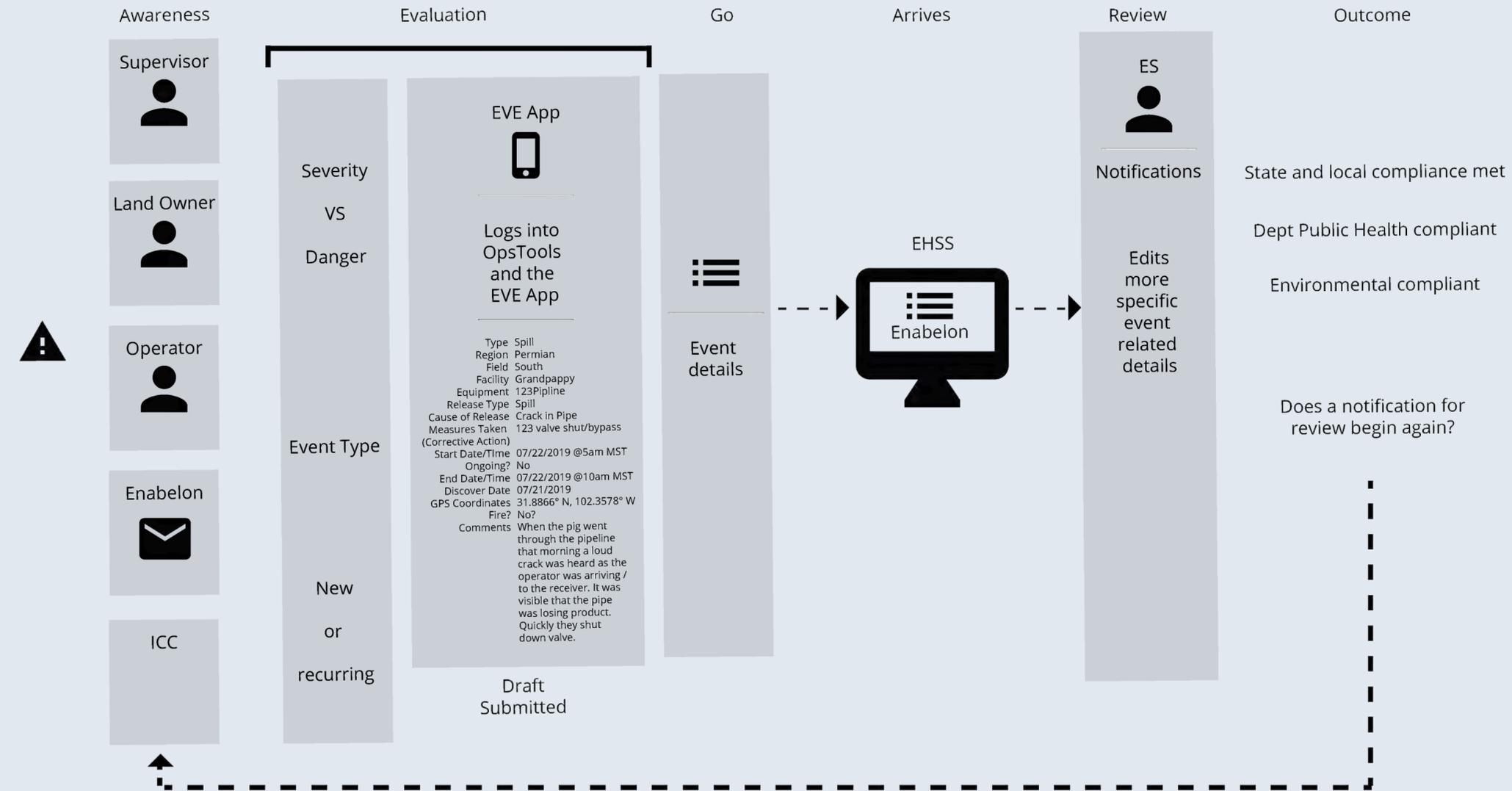
Define Goal

1. Capture events in a timely manner
2. Pass event information to EHSS/Enablon to calculate
 - Air emmisions
 - Spills to ground and water
3. Simple, intuitive

UX Design Team (Bill Banks and Joel Heaton)

Environmental Events Flow

Q3 7.22.2019



Met with ES, Managers, Operators and stakeholders for walk throughs to challenge the hypothesis.

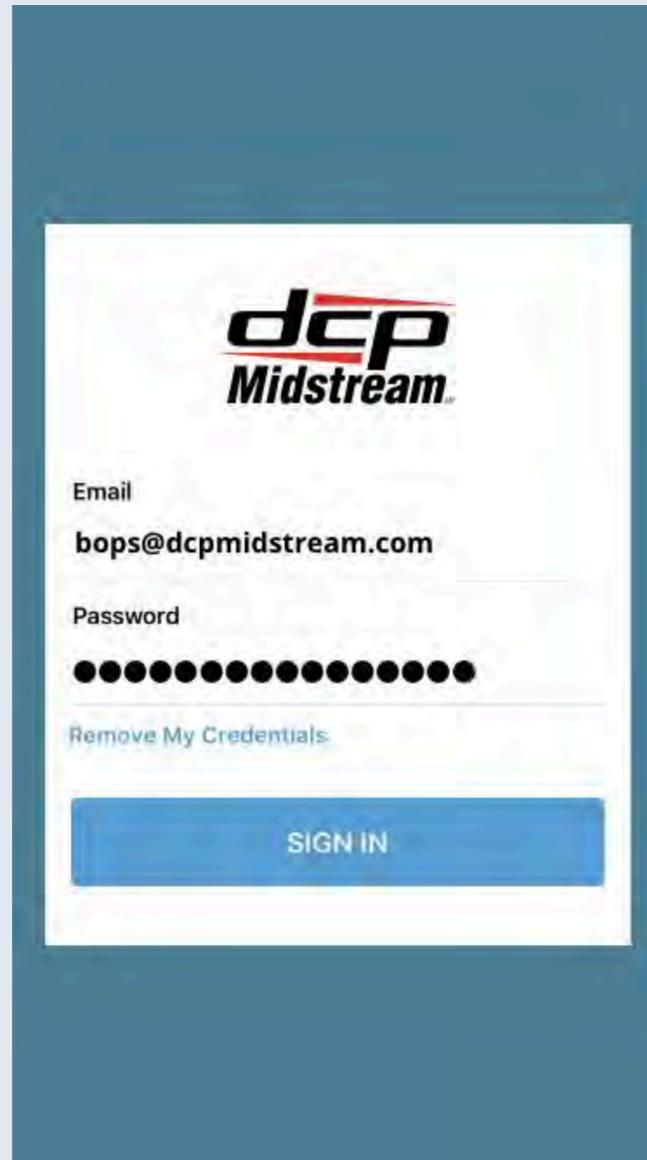
The Sequence

- Location
- Impact
- Details
- Review (possible safety module)

Recording from legacy

- Air
- Soil
- Water
- or a combination of

Build - V1



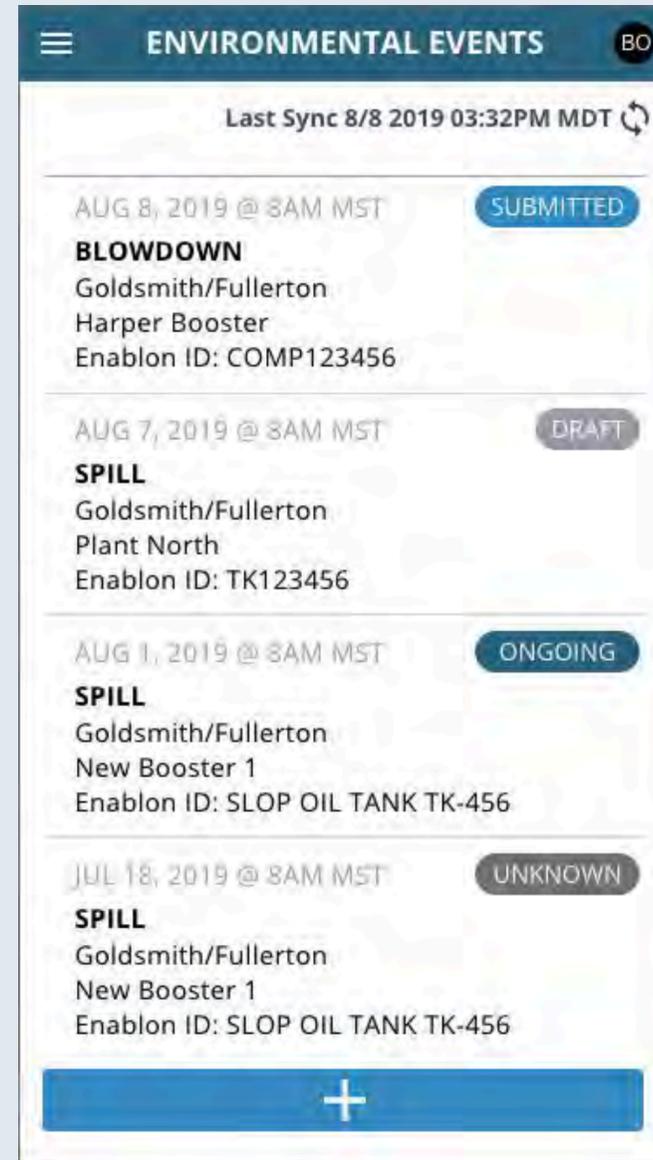
DCP Midstream logo

Email
bops@dcpmidstream.com

Password
●●●●●●●●●●●●●●●●

[Remove My Credentials](#)

SIGN IN

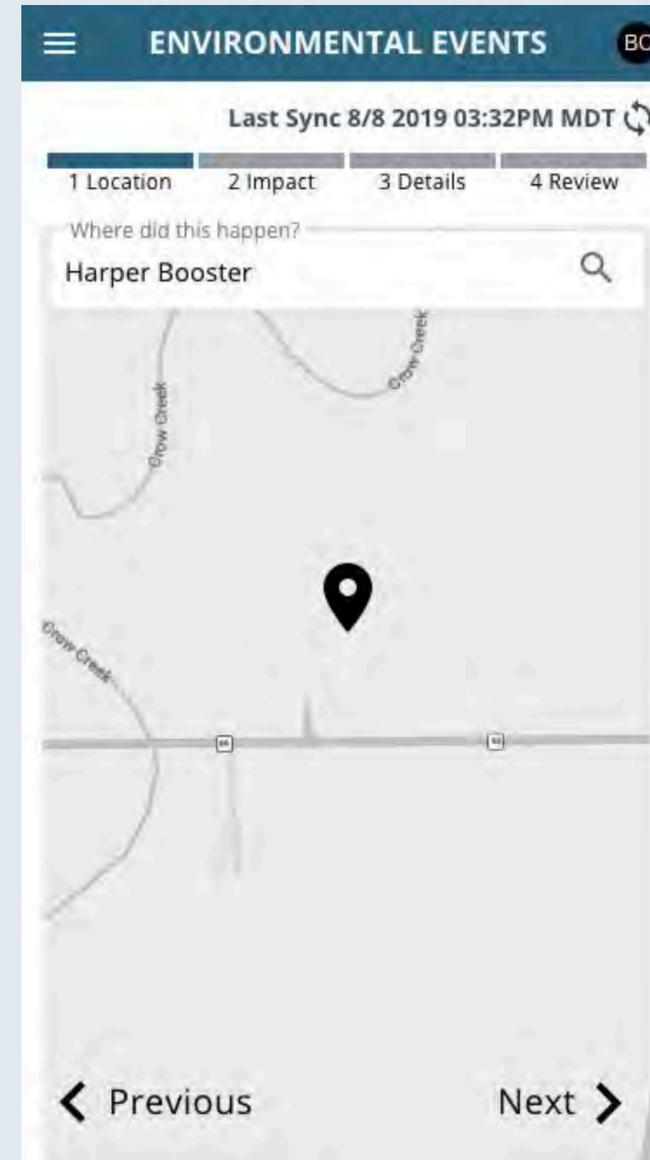


ENVIRONMENTAL EVENTS BO

Last Sync 8/8 2019 03:32PM MDT ↻

- AUG 8, 2019 @ 8AM MST** SUBMITTED
BLOWDOWN
Goldsmith/Fullerton
Harper Booster
Enablon ID: COMP123456
- AUG 7, 2019 @ 8AM MST** DRAFT
SPILL
Goldsmith/Fullerton
Plant North
Enablon ID: TK123456
- AUG 1, 2019 @ 8AM MST** ONGOING
SPILL
Goldsmith/Fullerton
New Booster 1
Enablon ID: SLOP OIL TANK TK-456
- JUL 18, 2019 @ 8AM MST** UNKNOWN
SPILL
Goldsmith/Fullerton
New Booster 1
Enablon ID: SLOP OIL TANK TK-456

+



ENVIRONMENTAL EVENTS BO

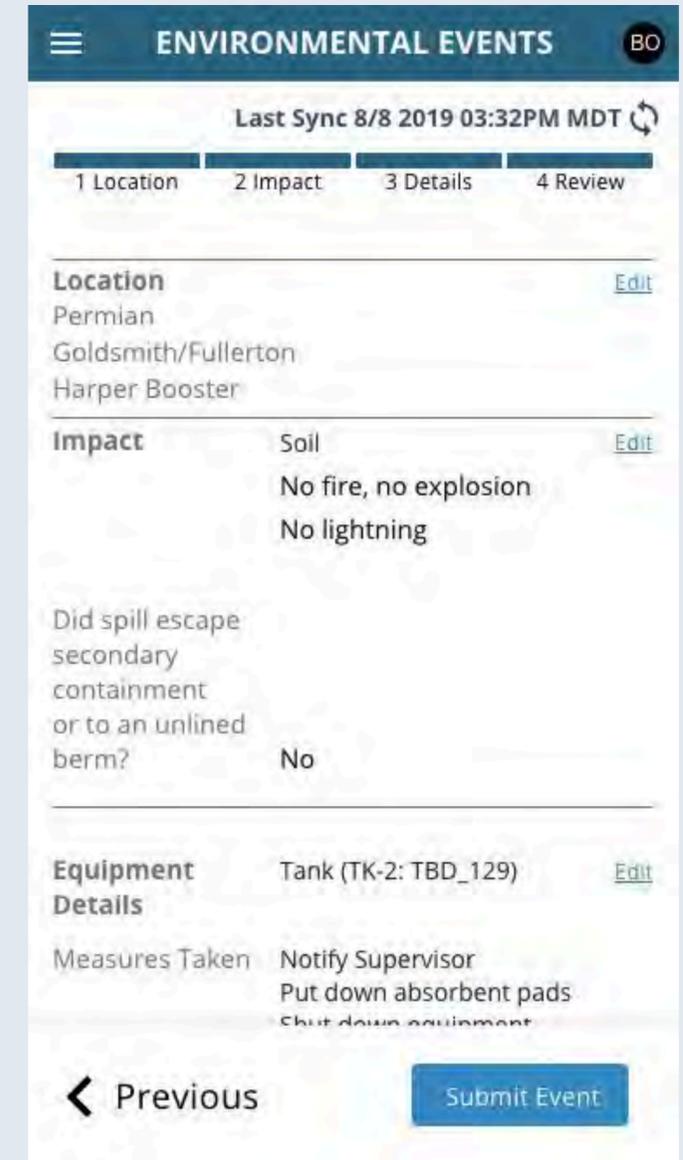
Last Sync 8/8 2019 03:32PM MDT ↻

1 Location 2 Impact 3 Details 4 Review

Where did this happen?
Harper Booster

Map showing location pin at Harper Booster

← Previous Next →



ENVIRONMENTAL EVENTS BO

Last Sync 8/8 2019 03:32PM MDT ↻

1 Location 2 Impact 3 Details 4 Review

Location [Edit](#)
Permian
Goldsmith/Fullerton
Harper Booster

Impact [Edit](#)
Soil
No fire, no explosion
No lightning

Did spill escape secondary containment or to an unlined berm? No

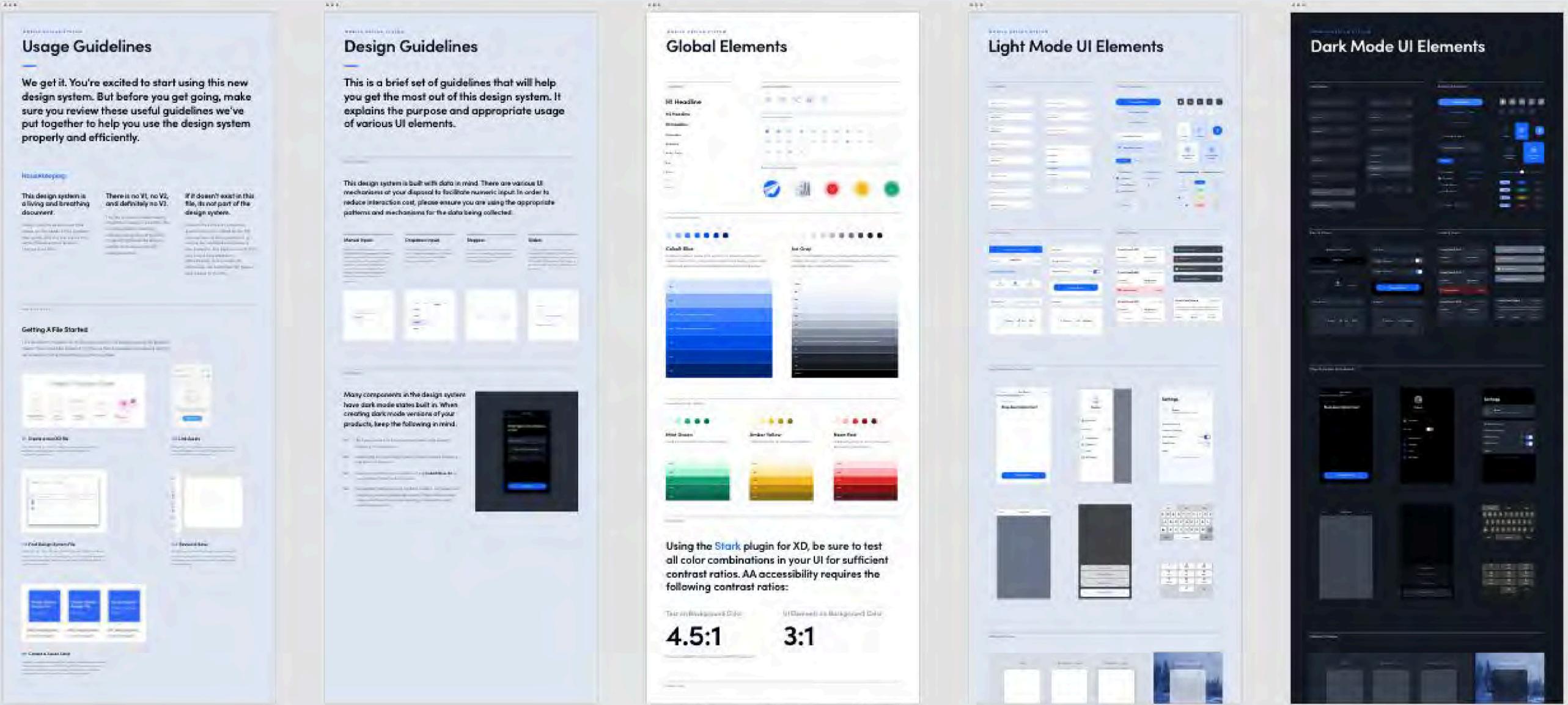
Equipment Details [Edit](#)
Tank (TK-2: TBD_129)

Measures Taken: Notify Supervisor
Put down absorbent pads
Shut down equipment

← Previous **Submit Event**

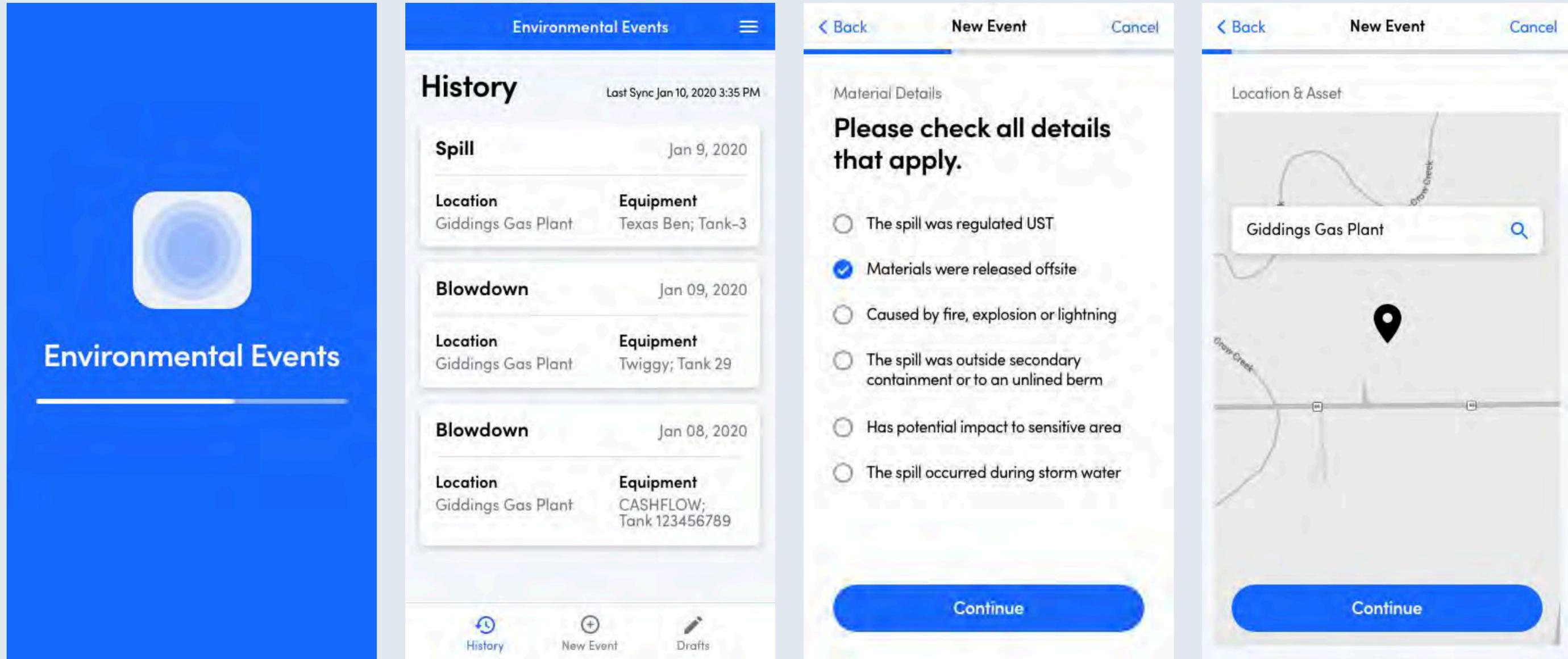
Enhanced OPSTools with Enablon fields for all state workflows.
Virtual UT all regions.

Build - Angular Material



New Material Angular Design Library

Build - V2



Iterated a V2 prototype with new design system, UT findings.
Ionic Mobile Material. On site UT all regions.

Test – Usability Testing

- 8+** Operators (Field & Plant)
- 8+** Environmental Specialists (Field & Plant Managers)
- 4+** Others (Technologists)

Permian • Midcon • Panhandle • Northern Colorado

UT on location in 4 oil and gas fields regions.
Captured with Validately.

Test – Context



Billy Ops

Field Operator

Permian, TX

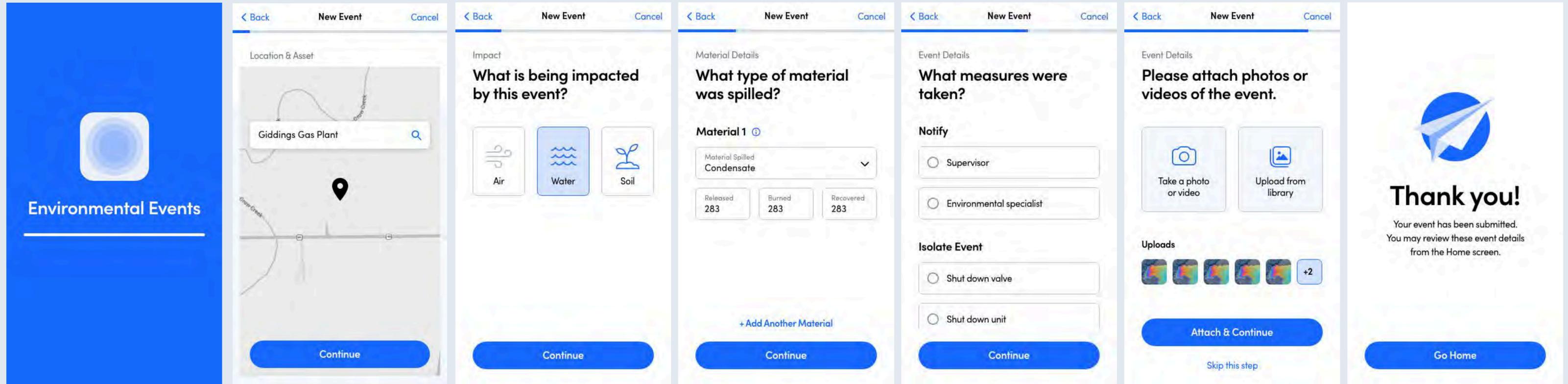
EVENT 1

Spill to Soil & Water

As a field operator Billy Ops you are on location at the Giddings Gas Plant to report a spill to water and soil. You arrive at the Giddings Gas Plant and see condensate flowing out of Tank 3A or what you guys call Bobby's Bayou. It has breached the secondary containment and it is flowing into a pond. You notify your supervisor and turn off the pump and you make note of this in the app. You take a photo make some notes and review the event before you submit it to Enablon through the app.

Real life context, real life feedback.

Test – Prototype Flow



Progression of the experience.

Test – Usability Testing Synthesis

4 of 8 Users

4 out of 8 understood when the spill was discovered.

Event Details

When was the spill discovered?

Sun, Nov 24 10 33 AM

Today 10 34 AM

11 35 PM

Continue

* 50% Validated Needs rework.

4 of 8 Users

Varied responses to equipment details.

Material Details

Please provide the following details.

Review

- Cleanup cannot be completed within 24 hours
- The spill occurred on federal (ie. BLM) or indian oil & gas lease
- Third party damage occurred

~~Event-Area (if spill optional) 50 sq. ft~~

Name of Land Owner
Bill Banks

Continue

* 50% Validated Needs rework.

6 of 8 Users

75% understood sequence.

Review

Please review your information.

You will not be able to edit this information once the event is submitted.

Facility & Asset [Edit](#)

Permian
Goldsmith/Fullerton
Harper Booster

Impact [Edit](#)

Environment Air
Emission Type Equipment & Pipeline Release

Submit Event

* 75% Validated

8 of 8 Users

(8 out of 8 understood) the library and its value

Environmental Events

History Last Sync Nov 24, 2019 3:32 PM

Blowdown Nov 25, 2019

Location Lorem Ipsum Equipment 987654321

Submit Failed. [Retry?](#)

Leak Nov 25, 2019

Location Lorem Ipsum Equipment 987654321

Spill Nov 25, 2019

Location Lorem Ipsum Equipment 987654321

History New Event Drafts

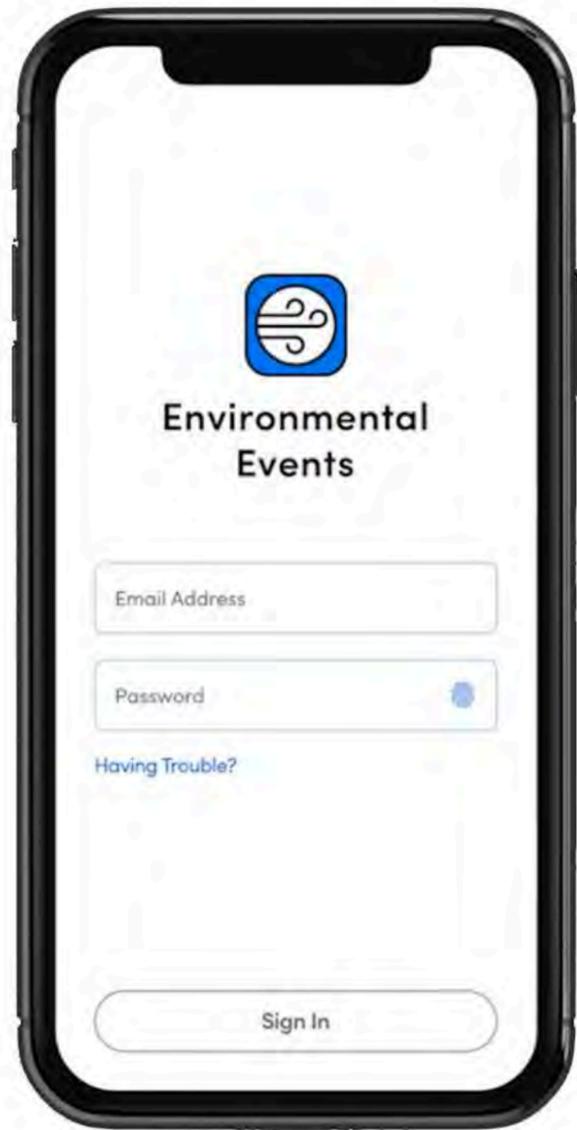
* 100% Validated

Delivery – Completed

- Reworked UI
- 2 rounds of usability testing
- Rebuilt App framework
- Revised MVP
- Consolidated all state workflows
- Pilot launch
- Launch
- Training
- Marketing

Final demo and review. Completed roadmap. Go-no-go.
Development approval to build and launch.

Conclusion - Launch and release



- 100%** Increase in efficiency
- 1** Standard workflow for digital reporting
- 2500** Users connected and using in field
- 6** States meeting environmental compliance
- 3** Offering for SAAS (Shell, Exxon & Phillips 66)
- 3** Legacy products sunsetted

Success

DCP Midstream Slug Catcher Data



Designing for Zero-Failure:
Bridging the Visibility Gap in High-Stakes Energy Infrastructure.

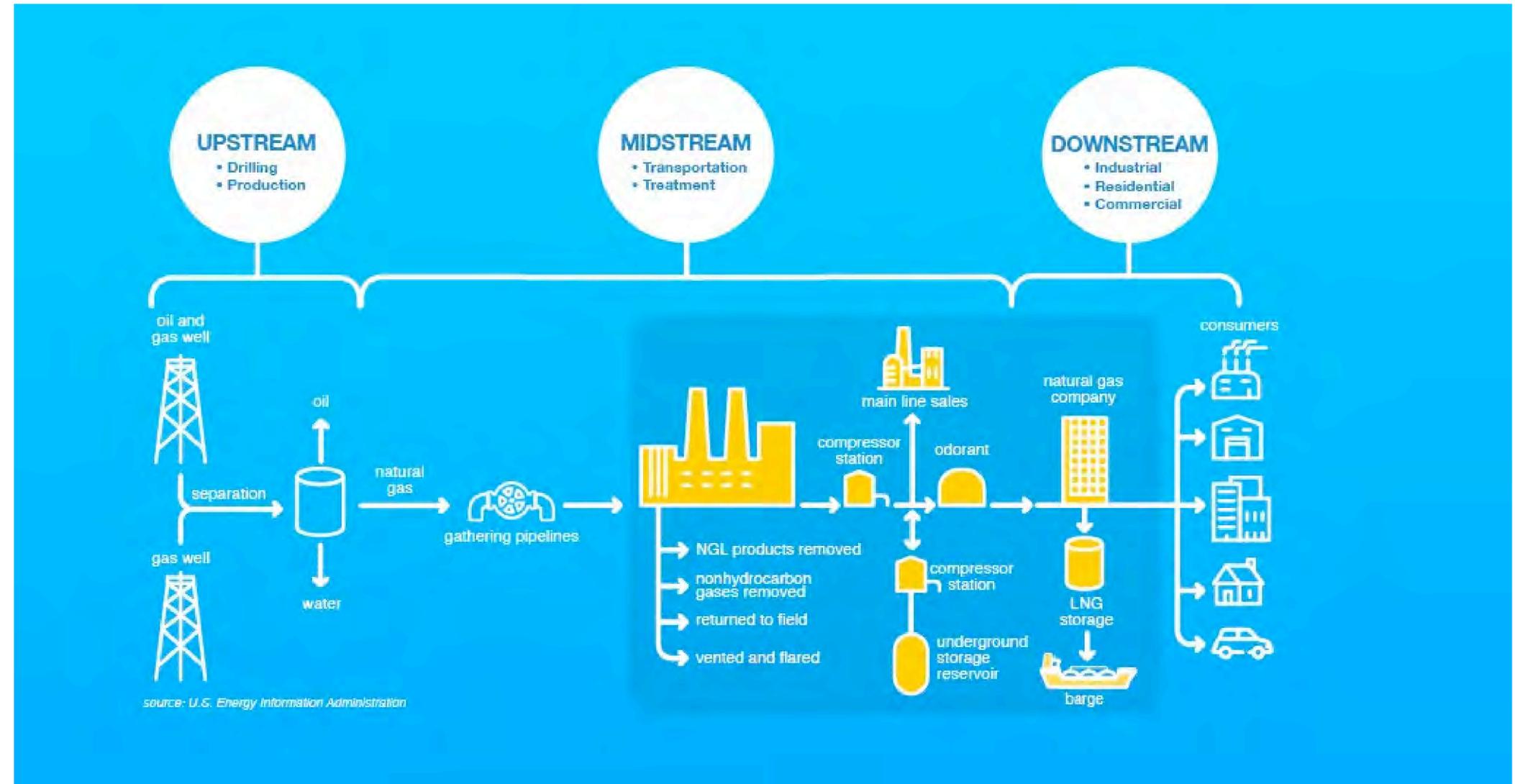


Joel Heaton
Lead UX Designer

Terms: Midstream

Midstream is the 'middleman' of oil and gas—processing and moving product. The UX challenge here was a visibility gap between the pipelines and the plants.

- Pipelines
- Processing plants
- Storage facilities.



The Stakes:

The 'Slug Catcher' is the first piece of equipment at the plant. If it overflows, it's a catastrophic event: hundreds of thousands of gallons of oil spilling, causing fire hazards and soil contamination.



 **798,000 Gallons**

of liquid surge of the plant is not prepared.
A single missed communication = catastrophic flood

Research & Validation:

Mixed-Methods Approach:

Interviewed 7 Operators
(including a 40-year veteran)
7 SCADA IT Experts

The mental model was correct,
but the tools were breaking.

100% Comprehension in Usability Testing

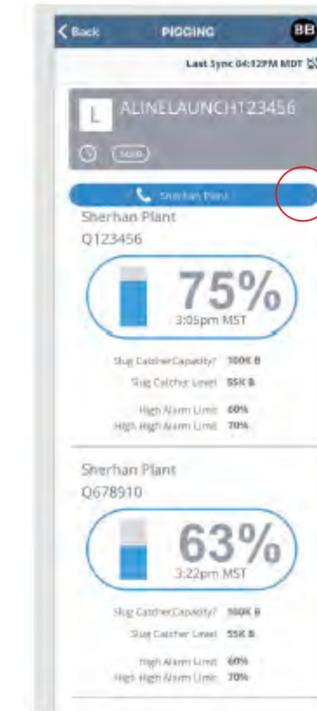
TASK 1

When to discuss levels with supervisors.



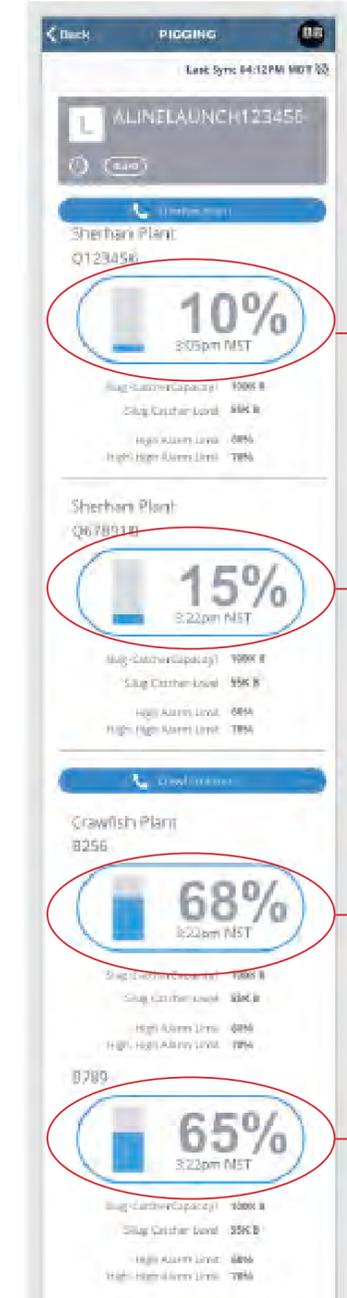
TASK 2

How to escalate high-risk levels.



TASK 3

How to identify available hardware (boosters/multiple catchers).



The Friction:

SCADA is a "failure"

It takes 15–30 minutes to get data, and connectivity in the field.

6 out of 7 Operators

specifically requested SC data on iOS via OPSTools because SCADA was unusable.

Fragmented

visibility across regions (North, Midcon, South, Permian) left plants "flying blind"

Possible data points that Field Ops and Plant Supervisors said would be helpful in OneSight & OPSTools

INLET LINE	LINE COMING INTO PLANT.	
INLET LIQUID HANDLING UNIT		YES PI
FLOW RATE	INLET GAS FROM SLUG TO PLANT, BOOBER	YES PI
PULL DOWN RATE	RATE LIQUIDS ARE PULLED OUT OF SLUG CATCHER.	RARE X NO
DUMPLINE	- SLUG CATCHER DATA UNIT	
EXPECTED LIQUID LEVEL	HYDRAULIC MODEL	X NO
CONDENSATE LEVEL	CONDENSATE LEVEL	NO PI
RAIN RATE	CALCULATION OF HOW FAST LEVEL IS INCREASING.	X NO
VOLUME AVAILABLE	3% OF LIQUIDS - CALCULATION	POSSIBLE?
LIQUID HOLD UP	HYDRAULIC MODEL	X NO
HYDROCARBON AMOUNT	HYDROCARBON WATER	HYDRAULIC MODEL
WATER AMOUNT	"	HYDRAULIC MODEL
SLUG CATCHER VOLUME	PLANTS USE MOST OF BACKFLOW @ 66% AND USES GRAVITY.	? PI POSSIBLE
SLUG CATCHER CAPACITY	STATIC # LEGAL GAS FROM OPERATIONS	? PI POSSIBLE
SLUG CATCHER LEVEL	CONDENSATE LEVEL	X
SLUG CATCHER BRINGING UNIT		X
HIGH HIGH ALARM	DCS + OPERATIONS SOURCE EFFECTIVE	YES PI
AT RISK IN BARRELS	HIGH ALARM IN % CONDENSATE IN BLS	

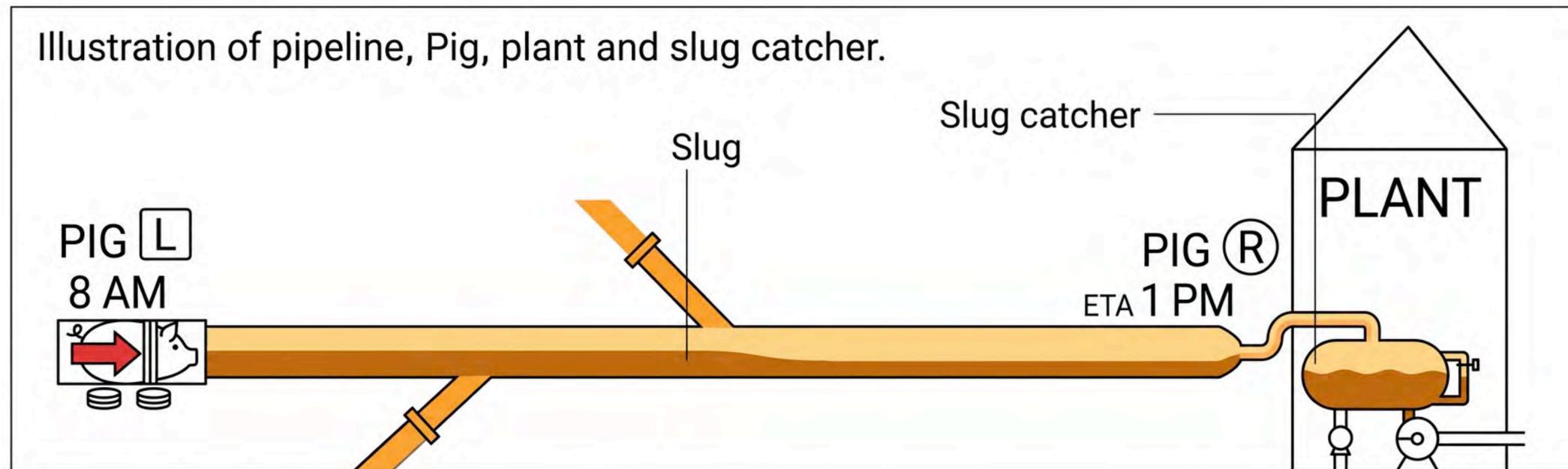
Operators didn't need more data; they needed reachable data.

The Process:

A 'Pig' pushes a 'Slug' (liquid/dirt) toward the plant. If the plant doesn't know it's coming, it floods.



Billy Ops, putting Pig in pipeline



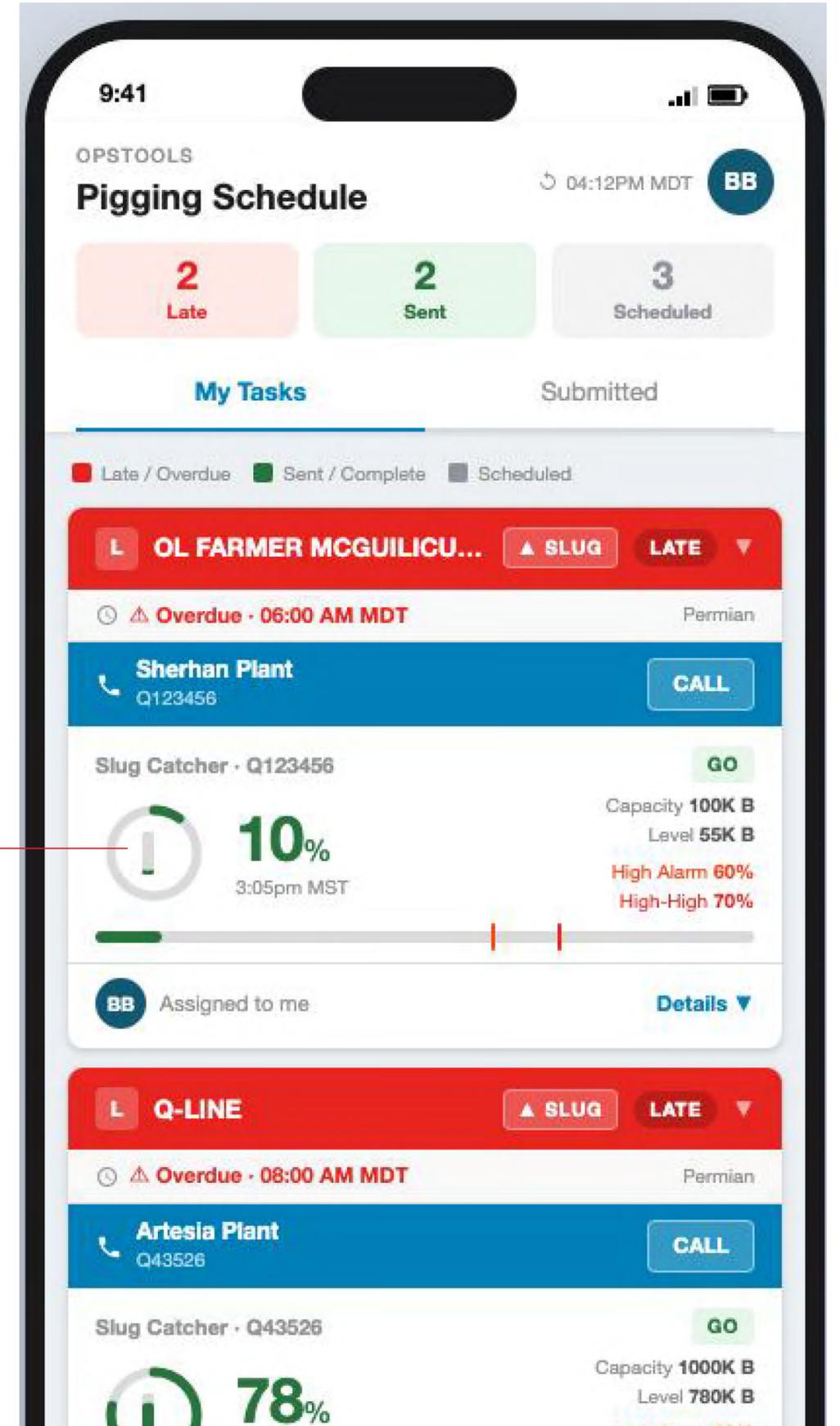
Bill, Pig and Joel

The Solution:

For Field Operators

A real-time UI that visualized tank capacity as a percentage. This gave field ops the immediate 'Go/No-Go' clarity they needed before launching a pig.

Slug catcher capacity showing Go/No-Go



OPSTools: Redesigned

Modern MUI card system with accurate color semantics and live Go/No-Go decision making.

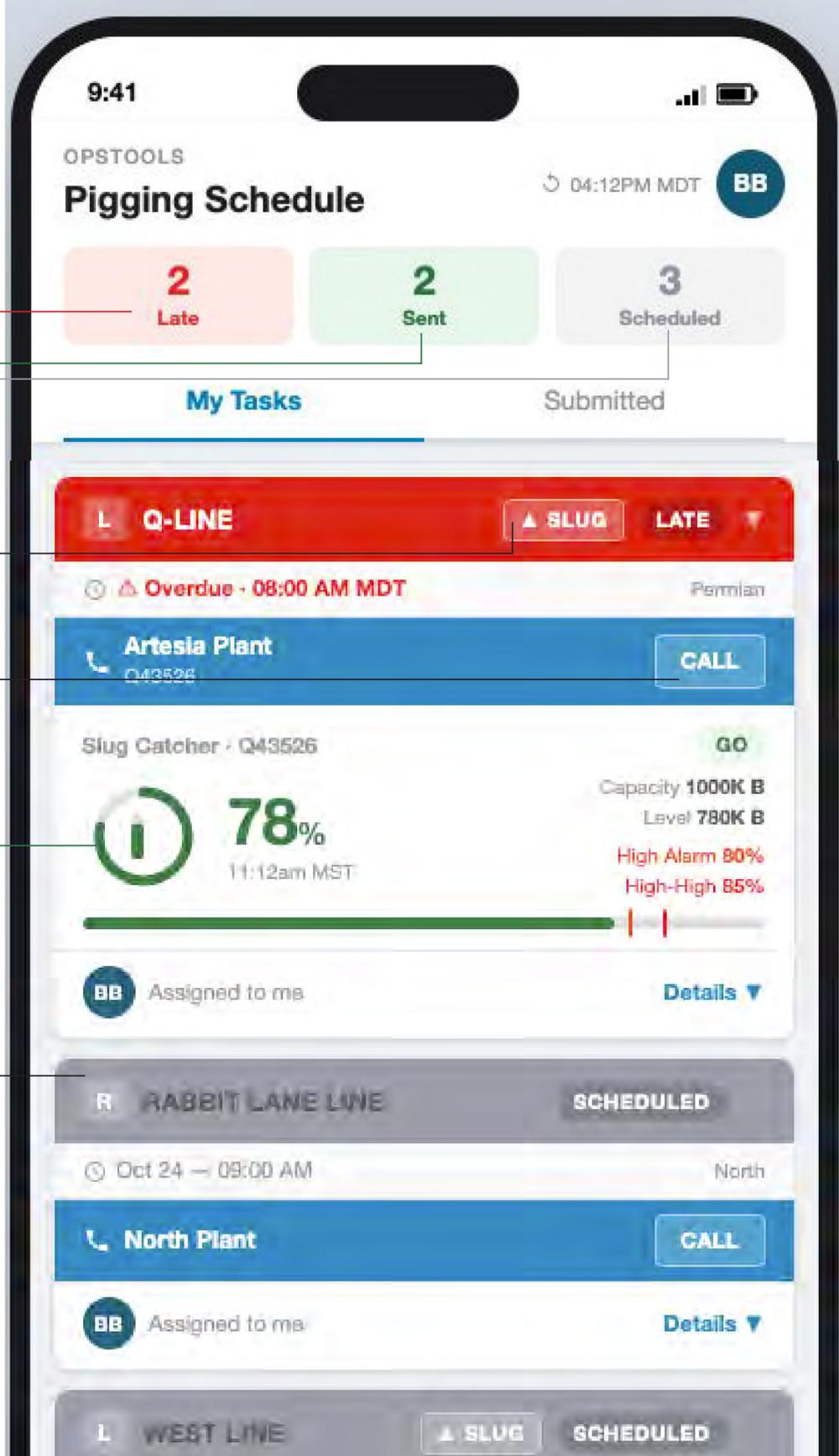
Red = Late / Overdue
Green = Sent / Complete
Grey = Scheduled

Slug Catcher connection IoT device

Call button for Plant

Green = Slug Catcher capacity from PI / SCADA

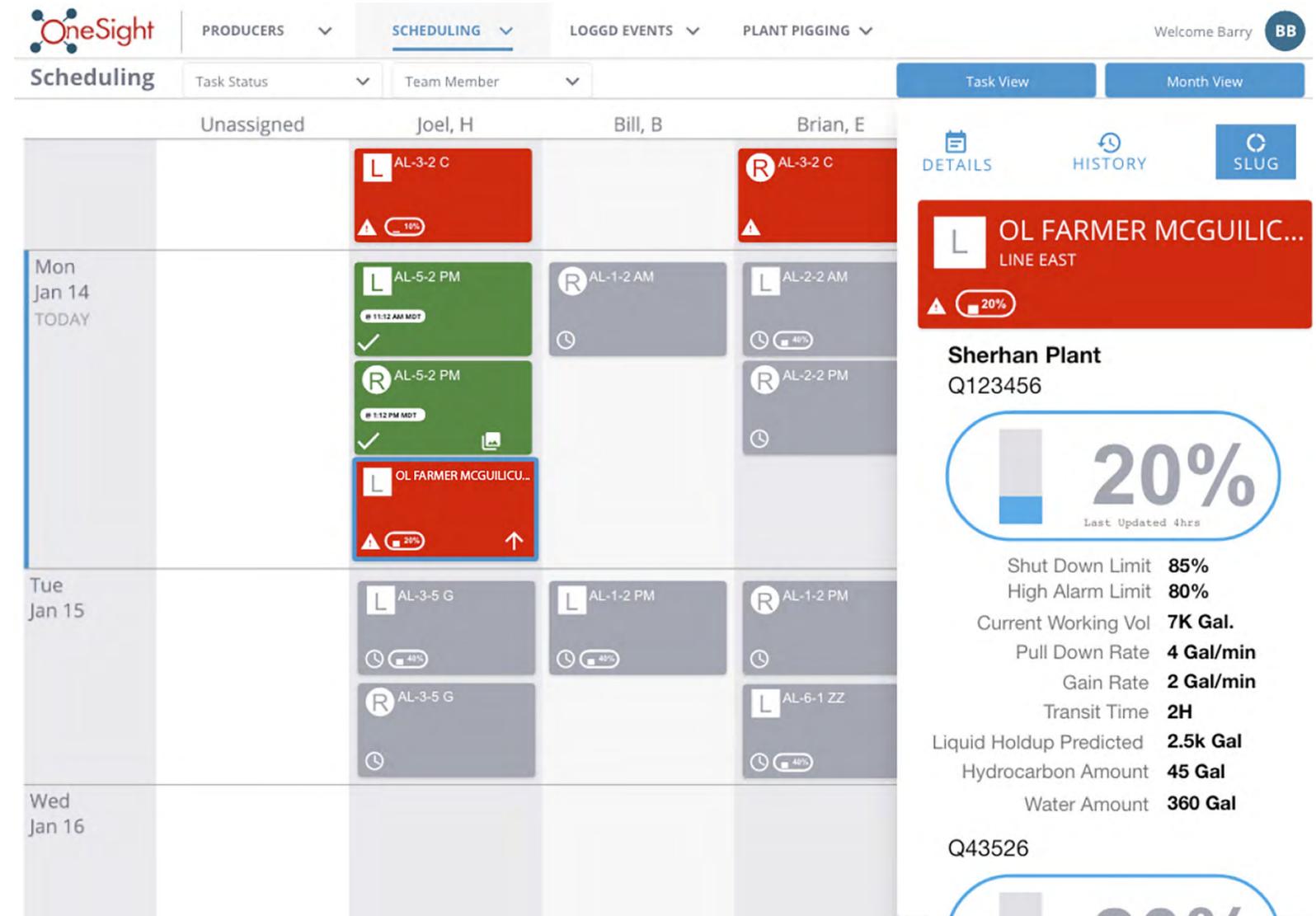
Grey = a scheduled task (may have data)



Desktop Sync:

For Plant Managers

I mirrored this for plant managers. By synchronizing the feedback loop, we removed the 'manual noise' and gave everyone a single source of truth.



Desktop Sync Redesigned

For Plant Managers

The screenshot displays the OneSight Scheduling interface. At the top, navigation tabs include PRODUCERS, SCHEDULING (active), LOGGED EVENTS, and PLANT HIGGING. A user profile for Barry (BB) is visible in the top right. The main area is titled 'Scheduling' and includes filters for Task Status (4 Late, 2 Completed, 3 Scheduled) and Team Member. A calendar view shows tasks for Joel, H; Bill, B; and Brian, E across days from Monday to Wednesday. Tasks are represented by colored bars with progress indicators (e.g., 10%, 78%, 40%). On the right, a sidebar provides details for 'Sherhan Plant' (Q123456), showing a 10% progress indicator and various operational parameters like Shut Down Limit (85%), High Alarm Limit (80%), Current Working Vol (7K Gal), Pull Down Rate (4 Gal/min), Gain Rate (2 Gal/min), Transit Time (2H), Liquid Holdup Predicted (2.5k Gal), Hydrocarbon Amount (45 Gal), and Water Amount (360 Gal). A second plant entry (Q43526) is partially visible at the bottom right, showing a 20% progress indicator.

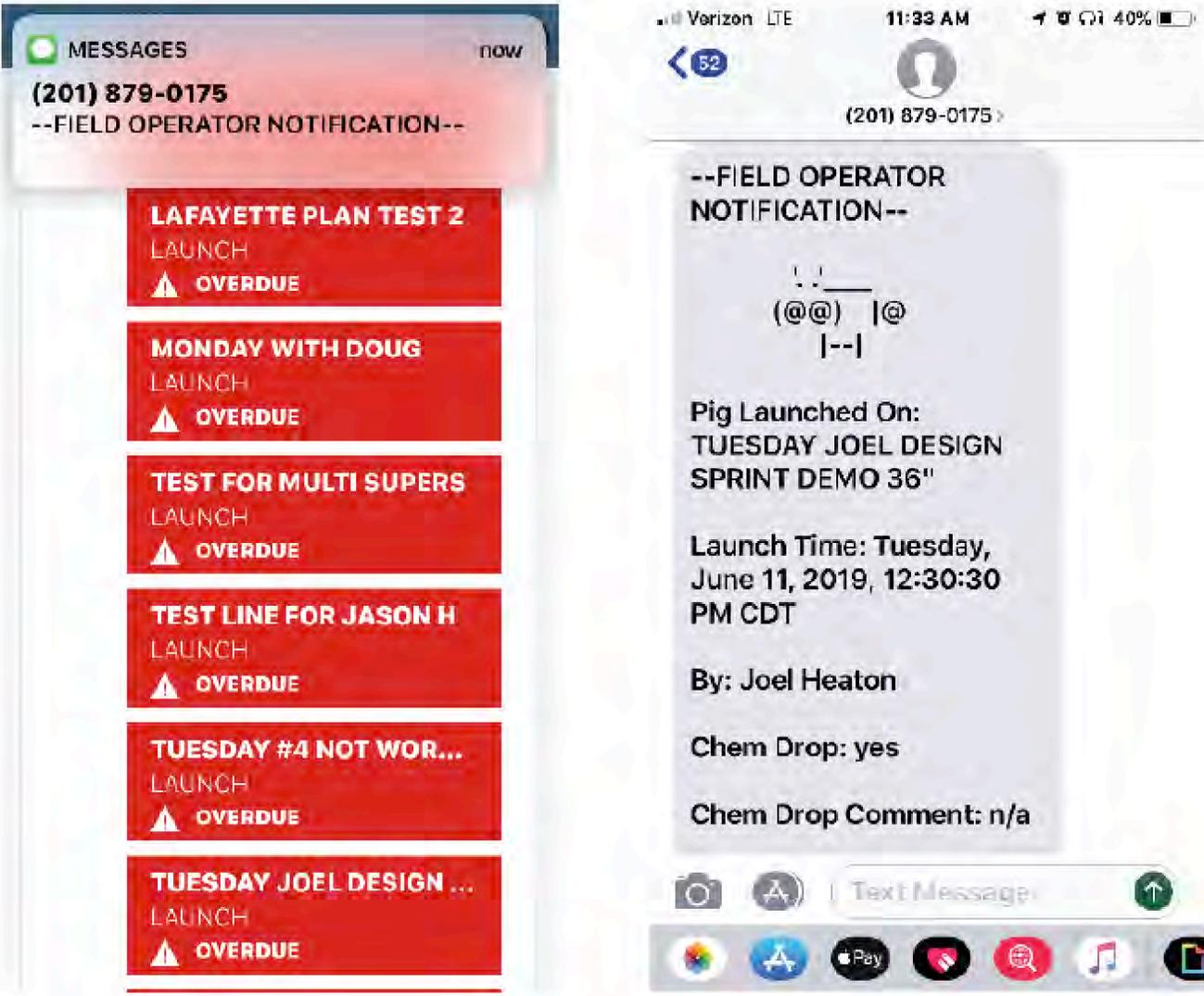
Gas Controller App:

For Gas Controllers

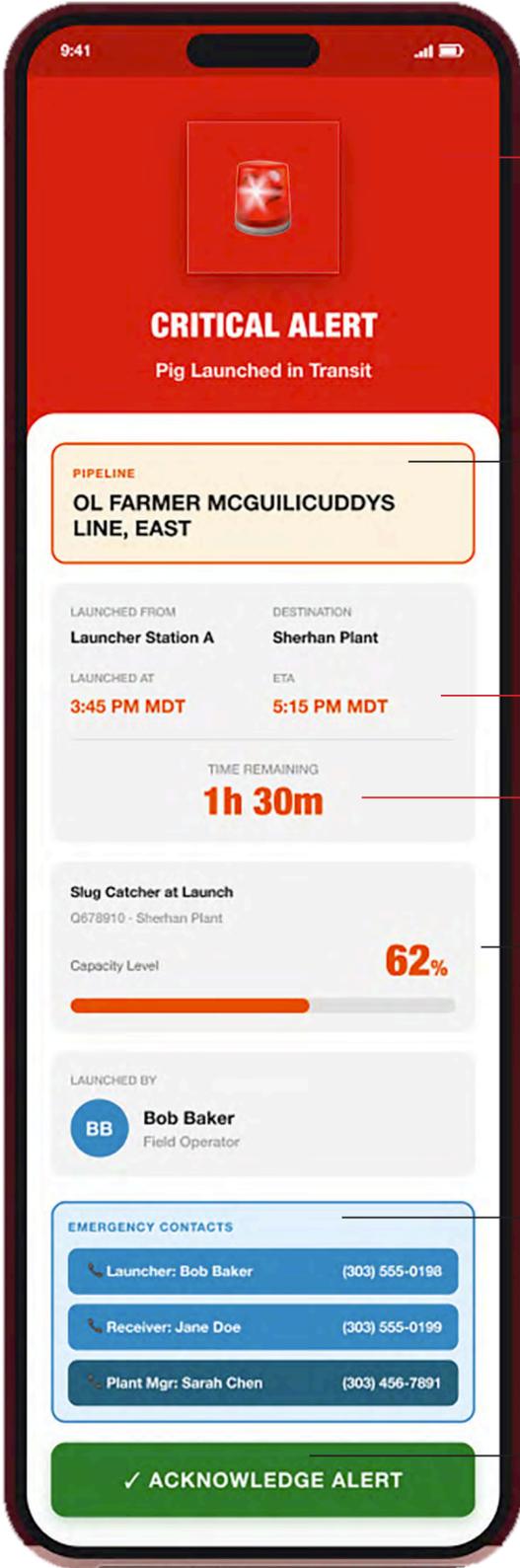
Gas controllers juggle 10 apps on 6 screens.
I designed automated text alerts so they could act on a message rather than staring at monitors all day.



Gas Controller with a sea of 10 applications on 6 screens.



Gas Controller App: Redesigned



Haptic! Ding! Alert!
(Similar to amber alert)

Pipeline

Launch time specs

Time to receive liquids

Slug Catcher data, capacity

Call buttons for:
Launcher
Receiver
Plant

CTA acknowledgment

Before: 10 apps, 6 screens, ASCII text messages, no structure

After: 1 Screen, triage view, Live data, one-tap call

The User

We identified our primary users: the Field Operator (safety) and the Plant Supervisor (capacity). Their core question was: 'Is it safe to send it?'



"The Field Operator or launch operator must communicate the launch. The Plant Ops and Supervisors "Must" know a pig is on the way."

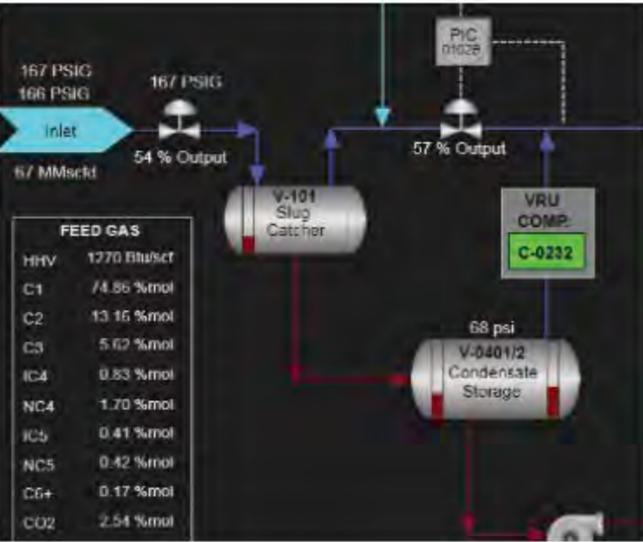
"Its go time, because if that tank is at 60% capacity 700k gallons will flood the plant! Period."

"The operator needs to know, Is it safe?, Can I send it?, Is there room in the tank?"

"The plant needs to handle the condensate and everything coming down the pipe"

Distillation:

I distilled complex SCADA metrics into a single, actionable percentage. This translated raw sensor data into immediate situational awareness.



SCADA Raw Data



Slug Catcher Capacity

One number.
One decision.

Go / No-Go

High Alarm 60%
High-High 70%

Before vs. After:

Before:

Pig Launch: Operators initiate the pigging process, sending an unmonitored liquid slug toward plant.

Fragmented Communication: Coordination relies on manual, “noisy” workflows—including paper logs, clipboards, and verbal hand-offs—that fail to provide a single source of truth.

Operational Visibility Gap: Legacy regional technology and inconsistent scheduling leave the plant “flying blind,” creating a high-risk environment prone to flooding and shutdowns.

After:

Precision Launch: Operators leverage real-time tank capacity data to confirm “Go/No-Go” status before initiating any pigging operation.

Unified Communication: Manual “noise” is replaced by a centralized UI component, synchronizing Field Ops, Plant Managers, and Gas Control through a single source of truth.

Total Situational Awareness: Integrated text alerts and desktop/mobile visibility eliminate the “flying blind” risk, ensuring the plant is prepared for every delivery and protected from flooding.

The Ecosystem:

Three products. One source of truth. Zero missed communications.

OPSTools

Mobile - Field Operator

Launches the pig

Checks Slug catcher levels

Go/No-Go decision

OneSight

Desktop - Plant Manager

Manages the pigging schedule

Sees all team tasks

Monitors slug catcher levels

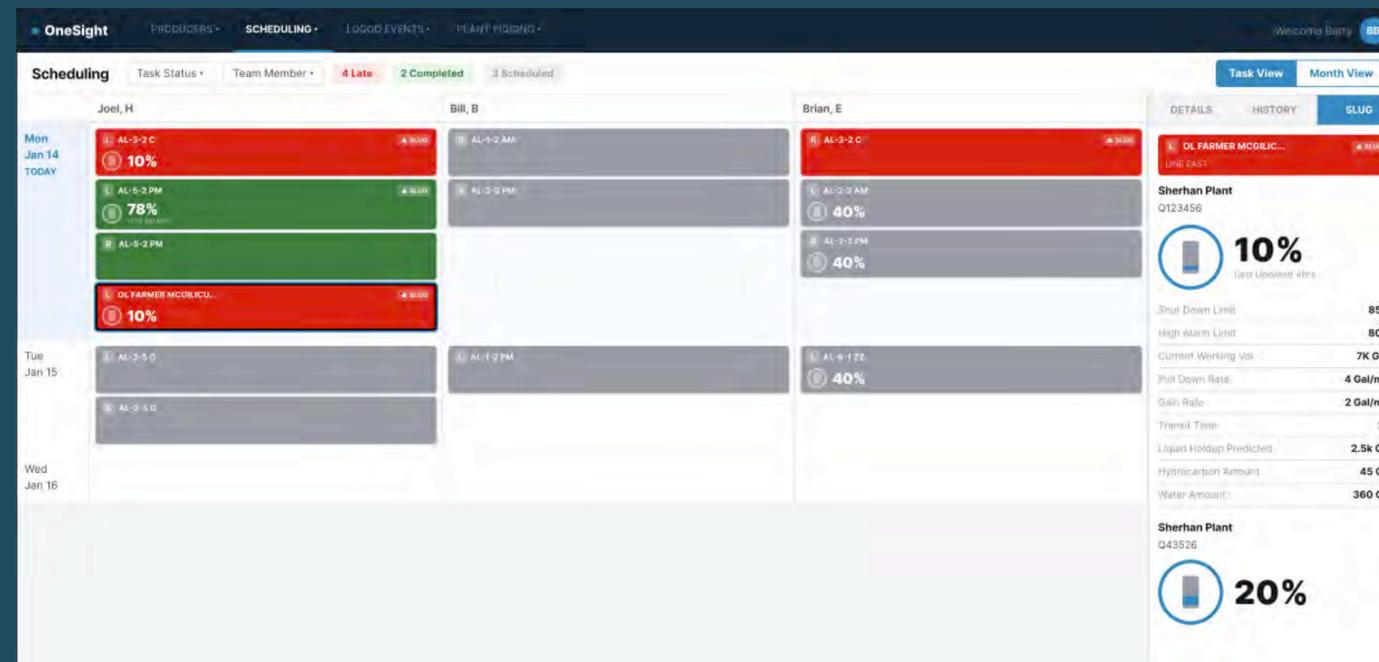
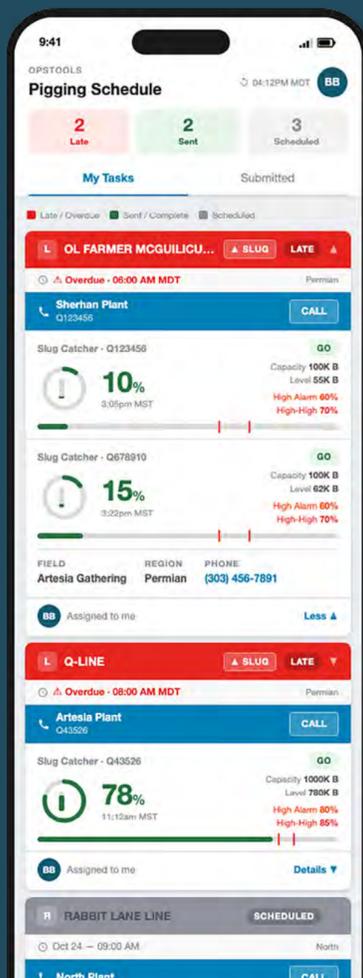
GasController

Mobile - Gas Controller

Receives inbound pig alerts

Monitors surge risk

Prepares slug catcher receiver



Shared design system • RED=Late • GREEN=Sent • GREY=Scheduled
SLUG=live slug catcher data
Go/NoGo gauge • Plant call bar

Validation

We standardized metrics to provide 'at-a-glance' awareness

"This is perfect! It lets the field know... They feel my pain."

"Same as PI a diagram that shows the tank capacity in %, showing how much was in there and how much space there was."

Technical Requirements

IOT Integration: Retrofit older tanks with IOT sensing units to bring legacy infrastructure into the real-time ecosystem.

Critical Safety Logic: Implement "High-High" alarm limits; note that currently only 50% of units support this, requiring a strategic investment in additional IOT hardware.

Standardized Metrics: Display Slug Catcher levels by percentage to provide universal "at-a-glance" capacity awareness.

System Mapping: Identify and integrate unique Equipment IDs for all slug catchers into SCADA for centralized tracking.

The Bottom Line:

By unifying the data stream, we replaced chaotic guesswork with **absolute situational awareness**. We ensured that safety is never compromised by a missed phone call.

Bridge the Hardware Gap: Retrofit legacy assets with IOT devices to bring 100% of slug catchers into the digital ecosystem.

Establish a Single Source of Truth: Replace fragmented texts and word-of-mouth with a real-time dashboard that connects every user—from the field to the NOC—in one accountable system.

Integrate the Data Loop: Map unique Equipment IDs and pipe segments directly into PI and SCADA to ensure metrics are accurate and synchronized.

Prioritize Accountability: Build a centralized scheduling and notification framework where every pig launch is visible, tracked, and confirmed by all stakeholders.

Equus Software Employee Experience



Global Mobility Connected.

A progressive web app
Fortune 500 Enterprise SAAS platform.

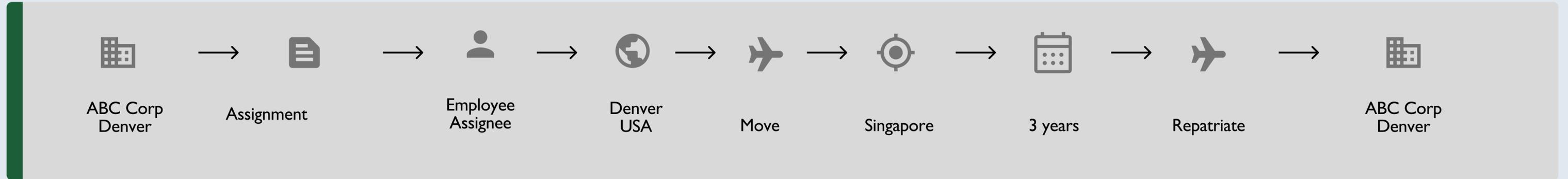
First UX designer

Joel Heaton

Presentation

THE CHALLENGE

Navigating relocation Chaos



The relocation and assignment experience was stressful, time consuming, and rigorous.

Scattered communications from different teams (moving, immigration, taxes, HR, the job) “chaos!”

THE APPROACH

Methodology

PHASE 1: 30 day UX discovery

30 day deep dive discovery by myself

Interviews:

- 8 stakeholders
- 13 users

Artifacts

- Personas
- Journey maps
- Card Sorting
- Surveys
- Application and workflow reviews

PHASE 2: 18 Month Design Sprints

Repeated the Sprint Design format. 1 per month for features, products and enhancements. 5 participants.

Features / Products:

- Employee Portal (look and feel)
- Timeline
- Cards (benefits and Services)
- Messaging
- Visualizations
- Host Country
- And others

Sprint Process:

Day 1: Define/describe

Day 2: Discover

Day 3: Invent

Day 4: Build

Day 5: Test



THE VISION

From Anxiety to Functioning on Relocation

The Goal

To create an elegant, comprehensive experience that minimizes an assignee's anxiety, helps them complete tasks, and gets them on location stress-free and functioning.

- Centralize Visibility: Provide clear access to benefits, policies, and documents.
- Structured Management: Replace scattered communication with intuitive task management.
- Reduce Overload: Use Progressive Disclosure to present information only when it's needed.

WHO Persona “Andy”

Assignee Anxious Andy

EXPERIENCED CHARISMATIC COMPASSIONATE DIRECTOR OF OPERATIONS

“
"I was chosen for an assignment because I was the perfect fit. The role involves managing a newly developed unit and to facilitate operations for large teams. I am excited to share this experience with my wife and kids."

AGE: 42 | MARRIED & KIDS | MALE

Motivations

- Career
- Family
- Success
- Retirement
- Excitement
- Life experience
- Safety

Concerns

- Family needs
- Timeline and immediate future
- Cultural differences
- Job expectations

Essential Needs

- Transparency of job expectations and compensation
- Task timeline and tracking
- Communications (cultural, safety, health, cost of living)
- Family support (housing, goods, schools)

WHO

Andy's Journey - Progressive Disclosure

Assignee Anxious Andy

EXPERIENCED CHARISMATIC COMPASSIONATE DIRECTOR OF OPERATIONS



Critical Principle: Progressive Disclosure - Information must be delivered at the right time, in the right format, for the right phase.

Goal: Get Andy to Phase 8 (relocated, functioning, anxiety-free) as efficiently as possible.

PROCESS

Discovery Insights - User Survey Results

"Would you rather sit down and complete all your tasks as quickly as you can? OR progressively complete task by task?"

10 users

progressively complete task by task

3 users

as quickly as you can

“

It was really scattered... a sea of different emails with no priority.

— Assignee 5, Taiwan

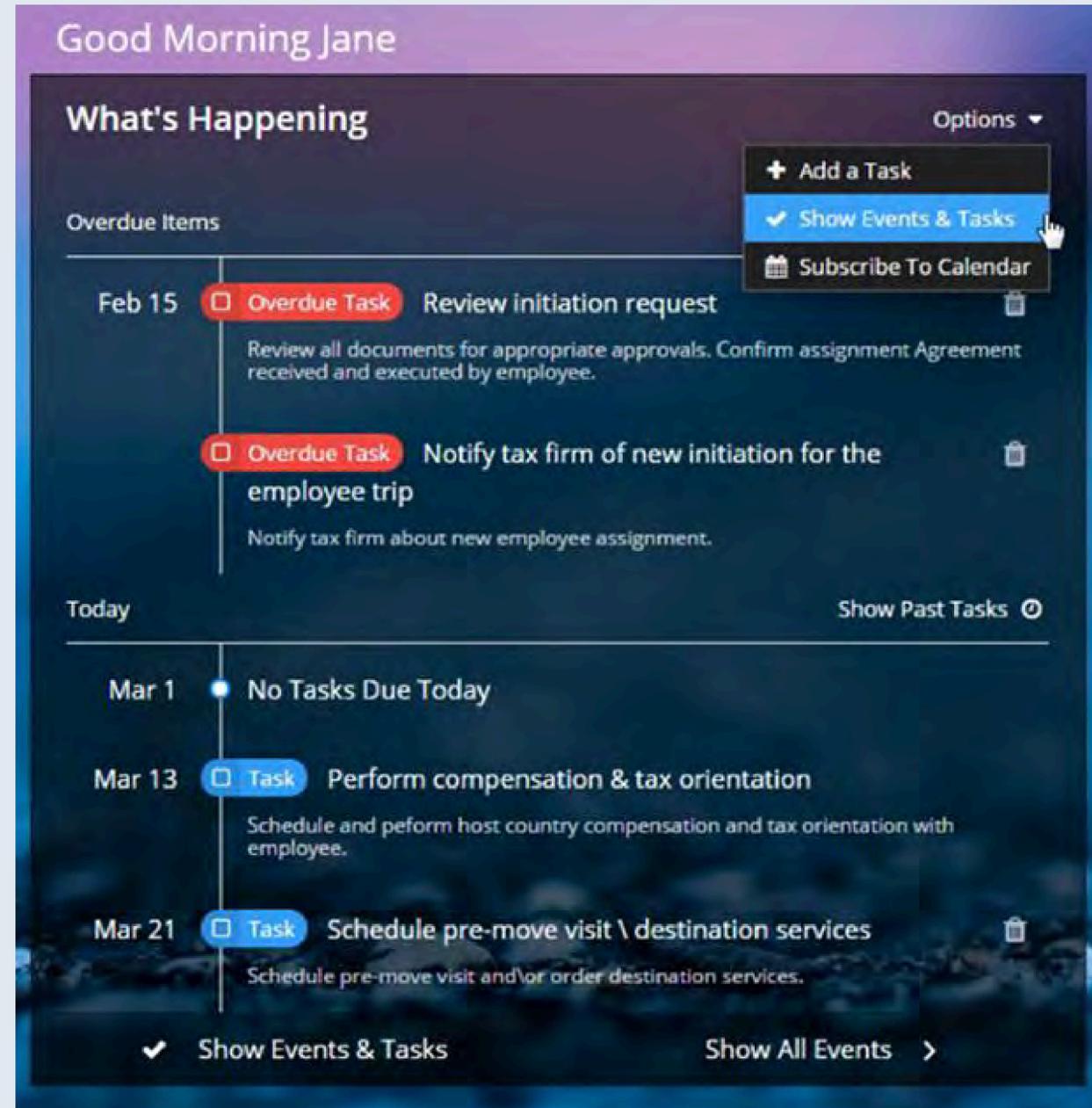
“

If I could have used a master checklist of everything needed so I would have known to follow up when things fell through.

— Assignee 2, London

PROCESS

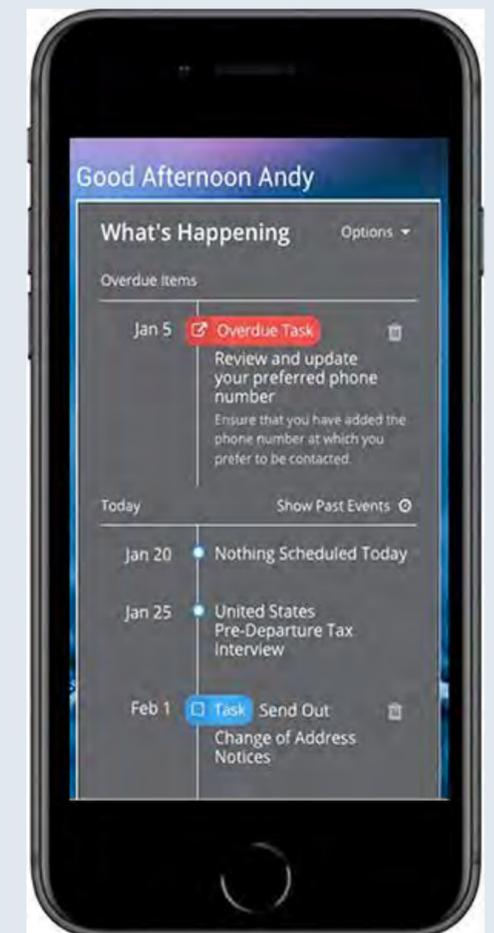
Strategic Timeline - Visual Anchor Design Goal



Minimize cognitive overload, we implemented a strategic timeline that serves as a visual anchor for the user.

This tool keeps them focused on immediate tasks, provides clear visibility into required documentation, and maps out a transparent path toward completion.

- ✔ "What's Happening" section as primary focus
- ✔ Date-based task organization
- ✔ Overdue item prominence
- ✔ Progressive disclosure (show past tasks toggle)
- ✔ Calendar integration



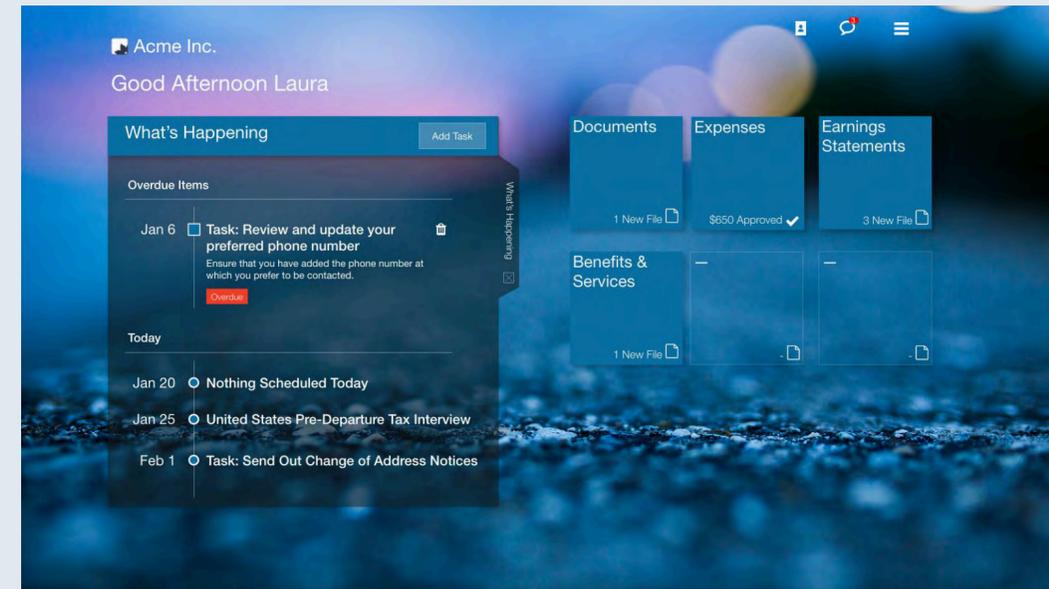
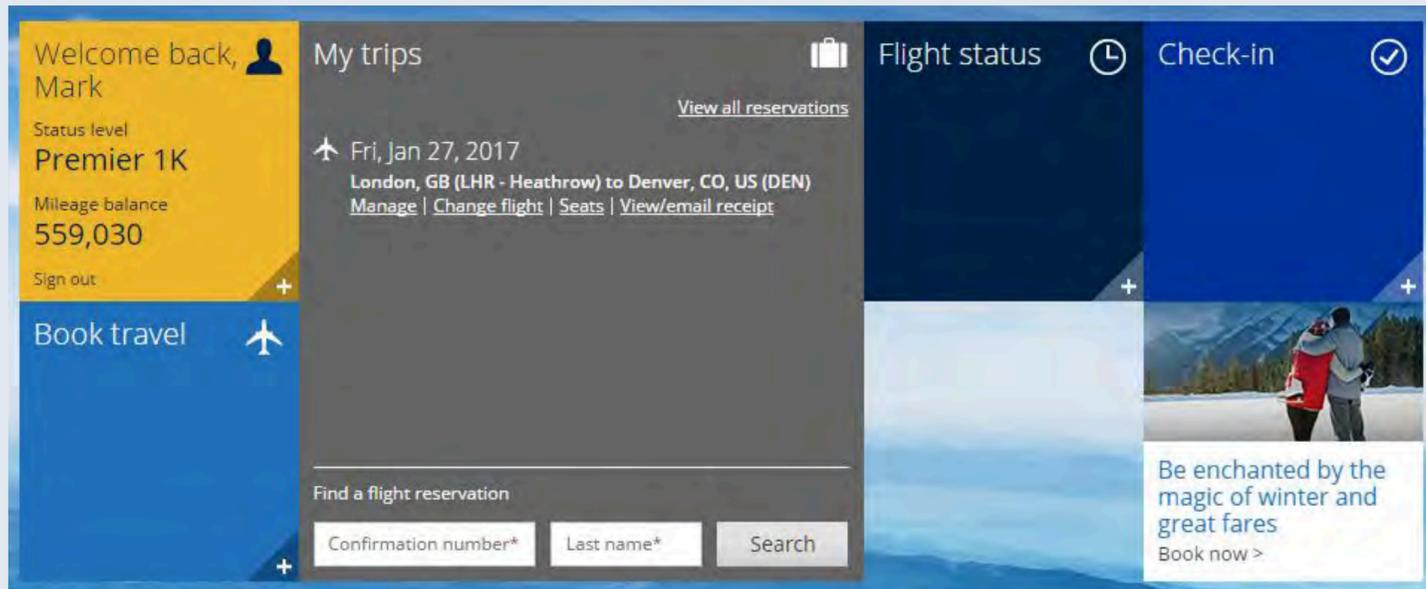
PROCESS

Modular Cards - The Initial Direction

How do we present different work streams (Documents, Expenses, Benefits, Immigration, etc.) without overwhelming the interface?

Initial Direction: Animated Masonry Layout

- Team preference: Colorful masonry card layout (United Airlines)
- Delightful on desktop
- Visually interesting and engaging



“

"Although delightful on desktop, animations and resizing for responsive became jarring and glitchy."

- ✗ Card reflow on mobile was disorienting
- ✗ Performance issues on older devices

- ✗ Difficult to scan on narrow screens
- ✗ Scalability concerns

PROCESS

The Pivot to Accordion

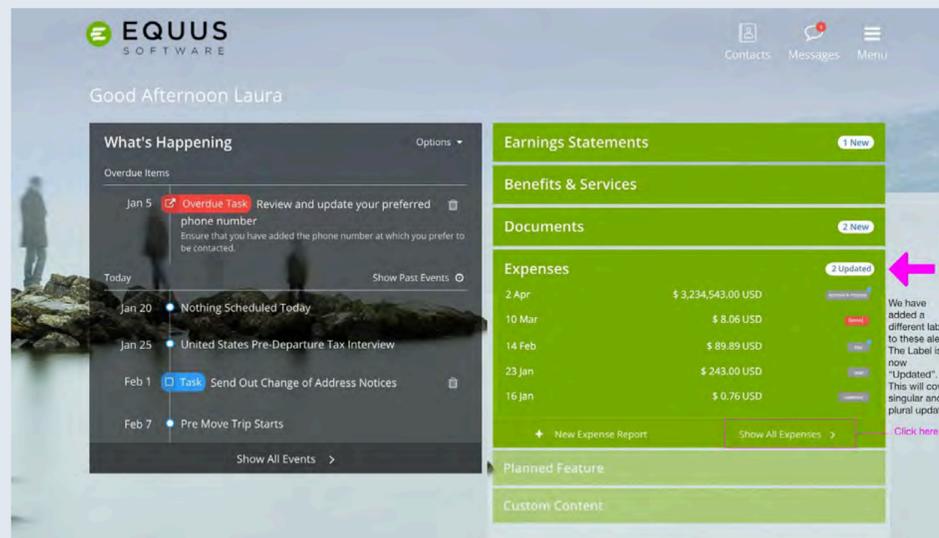
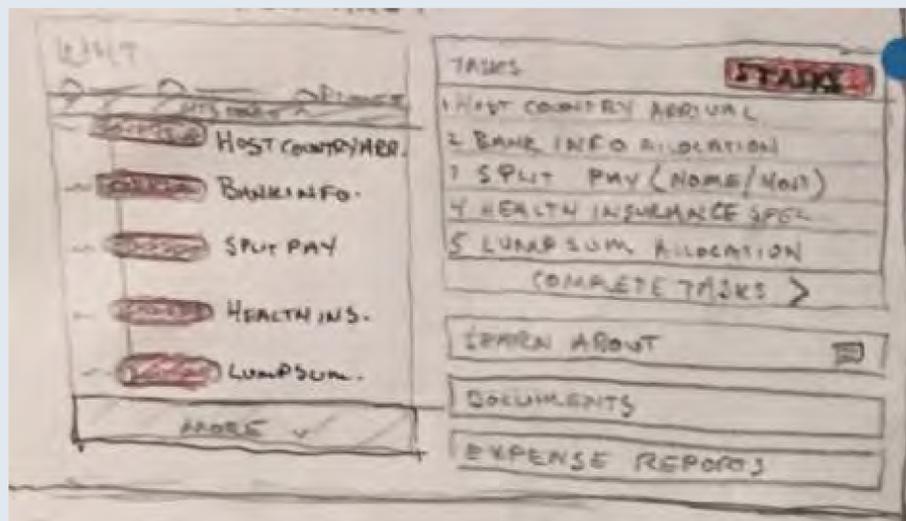
My Proposal:

Pivot to accordion component based on:

- ✔ Survey data: 10/13 users preferred progressive task completion
- ✔ Cognitive load reduction
- ✔ Mobile usage: "I want it on my phone"
- ✔ Better scalability and accessibility

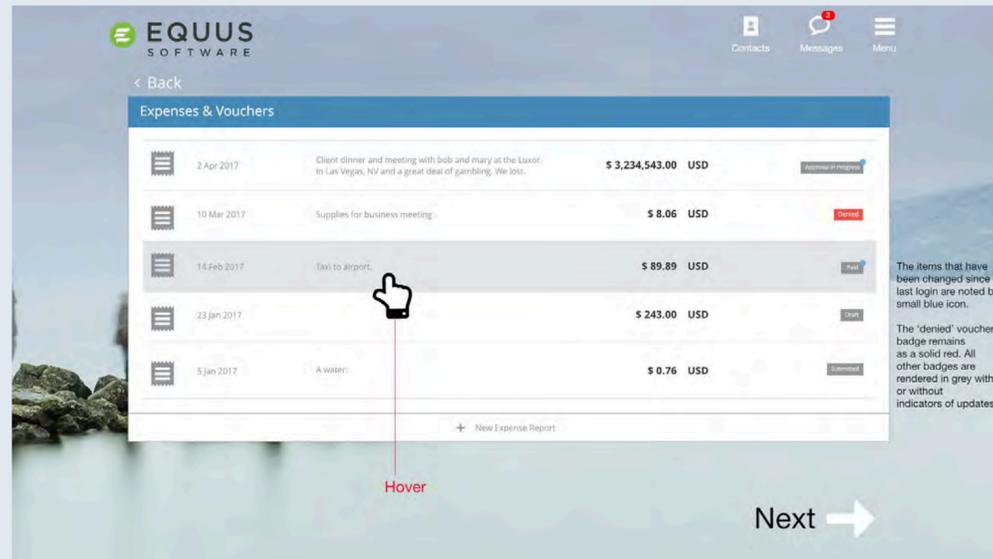
"An accordion worked better for desktop to mobile because it took up less space and interactions were fluid."

- ✔ Responsive-friendly (no jarring reflows)
- ✔ Accessible (keyboard & screen reader friendly)
- ✔ Scalable (add sections without redesign)
- ✔ Progressive disclosure (expand what you need)
- ✔ Performant (minimal animations)



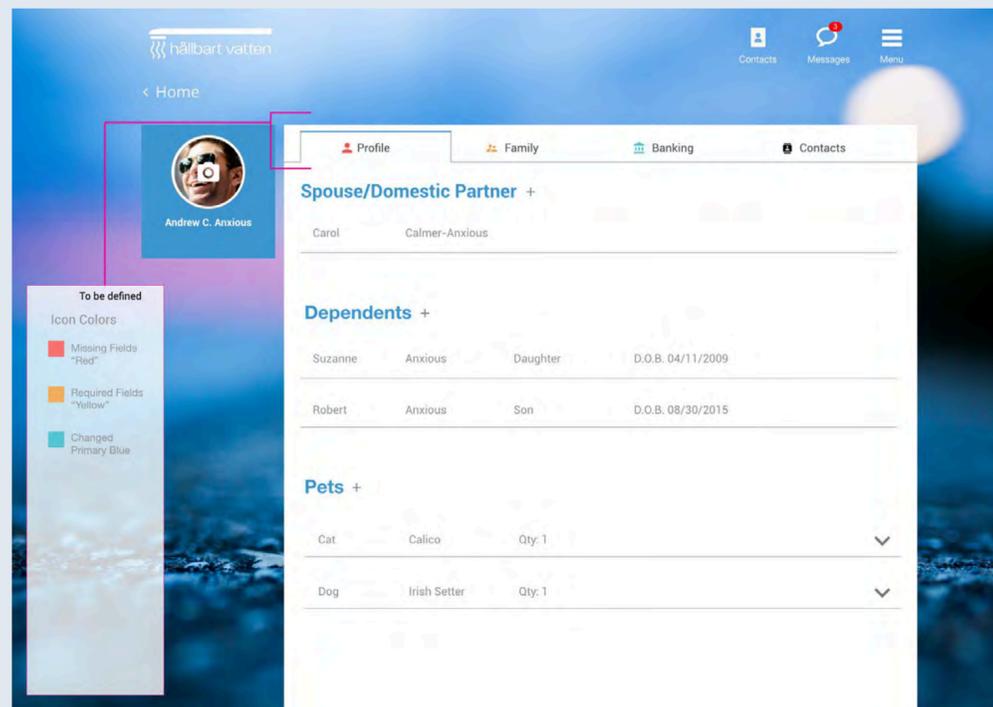
PROCESS

Modular System Expansion



Horizontal Modular Template (Expenses & Vouchers):

- List view of expense items
- Hover state interactions
- Side panel showing item details
- "Next" navigation for sequential tasks



Vertical Modular Template (Profile Page):

- Full-length scrollable modules
- Variable form fields and uploads
- Profile tabs: Spouse/Partner, Family, Banking, Contacts
- Responsive mobile adaptation

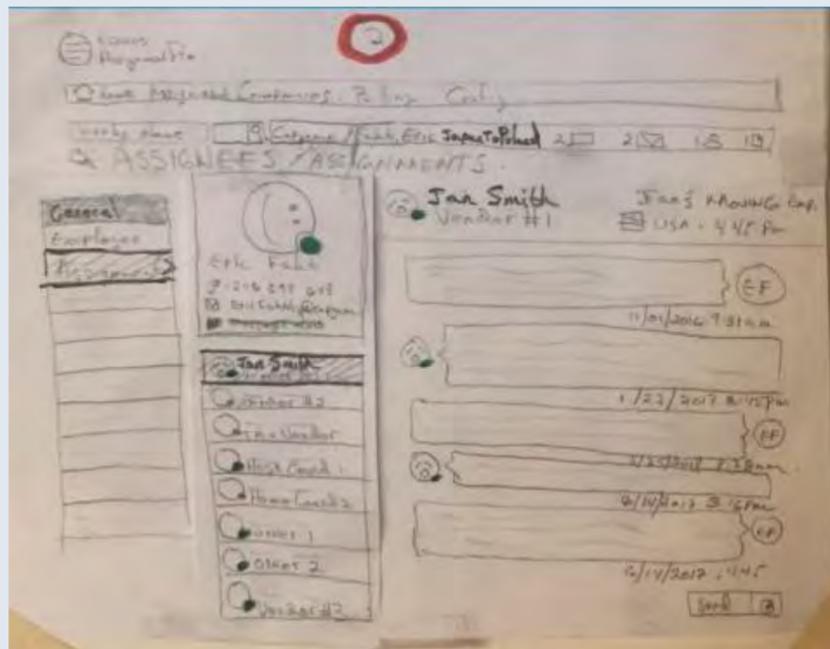
THE RESPONSE

Key Feature 1: Centralized Messaging

“

It was really scattered... a sea of different emails with no priority.

Assignees received scattered communications from Global Mobility teams, move coordinators, immigration specialists, tax advisors, HR departments, and third-party vendors—all via different channels with no centralized tracking.



- Integrate a unified messaging tool into Assignment Pro
- Connect Global Mobility teams, third-party vendors, and assignees
- Support text, email, and in-app notifications
- Deliver real-time, role-specific updates

THE RESPONSE

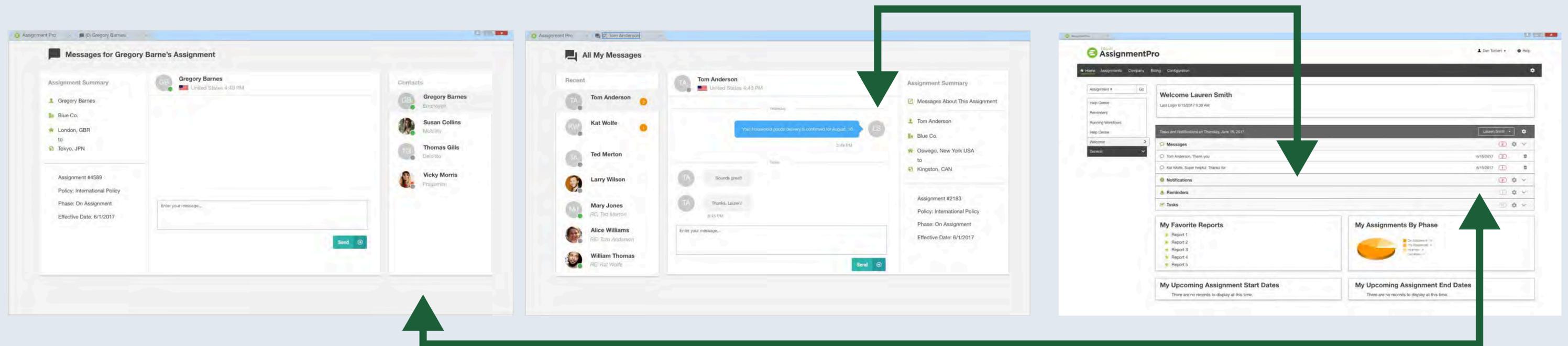
Messaging Impact - Multi-Role Implementation

Navigating Complex Messaging

We bridged the gap between complex security and disparate platforms to create a seamless communication experience.

This empowered HR and Global Mobility teams to connect with users on their preferred devices.

This enables automated AI support systems.



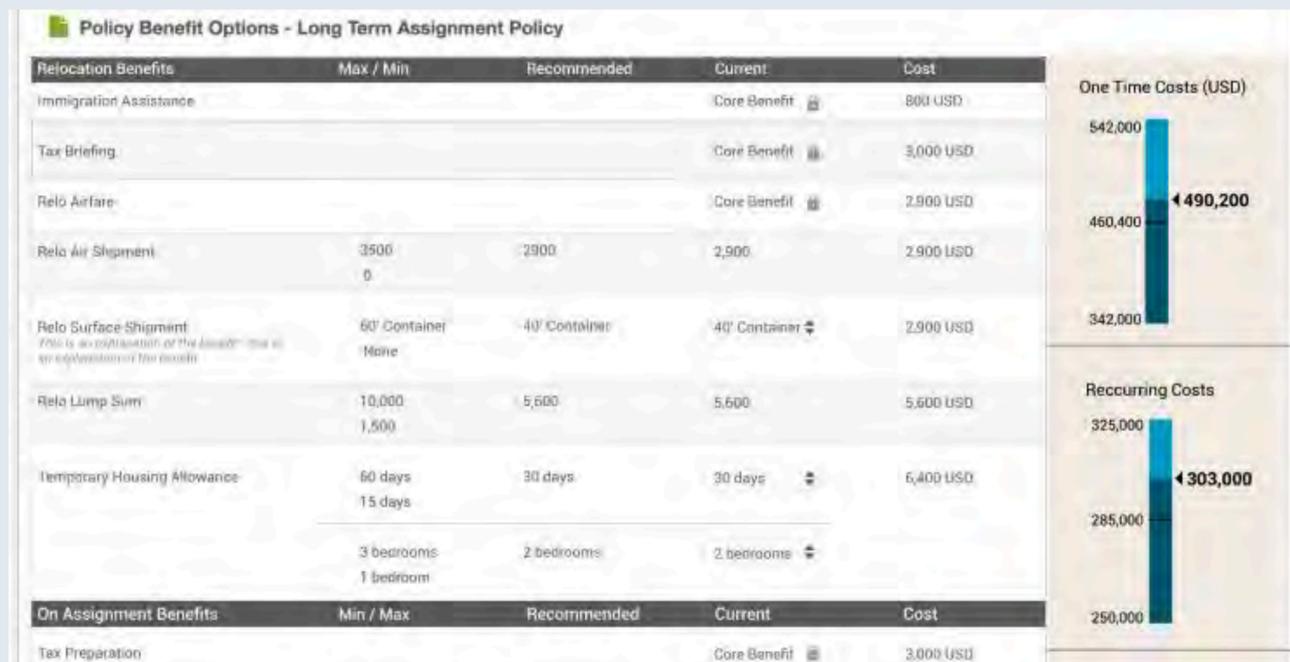
- Andy, Assignee - Message inbox view, assignee perspective
- Tom, Move Coordinator - Coordinator messaging interface, task management view
- Lauren, Global Mobility Coordinator - Admin/coordinator dashboard, multi-user messaging

THE RESPONSE

Key Feature 2: Financial Visualizations

The Challenge:

HR teams and Global Mobility coordinators needed real-time visibility into relocation costs (actual vs. budgeted), storage costs over time, and assignment authorization expenditures.



- I integrated a dynamic bar graph into the HR interface to provide real-time visibility into relocation and storage costs.
- This visualized data enables HR to make faster decisions, maintain budget oversight, and drive more informed conversations with assignees.

"Adds context and visualization to the conversations with the assignee."

THE RESPONSE

Key Feature 3: Host Country Resources

Host Country - Communicating Expectations

“

Assignees must understand the host country's reality—especially having children, fundamentally changes the requirements and trade-offs for a relocation.

— Stakeholder Interview

“

Provide a centralized resource—like a website or welcome kit—covering logistics, health, and safety. Crucially, include cultural guides to navigate communication differences...

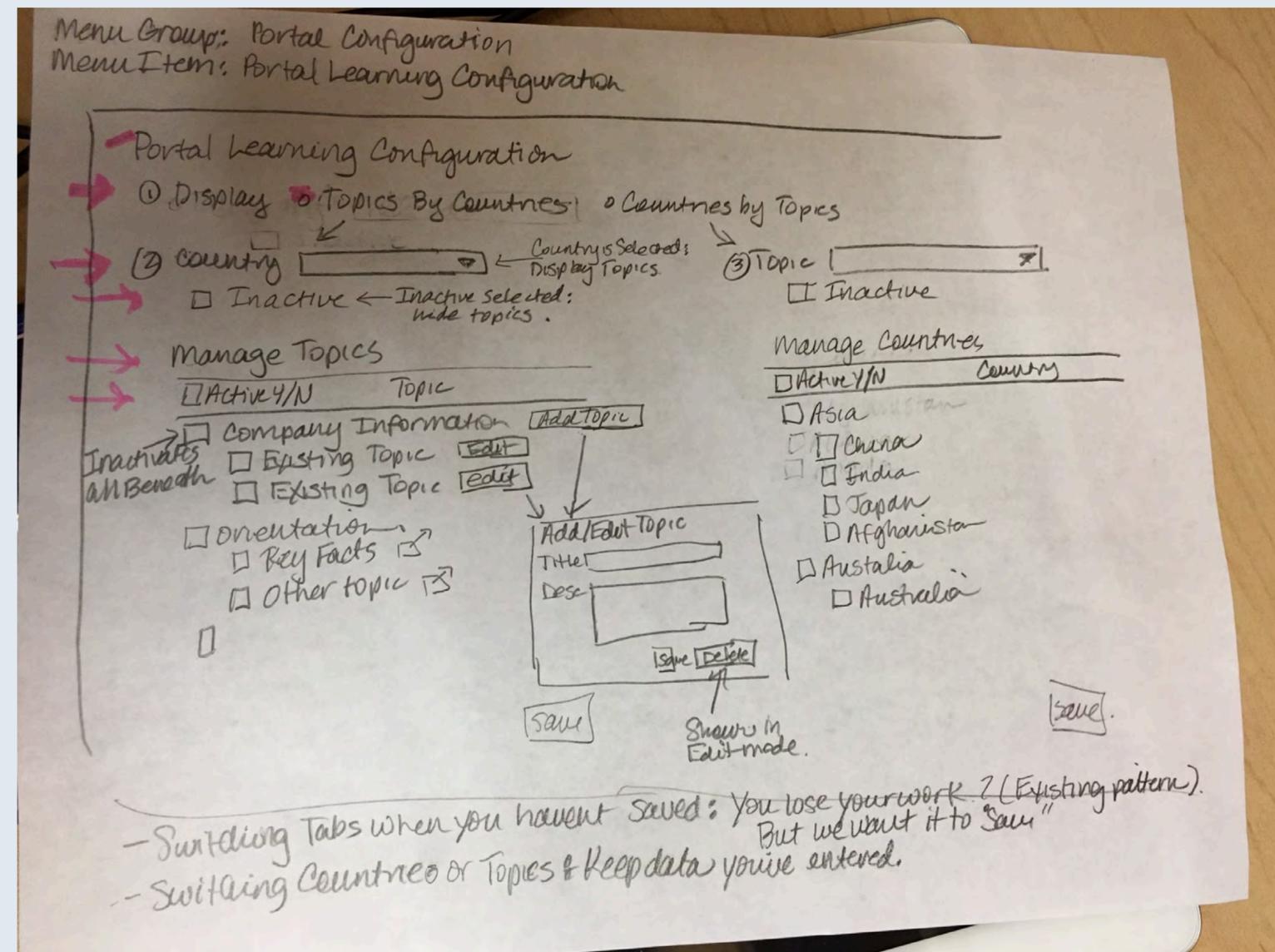
— User Interview

THE RESPONSE

Host Country - Targeted Location Resources

By providing targeted resource articles via AssignmentPro, we helped assignees make more informed decisions based on their specific policy and location.

- Housing options and neighborhoods
- Education systems and international schools
- Local logistics (transportation, utilities, banking)
- Cultural guides and communication styles
- Health and safety resources
- Cost of living comparisons

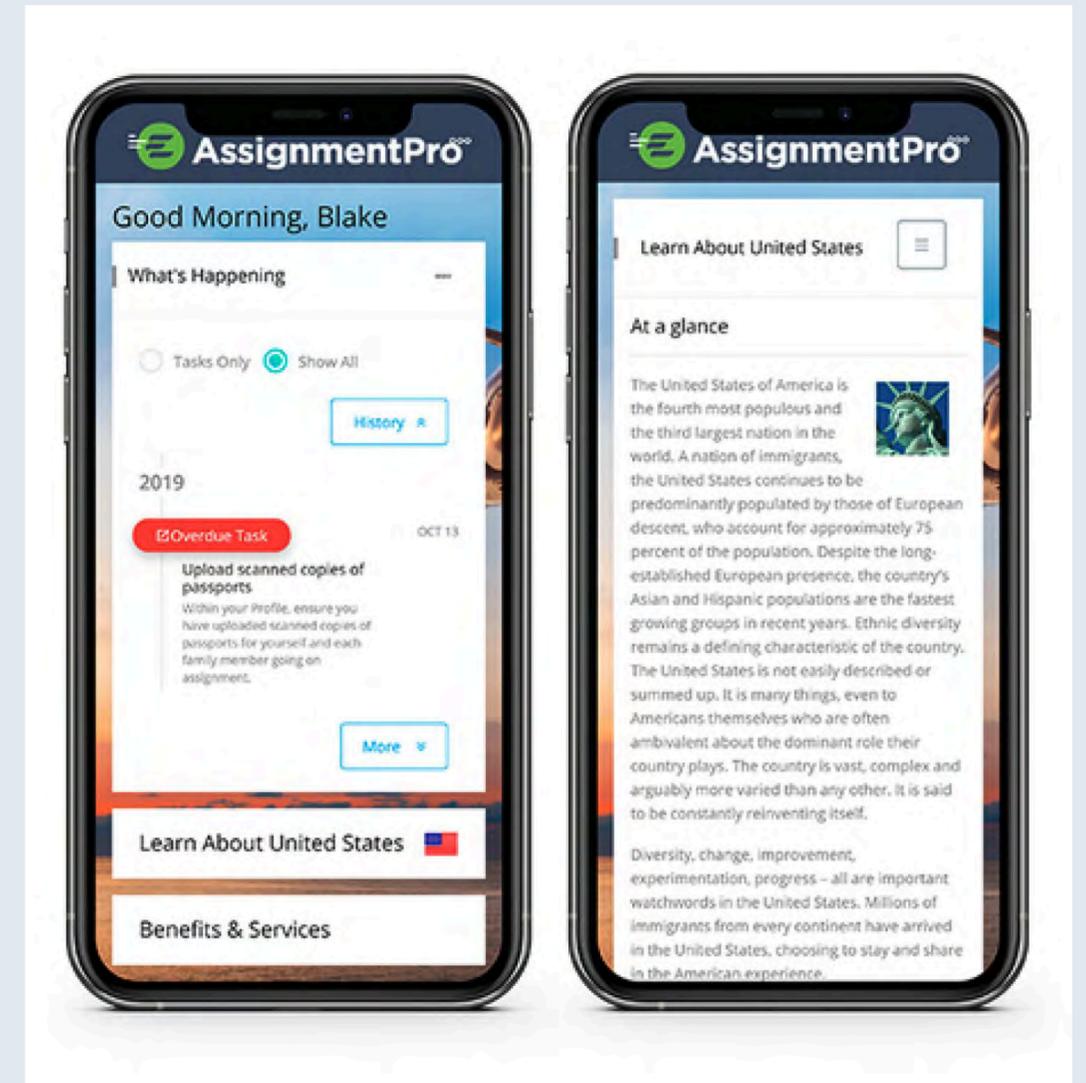
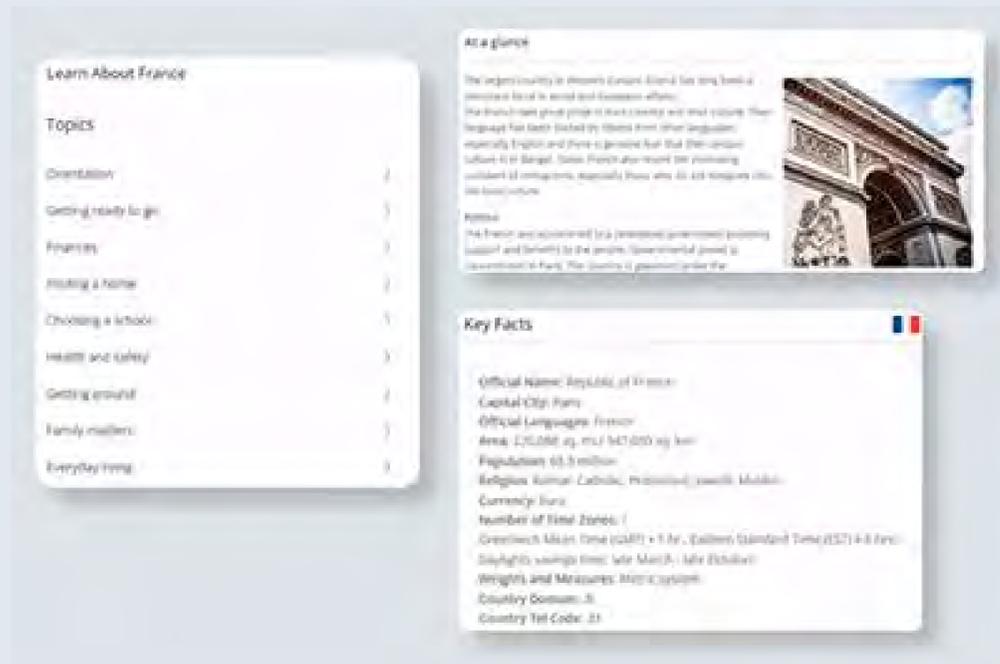


THE RESPONSE

Host Country Mobile Experience

Overcoming Uncertainty

By providing instant access to critical host-country information and former expat knowledge—such as local banking, schools, business culture, and safety—we empower assignees to navigate their new environment with total clarity and confidence.



We replaced anxiety with a centralized mobile hub that delivers location-specific data.

✔ Reduced decision anxiety

✔ Increased assignment acceptance rates

✔ Improved family buy-in (education and safety concerns addressed)

✔ Informed decision-making

THE RESPONSE

Complete Solution Overview

Features Developed Through 18-Month Sprint Process:

Core Features:

- ✔ Employee Portal (look and feel)
- ✔ Timeline ("What's Happening")
- ✔ Modular card architecture (accordion system)
- ✔ Centralized messaging system
- ✔ Financial visualizations
- ✔ Host Country resource hub

Supporting Features:

- Documents management
- Expenses tracking
- Benefits & Services portal
- Profile management
- Immigration tracking
- Task management
- Calendar integration
- Multi-role dashboards

The Modular System: Created a flexible architecture that could adapt to different content types and user needs through horizontal, vertical, and accordion templates.

APPLYING TODAY'S TOOLS
What If I Built This Today?

Same Research. Modern Tools.

The research and UX principles from 2016-2018 remain solid. But the tools have changed dramatically. Using AI and React, I rapidly prototyped what this platform could look like if built today—taking the same user insights about stress, information overload, and mobile-first needs.

What took weeks of custom design and development then can now be iterated in days.

The following slides show a modern UI implementation based on those original research findings.

RAPID PROTOTYPING

Timeline: Built with AI/React

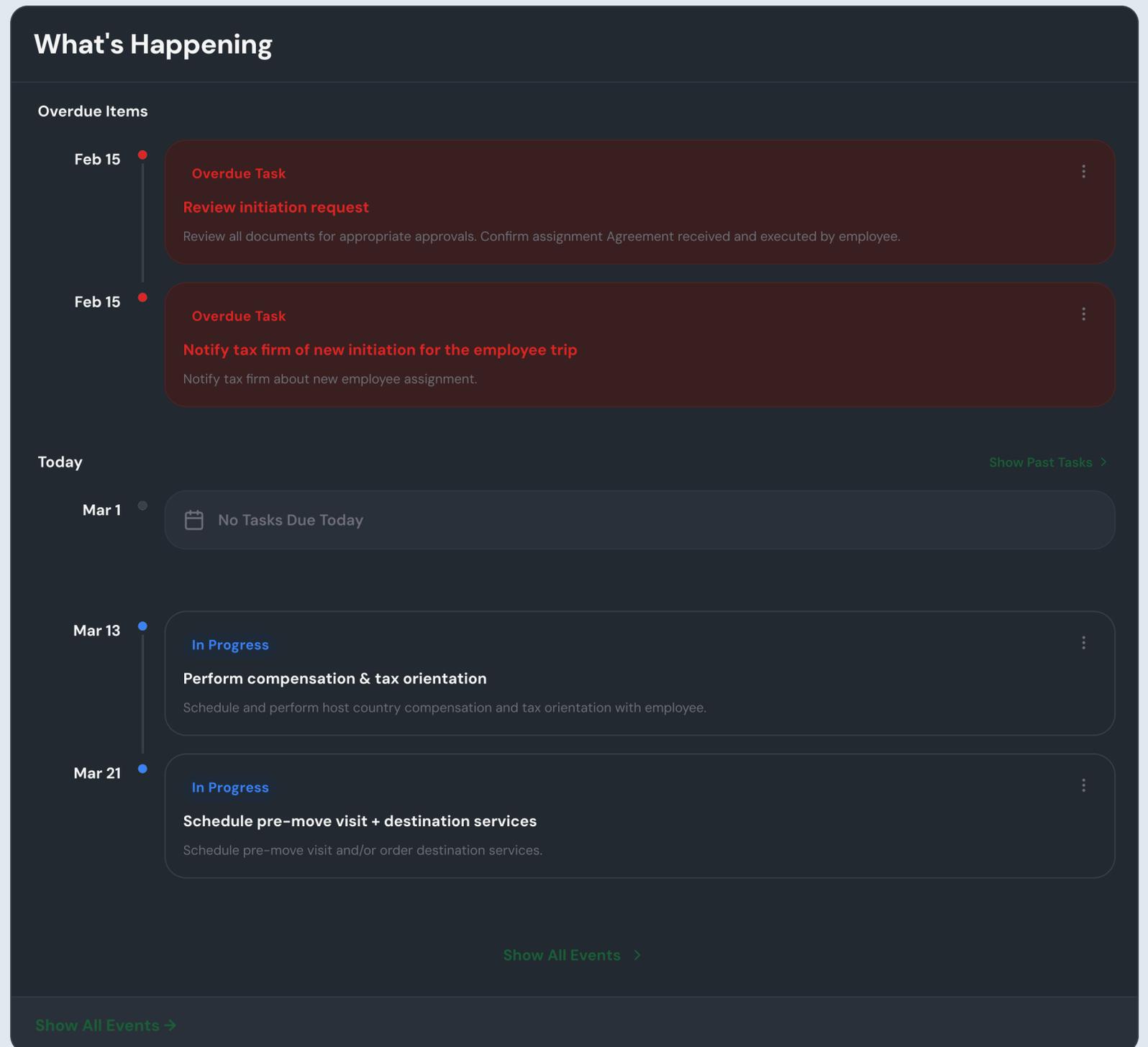
Same UX Principles. Modern Implementation.

Original Research Principles:

- "What's Happening" as primary section (reduces cognitive load)
- Overdue item prominence (anxiety reduction)
- Calendar integration (cross-platform sync)
- Date-based organization (time-sensitive relocations)
- Progressive disclosure (mobile-first)

AI-Generated in Days vs. Weeks

- ✔ Dark theme interface (#0F1419, #232931)
- ✔ Personalized greeting ("Good Afternoon Andy")
- ✔ Interactive task management
- ✔ Forest green brand color (#1B5E38)
- ✔ Fully responsive mobile optimization



The research-driven UX decisions from 2016-2018 translate seamlessly into modern React components. AI accelerates implementation but the human research remains the foundation.

RAPID PROTOTYPING

Accordion Cards: Built with AI/React

The Pivot That Proved Right

2016-2018: The Research-Driven Pivot

- Rejected masonry layout (mobile failures)
- Prioritized responsive design
- Chose accordion pattern (progressive disclosure)
- Optimized for information density

AI-Generated Accordion System

- ✔ Dark theme with forest green (#1B5E38)
- ✔ Smooth expand/collapse animations
- ✔ Mobile-optimized interactions
- ✔ Applied across Documents, Expenses, Benefits, Profile
- ✔ Full CRUD functionality

Benefits & Documents

The screenshot displays a mobile application interface with a dark theme and forest green accents. It is divided into three main sections: 'Benefits & Services', 'Documents', and 'Expenses'.

Benefits & Services: This section is titled 'Your assignment benefits package' and lists several items, each with an icon, a title, a subtitle, and a status indicator in a pill-shaped button.

Benefit	Status
Temporary Housing (House icon)	Active
Relocation Flight Tickets (Airplane icon)	Active
Household Goods Shipment (Box icon)	Scheduled
Destination Services (Car icon)	Active
Children's Education Support (Graduation cap icon)	Active
Global Health Insurance (Medical cross icon)	Active
Cultural Training Program (Globe icon)	Not Started
Cost of Living Allowance (Dollar sign icon)	Active

A link 'View Full Benefits Guide →' is located at the bottom of this section.

Documents: This section lists documents with icons, titles, file sizes, and status indicators.

Document	File Size	Status
Employment Contract	PDF · 847 KB	Signed
Work Permit Application	PDF · 1.2 MB	Pending
Housing Lease Agreement	PDF · 623 KB	Review Required
Tax Forms (IR8A)	PDF · 245 KB	Draft

A '+ Upload Document' button is at the bottom.

Expenses: This section lists expenses with dates, titles, amounts, and status indicators.

Expense	Date	Amount	Status
Flight tickets for family	Mar 5	\$3,240.00	Approved
Hotel stay (pre-assignment)	Mar 8	\$890.00	Pending
Shipping insurance premium	Mar 10	\$425.00	Approved

A 'Total Submitted: \$4,555.00' summary is at the bottom.

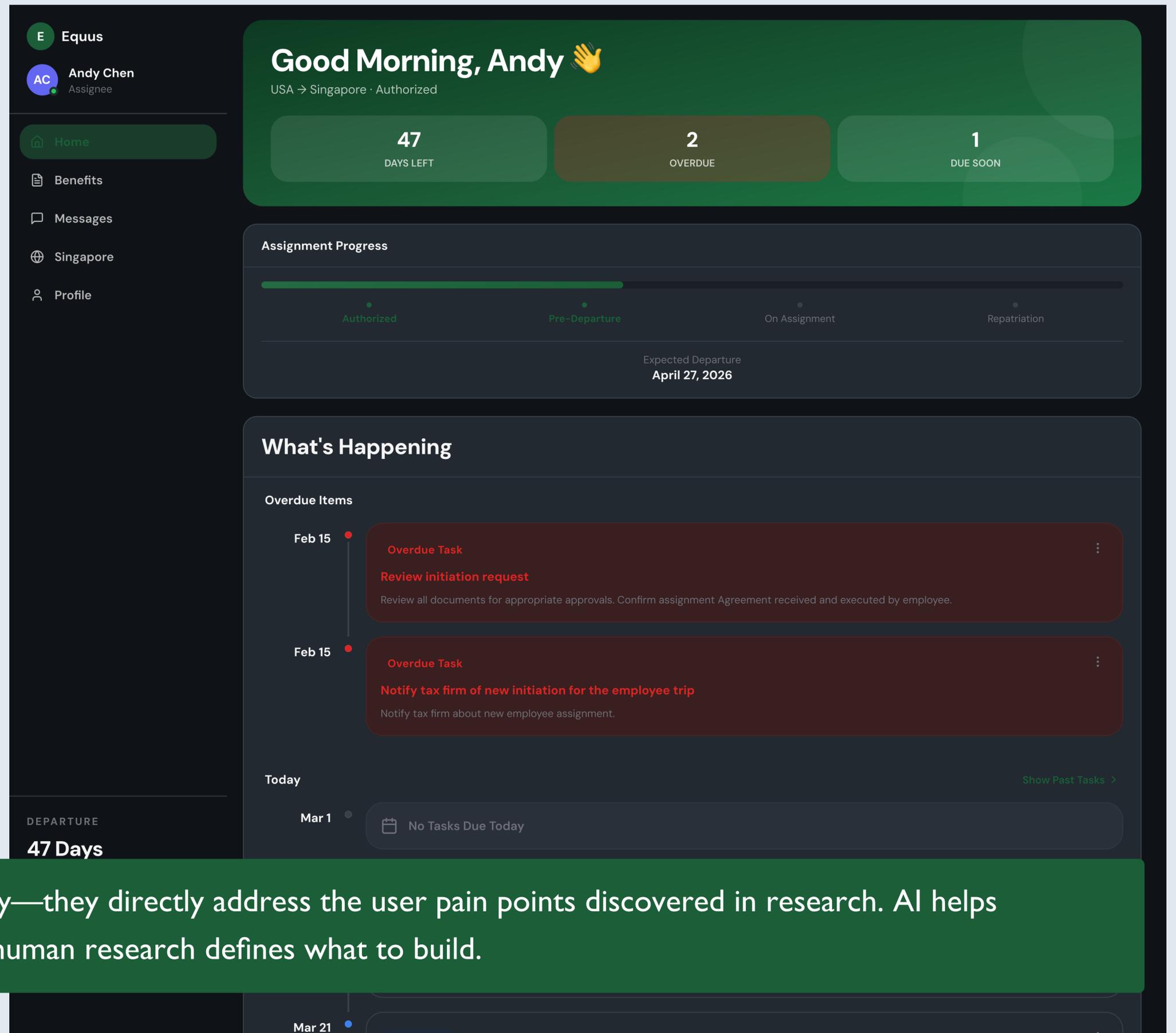
The accordion pattern chosen through user research in 2016 translates perfectly to modern React. The architectural decision was sound—AI just makes building it faster.

RAPID PROTOTYPING Modern Visual System

From Research to React Components

Original Research Insights (2016-2018)

- Users experienced relocation stress and anxiety
- Information overload was a major pain point
- Mobile access was critical during moves
- Clear visual hierarchy reduced cognitive load



The visual design choices aren't arbitrary—they directly address the user pain points discovered in research. AI helps implement these decisions quickly, but human research defines what to build.

RAPID PROTOTYPING Documents Page: Built with AI/React

Full File Management System

Based on Original Insights

- Users needed document access during moves
- Mobile access was essential
- Organization by type reduced search time
- Progressive disclosure prevented overwhelm

AI-Generated Features

- ✔ Accordion organization by document type
- ✔ Document preview modal
- ✔ Status tracking (pending, approved)
- ✔ Drag-and-drop file upload
- ✔ Download and delete actions
- ✔ Fully responsive for mobile use

Documents

6 documents uploaded

Upload Document

Search documents...



Drag and drop files here

or click to browse • PDF, DOC, DOCX, JPG, PNG • Max 10MB per file

	Employment Contract PDF • 847 KB • Mar 1, 2026 • Employment	Signed
	Work Permit Application PDF • 1.2 MB • Mar 3, 2026 • Immigration	Pending
	Housing Lease Agreement PDF • 623 KB • Mar 5, 2026 • Housing	Review Required
	Tax Forms (IR8A) PDF • 245 KB • Mar 8, 2026 • Tax	Draft
	Health Insurance Card PDF • 156 KB • Mar 2, 2026 • Benefits	Active
	Bank Account Details PDF • 98 KB • Feb 28, 2026 • Finance	Signed

Built in days using AI/React. The accordion pattern, progressive disclosure, and mobile-first approach all came from the 2016-2018 research—AI just executes the vision faster.

REFLECTION
What Changed. What Didn't.

The Tools

- AI can generate React components in minutes
- Design systems can be implemented rapidly
- Iterations happen in days instead of weeks
- Prototypes can be fully functional

The Foundation

- User research still defines what to build
- Pain points guide design decisions
- Testing validates assumptions
- Empathy drives innovation

AI and React accelerate execution, but human-centered research remains irreplaceable. The 2016-2018 work proved that understanding users deeply creates design systems that endure—even as technology evolves.

IMPACT

Design Decisions That Endured

Principles That Stood the Test of Time:

1. Progressive Disclosure (10 vs 3 User Validation)

Research: Users prefer task-by-task completion

Design: Timeline with date-based organization

2024: Still the core pattern today

2. Accordion Over Masonry (The Pivot)

Research: Mobile usage expectations, responsive challenges

Design: Professional disagreement, proposed accordion

2024: Accordion pattern remains the foundation

3. Mobile-First Approach

Research: "I want it on my phone"

Design: Responsive from the start

2024: Mobile optimization continues to evolve

4. Modular Architecture

Research: Different work streams need different layouts

Design: Horizontal, vertical, accordion templates

2024: Flexible system adapted to new requirements

Research-Driven Design Creates Lasting Impact

IMPACT

The Transformation Achieved

From Chaos to Clarity

BEFORE:

- ✗ Stressful, scattered process
- ✗ Multiple systems and email threads
- ✗ No centralization
- ✗ No prioritization
- ✗ High anxiety
- ✗ Incomplete information

AFTER

- User-friendly app with total control
- Centralized communications
- Progressive task disclosure
- Clear timelines
- Host country resources
- Mobile access
- Reduced anxiety

Impact on Andy

- ✔ Clear task timeline (Phase 6 → Phase 8)
- ✔ Centralized communications (no email chaos)
- ✔ Host country resources (reduced fear)
- ✔ Progressive disclosure (right time)
- ✔ Mobile access (on his phone)

This ensures an assignee like Andy has the best chance of being relocated, functioning, and anxiety-free.

REFLECTION

What This Project Taught Me

The Principles That Matter:

Research-driven decisions create lasting impact

21 interviews, 30-day discovery, survey validation - Decisions backed by data endure

Solve real problems over aesthetic preferences

The masonry → accordion pivot - Functionality over delight when it comes to task completion

Progressive disclosure respects cognitive limits

10/13 user validation - Design with human capacity in mind

Modular systems adapt to change

Horizontal, vertical, accordion templates - Flexible architecture supports evolution

Professional disagreement drives better outcomes

Team favored masonry, I proposed accordion based on research - Data-backed advocacy matters

Great design isn't about following trends—it's about deeply understanding user needs and creating flexible systems that can evolve.

CONCLUSION

Design That Endures

The Measure of Success:

The comprehensive research, strategic design decisions, and flexible architecture created between 2016-2018 formed a foundation that continues to serve the Equus platform today.

What We Built:

- ✔ Deep user understanding through rigorous research
- ✔ Strategic features addressing core pain points
- ✔ Flexible modular architecture
- ✔ Progressive disclosure principles
- ✔ Mobile-first responsive design

How It Evolved:

The design system matured from experimental prototypes to refined production implementation while maintaining the core user-centered principles established through research.

The Impact:

This work serves thousands of employees navigating the stressful relocation process, ensuring they arrive on location functioning and anxiety-free.

That's the kind of impact that makes design meaningful.

PROJECT DETAILS

Role: First UX Designer

Company: Equus Software

Timeline: 2016-2018 (Design & Prototype)

Platform: Progressive Web App, Fortune 500 Enterprise SAAS

Methodology:

- 21 total interviews (13 users + 8 stakeholders)
- Personas, journey maps, card sorting, surveys
- 18 monthly design sprints (5-day format, 5 participants)
- POC/MVP/Prototype → Refinement → Testing → Development → Go/No-Go

Responsibilities:

- User research and discovery (30-day deep dive)
- Persona development and journey mapping (Andy)
- Design sprint facilitation (18 months, monthly sprints)
- Information architecture and interaction design
- Prototype design and user testing
- Stakeholder collaboration and professional advocacy
- Feature design: Timeline, Messaging, Visualizations, Host Country, Card architecture

Thank you.

The following are all the React screens

Joel Heaton

Presentation

Good Morning, Andy 🙌

USA → Singapore · Authorized

47

DAYS LEFT

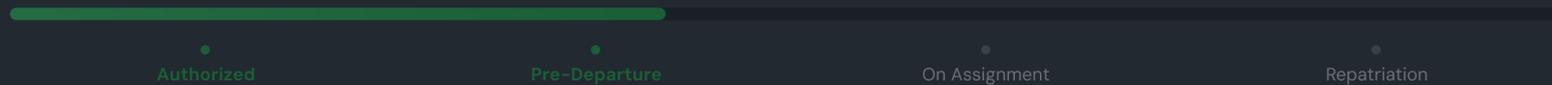
2

OVERDUE

1

DUE SOON

Assignment Progress



Expected Departure
April 27, 2026

What's Happening

Overdue Items

Feb 15

Overdue Task

Review initiation request

Review all documents for appropriate approvals. Confirm assignment Agreement received and executed by employee.

Feb 15

Overdue Task

Notify tax firm of new initiation for the employee trip

Notify tax firm about new employee assignment.

Today

[Show Past Tasks >](#)

Mar 1

No Tasks Due Today

Mar 13

In Progress

Perform compensation & tax orientation

Schedule and perform host country compensation and tax orientation with employee.

Mar 21

In Progress

Schedule pre-move visit + destination services

Schedule pre-move visit and/or order destination services.

[Show All Events >](#)

[Show All Events →](#)

YOUR COORDINATOR

LS

Laura Schmidt

Global Mobility Coordinator

[Message Laura](#)

DEPARTURE

47 Days

Apr 27, 2026

Good Morning, Andy 🙌

USA → Singapore · Authorized

47

DAYS LEFT

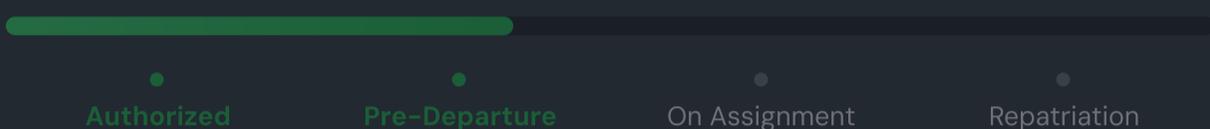
2

OVERDUE

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Today

[Show Past Tasks >](#)



Home



Benefits



Messages



Singapore



Profile

Mar 13 **In Progress**

Perform compensation & tax orientation

Schedule and perform host country compensation and tax orientation with employee.

Mar 21 **In Progress**

Schedule pre-move visit + destination services

Schedule pre-move visit and/or order destination services.

[Show All Events >](#)

[Show All Events >](#)

YOUR COORDINATOR



Laura Schmidt

Global Mobility Coordinator

[Message Laura](#)

Benefits & Documents

Benefits & Services

Your assignment benefits package

-  **Temporary Housing** Active
Core Benefit · 30 days
-  **Relocation Flight Tickets** Active
Core Benefit · Active
-  **Household Goods Shipment** Scheduled
Core Benefit · Scheduled
-  **Destination Services** Active
Flex Benefit · Active
-  **Children's Education Support** Active
Flex Benefit · 12 months
-  **Global Health Insurance** Active
Core Benefit · Active
-  **Cultural Training Program** Not Started
Flex Benefit · Not Started
-  **Cost of Living Allowance** Active
Core Benefit · Active

[View Full Benefits Guide →](#)

Documents

-  **Employment Contract** Signed
PDF · 847 KB
-  **Work Permit Application** Pending
PDF · 1.2 MB
-  **Housing Lease Agreement** Review Required
PDF · 623 KB
-  **Tax Forms (IR8A)** Draft
PDF · 245 KB

[+ Upload Document](#)

Expenses

Flight tickets for family	\$3,240.00	Approved
Mar 5		
Hotel stay (pre-assignment)	\$890.00	Pending
Mar 8		
Shipping insurance premium	\$425.00	Approved
Mar 10		
Total Submitted:	\$4,555.00	

Profile



Andy Chen

Assignee · Employee ID: EMP-45891

Pre-Departure Phase

Personal Information



EMAIL

andy.chen@company.com



MOBILE

+1 (415) 555-0123



CURRENT LOCATION

San Francisco, CA, USA



DATE OF BIRTH

March 15, 1985

Family Members

Accompanying on assignment



Emily Chen

Spouse · Born Aug 22, 1987



Sophie Chen

Daughter · Born Jun 10, 2015



Max Chen

Son · Born Feb 3, 2018

[+ Add Family Member](#)

Assignment Details



ASSIGNMENT TYPE

Long-term Assignment

HOST COUNTRY

Singapore

ASSIGNMENT START

April 27, 2026

EXPECTED DURATION

36 months

JOB TITLE

Senior Software Engineer

DEPARTMENT

Engineering – Cloud Platform

HOST COMPANY

TechCorp Asia Pacific Pte Ltd

REPORTING MANAGER

David Tan

Emergency Contact



Michael Chen

Brother · Primary Contact

+1 (415) 555-0199

E Equus

AC Andy Chen
Assignee

Home

Benefits

Messages

Singapore

Profile

DEPARTURE

47 Days

Apr 27, 2026

Messages

Laura Schmidt 2
GM Coordinator
I've uploaded your housing documents

Thomas Anderson
Move Coordinator
Shipment scheduled for next week

Kim Wei
Immigration Specialist
Your work permit is being processed

Sarah Lopez
Destination Services
Here are some school options for your k

Laura Schmidt
GM Coordinator

Hi Andy! Welcome to Singapore assignment portal.
9:42 AM

Thanks Laura! Really excited about this opportunity.
9:45 AM

Great! I've uploaded your housing lease agreement to the Documents section. Can you review and sign by Friday?
9:47 AM

Absolutely, I'll review it today.
9:50 AM

Perfect! Let me know if you have any questions.
9:51 AM

I've uploaded your housing documents
Just now

Type a message...

Send

Documents

6 documents uploaded

Upload Document

Search documents...



Drag and drop files here
or click to browse • PDF, DOC, DOCX, JPG, PNG • Max 10MB per file

	Employment Contract PDF • 847 KB • Mar 1, 2026 • Employment	Signed
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DEPARTURE

47 Days

Apr 27, 2026



Singapore

Your host country guide. Everything you need to know about living and working in the Lion City.

At a Glance

CAPITAL Singapore	LANGUAGE English, Mandarin, Malay, Tamil	CURRENCY Singapore Dollar (SGD)
TIME ZONE UTC+8 (SGT)	POPULATION 5.9 million	CLIMATE Tropical, hot & humid year-round

Resource Guides

Click topics to learn more

[Housing & Neighborhoods](#) ▼

[Transportation & Getting Around](#) ▼

[Healthcare System](#) ▼

[Education & Schools](#) ▼

[Banking & Finance](#) ▼

[Cultural Norms & Etiquette](#) ▼

Quick Links



Ministry of Manpower (MOM)

Work permits & employment regulations



HealthHub Singapore

National healthcare portal



Singapore MRT Guide

Transit maps & journey planner



MyInfo Digital Identity

Government digital services



E Equus

AC Andy Chen
Assignee

Home

Benefits

Messages

Singapore

Profile

DEPARTURE

47 Days

Apr 27, 2026