

Portfolio Case Study Report

HOME SERVICE OPERATIONS ECOSYSTEM

Why do I have to wait all day for the cable guy?

UX Research · Service Design · Product Design · Workflow Architecture

Industry: Home Services

Ariela Arancibia | June 2026

Executive Summary

Why do I have to wait all day for the cable guy?

Waiting all day for a home service appointment has become so common that most people simply accept it.

What began as a question about appointment windows quickly revealed a problem that extended far beyond the customer experience.

To better understand that problem, I conducted primary research with Customers, Field Technicians, and Operations and Dispatch professionals. Their responses confirmed that waiting was only a symptom of a much larger problem.

This case study follows that investigation, from research and analysis through synthesis and service design to understand how information can improve the home service experience

52 Customer survey responses 48 viable (4 excluded for no appointment experience)	89.6% of customers want real-time tracking
8 Field technician responses	75% of techs bear customer update burden
5 Operations responses	100% notify customers manually for delays

It Started With One Question

Like many people, I had spent entire days waiting for a home service appointment. One question kept coming back:

"Why do I have to wait all day for the cable guy when we have GPS, smartphones, and real time technology?"

- What if customers could track the technician in real time?
- What if technicians could update their status without adding extra work?
- What if reporting happened immediately after each job instead of hours later?
- What if dispatchers could see everything in one place instead of relying on phone calls and texts?

Every answer solved one problem but created another. Without realizing it, I was no longer exploring a tracking feature. I was investigating how information moved between customers, technicians, and operations.

At that point, I didn't know whether these were real problems or assumptions. Instead of designing a solution, I decided to validate them through research.

The Challenge

Home service appointments involve much more than a customer waiting for a technician. Behind every appointment are technicians, dispatchers, scheduling, inventory, reporting, customer support, and communication systems that all depend on one another. When one part breaks down, everyone feels the impact.

- A technician arrives late because the previous job ran longer than expected.
- Operations have no real-time visibility into what is happening.
- Customers spend hours wondering if anyone is coming.
- Support receives calls they cannot confidently answer.
- Technicians finish the day completing reports from memory.

One delay creates another, creating ripple effects throughout the service process.

Hypothesis

The appointment experience is not primarily a scheduling problem, but an information flow problem affecting customers, technicians, and operations.

If the right information reaches the right people at the right time, the service experience can improve without changing the scheduling process.

Research

I wanted to understand the problem from every perspective, not just the customers. Instead of relying on assumptions, I gathered feedback from the three stakeholder groups involved in home service appointments to better understand where the service experience breaks down.

Participants

	Responses
Customers	52 responses (4 excluded no prior home service appointment)
Field Technicians	8 responses
Operations & Dispatch	5 responses

Research Methods

- Online surveys
- Interviews and text outreach
- Professional and personal networks
- Industry and online communities

What the Research Revealed

Customer Findings: 48 Responses

Customers were not frustrated by waiting alone. They were frustrated by uncertainty. Most were willing to wait if they received accurate updates, realistic arrival times, and clear communication.

Key Statistics

Finding	Data
Said real-time tracking would improve their experience	89.6%
Prefer SMS as their communication channel	68.8%
Most requested information: exact arrival time	58.3%
Avg satisfaction: customers who always received updates	4.6 out of 5
Avg satisfaction: customers who never received updates	3.1 out of 5

Voices from the Research

- *“Had to kill my entire day to be available when they come. That small problem turned into an all day affair.”*
- *“Not knowing when someone would arrive, and if they were running late there was no update on how long they would be.”*
- *“Communication is vital and key to creating and keeping a great relationship with customers.”*
- *“Honesty and transparency.”*

Field Technician Findings: 8 Responses

Technicians were not only repairing equipment. They were managing incomplete job information, unexpected delays, inventory issues, customer expectations, and paperwork, often all at once.

Key Statistics

Finding	Data
Personally responsible for updating customers	75%
Still use paper forms as primary documentation method	87.5%
Have arrived at a job without necessary materials, parts, or equipment	75%
Cite incomplete problem descriptions as a top inefficiency	50%
Want better inventory tracking	62.5%
Want troubleshooting steps from customer before arrival	62.5%

Operations and Dispatch Findings: 5 Responses

Operations teams spent much of their day reacting instead of planning. Without real-time visibility into technician status, they relied on phone calls, text messages, and multiple systems to understand what was happening in the field.

Key Statistics

Finding	Data
Schedule appointments using phone, text, or paper (no software)	100%
Communicate with technicians via text message	100%
Use automated notifications to update customers	0%
Call customers manually when a technician is delayed	100%
Track appointment status through text message threads	80%
Purchase materials as needed (no proactive inventory system)	60%
One respondent fields this many customer status calls per day	11-25 calls

Underlying Issue

The research revealed that the challenges experienced by each stakeholder were not isolated. Many were caused by the same underlying issues but experienced in different ways.

Root Cause	Technician Impact	Customer Impact	Operations Impact
No proactive inventory system	Arrives without parts (75%)	Appointment delayed or rescheduled	Manual intervention required
Incomplete job information	Diagnosis takes longer than expected	Longer wait, possible repeat visit	Schedule cascade begins
No real time field visibility	Schedule changes not communicated	Customer has no ETA	Operations cannot intervene early
Manual customer communication	Tech must stop work to update customer	Calls support for basic status info	High inbound call volume
Paper based end-of-shift documentation	Reports rely on memory	Service records may be inaccurate	Operational data is unreliable

Open-Ended Responses

"Poor communication."

"Communication and inventory."

"Materials being delayed."

The Shared Finding

Although each stakeholder described different challenges, they all pointed to the same underlying problem. Customers, technicians, and Operations & Dispatch each had part of the picture, but no one had the complete view.

The problem wasn't the customer, the technician, or operations & dispatch.
It was the system.

Personas

Research revealed that customers, technicians, and Operations experience the same appointment very differently. Three personas were developed to represent each stakeholder, grounded directly in survey data.

1) Waiting Wendy, The Customer

Archetype: Busy homeowner, age 38–55, Northeast U.S.

Quote: "I don't mind waiting. I mind not knowing."

Goals

- Know exactly when the technician will arrive
- Avoid wasting an entire day waiting
- Receive proactive updates if delays occur
- Plan her schedule with confidence

Pain Points

- Long appointment windows
- No visibility into technician location or appointment status
- Inconsistent communication; sometimes updates arrive, often they do not
- Delays that are never communicated
- Unexpected schedule disruptions.



Waiting Wendy
Busy Homeowner

Seeking appointment certainty and better status updates

Role
Working professional & homeowner

Age
35 to 55

Location
Northeast U.S.

Service frequency
1 to 2 times per year

Preferred Contact method
Text Message(SMS)

Primary Need
Appointment certainty through real-time visibility

"I don't mind waiting. I mind not knowing."

About Wendy

Wendy is a busy homeowner balancing work and family responsibilities. She doesn't mind waiting for service, but she needs clear communication and reliable arrival updates. She expects the same visibility she gets from delivery and ride share apps.

Needs

 Accurate ETA	 Live Tracking	 Delay Notifications	 Status Updates	 Technician Info
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Goals

- Know exactly when the technician will arrive
- Avoid wasting an entire day waiting
- Receive proactive delay updates
- Plan her schedule with confidence

Frustrations

- Long appointment windows
- No visibility into technician location or appointment status
- Delays that are never communicated
- Unexpected schedule disruptions

Research Highlights

 47.8% Changed plans for the appointment	 28.3% Called support for status updates	 89.1% Want real-time tracking	 34.8% Experienced long appointment windows
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2) Field Felix, The Technician

Archetype: Field technician, 8 – 15+ years' experience, multiple industries

Quote: "Give me the right info before I arrive and I can fix anything."

Goals

- Arrive at every job with complete information and the right materials
- Spend less time on paperwork and administrative tasks
- Stay informed of schedule changes as they happen
- Keep customers updated without stopping work to call or text manually

Pain Points

- Arrives at jobs without the necessary materials.
- Receives incomplete problem descriptions.
- Personally responsible for updating customers.
- Completes documentation after the job, relying on memory.



Field Felix
Field Technician

Seeking complete job information and tools readiness

Role
Field Technician
Plumbing, Electrical, HVAC, Home Improvement, IT

Experience
Mostly 8+ years

Jobs Per Day
1 to 10+

Primary Tools
Mostly paper forms, text messages, phone calls

Primary Need
Complete job information and tools before arrival

"Give me the right info before I arrive and I can fix anything."

About Felix

Felix is an experienced field technician managing multiple jobs per day. He arrives at jobs ready to work but is frequently held back by incomplete job information, missing materials, and administrative burden. He wants to focus on the work, not on chasing information manually.

Needs

Real time Updates

Better Job Info

Automated Customer Notifications

Inventory Tracking

Easier Reporting

Goals

- Arrive at every job with complete information
- Have the right materials and tools ready
- Spend less time on paperwork and reporting
- Stay informed of schedule changes in real time
- Keep customers updated without manual effort

Frustrations

- Arriving without the right materials,
- Incomplete problem descriptions before arrival
- Schedule changes with no real-time updates
- Manual paperwork at end of long shifts
- Customers calling for updates he can't always provide
- Traffic and routing inefficiencies

Research Highlights



75%
Arrived without needed materials or parts



50%
Incomplete problem descriptions



62.5%
Want better inventory tracking



75%
Want automated customer updates

3) Dispatch Diana, Operations

Archetype: Operations manager / business owner, 4–15+ years' experience

Quote: "I need to see what is happening in the field without having to call someone to find out."

Goals

- See job status and technician location without making a phone call
- Notify customers of delays automatically
- Know when materials are needed before technicians leave for the job
- Reduce inbound customer calls asking for arrival times
- Have one place where scheduling, communication, and reporting come together

Pain Points

- Manually notifies customers about delays.
- Has limited real-time visibility into field operations.
- Purchases materials reactively because inventory visibility is limited.
- Relies on phone calls, text messages, and paper to coordinate work.
- Handles frequent customer calls requesting appointment updates.



Dispatch Diana
Operations & Dispatch Manager

Seeking real time visibility and coordination

Role
Business Owner and Operations Manager

Experience
4 to 15+ years

Team Size
6 to 25 field technicians

Primary Tools
Phone calls, texts, emails, personal calendars

Primary Need
Operations manager seeking real-time visibility and coordination

"I need to see what is happening in the field without having to call someone to find out."

About Diana

Diana manages daily scheduling, technician coordination, customer communication, and inventory. She needs real-time visibility to keep operations running smoothly without relying on calls and text messages.

Needs

 Real-time Job Status	 Inventory Visibility	 Automated Notifications	 Centralized Scheduling	 Automated Reports
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Goals

- Monitor jobs in real-time
- Notify customers automatically
- Know inventory status before dispatching
- Reduce inbound status calls from customers
- Coordinate technicians efficiently

Frustrations

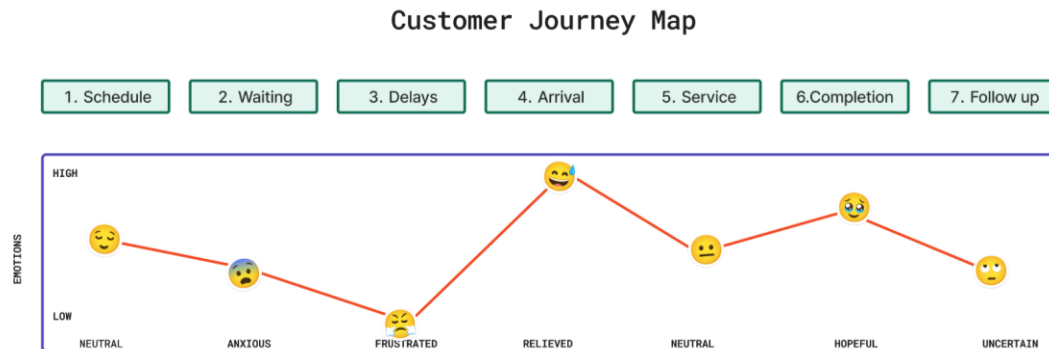
- Calling every customer manually
- No real-time view of field job status
- No proactive inventory system,
- Fragmented scheduling across phone, text, and paper
- Inbound status calls from customers with no visibility

Research Highlights

 0% Use scheduling software with automation	 100% Call customers manually for every delay	 60% Said all areas of operations need improvement	 100% Have no proactive inventory system
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Journey Maps

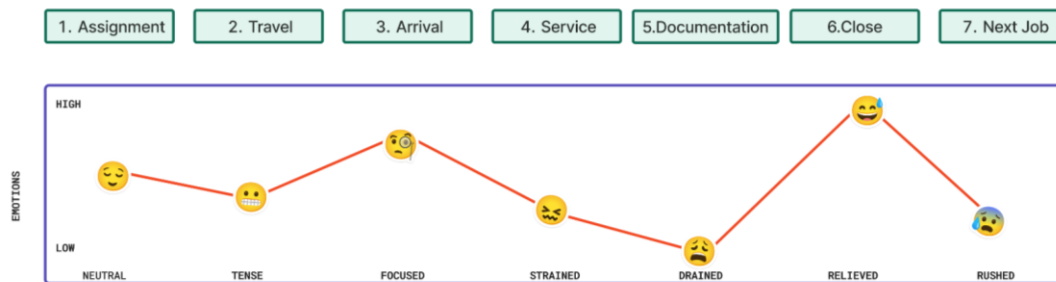
Understanding each stakeholder's journey identified where emotions changed, communication broke down, and opportunities for improvement emerged throughout the appointment lifecycle.



Customer Journey

Stage	Action	Emotion	Pain Point	Opportunity
Schedule	Books appointment	Neutral	No control over window size	Narrower, smarter time windows
Waiting	Stays home, rearranges day	Anxious	Zero visibility, must call to ask	Live tracking and ETA updates
More Waiting	Checks phone repeatedly, calls support	Frustrated (lowest point)	Repeated calls with no new info	Proactive delay notification
Arrival	Greets technician	Relieved (highest point)	No prior info about the technician	Technician profile sent before arrival
Service	Waits nearby, signs form	Neutral	No progress updates given	Real-time status in app
Completion	Confirms work is done	Hopeful	No clear completion confirmation	Digital completion confirmation
Follow-up	Resumes day, hears nothing more	Uncertain	No summary sent	Auto-generated digital summary

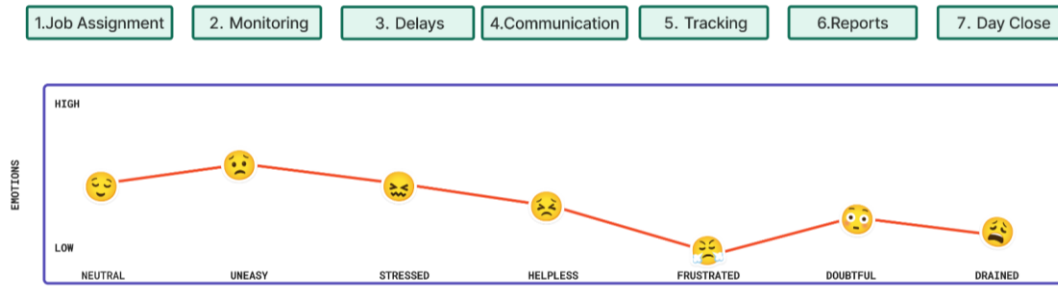
Technician Journey Map



Technician Journey

Stage	Action	Emotion	Pain Point	Opportunity
Assignment	Receives job assignment	Neutral	Incomplete job information	Full job package sent in advance
Travel	Drives to customer location	Tense	Schedule changes with no warning	Real-time schedule updates pushed to tech
Arrival	Greets customer, assesses issue	Focused	Customer not available or unprepared	Customer pre-notified via SMS
Service	Performs the repair	Strained	Missing parts discovered mid-job	Materials checklist confirmed before departure
Documentation	Completes report, often after the fact	Drained (lowest point)	Reporting burden, relying on memory	In-app reporting step-by-step, in the moment
Close	Gets signature, closes job	Relieved	No quick way to confirm accuracy	Auto-generated summary reduces close time
Next Job	Moves to next assignment	Rushed	Back-to-back with no buffer	Smarter routing with realistic travel buffers

Operations Journey Map



Operations Journey

Stage	Action	Emotion	Pain Point	Opportunity
Job Assignment	Assigns tech to job	Neutral (start)	Limited info on tech availability	Real-time availability and location data
Monitoring	Watches multiple jobs in progress	Uneasy	No real-time visibility into field	Live dashboard showing all active jobs
Mid-Day Changes	Reacts to delays, reroutes techs	Stressed	Manual rework across the board	Automated rerouting suggestions
Customer Contact	Fields calls asking for updates	Helpless	Cannot give a real answer	Accurate real-time status to share
Status Tracking	Confirms status across calls and texts	Frustrated	Job status scattered across systems	One unified view of every job's status
Report Review	Reviews reports as they come in	Doubtful	Reports arrive late, with missing details	Reports submitted in real time, validated
Day Close	Closes jobs, preps for tomorrow	Drained (lowest)	Full picture only visible after the day	Live day-end summary, no surprises

Service Design Artifacts

To better understand the service experience from multiple perspectives, a series of service design artifacts were created. Together, they helped visualize communication gaps, operational bottlenecks, and opportunities throughout the appointment lifecycle.

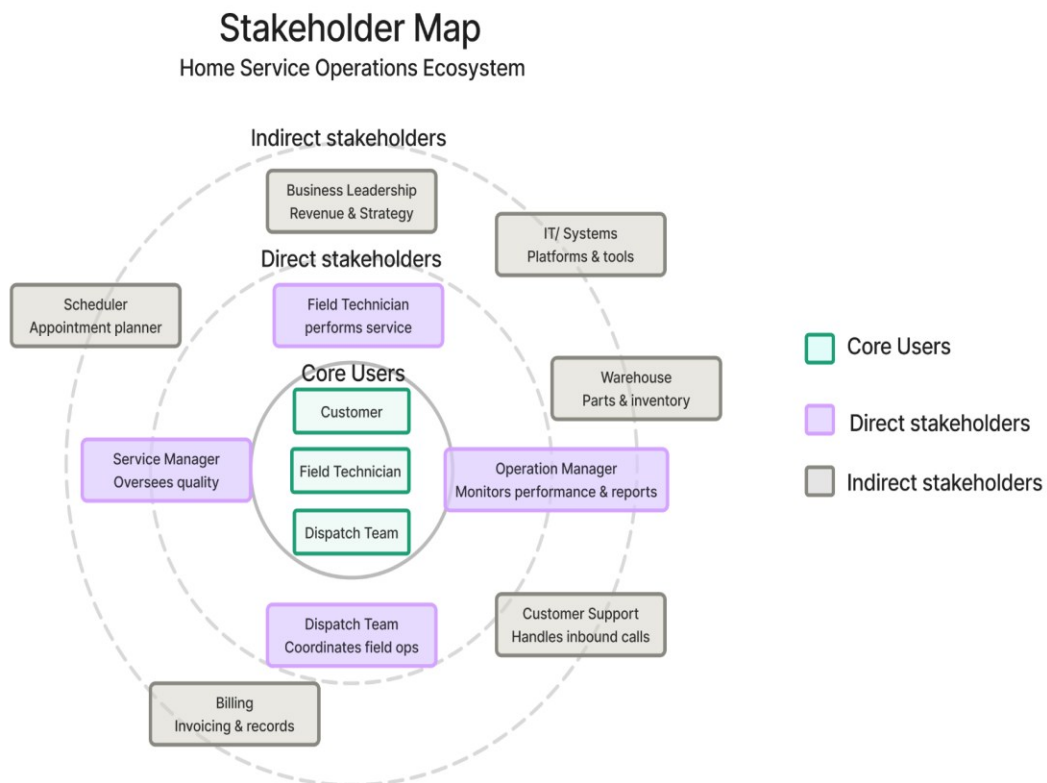
Service Design Deliverables

- Stakeholder Map - Identified the people, teams, and supporting systems involved in the service ecosystem.
- Customer Journey Map - Mapped the customer's experience, emotions, pain points, and opportunities throughout the appointment lifecycle.
- Field Technician Journey Map - Documented the technician's workflow, challenges, and opportunities in the field.
- Operations & Dispatch Journey Map - Visualized operational activities, decision points, and coordination challenges.
- Service Blueprint - Connected customer actions with frontstage and backstage processes to reveal operational dependencies and communication gaps.
- Competitive Analysis - Compared existing field service platforms to identify market gaps and opportunities.
- Design Opportunities Matrix - Translated research findings into prioritized design opportunities.
- Home Service Operations Ecosystem Diagram - Visualized how information flows between customers, field technicians, Operations & Dispatch, inventory, reporting, and supporting systems.
- Operational Workflow Architecture - Modeled the business logic across six interconnected workflows covering the complete service lifecycle.
- Information Architecture - Organized the information structure and navigation for customers, field technicians, and Operations & Dispatch.
- Low-Fidelity Wireframes - Explored user flows, layouts, and information hierarchy.
- Mid-Fidelity Wireframes - Refined workflows, interactions, and screen organization before visual design.
- High-Fidelity Prototypes - Translated research and service design into connected interfaces for all three stakeholder experiences:
 - Customer
 - Technician
 - Operations & Dispatch
- Personas - Translated research findings into representative stakeholder profiles.
- Affinity Mapping - Organized research observations into themes and patterns to identify key insights.

**** All Artifacts are in www.arielastudio.com**

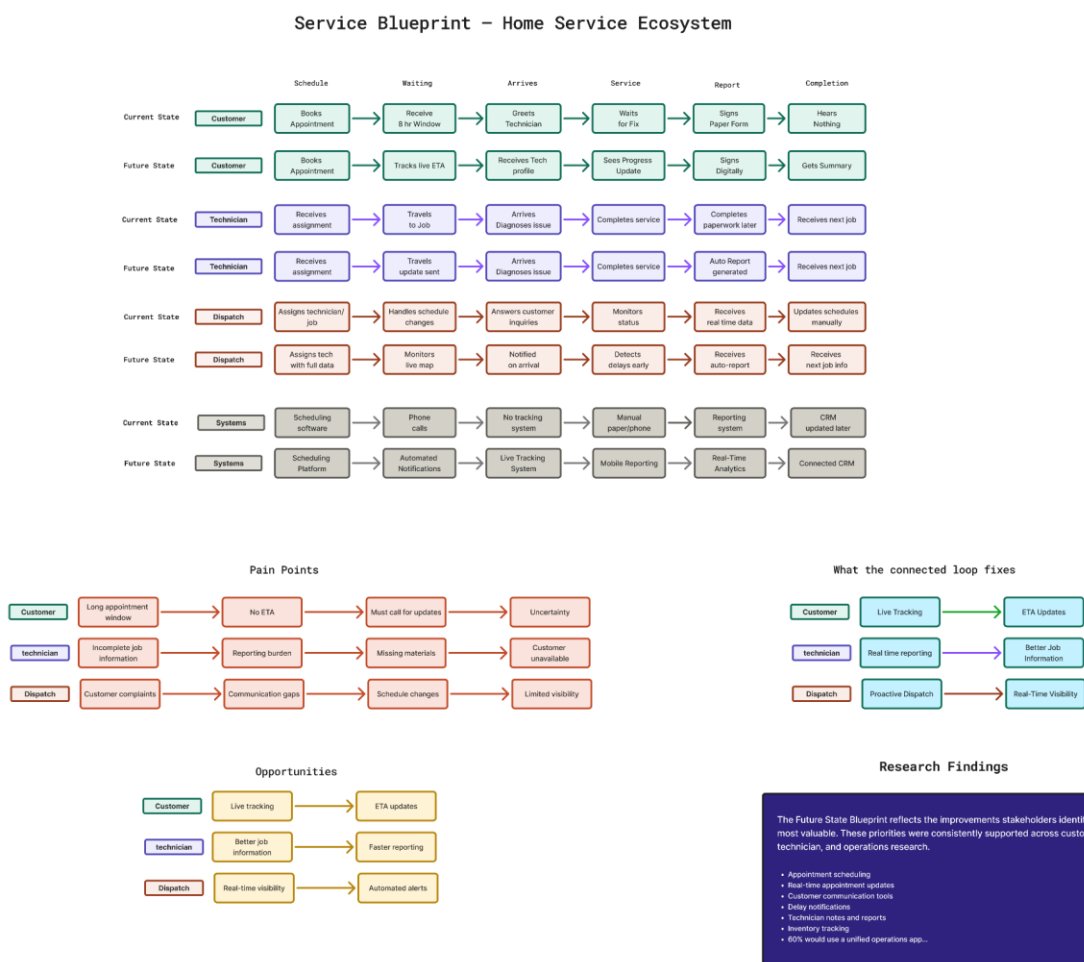
Stakeholder Map

This map identifies the people, teams, and supporting systems involved in the home service appointment experience.



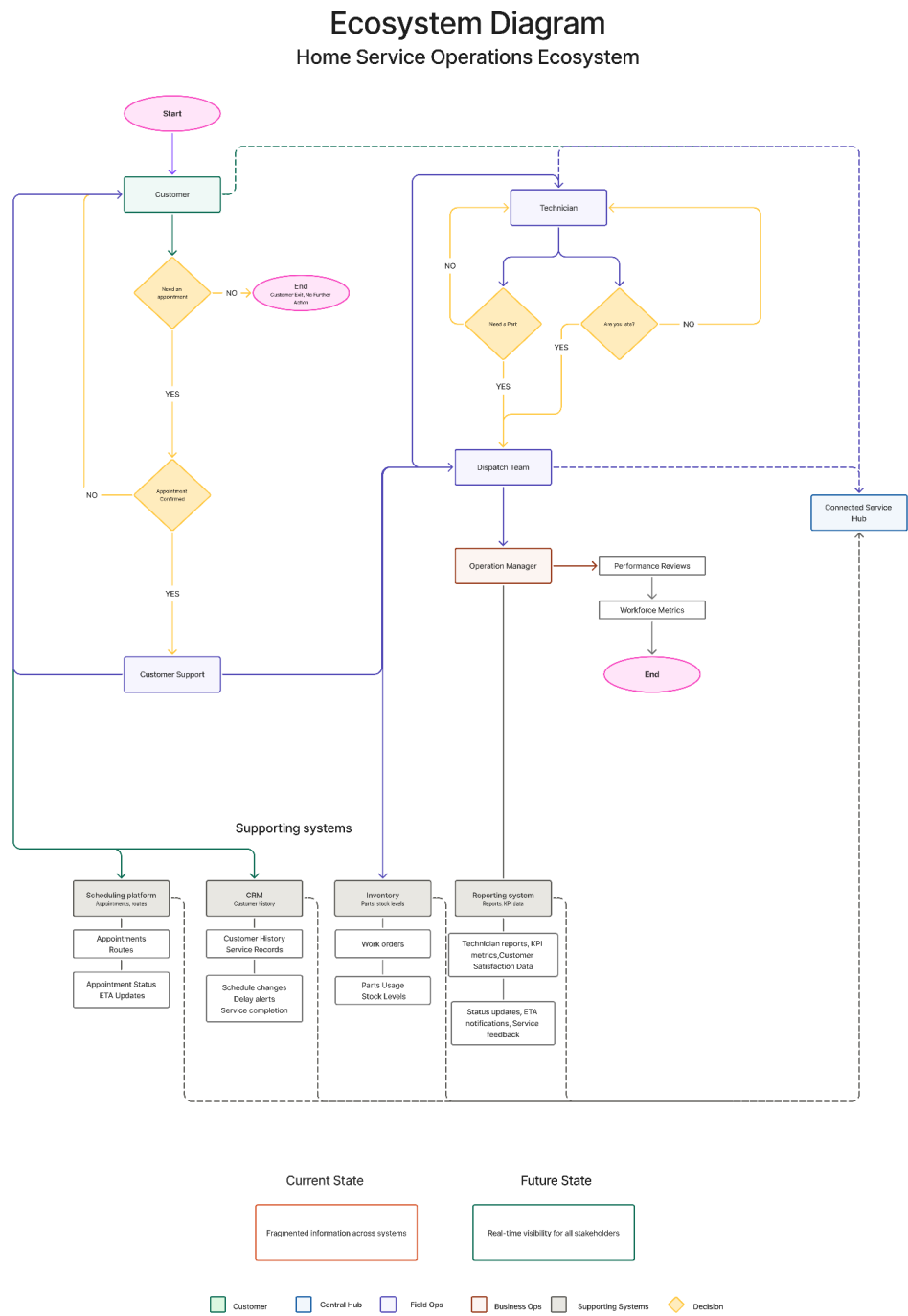
Service Blueprint

The service blueprint maps the customer journey alongside the frontstage and backstage processes that support it, revealing where communication gaps, operational bottlenecks, and opportunities for improvement occur.



Home Service Operations Ecosystem Diagram

The ecosystem diagram illustrates how information flows between customers, field technicians, Operations & Dispatch, inventory, reporting, and supporting systems throughout the appointment lifecycle.

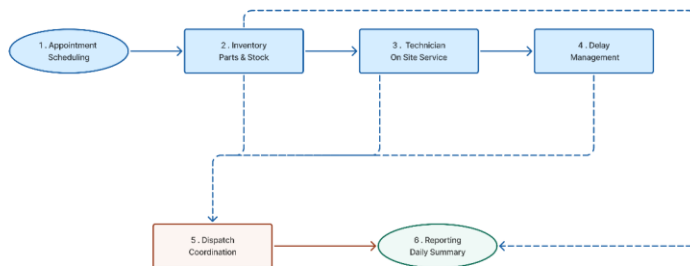


Workflow Architecture Overview

The ecosystem operates through six interconnected workflows that coordinate customers, field technicians, Operations & Dispatch, inventory, and reporting. Together, they ensure that information moves efficiently throughout the service lifecycle.

Workflow Architecture

Ecosystem Level Map and how the six workflows connect



Flow of the Ecosystem

Workflow 1 creates appointments.

Workflow 2 prepares inventory.

Workflow 3 executes service.

Workflow 4 manages delays.

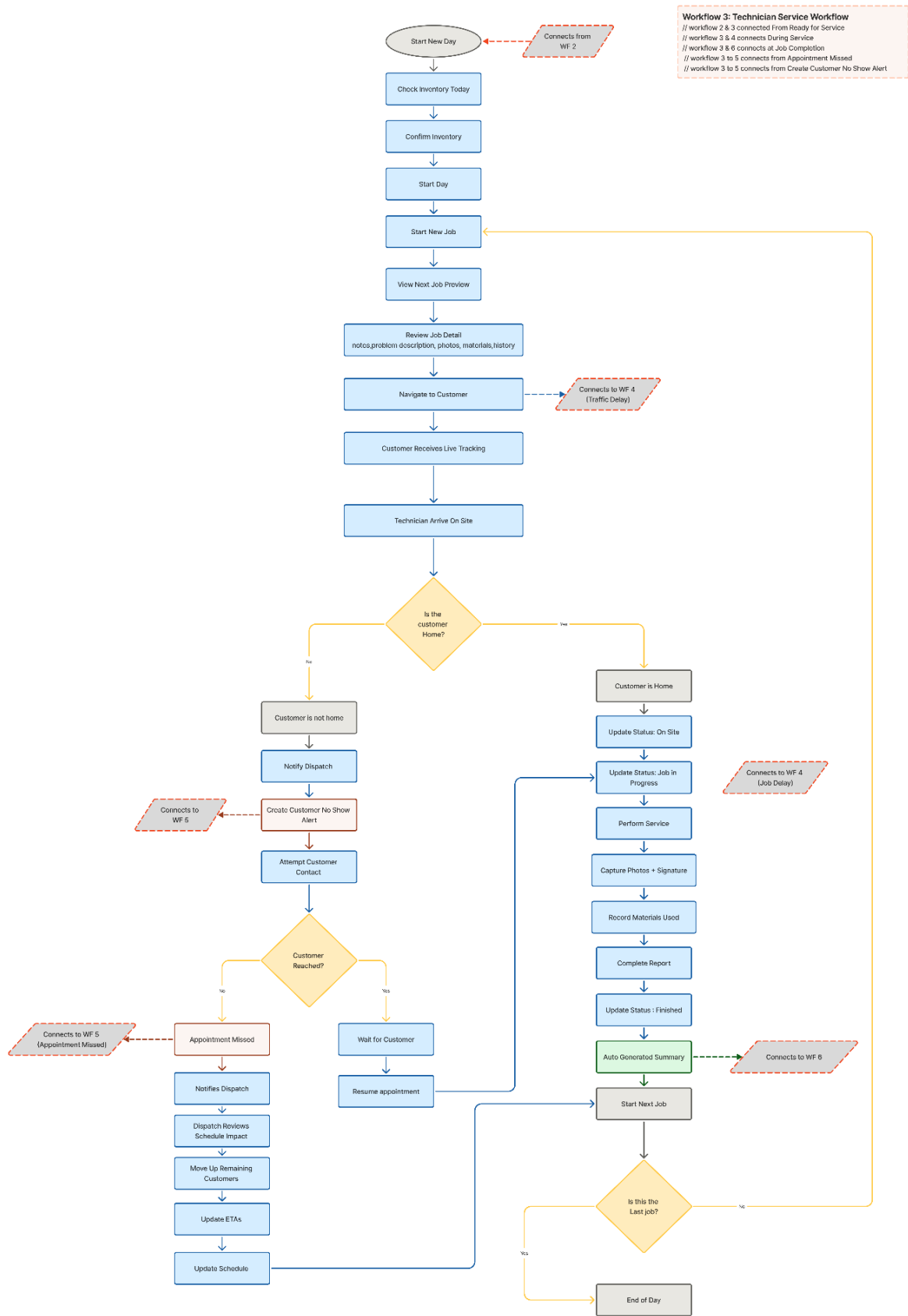
Workflow 5 coordinates operational issues.

Workflow 6 analyzes the results and generates reports.

The ecosystem was modeled as six connected workflows representing the complete service lifecycle, from appointment scheduling through inventory management, field operations, delay handling, dispatch coordination, and automated end-of-day reporting. Each workflow was designed independently while sharing information across the system to ensure every stakeholder worked from the same source of truth.

The complete workflow architecture consists of six interconnected workflows covering appointment scheduling, inventory readiness, field operations, delay management, dispatch coordination, and automated reporting.

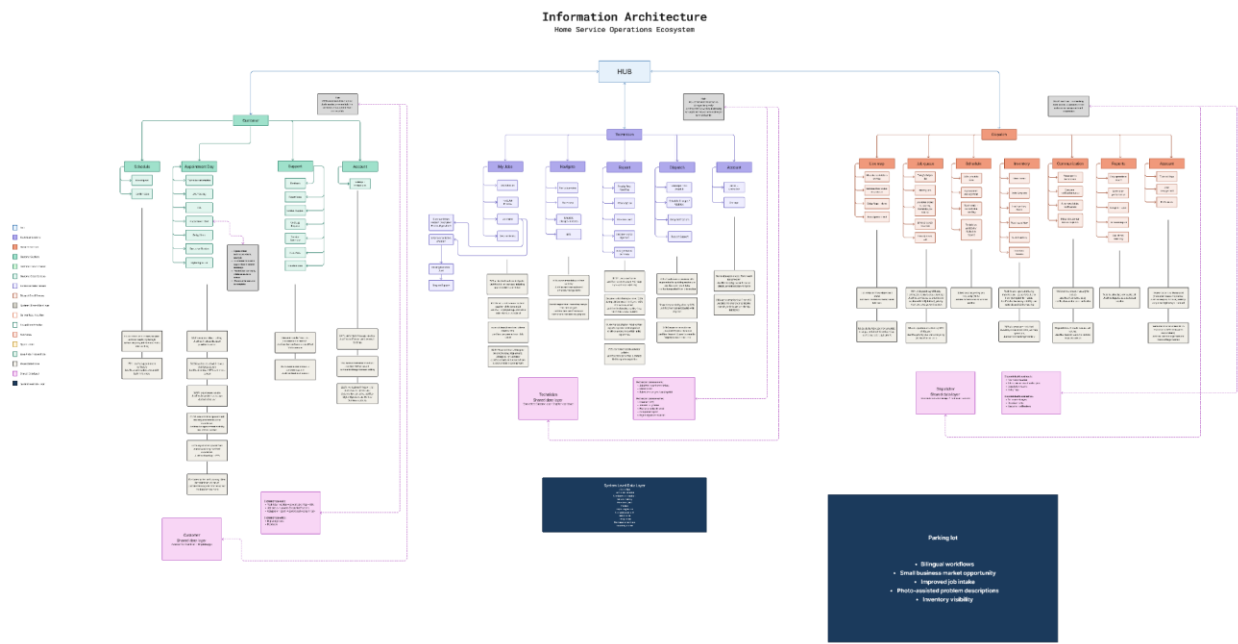
Workflow 3 - Technician Service Workflow



Workflow	Purpose
1. Customer Appointment Journey	From scheduling through service completion and follow-up
2. Technician Service Workflow	From start of day through job execution, reporting, and next job
3. Inventory Readiness Workflow	Inventory verification, missing materials alerts, and parts readiness
4. Technician Delay Management	Delay detection, customer notification, technician reassignment
5. Dispatch Operations Workflow	Daily monitoring, issue identification, resolution, and escalation
6. End-of-Day Automated Summary	System-generated reports delivered to operations and leadership

Designing the Ecosystem

The solution evolved into three connected experiences supported by a shared data layer. Each experience solves the unique needs of its users while sharing the same information in real time.



Shared Data Layer

Rather than maintaining separate information, every stakeholder works from the same shared source of truth.

Data Type	Who Benefits
Job status	Operations (live view) + Customer (tracking)
Technician location	Customer (live tracking) + Operations (field visibility)
Customer information	Technician (job prep) + Operations (communication)
Appointment updates	All three stakeholders simultaneously
Materials used	Operations (inventory) + Billing + Service records
Photos and digital signatures	Replaces all paper-based confirmation workflows
Completion reports	Auto-generated; pushed to all relevant parties
ETA updates	Customer (SMS) + Operations (dashboard)
Inventory status	Technician (before departure) + Operations (procurement)

Competitive Analysis

To better understand the competitive landscape, I compared three leading field service platforms: ServiceTitan, Housecall Pro, and Jobber. Rather than comparing every feature, I focused on the capabilities where primary research and competitive analysis revealed the greatest opportunities. These gaps became the foundation of the proposed solution.

Where are the opportunities?

Feature	Service Titan	Housecall Pro	Jobber	Proposed Solution
Live ETA	●	●	●	✓
Technician location	✓	●	●	✓
Automatic customer updates	●	●	●	✓
Automatic delay notifications	●	●	●	✓
Inventory visibility for dispatch	●	✗	✗	✓
Customer Service Dashboard	✗	✗	✗	✓
Dispatch dashboard	✓	●	✓	✓
Shared visibility across all stakeholders	✗	✗	✗	✓
Cross-stakeholder communication	✗	✗	✗	✓
Designed for small & medium sized business	Enterprise focus	✓	✓	✓
Legend ✓ Full support ● Partial / Limited ✗ Not Available				

Note: The Proposed Solution column represents capabilities derived from primary research and is included for comparison purposes only. Full Competitive Analysis on arielastudio.com

ServiceTitan	
Strengths	Weaknesses
Comprehensive scheduling and dispatch	Information dense interface with a steep learning curve (rich, but complex).
Strong inventory and reporting capabilities	Better suited for larger organizations than small service businesses.
Scales well for large organizations	Less emphasis on the customer appointment experience compared to the technician and dispatcher tools.
HouseCall Pro	
Strengths	Weaknesses
Clean and intuitive interface with a short learning curve.	Fewer advanced dispatch and analytics features than enterprise platforms.
Simple scheduling and job management for small service businesses.	Limited operational visibility as business grows.
Strong technician mobile experience with streamlined workflows.	Less support for complex, multi-team service operations.
Jobber	
Strengths	Weaknesses
Strong focus on communication and appointment management.	Limited real time tracking compared with enterprise platforms.
Easy to use dashboard and scheduling interface.	Limited shared visibility across customers, technicians, and Operations & Dispatch.
Well suited for small and medium-size service business.	Limited support for complex operational coordination at business scale.

Key Findings: All three platforms provide scheduling, dispatching, and job management. However, the analysis revealed a gap in the market. Enterprise platforms offer extensive functionality but are often complex and costly, while simpler solutions sacrifice visibility and coordination. These insights, combined with research findings, helped identify opportunities that influenced the proposed solution.

Designing Opportunities

Primary research uncovered opportunities that existing software only partially addresses. Every design decision below can be traced directly to user research findings.

User Research Finding	Existing Solutions	The Solution
Customers waited hours with no updates	Basic notifications	Live appointment tracking with dynamic ETA
Customers called support for updates	Limited proactive communication	Automatic delay notifications
Customers experienced long periods of uncertainty	Fixed appointment windows	Continuous appointment visibility
Technicians still rely on paper documentation	Mobile reporting still requires manual documentation.	Mobile reporting submitted immediately after job completion.
Technicians lacked inventory visibility	Inventory exists but isn't always surfaced at the right moment	Inventory integrated directly into the work order
Dispatch couldn't see the whole picture	Operational dashboards focus on dispatch only	Shared visibility across customers, field technicians, and Operations & Dispatch.
Communication relied on disconnected tools.	Separate communication tools	Unified communication throughout the appointment lifecycle

Key takeaway: Existing platforms already solve scheduling and dispatch well. The opportunity lies in creating a connected experience that keeps customers, technicians, and Operations & Dispatch working with the same real-time information.

Opportunity Matrix

The research highlighted four opportunities with the greatest potential impact across all three stakeholder groups.

Opportunity	Current State	Future State
Customer Visibility	No real-time appointment status or ETA	Live technician tracking, proactive notifications, accurate ETAs
Technician Reporting	End of day, memory-based documentation on paper forms	Mobile reporting is completed immediately after each job.
Inventory Tracking	Reactive inventory management	Proactive checklist before departure; technician arrives prepared
Operations Coordination	Fragmented, reactive notification process	Real-time dashboard, automated alerts, delay detection

Key Insight: Rather than solving a single touchpoint, the goal became creating one connected experience where the right information reaches the right person at the right time.



Minimum Viable Product (MVP)

Rather than solving every problem at once, the MVP focused on the features that would provide the greatest value for all three stakeholders, based on research findings.

Experience	MVP Features
Customer	Appointment tracking Real-time ETA Delay notifications Technician info Appointment updates
Technician	Job details Customer notes In-truck reporting Materials tracking Status updates
Operations	Live dashboard Technician visibility Schedule management Customer communication Inventory visibility Operational reporting

Wireframes and Prototypes

From Research to Interface Design

The research and service design artifacts established what information each stakeholder needed and when they needed it. The next step was translating those insights into connected interfaces for customers, field technicians, and Operations & Dispatch. Each experience was designed to support the same shared information while addressing the unique needs of its users.

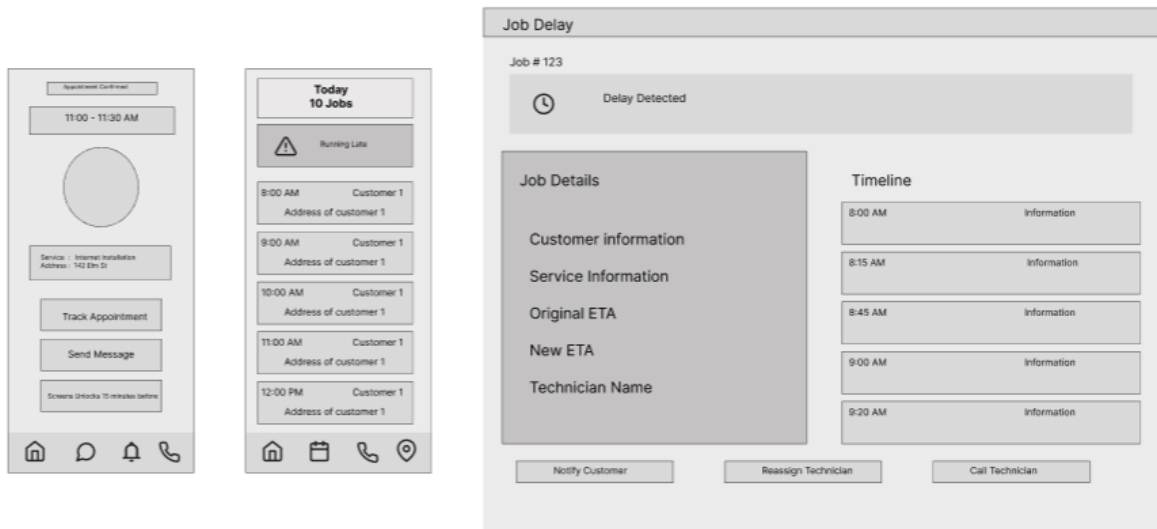
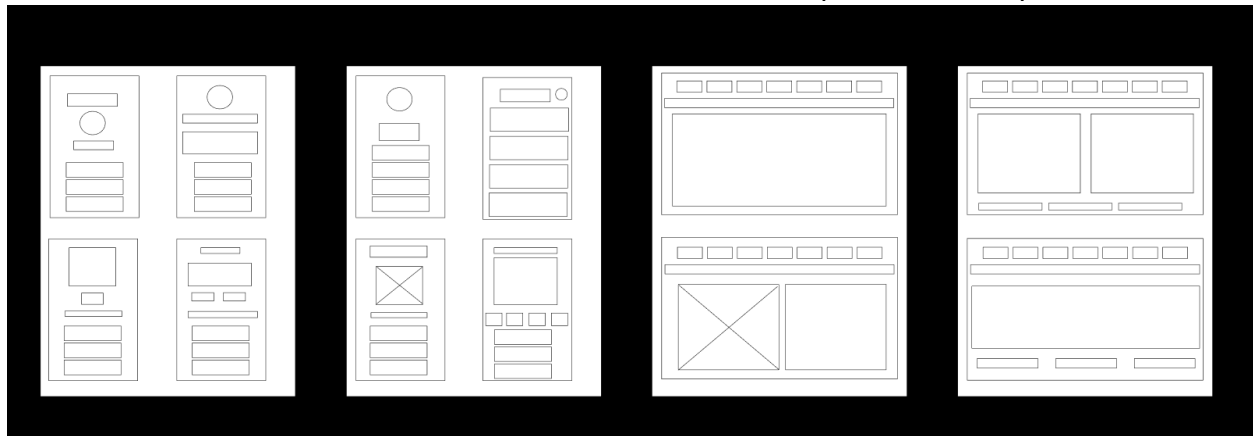
Low and Mid-Fidelity Wireframes

I began by exploring layouts, information hierarchy, and user flows for the three stakeholder experiences. At this stage, the goal was to validate how information moved through the ecosystem before making visual design decisions.

Customer

Technician

Operations & Dispatch

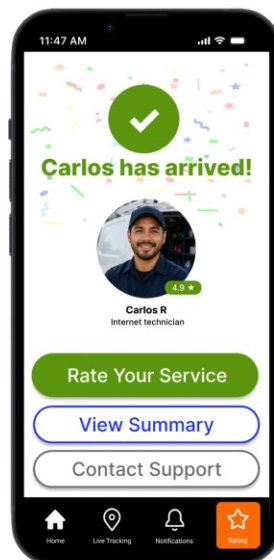
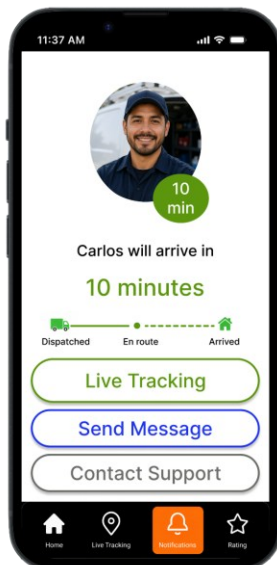
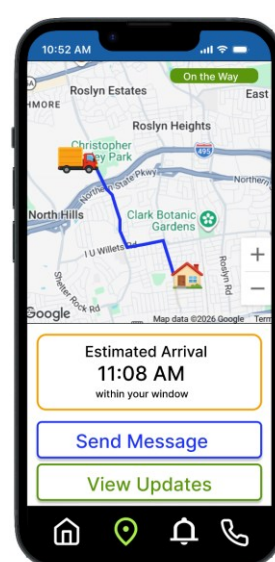
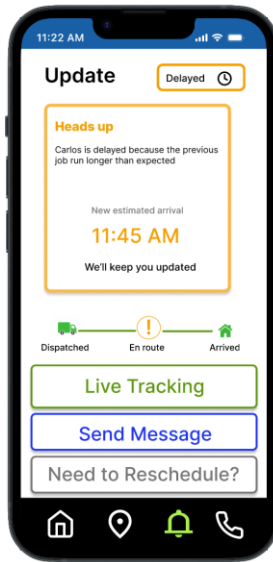
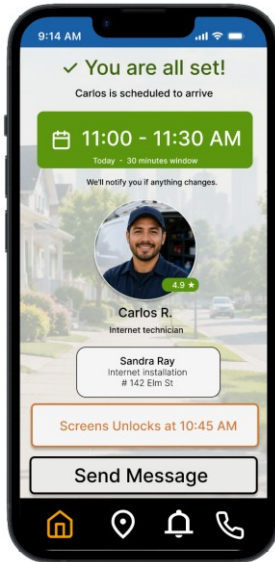


High-Fidelity Prototypes

The high-fidelity prototypes brought the ecosystem to life. Every screen was designed to address research finding while maintaining a shared flow of information across customers, field technicians, and Operations & Dispatch.

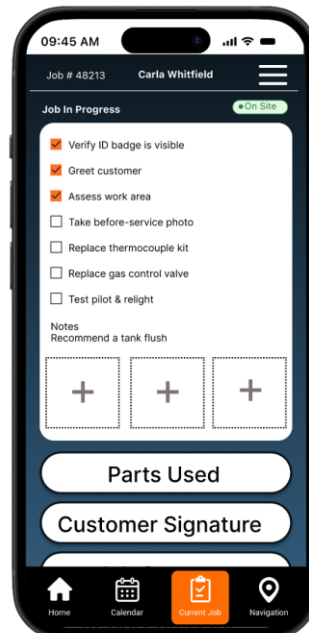
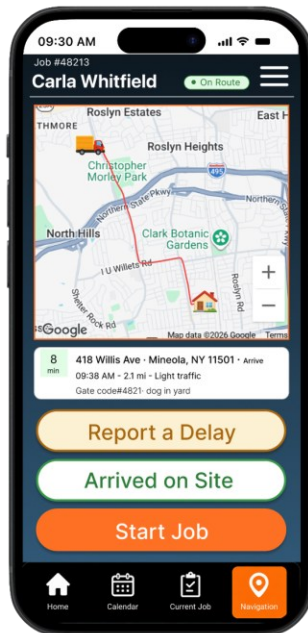
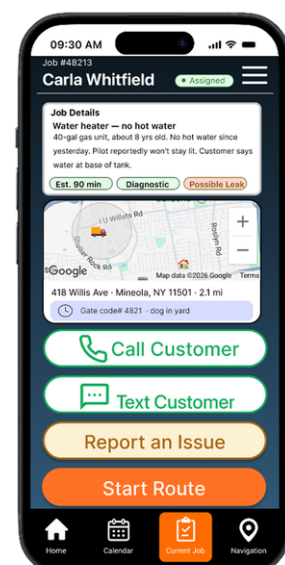
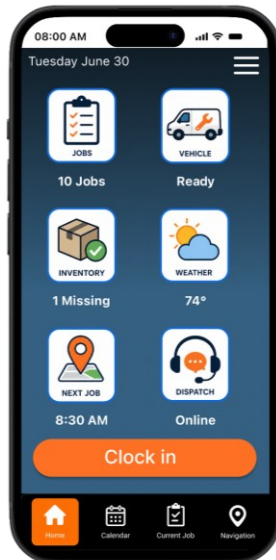
Customer Experience

The customer experience was designed to reduce uncertainty throughout the appointment. Instead of waiting through a broad appointment window with little communication, customers receive appointment confirmation, live tracking, proactive delay notifications, technician information before arrival, and automatic updates as the appointment progresses. Together, these screens provide greater visibility and help customers plan their day with confidence.



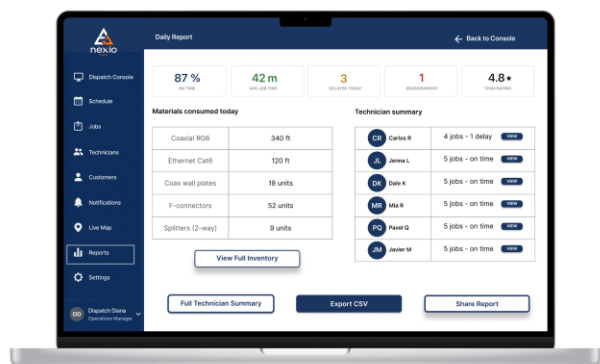
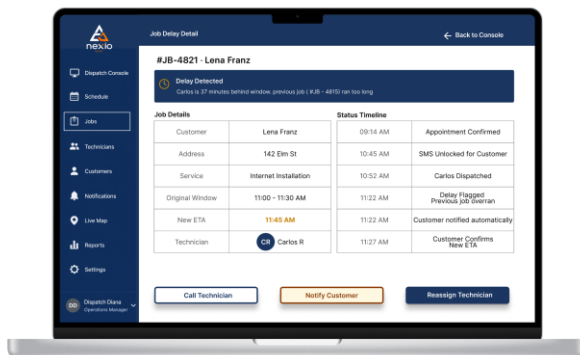
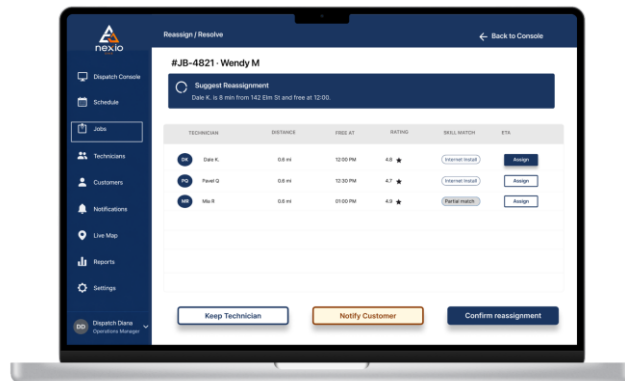
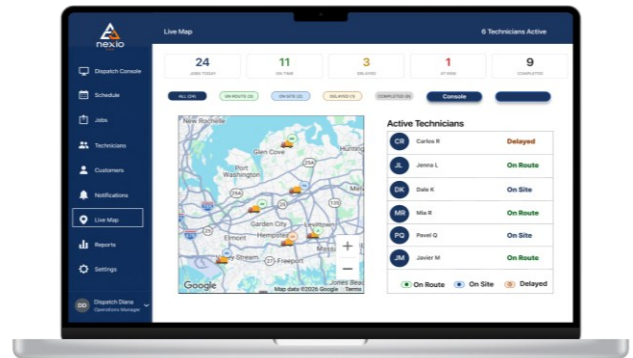
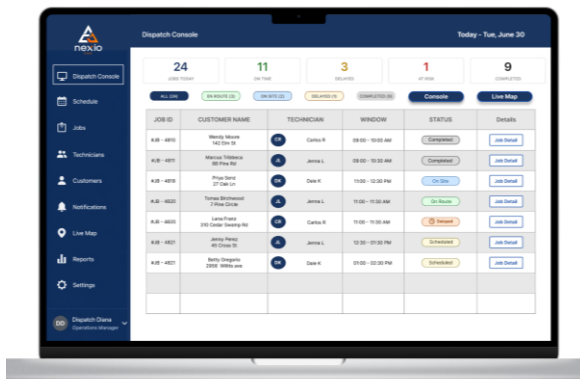
Technician Experience

The technician's experience focuses on reducing administrative work while improving communication and job readiness. Technicians receive complete job information, customer notes, inventory visibility, navigation, and in-the-moment reporting, allowing updates to flow automatically to both customers and Operations & Dispatch without additional phone calls or paperwork.



Operations & Dispatch

The Operations & Dispatch experience provides real-time visibility into field operations from a single dashboard. Dispatchers can monitor technician status, detect delays, manage reassignments, track inventory, and review operational reports without relying on phone calls or text messages. By sharing the same information across the ecosystem, the dashboard supports faster decisions and more proactive customer communication.



Conclusion

This project started with one simple question:

Why do I have to wait all day for the cable guy?

I expected to design a better appointment experience. Instead, I discovered a much bigger problem. Every answer created another question, and every question uncovered another layer of the system.

What started as customer frustration turned out to be a technician problem and an Operations & Dispatch problem at the same time. Each stakeholder experienced the service differently, but they were all affected by the same underlying issue: fragmented information.

Customers, technicians, and Operations & Dispatch were all working with different pieces of information, leading to delays, uncertainty, and unnecessary frustration. It wasn't simply a scheduling problem. It was an information problem.

That changed the direction of the entire project.

By the end of the project, I was no longer designing a tracking feature. I had designed a connected service ecosystem built around shared information, real-time visibility, and better communication for Customers, Technicians, and Operations & Dispatch.

The biggest realization was not about technology. Improving a service does not always mean creating new features. Sometimes it means helping the right information reach the right people at the right time.

The research also revealed something I hadn't expected. When combined with the competitive analysis, it identified an underserved market opportunity: many small and medium-sized service businesses need solutions that prioritize simplicity, affordability, and connected information over enterprise complexity. That gap became the foundation of the proposed solution.

In the end, the answer to my question was not a feature. It was a system. And at the center of that system was not technology. It was information.

Reflection

Designing the proposed solution answered many of the questions uncovered during the research, but it also revealed new ones. I realized that designing a working concept is very different from designing a product that people can rely on every day.

The current design focuses on the ideal path, but real service work rarely follows one. Technicians are delayed, inventory is missing, customers are not home, phones lose signal, and schedules change constantly. These are no exceptions; they are part of daily service operations.

A production-ready version of this system needs every one of those scenarios designed, not just the path where everything works, and designing how a system responds when things go wrong is as important as designing when everything goes right.

That was probably the biggest lesson from this project. Every problem creates new decisions, new workflows, and new communication. The challenge is not simply solving the problem but designing how the system responds when it happens.

I realized that if I continue developing this project, my next focus would be those failure states, along with onboarding, privacy, integration, and offline behavior. Those are the challenges that would transform this concept from a portfolio case study into a production-ready product that could support real service businesses.