

Michael Jacobs

User Experience Designer / Engineer

Design Portfolio 2021

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About Me

I work to help people make better decisions, to extend their abilities, and to make their work easier. Most of my career has been about creating ways for humans to interact with complex systems.

My experience making software has given me a broad range of skills within the development process. While I am often hired as a designer, I have also worked as an engineer and a product manager— now I shine in the overlap of these roles. Regardless of role, I place special importance on understanding user needs and validating ideas through user testing.

My proudest moments are from projects that led me to make meaningful connections with people that might otherwise be overlooked by the tech industry— the tech-illiterate, non-native english speakers, currently-/formerly-incarcerated people, public defenders, government workers – with the goal of using tech to make their lives better.

I believe in wielding technology with care to create a more equitable future, as well as actively working to avoid and reduce its potential for harm. I feel strongly about using my skills toward eliminating power/race/class/gender disparities, and I am seeking others that are doing the same.

I consider myself an artist and musician, and enjoy bringing these other disciplines into software and vice versa.

You can email me at mike@mjacobs.me

Experience

Hello Chair Inc. (Y-Combinator Summer '07) *May '07 - April '12*
Co-Founder, Designer, etc. Designed ways to interact with cutting edge recommendation algorithms. Front-end engineering for web and mobile web apps. Raised 1.5MM. Co-managed three employees.

Uber Technologies *Feb '13 - April '17*
Lead UX Designer / Engineer. Contributed design and code to many different parts of the company, especially Uber Operations and Data tools, UberPool, and the Uber Rider and Driver Partner apps.

Promise Networks *Jan '18 - July '19*
Lead Designer / Engineer, 2nd Employee. Helped bring multiple web and mobile products from concept to reality, led design and research, as well as majorly contributed to front-end engineering, sales support efforts, and investor relations.

Design Contractor *April 2020 - Present*
Various roles

Skills

Design

- UX+UI design
- User research + testing
- Service design
- Information design + data visualization
- Prototyping
- Branding
- Music composition + production
- Sound design

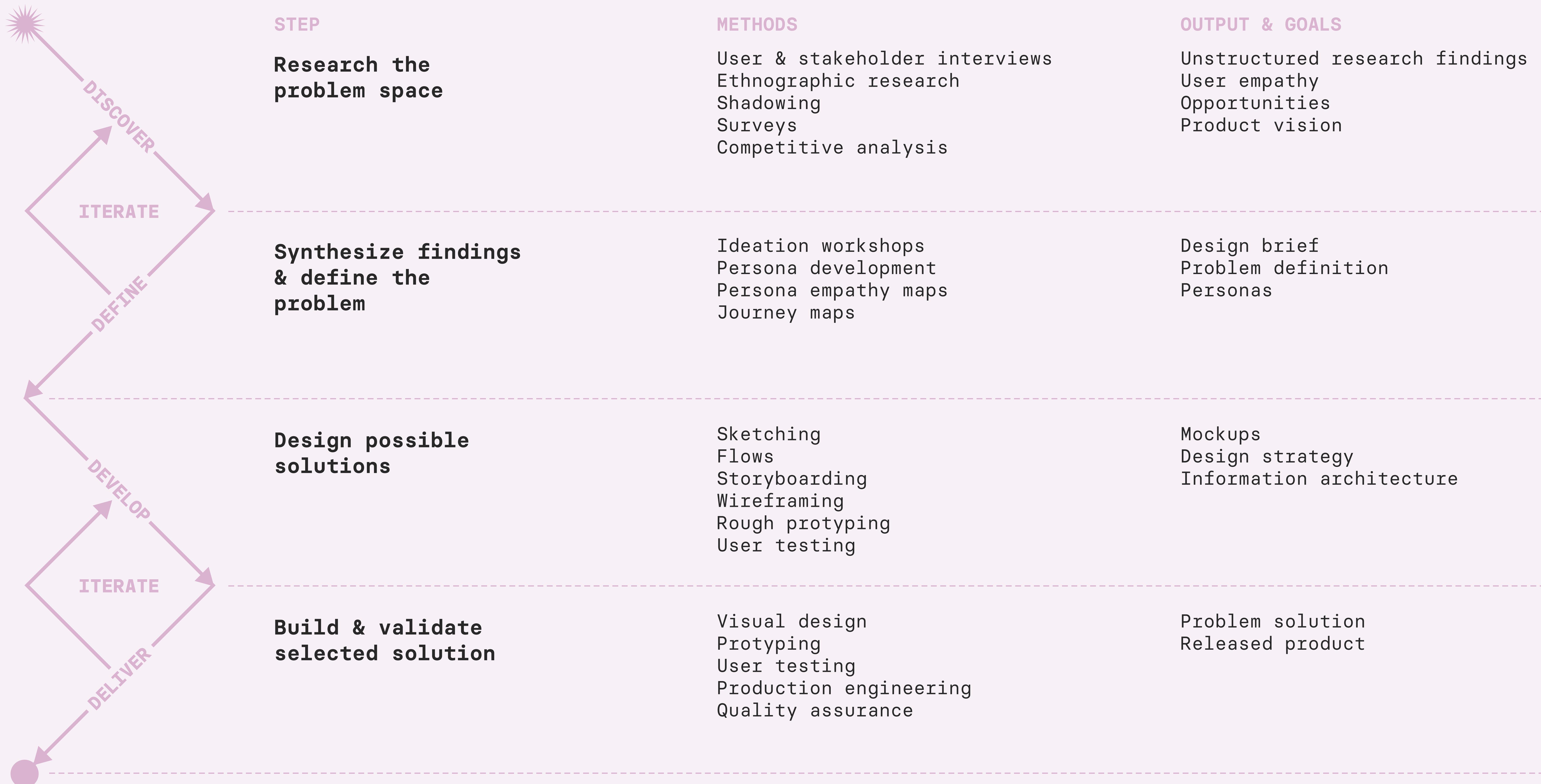
Product Management

- Product strategy + vision
- Product research
- Stakeholder management
- Requirements gathering + documentation

Engineering

- Javascript (vanilla/React/D3)
- HTML, CSS
- Swift
- React Native
- Python

Design Process



Promise Case Manager Web App & Client Mobile App

1/2018 - 7/2019

Promise's company mission was to keep people out of jail. As the second employee, I worked with the co-founders to map the entrypoints of the criminal justice system and identify areas that we could create tech-assisted services to help people avoid incarceration, or reduce the potential of harm to those already in the system.

The first area of focus was pre-trial: the period after someone had been arrested but before their trial. A large percentage of the people sitting in jails are pre-trial— they haven't been proven guilty of a crime but cannot leave simply because they're unable to afford bail. It's one of the clearest examples of the two-tiered justice system in the US. We set out to create a pre-trial program that could be used by a local government, public defender, or diversion organization to provide a viable alternative to jail for those unable to afford bail.

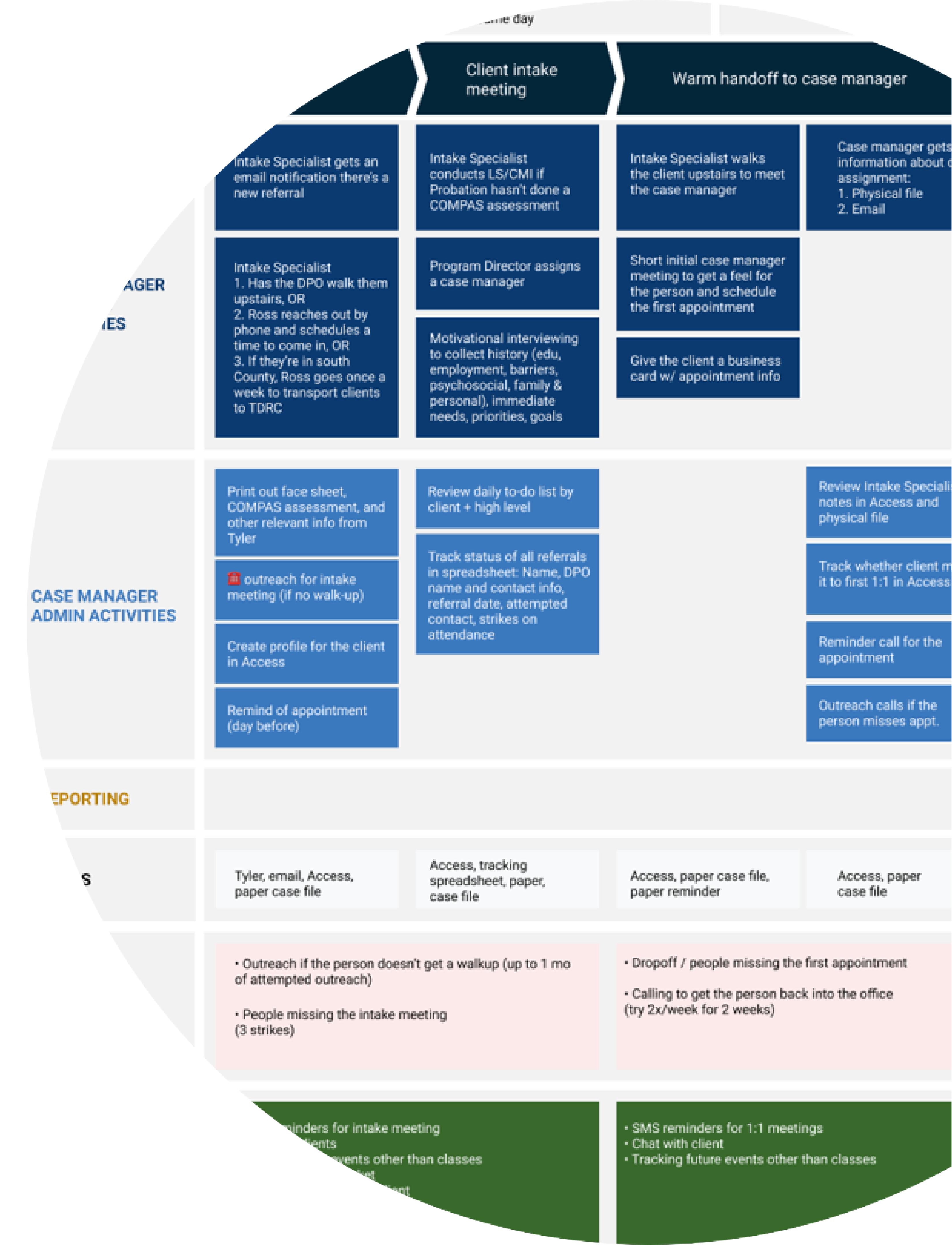
Bringing technology into this space was not a task we took lightly. In such a complex and broken system, there was plenty of potential for us to inadvertently do harm in the name of harm reduction. We regularly consulted with people that had personally been affected by the criminal justice system, and heavily relied on the expertise of those in our company that were already doing good in this space. This was the most challenging project in my professional life, and this portfolio is not an adequate format to present all its complexities— I'm happy to talk about this more in conversation.

Role:

Design Lead

Responsibilities:

- User research
- Service design
- Product design
- Prototyping + User testing
- Front-end engineering (React, React Native)
- Sales support



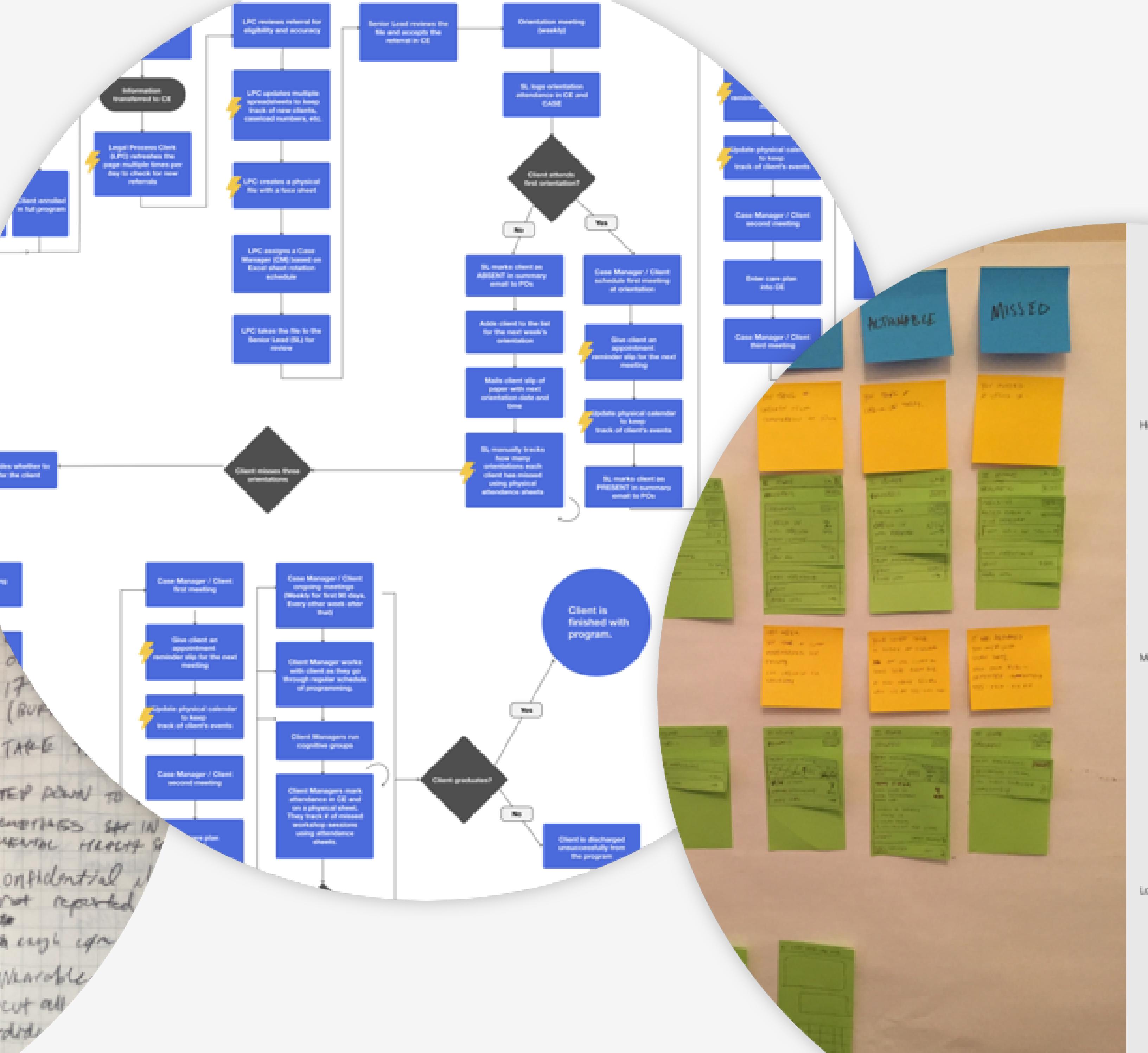
Unique ID	Case Number	Department	Status
10974	52856367	9	GOOD

Promise Design Process



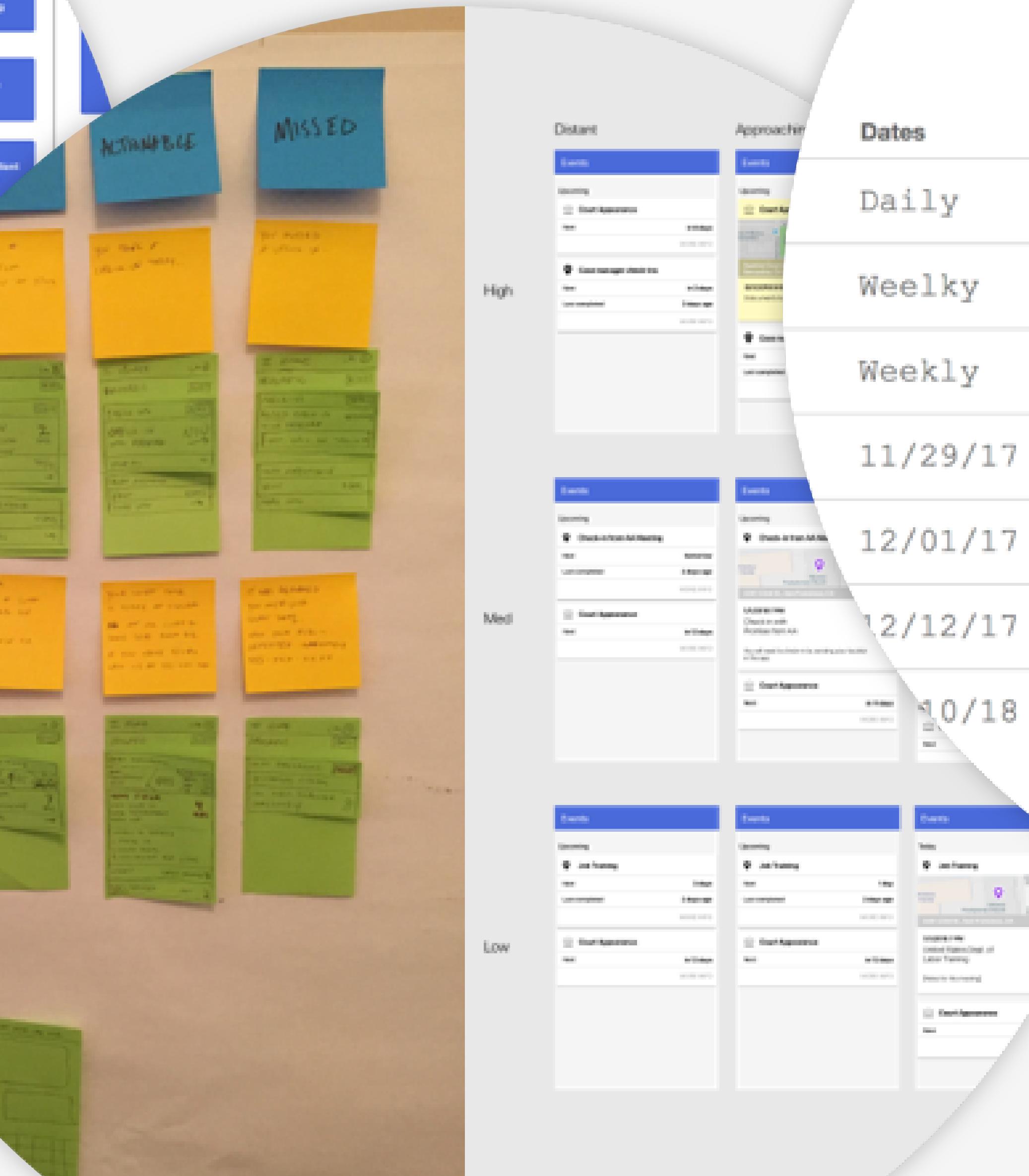
↑ Research: Interviews

We conducted ethnographic interviews of currently and previously incarcerated people ("clients"), as well as experienced social workers, and public defenders to find out what they would need from such a program. And shadowed the social workers to understand how they do their job and identify pain-points.



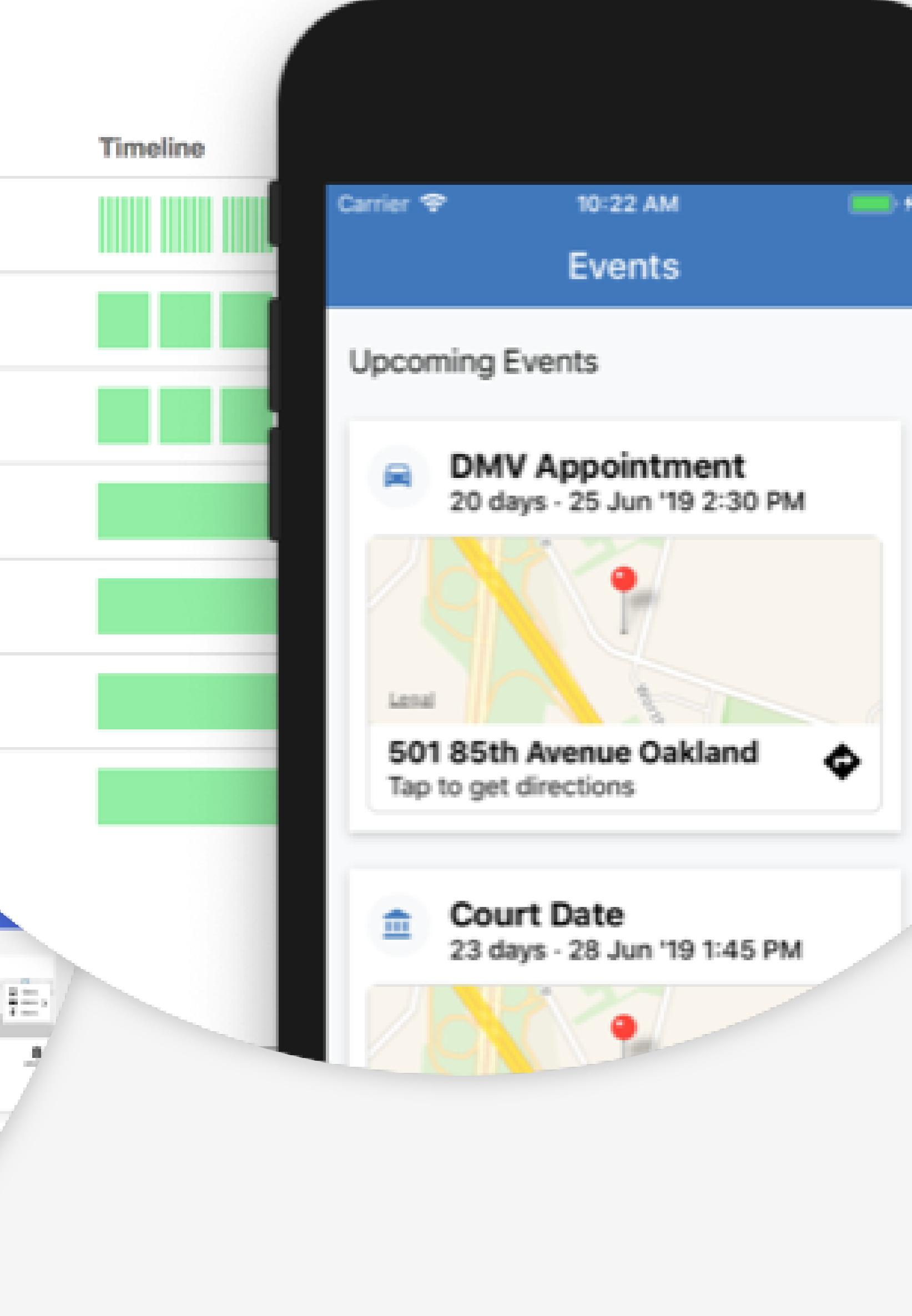
↑ Synthesize: Service map

We partnered with a local, care-focused criminal justice organization to map the experience of someone going through their pre-trial process, and how they, as an organization, provide support in that process.



↑ Design: Architecture + flow

We identified areas that we felt technology could aid in both navigating pre-trial and providing pre-trial support. Pictured above: a matrix for delivering event reminders and offers of support to someone awaiting trial.



↑ Build: Mocks, prototypes, testing, launch

I created a set of mocks and prototypes that we then used in user testing scenarios. After a few iterations, we used the prototypes as guides for engineers building out full versions, and as walkthroughs in sales pitches to local governments.

Promise

The Workflow dashboard automated a significant task for case managers: figuring out who to talk to every day.

Previously, this took hours of querying a database, printing out names, and prioritizing "clients" based on predefined criteria like "who has a court date in the next 2 weeks" or "who is in risk of failing out of the program", and then reentering information into the database.

It was very popular as it freed up case managers to spend more quality time with their clients instead of battling an outdated system. A meaningful connection with a social worker was a significant factor in reducing incarceration.

Names have been blurred for privacy.

The screenshot shows a web-based application titled "Promise: Case Manager" with a dark blue header bar. The header includes the "Workflow" tab, a search bar labeled "Search Clients", and other navigation links. Below the header, a main content area is titled "Workflow All". A sub-section titled "Court in Next 2 Weeks" displays a list of clients with their details. The columns in the table are: Done (checkbox), Client (blurred names), Court Date (Jun 18, 2019 9:00AM), Program (e.g., OR - Minimum, ACM - Int, ACM), and Assessment (e.g., Release Not Rec, SFPDP - ACM). There are 15 rows of data, each corresponding to a client with a court date on June 18, 2019, at 9:00 AM.

Done	Client	Court Date	Program	Assessment
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	OR - Minimum	Release Not Rec
<input checked="" type="checkbox"/>	NM	Jun 18, 2019 9:00AM	ACM - Int	Release Not Rec
<input checked="" type="checkbox"/>	NM	Jun 18, 2019 9:00AM	ACM	Release Not Rec
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM, OR - Minimum	OR - NAS
<input checked="" type="checkbox"/>	AB	Jun 18, 2019 9:00AM	ACM	Release Not Rec
<input checked="" type="checkbox"/>	AB	Jun 18, 2019 9:00AM	ACM - Int, OR - Minimum	SFPDP - ACM
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM - Int	Release Not Rec
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM, OR - NAS	OR - Minimum
<input type="checkbox"/>	██████████	Jun 18, 2019 1:30PM	ACM, OR - NAS	Release Not Rec
<input checked="" type="checkbox"/>	AB	Jun 18, 2019 9:00AM	ACM	Release Not Rec
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM	Release Not Rec
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM	OR - Minimum
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM - Int, MBHC	Release Not Rec
<input type="checkbox"/>	██████████	Jun 18, 2019 9:00AM	ACM - Int, OR - NAS	OR - NAS
<input type="checkbox"/>	██████████	Jun 18, 2019 12:00PM	ACM - Int	Release Not Rec

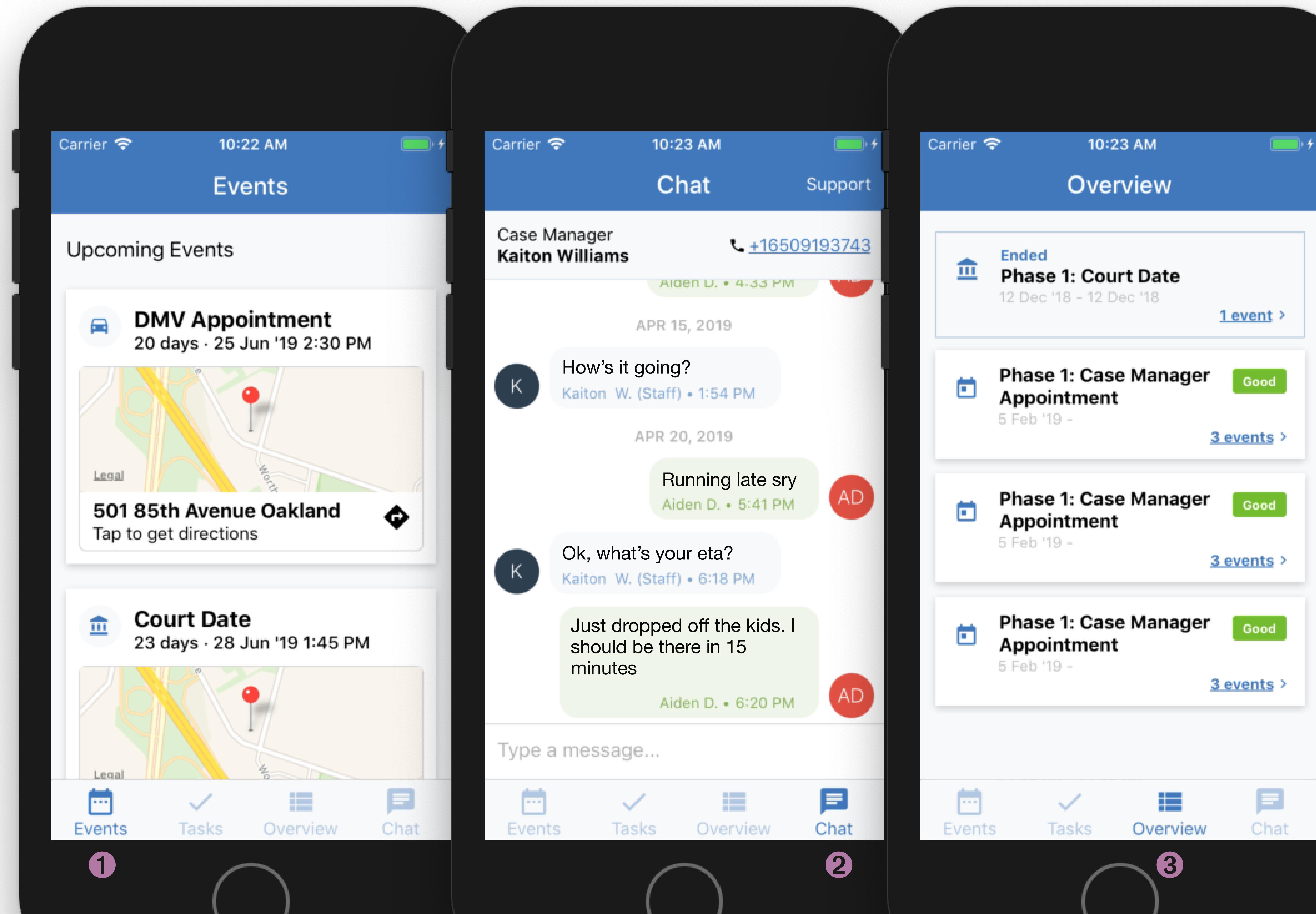
Promise

The Promise mobile app was created for people awaiting pre-trial. It provided a feature set that enabled better communication and information sharing between them and their assigned case manager.

Key features:

- 1 Calendar of upcoming events (e.g. court dates) with important information, and (sometimes) the ability to request transportation
- 2 Chat, phone numbers, and other options for support
- 3 A list of expectations for the program

(Not shown) Push notifications or SMS reminders (app not needed) for important events



UberPool

6/2014 - 11/2014

In mid 2014, Uber started researching a new, experimental ride option: carpooling. In theory, adding more passengers to a car could make more efficient use of the limited supply of drivers, and make Uber more affordable than UberX and competitors.

I was brought in as the initial discovery phase was being completed. Surveys and interviews indicated that riders might be willing to share a car with someone in return for a large discount, and drivers would appreciate making more money. My role was to design the rider experience, co-leading design and collaborating with the designer on the driver experience.

In order to test the feasibility of a radically different service before fully committing to a rider app redesign, we chose to work with the developers to create a quick and dirty alpha version within the existing rider app that functioned almost entirely through push notifications. This allowed us to work out any issues with the experience from the server side, rather than baking it into the app.

Role:

Design Co-lead (Rider Experience)

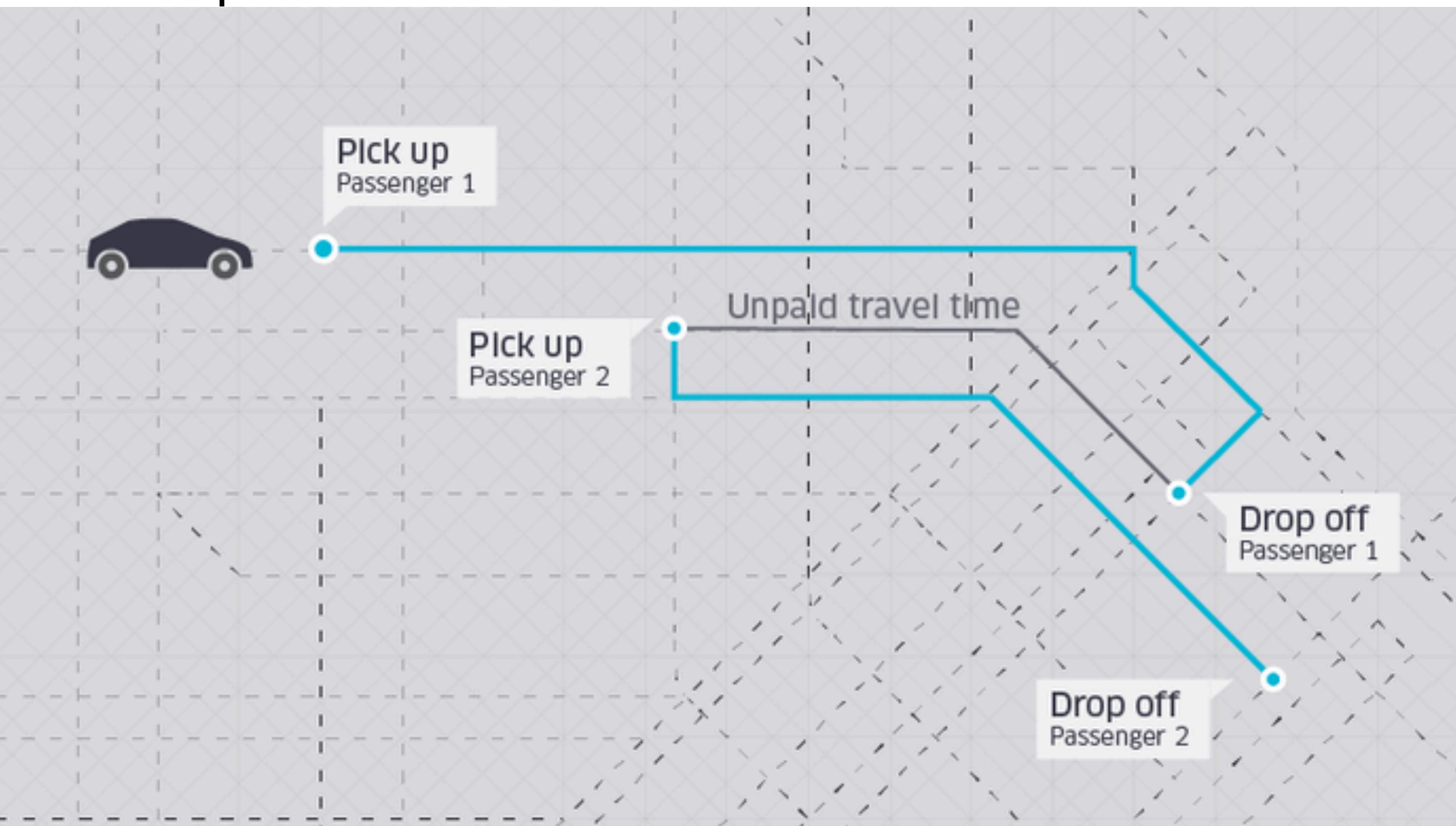
Responsibilities:

- Product design
- Prototyping
- User testing
- Copywriting
- Branding
- Sound design

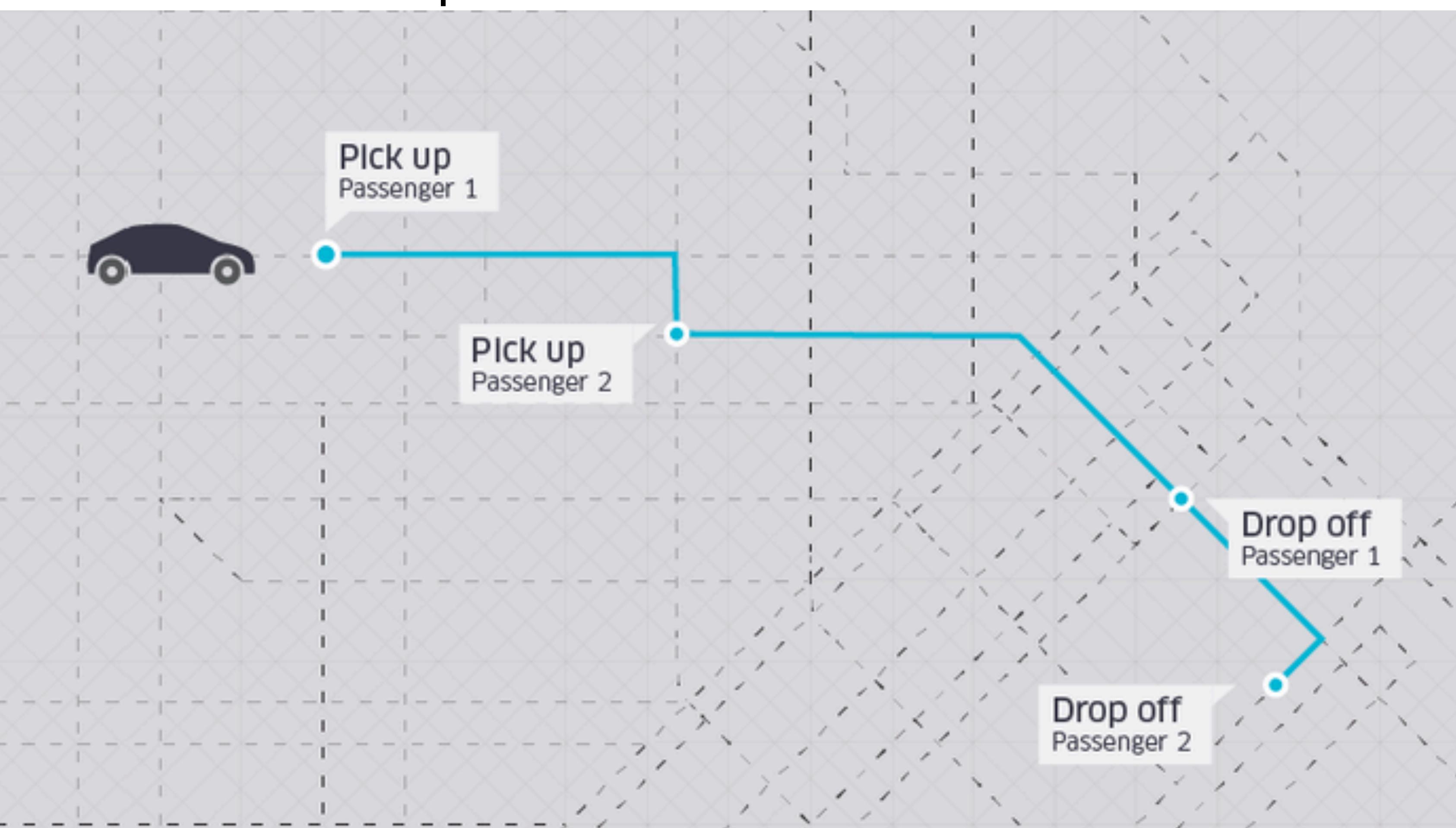
Phases:

1. Launch a private alpha version in just three weeks
2. Aggressively iterate and launch a full public beta in another few weeks

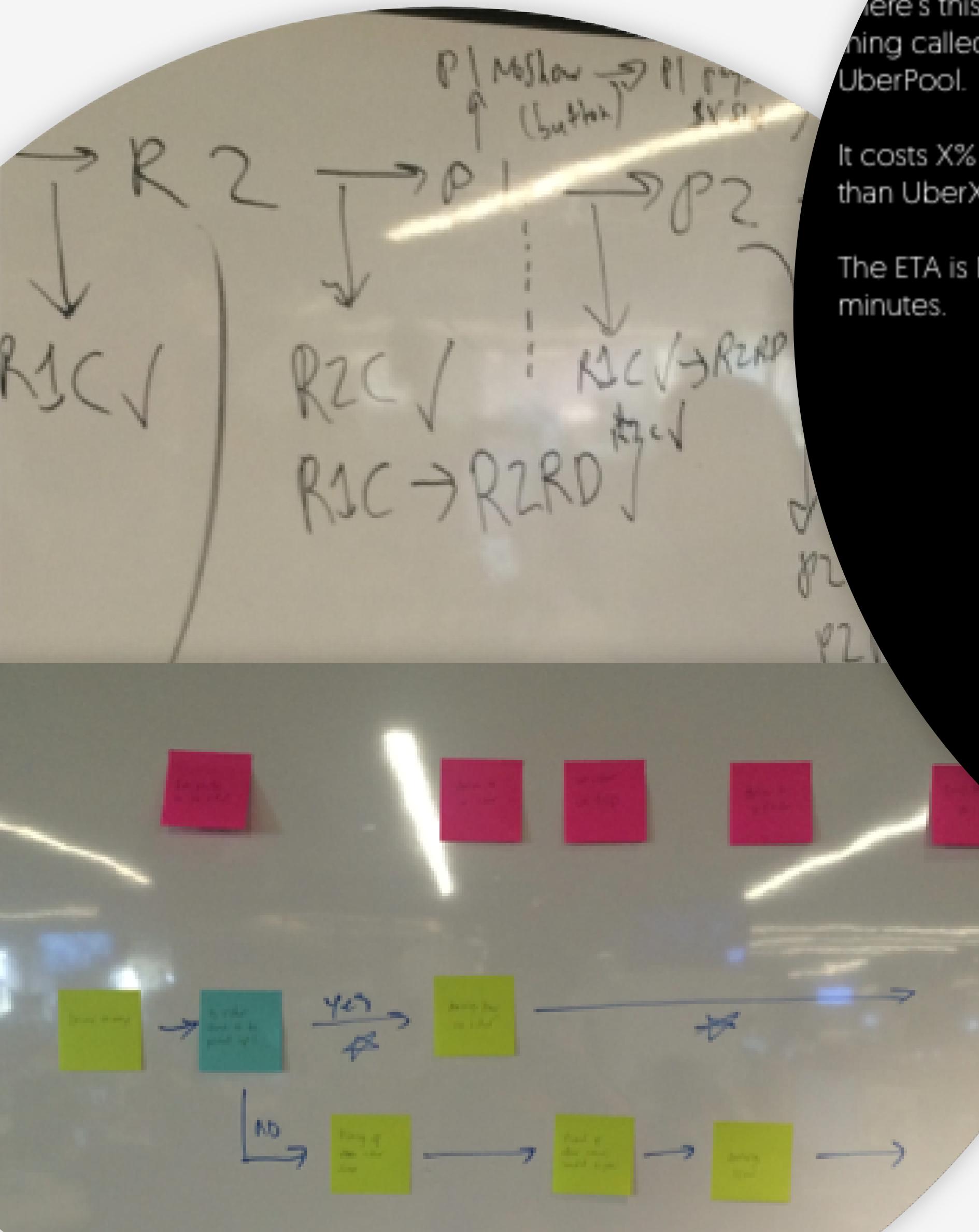
Driver experience before UberPool



UberPool driver experience



UberPool Alpha Design Process



↑ Synthesize: Brainstorming

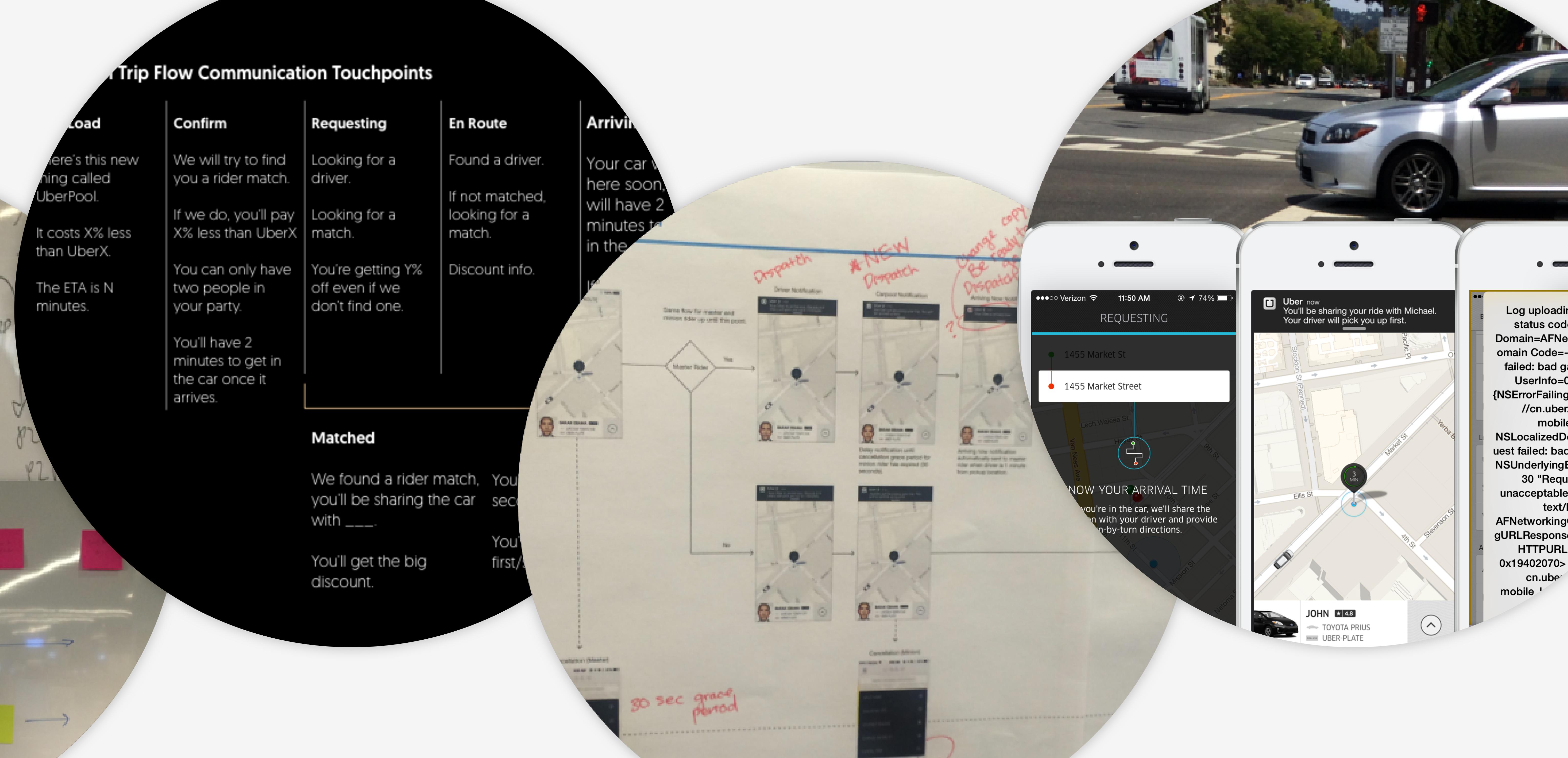
Worked with other team leads to figure out the high level steps of both the rider and driver experience. We then worked with stakeholders (managers and executives) to ensure this fit their vision for the service.

↑ Define: Journey map

I translated the steps for the rider into the stages of the Uber trip flow as it was already established in the app, then fleshed out the communication touchpoints (push notifications) with a copywriter.

Design: Flow diagrams + prototype

I designed a flow chart for the rider experience— created in a way that would easily export as an interactive prototype. Then worked with the design co-lead and design manager to refine it. Once completed, the prototype served as a presentation tool and a development guide for engineering.



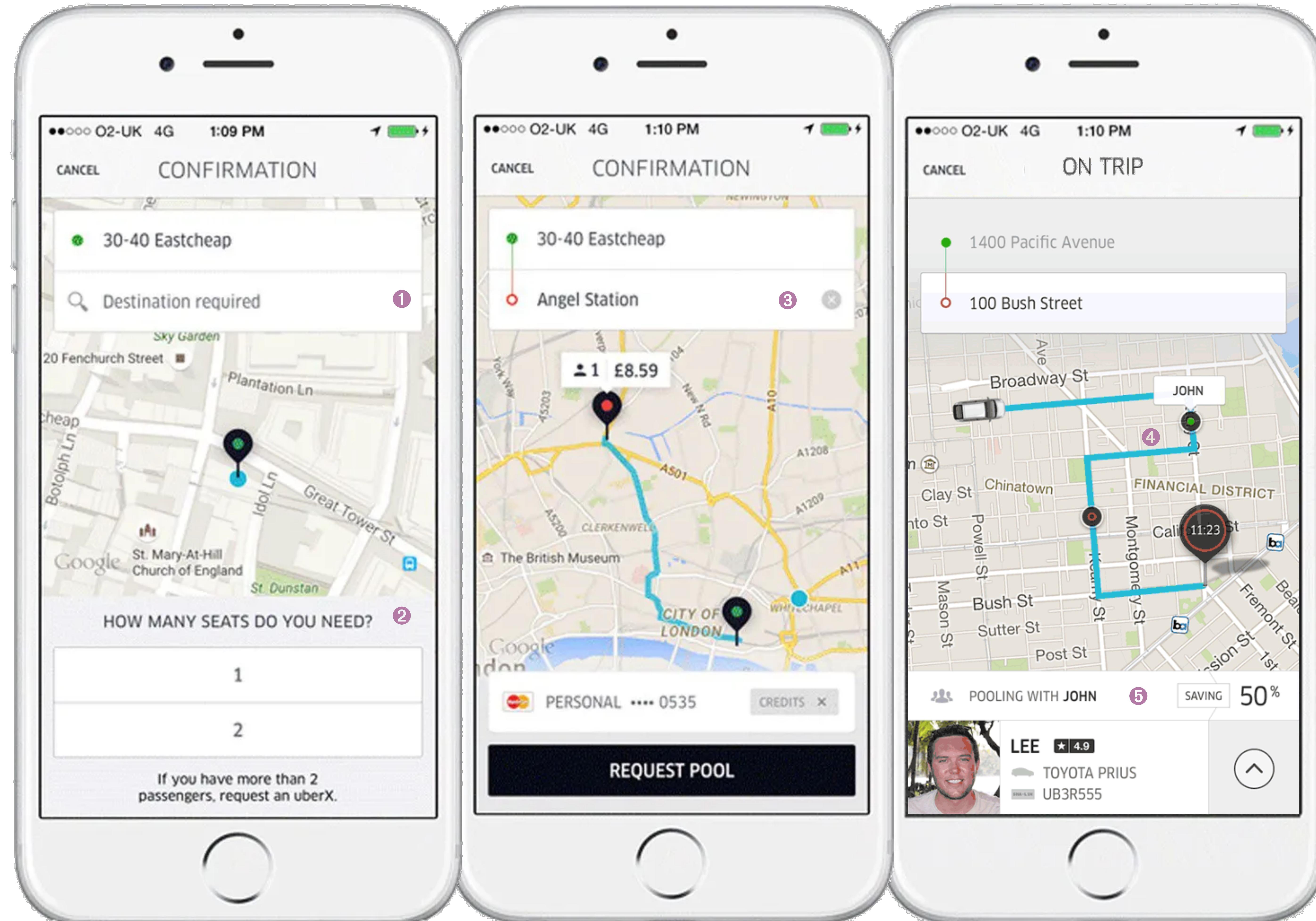
Deliver: Closed alpha launch

fully functioning experience, usable by anyone with the Uber app and a flagged account. I worked closely with engineering to fix UX issues as they arose in development, and took on the role of primary user tester out in the field.

UberPool Beta

Service-specific features built into an updated version of the Uber app.

- ① Required destination
- ② Seat specification
- ③ Destination editing
- ④ Map route visualizes trip with stop location and order
- ⑤ Co-rider banner with savings information

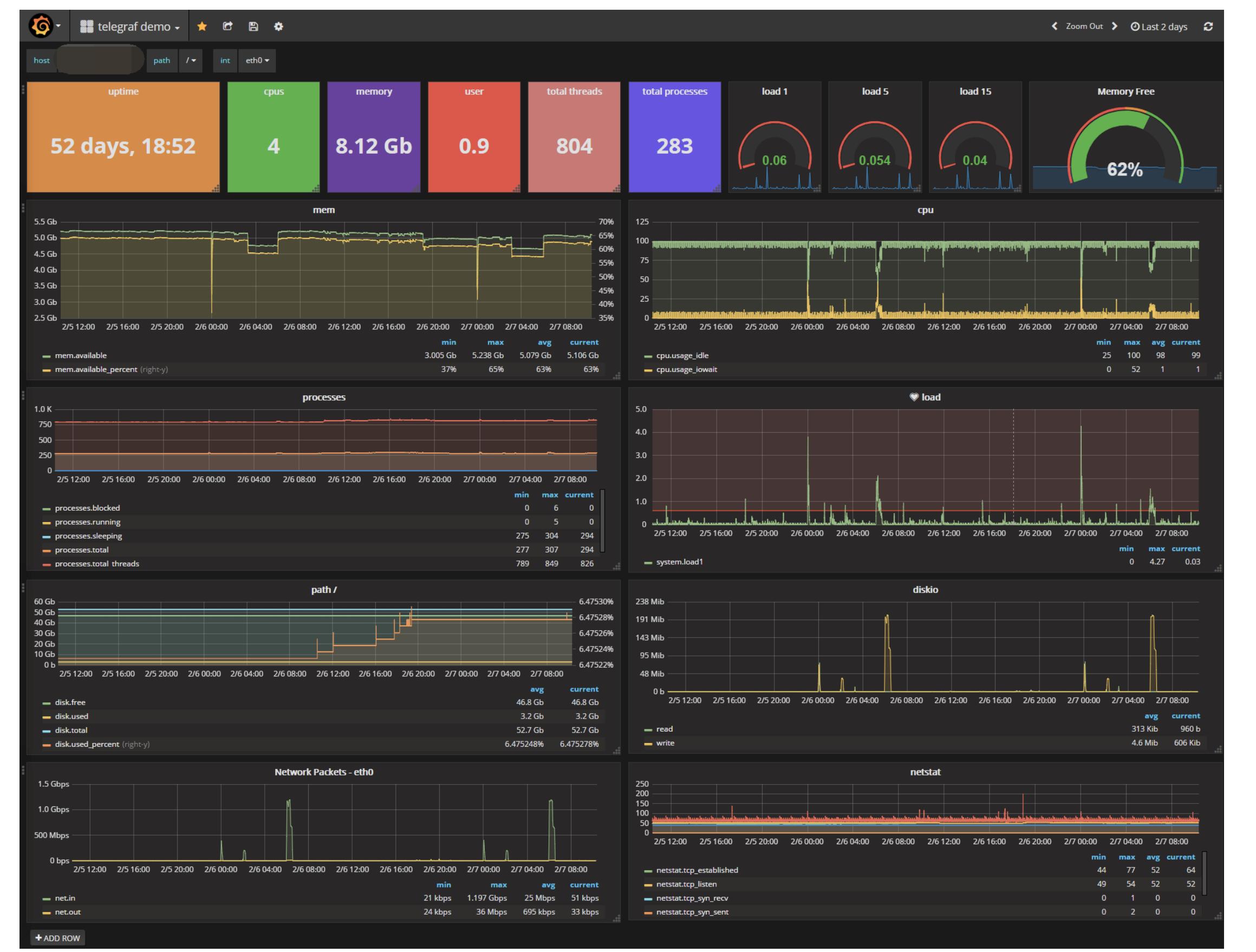


Synoptic

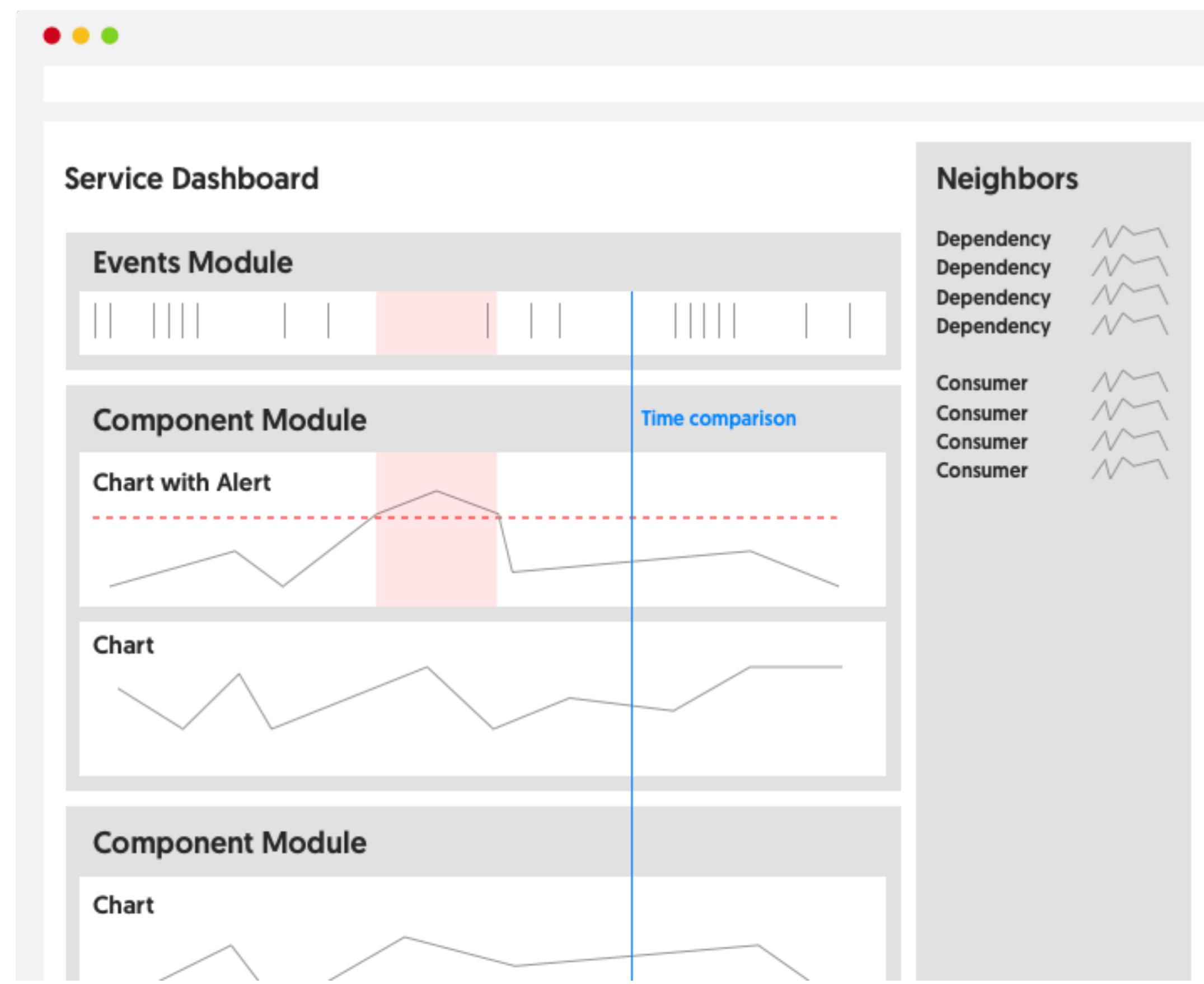
11/2016 - 3/2017

After years of rapid growth, Uber's engineering infrastructure was becoming extremely complex. Lack of visibility into the system made it difficult to catch small issues before they snowballed into costly service outages, sometimes taking down the entire company for hours. The team needed a better tool to make and display real-time charts (monitoring), and send urgent emails & text messages when values on those charts crossed certain thresholds (alerting).

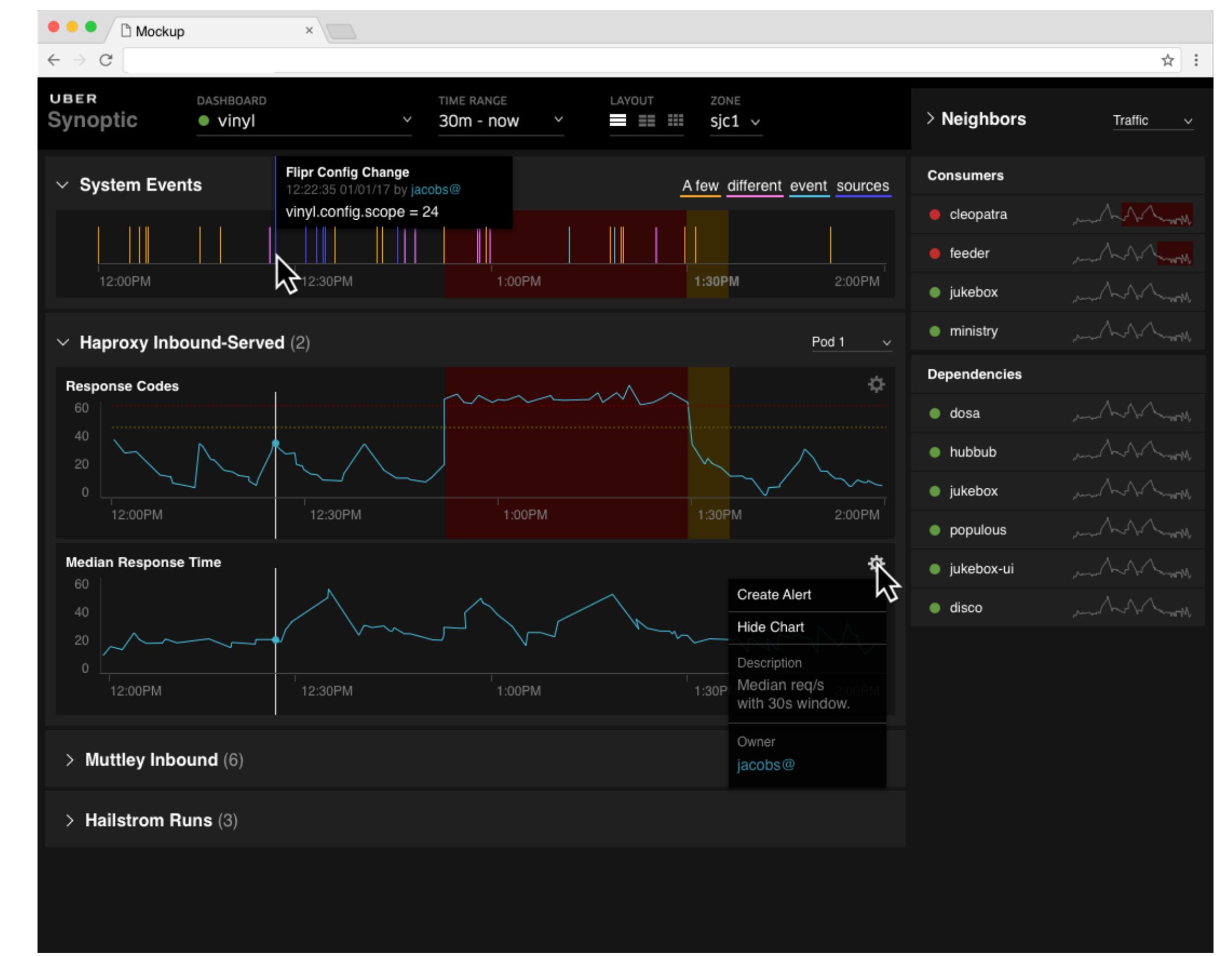
At the time, monitoring and alerting was done in an open source tool that the team so heavily modified over the years it had become a Frankenstein's monster's user experience nightmare. I worked with engineering leadership to identify an opportunity to create a real-time, auto-generated dashboarding system to display context-sensitive information from across the Uber ecosystem, enabling quick detection and mitigation of issues. Then I researched, designed, and tested a set of solutions, and helped lead a team of 8 engineers to build a final product.



OLD VERSION



WIREFRAME



FINAL PRODUCT

Role:

Acting product manager &
Lead designer

Responsibilities:

- Product research
- Stakeholder management
- Requirements
- Project management
- User research
- Product design
- Prototyping
- User testing

Before Synoptic

Configuration was difficult

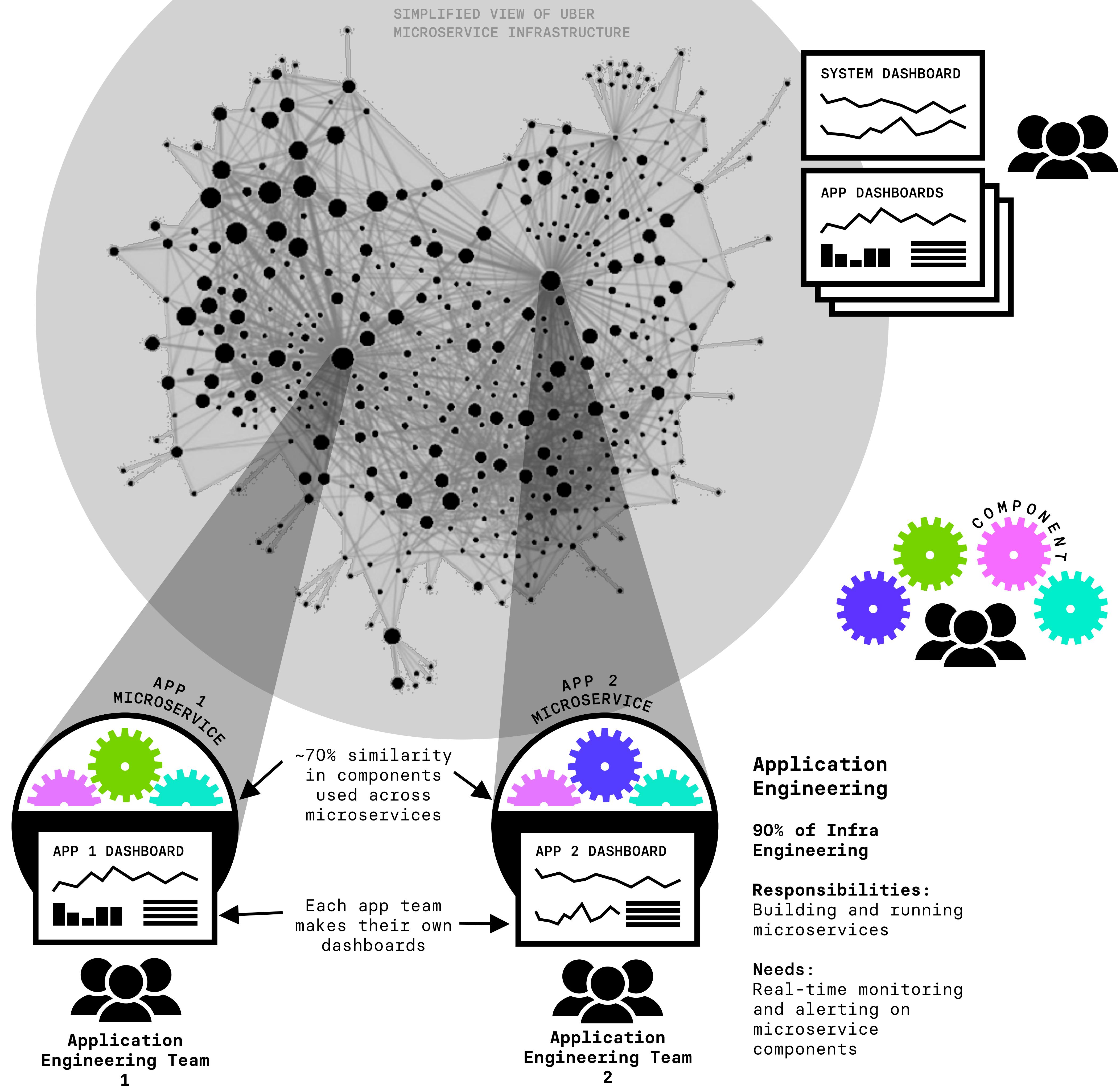
- Lots of potential for incorrect setup by application engineers
- Involved learning a custom query language
- Very little documentation or help docs
- Support fell on platform engineers to help make dashboards work

Duplicated work

- User required to input same data in multiple places
- High degree of similarity in charts needed across dashboards, but often configured differently

Poor quality, limited utility

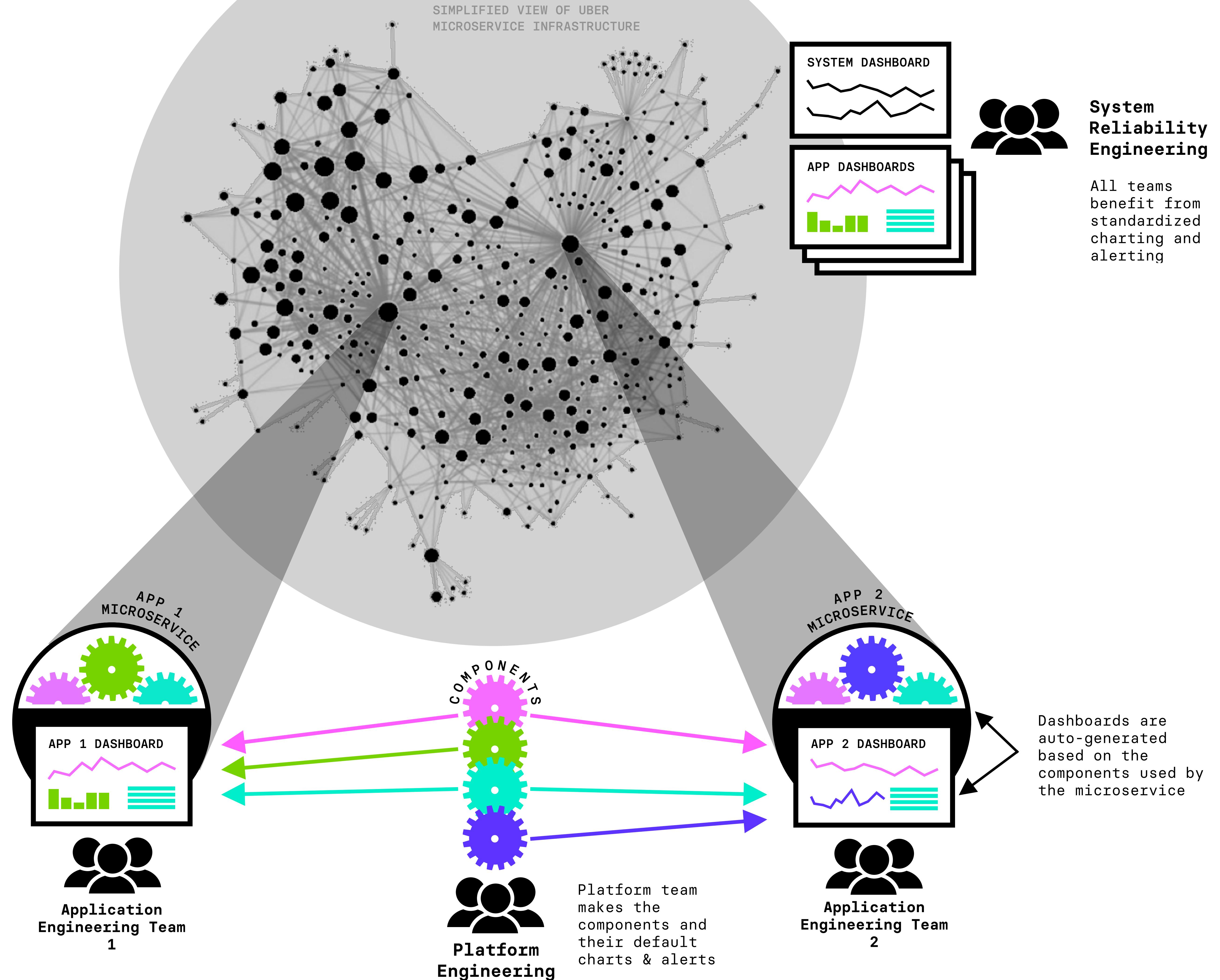
- Misconfigured alerts and dashboards had little utility
- Inconsistent data representation
- Misconfigured alerts were noisy and often ignored
- Inconsistencies made it difficult to use someone else's dashboard— a crucial requirement for system-wide fire fighting
- No awareness of dependencies
- Difficult to navigate by time



Synoptic

Working with leadership from each of the engineering groups, we decided to lean on platform engineers to make the charts and alerts associated with their components. We found they were already doing similar work in an ad-hoc manner to help app engineers make/fix charts and alerts for their components, so this would actually reduce their support work while allowing it to benefit more people.

Dashboards could then be auto-generated based on a system that detected the component makeup of a microservice—**no configuration needed!**

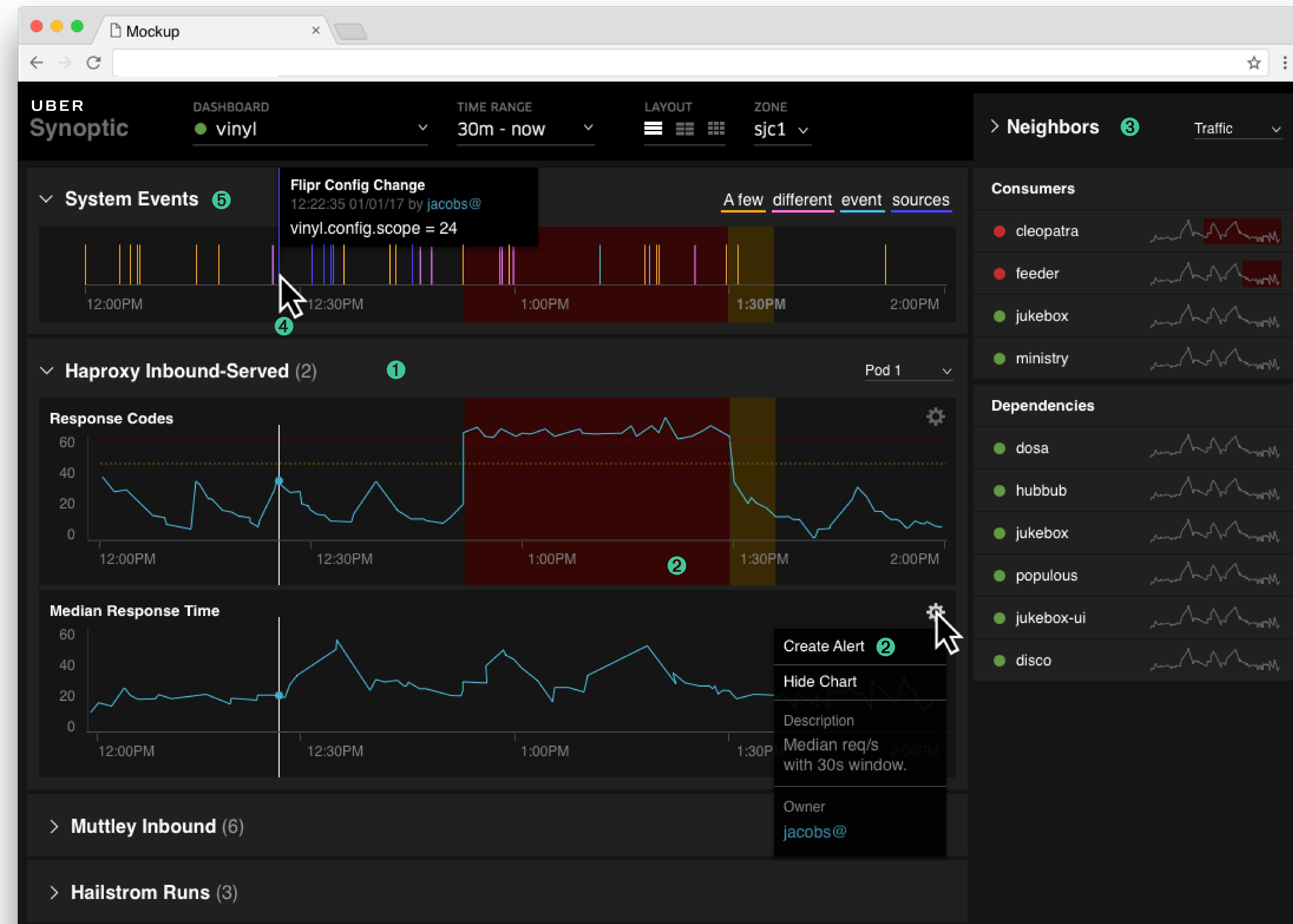


Synoptic

Synoptic quickly became the default tool for infrastructure engineers to do monitoring, alerting, and root cause analysis. Within a week of launch, Synoptic was used to identify a potentially major issue that could have disrupted the Uber rider app.

Key features:

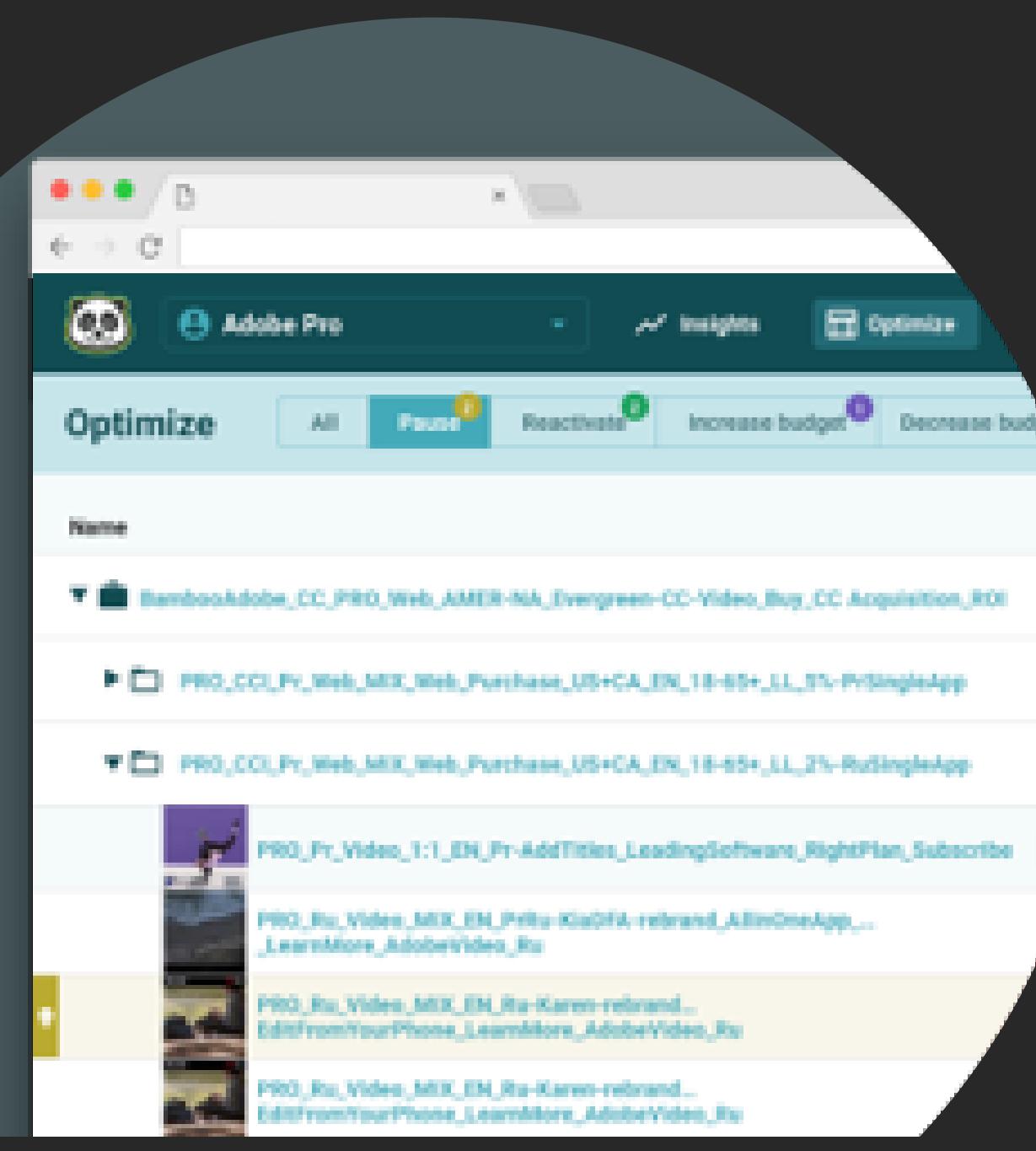
- ① Real-time, community-managed dashboard system built from modules made by domain experts
 - Automated dashboard setup based on service architecture
- ② Alerting capabilities for outage detection
- ③ Navigable dependency/consumer graph to help diagnose outages
- ④ Data visualizations heavily geared toward time-based comparisons across multiple data sources
- ⑤ Overlay of company-wide system events
 - Bird's eye network visualization to show all 2500 microservices, their dependencies, consumers and status





Talka

Solo created iPhone app that repurposed text-to-speech for wacky musical purposes



BambooAI

Freelance design for a web tool that helped small businesses get the most out of running Facebook ads



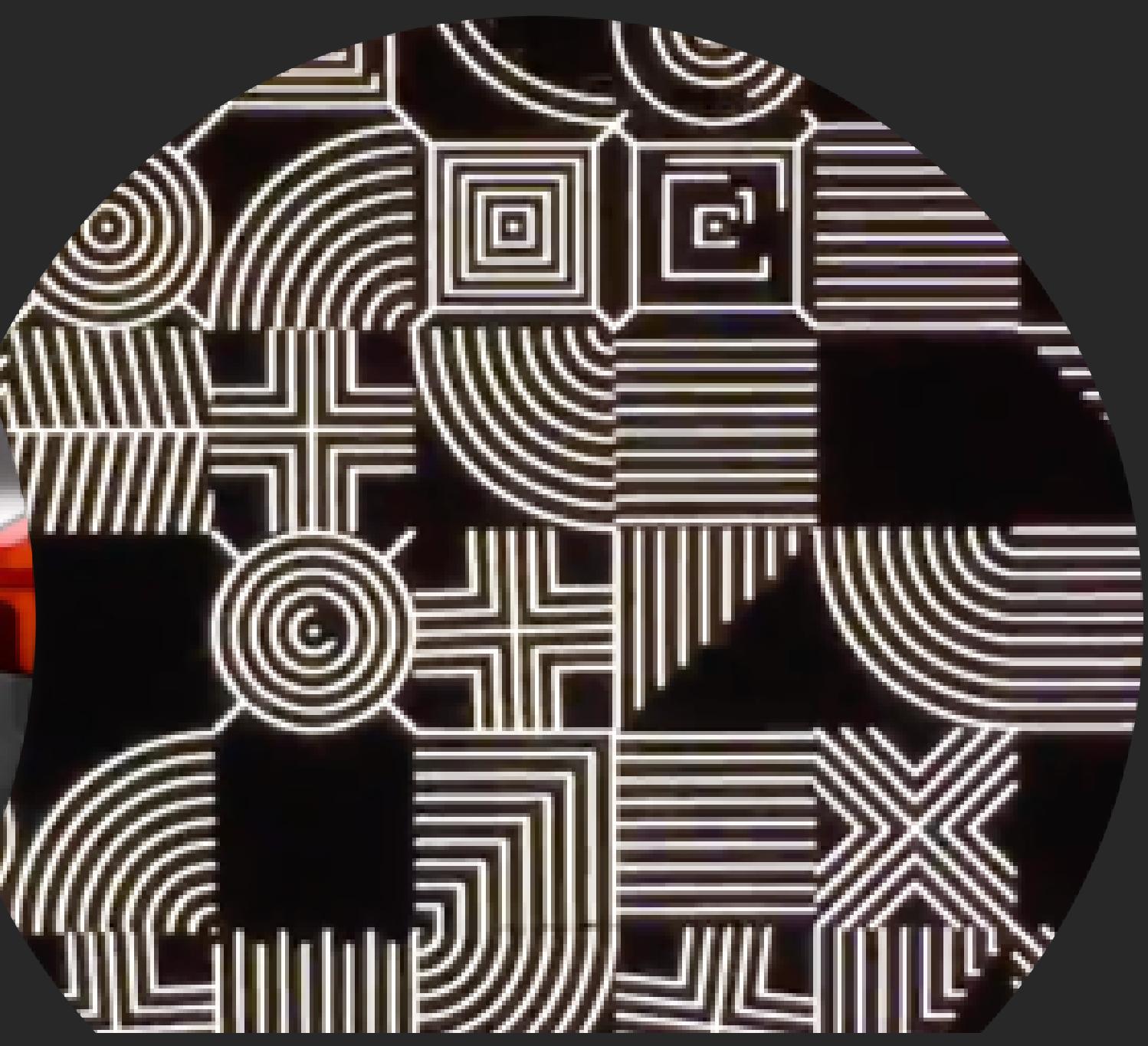
Uber Data Vis

Major contributor to a design system with accompanying tools and guides for internal & external data visualization



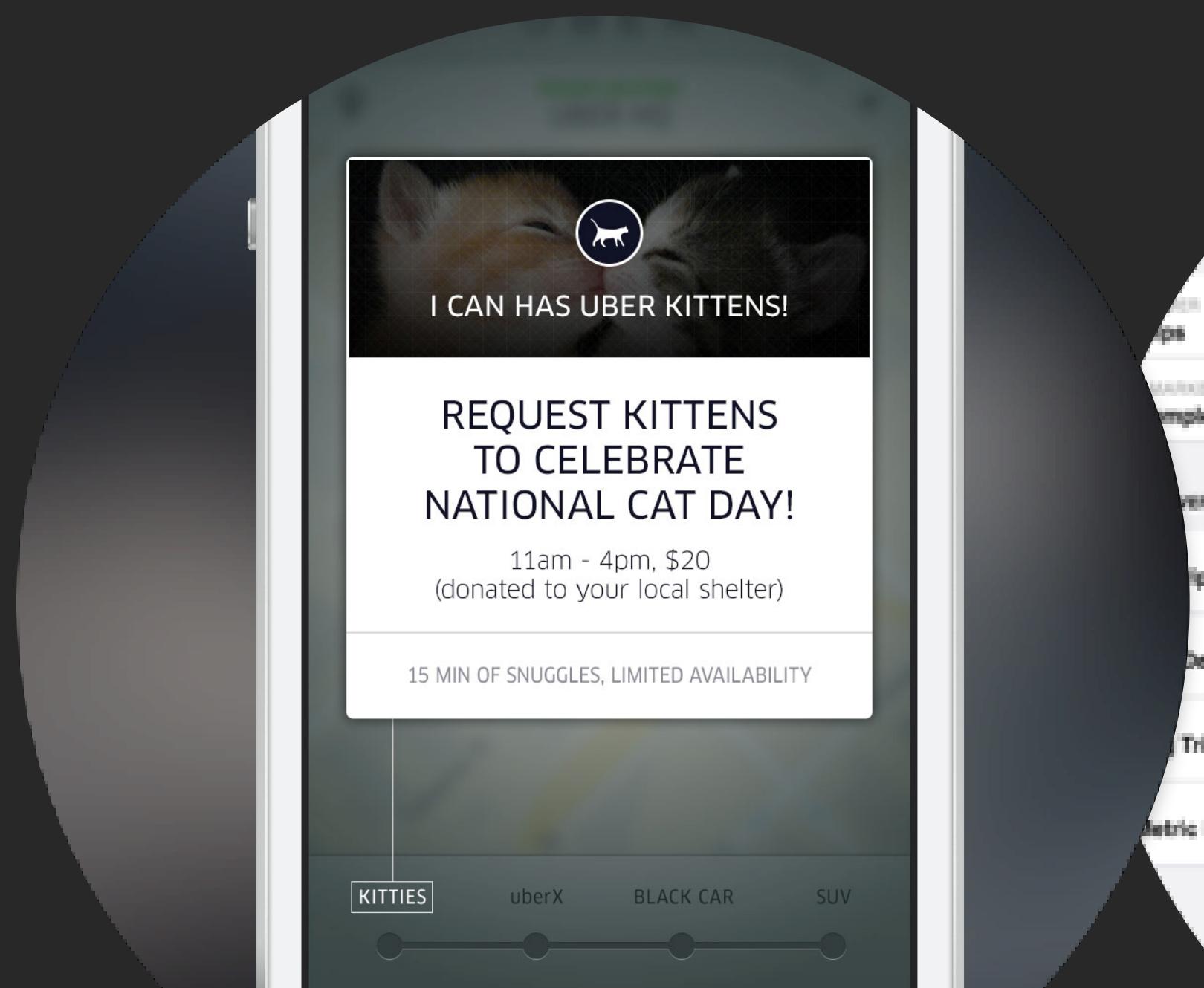
Uber Sound Design

Collaborated with Uber ATG engineers to create sounds for self-driving cars



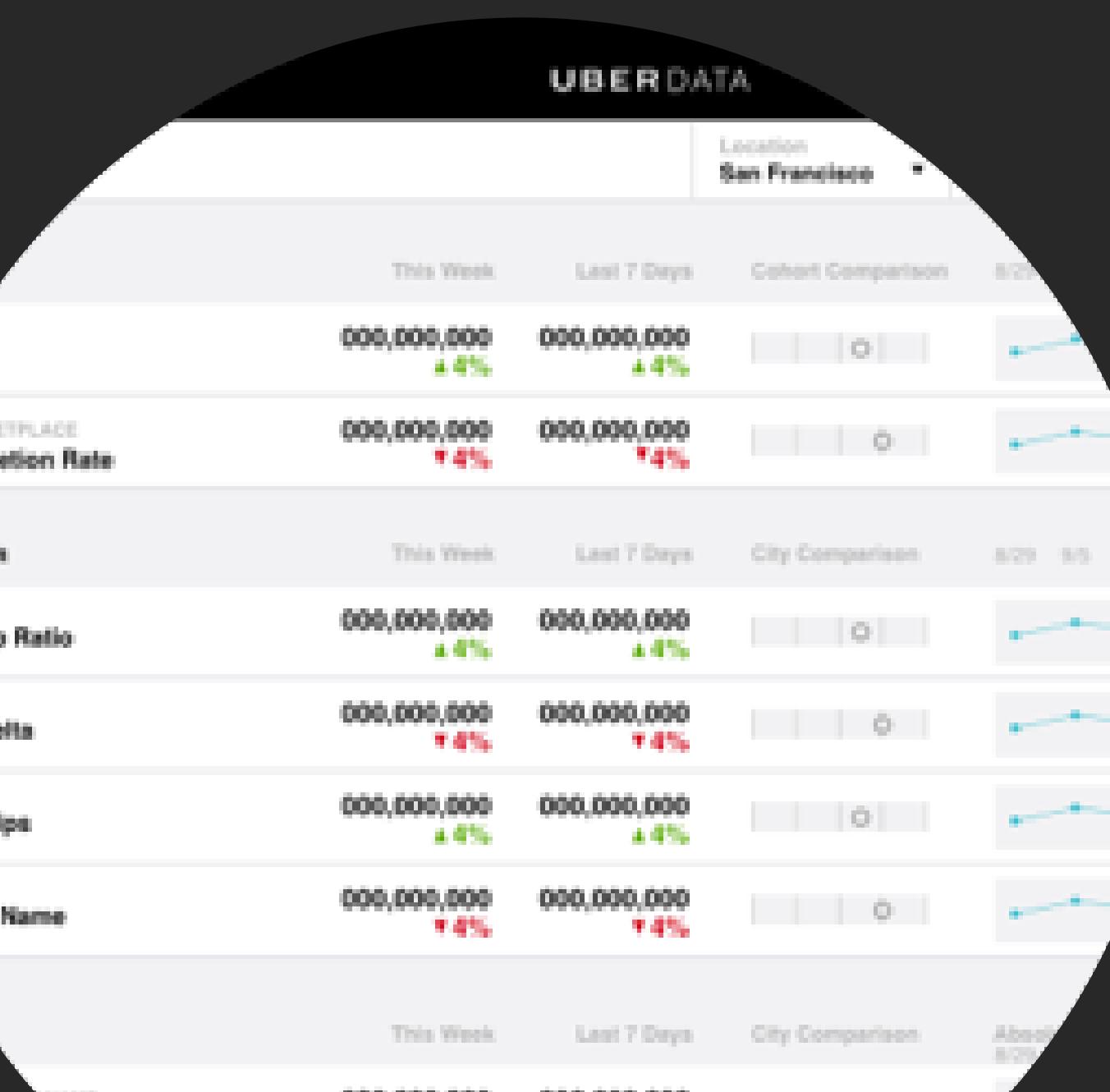
Uber Branding

Collaborated with branding team to create a generative design system for a big Uber employee convention



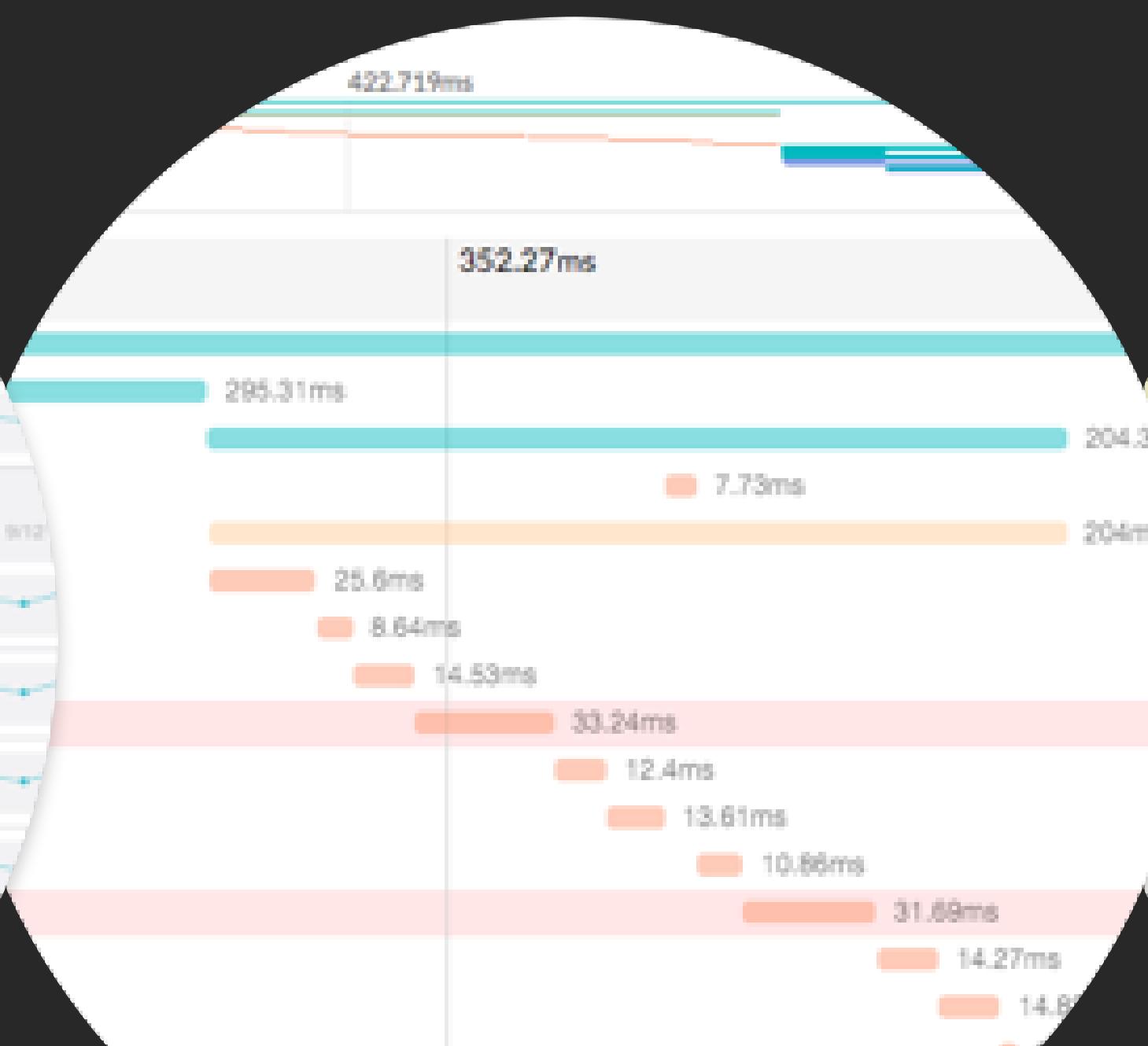
Uber Mobile Messaging

Led design on mobile app feature used by city teams to communicate with riders about product launches, fare changes, promotions, service disruptions, etc



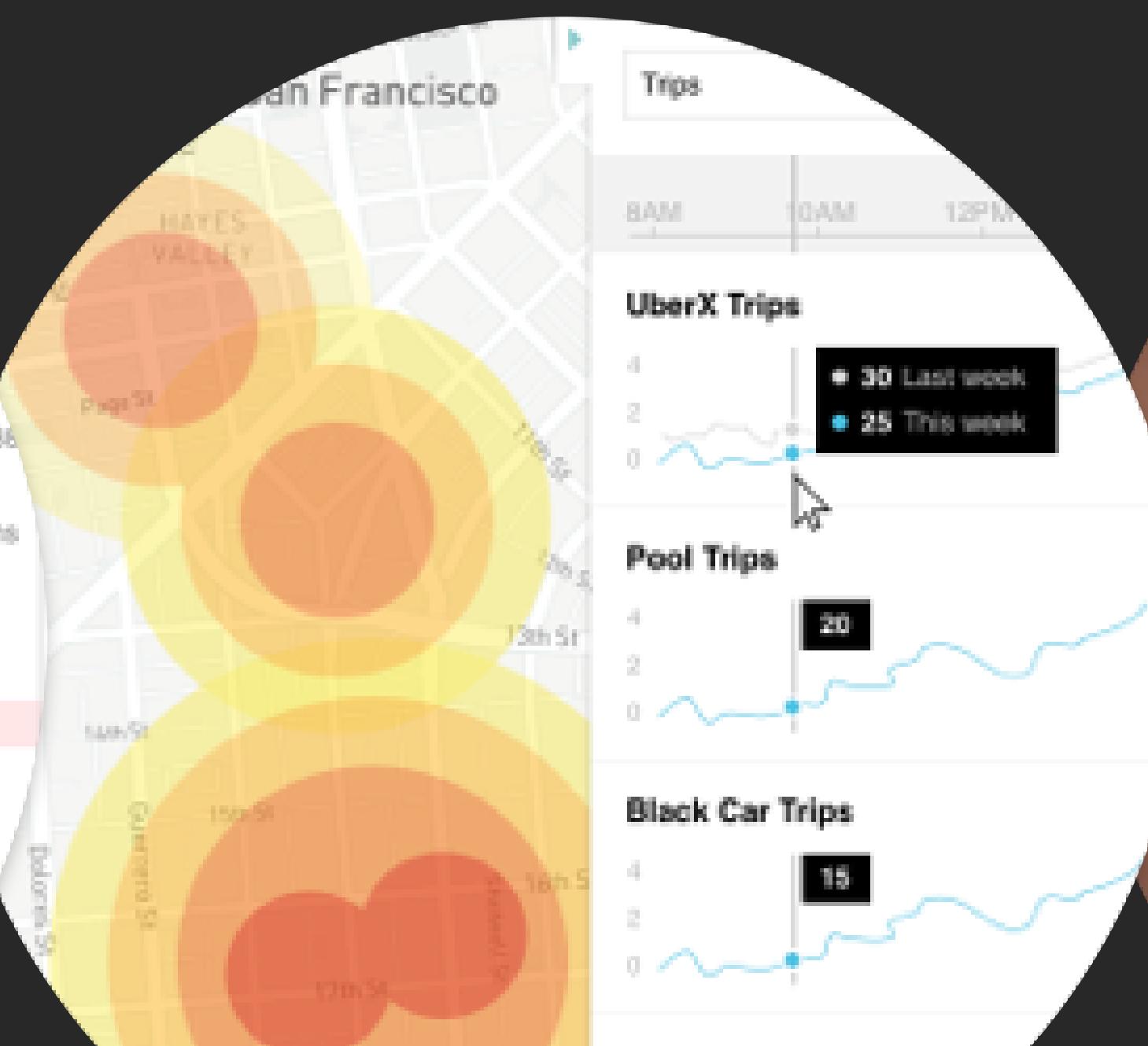
Uber Summary (v1-3)

Led design on multiple versions of Uber's main performance dashboard used by all operations employees and executives



Uber Jaeger

Design and product management on an open source infrastructure call tracing tool



Uber Heaven Charts

Real-time charts and map visualization tool for city operations teams to understand the state of the Uber marketplace



Explor (née Appsaurus)

Design of iPhone app for discovering iPhone apps, featured a fun UI for interacting with a sophisticated recommendation algorithm

WE ARE
ONE

LET'S WORK TOGETHER

