

Reimagine the user experience for a corporate travel management solution



## Project Background

Cornerstone Information Systems® is a leading travel technology provider with more than 600 clients operating globally, including travel management companies, online travel agencies, corporate travel departments, and global distribution systems.

The 4site™ platform, built in cooperation with AltexSoft, aims at automating travel planning and trip management. It offers powerful business intelligence features, providing the users with a complete control over their journeys, and 24/7 support to handle disruptions.

***Cornerstone***  
information systems®



# Problem

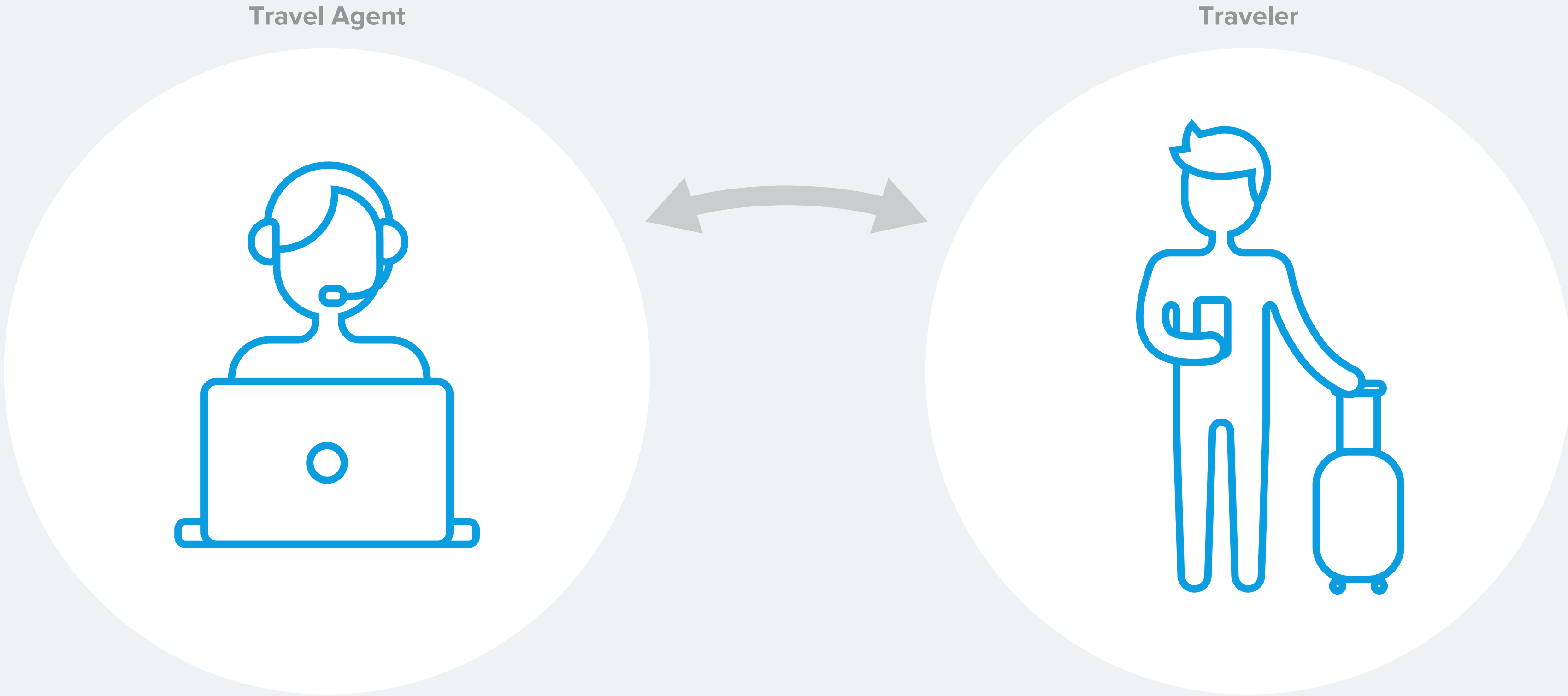
The estimated cost of travel disruptions is \$60 billion per year. With the number of airline passengers expected to reach 7.3 billion by 2034, the costs of disrupted flights will skyrocket.

Cornerstone was looking for a simple yet efficient solution for proactive airline disruption management, able to save billions of dollars for travel providers and travelers globally.





# Solution



Advanced **web dashboard** – a comprehensive tool for corporate travel managers. The dashboard allows the travel manager to track the status of the corporate traveler and proactively react in case of disruption.

Multitenant **mobile application** providing corporate travelers with a direct access to travel-related information on the go and get timely assistance from travel managers in case of disruption.



# The Process

Having spent about a year working on the idea of the 4site tool and drafting the basics, the company addressed AltexSoft with a request to handle core aspects of product development, including business analysis, UI/UX consulting, and engineering.

In order to achieve maximum performance efficiency in business analysis, solution architecture and prototyping, a hybrid approach to dedicated team cooperation model has been chosen. As a result, the part of our team traveled to the client's business location in order to join forces with the client's in-house team and jumpstart the project.





## Step 1

# Requirements specification

**Goal:** Elaborate and finalize the main user personas for the future product taking into account the specifics of corporate travel industry and disruption management business.

**Process:** AltexSoft team of project manager, UX designer/business analyst and software engineers has spent three weeks at the client's office for a deep dive into the industry and product specifics with the Cornerstone product team.

**Deliverables:** Valuable insights about the industry and client's business, profound user personas analysis, clear vision of the product goals, for every persona.





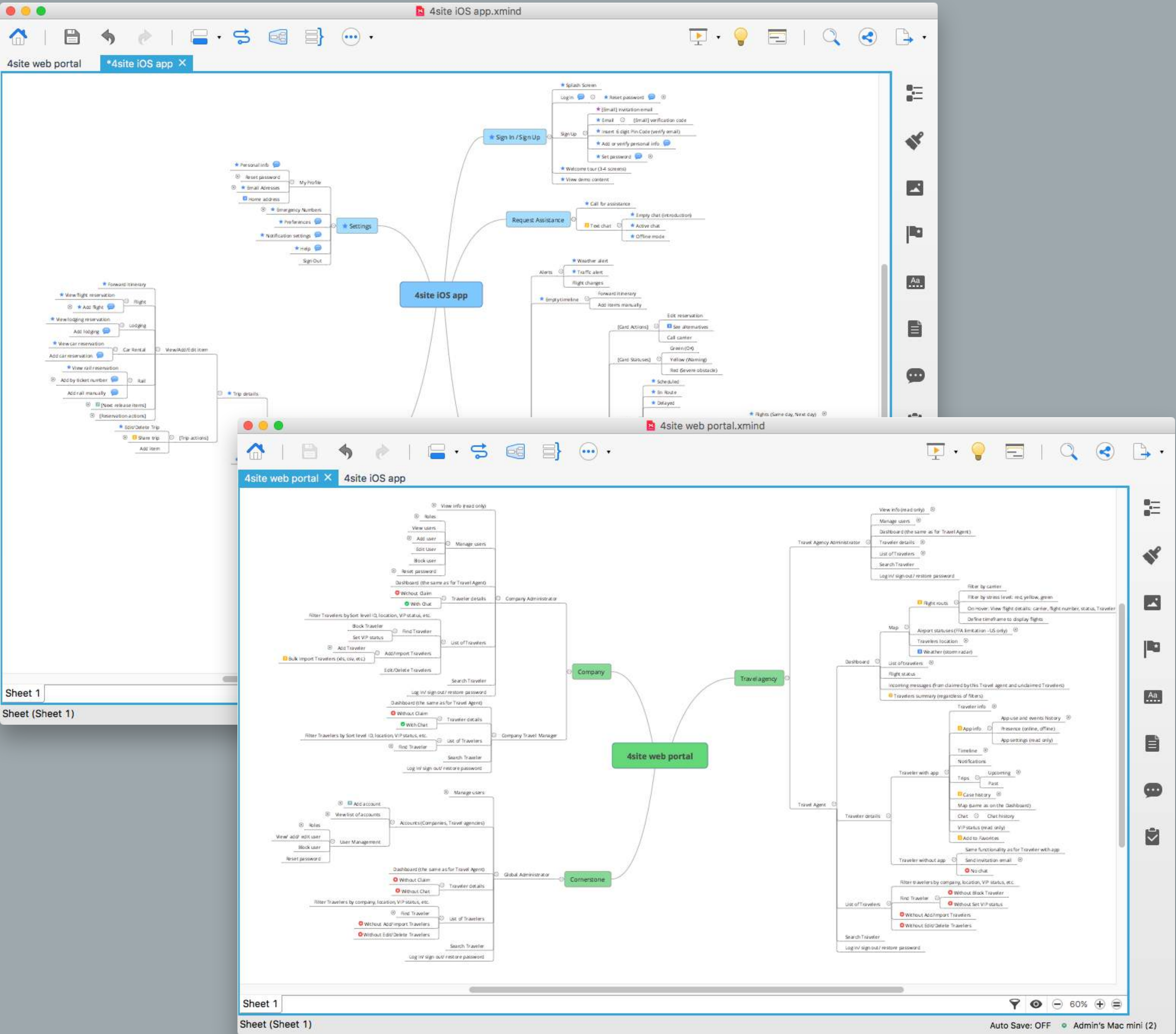
Step 2

Mapping the hierarchy of roles and entities

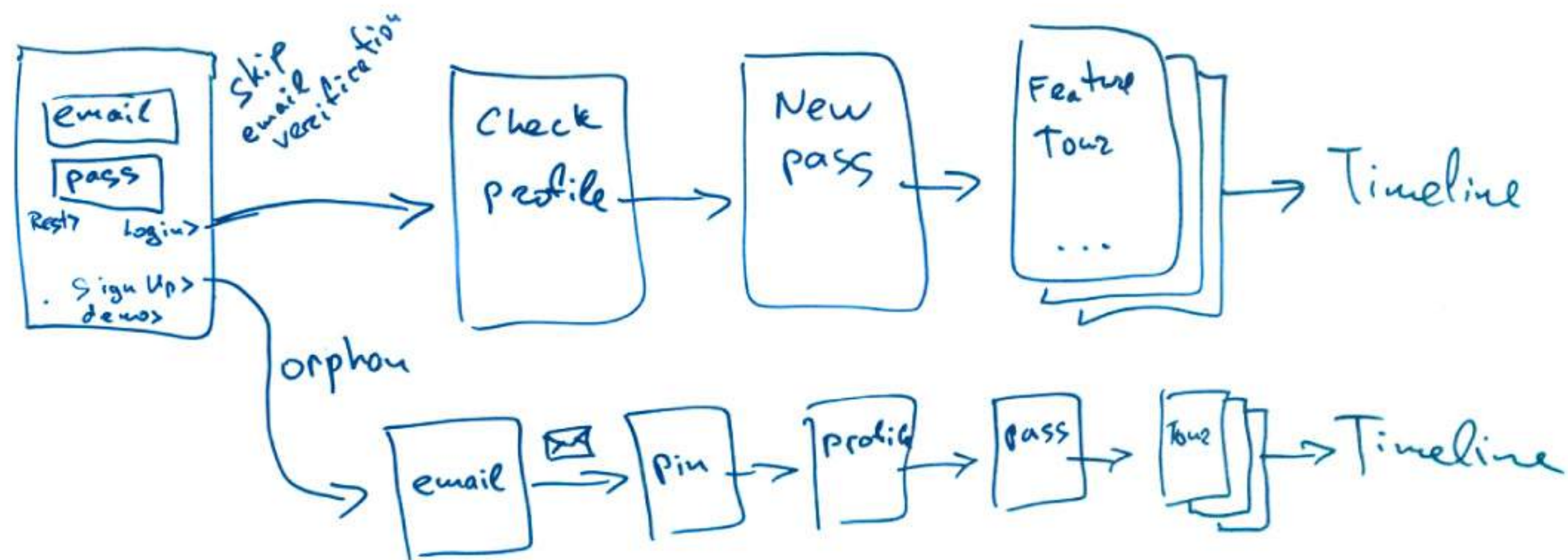
**Goal:** Define and visualize the inner information architecture of the product, structure it according to the roles and assigned functionality.

**Process:** Documenting the features and relations between the product modules, we were able to break down the scope of the project into smaller pieces and identify implementation priorities, from level 1 (critical) issues to level 7 (nice to have add-ons).

**Deliverables:** Roles and entities canvas in a form of mindmaps, with basic priorities assigned.







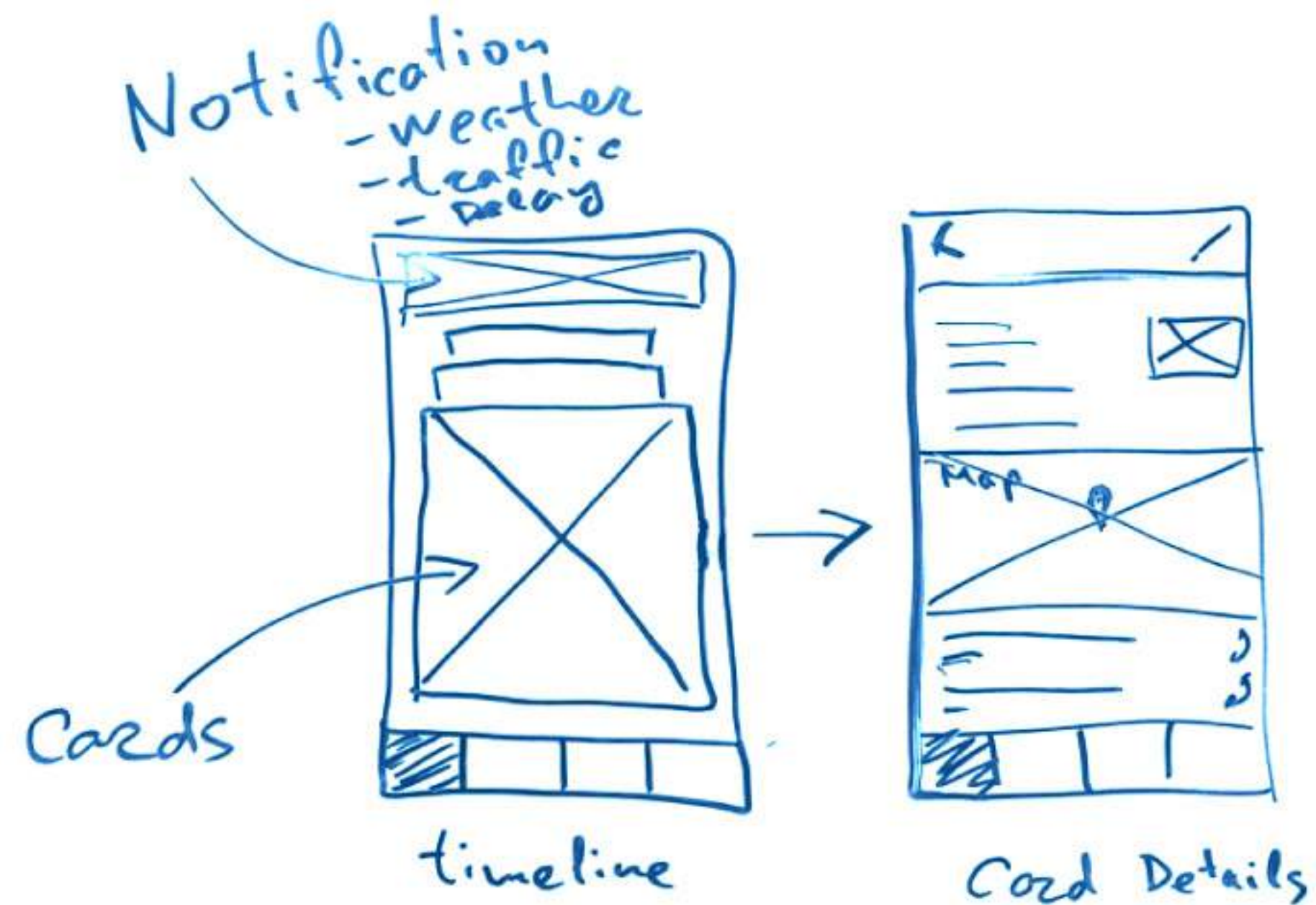
### Step 3

## Identifying user journeys and testing the concept

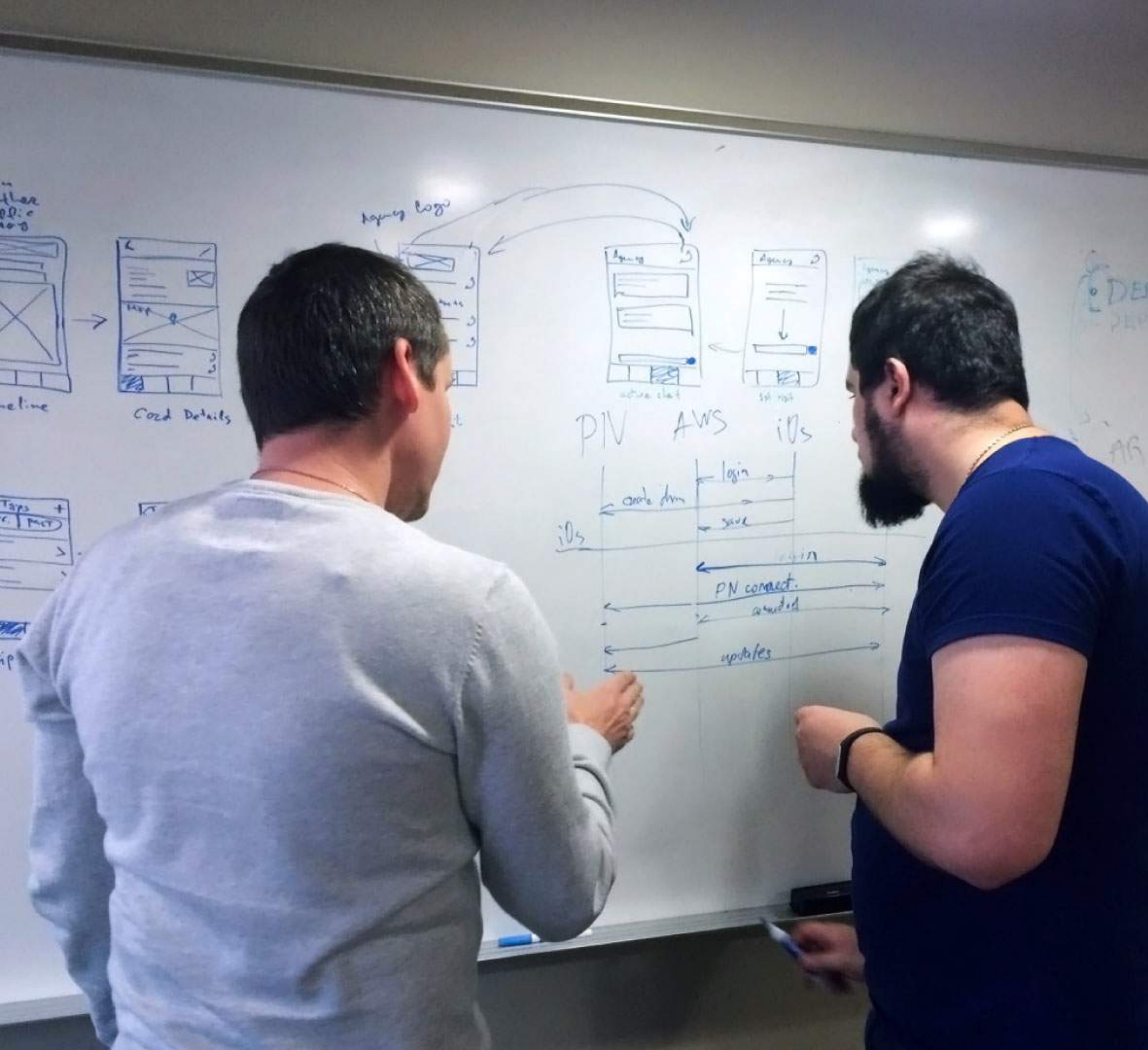
**Goal:** Propose the navigation flow, outline user journeys.

**Process:** The team was able to map out possible user journeys for the future product, including custom variations of the app flow for every type of user.

**Deliverables:** Finalized product concept and navigation.







## Step 4

# Prototyping, identifying the MVP

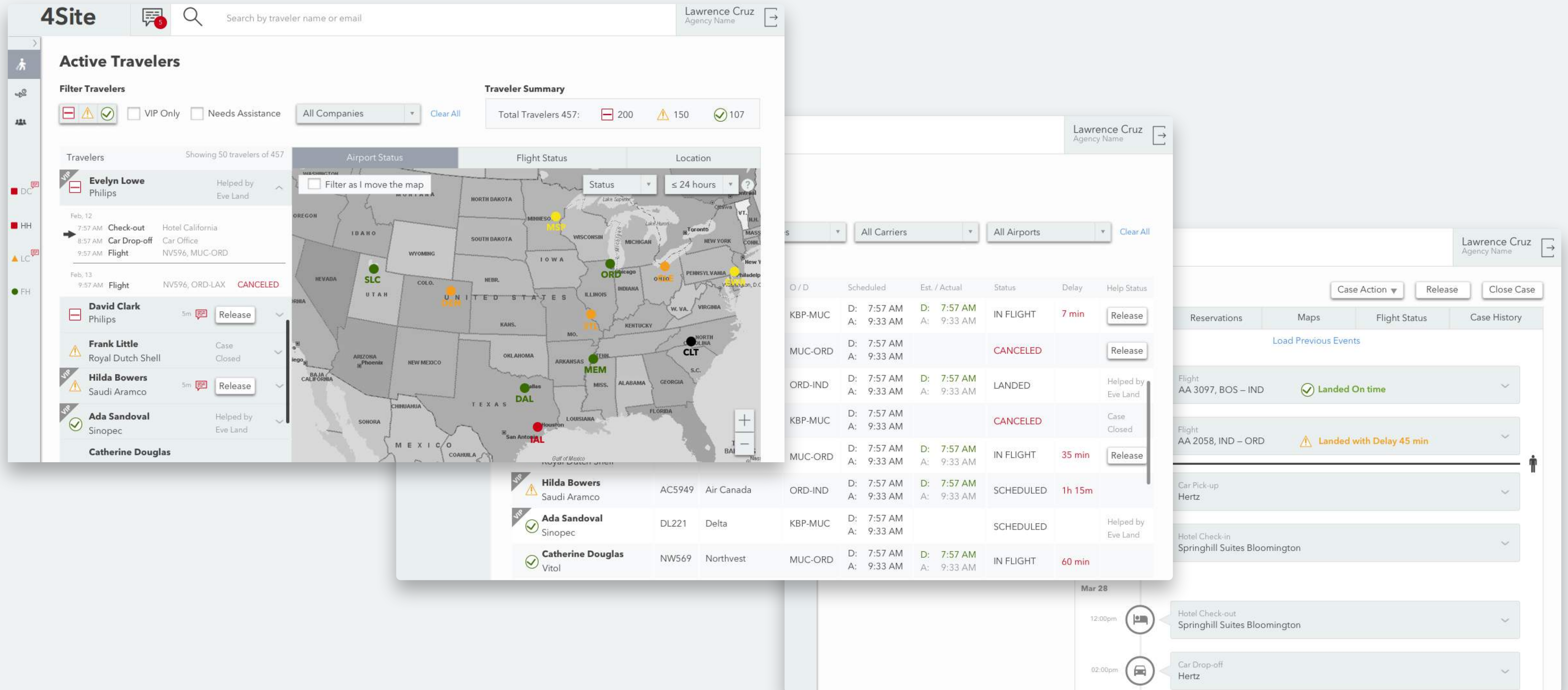
**Goal:** Lay the groundwork for product design

**Process:** We analyzed and fine-tuned initial prototypes, provided by the client, to match the product concept. Based on updated prototypes, the team created the basic wireframes and then converted them into clickable, interactive prototypes.

**Deliverables:** Interactive product prototypes (80+ web app screens), finalized specifications and outlined MVP scope.



## 80+ screens of interactive prototypes





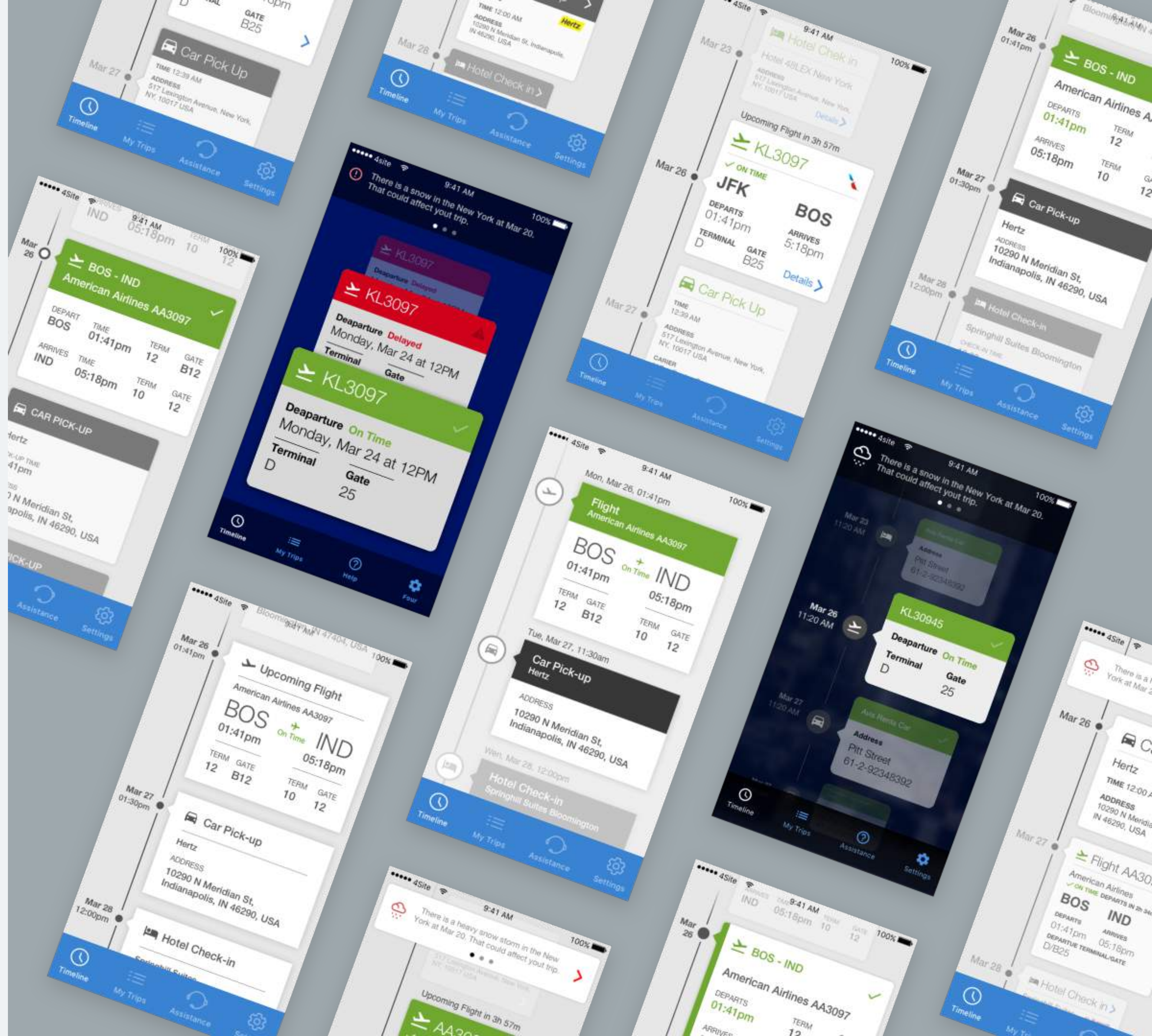
## Step 5

# Design

**Goal:** Develop the visual image of the product and style guide.

**Process:** AltexSoft UX/UI team has developed UI design for the web app (based on the updated prototypes) and mobile app (created from the ground up). The most important features required extremely elaborate implementation, which lead us to creating numerous design concepts.

**Deliverables:** Complete user interface design for web and mobile app, product style guide.

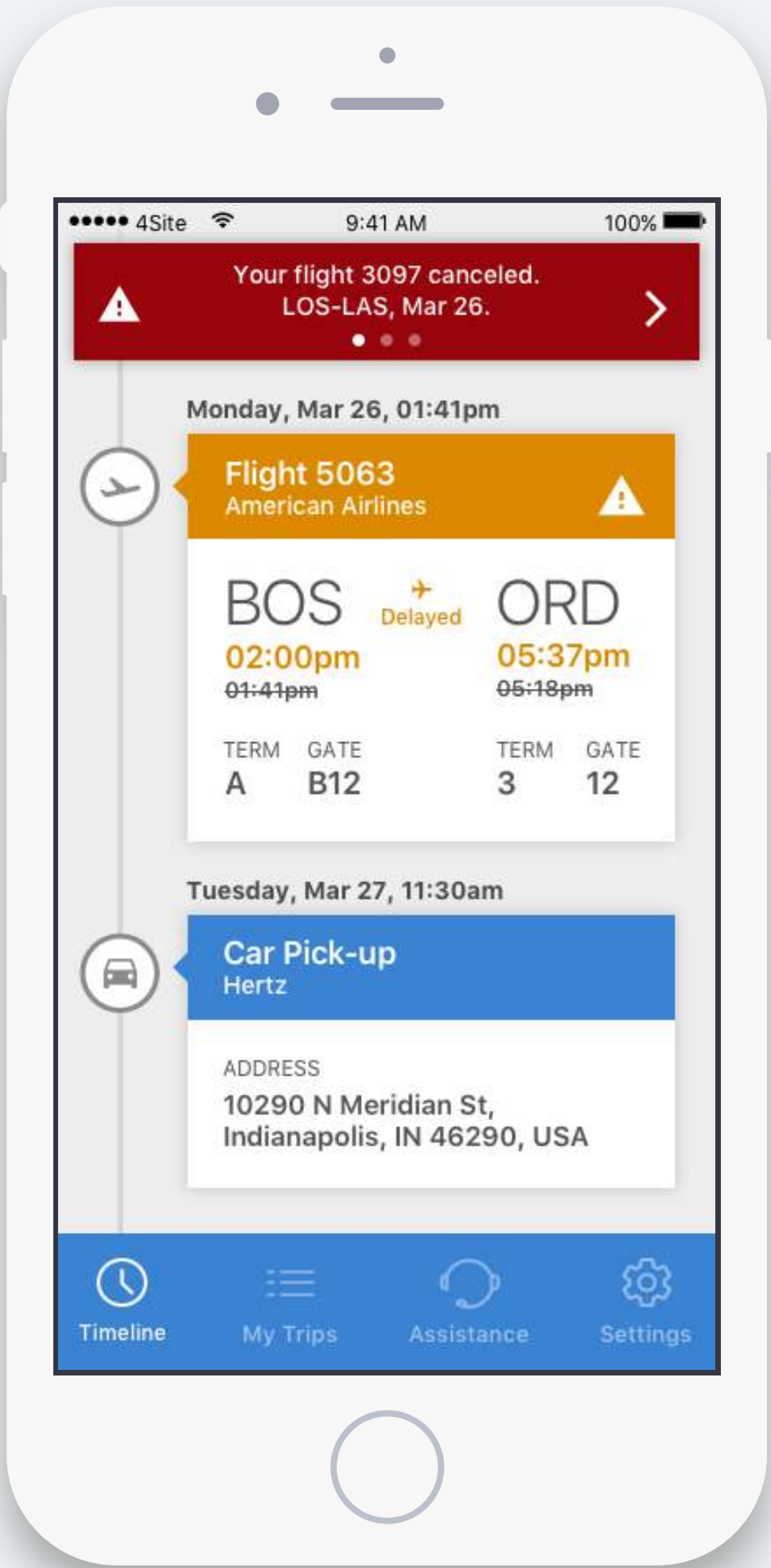




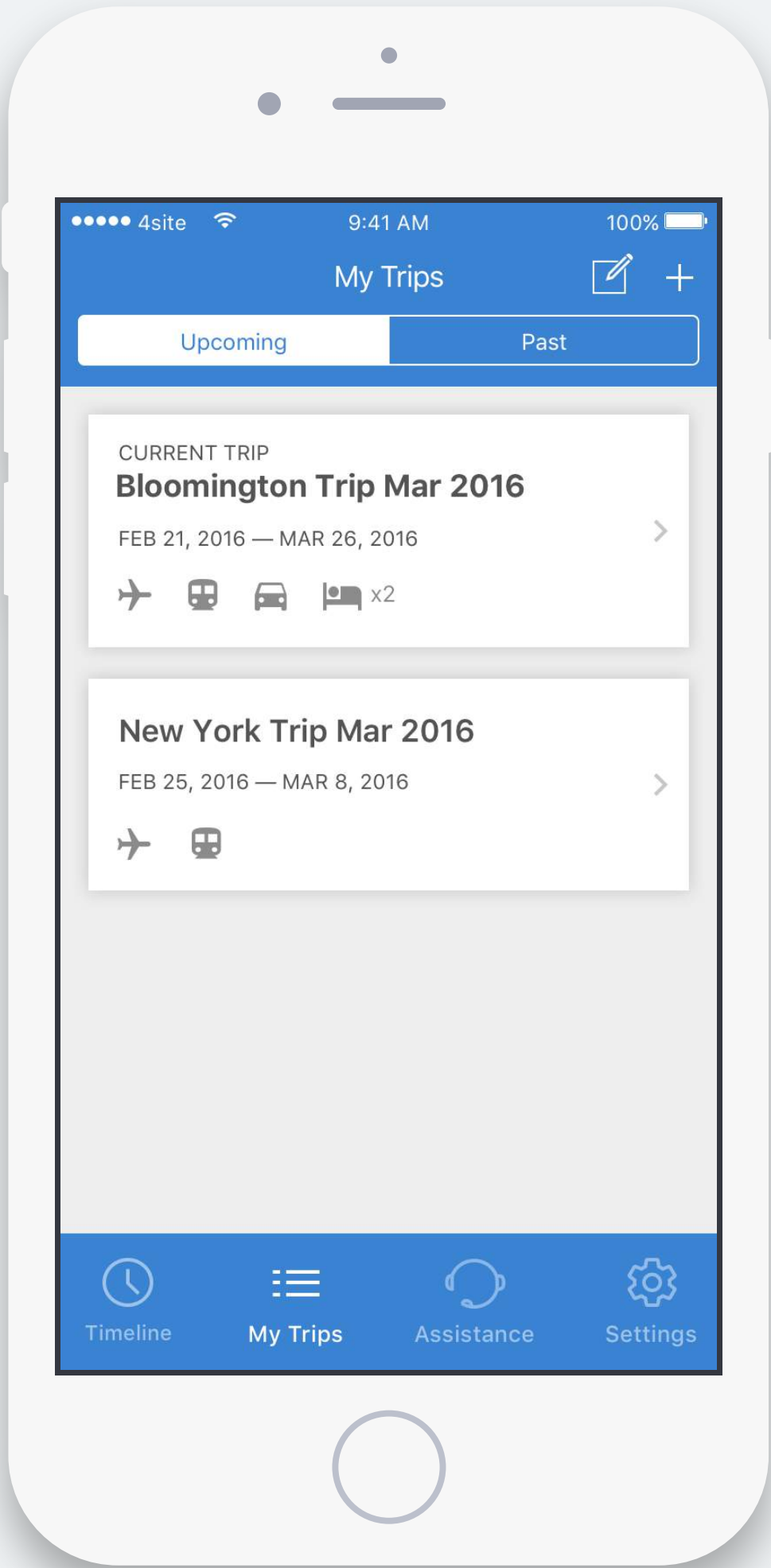
# 4site Mobile App



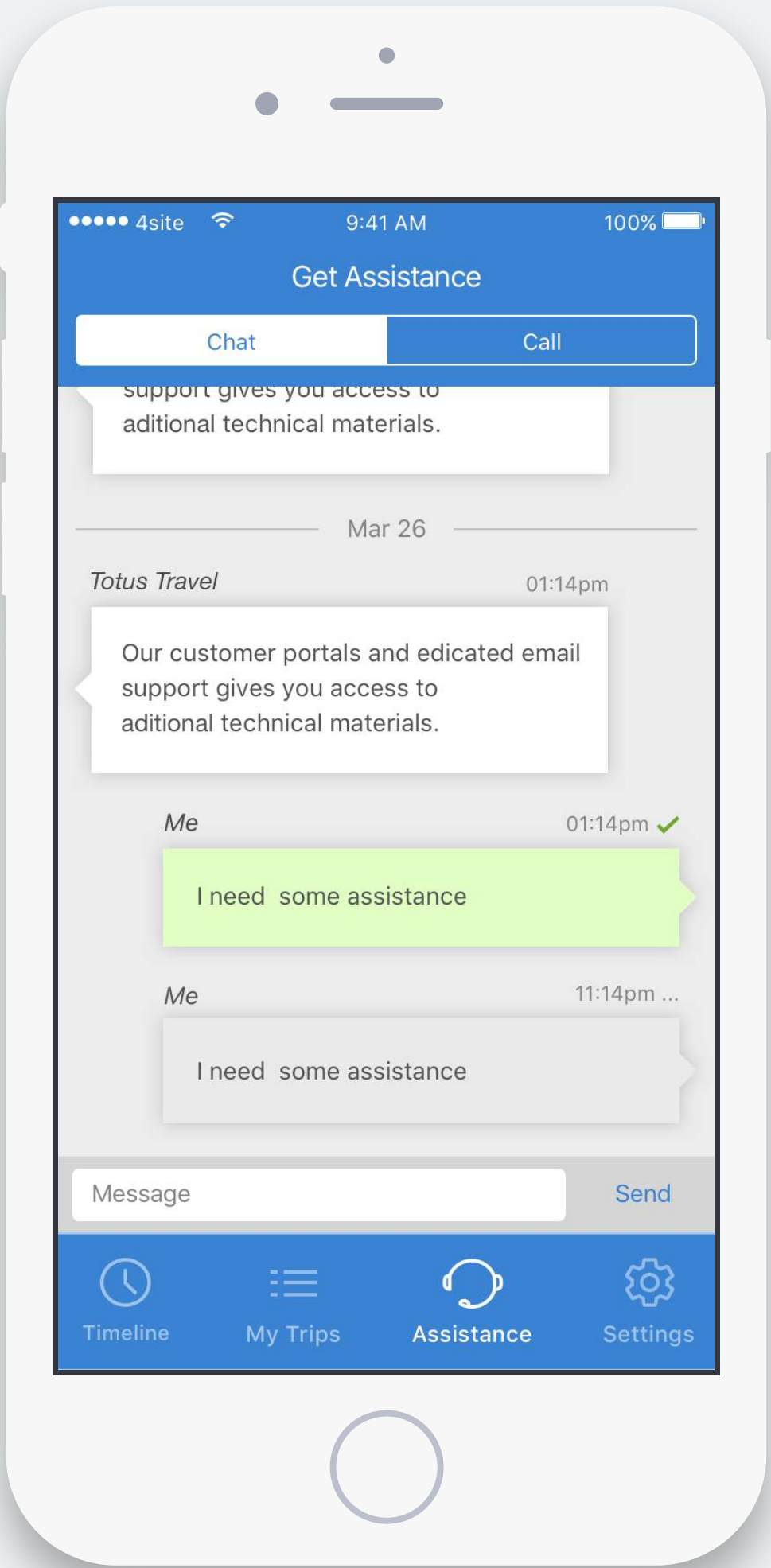
Timeline



My Trips



Assistance





# 4site Web Dashboard

## Active Travelers

The screenshot displays a web application interface for managing active travelers. On the left, a sidebar contains navigation icons for a person, an airplane, and a group of people, along with a 'Help' link and a list of company codes (DC, HH, LC, FH). The main content area is titled 'Active Travelers' and shows a total of 457 travelers, with a breakdown of 200 red flags, 150 yellow flags, and 107 green flags. Below this, a 'Filters' section allows users to select 'All Companies' and toggle 'Needs Assistance' (unchecked) and 'VIP Only' (checked). A list of travelers is shown, including Evelyn Lowe (VIP, helped by Eve Land), David Clarks (Philips, 4m), David Clarks (Royal Dutch Shell, case closed), Hilda Bowers (VIP, Saudi Aramco, 10m, release button), Ada Sandoval (Sinopec, case closed), Catherine Douglas (VIP, Vitol, 10m, help button), Isabelle Hogan (Philips, 4m, help button), and David Clarks (4m). On the right, a map of the United States shows the locations of these travelers as colored dots. A popup for Isabelle Hogan Phillips shows her location near Omaha, Nebraska, with a timestamp of Feb 12, 07:57am and a note 'Check out - Hotel California'. The map also features a 'Filter as I move the map' checkbox and a zoom control.

Traveler Name	Status	Company	Duration/Status	Action
Evelyn Lowe	VIP	Philips	Helped by Eve Land	
David Clarks		Philips	4m	Help
David Clarks		Royal Dutch Shell	Case closed	
Hilda Bowers	VIP	Saudi Aramco	10m	Release
Ada Sandoval		Sinopec	Case closed	
Catherine Douglas	VIP	Vitol	10m	Help
Isabelle Hogan		Philips	4m	Help
David Clarks			4m	

## Flight Status

25

Companies

Agency Users

Lawrence Cruz

▼

All Carriers

▼

▼

All Airports

▼

☐ Needs Assistance
 ☒ VIP Only

Clear Filters

Flight	Carrier	O/D	Scheduled ▼	Est./Actual ▼	Status ▼	Delay ▼	Help Status
DL 221	Operated by Delta	ORD – IND	<div> <div>↗</div> <div>Mar 30, 10:57 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 00:33 am</div> </div>	<div> <div>↗</div> <div>Mar 30, 10:57 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 00:33 am</div> </div>	Landed	On time	Release
DL 4636	Operated by Northwest	IND – BOS	<div> <div>↗</div> <div>Mar 31, 03:44 am</div> </div> <div> <div>↘</div> <div>Mar 31, 05:56 am</div> </div>	<div> <div>↗</div> <div>Mar 31, 01:41 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 04:30 pm</div> </div>	Landed	10h 57min	Helped by Eve Land
AA 1061	American Airlines	BOS – AUS	<div> <div>↗</div> <div>Mar 31, 09:57 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 11:33 pm</div> </div>	<div> <div>↗</div> <div>Mar 31, 10:57 pm</div> </div> <div> <div>↘</div> <div>Apr 1, 01:03 am</div> </div>	In flight	1h 30min	Case Closed
DL 4636	Operated by Delta	ORD – IND	<div> <div>↗</div> <div>Mar 30, 10:57 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 00:33 am</div> </div>	<div> <div>↗</div> <div>Mar 30, 10:57 pm</div> </div> <div> <div>↘</div> <div>Mar 31, 00:33 am</div> </div>	In flight	On time	
DL 221	Delta	DAL – DEN	<div> <div>↗</div> <div>Apr 1, 05:16 pm</div> </div> <div> <div>↘</div> <div>Apr 1, 08:43 pm</div> </div>		Canceled		Help
AA 1061	American Airlines	BOS – AUS	<div> <div>↗</div> <div>Apr 1, 10:57 pm</div> </div> <div> <div>↘</div> <div>Apr 2, 01:33 am</div> </div>	<div> <div>↗</div> <div>Apr 1, 10:57 pm</div> </div> <div> <div>↘</div> <div>Apr 2, 03:03 am</div> </div>	Scheduled	1h 30min	Release
DL 4636	Operated by Northwest	MSP – SLC	<div> <div>↗</div> <div>Apr 2, 09:17 pm</div> </div> <div> <div>↘</div> <div>Apr 2, 11:33 pm</div> </div>		Scheduled		
DL 4636	Operated by Northwest	AUS – DAL	<div> <div>↗</div> <div>Apr 3, 09:17 am</div> </div> <div> <div>↘</div> <div>Apr 3, 11:33 am</div> </div>		Scheduled		
DL 4636	Spirit	MSP – SLC	<div> <div>↗</div> <div>Apr 5, 06:17 pm</div> </div> <div> <div>↘</div> <div>Apr 5, 10:33 pm</div> </div>		Scheduled		



# 4site Web Dashboard

## Traveler details – Timeline

David Clark

VIP

Philips

david.clark@philips.com

1-046-930-2766

Online More App Info

Add Case Action

Release

Close Case

te. lus facer virtute ex, ea sit quaestio interpretaris.

12:57 am Lawrence Cruz

Bye, have a nice day!

Erick Decker (admin)

12:57 am

Autem legere primis eu duo. Esse mutat possit cu has, te vel vide nominati henderit. Propriae accusata at duo, duo eu omnium rationibus. Usu an invidunt interesset.

12:57 am Lawrence Cruz

Te phaedrum salutandi intellegam per, cu dico inciderint sed, vel tantas quodsi audire at.

David Clark

12:57 am

Sale fastidii inimicus cu has. Vis duis repudiandae te. lus facer virtute ex, ea sit quaestio interpretaris.

No prima labores imperdiet usu. Nam an vide solum, ea quo delicata occurreret. Nam sonet nonumes disputando

Timeline

Reservations

Maps

Flight Status

Case History

Load Past Events

Mar 24

01:41 pm

Flight AA 3097, BOS – IND

Landed on time

07:12 pm

Flight AA 2058, IND – ORD

Landed with 45 min delay

07:12 pm

Flight AA 2058, IND – ORD

On time

09:00 pm

Train Chicago – New York

Mar 26

00:30 am

Hotel Check-in Hilton Garden Inn Chesterton

22:00 pm

Hotel Check-out Hilton Garden Inn Chesterton

22:20 pm

Car Drop-off Hertz

23:48 pm

Flight AA 3097 ORD – IND

On time

## Traveler details – Reservations

Companies
Agency Users
Lawrence Cruz

**Flight delay: 17 min**  
 AA 1061, AUS - DAL      Mar 27, 10:15 pm 09:57pm - Mar 28, 00:14 am Mar 27 11:57pm

Timeline
Reservations
Maps
Flight Status
Case History

View Past Reservations

### Boston - Indianapolis - Boston ^

**Flight Reservation**  
Reservation Canceled

Airline RECLOC #: X6B297  
 Agency RECLOC #: 1234567890

David Clark, Frank Little, Adam Meyer Total price: \$2,344

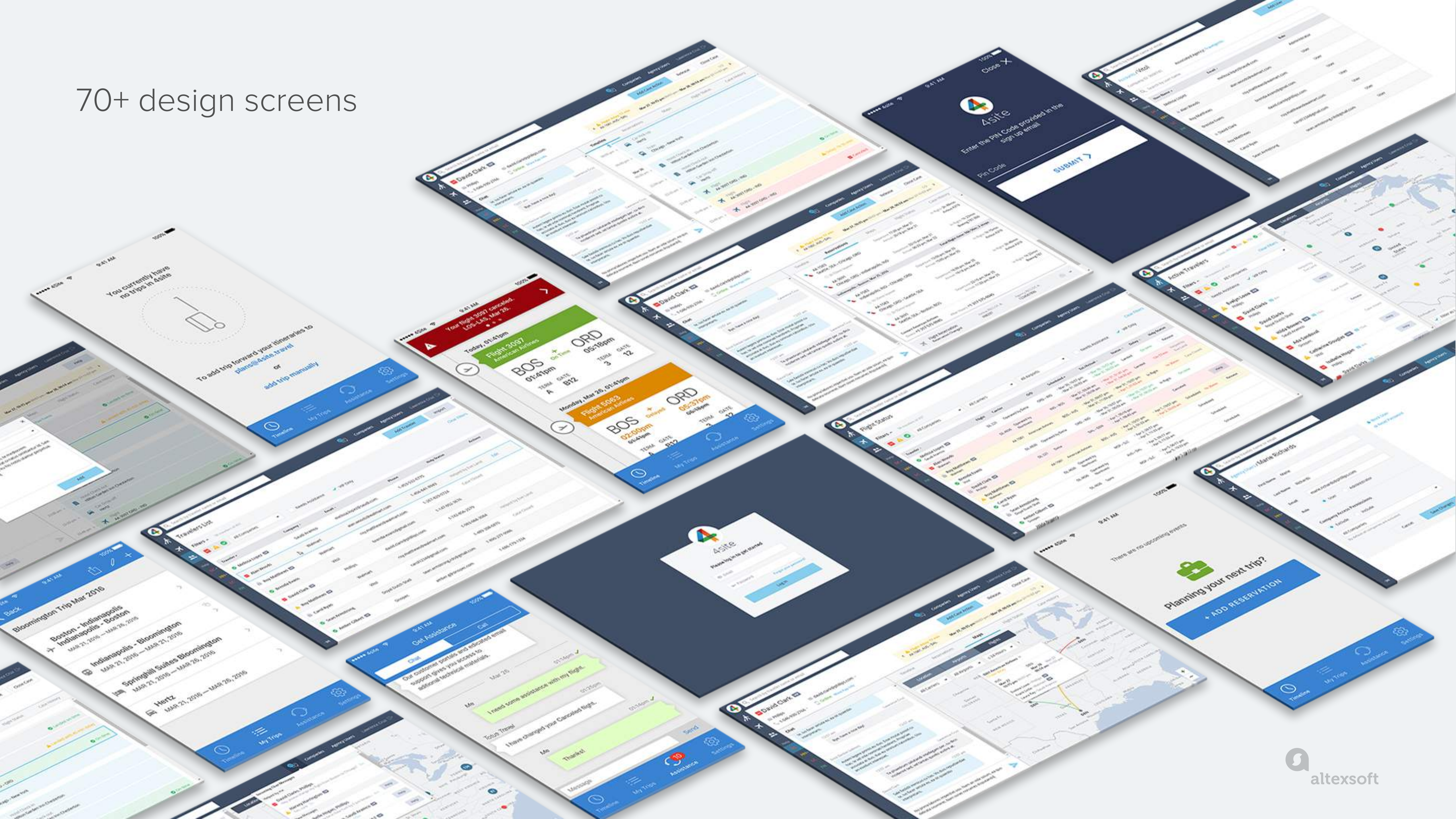
Boston - Indianapolis, Mar 21-22, 2016		Total flight time: 9h 43m, 2 stops
<b>AA 1583</b> Boston, BOS – Seattle, SEA Operated by DELTA	Departure: 14:50 pm, Mar 21 Arrival: 16:05 pm, Mar 21	In flight: 1h 15min Airbus A319
<div style="text-align: center;">⌚ 1h 25min layover</div>		
<b>AA 1583</b> Seattle, SEA – Chicago, ORD	Departure: 17:30 pm, Mar 21 Arrival: 20:18 pm, Mar 21	In flight: 2h 48min Airbus A319
<div style="text-align: center;">⌚ 2h 52min layover</div>		
<b>AA 3691</b> Chicago, ORD – Indianapolis, IND	Departure: 23:10 pm, Mar 21 Arrival: 00:33 pm, Mar 22	In flight: 1h 23min Boeing 787-300

Indianapolis - Boston, Mar 25, 2016		Total flight time: 16h 56m, 2 stops
<b>AA 1583</b> Indianapolis, IND – Chicago, ORD	Departure: 13:50 pm, Mar 25 Arrival: 15:05 pm, Mar 25	In flight: 1h 15min Airbus A319



70+ design screens





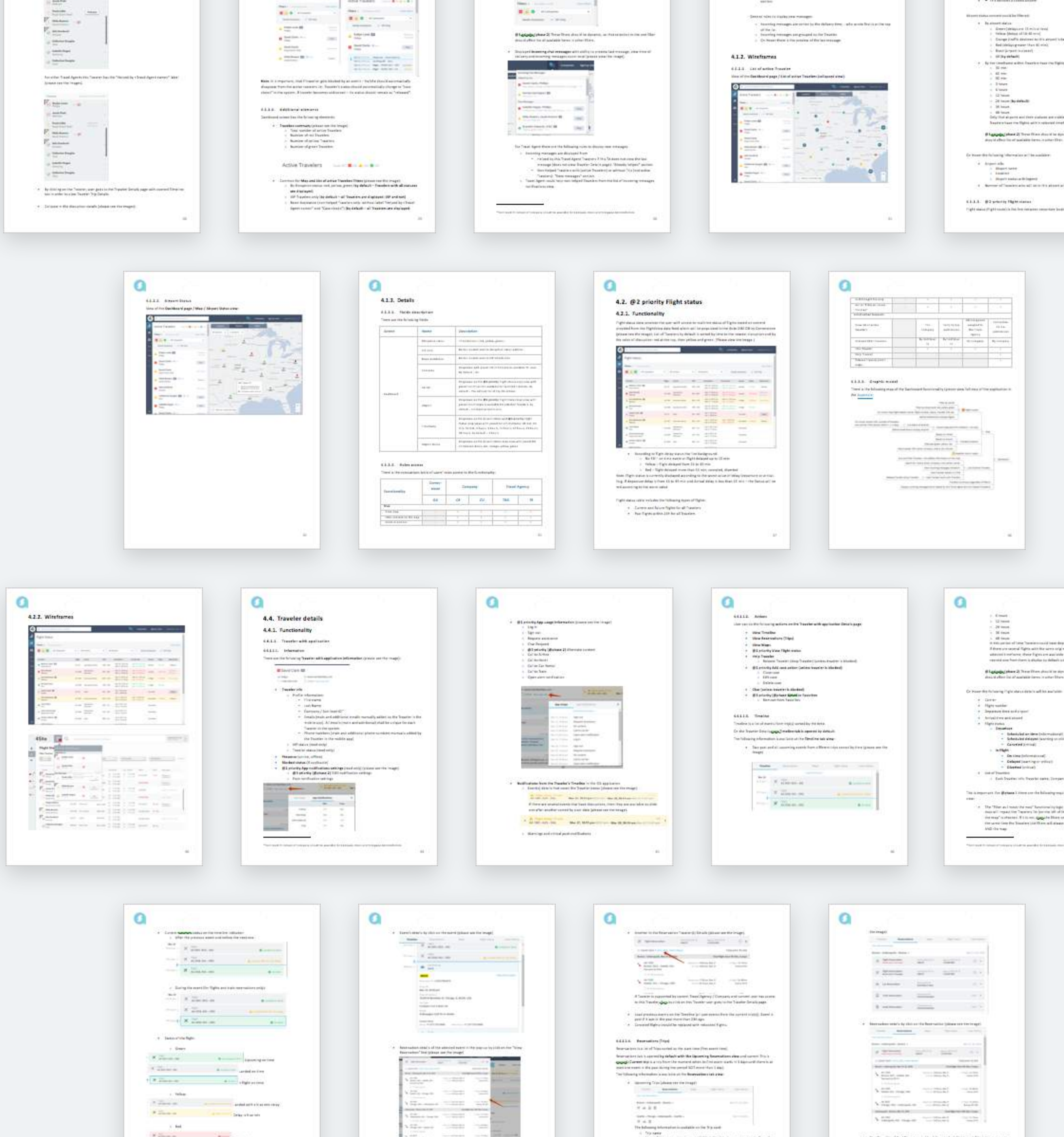
## Step 6

# Documenting the functional specifications

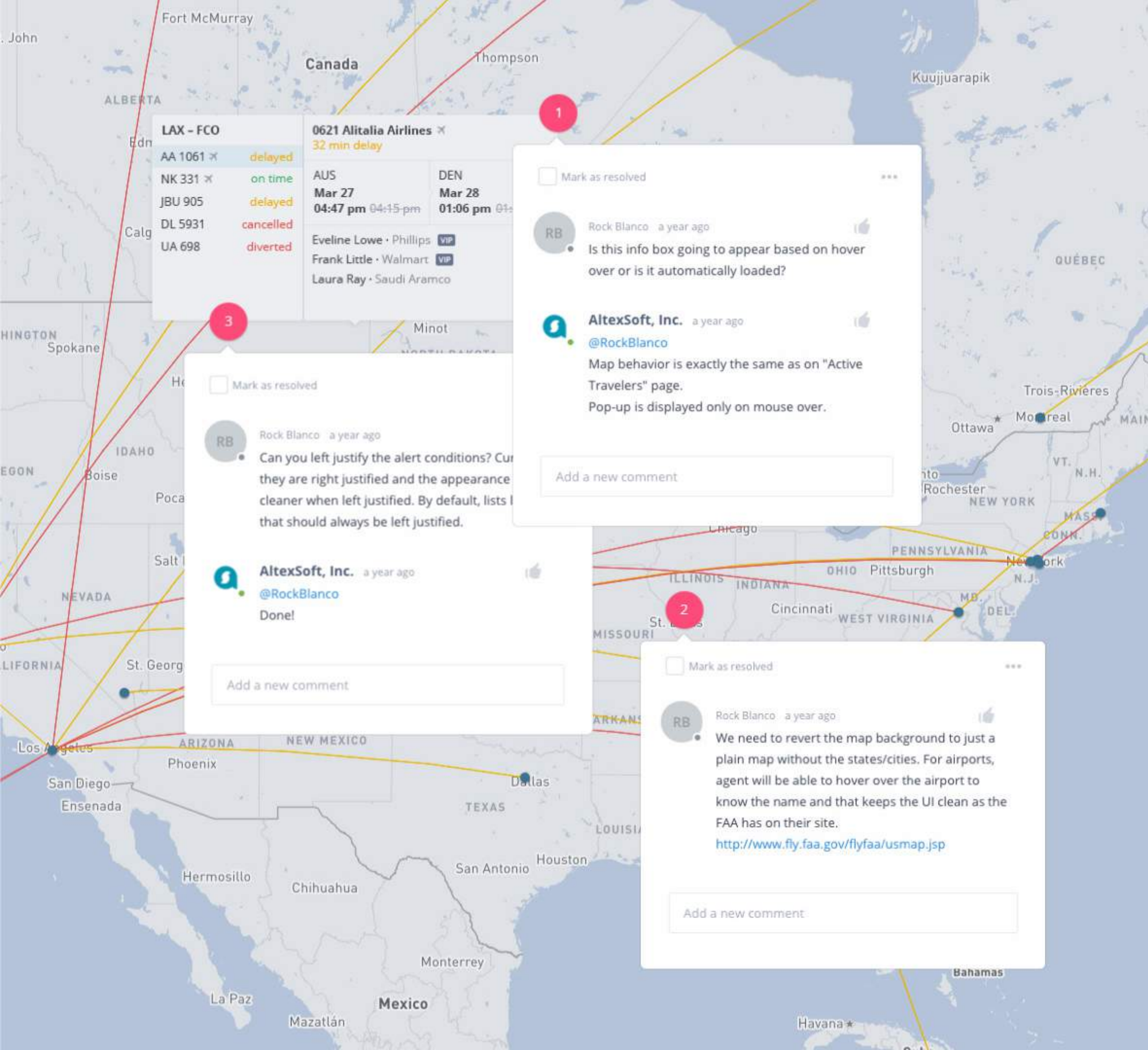
**Goal:** Outline the requirements and functionality of the future product.

**Process:** Specification writing was running in parallel with all previous steps. The business analyst compiled all related functional requirements for every new screen or feature added by the team. Completed parts on the document were regularly submitted for client review and updated as necessary.

**Deliverables:** Elaborated functional specifications document for both web and mobile app – total 260+ pages.







## Step 7

# Ongoing design support

**Goal:** Provide the engineering team with the required design elements and support the product's future development.

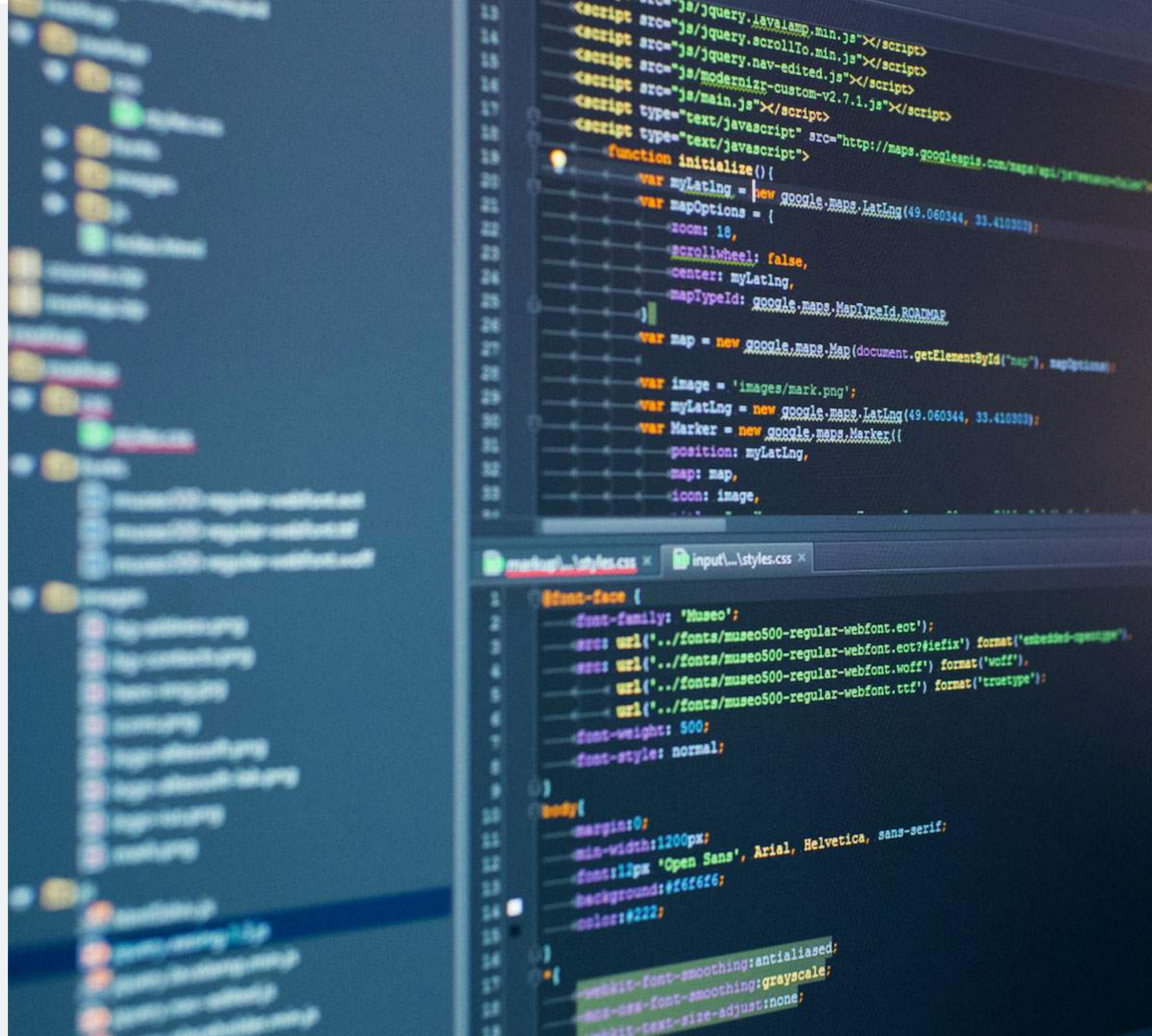
**Process:** In the process of product implementation minor tweaks of UI elements or features were needed, which resulted in making the software engineering process more efficient. Hence, our designers actively contributed to the product development process until the project completion.

**Deliverables:** Full-fledged product, and its ongoing improvement through added features design.



## Project Outcomes

After the UX/UI design process was completed, our team proceeded with the product engineering. Both mobile application and web dashboard were developed in full accordance with the client's requirements. The product is currently a part of Cornerstone Information Systems portfolio of travel management software.





## Client's Testimonial



I've had the pleasure of working with AltexSoft on various projects including both web and mobile applications development. They brought together great people, including excellent project and account management leadership. AltexSoft technical talent was fantastic and worked well with our scrum teams and helped us to deliver consistent results. They were always helpful and accommodating to our schedules and deadlines. I highly recommend AltexSoft for your next software development engagement.

— **Mat Orrego,**

*Co-Founder and CEO, Cornerstone Information Systems*



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