



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

Travel Agent



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.

Traveler



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.





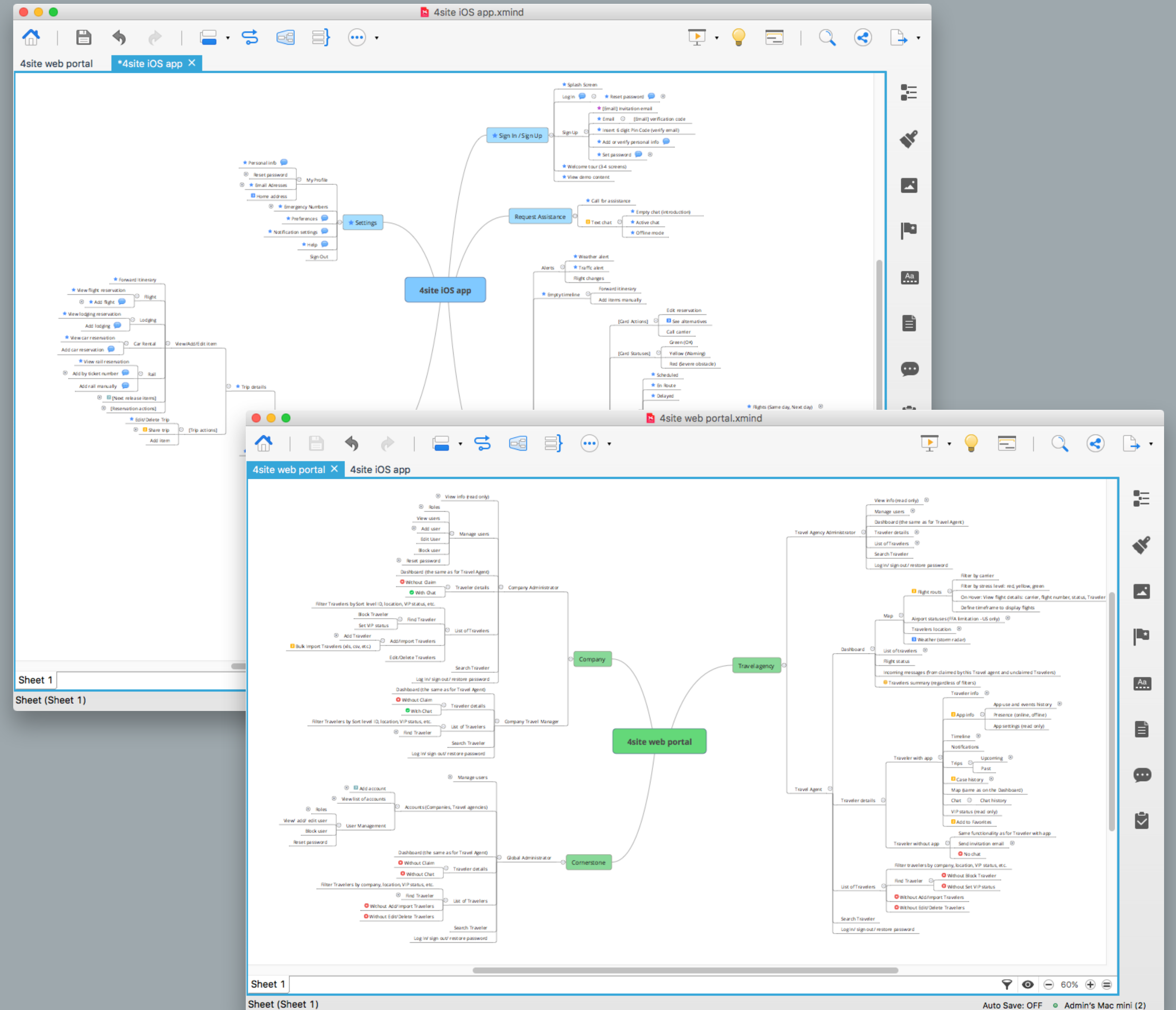
## Step 2

# Mapping the hierarchy of roles and entities

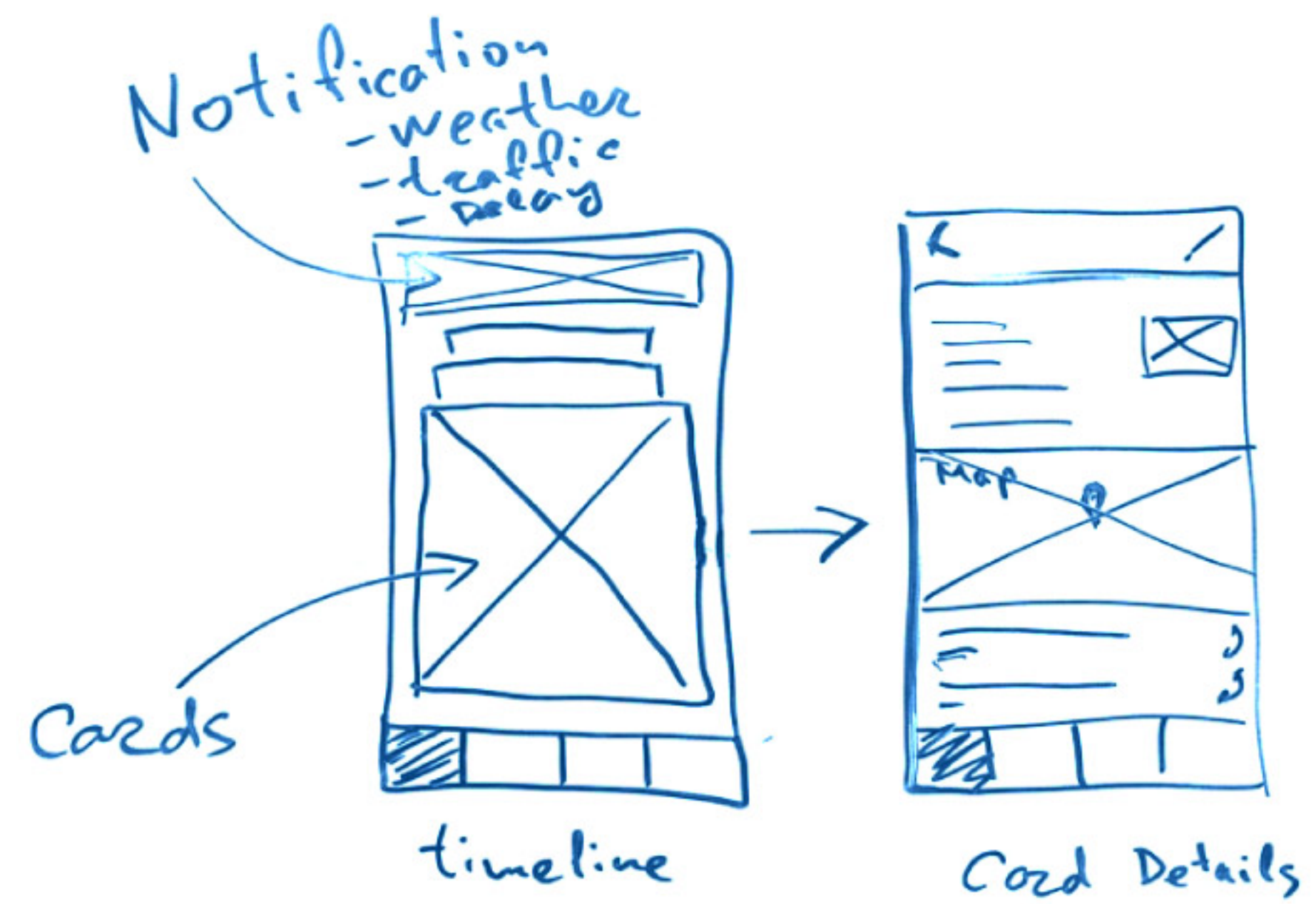
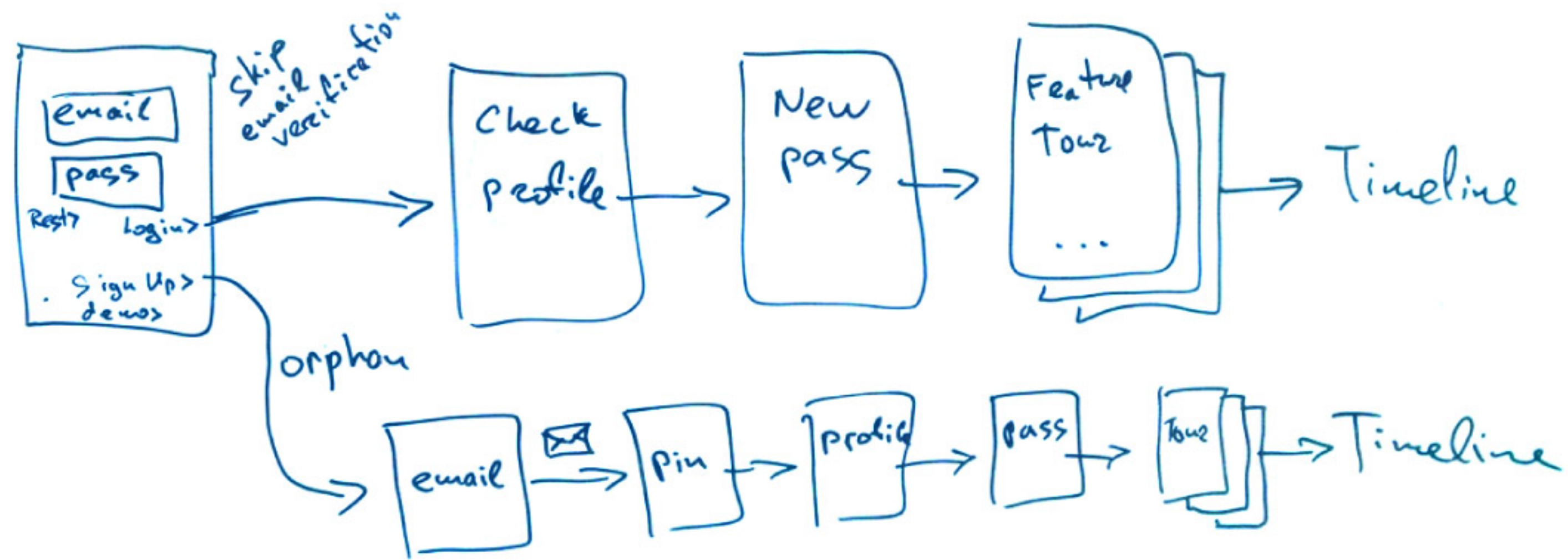
**Goal:** Define and visualize the inner information architecture of the product, structure it according to the roles and assigned functionality.

**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**

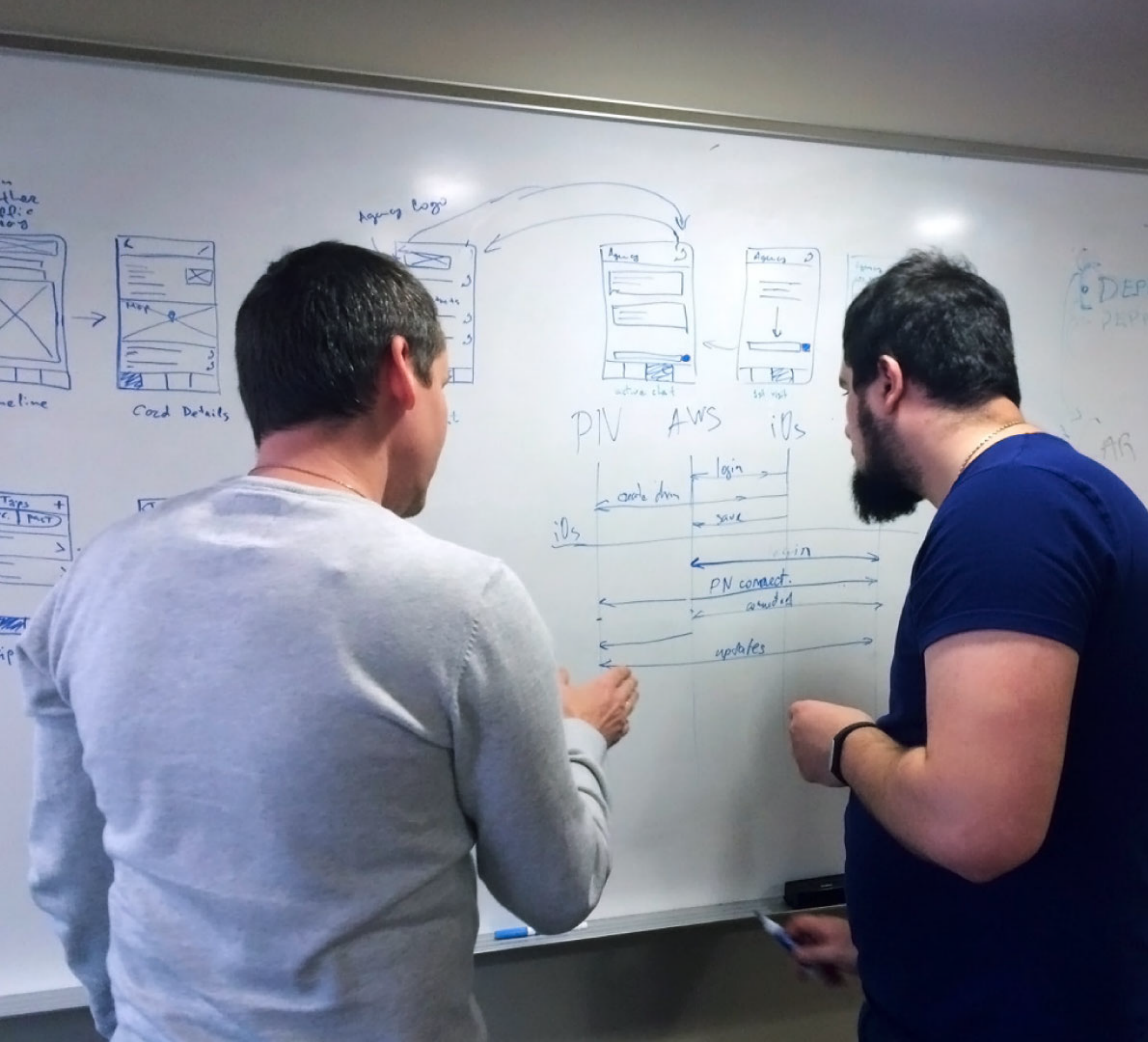
Identifying user journeys and testing the concept

**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

**4Site** Search by traveler name or email Lawrence Cruz Agency Name

## Active Travelers

**Filter Travelers**  VIP Only  Needs Assistance  [Clear All](#)

**Traveler Summary** Total Travelers 457:  200  150  107

Travelers Showing 50 travelers of 457

**Travelers**

Feb, 12

- Evelyn Lowe Philips** Helped by Eve Land
  - 7:57 AM Check-out Hotel California
  - 8:57 AM Car Drop-off Car Office
  - 9:57 AM Flight NV596, MUC-ORD
- David Clark Philips** 5m [Release](#)
- Frank Little** Royal Dutch Shell Case Closed
- Hilda Bowers** Saudi Aramco 5m [Release](#)
- Ada Sandoval** Sinopec Helped by Eve Land
- Catherine Douglas**

Feb, 13

- 9:57 AM Flight NV596, ORD-LAX **CANCELED**

**Airport Status**  Filter as I move the map

**Flight Status** Status  ?

**Location**   [Clear All](#)

O / D	Scheduled	Est. / Actual	Status	Delay	Help Status
KBP-MUC	D: 7:57 AM A: 9:33 AM	D: 7:57 AM A: 9:33 AM	IN FLIGHT	7 min	<a href="#">Release</a>
MUC-ORD	D: 7:57 AM A: 9:33 AM		CANCELED		<a href="#">Release</a>
ORD-IND	D: 7:57 AM A: 9:33 AM	D: 7:57 AM A: 9:33 AM	LANDED		Helped by Eve Land
KBP-MUC	D: 7:57 AM A: 9:33 AM		CANCELED		Case Closed
MUC-ORD	D: 7:57 AM A: 9:33 AM	D: 7:57 AM A: 9:33 AM	IN FLIGHT	35 min	<a href="#">Release</a>
ORD-IND	D: 7:57 AM A: 9:33 AM	D: 7:57 AM A: 9:33 AM	SCHEDULED	1h 15m	
KBP-MUC	D: 7:57 AM A: 9:33 AM		SCHEDULED		Helped by Eve Land
MUC-ORD	D: 7:57 AM A: 9:33 AM	D: 7:57 AM A: 9:33 AM	IN FLIGHT	60 min	

[Case Action](#) [Release](#) [Close Case](#)

Reservations | **Maps** | Flight Status | Case History

[Load Previous Events](#)

- Flight AA 3097, BOS – IND  Landed On time
- Flight AA 2058, IND – ORD  Landed with Delay 45 min
- Car Pick-up Hertz
- Hotel Check-in Springhill Suites Bloomington
- Hotel Check-out Springhill Suites Bloomington
- Car Drop-off Hertz

Mar 28

12:00pm  Hotel Check-out Springhill Suites Bloomington

02:00pm  Car Drop-off Hertz



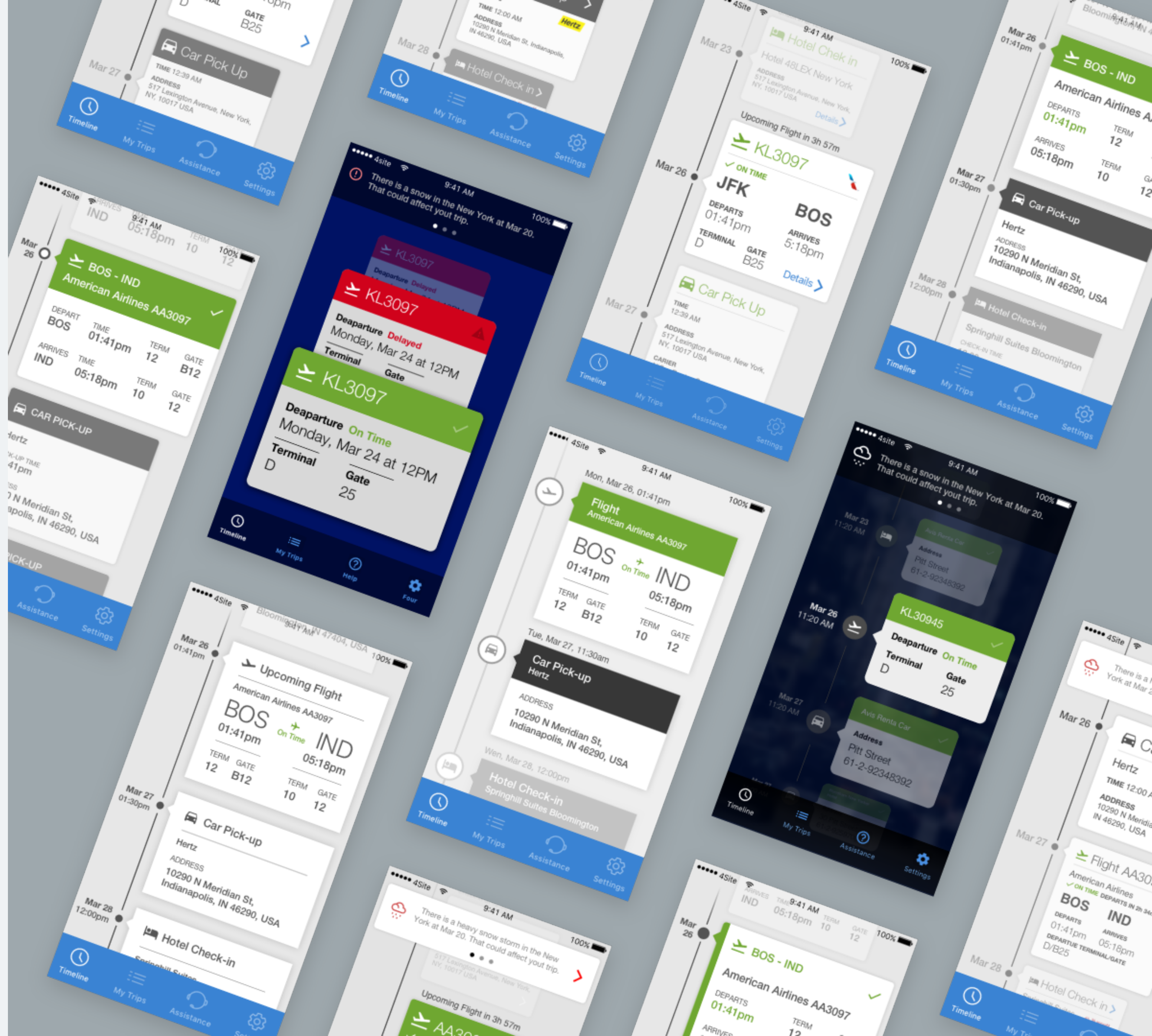
## Step 5

# 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.

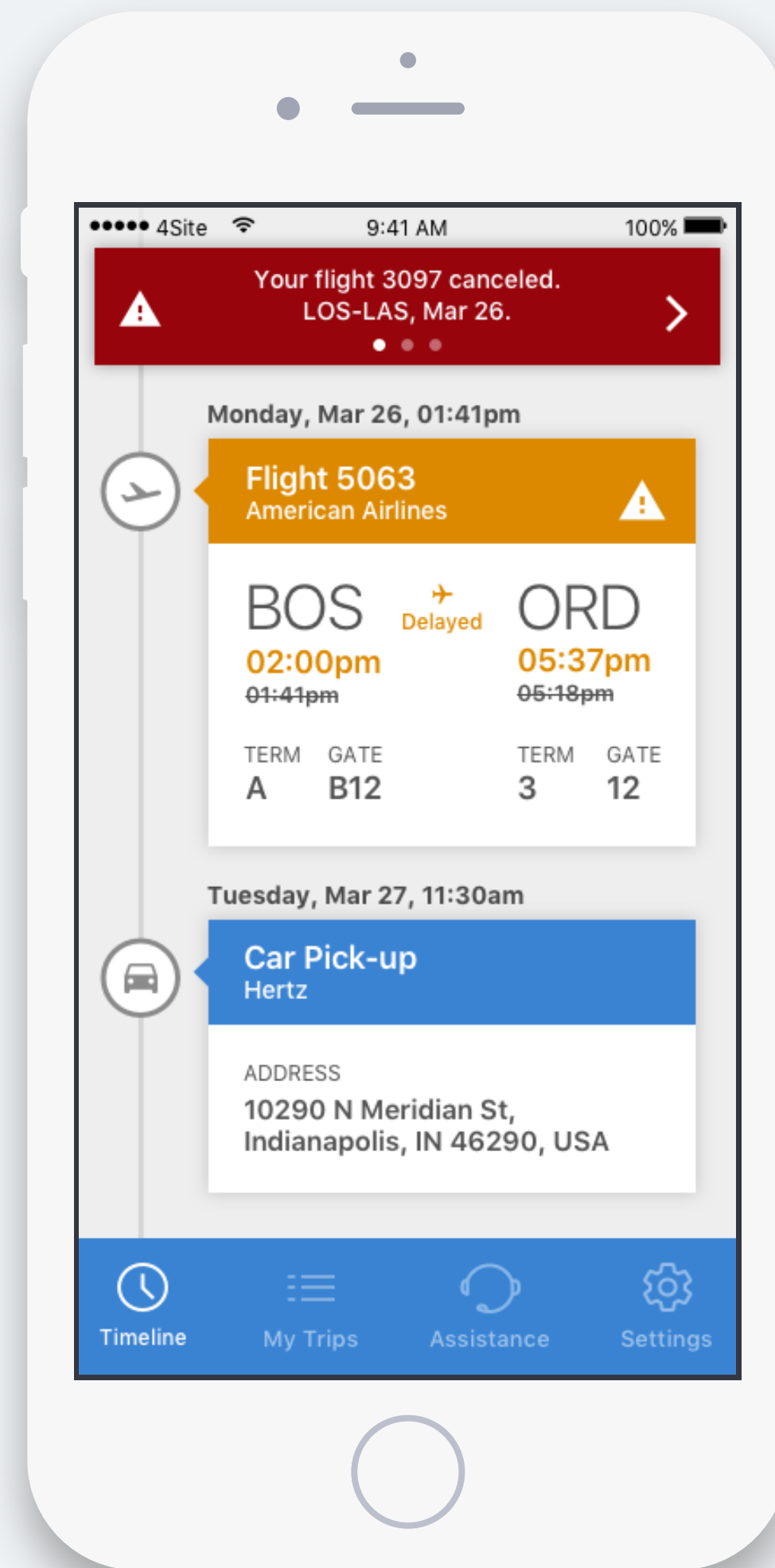




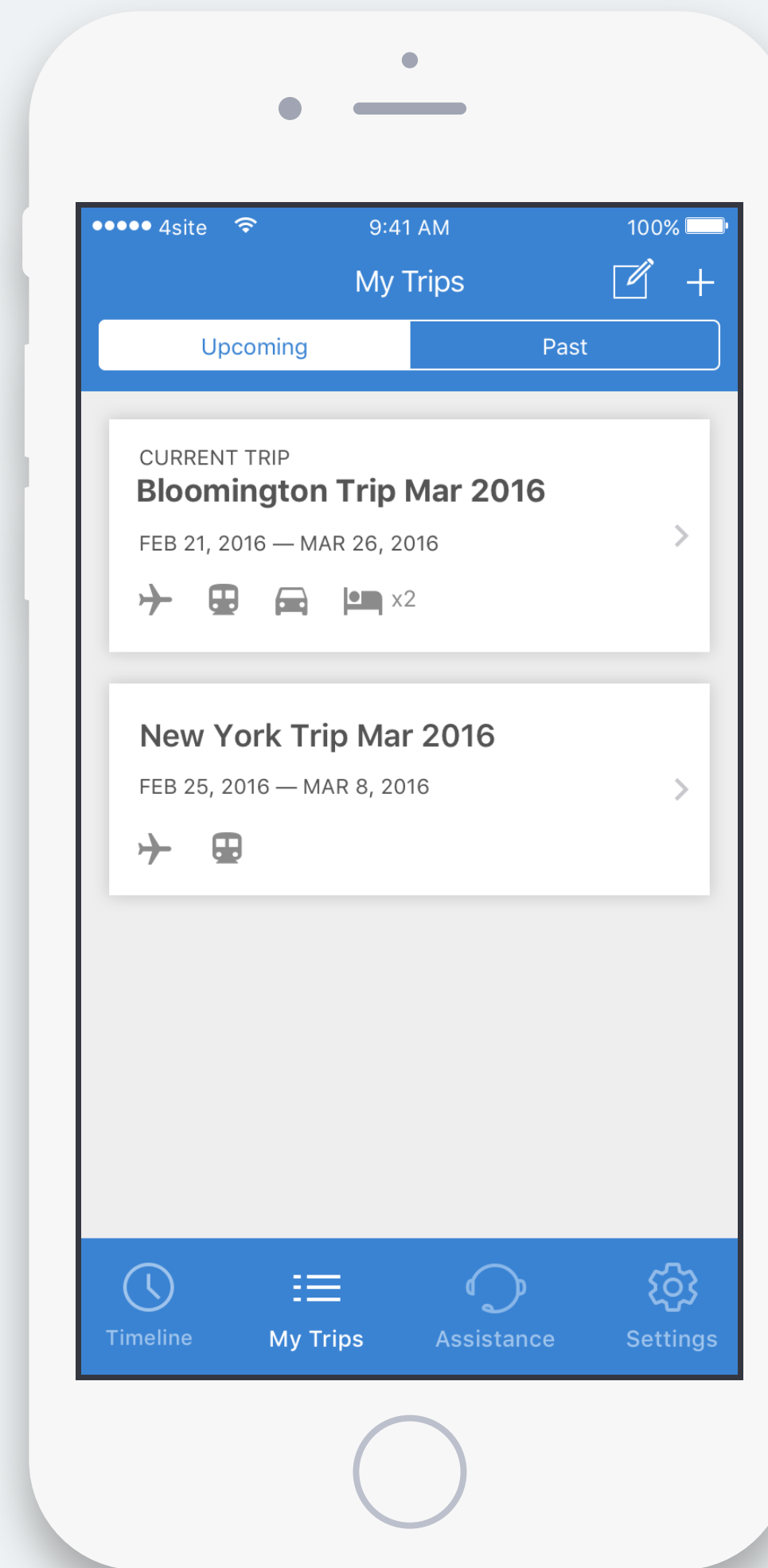
# 4site Mobile App



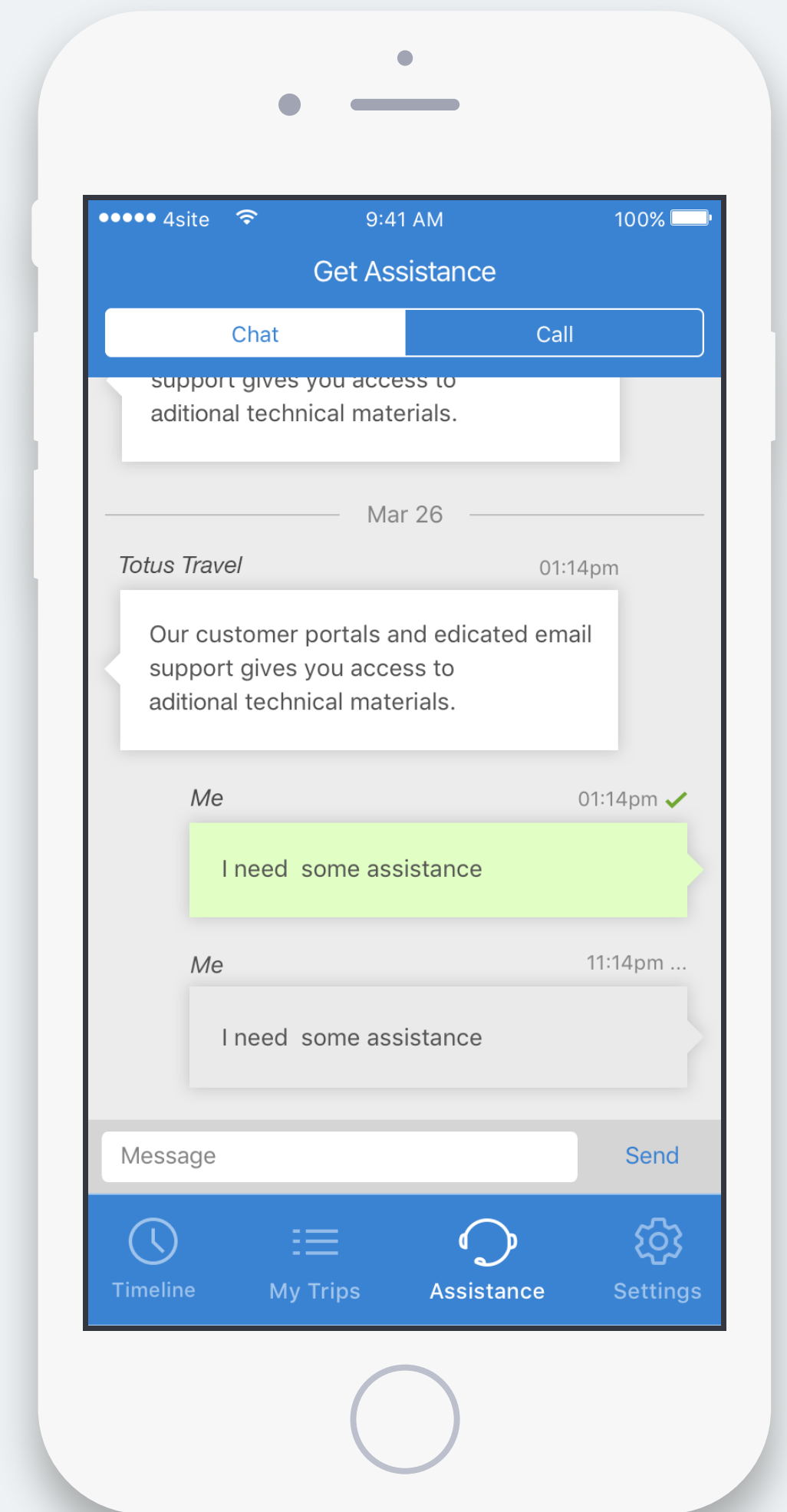
Timeline



My Trips



Assistance





# 4site Web Dashboard

## Active Travelers

Search by traveler name or email

Companies Agency Users Lawrence Cruz

**Active Travelers** Total: 457 200 150 107

Filters 56 travelers of 457 [Clear Filters](#)

Needs Assistance  VIP Only

All Companies

- ! 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 Philips 4m

Locations Airports Flights

Isabelle Hogan **VIP** Philips  
Feb 12, 07:57am  
Check out - Hotel California

Filter as I move the map

## Flight Status

Companies Agency Users Lawrence Cruz

[Clear Filters](#)

All Carriers All Airports  Needs Assistance  VIP Only

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

Amber Gilbert **VIP** Sinopec  
Hilda Bowers



# 4site Web Dashboard

## Traveler details – Timeline

Search by traveler name or email

Companies Agency Users Lawrence Cruz

**David Clark** VIP

Philips david.clark@philips.com  
1-046-930-2766 Online More App Info

Add Case Action Release Close Case

**Chat**

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 hendrerit. Propriam 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

Add Case Action Release Close Case

philips.com

App Info

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

Timeline Reservations Maps Flight Status Case History

View Past Reservations

**Boston – Indianapolis – Boston** Mar 21–25, 2016

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

AA 1583 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
1h 25min layover		
AA 1583 Seattle, SEA – Chicago, ORD	Departure: 17:30 pm, Mar 21 Arrival: 20:18 pm, Mar 21	In flight: 2h 48min Airbus A319
2h 52min layover		
AA 3691 Chicago, ORD – Indianapolis, IND	Departure: 23:10 pm, Mar 21 Arrival: 00:33 pm, Mar 22	In flight: 1h 23min Boeing 787-300

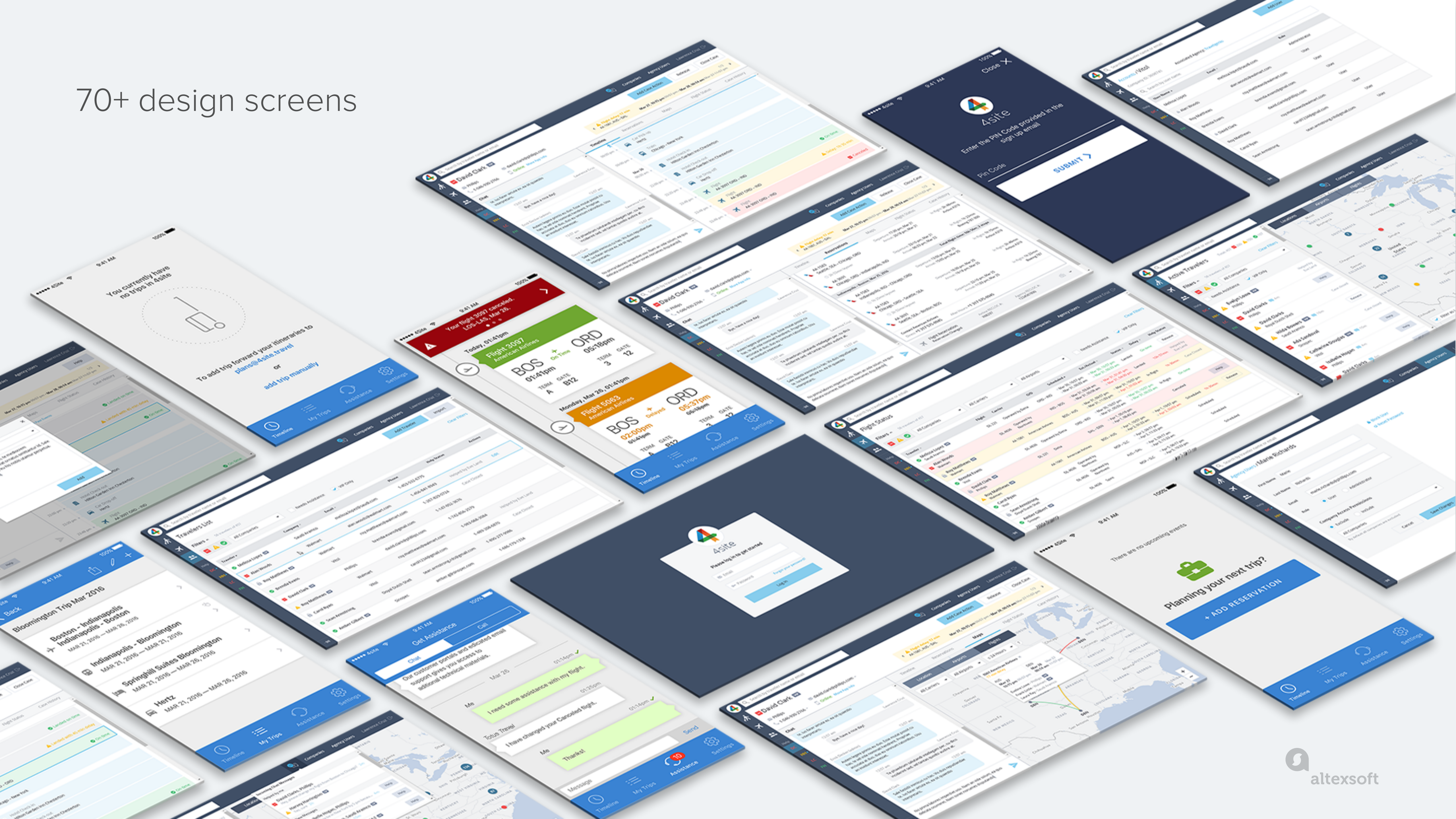
**Indianapolis – Boston, Mar 25, 2016** Total flight time: 16h 56m, 2 stops

AA 1583 Indianapolis, IND – Chicago, ORD	Departure: 13:50 pm, Mar 25 Arrival: 15:05 pm, Mar 25	In flight: 1h 15min Airbus A319
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No prima labores imperdiet usu. Nam an vide solum, ea quo delicata occurreret. Nam sonet nonumes disputando



70+ design screens





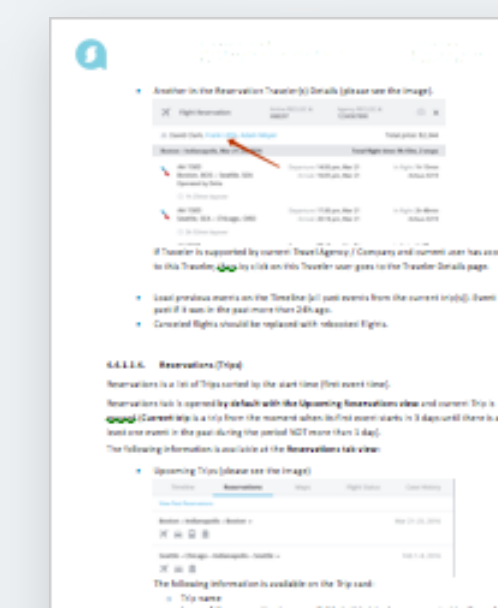
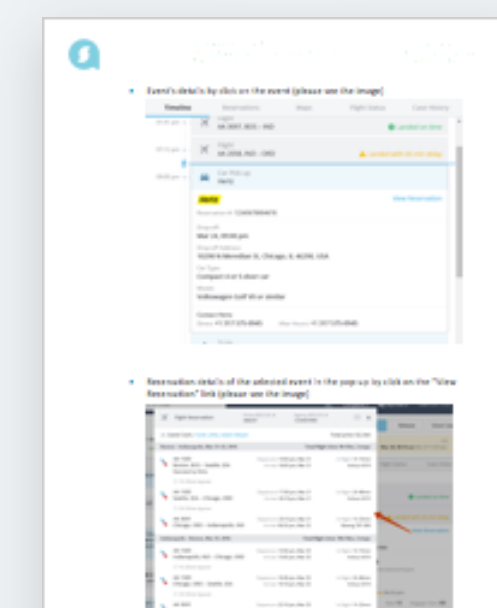
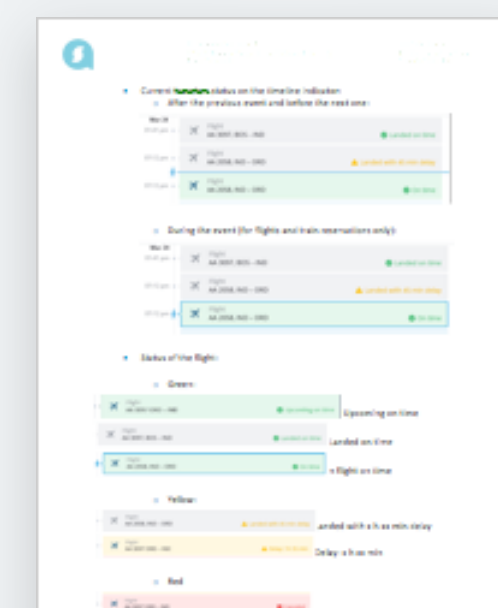
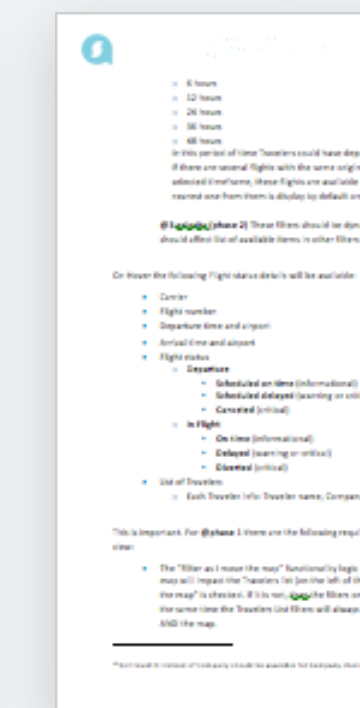
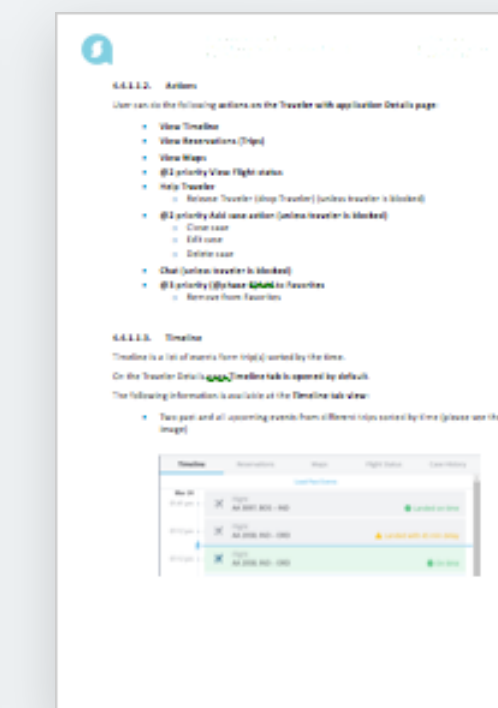
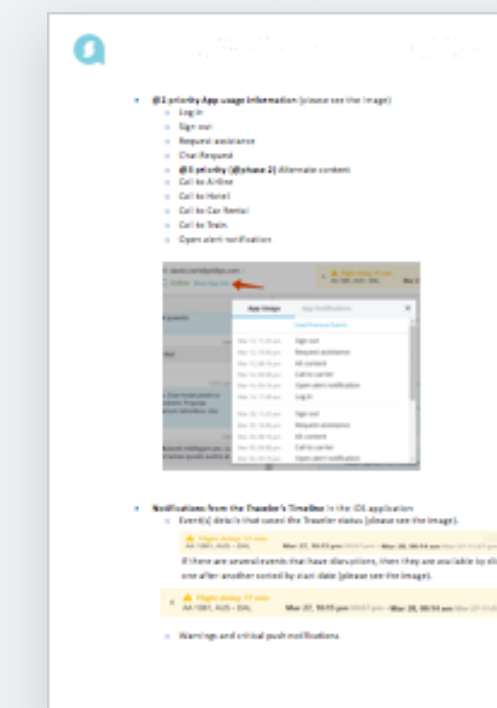
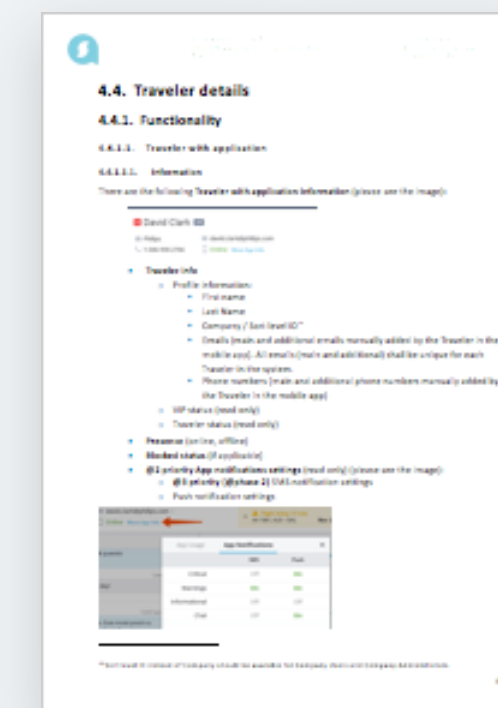
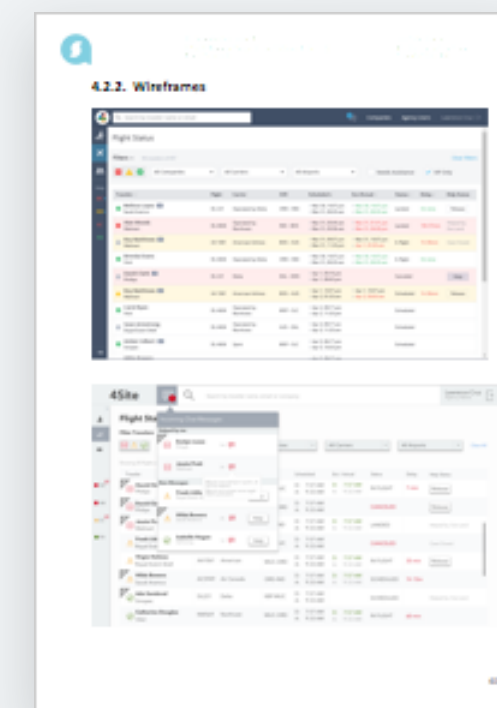
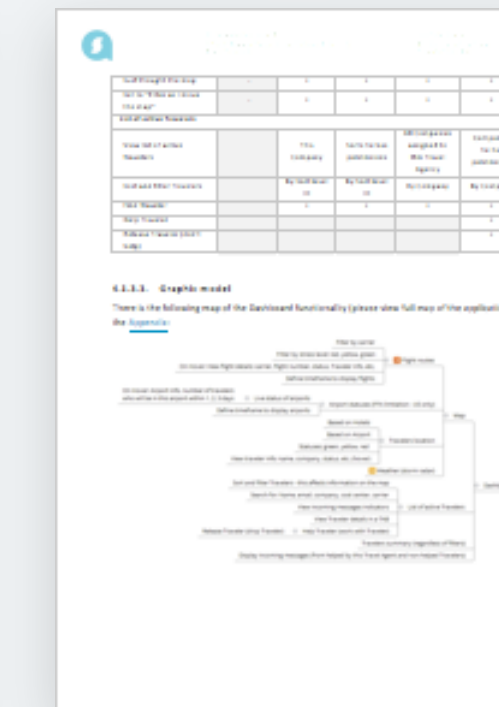
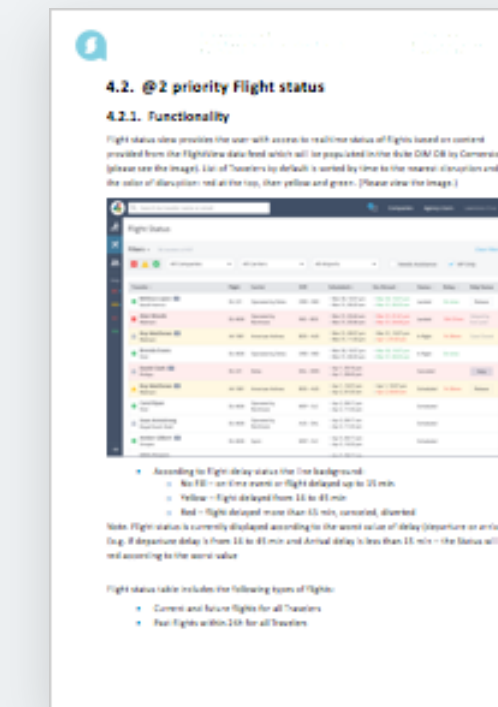
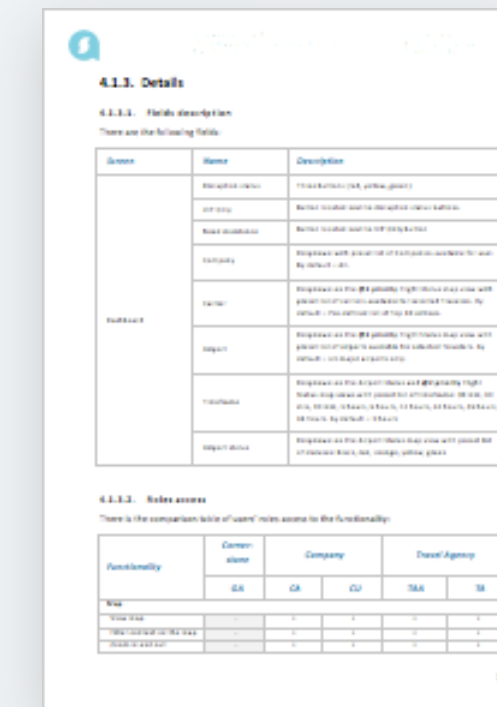
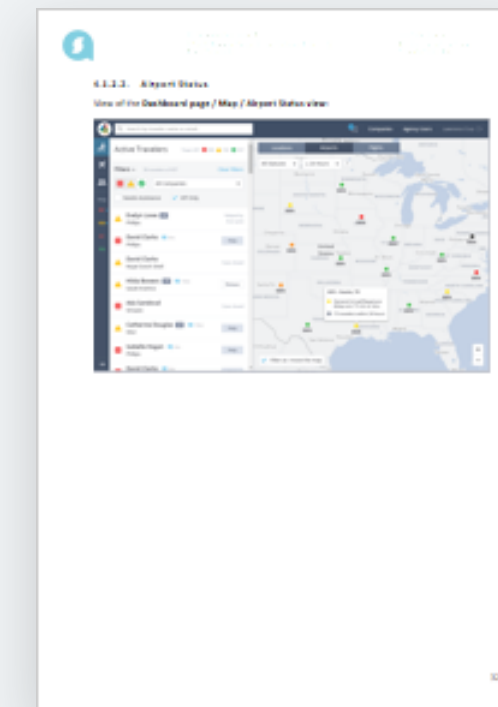
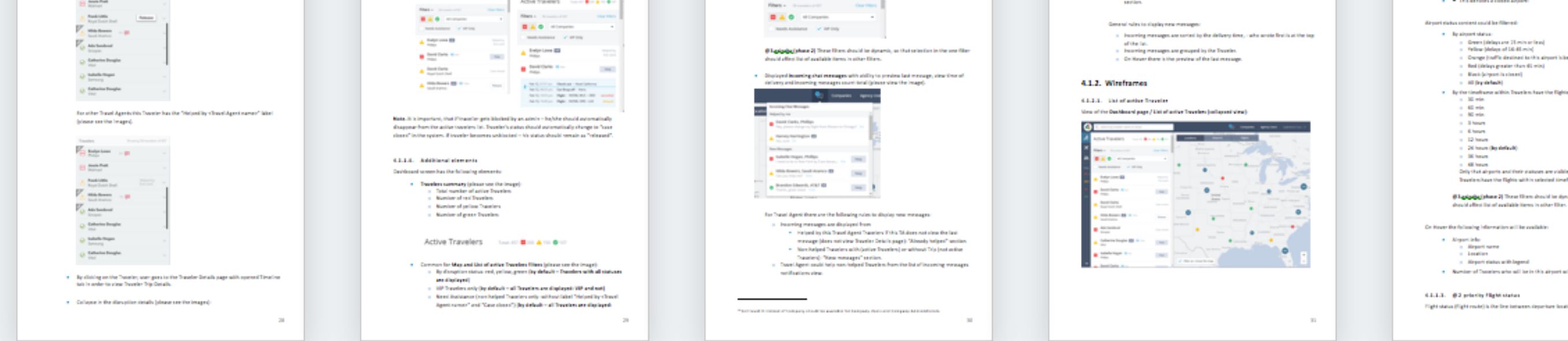
## Step 6

# Documenting the functional specifications

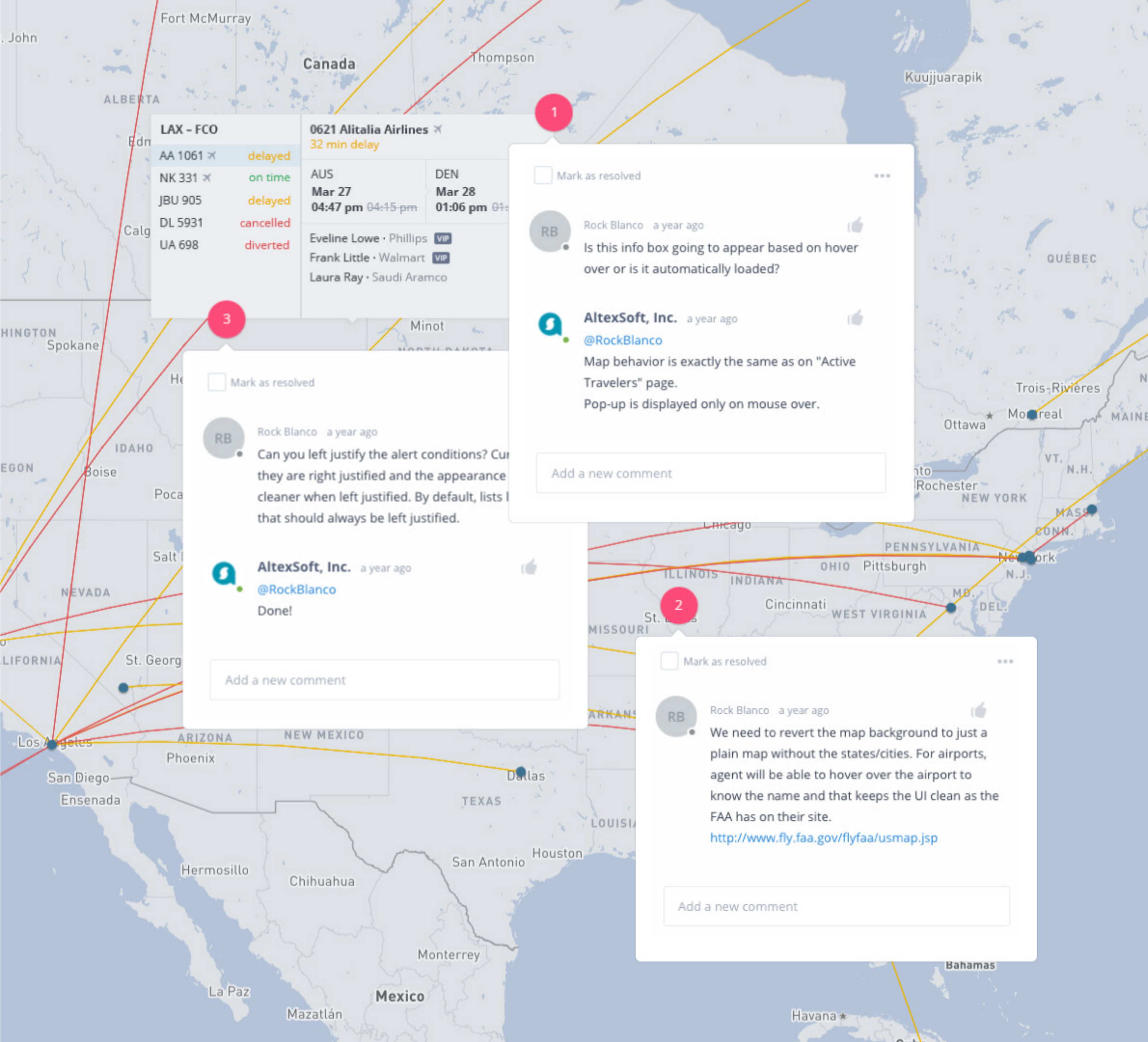
**Goal:** Outline the requirements and functionality of the future product.

**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.

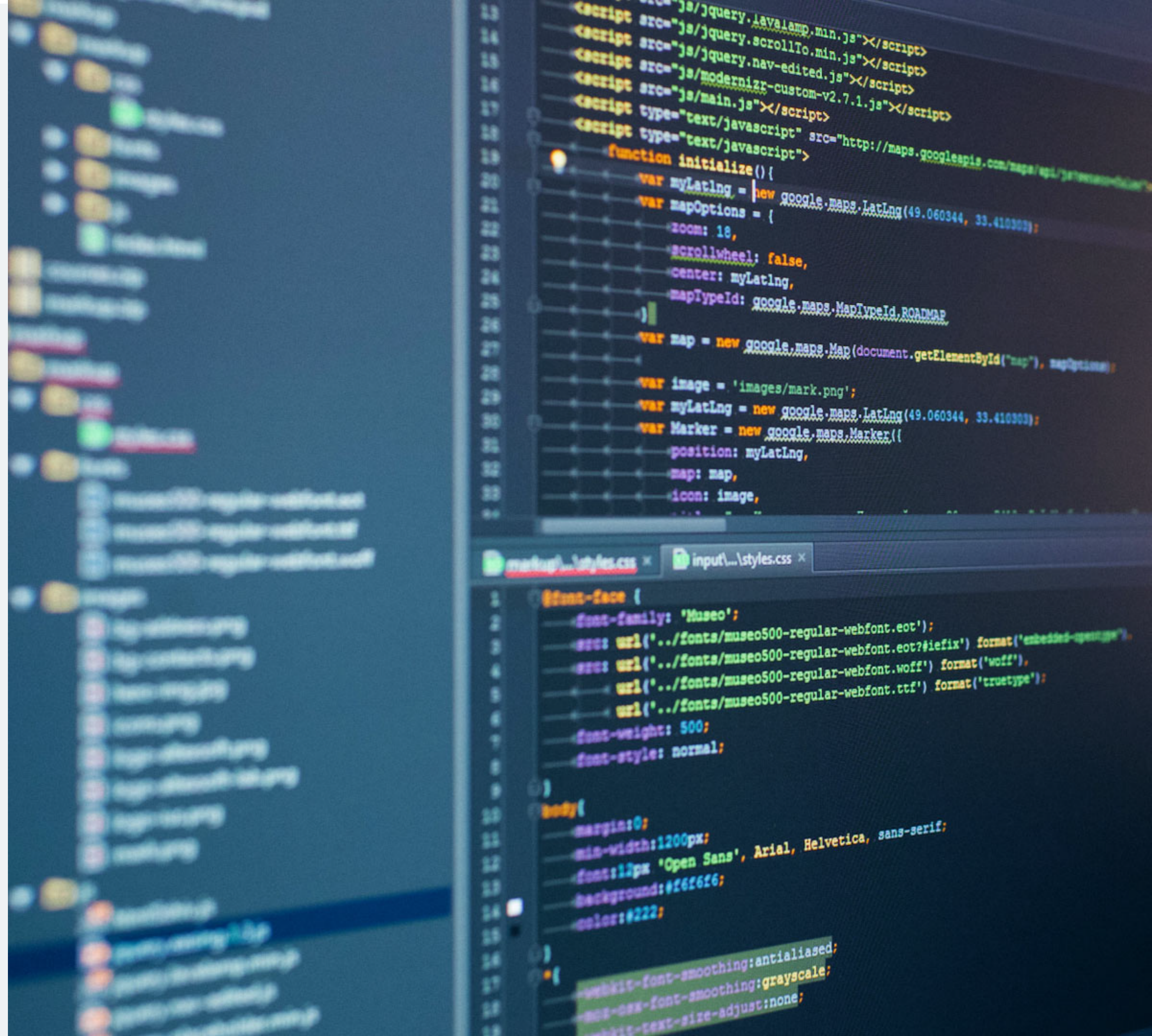
**Process:** In the process of product implementation minor tweaks of UI elements or features were needed, which resulted in making the software engineering process more efficient. Hence, our designers actively contributed to the product development process until the project completion.

**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



Rarely can I say that someone not only exceeded my expectations, but actually created an entirely new standard for achievement like AltexSoft. They demonstrated an in-depth, practical knowledge of the business needs and actual business case value for what we wanted in a product. Most importantly, everyone was fully able to understand technical design and development, techniques and constraints with the confidence, vision, and capabilities to manage our project from the planning to the implementation and delivery stages cost effectively and on-time.

— **Rock Blanco,**

*Senior Vice President, Product Innovation at Cornerstone Information Systems*





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