

process book

assignment #2: data-driven digital display

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research

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research

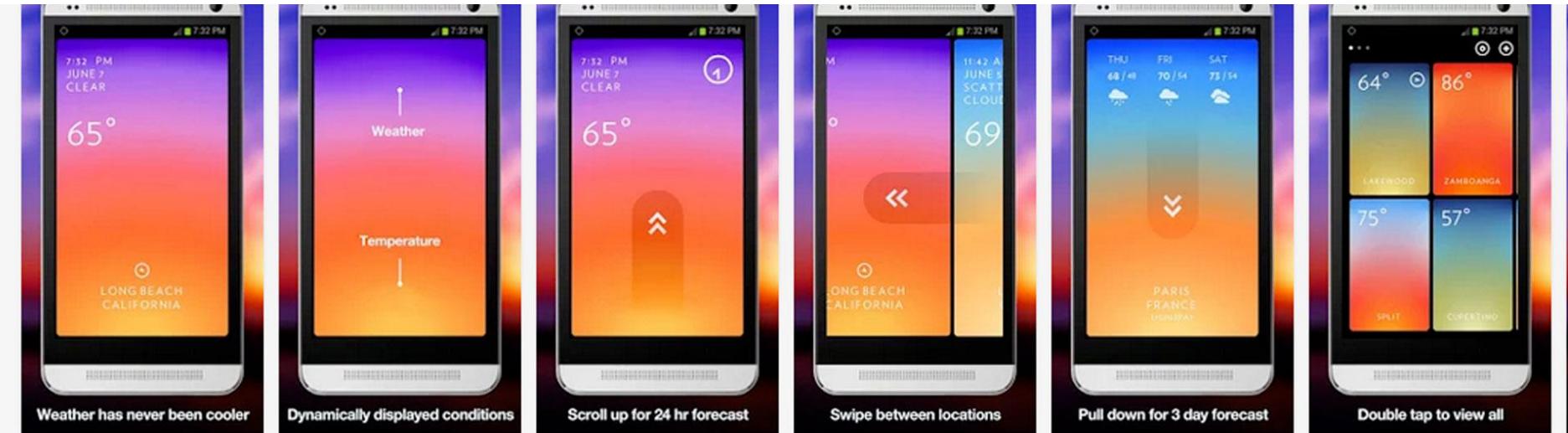
competitive analysis



We did online research for inspiration, as well as visiting our local transportation hubs. From the analysis, we found that most displays lacked weather that was easily readable and not obnoxious or didn't have weather information at all. We also found that the airlines logo interrupt the flow of the overall designs.

research

competitive analysis



We also looked at Solar which was a weather app and found the strengths of having a minimalistic design and incorporated it into our iterations.

research

stakeholder persona

STAKEHOLDER PERSONA



Elizabeth Duarte

Transportation Director of the
Municipality of San Juan Islands

We had research on the background of our main stakeholder, Elizabeth. This greatly influenced our design, specifically that we needed to promote the PTF pass.

Elizabeth Duarte is the Transportation Director of the Municipality of the Greater San Juan Islands, a division of the local government that operates Atlantis Hub. Her department is responsible for displaying transportation data on large environmental displays in the airport, train stations, and ferry docks for Atlantis customers. In addition to offering highly readable displays of changing transportation data, Elizabeth aims to educate the public about the ease with which travelers can make itineraries by combining plane, train, and ferry trips through her new program, the PTF Pass, which allows customers a great value and a lot of flexibility.

research

user personas

USER PERSONA



Patrick Mulvaney
EnCo environmental engineer

Patrick Mulvaney, is an environmental engineer for a EnCo, a large energy company in the region. As an engineer for EnCo who is stationed in Seattle, Patrick spends an average of three days per week visiting drilling and wind power sites throughout the San Juan Islands. Because weather often influences his travel from Seattle, through Victoria, and between the islands, Patrick welcomes the new PTF Pass program that allows his company to purchase multiple trips on planes, trains, and ferries so that he can optimize his travel on-the-fly, to accommodate changing weather conditions.

USER PERSONA



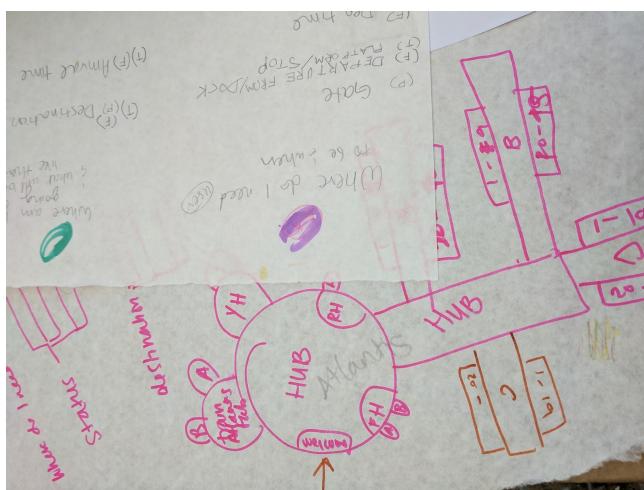
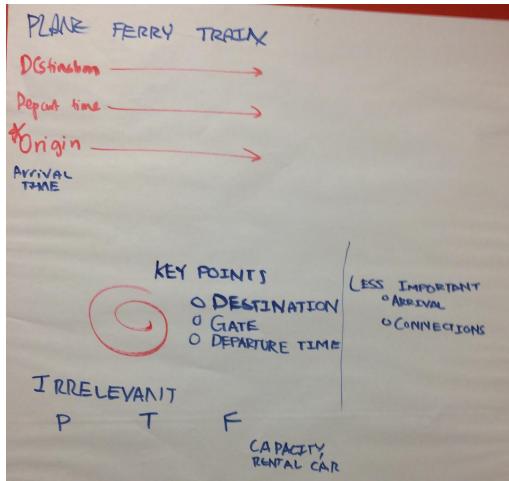
George Shimko
Property owner and retired resident
of San Juan Islands

A long-time resident of the San Juan Islands, George Shimko is an avid outdoorsman who owns modest fishing cabins on nearby Orcas Island and Stuart Island. He regularly invites his children and grandchildren to his house on San Juan Island and intends to give them PTF passes so that they can travel to Roche Harbour, Yacht Haven, and Friday Harbour on San Juan Islands and to his cabins on Orcas Island and Stuart Island. He wants to be able to use his home on San Juan Island as a base so his guests can plan fun tourist itineraries.

We were also provided user personas which allowed us to design for specific user cases. Our main takeaway was that these users are destination focused, not transit-focused. The personas also influenced some other design decisions during iteration.

research

data modeling



How do you break down pages and pages of data?

The hardest task of the data driven display was breaking down the data. How could we choose what is important and what is not?

We divided the data into information that was relevant to the users and the stakeholders and prioritized the information based on our audience.

research

data modeling

P: Plane

T: Train

F: Ferry

User

Stakeholder

Where do I need to be and when?	Where am I going and what will it be like there?	How much money can I make with this?	What can I expect on my journey?
P - Gate F - Departure From/Dock T - Platform/Stop	T, P, F - Destination T, F - Arrival Time	P - ID Number P - Fuel hours onboard P - Aircraft Manufacturer P - MTOW P - PTF Package P - Airline	P - PTF Package P - Airline F - Train Connection T, F - Passenger Capacity T - Express T - Food
F, T, P - Departure Time			
P - Status			
P - ID number			
P - Airline / Airline Code			

Here we used the questions to figured out what part of the data would be relevant to their interests.

???

Rental Car

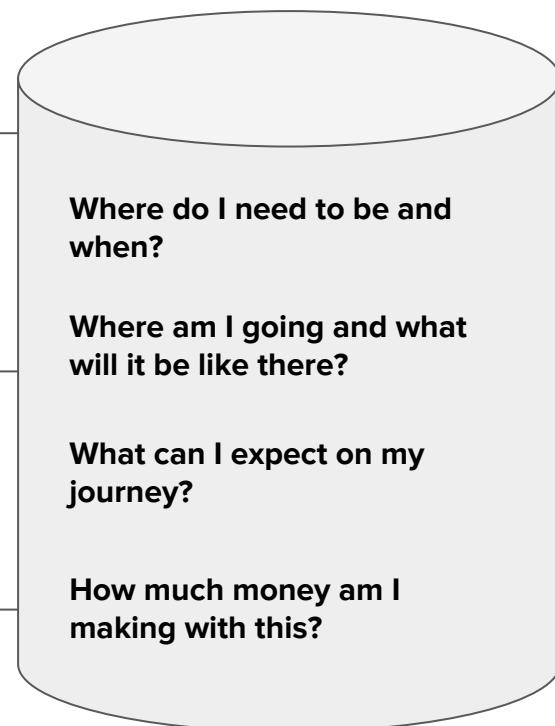
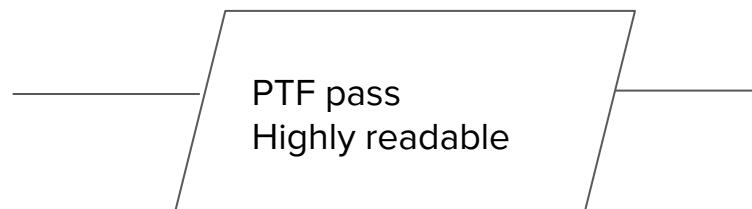
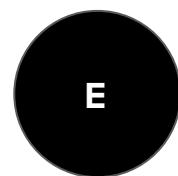
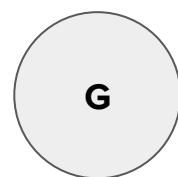
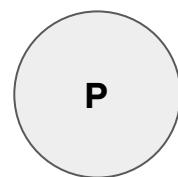
research

data modeling

Here we figured out several questions that the users and stakeholder would have based on their biographies.

User

Stakeholder

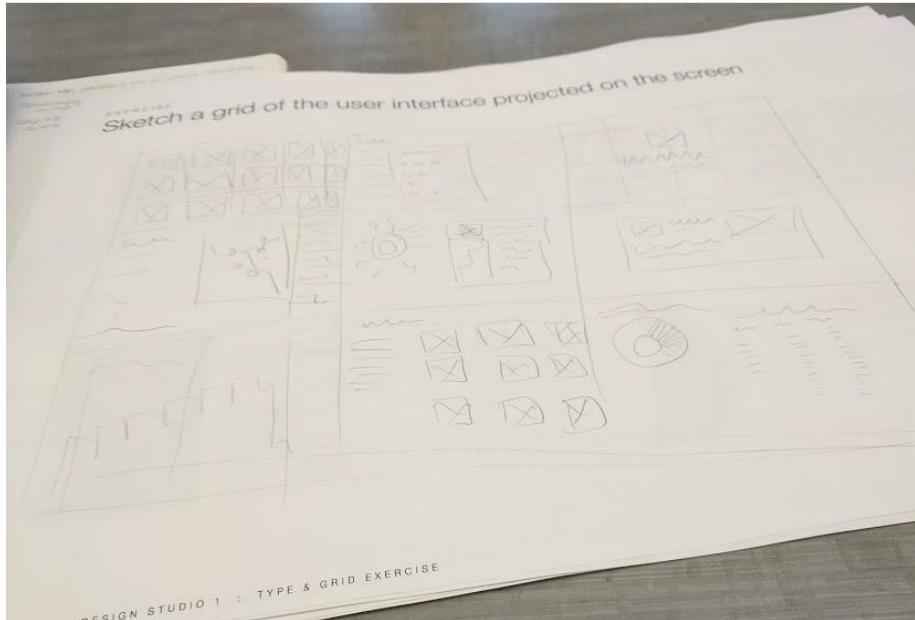


ideation

typographic prototyping	12-18
color prototyping	19-22
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ideation

typographic prototyping

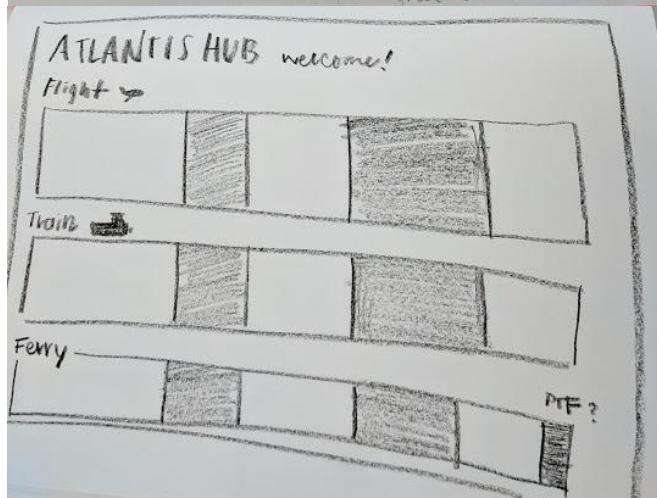
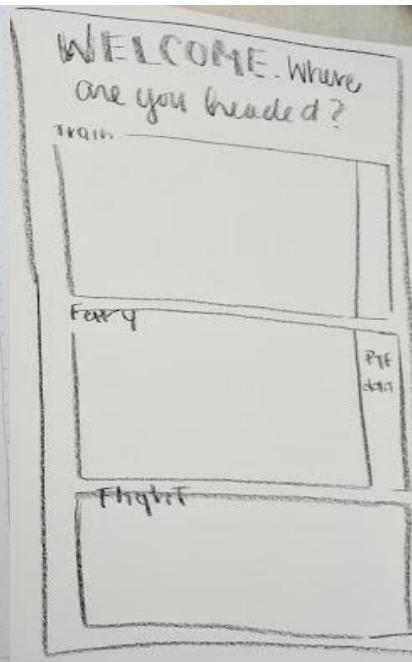
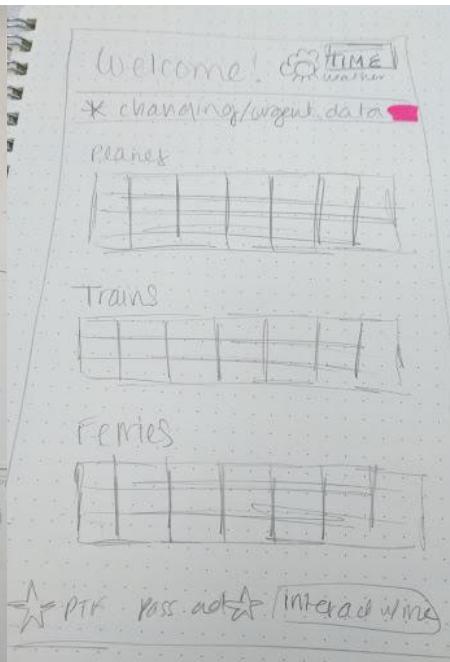
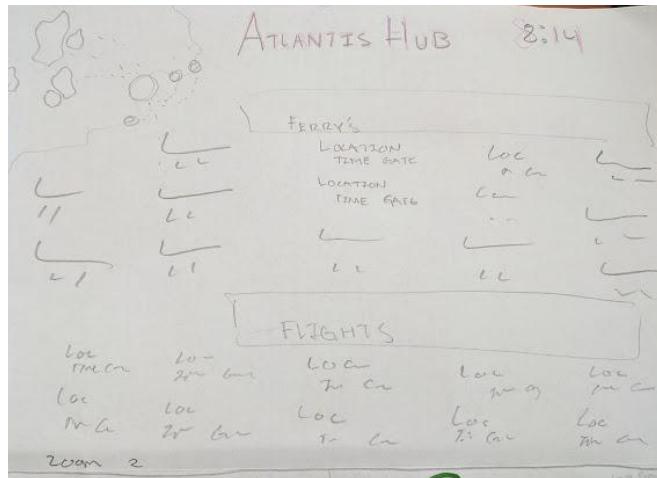


Depart at	Depart from	Status	Carrier ID
8:30 am	Friday Harbour	On Time	E1
8:30 am	Friday Harbour	On Time	C13
8:30 am	Friday Harbour	On Time	C17
8:30 am	Friday Harbour	On Time	C20
8:30 am	Friday Harbour	On Time	E1
8:30 am	Friday Harbour	Cancelled	San Juan Air 1885
10:00 am	Friday Harbour	On Time	FH Dock A
10:00 am	Friday Harbour	On Time	FH Dock B
10:00 am	Friday Harbour	Delayed	Split 400
10:00 am	Friday Harbour	On Time	Friday Harbour (FH)
Next flight departs at 10:20pm.		Gates announced 14.0pm	
Arrivals	Depart at	Depart from	Status
8:30 am	Friday Harbour	On Time	E1
8:30 am	Friday Harbour	On Time	C13
8:30 am	Friday Harbour	On Time	C17
8:30 am	Friday Harbour	On Time	C20
8:30 am	Friday Harbour	On Time	E1
8:30 am	Friday Harbour	Cancelled	San Juan Air 1885
10:00 am	Friday Harbour	On Time	FH Dock A
10:00 am	Friday Harbour	On Time	FH Dock B
10:00 am	Friday Harbour	Delayed	Split 400
10:00 am	Friday Harbour	On Time	Friday Harbour (FH)
Next flight departs at 10:20pm.		Gates announced 14.0pm	
Departures	Depart at	Depart from	Status
Seattle	8:30 am	C1	On Time
Shaw Island	8:30 am	FH Dock B	On Time
Stuart Island	8:30 am	C1	Delayed
Swartz Bay	8:30 am	R+ Dock A	On Time
Victoria	8:30 am	FH Dock A	On Time
Victoria	10:30 am	FH Dock A	On Time
Victoria	10:30 am	D1	On Time
Victoria	10:30 am	D1	On Time
Victoria	10:30 am	D1	On Time
Victoria	10:30 am	D1	On Time
Victoria	10:30 am	D1	On Time
Yacht Haven	8:30 am		Next flight departs at 11:00am.
Yacht Haven	8:30 am		Gates announced 9:00am

We explored the underlying grid structure and type interaction, which would translate into the grid we built for the data display. It was important for us to think about type and text essentially as images that would complement each other and create hierarchy.

ideation

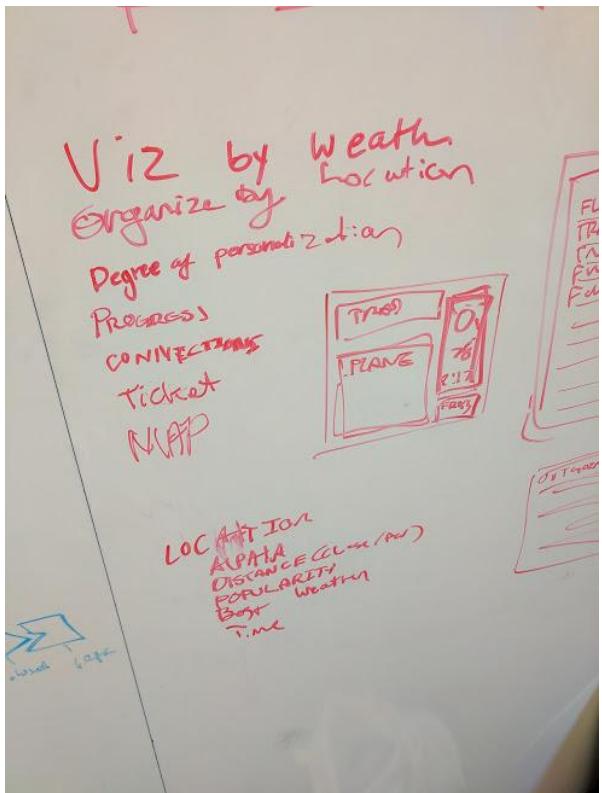
typographic prototyping



Explorations of type and grid were also done early on in the process.

ideation

typographic prototyping

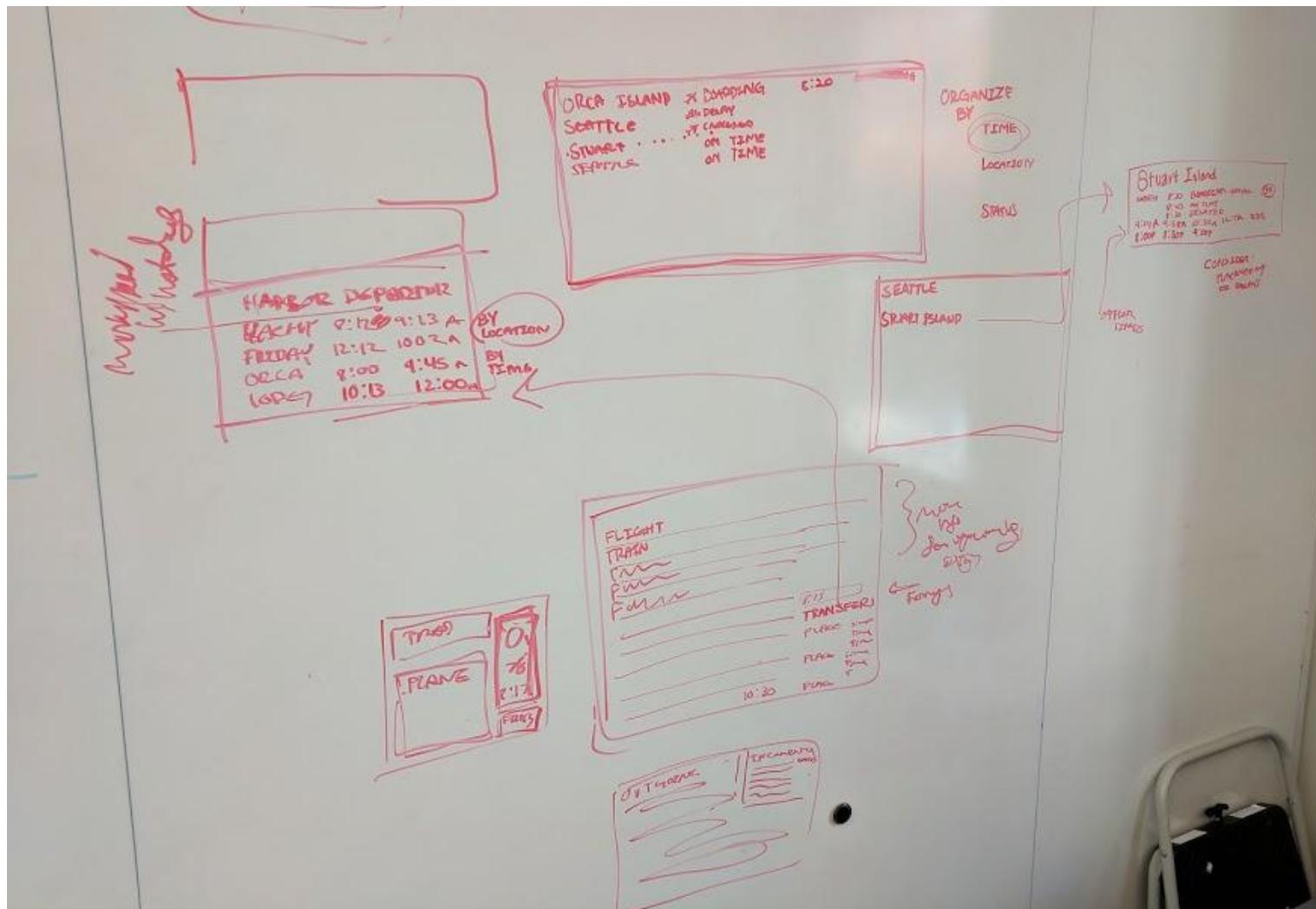


How do you display relevant information?

Next, the issue was figuring how to display the data. Our team came together to talk about the most important points from the data and then we individually design as many user interfaces we could in fifteen minutes. We came back together to pull the design elements we thought was the most important. We put those concepts into the iterations.

ideation

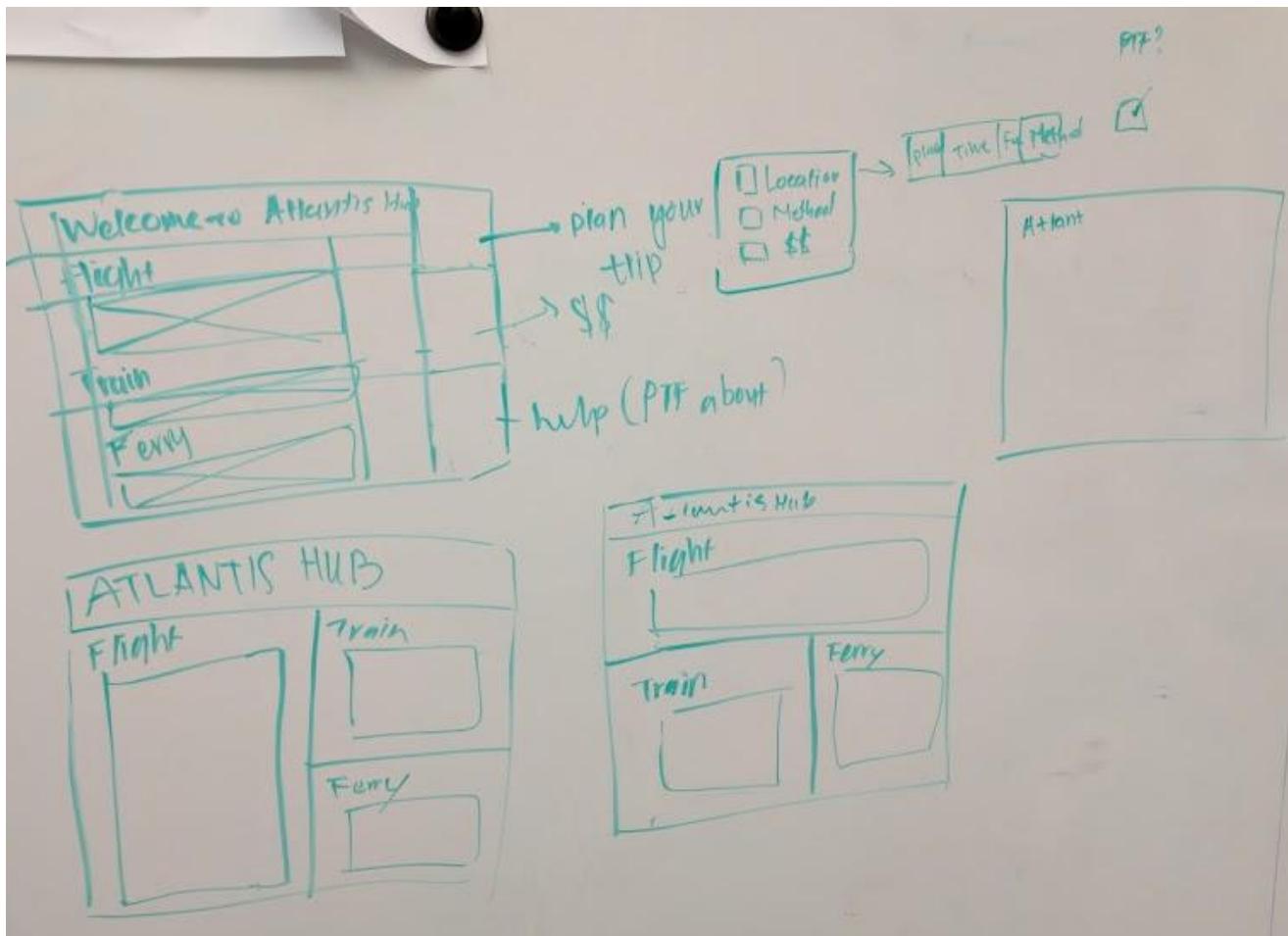
typographic prototyping



From this design, our team decided that it resembled a ticket which struck a chord in our collective hearts and it also had weather information which was important for one of our user personas.

ideation

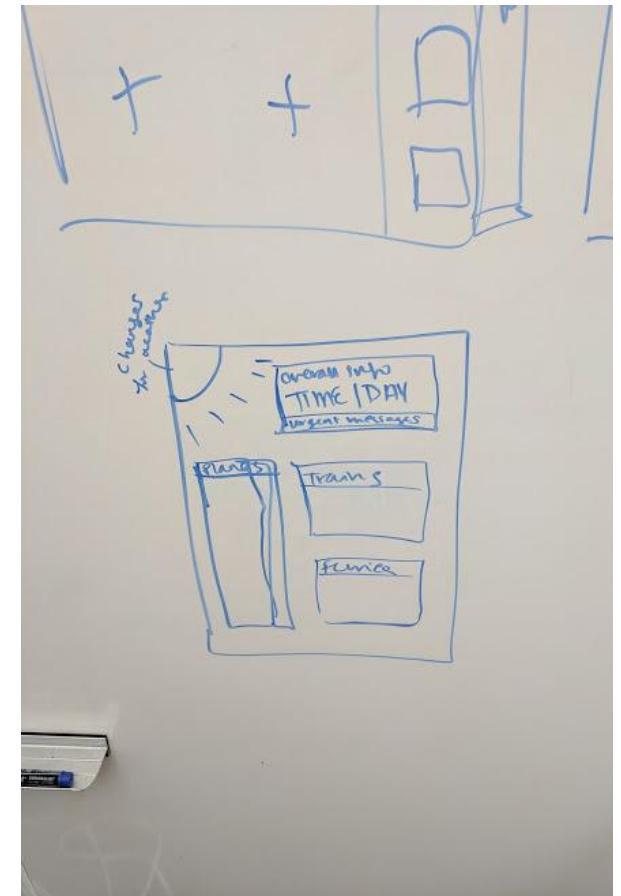
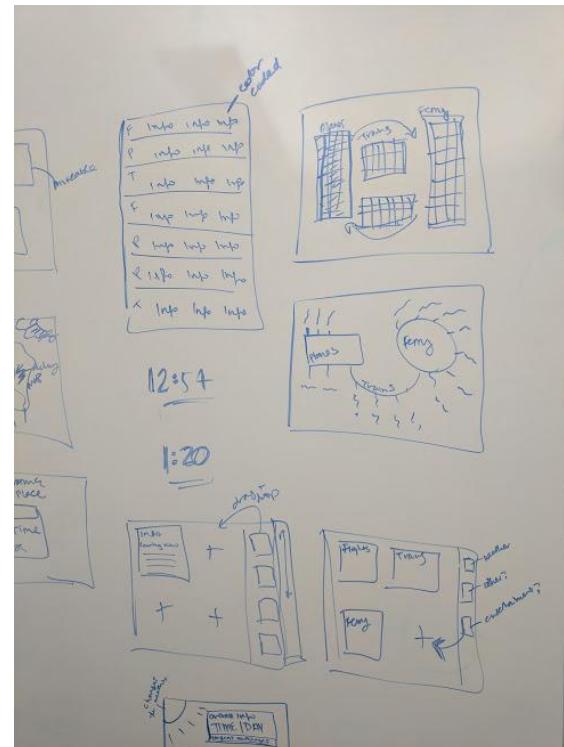
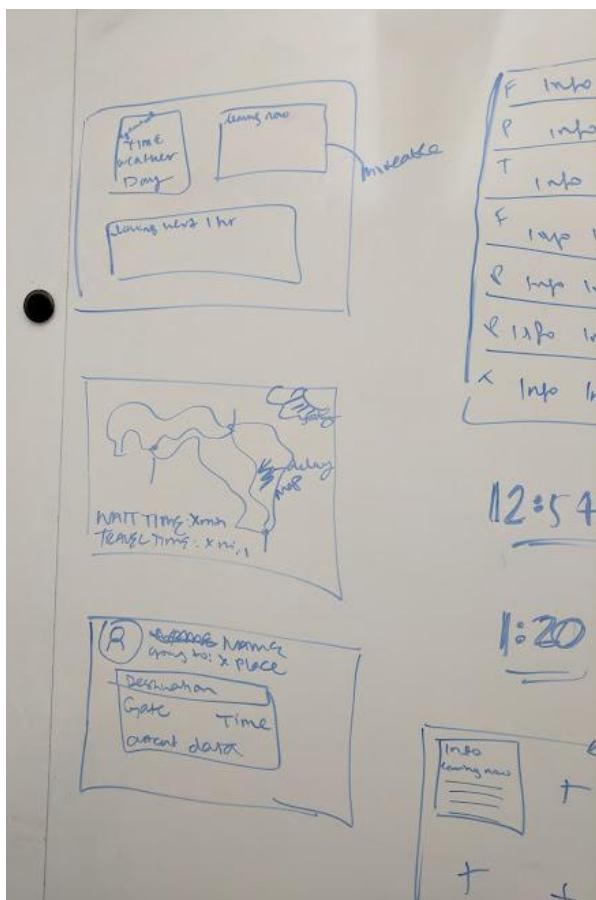
typographic prototyping



From this design, we liked the idea of being able to plan your trip. This would be especially pertinent to users like George, whose priority is traveling for leisure.

ideation

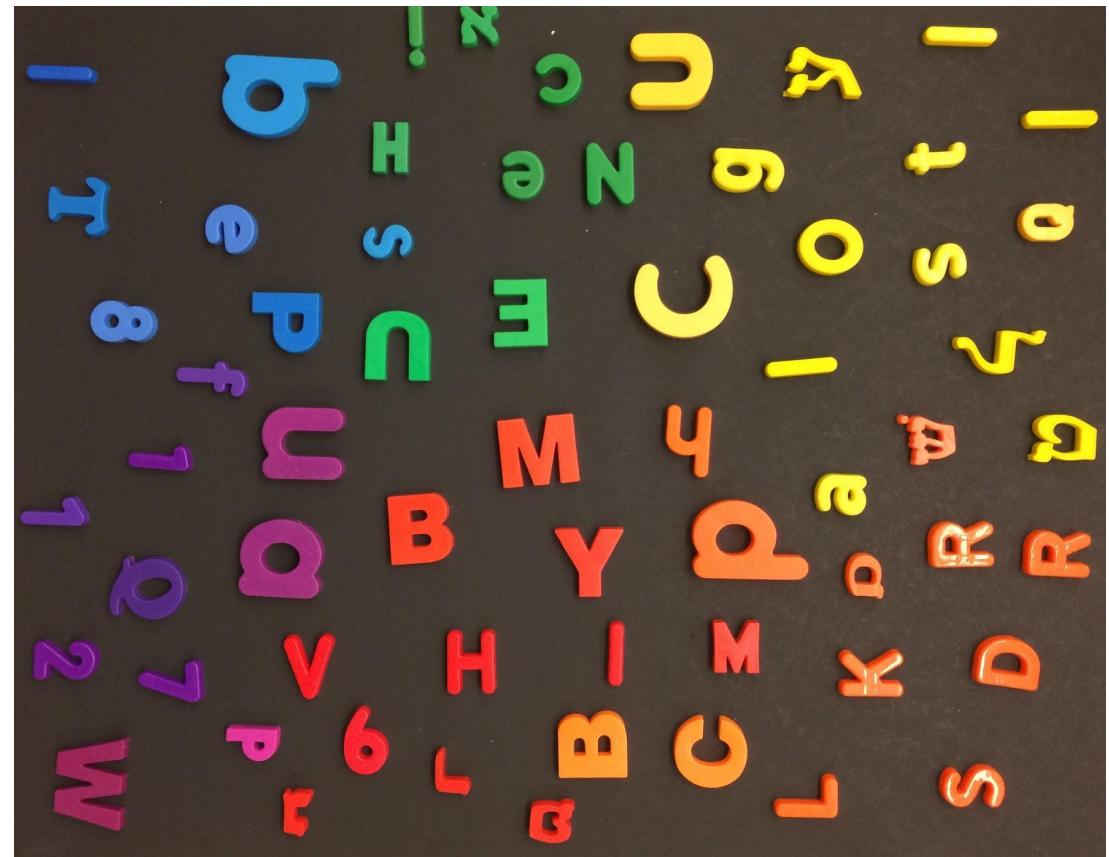
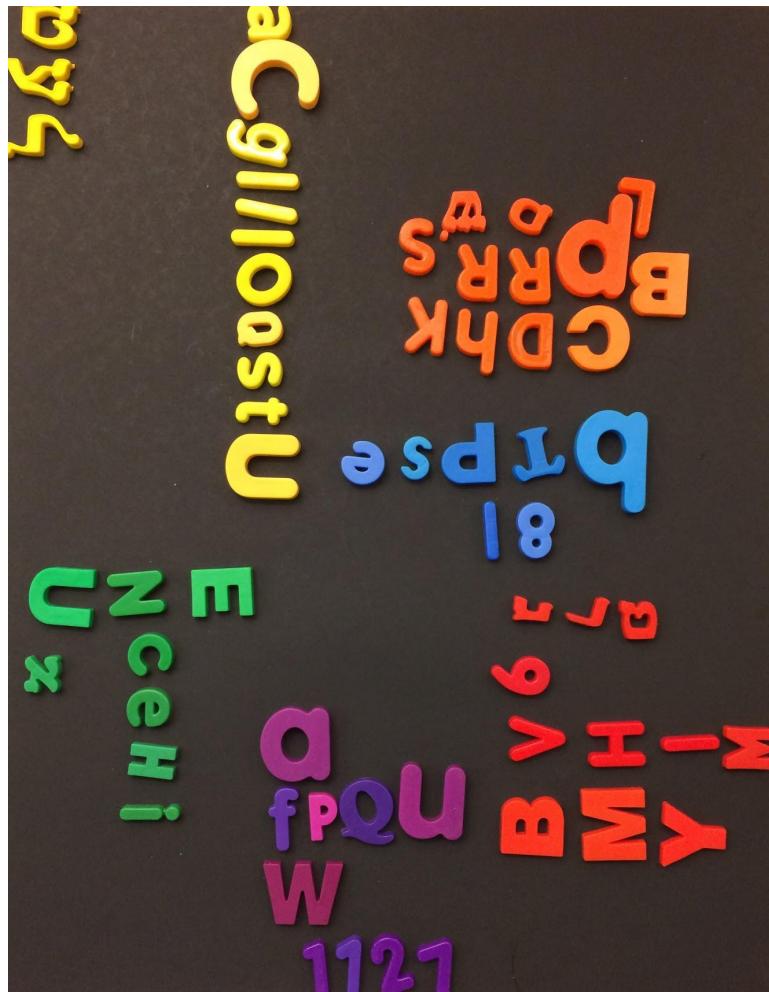
typographic prototyping



We liked that this design held an equal focus to location and method of transportation. It also included weather which would greatly influence our designs later on.

ideation

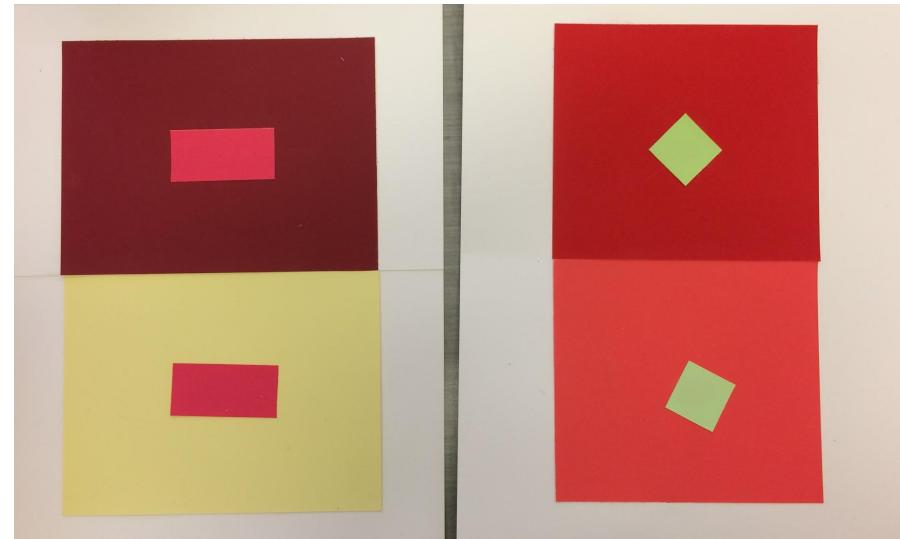
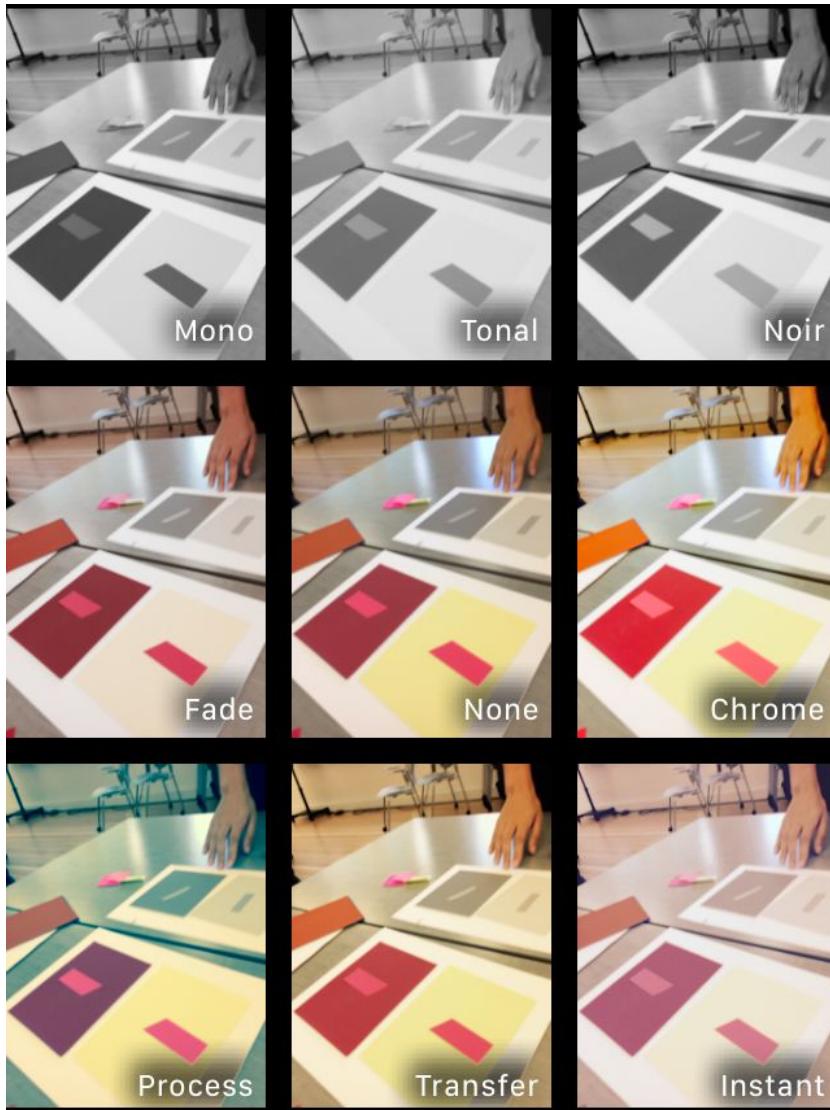
typographic prototyping



We also explored color, form, and structure in a series of quick exercises.

ideation

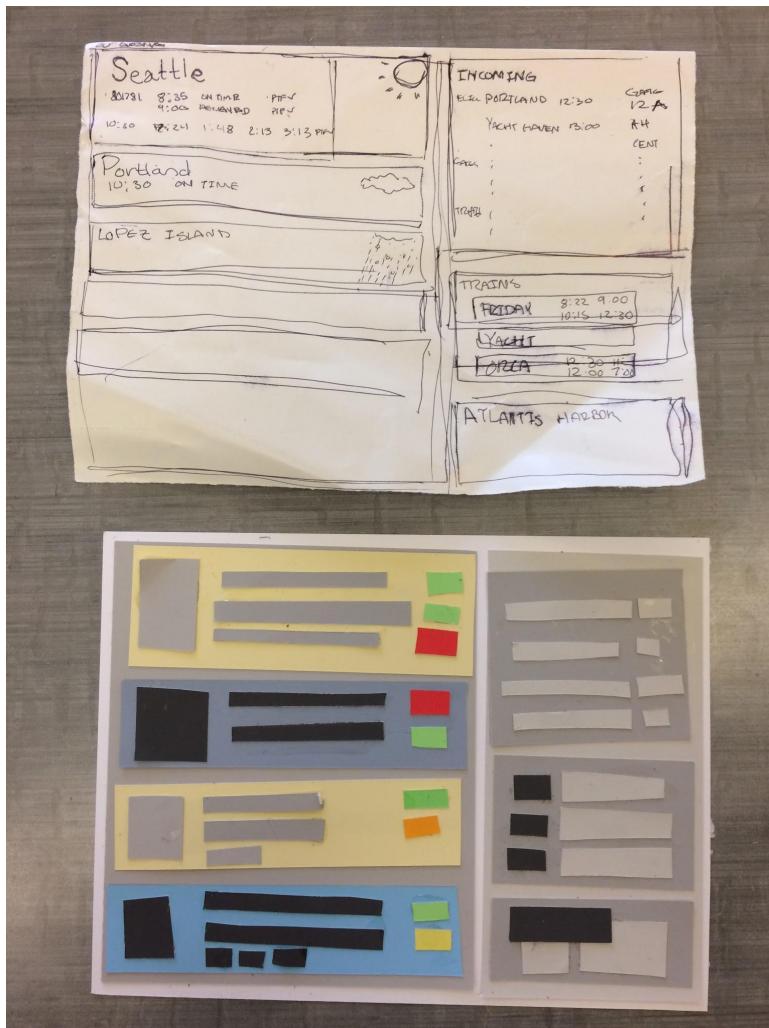
color prototyping



Which leads us to color interaction. We explored how color interacts with the eye and how it can be deceiving. This helped us understand which values to choose when moving to our digital prototype.

ideation

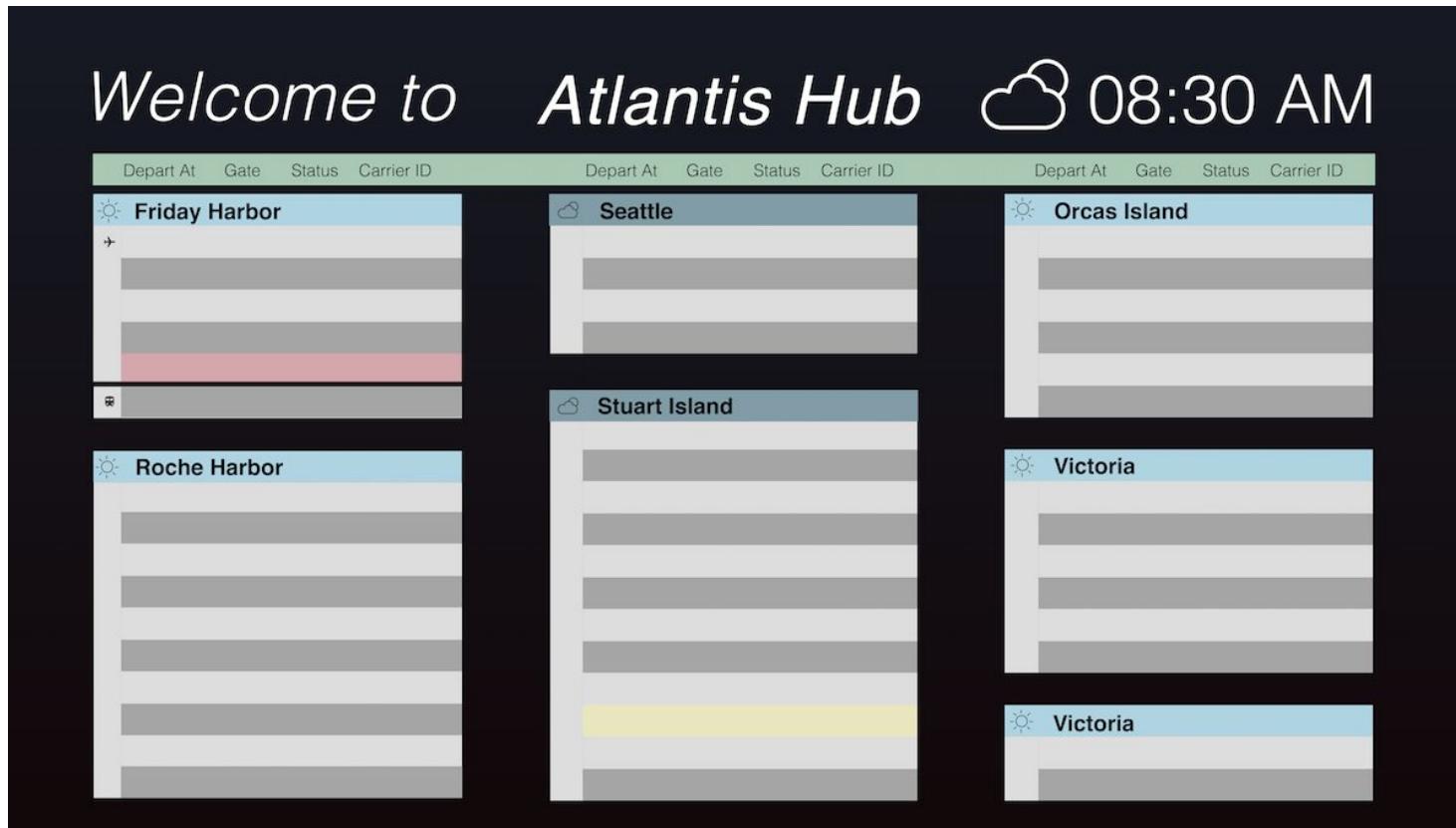
color prototyping



After the color exercise, we briefly modelled the potential colors for our user interface.

ideation

color prototyping



In this first edition, there was an investigation with higher contrast and bolder backgrounds and how those things play a role with legibility.

ideation

color prototyping

We worked with grayscale before working with color to see how value could impact readability.

Location	Depart at	Depart from	Status	Carrier/ID
Friday Harbour	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Lopez Island	10:00 am	FH Dock A	On Time	Friday Harbour (FH)
Oakland	8:45 am	C31	On Time	Virgin America 9000
	10:23 am	C33	Cancelled	Virgin America 9001
Orcas Island	8:40am	B2	On Time	San Juan Air 8331
	9:00 am	FH Dock B	On Time	Friday Harbour (FH)
Portland	8:45am	C31	On Time	Virgin America 9000
	10:23 am	C33	Cancelled	Virgin America 9001
San Francisco	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Seattle	9:00 am	C8		
Roche Harbour	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Lopez Island	10:00 am	FH Dock A	On Time	Friday Harbour (FH)
Oakland	8:45 am	C31	On Time	Friday Harbour (FH)
	10:23 am	C33	Cancelled	Friday Harbour (FH)
Orcas Island	8:40am	B2	On Time	San Juan Air 8331
	9:00 am	FH Dock B	On Time	Friday Harbour (FH)
Portland	8:45am	C31	On Time	Virgin America 9000
	10:23 am	C33	Cancelled	Virgin America 9001
Shaw Island	10:15 am	FH Dock B	On Time	Friday Harbour (FH)
Stuart Island	8:10 am	C10	Delayed	Spirit 4300
	8:35 am	B8	On Time	San Juan Air 1885
	8:35 am	C9	On Time	Spirit 4301
	9:16 am	B3	On Time	San Juan Air 1886
	9:16 am	C6	On Time	Spirit 4302
	Next ferry departs at 12:00pm. Dock announced 10am.			
Swatz Bay				
Friday Harbour	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
San Francisco	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Seattle	9:00 am	C8		
Roche Harbour	8:10 am	B2	Delayed	San Juan Air 8331
	9:00 am	B9	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Lopez Island	10:00 am	FH Dock A	On Time	Friday Harbour (FH)
Oakland	8:45 am	C31	On Time	Friday Harbour (FH)
	10:23 am	C33	Cancelled	Friday Harbour (FH)
Orcas Island	8:40am	B2	On Time	San Juan Air 8331
	9:00 am	FH Dock B	On Time	Friday Harbour (FH)
Portland	8:45am	C31	On Time	Virgin America 9000
	10:23 am	C33	Cancelled	Virgin America 9001
Shaw Island	10:15 am	FH Dock B	On Time	Friday Harbour (FH)
Stuart Island	8:10 am	C10	Delayed	Spirit 4300
	8:35 am	B8	On Time	San Juan Air 1885
	8:35 am	C9	On Time	Spirit 4301
	9:16 am	B3	On Time	San Juan Air 1886
	9:16 am	C6	On Time	Spirit 4302
	Next ferry departs at 12:00pm. Dock announced 10am.			
Swatz Bay				
Friday Harbour	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
San Francisco	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9am.			
Seattle	9:00 am	C8		
Victoria	8:30 am	FH Dock A	On Time	Friday Harbour (FH)
	10:30 am	FH Dock A	On Time	Friday Harbour (FH)
	8:37 am	D11	On Time	Southwest 0090
	9:45 am	D2	On Time	American 1000
	10:30 am	D9	On Time	Southwest 0100
Yacht Haven				
Friday Harbour	8:36 am	B1	On Time	San Juan Air 8331
	8:36 am	C13	On Time	Spirit 1110
	8:40 am	C7	On Time	Spirit 6603
	8:56 am	C2	On Time	Spirit 9000
	9:00 am	B1	Cancelled	San Juan Air 1885
	Next train departs at 11:00am. Gate announced 9:00am.			

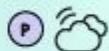
ideation

motion prototyping

08:36 B1 On Time Friday Harbour

🚂 *Next train 11:00am. Gate announced 09:00am.*

Lopez Island



🚂 08:36 B1 Delayed Friday Harbour

Oakland

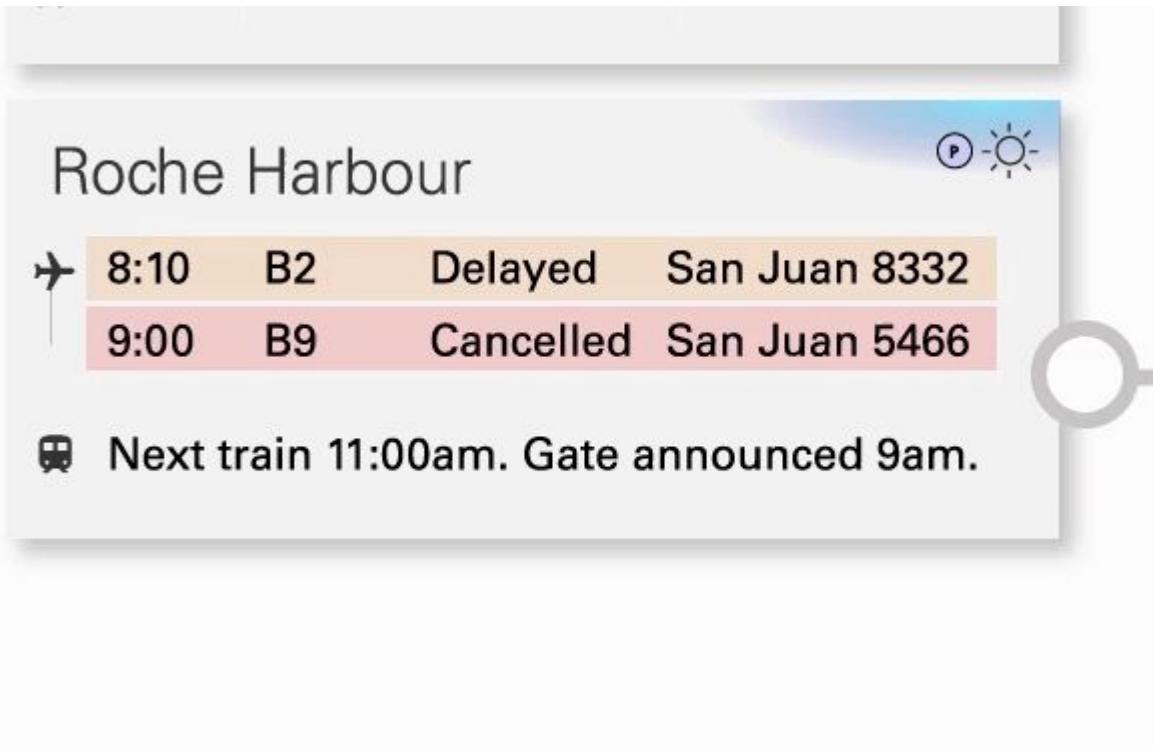


✈ *Next flight 16:01pm. Gate announced 14:01pm*

We experimented with the idea of flashing dot information to indicate status change. Ultimately, we didn't think that the mass was large enough to convey a significant change.

ideation

motion prototyping



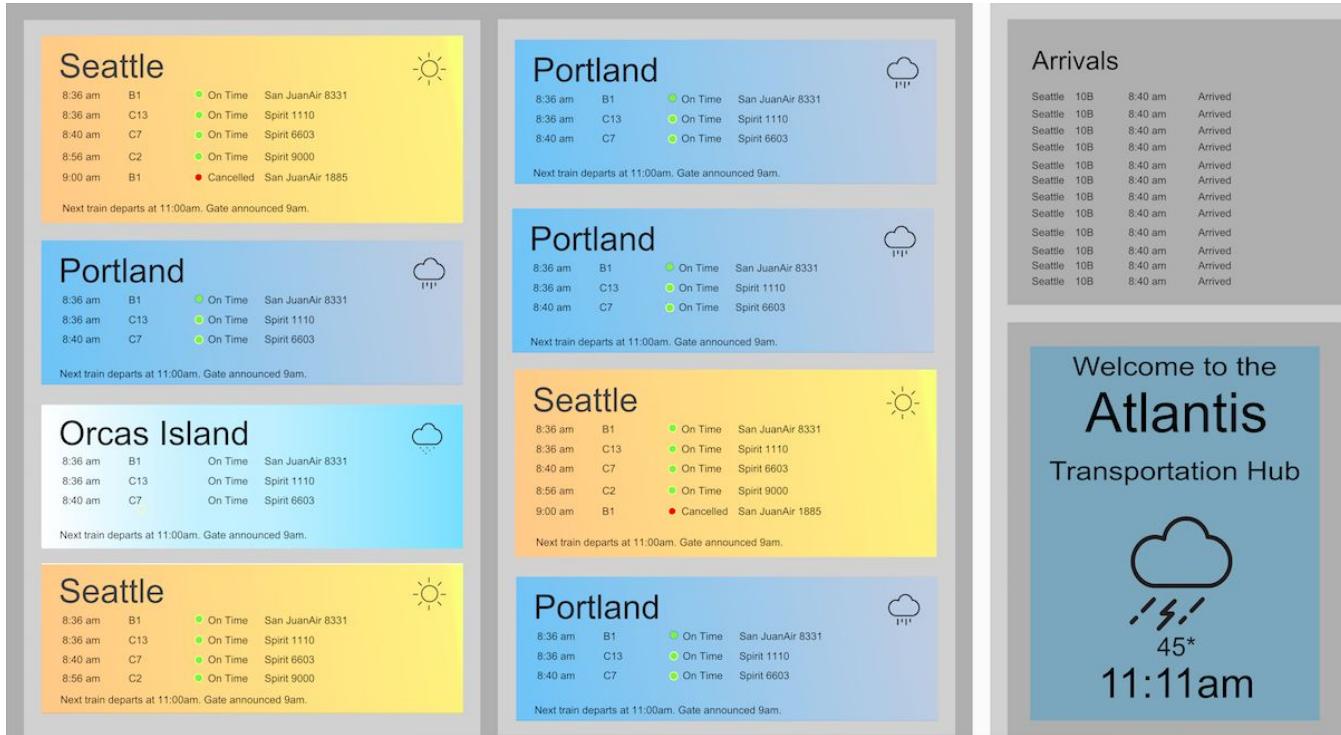
We also looked at expanding cards to add new flight information and animations with more mass (like the flashing bars instead of dots)

iteration

critique process	26-41
final design	42

iteration

critique process (round 1)



We brought this design to our first critique. This design focused mainly on weather information, based on our persona Patrick.

Critique feedback:

- Fun design
- Too-weather focused (is that the most important data?)
- Need to use real data for full effect (instead of placeholders)

iteration

critique process (round 1)

Welcome to Atlantis Hub

Monday, March 31st 8:30 am

Train Flight Ferry

PTF Pass Eligible

Departures

Depart at	Depart from	Status	Carrier/ID
Friday Harbour			
8:36 am	B1	On Time	San Juan Air 8331
8:36 am	C13	On Time	Spirit 1110
8:40 am	C7	On Time	Spirit 6603
8:56 am	C2	On Time	Spirit 9000
9:00 am	B1	Cancelled	San Juan Air 1885

Next train departs at 11:00am. Gate announced 9am.

Depart at	Depart from	Status	Carrier/ID
Seattle			
9:00 am	C8	On Time	Delta Airline 2001

Depart at	Depart from	Status	Carrier/ID
Shaw Island			
10:15 am	FH Dock B	On Time	Friday Harbour (FH)

Depart at	Depart from	Status	Carrier/ID
Stuart Island			
8:10 am	C10	Delayed	Spirit 4300
8:35 am	B8	On Time	San Juan Air 1885
8:35 am	C9	On Time	Spirit 4301
9:16 am	B3	On Time	San Juan Air 1886
9:16 am	C6	On Time	Spirit 4302

Next ferry departs at 12:00pm. Dock announced 10am.

Depart at	Depart from	Status	Carrier/ID
Swatz Bay			
9:00 am	RH Dock A	On Time	Roche Harbour (RH)

Depart at	Depart from	Status	Carrier/ID
Victoria			
8:30 am	FH Dock A	On Time	Friday Harbour (FH)
10:30 am	FH Dock A	On Time	Friday Harbour (FH)
8:37 am	D11	On Time	Southwest 0090
9:45 am	D2	On Time	American 1000
10:30 am	D9	On Time	Southwest 0100

Depart at	Depart from	Status	Carrier/ID
Yacht Haven			
9:00 am	B9	Cancelled	San Juan Air 1885

Next train departs at 11:00am. Gate announced 9:00am.

Arrivals

Depart at	Depart from	Status	Carrier/ID
Atlantis Hub			
8:36 am	B1	On Time	San Juan Air 8331
8:36 am	B1	On Time	San Juan Air 1885
8:36 am	B1	Cancelled	San Juan Air 1885
8:36 am	B1	On Time	San Juan Air 1885
8:36 am	B1	On Time	San Juan Air 1885

Next train departs at 11:00am. Gate announced 9am.

Depart at	Depart from	Status	Carrier/ID
San Francisco			
8:36 am	B1	On Time	San Juan Air 1885

Next flight departs 13:53pm. Gate announced 11:53am.

We also brought this design to our first critique. This design focused mainly on typographical hierarchy and organizing the transport data.

Critique feedback:

- Useful design
- Data is too small to read
- Nice use of icons and mass
- Need to think about how this ties directly to user needs

iteration

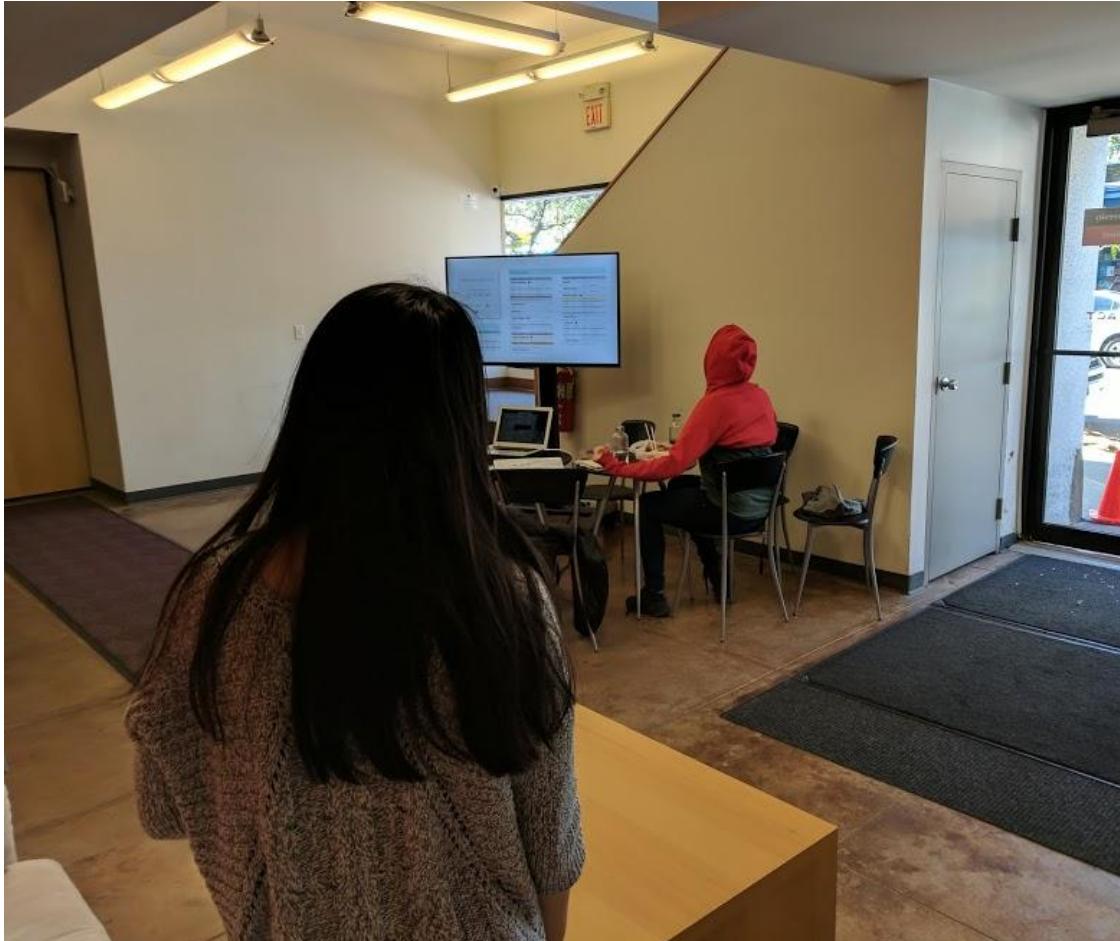
critique process (round 2)

Going into our second round of iteration, we had the following goals in mind:

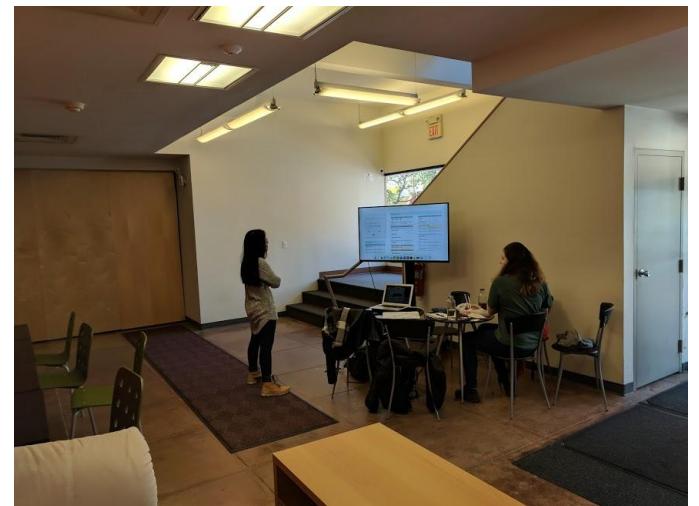
- Combine the usefulness and fun-loving natures of our two initial designs
- Incorporate some type of meaningful animation into our design
- Think more about how to speak to our users and stakeholders
- Enhance readability of our display

iteration

critique process (round 2)



We made sure to test our design on the actual display, standing at different distances to determine optimal font size.



iteration

critique process (round 2)

Friday Harbour P			
Depart at	Depart from	Status	Carrier/ID
✈ 8:36 am	B1	On Time	San Juan Air 8331
✈ 8:36 am	C13	On Time	Spirit 1110
✈ 8:40 am	C7	On Time	Spirit 6603
✈ 8:56 am	C2	On Time	Spirit 9000
✈ 9:00 am	B1	Cancelled	San Juan Air 1885
🚂	Next train departs at 11:00am. Gate announced 9am.		

We also played with multiple ways of indicating different methods of transport using variations of icons to increase readability.

Friday Harbour P			
Depart at	Depart from	Status	Carrier/ID
8:36 am	B1	On Time	San Juan Air 8331
8:36 am	C13	On Time	Spirit 1110
✈ 8:40 am	C7	On Time	Spirit 6603
8:56 am	C2	On Time	Spirit 9000
9:00 am	B1	Cancelled	San Juan Air 1885
🚂	Next train departs at 11:00am. Gate announced 9am.		

Friday Harbour P			
Depart at	Depart from	Status	Carrier/ID
8:36 am	B1	On Time	San Juan Air 8331
8:36 am	C13	On Time	Spirit 1110
8:40 am	C7	On Time	Spirit 6603
8:56 am	C2	On Time	Spirit 9000
9:00 am	B1	Cancelled	San Juan Air 1885
🚂	Next train departs at 11:00am. Gate announced 9am.		

iteration

critique process (round 2)

 8:30 AM WELCOME TO ATLANTIS TRANSPORTATION HUB    	<h2>Departures</h2> <table border="1"> <thead> <tr> <th>TIME</th> <th>GATE</th> <th>STATUS</th> <th>ID</th> </tr> </thead> <tbody> <tr> <td colspan="4">Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td colspan="4">Next train 11:00am. Gate announced 9am.</td> </tr> <tr> <td colspan="4">Lopez Island</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● Delayed</td> <td>Friday Harbour</td> </tr> <tr> <td colspan="4">Oakland</td> </tr> <tr> <td colspan="4">Next flight 16:01pm. Gate announced 14:01pm</td> </tr> <tr> <td colspan="4">Orcas Island</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> <tr> <td colspan="4">San Francisco</td> </tr> <tr> <td colspan="4">Next flight 16:01pm. Gate announced 14:01pm</td> </tr> <tr> <td colspan="4">Seattle</td> </tr> <tr> <td colspan="4">Next flight 16:01pm. Gate announced 14:01pm</td> </tr> <tr> <td colspan="4">Shaw Island</td> </tr> <tr> <td>8:36</td> <td>B1</td> <td>● On Time</td> <td>Friday Harbour</td> </tr> </tbody> </table>	TIME	GATE	STATUS	ID	Friday Harbour				8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	Next train 11:00am. Gate announced 9am.				Lopez Island				8:36	B1	● Delayed	Friday Harbour	Oakland				Next flight 16:01pm. Gate announced 14:01pm				Orcas Island				8:36	B1	● On Time	Friday Harbour	8:36	B1	● On Time	Friday Harbour	San Francisco				Next flight 16:01pm. Gate announced 14:01pm				Seattle				Next flight 16:01pm. Gate announced 14:01pm				Shaw Island				8:36	B1	● On Time	Friday Harbour																												
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We tried to combine elements of both displays by infusing with color and experimenting different ways of showing weather information. These designs were more overtly focused on weather.

iteration

critique process (round 2)

8:30 AM

Departures

Time	Gate	Status	ID
Friday Harbour			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Next train 11:00am. Gate announced 9am.			
Lopez Island			
8:36	B1	Delayed	Friday Harbour
Oakland			
Next flight 16:01pm. Gate announced 14:01pm			
Orcas Island			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Portland			
8:36	B1	Cancelled	Friday Harbour
8:36	B1	On Time	Friday Harbour
Roche Harbour			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Next train 11:00am. Gate announced 9am.			
San Francisco			
Next flight 16:01pm. Gate announced 14:01pm			
Seattle			
Next flight 16:01pm. Gate announced 14:01pm			
Shaw Island			
8:36	B1	On Time	Friday Harbour

These designs focused on more subtle representations of weather information that serve as headers for the destination information.

8:30 AM

DEPARTURES

TIME	GATE	STATUS	ID
Friday Harbour			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Next train 11:00am. Gate announced 9am.			
Lopez Island			
8:36	B1	Delayed	Friday Harbour
Oakland			
Next flight 16:01pm. Gate announced 14:01pm			
Orcas Island			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Portland			
8:36	B1	Cancelled	Friday Harbour
8:36	B1	On Time	Friday Harbour
Roche Harbour			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Next train 11:00am. Gate announced 9am.			
San Francisco			
Next flight 16:01pm. Gate announced 14:01pm			
Seattle			
Next flight 16:01pm. Gate announced 14:01pm			
Shaw Island			
8:36	B1	On Time	Friday Harbour

8:30 AM

Departures

Time	Gate	Status	ID
Friday Harbour			
8:36	B1	On Time	Friday Harbour
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8:36	B1	On Time	Friday Harbour
Portland			
8:36	B1	Cancelled	Friday Harbour
8:36	B1	On Time	Friday Harbour
Roche Harbour			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
Next train 11:00am. Gate announced 9am.			
Lopez Island			
8:36	B1	Delayed	Friday Harbour
Oakland			
Next flight 16:01pm. Gate announced 14:01pm			
Orcas Island			
8:36	B1	On Time	Friday Harbour
8:36	B1	On Time	Friday Harbour
San Francisco			
Next flight 16:01pm. Gate announced 14:01pm			
Seattle			
Next flight 16:01pm. Gate announced 14:01pm			
Shaw Island			
8:36	B1	On Time	Friday Harbour

iteration

critique process (round 2)

08:30 AM

DEPARTURES

Welcome to Atlantis Hub!

PTF Pass Eligible Train

Flight Ferry

Friday Harbour

TIME	GATE	STATUS	ID
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour

Next train 11:00am. Gate announced 09:00am.

Lopez Island

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Oakland

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Next flight 16:01pm. Gate announced 14:01pm.

Orcas Island

TIME	GATE	STATUS	ID
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour

Portland

TIME	GATE	STATUS	ID
08:36	B1	Cancelled	Friday Harbour
08:36	B1	On Time	Friday Harbour

Roche Harbour

TIME	GATE	STATUS	ID
08:36	B1	On Time	Friday Harbour
08:36	B1	On Time	Friday Harbour

Next train 11:00am. Gate announced 9am.

San Francisco

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Next flight 16:01pm. Gate announced 14:01pm.

Seattle

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Next flight 16:01pm. Gate announced 14:01pm.

Shaw Island

TIME	GATE	STATUS	ID
08:36	B1	On Time	Friday Harbour

Lopez Island

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Lopez Island

TIME	GATE	STATUS	ID
08:36	B1	Delayed	Friday Harbour

Lopez Island

TIME	GATE	STATUS	ID
08:36	B1	Cancelled	Friday Harbour

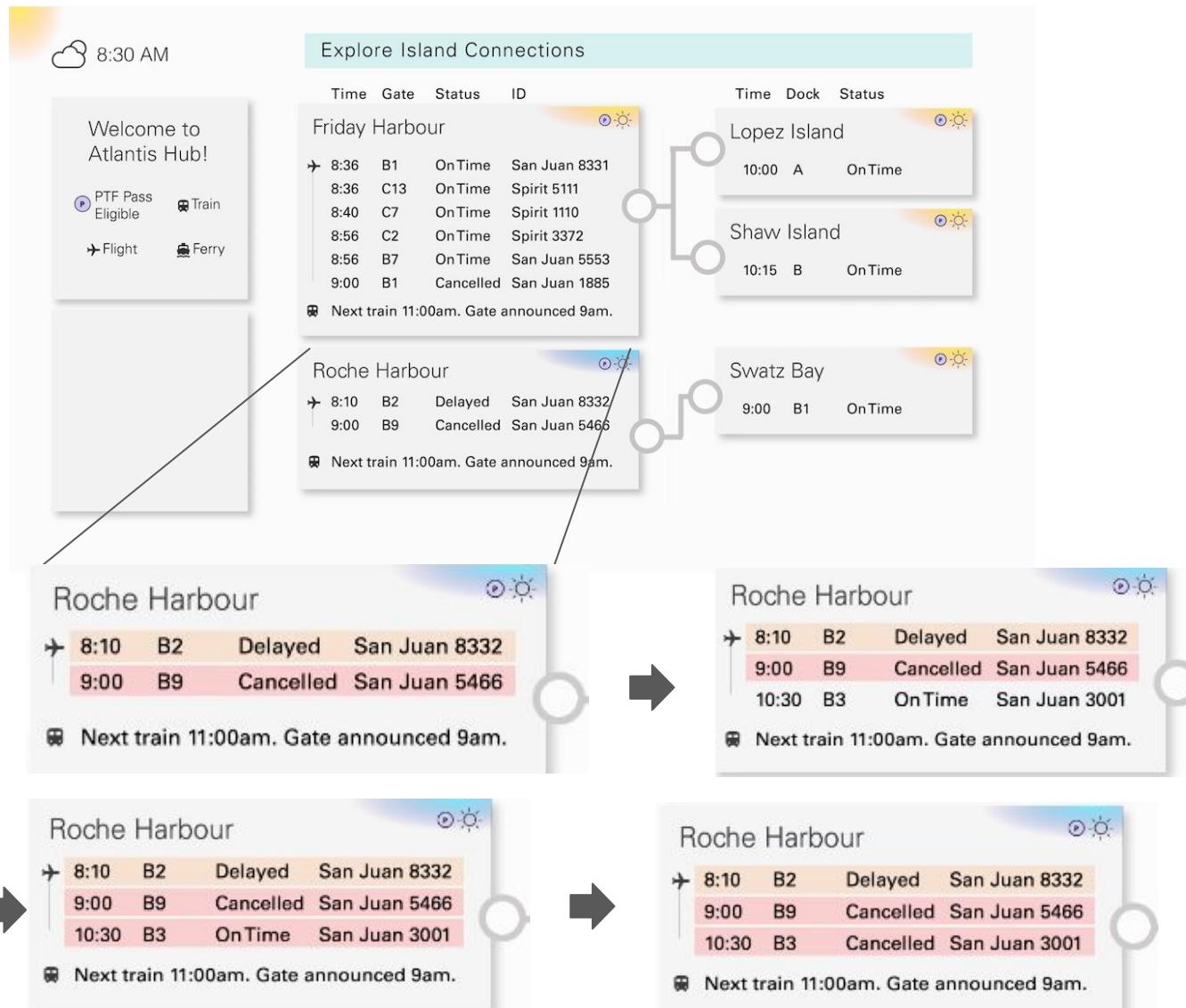
We ultimately brought this design to our second critique. In this design we switched to the more readable Univers typeface. We also used animation to indicate status changes.

Critique feedback:

- + Could use better system for multiple types of transit of the same type
- + Dots are subtle, perhaps too subtle though.

iteration

critique process (round 2)



We also brought this design to our second critique. In this design we used a card based design, animated bars and tried to incorporate route info better.

Critique feedback:

- + Route info is awkwardly presented
- + Bars provide good amount of mass
- + PTF Pass icon is hard to distinguish

iteration

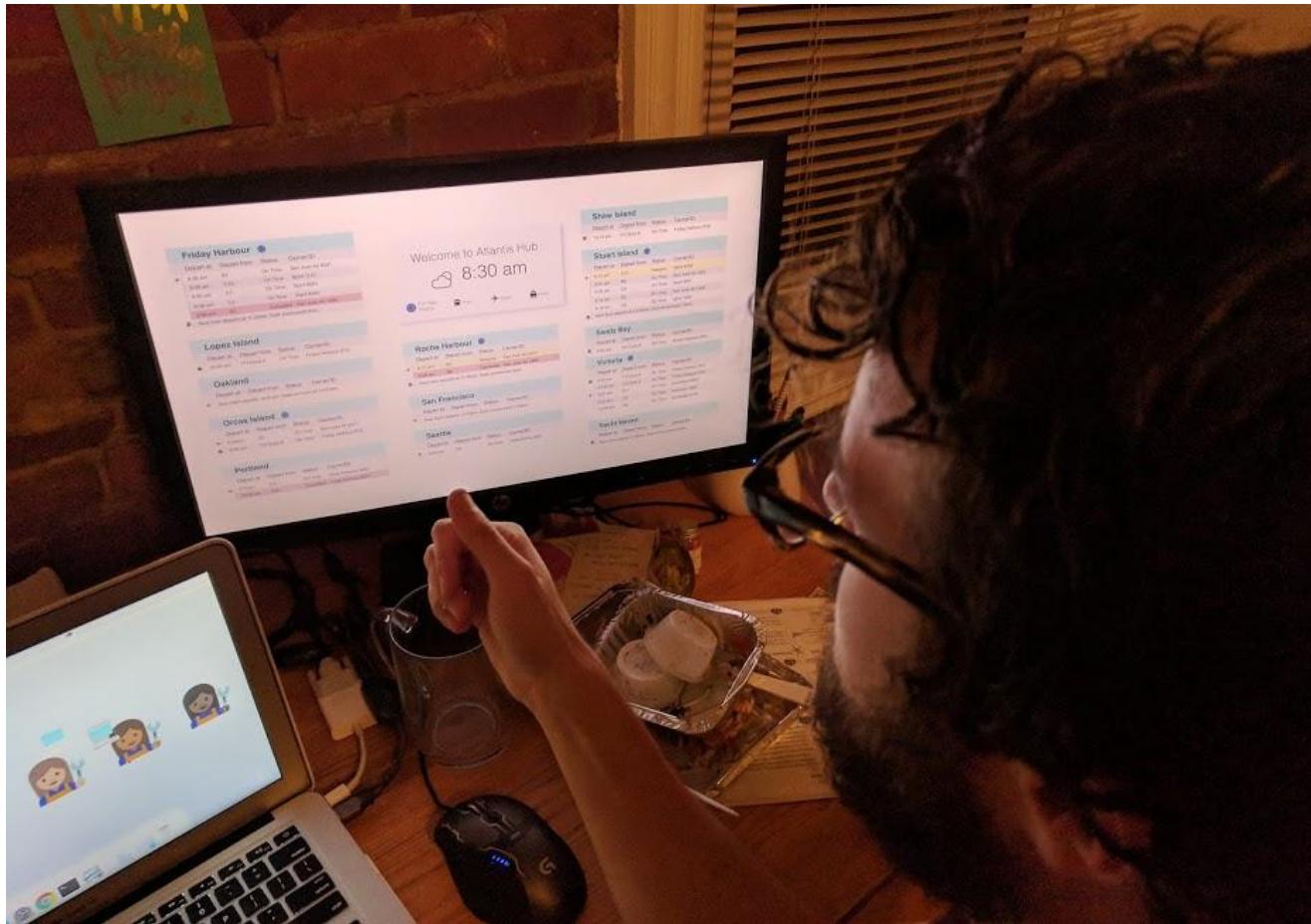
critique process (round 3)

Going into our third round of iteration, we had the following goals in mind:

- Make it easier to represent complicated route information
 - We knew that our target users needed to go to places like Orcas Island, which are not accessible via direct routes.
 - We knew that our users cared less about specific transport modes and more about getting to their destinations however they could (a concept we defined as wayfinding to our stakeholder).
 -
- Incorporate a relevant control into our display with appropriate feedforward, feedback and perceptual affordance

iteration

critique process (round 3)



At this stage in our process we continued to test our designs with different users, especially on monitors and screens so we could understand the experience. This allowed us to understand which elements were readable.

iteration

critique process (round 3)

Oakland

82° ☀

✈ Next plane at 16:01. Gate announced 14:01

We experimented with a typewriter effect for bringing in new transport information.

Portland

82° ☀

✈ 8:45	Gate C31	On Time	VX 5419
✈ 10:23	Gate C33	Canceled	VX 5419

iteration

critique process (round 3)

8:30 AM April 25

WELCOME TO ATLANTIS HUB

PTF Pass Info
Arrivals
Flight Ferry Train

DEPARTURES

Friday Harbour				82° ☀
TIME	DEPARTS	STATUS	ID	
8:36	Gate B1	On Time	SJ 8331	P
8:36	Gate C13	On Time	NK 1885	P
8:40	Gate C7	On Time	NK 1884	P
8:56	Gate B7	On Time	SJ 8336	P
8:56	Gate C2	On Time	NK 1882	P
9:00	Gate C4	Canceled	NK 1889	P
8:56	Platform B	On Time		P

Lopez Islands				75° ☁
TIME	DEPARTS	STATUS	ID	
Stop 1/2 Atlantis Hub				Friday Harbour
8:36	Gate B1	On Time	SJ 8331	P
8:36	Gate C13	On Time	NK 1885	P
8:40	Gate C7	On Time	NK 1884	P
Stop 2/2 Friday Harbour				Lopez Islands
10:00	Dock A	On Time		P
12:05	Dock A	On Time		P

Orcas Islands				69° ☀
TIME	DEPARTS	STATUS	ID	
8:40	Gate B2	On Time	SJ 8332	P
Stop 1/2 Atlantis Hub				Friday Harbour
8:36	Gate B			
8:36	Gate C			
8:40	Gate C			
Stop 2/2 Friday				
9:00	Dock A			
11:00	Dock A			

Oakland				82° ☀
TIME	DEPARTS	STATUS	ID	
Next plane at 16:01. Gate announced 14:01				

Orcas Islands				69° ☀
TIME	DEPARTS	STATUS	ID	
8:40	Gate B2	On Time	SJ 8332	P
Stop 1/2 Atlantis Hub				Friday Harbour
8:36	Gate B1	On Time	SJ 8331	P
8:36	Gate C13	On Time	NK 1885	P
8:40	Gate C7	On Time	NK 1884	P
Stop 2/2 Friday Harbour				Orcas Islands
9:00	Dock A	On Time		P
11:00	Dock A	On Time		P

We brought this design to critique. The blue button was a control for getting PTF pass info, and we incorporated new routes. Some feedback we received:

- + Perhaps animation could be used to make the route information more meaningful
- + The button placement is awkward for others trying to read the display

iteration

critique process (round 4)

Lopez Islands Routes via Friday Harbour			75° ☁	
TIME	DEPARTS	STATUS		
1/2	Atlantis Hub	—————>	Friday Harbour	
✈ 8:36	Gate B1	On Time	Select	P
✈ 8:36	Gate C13	On Time	Select	P
✈ 8:40	Gate C7	On Time	Select	P

Oakland		73° ☀	
✈ Next plane at 16:01. Gate announced 14:01			

Portland		75° ☀	
✈ 8:45	Gate C31	On Time	VX 5419
✈ 10:23	Gate C33	● Canceled	VX 5419

We decided to make the route information a control, where the user can choose their first leg, which then reveals subsequent legs.

At first, we made explicit buttons that would indicate perceptual affordance to the user.

iteration

critique process (round 4)

Lopez Islands
Routes via Friday Harbour
75° ☁

TIME	DEPARTS	STATUS
Pick Leg 1 Atlantis Hub → Friday Harbour		
→ 8:36	Gate B1	On Time
→ 8:36	Gate C13	On Time
→ 8:40	Gate C7	On Time

Oakland
73° ☀
→ Next plane at 16:01. Gate announced 14:01

Portland
75° ☀
→ 8:45 Gate C31 On Time VX 5419
→ 10:23 Gate C33 ● Canceled VX 5419

Lopez Islands
Routes via Friday Harbour
75° ☁

TIME	DEPARTS	STATUS
Pick Leg 1 Atlantis Hub → Friday Harbour		
→ 8:36	Gate B1	On Time
→ 8:36	Gate C13	On Time
→ 8:40	Gate C7	On Time

Oakland
73° ☀
→ Next plane at 16:01. Gate announced 14:01

Portland
75° ☀
→ 8:45 Gate C31 On Time VX 5419
→ 10:23 Gate C33 ● Canceled VX 5419

Lopez Islands
Routes via Friday Harbour
75° ☁

TIME	DEPARTS	STATUS
Pick Leg 1 Atlantis Hub → Friday Harbour		
→ 8:36	Gate B1	On Time
→ 8:36	Gate C13	On Time
→ 8:40	Gate C7	On Time

Leg 2 Friday Harbour → Lopez Island

TIME	DEPARTS	STATUS
10:00	Dock A	On Time
12:05	Dock A	On Time

Oakland
73° ☀
→ Next plane at 16:01. Gate announced 14:01

Portland
75° ☀
→ 8:45 Gate C31 On Time VX 5419
→ 10:23 Gate C33 ● Canceled VX 5419

However, we thought these buttons were too distracting, so we created pulsating ripples instead.

These controls create perceptual affordance by mimicking a motion as if your finger is touching the screen and creating a ripple. The circle in the center also mimics the pad of the finger. There is also immediate feedback as the circle gets larger and then minimizes when activated.

iteration

critique process (round 4)

PTF PASS

The PTF Pass allows you to board any mode of transit, marked with the PTF logo 

\$90.00/month

Available to buy at www.ptfpass.com and any Information kiosk

PTF Pass Arrivals

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ed with the
P
th
buy at
ss.com and any
kiosk

LS

:ROM
Roche Harbour
Victoria
Portland
Oakland
Friday Harbour
Orcas Islands



PTF Pass Arrivals

ARRIVALS

TIME	FROM
8:05	Roche Harbour
8:10	Victoria
8:13	Portland
8:17	Oakland
8:25	Friday Harbour
8:29	Orcas Islands



PTF Pass Arrivals

Finally, we decided to echo these buttons in our other control, which allows a user to flip between Arrivals and PTF Pass Info. This control is also stationed at the bottom of the screen in order not to impede travel information for others using the display.

iteration

final design

The final design is a digital interface for flight information. It features a header with the time (8:30 AM) and date (April 25). Below the header, there are two main sections: 'ARRIVALS' and 'DEPARTURES'.
ARRIVALS: Shows flights from Roche Harbour, Victoria, Portland, Oakland, Friday Harbour, and Orcas Islands. Each entry includes the arrival time, gate, status (e.g., On Time, Delayed, Cancelled), and flight number. A note indicates the next plane arrives at 16:01.
DEPARTURES: Shows flights departing to Friday Harbour, Lopez Islands, Oakland, and Portland. Each entry includes the departure time, gate, status, and flight number. A note indicates the pick leg 1 departs at 8:36.
The interface also includes weather information (74°F, 76°F, 73°F, 75°F) and a note about PTF Pass availability.

Our final design satisfies our key design goals:

Fulfills users' needs by providing clear destination information, including weather. Additionally allows users to plan custom routes based on where they need to go.

Fulfills stakeholder's needs by promoting the PTF pass (using clear icons and a control which gives the user more information about the pass)

Displays information in a clear hierarchy oriented around destination.