Scheduling Dashboard

Case Study

Dallas

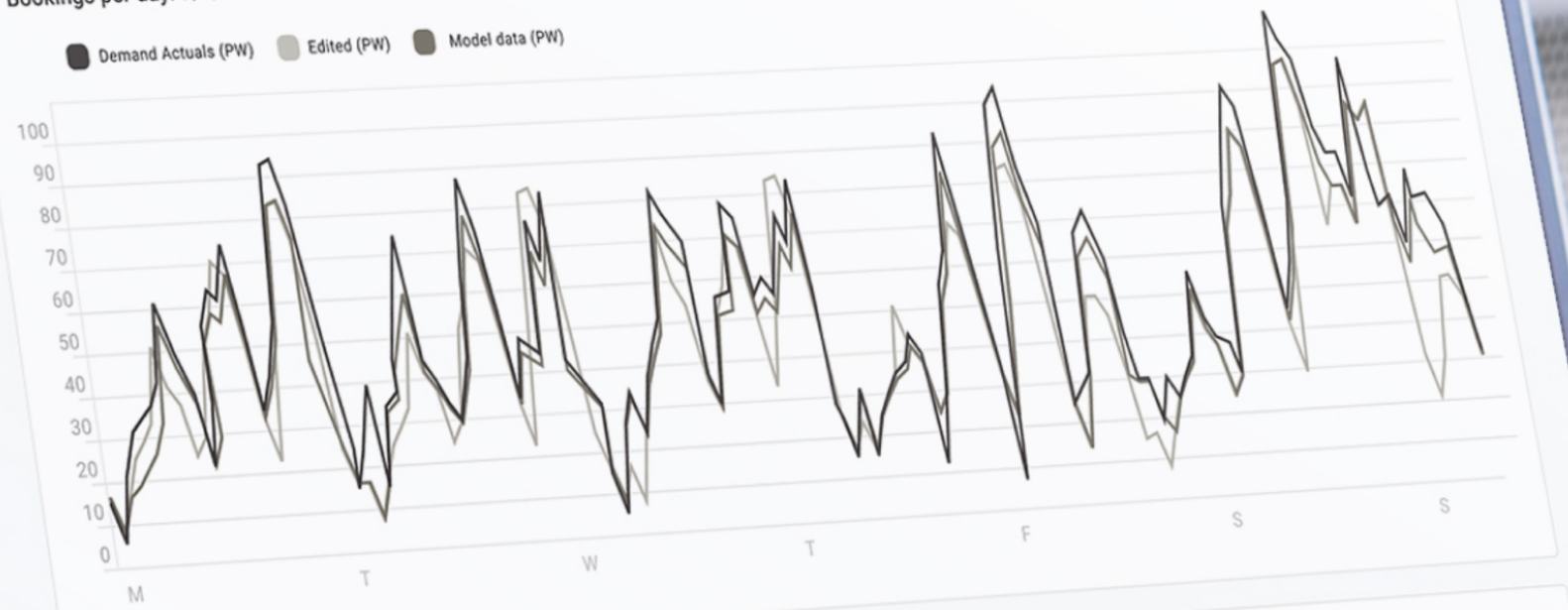
Market Constraints & Inputs

Trips/Hour 1.2	Revenue/Trip $40/trip
Ave. Trip 30 min.	Max. Out Flow 13 shifts
Min. Shift Length 240 min.	Max. In Flow 12 shifts
Max. Shift Length 600 min.	Min. Vehicles 80
Cost/Shift/Hr $30/shift	Max. Vehicles 145

Overview: Monday, Sep 12 – Sunday, Sep 18 2022

Compared to 1 week ago: 9/5 – 9/11

Bookings per day: 9/5/22 – 9/11/22 (Previous Week)



Bookings per day: 9/12 – 9/18 (Current Week)

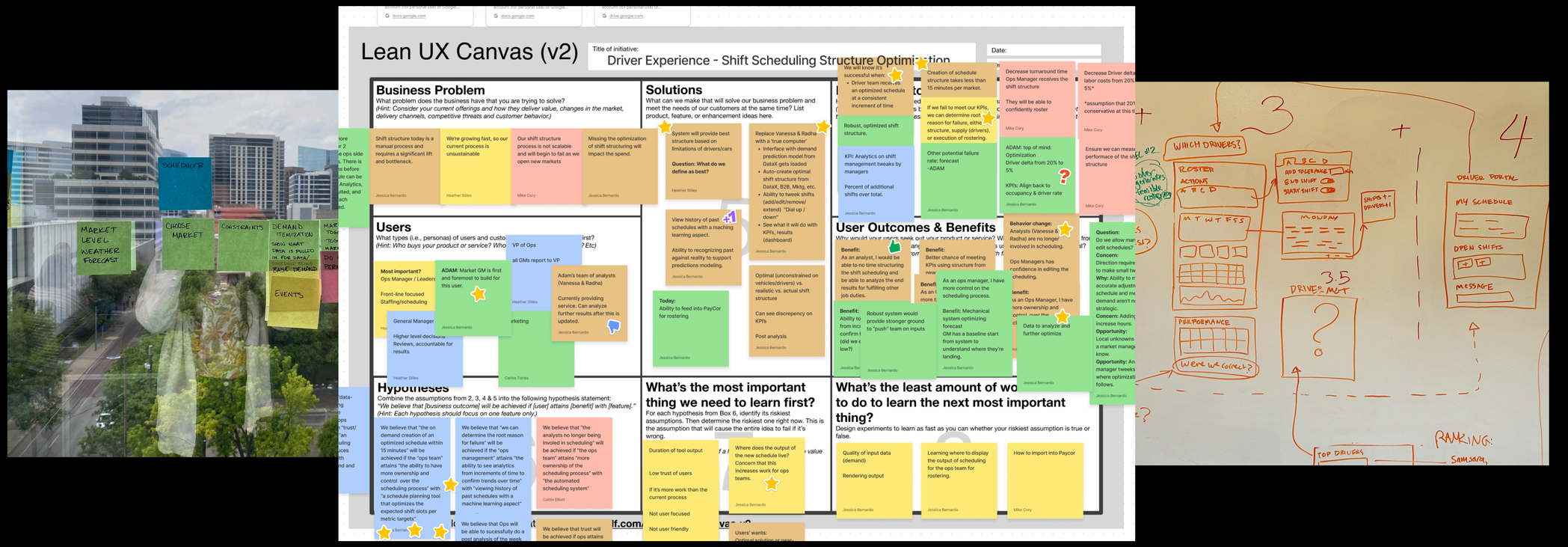
The setting: *Characters*

- UX/UI Designer (me!)
- Portfolio Director/Product Manager
- **Dev Team:** Senior Engineering Lead, Front-end & Back-end Developers
- **Stakeholders:** CEO, CTO, Operation Strategists
- **SME/User:** General Managers, Operation Strategists

The setting: *Manual processes*

Every week, driver schedules are tediously made by hand based on the guess work of multiple people

The rising action: *Discovery*



The rising action: *Discovery*

Insights

Managing driver availability is a significant time suck that if not done regularly and accurately contributes to driver call out and **schedule failure**

Heather Stiles

All personas claim processes are time consuming and prone to human error

Heather Stiles

All personas crave greater visibility as to how their scheduling decisions will influence key metrics

Heather Stiles

The rising action: *Discovery*

Needs

1. As an Alto operations manager, I need a reliable and automated way to predict rideshare demand

2. I then need a way to convert that demand to number of drivers on the road for a given time period

The rising action: *Discovery*

Hypothesis

If an Ops. Manager has the ability to export a weekly AI-generated schedule in 15 minutes or less, it will result in less wasted man hours for both operations and drivers.

The conflict: *Who is our user?*

General Manager

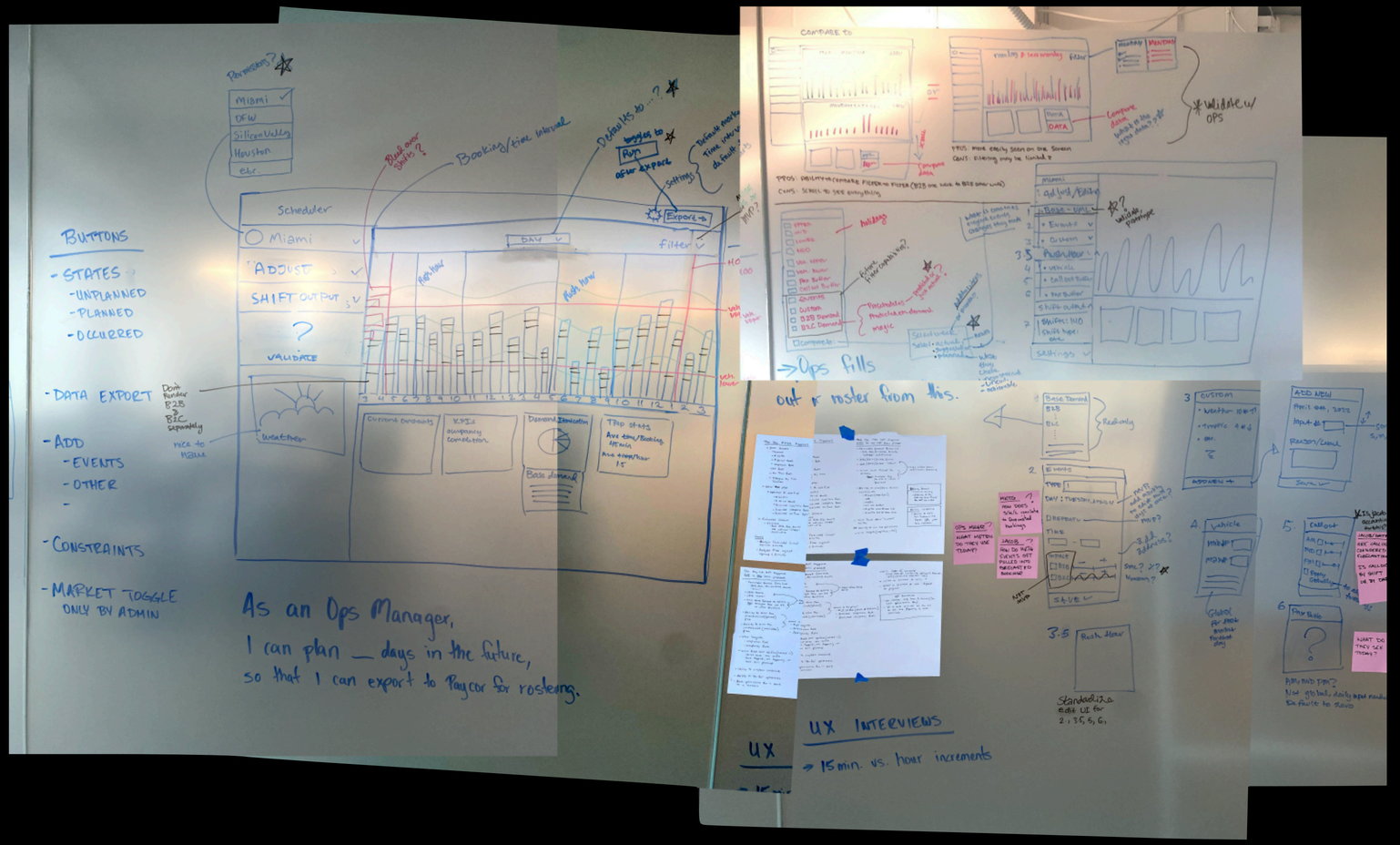
“Boots on the ground”

VS

Operations Strategist

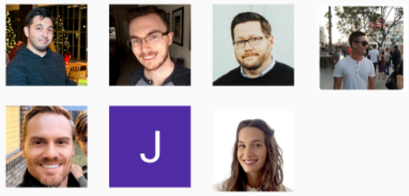
“HQ”

The rising action: *Build & test*



The rising action: *Build & test*

Tech Sync: Aug 8



Review Focus: Editing UI & future focus

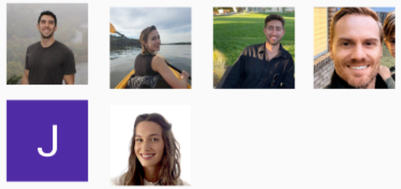
Key Feedback:
Keep track of delta
Maybe not Bulk edit...? But select multiple would be good

Gray out not included demand input types

Prototype out switching markets and switching days from scheduling view

Think about how to compare forecasted, estimated

Pod usability review: Aug 11



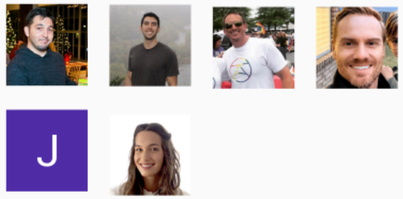
Review Focus: Editing UI for Demand Forecast

Key Feedback:
Sev:
I would like the Ability to edit vehicle counts.
Editability is less important, just knowledge that it is being included
Demand transform
Can we have both up/down and click in to edit? (Vanessa agrees)
Up/Down is fine, but increment isn't one. Percentage change is weird
I Like the look of the new version way better. Looks way cleaner
Like the bulk edit
Would like to keep UI edit simpler

LA can do 1.x - 2.x demand per hour (velocity) (demand per shift per time window)
What inputs go into the optimizer?
Understanding the relationship between X and Y:
- X: End total number of bookings
- Y: Number of shifts, How accurately

What evidence do I have to verify the accuracy?
Changes are much more difficult after the fact

Stakeholder check-in: Aug 11

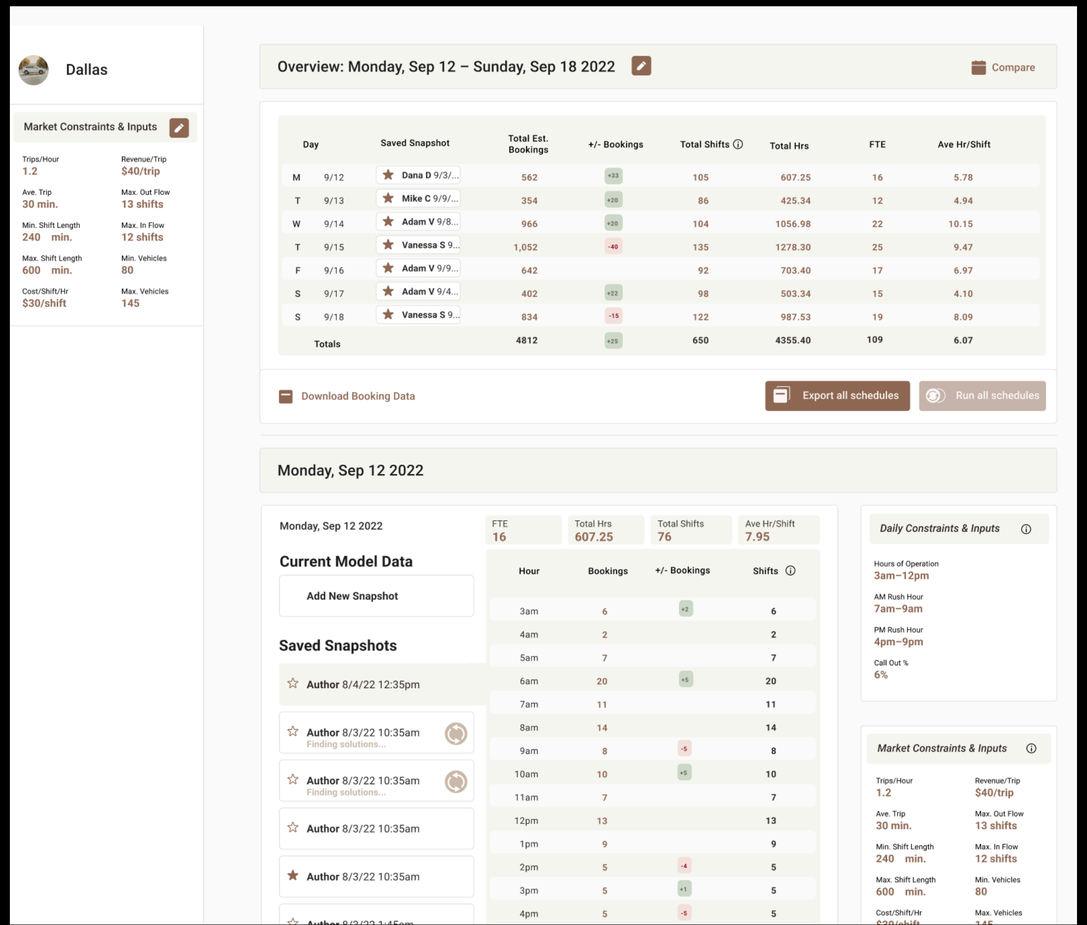


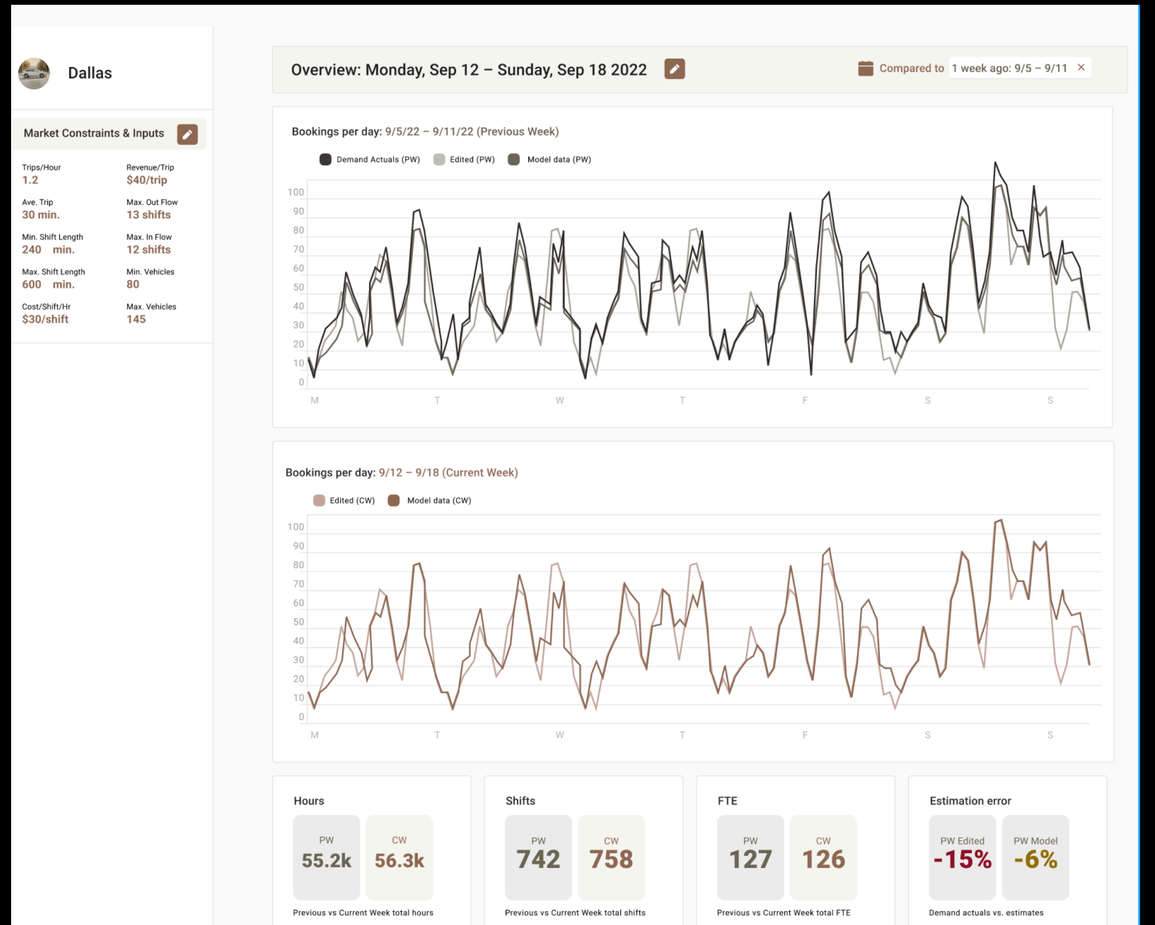
No new feedback

The rising action: *Build & test*

"Those metrics are not helpful"

"That graph makes sense, matches the other reports we use"





The climax: *Release (slowly) to markets*

Shift Scheduling: All Markets

Search

DALLAS

Select the time frame you would like to plan

+1 week | +2 weeks

Specific dates

LOS ANGELES

Select the time frame you would like to plan

+1 week | +2 weeks

Specific dates

HOUSTON

Select the time frame you would like to plan

+1 week | +2 weeks

Specific dates

MIAMI

DC

SAN FRANCISCO

Performance Metrics: All Markets

Occupancy	Completion Rate	On-Time Rate
53%	90%	68%

Sep 5 – Sep 11

Scheduling Metrics: All Markets

Estimation Error

PW Edited	PW Model
-15%	-6%

Previous Week (PW) Demand Actuals vs. Edited & Model Estimates

The falling action: *Results*

- **Positive:** Reduced schedule creation time from 20+ hrs to 1-2 hrs
- **Positive:** Scheduling data now trackable
- **Negative:** We picked the wrong user!

General Manager

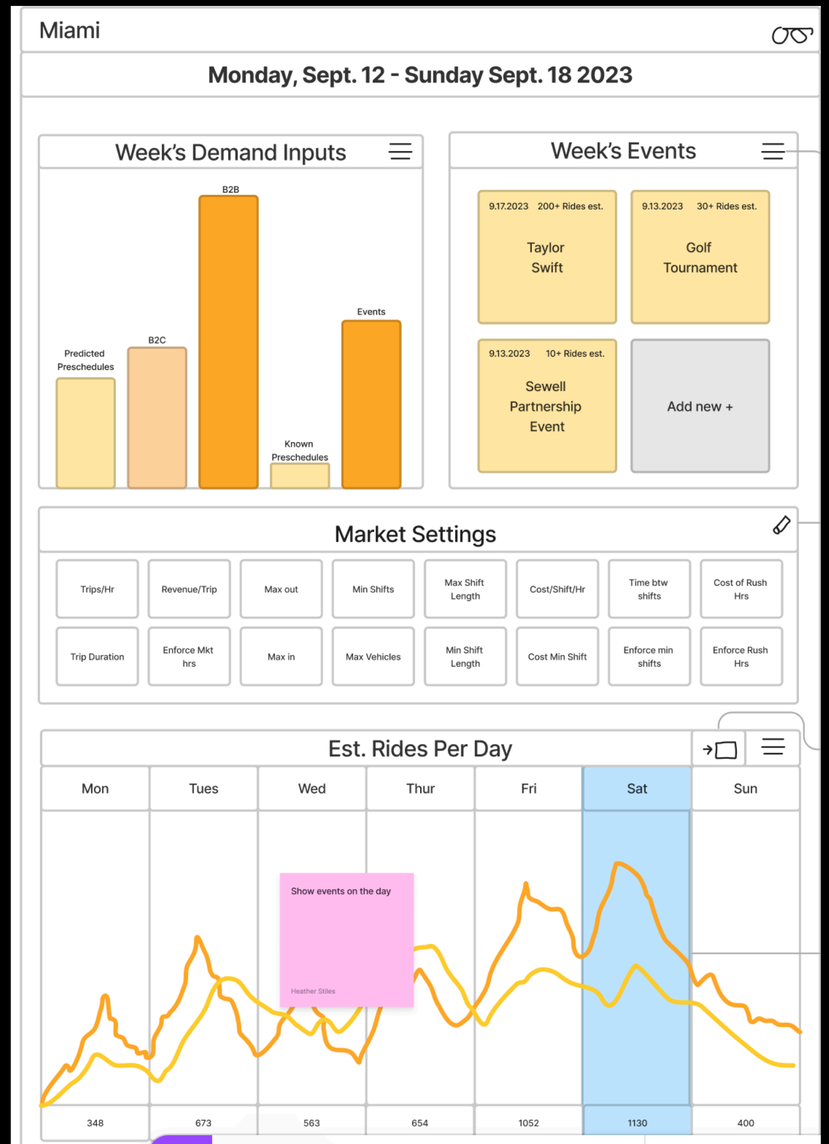
"Boots on the ground"

VS

Operations Strategist

"HQ"

The falling action: *Continued feedback*



The conclusion: *Learnings*

- If your stakeholders are not aligned, there will be rework
- Designing the right level of complexity for your user requires thorough discovery work
- Designing for AI & machine learning requires careful strategy

Thank you!