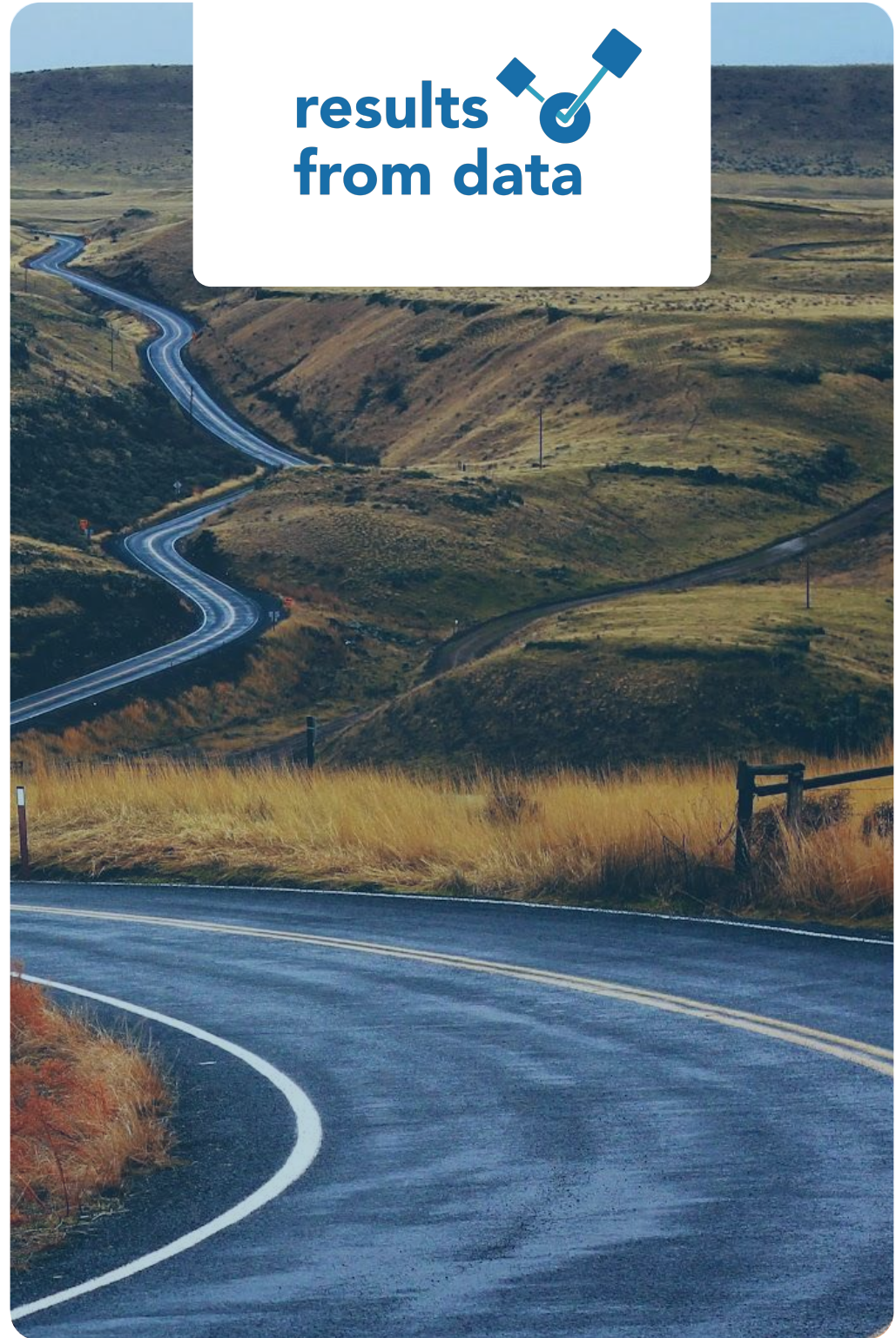




Data-Driven Operational Improvement

KSMTA FreightMath Alliance
October 07, 2025

results
from data



Agenda

- Introductions
- Moving from under- to over-sold (airline model)
- Preplanning as a driver of utilization and profitability
- Time-based strategies for dispatching and routing
- Kivi Bros. Trucking case study

Introductions

- Swan Webb,
 - The Results from Data Initiative
 - Data Scientist
 - 30 years of experience in transportation, management and data analytics
- Dakota Kivi
 - Kivi Bros. Trucking
 - Vice President of Operations
 - Flatbed operations
 - HR and recruiting
 - Pricing
 - Finance

Lag and Lead Measures



Lag Measures

- Good scoreboard
- Driving looking out the rearview mirror
- Daily or weekly computation
- e.g. miles per driver per week

Lead Measures

- Shows you what you can do right now to make lag measures better
- Windshield view
- Often requires near real-time information
- e.g. trucks sitting now

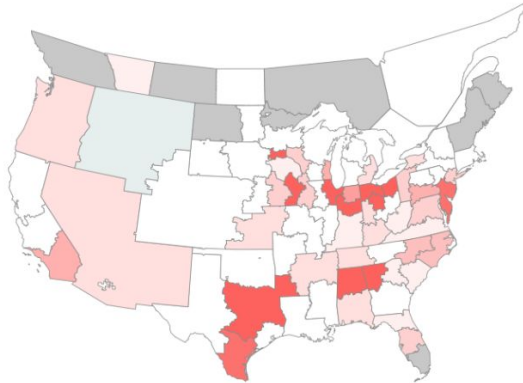
Overbooking

- Sets the tone of the entire operation to hustle
- Necessary to take advantage of utilization gains
- “Yes” is the default, “No” is the exception
- Enables planners and driver managers to choose the best load fits for drivers
- Constant pressure to cover “One more load”
- Utilize a balance map to solicit customer freight
 - Future network visibility
 - Need to solicit customer freight days in advance
- Leverage brokerage to cover excess
 - Works best in stable and consistent lanes
 - Develop trusted carrier relationships and capacity
- Use excess freight to smooth seasonal variations



Balance Map

Balance by Region



-312
Balance
52
Total Available Loads
364
Total Available Trucks
14%
Balance %
Rollover
☒ No
☐ Yes

Balance Day
☒ 0
☐ 1
☐ 2
☐ 3

Order Customer Division
☐ Select all
☐ (Blank)
☐ DED - 3M Dedicated

Trip Driver Division
☐ Select all
☐ (Blank)
☐ Brokerage
☐ DED - 3M Dedicated Teams

Trip Number
 Search
☐ Select all
☐ 6667878-02
☐ 6667878-03

Order Controlling Cust Name
 Search
☐ Select all
☐ 3M COMPANY
☐ 3M COMPANY - INBOUND

Geographic Region
☐ Select all
☐ (Blank)
☐ 112
☐ 113

Geographic Market
☐ Select all
☐ (Blank)
☐ E-NORTHEAST
☐ E-OHIO VALLEY

Geographic Division
☐ Select all
☐ (Blank)
☐ OTR - East
☐ OTR - Midwest

Geographic Region	Summary Day 0	Summary Day 1	Summary Day 2	Summary Day 3
	-2 0 2 0%	-42 2 44 5%	1 2 1 200%	4 11 7 157%
112	0 0 0	-5 0 5 0%	0 0 0	1 1 0
113	-3 1 4 25%	-2 6 8 75%	-4 5 9 56%	-7 3 10 30%
114	0 0 0	0 0 0	0 0 0	0 0 0
121	0 0 0	0 0 0	0 0 0	-2 0 2 0%
122	-9 0 9 0%	-10 6 16 38%	-4 6 10 60%	-5 0 5 0%
123	-3 0 3 0%	3 6 3 200%	-2 3 5 60%	-3 0 3 0%
124	-3 0 3 0%	-4 0 4 0%	-1 0 1 0%	0 0 0
125	0 0 0	-2 0 2 0%	-2 0 2 0%	0 0 0
126	-5 1 6 17%	3 15 12 125%	1 15 14 107%	-6 6 12 50%
127	0 0 0	-2 1 3 33%	0 0 0	-2 0 2 0%
128	-1 0 1 0%	0 0 0	0 0 0	0 0 0
131	-2 2 4 50%	2 15 13 115%	-7 9 16 56%	5 10 5 200%
211	-1 0 1 0%	-1 3 4 75%	-5 4 9 44%	-2 1 3 33%
212	-2 0 2 0%	0 2 2 100%	-3 0 3 0%	-1 0 1 0%
213	-2 0 2 0%	-1 1 2 50%	-2 0 2 0%	0 0 0
Total	-312 52 364 14%	-105 420 525 80%	-137 332 469 71%	-126 244 370 66%

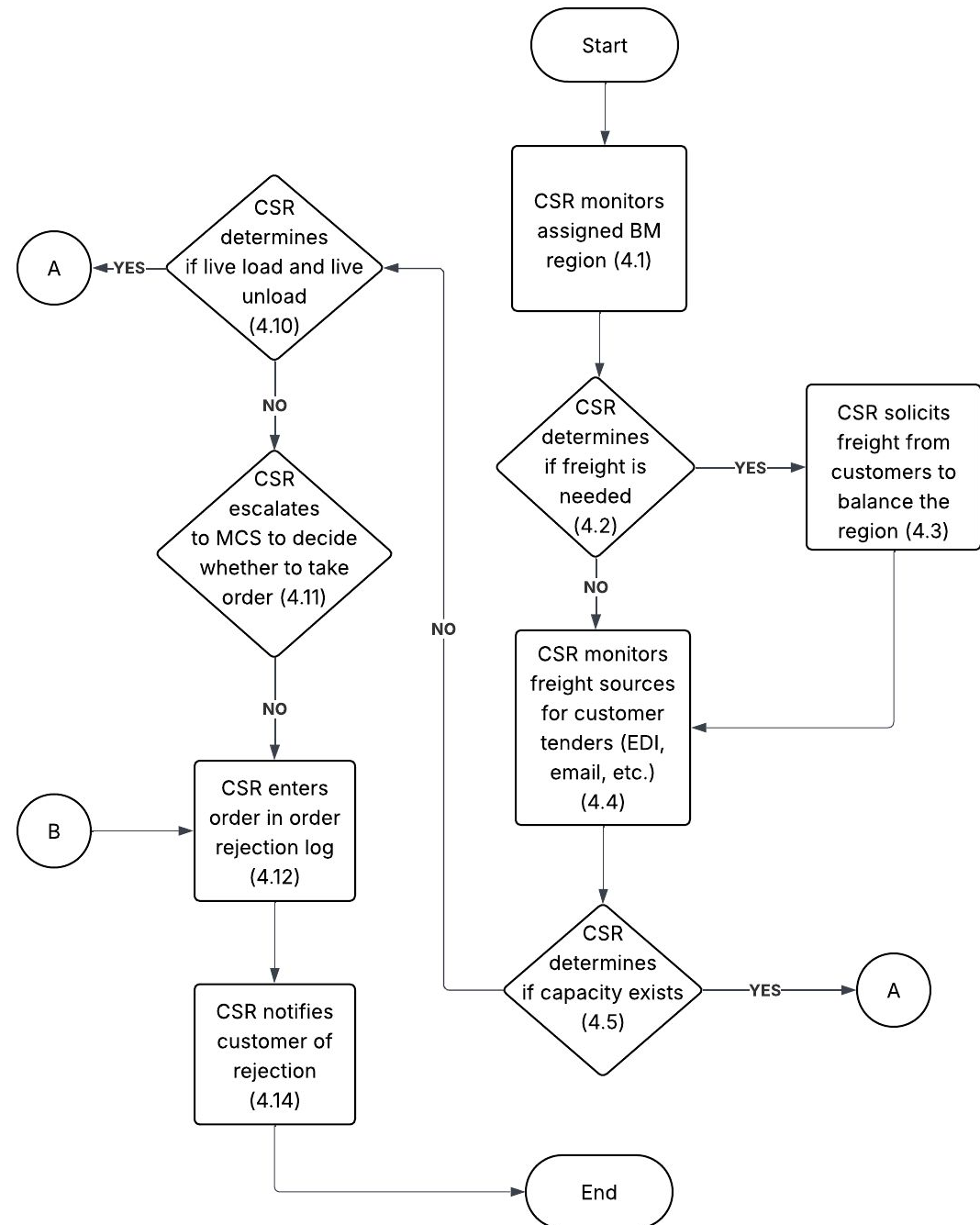
Balance | Available Loads | Available Trucks | (Balance %)

Trip Number	Plan Status Description	Available Load	Order Controlling Cust ID	Order Controlling Cust Name	Order	
6734590	Unplanned	1	RS3O	ROSS STORES OUTBOUND	OTR -	
9435573-02	Drv Con	1	CDEDI	CHURCH & DWIGHT - EDI	OTR -	
6743148	Offered	1	C8L	CIRCLE 8 LOGISTICS INC	NATIC	
9436005	Drv Con	1	WAL2D	WISE ALLOYS - DEDICATED	DED -	
9437573	Confirmed	1	WAL2D	WISE ALLOYS - DEDICATED	DED -	
9437619	Unplanned	1	MS8	MACY'S STORES	OTR -	
9437399	Unplanned	1	SLSCH	SEARS (INNOVEL SOLUTIONS)		
Total		52				
Trip Number	Plan Status Description	Available Trucks	Driver ID	Fleet Leader ID	Team Leader ID	Trip Driver Division
9433348-03	Pending	1				
9437096-02	Pending	1				
9435738-03	Pending	1				
9436301-02	Active	1	MALMA1	RIEIN	CCJ	TEAMS -Birmingham - NE
9435341	Unplanned	1				
9434051	Active	1	BARSO	SQUDU	LAVST	E - PACCAR
6742574-02	Drv Con	1	SIRBR	HARL17	BUCT	DED - 3M Dedicated Solo
Total		364				

Don't plan to sit

Order Entry Procedure

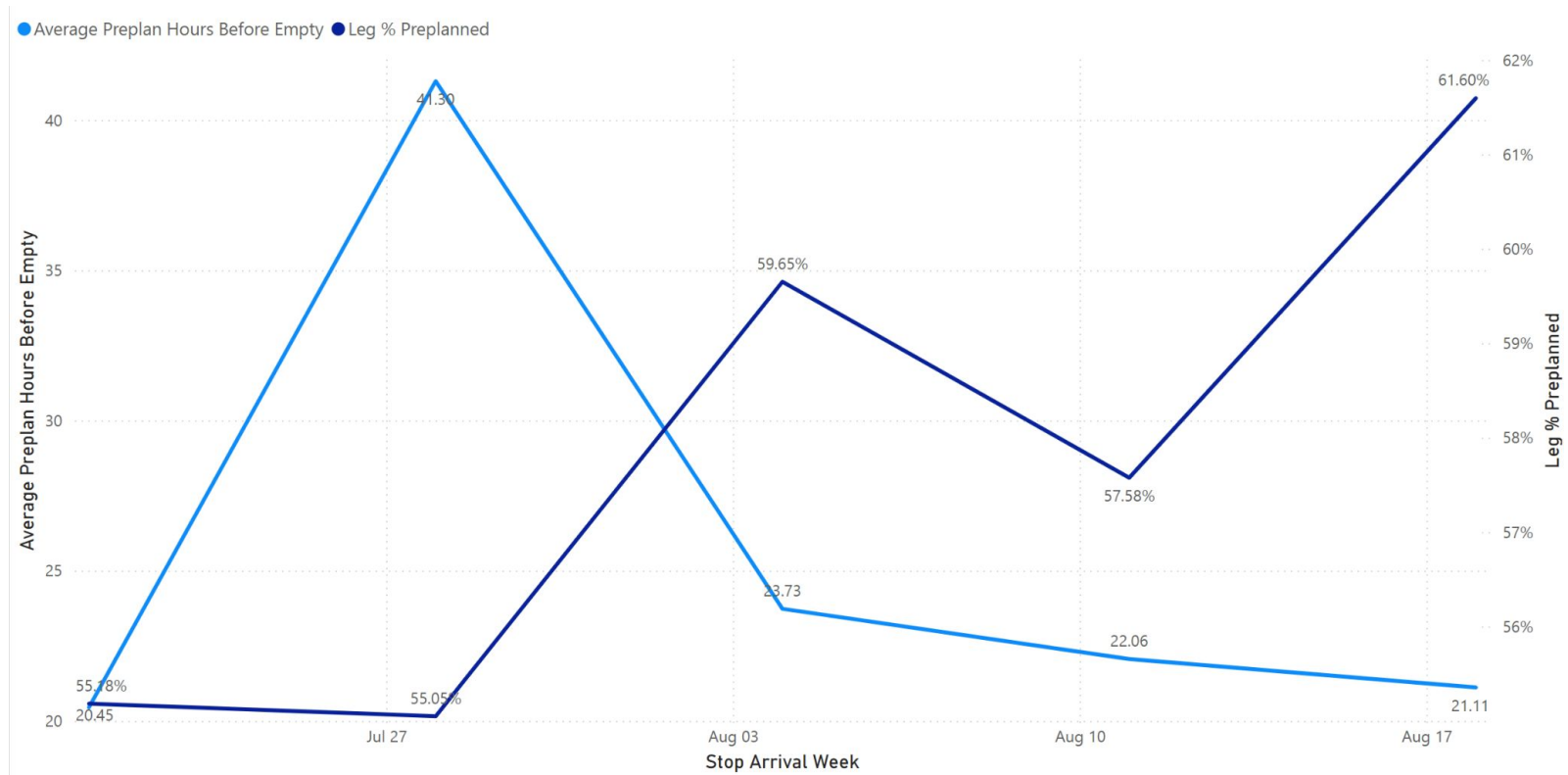
- Build overbooking into your order entry procedure
- Put in a managerial speed bump to turndowns
- Track your turndowns in a turndown log so you can see, manage and improve them



Tale of Two Drivers

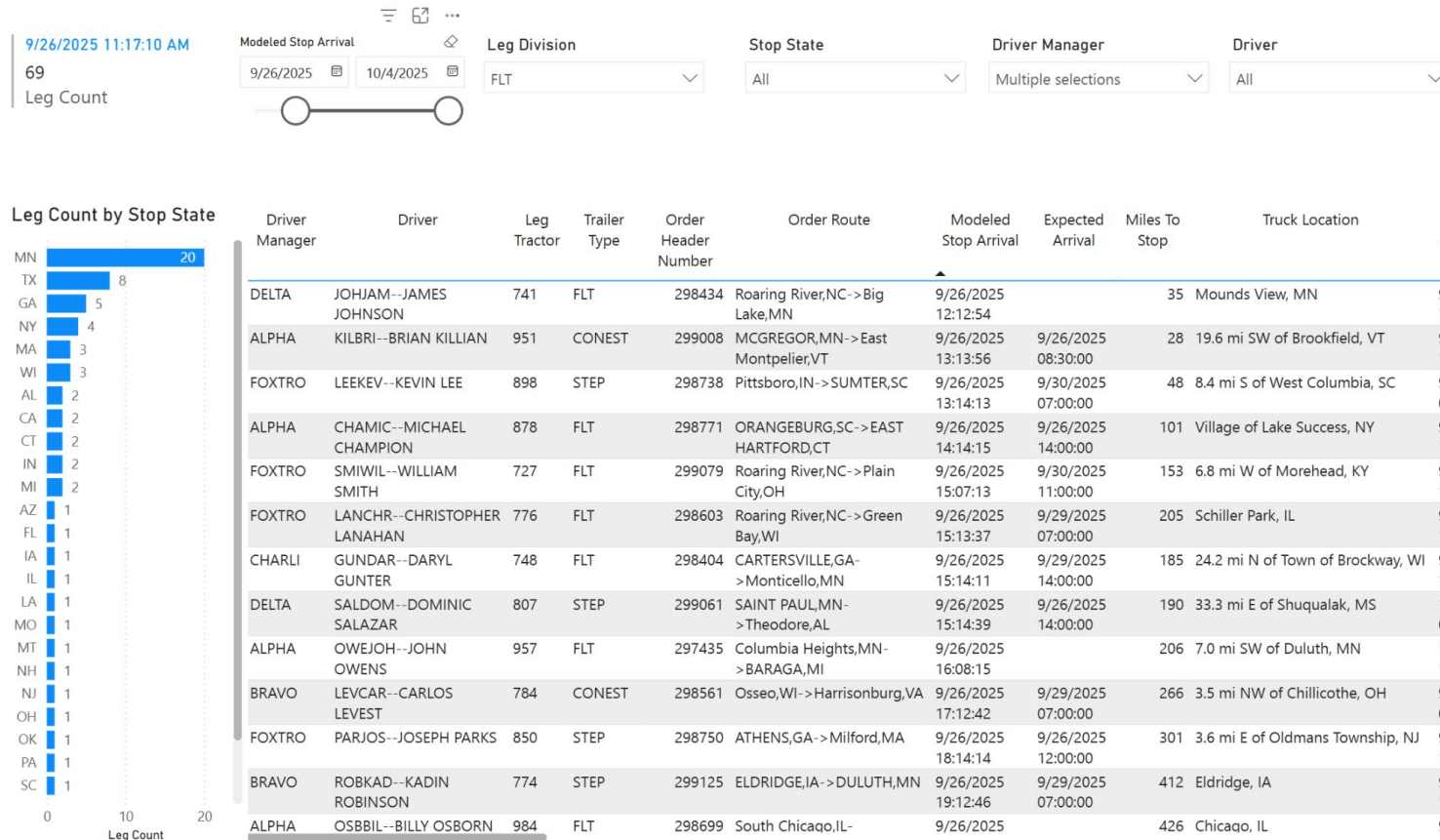
	Bob	Susie
Preplan	Bob doesn't get a preplan. His DM tells him he can deliver between 0800 and 1700 and to give him a call when he is empty and he'll get him rolling	Susie's DM tells her the day before that she should arrive at the consignee at 0700 so she is first in line to deliver at 8 because she is preplanned on another load 30 miles away at 1100
How the Delivery Goes	Bob has a great breakfast at the truck stop before showing up at 1000 to deliver. He is 7th in line and ends up getting empty a little after 1200.	Susie is first in line at 0700 and is empty a little before 0900. She heads over to her next load with plenty of time.
The Next Load	Bob calls his DM after 1200 when he is empty, but his DM is out to lunch and calls him back at 1300. He notes that Bob is empty and asks the planner for load. The planner wasn't sure when Bob would be empty and begins looking for a broker load to cover him. After 2 hours, Bob gets dispatched on a load 100 miles away that picks up by 1700. He barely makes the pickup on time and is able to put down 100 miles before parking for the night	Susie picks up her load and is rolling a little after noon. She is able to put down 400 miles on her new load before parking for the night.
Total Loaded Miles	150 or ($\$2.15 \text{ LHRPM} \times 150 = \322.50)	450 or ($\$2.50 \times 450 = \$1,125.00$)

Preplan Lag Measures



- Communicates the plan to drivers
- Hustles drivers
- Puts operation into a more proactive than reactive stance
- Plan for success, manage exceptions

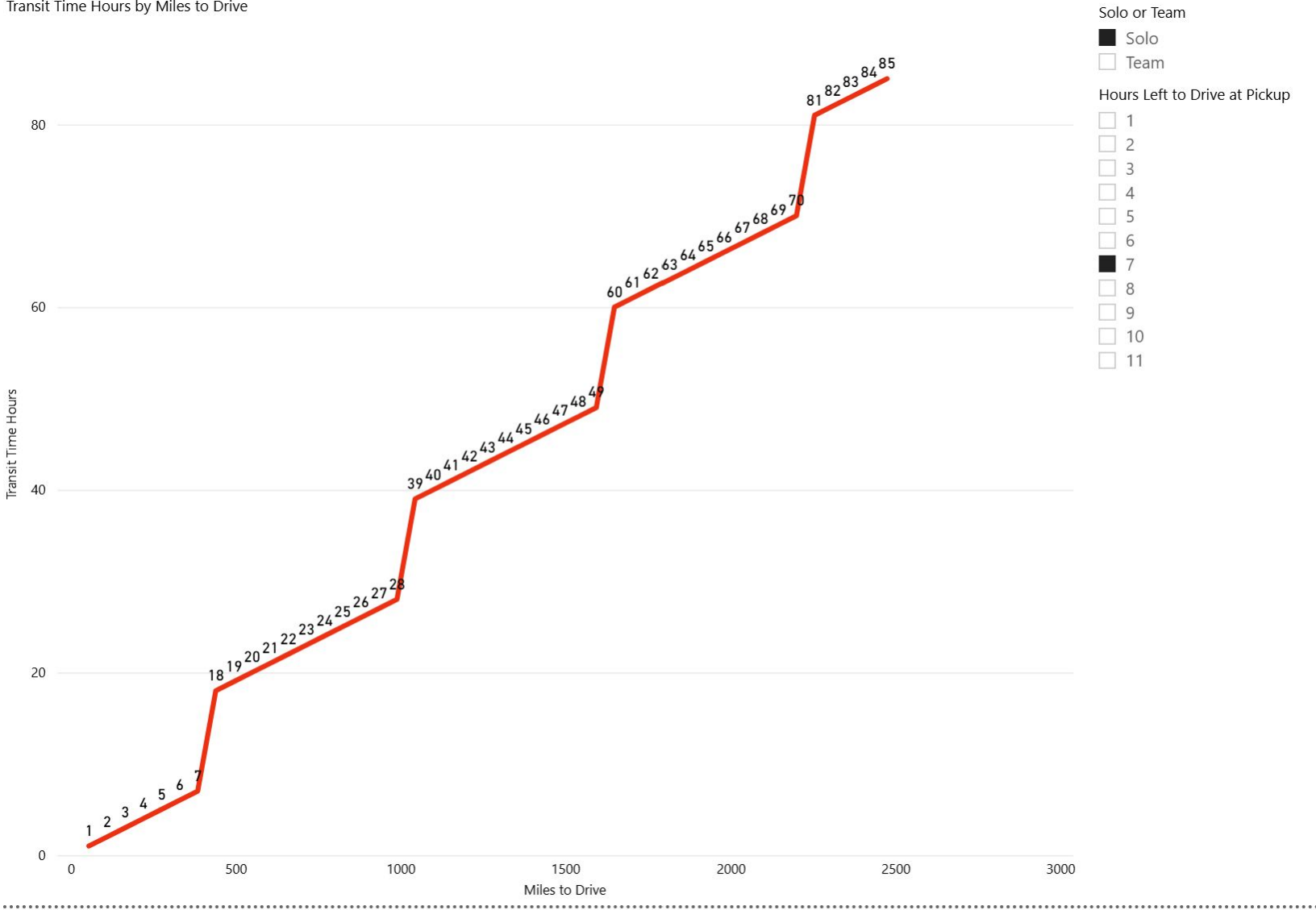
Dispatched, Not Preplanned Lead Measure



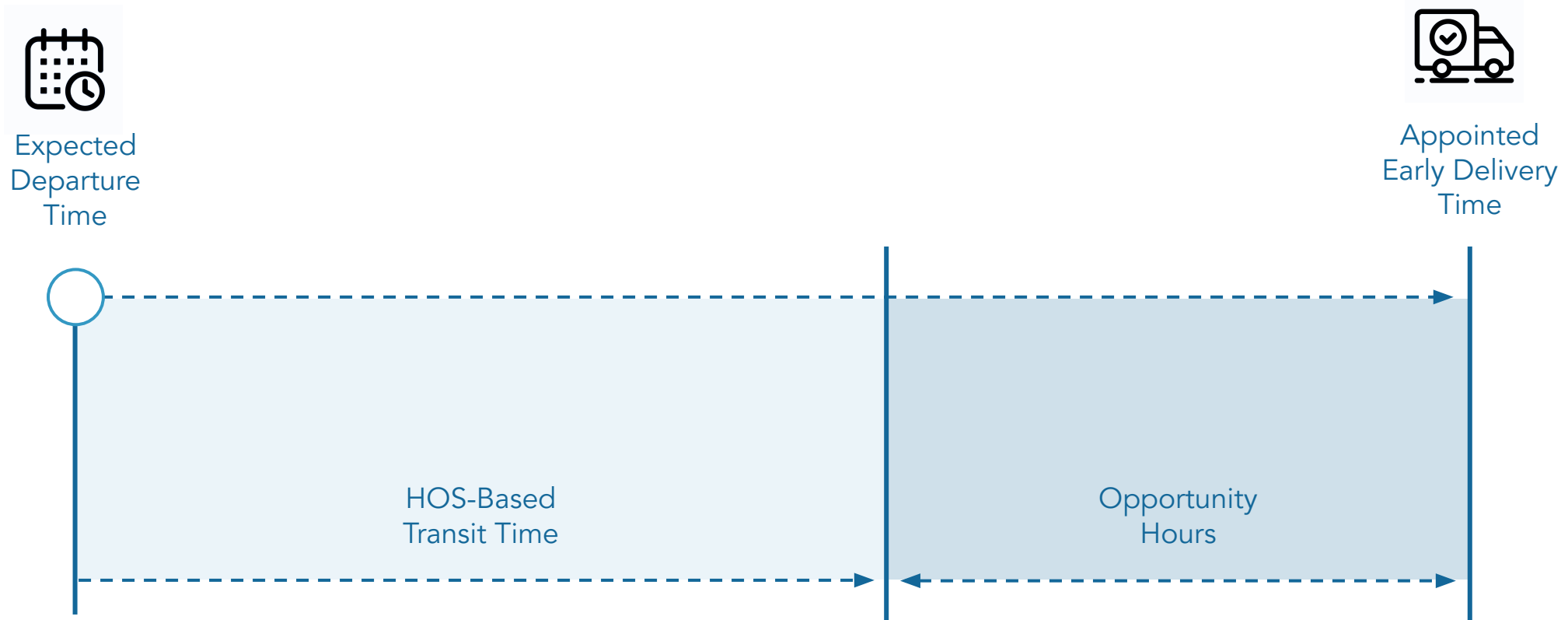
- Lead measure for actions that need to be taken now
- Dispatch all trucks delivering tomorrow before we go home tonight
- $2 \text{ Hours Per Day Per Truck} \times 55 \text{ miles per hour} \times \$2.50 \text{ per mile} \times 25\% \text{ variable operating margin} \times 250 \text{ Trucks} \times 240 \text{ Days Per Year} = \4.125M annually

Hours of Service-Based Transit Time

Transit Time Hours by Miles to Drive

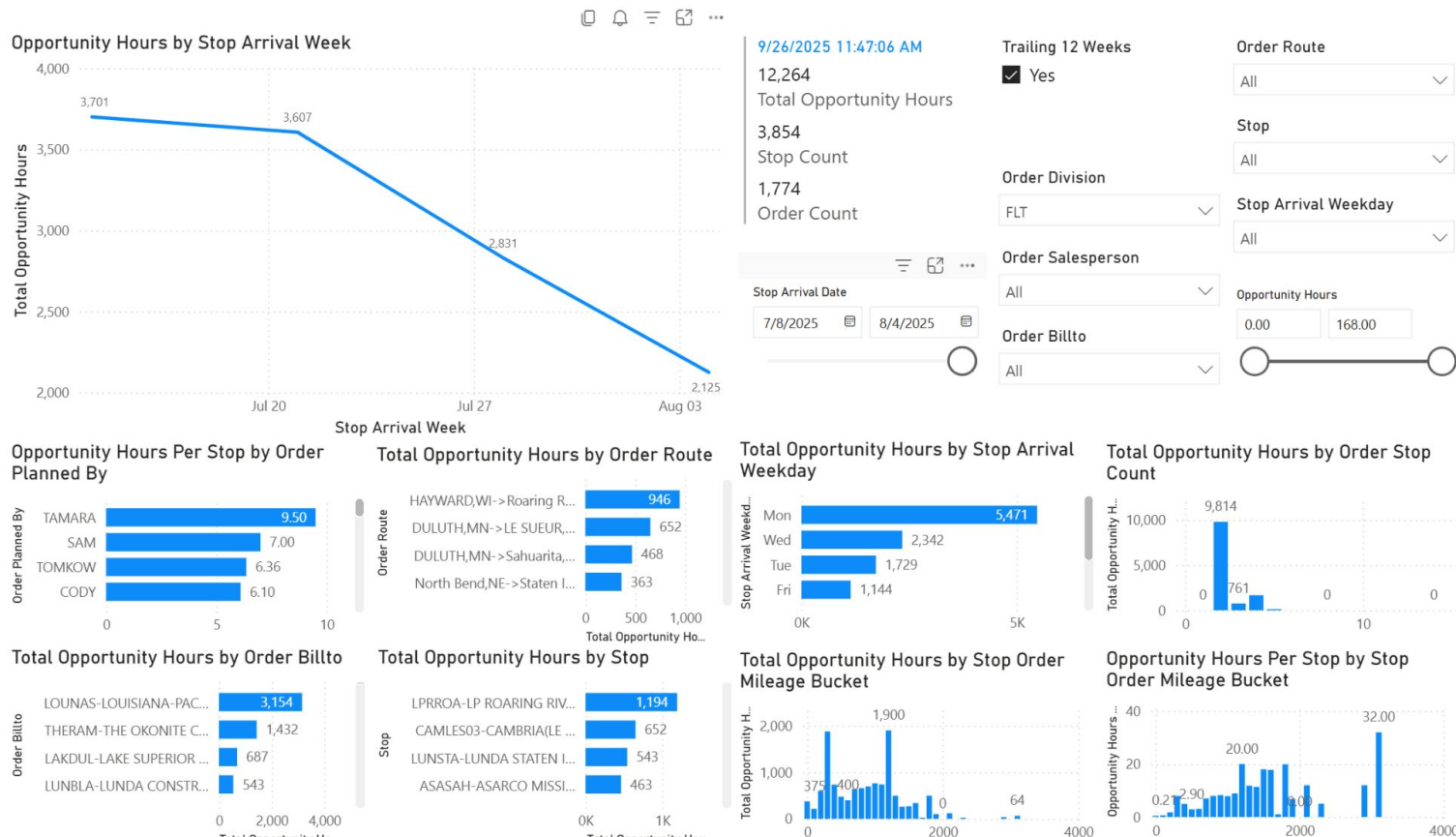


Opportunity Hours



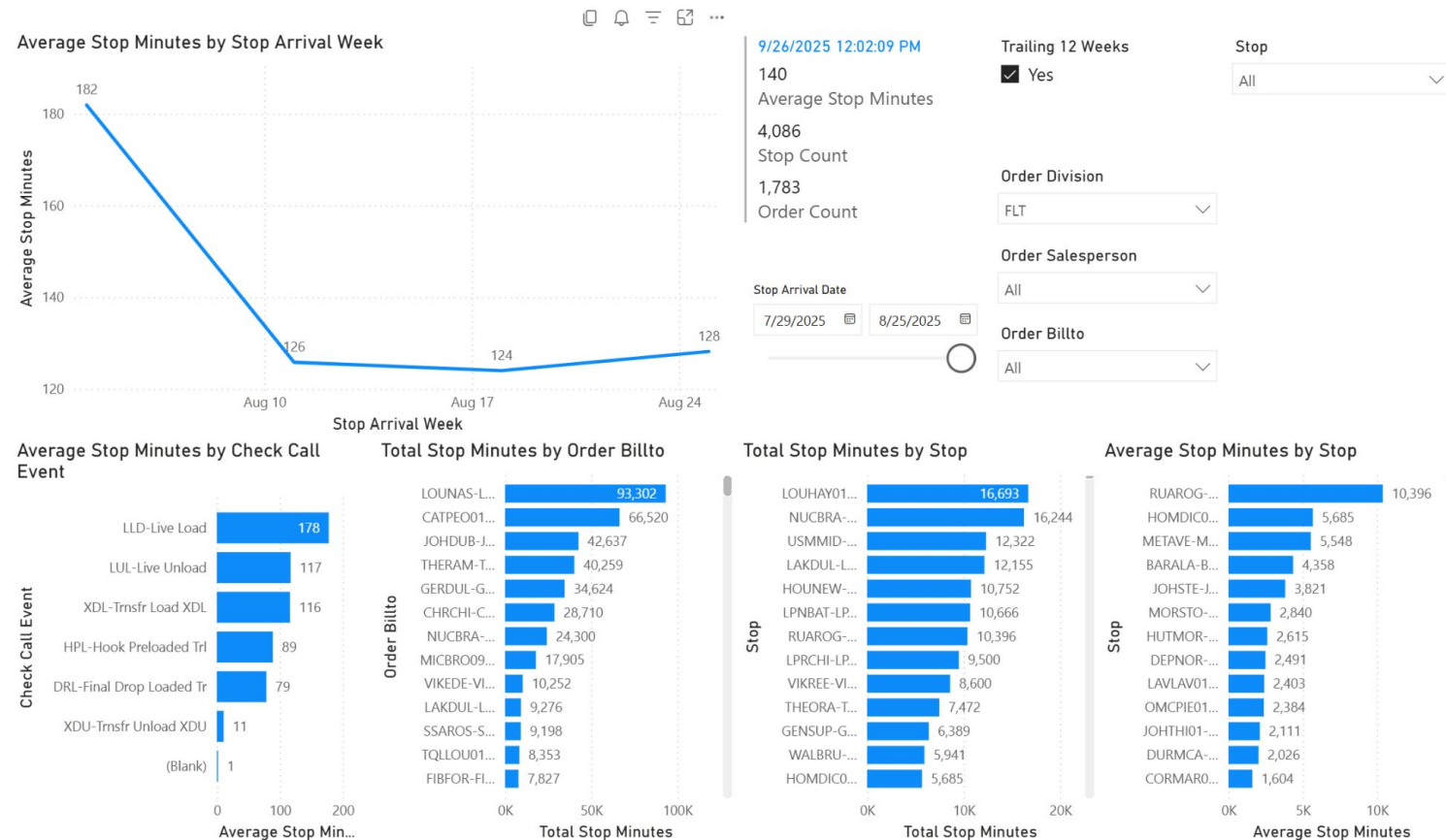
- Opportunity hours are the difference between when a driver can get to an appointment and the earliest appointment time
- Set appointment times to match HOS-based transit times to eliminate opportunity hours

Opportunity Hours Lag Measure



- Most mid-sized carriers have thousands of opportunity hours per week
- 5,000 hours X 55 miles per hour X \$2.50 per mile X 25% variable operating margin = \$171,875 in additional profit per week (\$8.9M annually)

Stop Duration Lag Measure



- Managing stop duration can also have a significant impact on utilization and profitability
- 1 hour per stop X 4,000 stops per month X 55 miles per hour X \$2.50 per mile X 25% variable operating margin = \$137,500 in additional profit per month (\$1.65M annually)

Case Study



- Before Implementation
 - Key areas of focus for improvement
 - Driver Utilization
 - Driver Turnover
 - Revenue Quality
 - Visibility & Accountability
 - Standard Operating Procedures To Align Team
- Outcome After Implementation

Category	Improvement	Results
Operating Ratio	10% Decrease	Improved profitability
Average Miles per Driver per Week	8% Increase	Better driver utilization
Normalized Linehaul Rate per Mile	11% Increase	Increased revenue per mile
Annual Driver Turnover	60% Decrease	Improved retention and satisfaction
Opportunity Hours	9% Decrease	Better time utilization
Drivers Preplanned Before Empty	11% Increase	Improved driver utilization and communication

Lead Measures for Decisive Hour-by-Hour Action

- Transit Time Optimization
 - Transit Time Calculator
 - Appointment Setting Based on Real HOS Availability Reducing Excess Transit Times
- Driver Availability Monitoring
 - Driver Sitting
- Preplanning Loads / Monitoring
 - Daily monitoring of loads not preplanned
- Capacity Planning & Optimization
 - Customer Service Utilized the Network Balance Map to Ensure In-Network Planned Capacity



Lag Measures for Performance Visibility and Accountability

- Weekly Management Meetings Reviewing KPI's
 - Average miles per driver per week
 - Normalized linehaul revenue per mile
 - Average preplan hours before empty
 - Opportunity hours
 - In-network vs. out-of-network freight balance
 - Facilitated by The Grawe Group
- Process Development & Standardization
 - Along with The Grawe Group developed SOP's aligning people, processes & data tools
 - Created clear roles and responsibilities

