



HOW MANY TIMES A DAY DO YOU ASK YOURSELF THE FOLLOWING?

- Should I take this Load?
 - What makes the most money?
 - Should I take 5 or 20?
- Where are we wasting time?
 - Between Loads?
 - At shippers or consignees?
- Why is...
 - Walter's MPG better than Jorge's?
 - One truck so much better than its twin?
 - This truck did get 9 MPG, now it's getting 7
 - Why didn't we catch it?



YOU HAVE THE DATA, YOU JUST HAVE TO GET TO IT.

BUT...  **McLeod**
SOFTWARE

- Too Generic
- Incomplete
 - Lat-Long v. Zip
- Plain Wrong
 - Duplicate time on moves

Dwell Time Report

RAIDER EXPRESS INC

Arrival date: 08/01/2016 - 08/31/2016, Location(s): WISPBUM, Customer(s): All, Report for: Pickup and delivery, Minimum dwell hours: 1

Minimum dwell minutes: 0, Report by: Location code, Report type: Detailed

Order	Stop type	Bill-to Code Name	Driver	Tractor	Trailer	Arrival dateTime	Departure dateTime	Dwell time
WISPBUM		Wisapak Foods						
		BUTLER, WI						
2061848	Stopoff	JBSGRC - JBS	ROEDA	4891	R53548	08/02/2016 17:37	08/03/2016 01:30	7:53
2063629	Stopoff	JBSGRC - JBS	KEEBR	4834	R53358	08/07/2016 14:46	08/08/2016 09:56	19:10
2061982	Stopoff	JBSGRC - JBS	PENJOS	4958	R53451	08/09/2016 05:07	08/09/2016 13:30	8:23
2061991	Stopoff	JBSGRC - JBS	SCHJA	4695	R53467	08/09/2016 11:48	09/09/2016 15:02	3:16
2063515	Stopoff	JBSGRC - JBS	DELRO	4816	R53445	08/10/2016 12:43	08/10/2016 17:12	4:29
2063607	Stopoff	JBSGRC - JBS	CLARM	4898	R53492	08/10/2016 23:34	08/11/2016 07:30	7:56
2063942	Stopoff	JBSGRC - JBS	MEJJO	4915	R53475	08/11/2016 21:12	08/11/2016 23:50	2:38
2063197	Stopoff	JBSGRC - JBS	SELJE	4890	R55	08/14/2016 22:20	08/15/2016 06:27	9:07
2063178	Stopoff	JBSGRC - JBS	BRIRO	4892	R53274	08/17/2016 15:58	08/18/2016 09:18	17:20
2063808	Stopoff	JBSGRC - JBS	CLARM	4898	R48	08/23/2016 02:13	08/23/2016 12:14	10:01
2063808	Stopoff	JBSGRC - JBS	PETRA	5112	R50	08/23/2016 10:54	08/23/2016 19:25	8:31
2063802	Stopoff	JBSGRC - JBS	CLARM	4898	R53859	08/29/2016 23:19	08/30/2016 11:17	11:58
2063801	Stopoff	JBSGRC - JBS	EIEMA	4893	R53864	08/30/2016 06:52	08/30/2016 19:15	12:22
Location totals:			13 Stop(s)		9:23 Average dwell		122:04	



Order: 2003187 Movement ID: 238022 Loaded Trk empty/locked Dispatched Matched Delay msg received

Move status: Cleared Ltr Authorized Manifest Limited

Transmitted to driver: 08/14/2018 20:47 Accepted

Origin: Location: GRAND ISLAND PLANT **Destination:** Location: WISCONSIN FOODS

Zone: NE Zone: WI

Scheduled: 08/14/2018 00:00 Actual: 08/14/2018 00:00 Scheduled: 08/15/2018 00:00 Actual: 08/14/2018 20:00

Overview | Comments | Galleries | Positions

Last location: 08/26/2018 15:15 1.75 ESE Shively IL

Loaded / Delivered 625.5 Miles Home Last Home Next Home **OTA**

Trailer: 4010 Driver: DELL JEFFREY - ALMA, NE 08/06/2018 **00251048 0001**

Trailer: 2003187 Driver: 08/14/2018

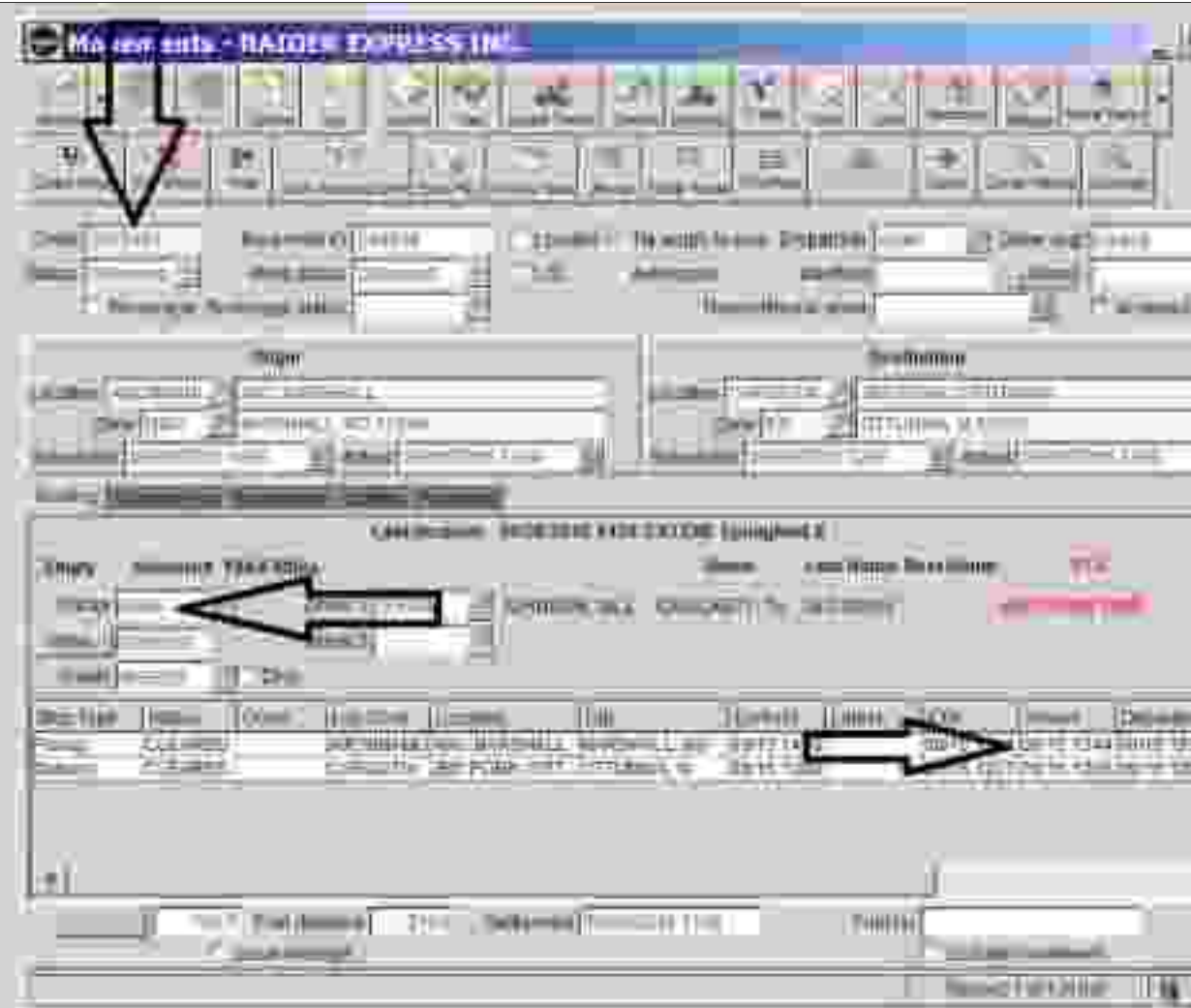
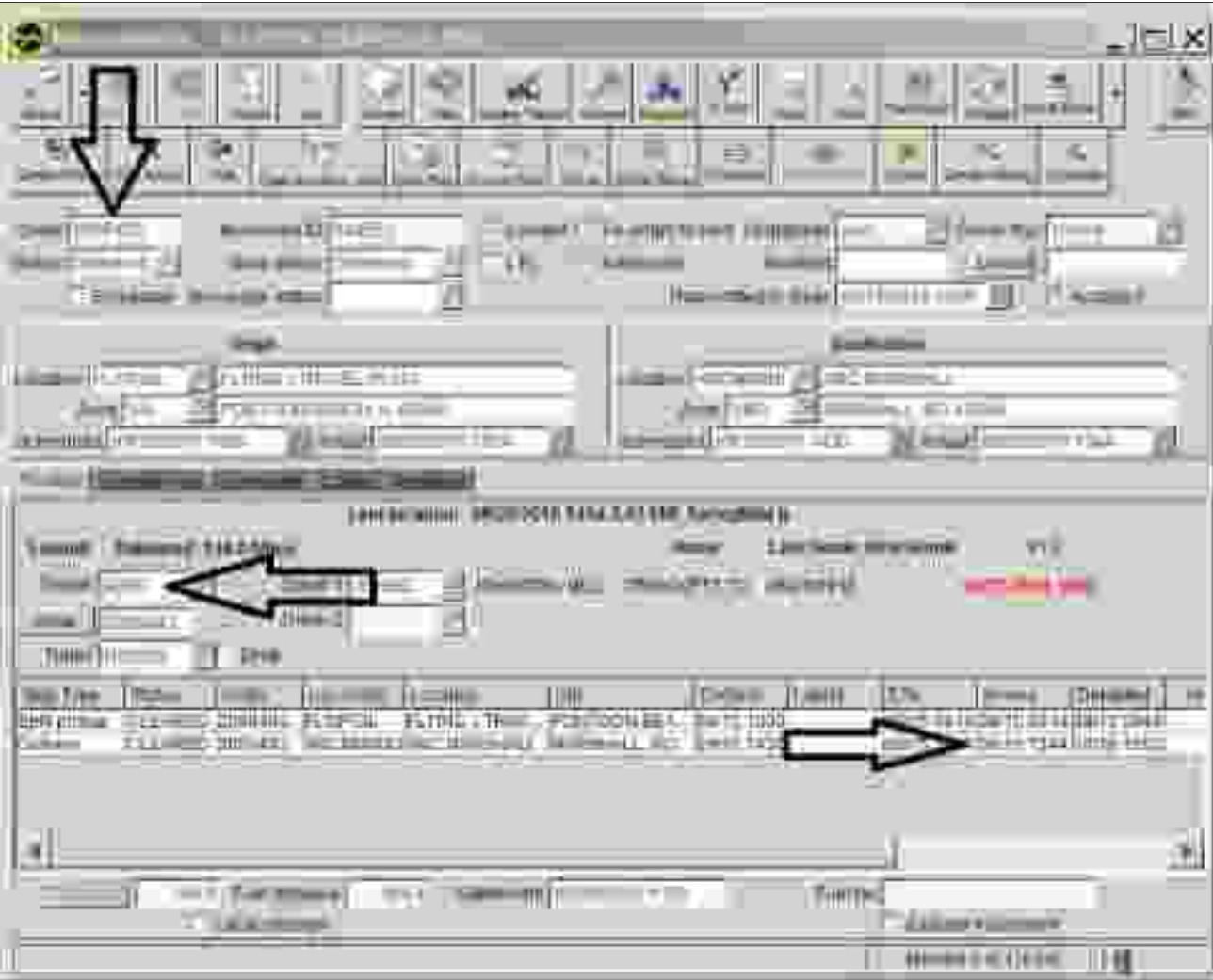
Job Type	Status	Order	Loc Code	Location	City	Earliest	Latest	ETA	Arrival	Departed	Miles	Pallets in	Pallets out	Cases	Weight
Setup	CLEARED	2003187	GRAND ISLAND PLANT	GRAND ISLAND	NE	08/14 00:00	08/14 02:00	08/14 07:23	08/14 07:55	08/14 07:55	0	0	23	21	42758.3
Delivery	CLEARED	2003187	WISCONSIN FOODS	BUTLER WI	WI	08/15 00:00		08/14 22:00	08/14 22:00	08/15 06:27	0	20	0	21	42708.3



425 Fuel distance: 1.75 * Settlement: 08/26/2018 19:47:55 Fuel rate: 00150018 1402

Local message Exclude movement

JUST PLAN WRONG



WHAT DOES IT TAKE TO CAPTURE THE DATA?

- Very big computer!
 - Dell T630
 - 2 x Intel 3.0Ghz CPU's
 - 128GB RAM
 - 2 x 120GB SSD's - OS
 - 6 x 480GB SSD's – Storage
- Tableau
 - Main software we are using to view the data in different ways
 - Data is taken apart through the ETL (Extract, Transform, & Load) Process.
 - It's then rebuilt into a SQL server database with connections to Tableau.
- SQL Server
 - Used for the storage of the datasets.
- De-normalization of data ETL.
 - Very complex process
 - We need to have some extra people in our corner that can help us along the way.
 - We have chosen *Interworks* as our partner for this part of the Data Warehouse Project.



New Server

Average PC

COST OF PUTTING IT ALL TOGETHER

Costs:

- Hardware: 10 K
- Licensing: 20 K
- Consulting: 50 – 150 K (30 K so far)



Our team of specialist

WHAT ARE THE FIRST BITS OF INFORMATION WE HOPE TO GET?



90% of the world's data
has been created
in the last two years

Experian

- True Velocity & Dwell Time
- Accurate capacity forecasting
- Load selection criteria
- ECM info processing
- MPG trending

McLeod is 30 years old

Order Time by Customer

- Very high level Load Time data broken out by customer.
- Very broad in scope, but we can drill down to the finest level of granularity by:
 - Order
 - Customer
 - Tractor
 - Driver
 - Month/Day
 - Commodity
 - Etc.
- All possible with just a couple of mouse clicks.

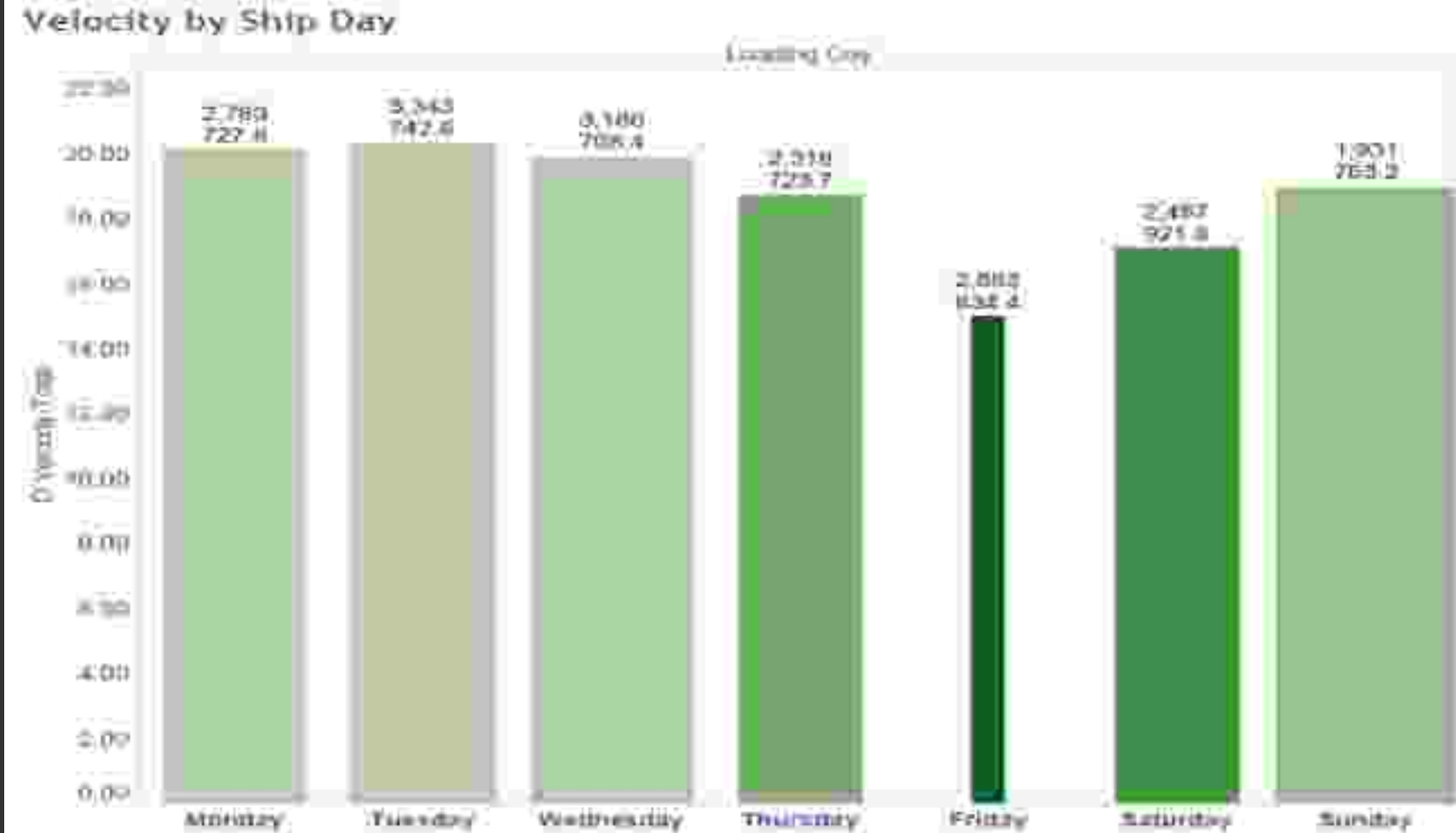
Customer Time Detail
Top 20 all time for Best Revenue

Customer	Order Count	Order Value	Order Count	Order Value	Order Count	Order Value	Order Count	Order Value	Order Count	Order Value
ABC	100	1000	100	1000	100	1000	100	1000	100	1000
DEF	200	2000	200	2000	200	2000	200	2000	200	2000
GHI	300	3000	300	3000	300	3000	300	3000	300	3000
JKLM	400	4000	400	4000	400	4000	400	4000	400	4000
NOPQ	500	5000	500	5000	500	5000	500	5000	500	5000
RSTU	600	6000	600	6000	600	6000	600	6000	600	6000
VWXY	700	7000	700	7000	700	7000	700	7000	700	7000
ZABC	800	8000	800	8000	800	8000	800	8000	800	8000
DEFG	900	9000	900	9000	900	9000	900	9000	900	9000
HIJK	1000	10000	1000	10000	1000	10000	1000	10000	1000	10000
LMNO	1100	11000	1100	11000	1100	11000	1100	11000	1100	11000
PQRS	1200	12000	1200	12000	1200	12000	1200	12000	1200	12000
TUVW	1300	13000	1300	13000	1300	13000	1300	13000	1300	13000
XYZA	1400	14000	1400	14000	1400	14000	1400	14000	1400	14000
BCDE	1500	15000	1500	15000	1500	15000	1500	15000	1500	15000
EFGH	1600	16000	1600	16000	1600	16000	1600	16000	1600	16000
IJKLM	1700	17000	1700	17000	1700	17000	1700	17000	1700	17000
NOPQR	1800	18000	1800	18000	1800	18000	1800	18000	1800	18000
STUVW	1900	19000	1900	19000	1900	19000	1900	19000	1900	19000
XYZAB	2000	20000	2000	20000	2000	20000	2000	20000	2000	20000

Load Times: 100ms, 200ms, 300ms, 400ms, 500ms, 600ms, 700ms, 800ms, 900ms, 1000ms, 1100ms, 1200ms, 1300ms, 1400ms, 1500ms, 1600ms, 1700ms, 1800ms, 1900ms, 2000ms

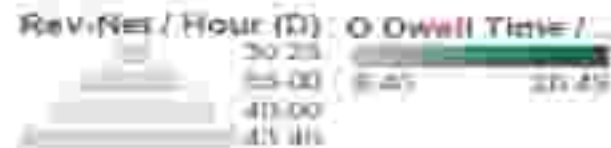
Velocity by Ship Day

- Still high level view of Load Time
 - Giving us a little bit of a different perspective on Load Times in that we're seeing Velocity based on the day of the week the load shipped.
- Notice Friday
 - loads have the lowest velocity
 - Even though they're not the highest in average loaded miles per load
 - The highest concentration of dwell time, and the lowest revenue per hour.
 - Friday is also the 3rd highest volume day.



Total Order Velocity (in transit and sitting) broken down by the day of the week the load shipped

- darker green indicates higher dwell time per load
- bar size indicates net revenue per hour
- top number above the bar is order count for 2010 through Aug 31
- number below order count is loaded miles / load



BOOKED TRANSIT TIME

- Similar to the previous slide *except* now we're looking at Booked Transit Time* by day of the week.
 - * ship appointment time to delivery appointment time*
- Friday loads have the highest Booked Transit Time even though they're not the highest in average miles per load.

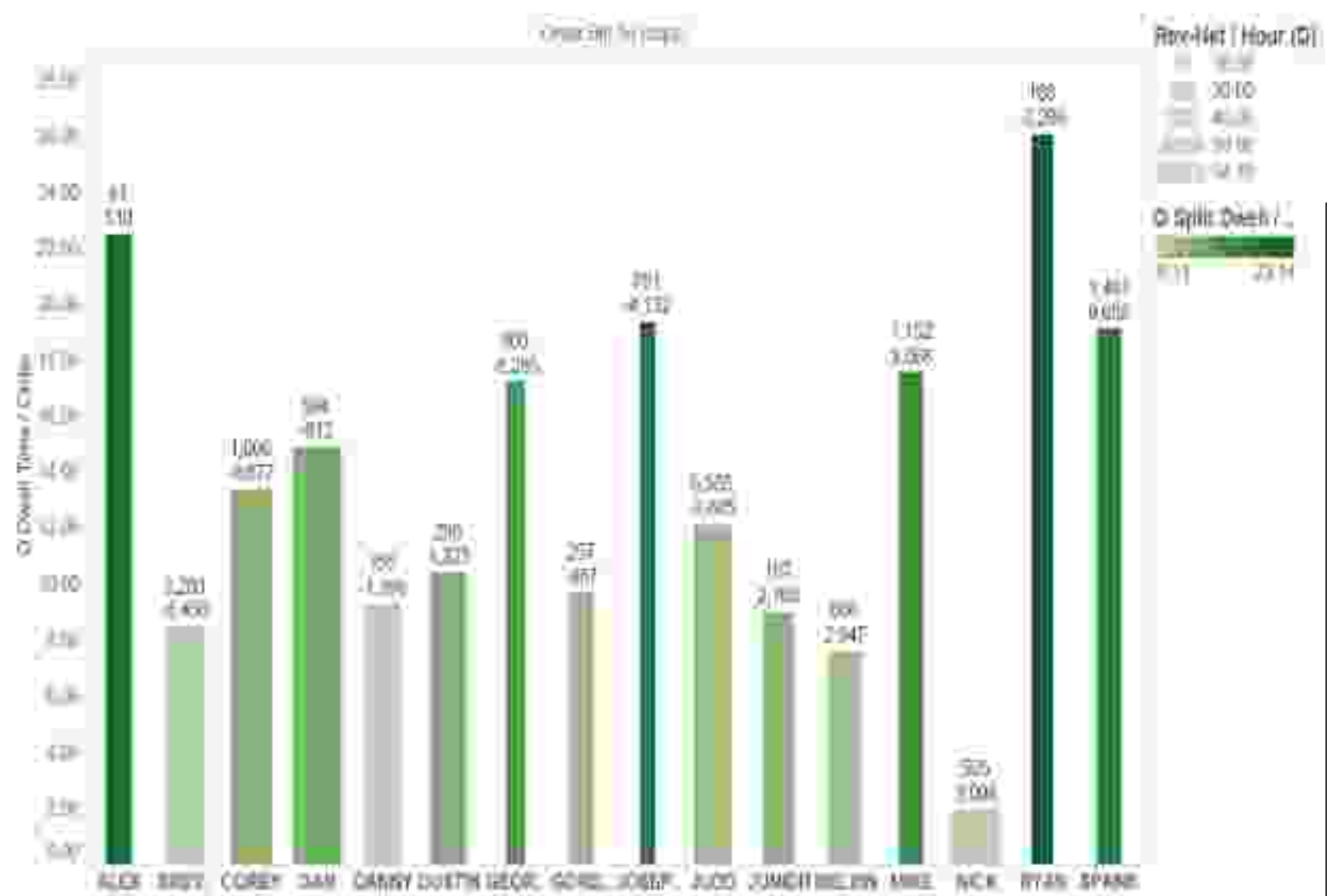
Booked Transit Time



Booked Transit per Load broken down by the day of the week the load stripped.

- darker green indicates higher dwell time per load
- larger bar size indicates higher net revenue per hour
- top number above the bar is order count for 2016 through Aug 31
- number below order count is loaded miles / load
- bottom number is revenue per hour

Dwell Time per Load for 2016

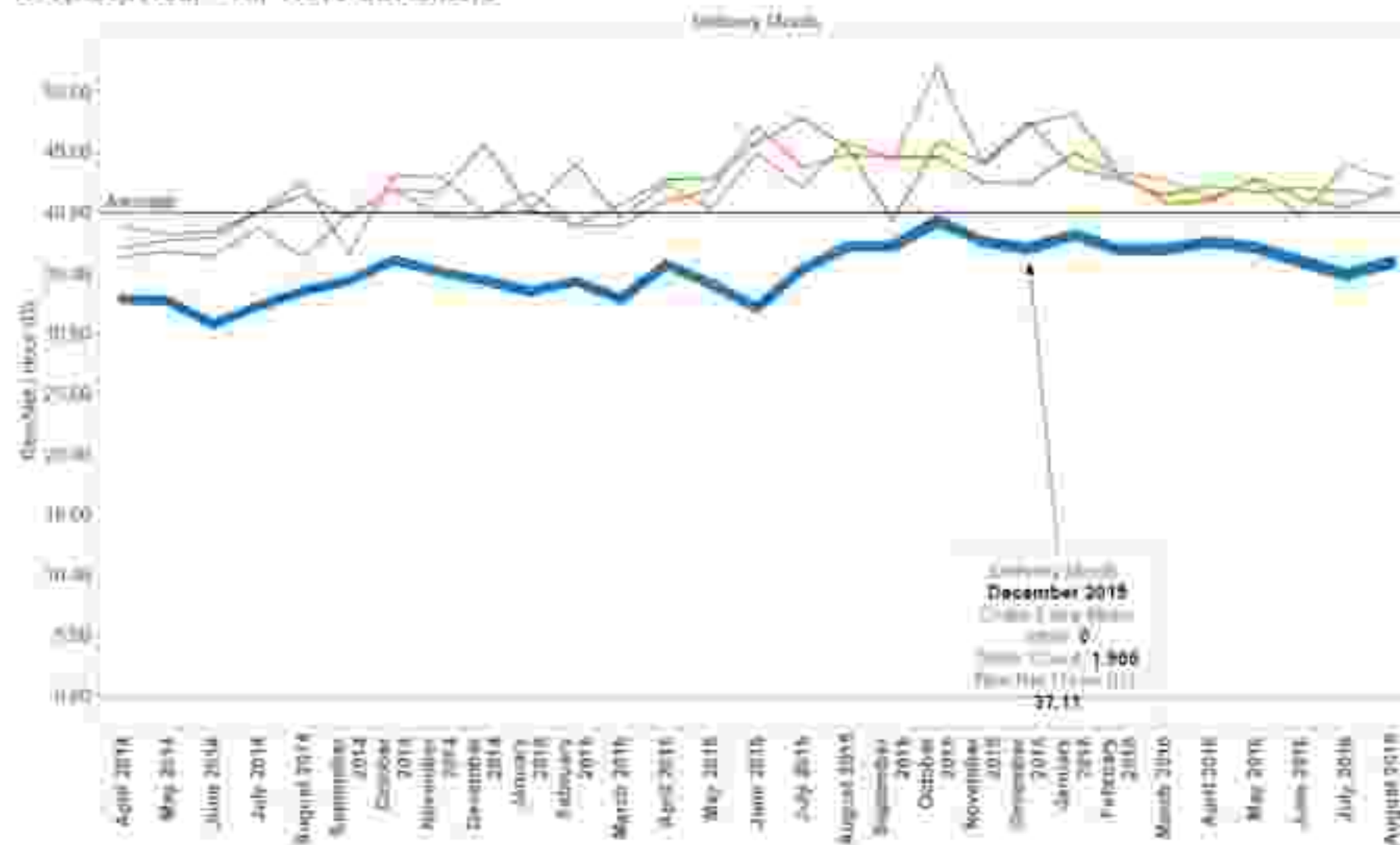


DWELL TIME PER LOAD (2016)

- Little more detailed look at Load Time by customer.
- Here, dwell time per load is the focal point.
- Notice that customer Joseph has a total of 4,132 actual transit hours beyond booked transit hours on 781 loads.
- That means either we're scheduling those loads too tight or the customer is by almost 5 and a half hours per load. And the net revenue per hour sucks!

- Darker green indicates a higher % of non-revenue-generating dwell time
 - See Alex indicates no revenue per hour
 - The top number on the bar is order count
 - The number below order count is booked transit time vs actual transit time

Rev(net)/Hour - All TRKG Customers



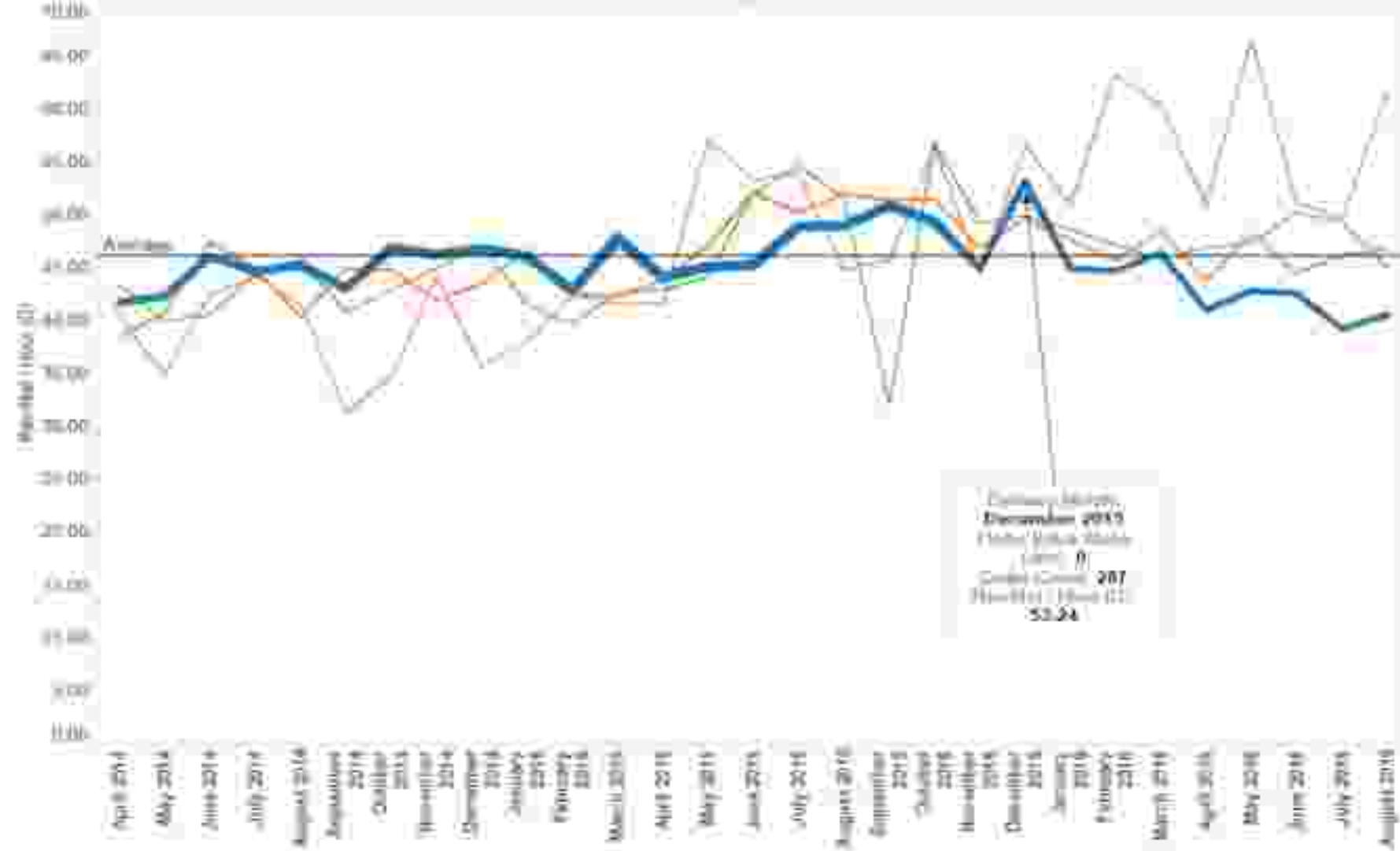
The word of Rev. Net. Hour (th) is derived from the TRKG system. The data is filtered by Order Count and Order Extra Stops. The word of Rev. Net. Hour (th) is derived from the TRKG system. The data is filtered by Order Count and Order Extra Stops. The word of Rev. Net. Hour (th) is derived from the TRKG system. The data is filtered by Order Count and Order Extra Stops.

Net Rev. per Hour by Number of Stops - All Customers

- Net Revenue per Hour for all non-dedicated customers broken out by number of extra stops per load.
- Notice that loads with zero extra stops have the lowest net revenue per hour.
- This is almost counter-intuitive, however we're finding that 0 extra stop loads have the highest percentage of non-customer related dwell time.
- This is time we need to figure out how to drive down.

Rev./Hour by Stops

Delivery Month



The Worst-Case Rev./Hour (RH) for Delivery Month. Color shows volume about Order Extra Stops (RH). The chart is plotted on Order Cost (RH) and Order Extra Stops (RH). The chart is plotted on Order Cost (RH) and Order Extra Stops (RH). The chart is plotted on Order Cost (RH) and Order Extra Stops (RH).



Net Rev. per Hour by Number of Stops

- Same slide as before, except only for one of our largest shippers.
- Zero extra stop loads have a higher revenue per hour total compared to all customers.
- However the non-customer related dwell time on these loads is much lower.