



# Power BI Portfolio

SOME EXAMPLES OF MY WORK THROUGH JUNE 2020  
ERIC NICHOLS

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## Background

I earned my Bachelor of Science in Accountancy from the University of Akron in Akron, OH in December 2011. Prior to graduation, I began working at a CPA firm as a tax intern, where I built a program in MS Access that tracked the thousands of tax return projects we were working on throughout the year in real-time.



An opportunity arose to make a switch, and I moved to the IT department, eventually becoming IT manager. As the company grew through acquisition, my team also grew, and the focus of my work quickly became data, reporting, and data governance. I loved this transition and began focusing my career on doing work with the Microsoft Power Platform, with a heavy focus on Power BI for reporting. I earned relevant MS technical certifications (MCSA: BI Reporting; MCSA: SQL 2016 Database Administration; MCSE: Data Management and Analytics) and have passed additional relevant technical certification exams, including Implementing a Data Warehouse.

I have experience introducing Power BI to companies from the ground up - helping define a vision and a roadmap for reporting initiatives, defining reporting requirements, prioritizing requests, writing reports, and implementing the reporting infrastructure. I have 5+ years of experience as an O365 global admin and maintain a working knowledge of all Microsoft O365/M365/Azure offerings.

In addition to working with Power BI, Power Apps, and Power Automate I have many years of experience working with Excel, leveraging Power Query and VBA to produce powerful tools when other reporting solutions are not the right fit.

I have strong SQL skills and have a solid understanding of SQL Server environments as well as Azure and have been seeking to find a role that will leverage my current skills, challenge me, and allow me to continue to grow my skill set.

Included in this document are a few examples of some work I have done with Power BI. I start with an example of when I was asked to fix/improve some existing reports. I then show a few reports I have written recently as well as some of the functionality (screen shots do not properly demonstrate the interactivity, but you do get an idea). The first 4 reports are examples of the reports I have written for CPA firms, the final was written for a small e-commerce company.

I have additional examples and references as well, available upon request.

Thank you for your time,

**Eric Nichols**

# Example 1: Re-work an existing report

## Existing Report

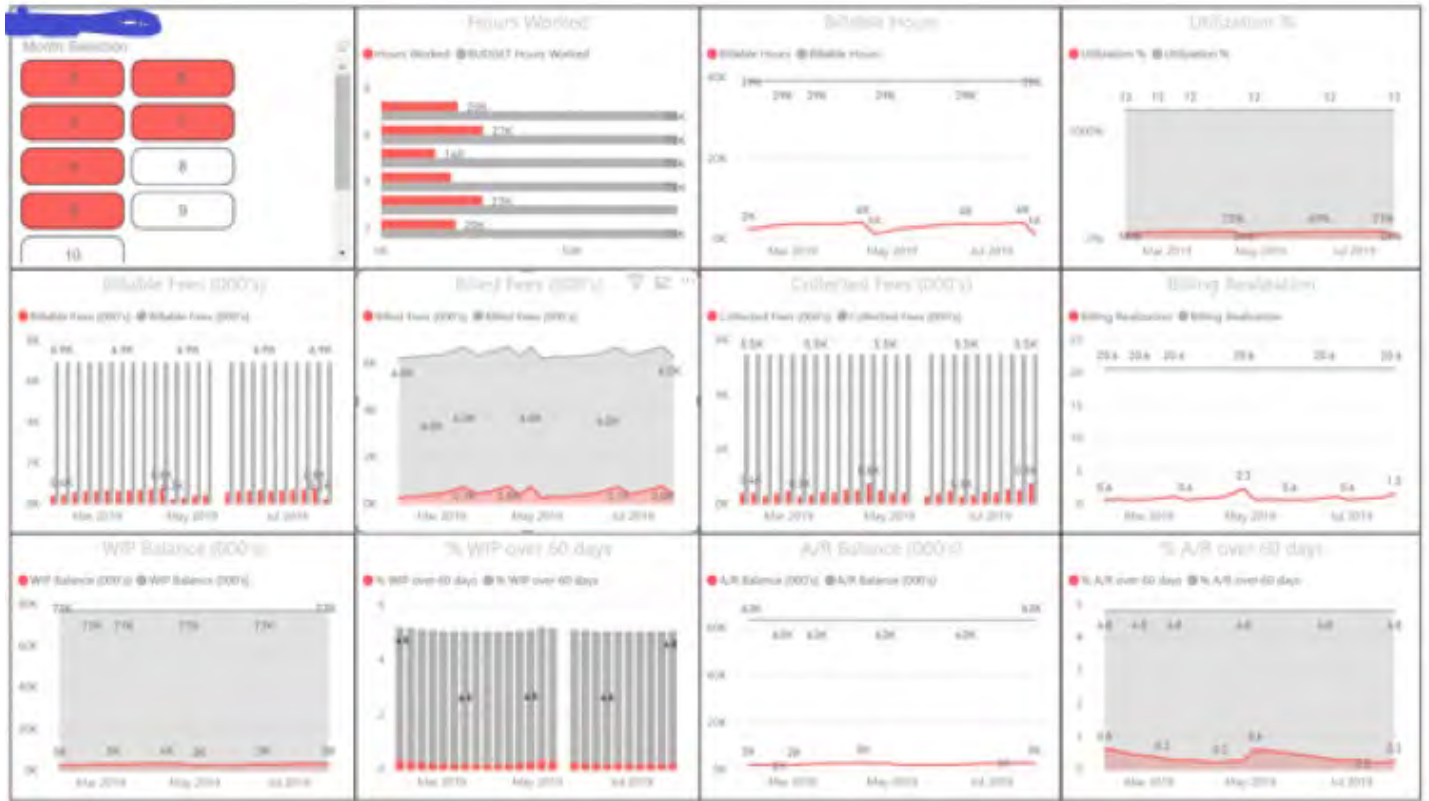


Figure 1 - Client's existing version (before)

Above is the client's existing report. The gray lines are supposed to represent prior-year (PY) data. The problem with these visualizations is that the PY data shown is the annual aggregate, not the YTD figure. The end result is that the client is comparing monthly totals to the previous annual total, resulting in a very poor presentation of the data – the actual data that matters (red) is hardly visible, and the scaling does not allow for a detailed look. Furthermore, the functionality of this report is very poor – slow loading and drill-down/drill-through capabilities do not exist. Multiple large tables from the same database are being queried and aggregated in the Power BI model. Finally, the report ultimately does not answer the question being asked – “What is the year over year comparison, on a monthly basis, of <the various metrics>?”

The solution was to consolidate the report by combining related metrics into the same visualization, therefore providing the end user with less to look at, yet a lot more relevant information at a glance. This was achieved by writing various SQL views to minimize the processing happening at the report level and simultaneously lightening the entire data model significantly. As you can see in the revised copy below, the CY is trending higher total hours, billable hours, and billed amounts (through February) compared to the PY. Billed amounts fall below PY values in March and April, and you can see that the beginning of this starts happening in February (as represented in the top-right visualization), when billed fees begin to diverge from the billable fees generated during the same period. The result that you cannot see is the significant performance improvement and high responsiveness of the interactions (cross filtering, slicing, etc.) within the report.

Revised version:

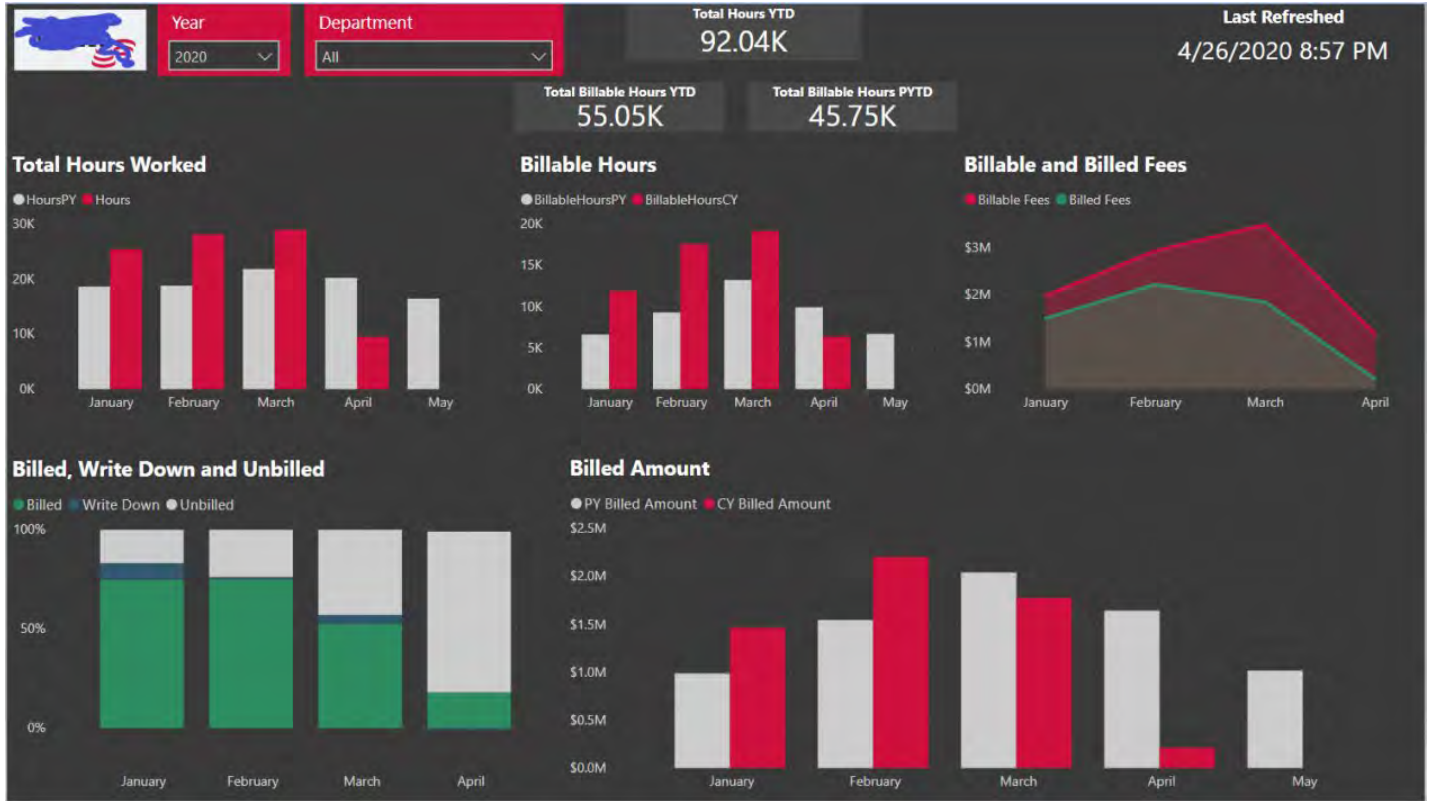


Figure 2 - Eric's revised version (after)

NOTE: One metric is missing from the revised version of the report as the client is preparing the required data.



# Example 2: Comprehensive Executive Overview Report

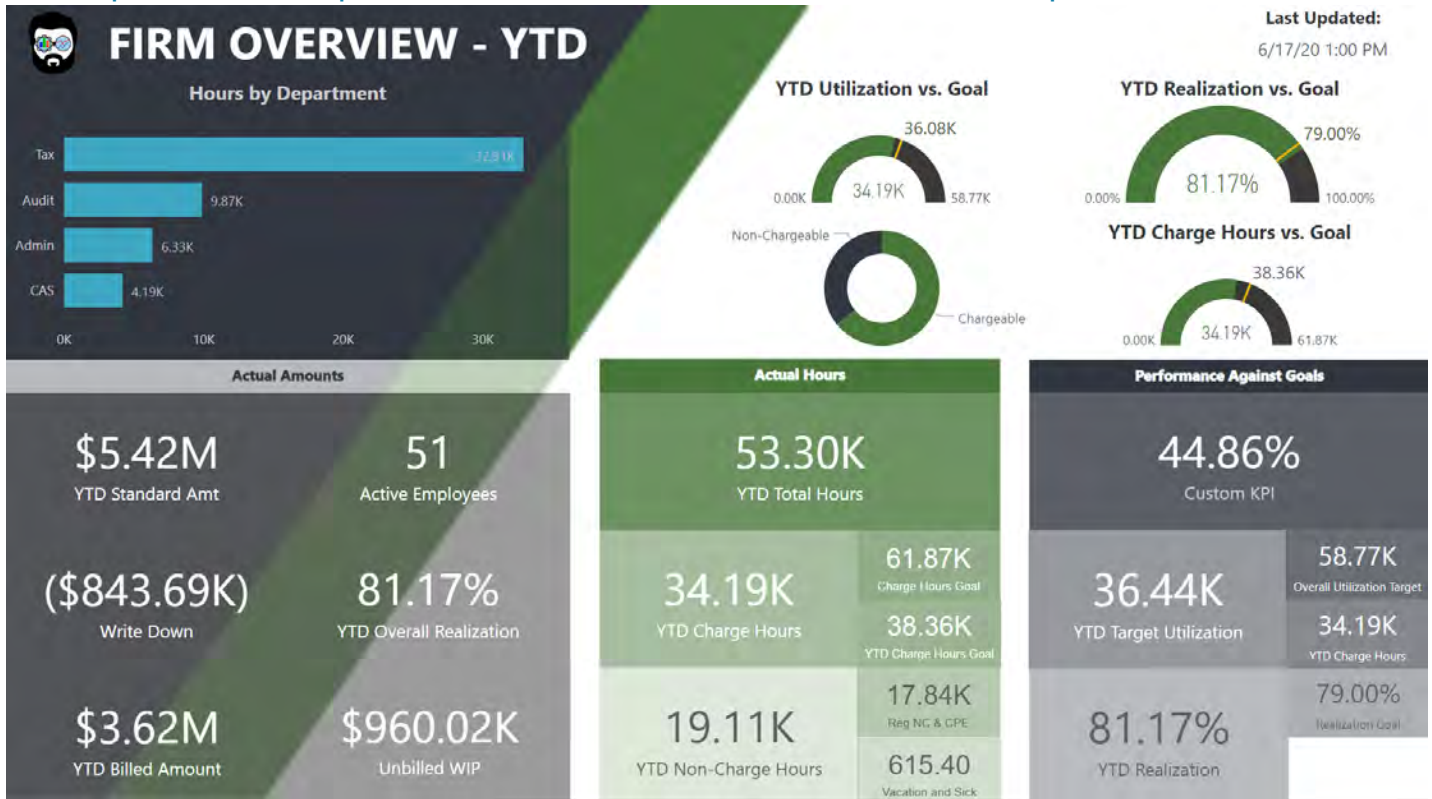


Figure 3 – Page 1 of the report - A YTD Overview of Key Metrics for Executives

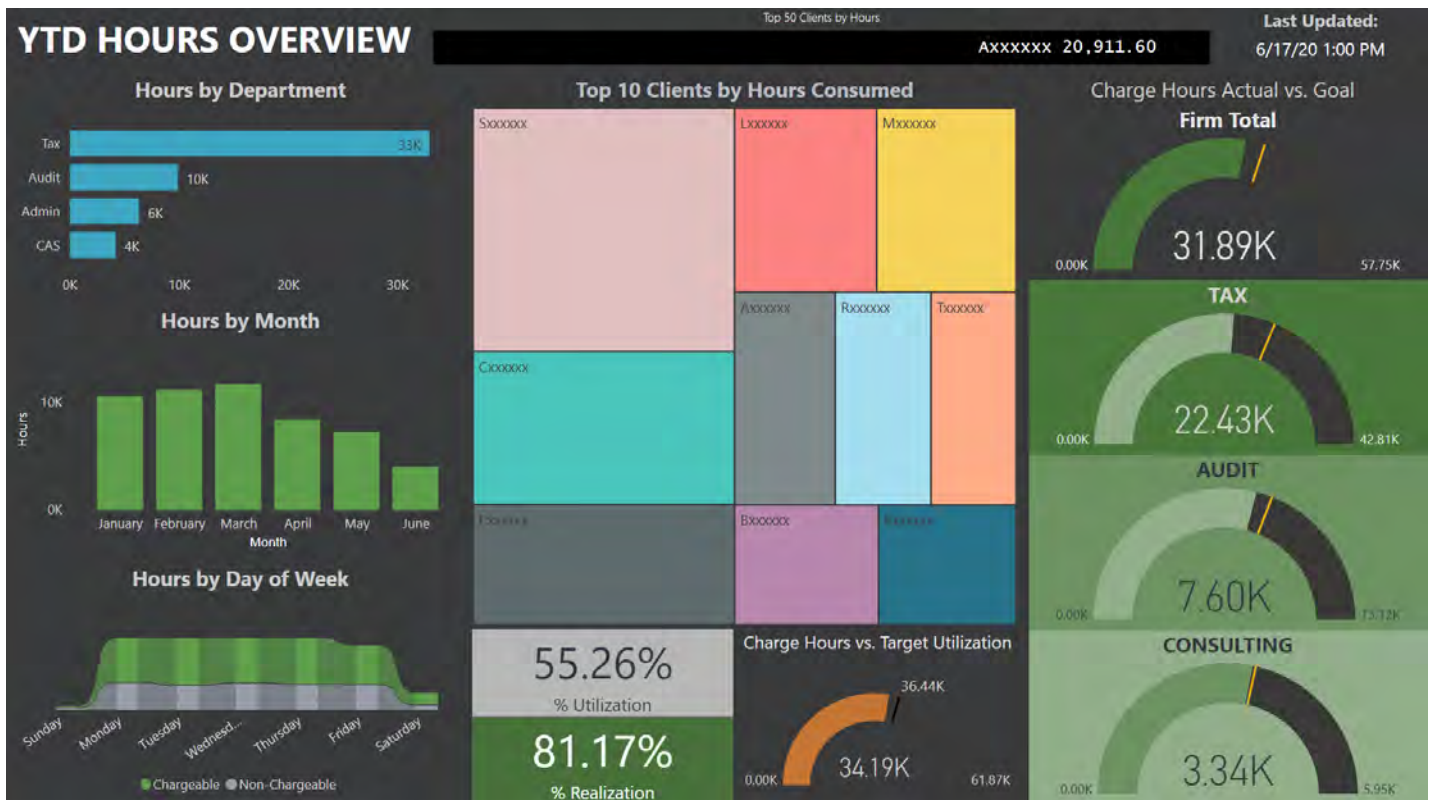


Figure 4 - Page 2 of the report - Hours Overview



Figure 5 - Page 3 of the report - Billing Overview



Department	Charge Hours Goal	Util Target (hrs)	YTD Hours Goal	YTD Util Target	YTD Hours	% Util	WIP Generated	\$ Billed	% Real	Avg Rate	Avg Eff. Rate	Custom KPI
Tax	42,805.00	40,664.75	26,856.00	25,513.20	22,434.19	52.41%	\$3,720,264.55	\$2,459,175.74	82.08%	\$168	\$110.82	43.02%
Audit	13,117.00	12,461.15	8,120.00	7,714.00	7,595.92	57.91%	\$1,215,988.60	\$825,414.87	78.54%	\$153	\$94.44	45.48%
CAS	5,945.00	5,647.75	3,384.00	3,214.80	3,339.20	56.17%	\$420,293.00	\$287,577.64	80.82%	\$123	\$83.89	45.40%
Admin					820.80	0.00%	\$68,247.50	\$48,913.69	84.19%	\$93	\$60.33	0.00%
<b>Total</b>	<b>61,867.00</b>	<b>58,773.65</b>	<b>38,360.00</b>	<b>36,442.00</b>	<b>34,190.11</b>	<b>55.26%</b>	<b>\$5,424,793.65</b>	<b>\$3,621,081.94</b>	<b>81.17%</b>	<b>\$152</b>	<b>\$99.94</b>	<b>44.86%</b>

Figure 6 - Page 4 of the report - Hours Detail (with granular drill-down)



### Last Week at a Glance

Date	4/26/2020	4/27/2020	4/28/2020	4/29/2020	4/30/2020	5/1/2020	5/2/2020
Department	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Admin	2.50	52.20	51.50	52.10	49.90	55.47	
Audit			8.00	8.00	8.00	8.00	8.00
[Redacted]							8.00
[Redacted] Christian							4.20
[Redacted] Michael							
[Redacted] Brandon							
[Redacted] Phillip		8.00	8.00	8.00	8.00	8.00	
<b>Total</b>	<b>15.00</b>	<b>381.40</b>	<b>371.00</b>	<b>376.10</b>	<b>361.00</b>	<b>320.07</b>	<b>19.00</b>

One-click Drill-down to individual

Figure 7 - Close up of one-click drill-down



Figure 8 - Page 5 of the report - Billing Detail

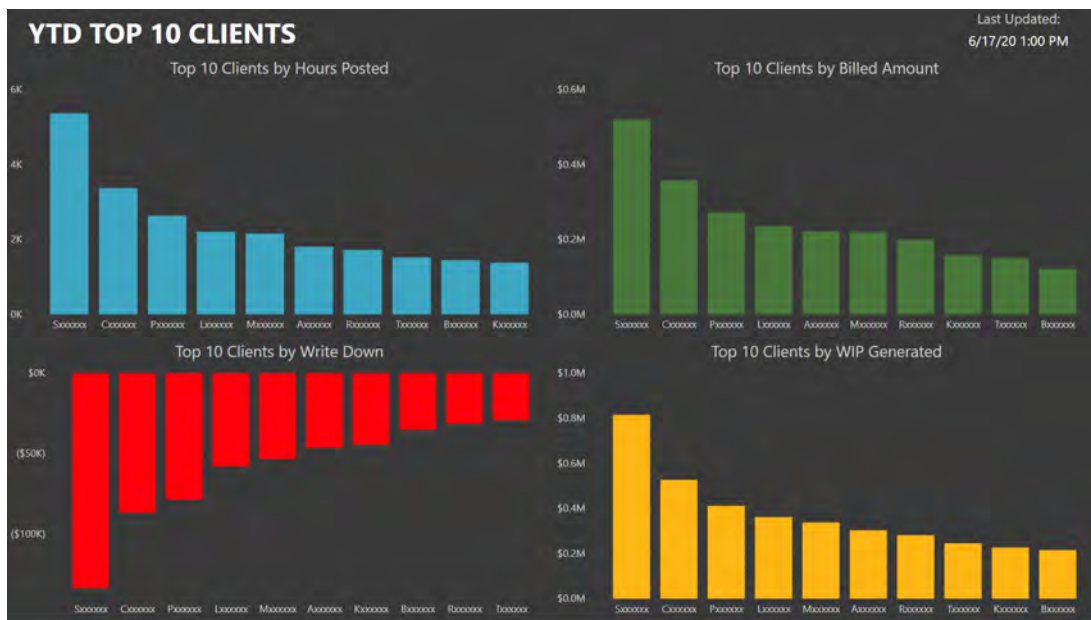


Figure 9 - Page 6 of the report - Top 10 (various dimensions)





Figure 10 - Page 7 of the report - Client Detail (highlight/overview)

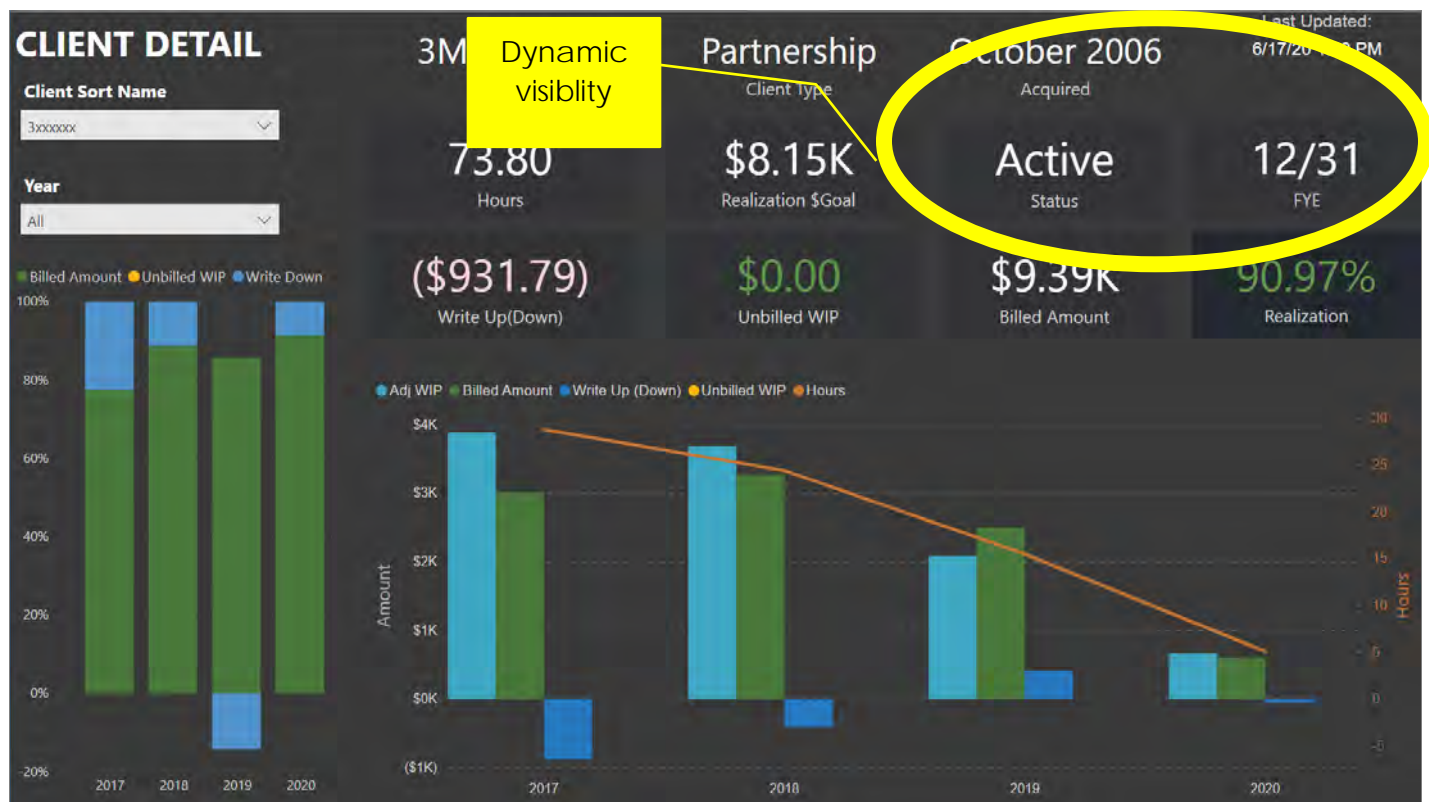


Figure 11 - Demonstration of use of dynamic visibility on various controls

# Example 3: Comprehensive Executive Overview Report – Version 2

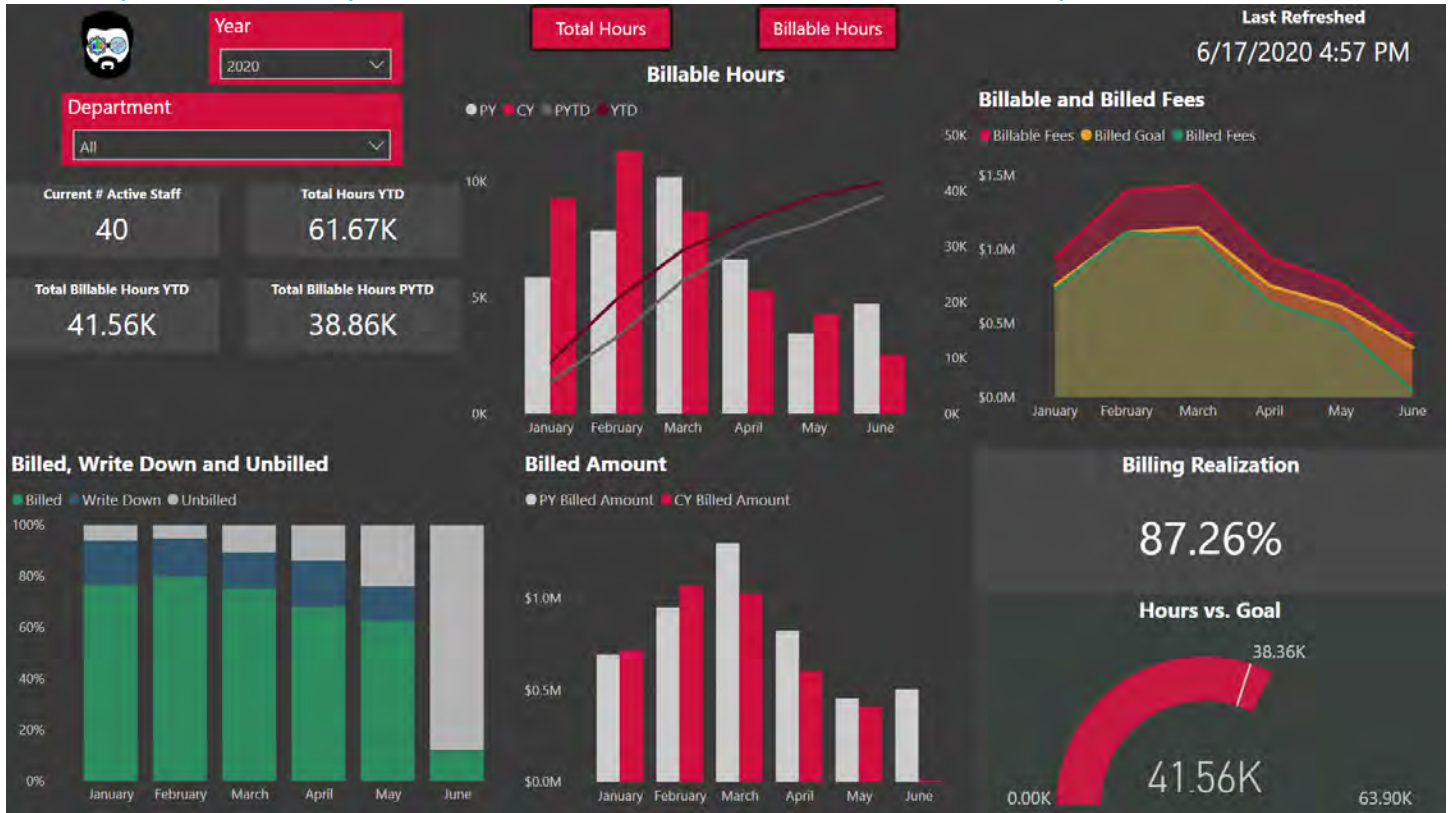


Figure 12 - YTD Comparative Overview

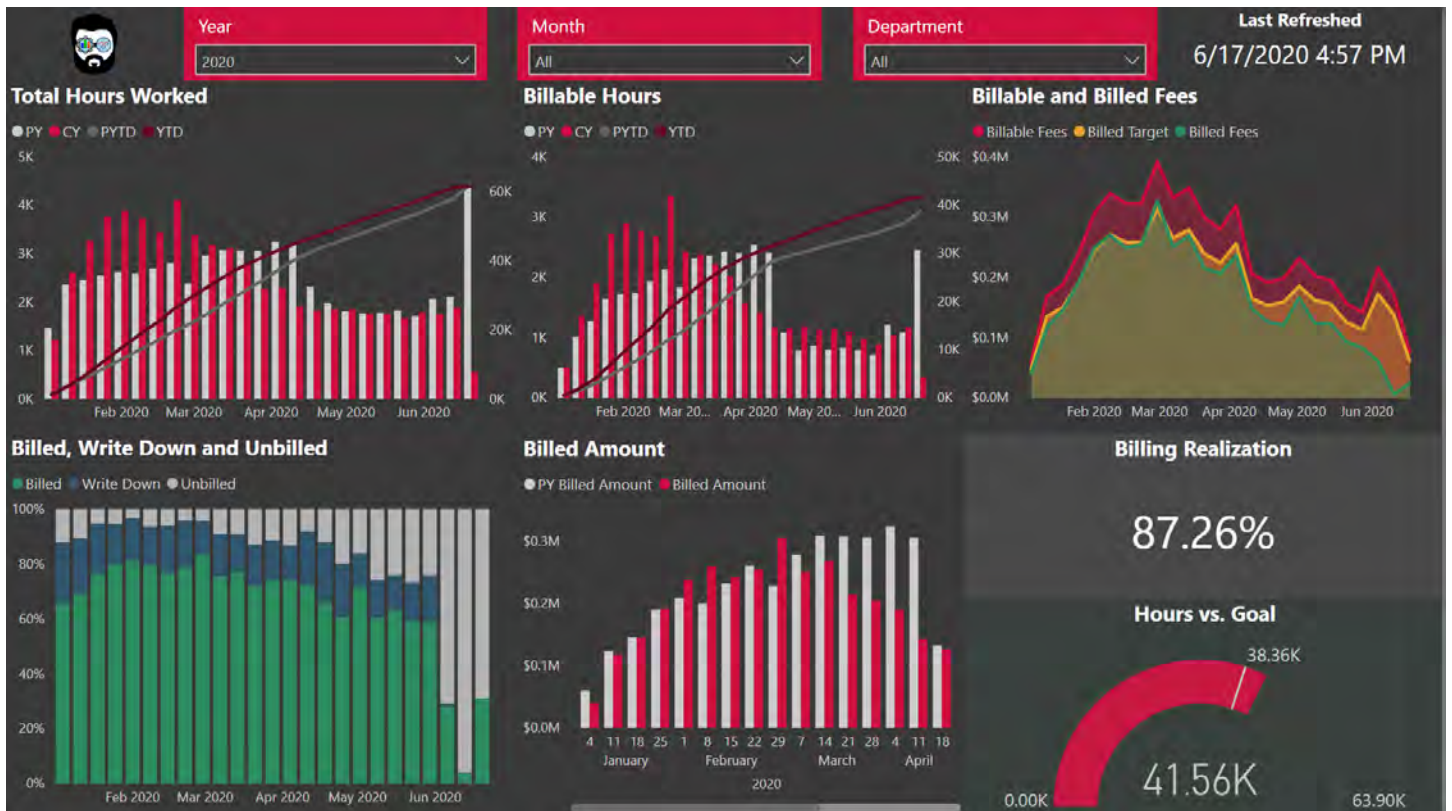


Figure 13- Interactive Weekly View



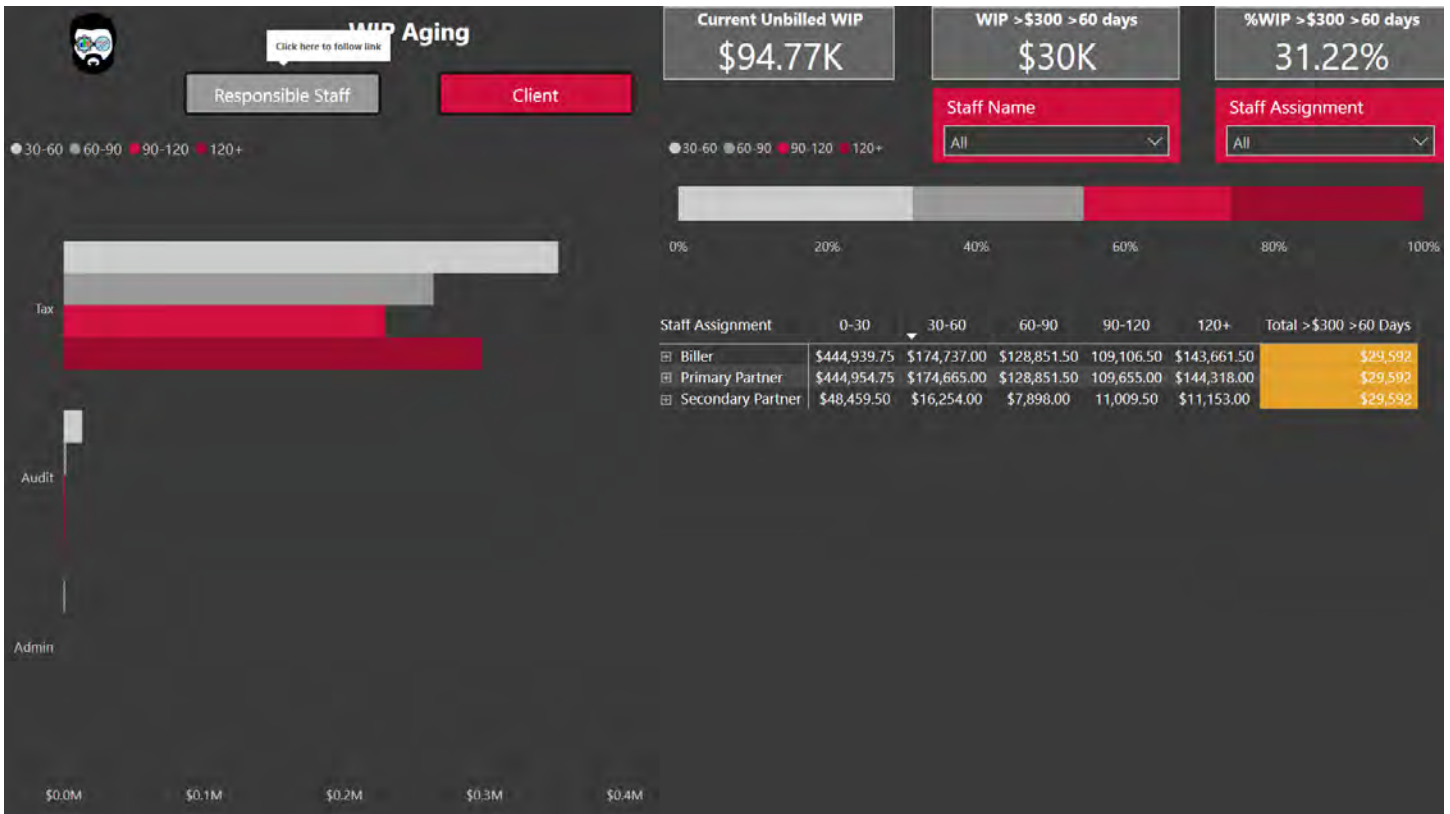


Figure 14- WIP Aging - by Staff

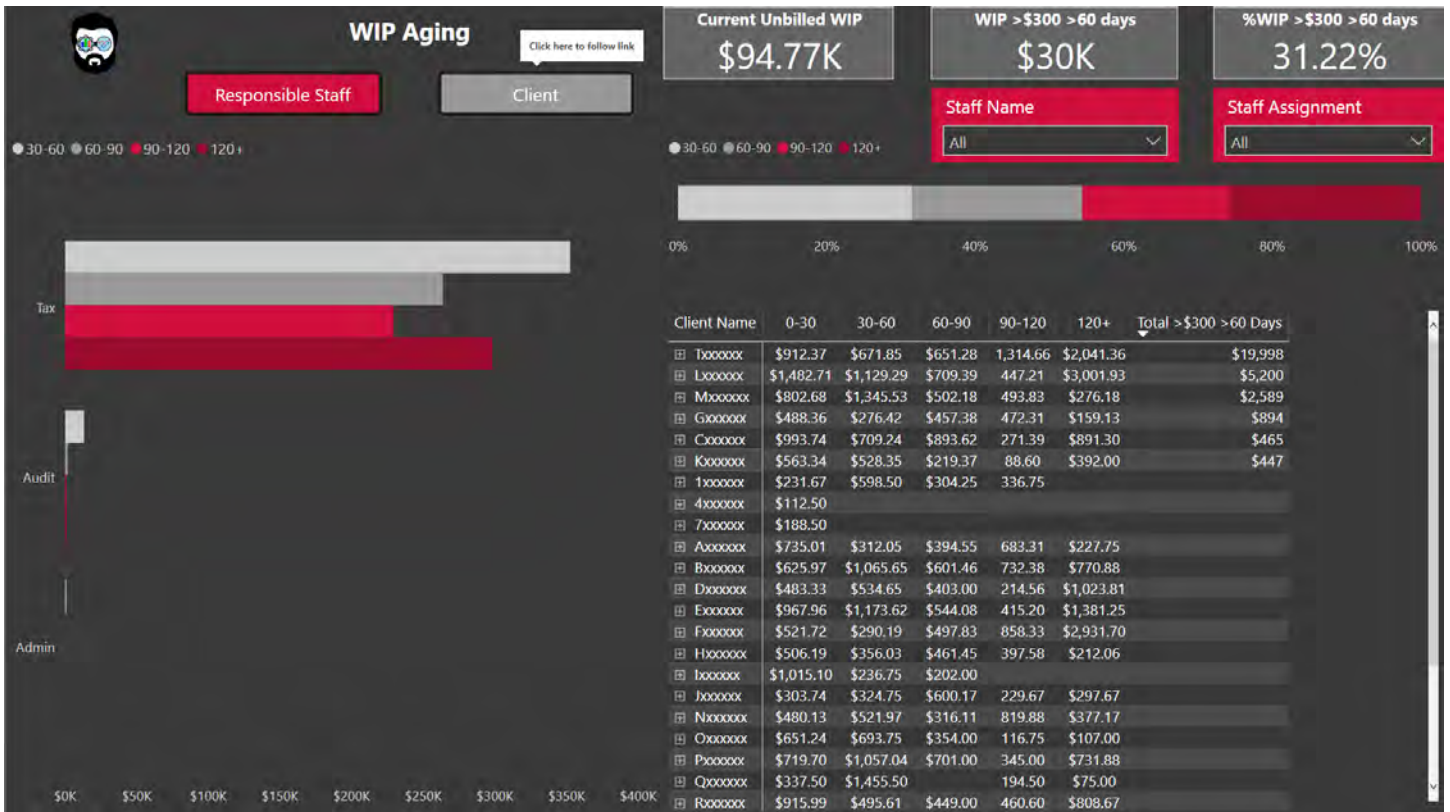


Figure 15- WIP Aging by Client

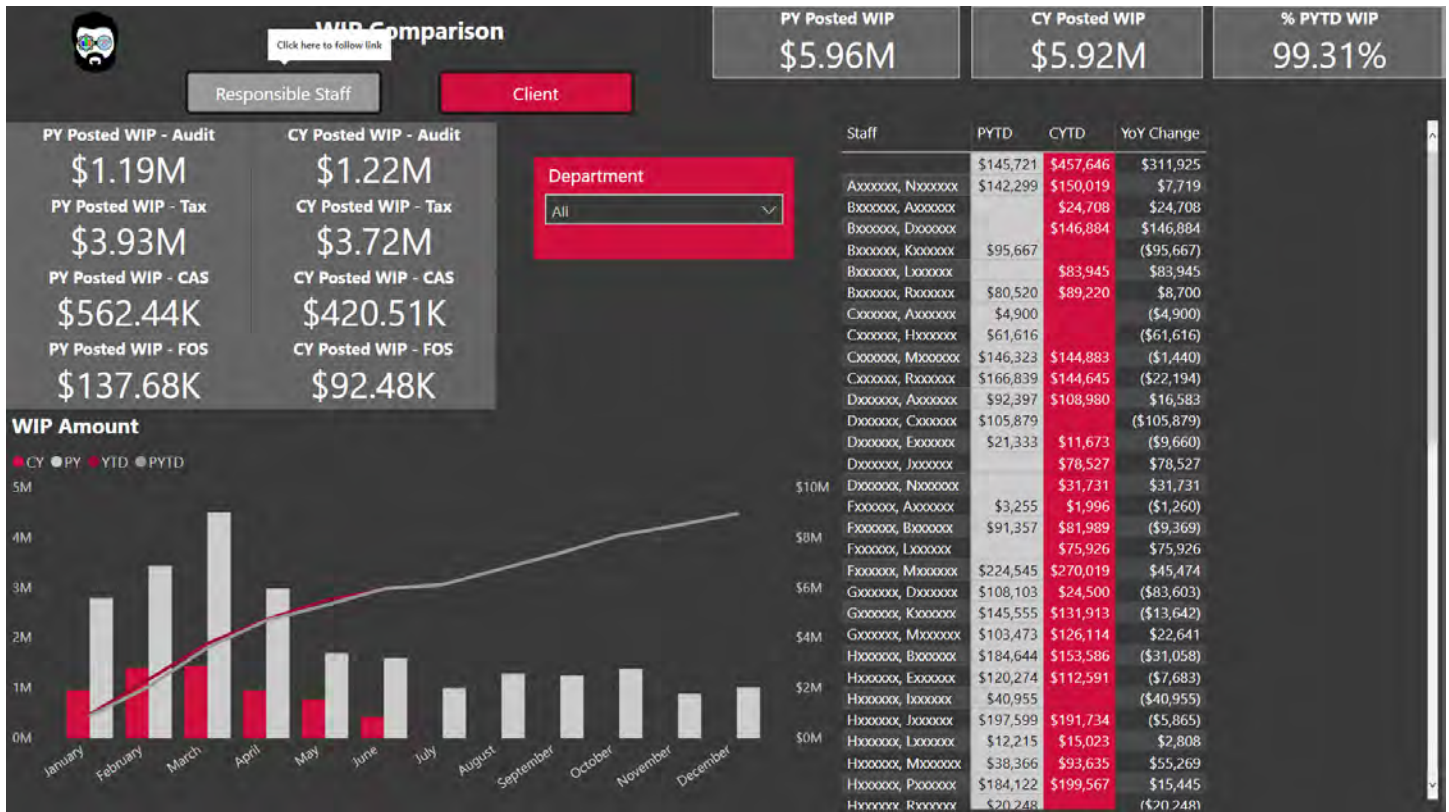


Figure 16 - WIP YoY Comparison by Staff

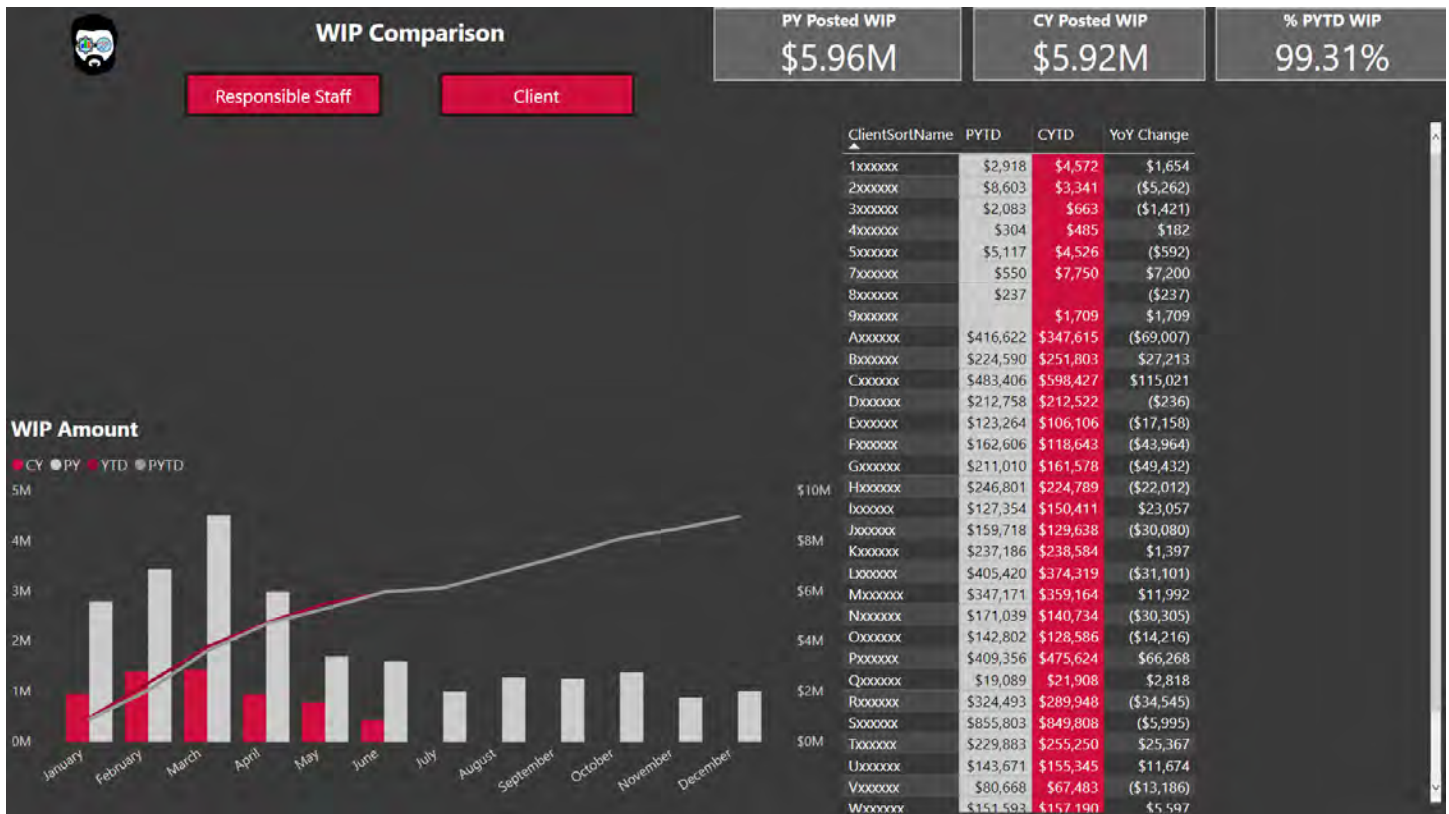


Figure 17- WIP YoY Comparison by Client



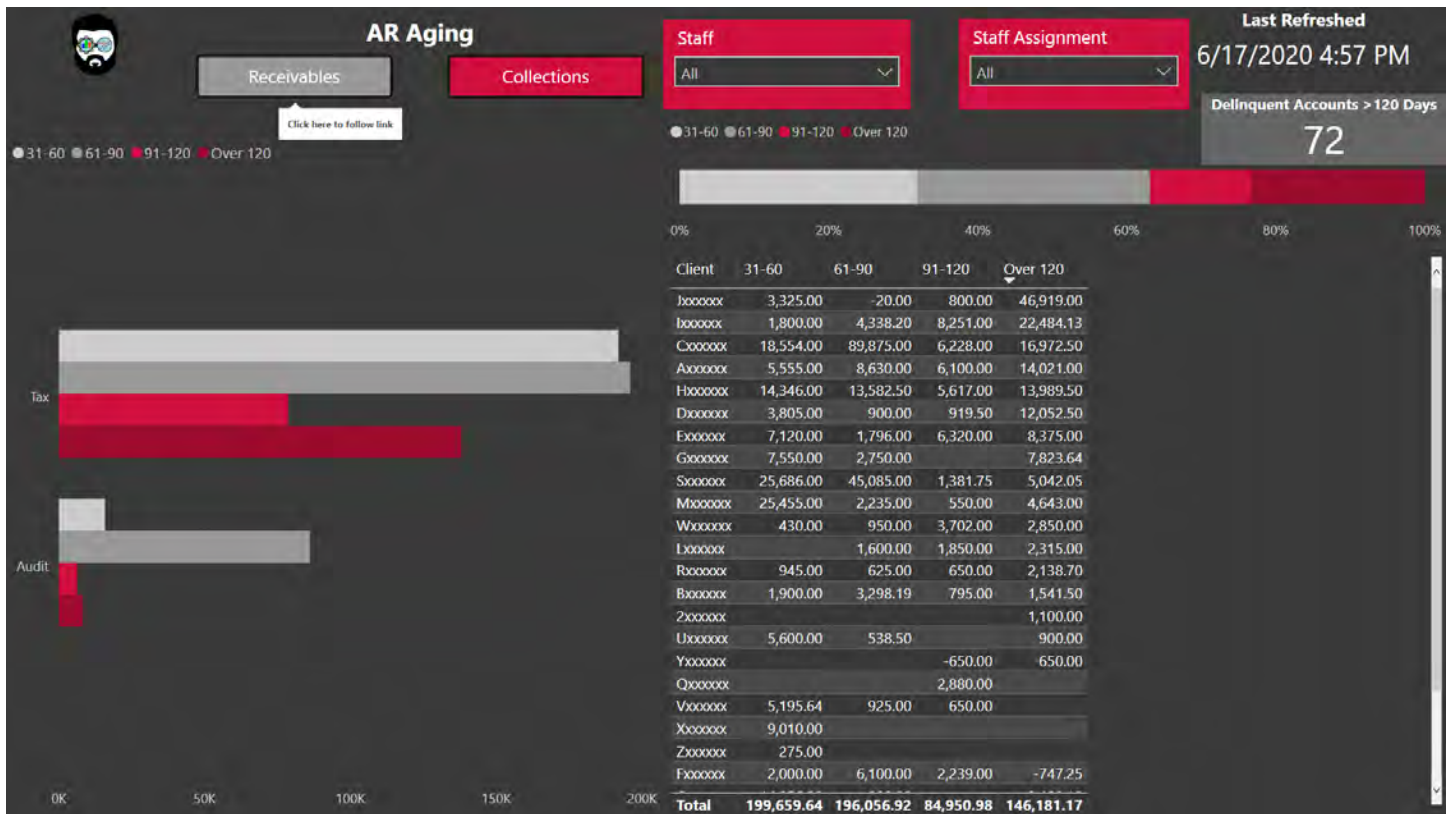


Figure 18 - AR Aging



Figure 19 - Collections

# Example 4: Department Manager Overview Report

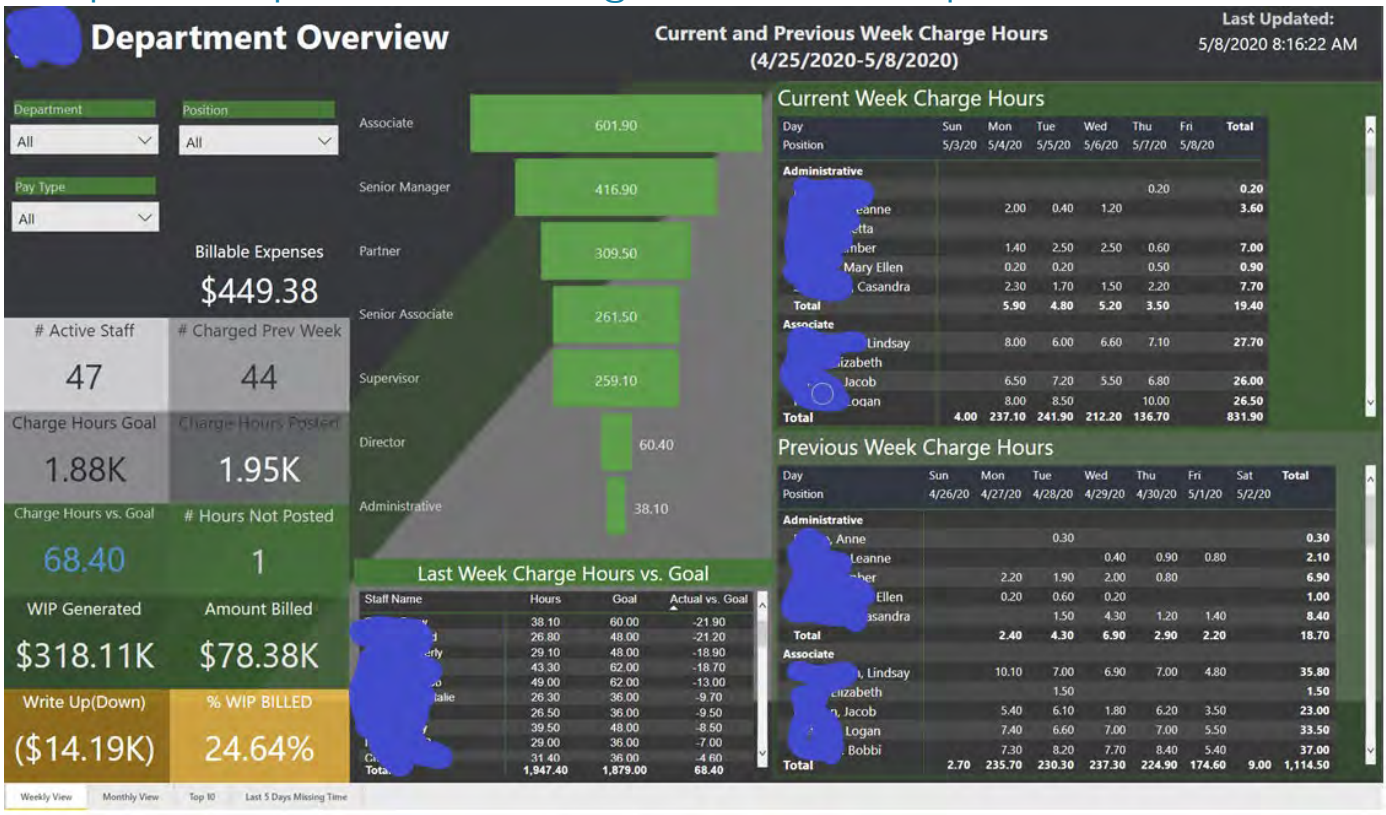


Figure 20 - Department Manager's Overview

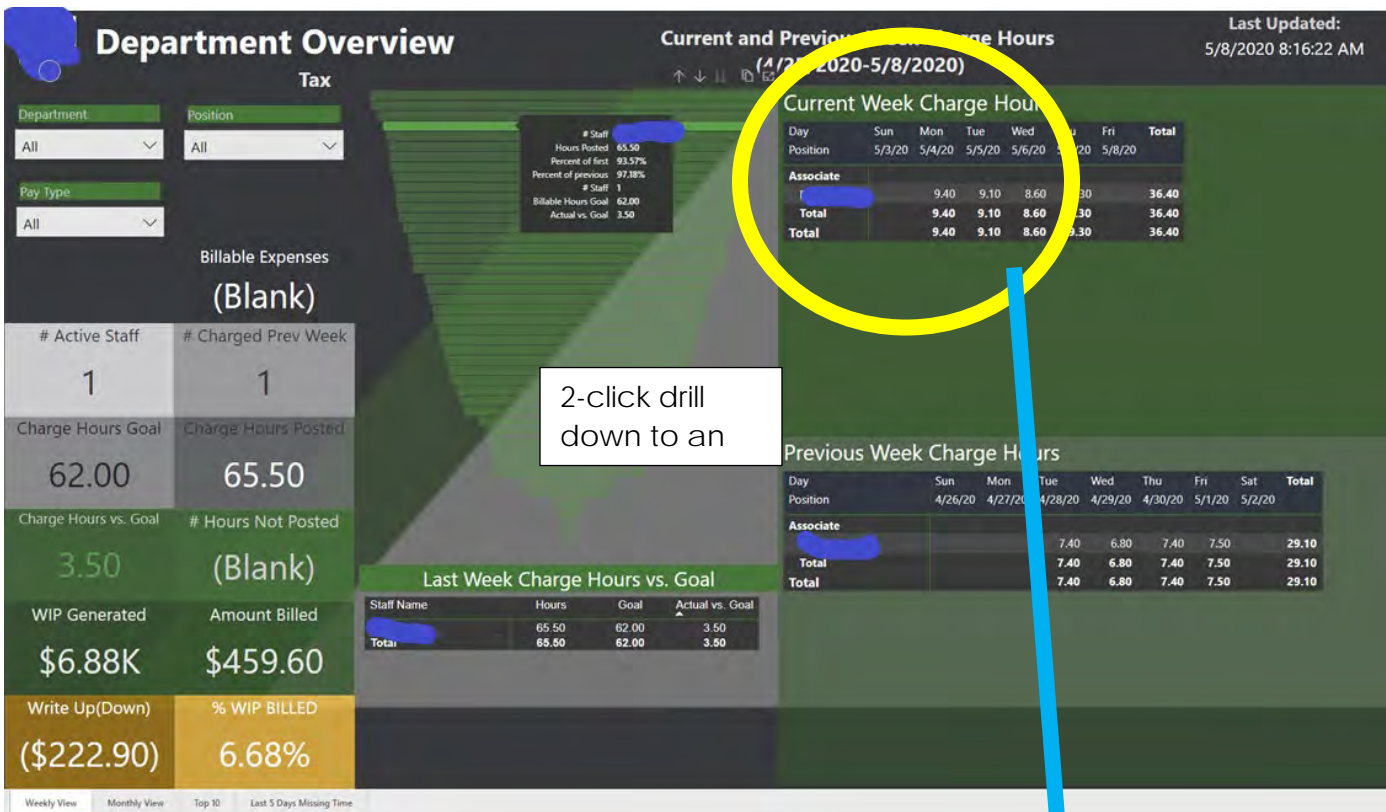


Figure 21 - 2-click drill-down to individual



### Current Week Charge Hours

Day	Sun	Mon	Tue	Wed	Thu	Fri	Total
Position	5/3/20	5/4/20	5/5/20	5/6/20	5/7/20	5/8/20	
Administrative		5.90	4.80	5.20	3.50		19.40
Associate		74.90	74.90	68.50	47.90		266.20
Director		7.00	7.00	7.70	6.00		27.70
Firm Administration							
Partner		38.80	40.80	27.50	14.30		121.40
Senior Associate		33.70	28.90	34.70	20.80		118.10
Senior Manager	4.00	43.80	51.60	41.20	29.30		169.90
Supervisor		33.00	33.90	27.40	14.90		109.20
<b>Total</b>	<b>4.00</b>	<b>237.10</b>	<b>241.90</b>	<b>212.20</b>	<b>136.70</b>		<b>831.90</b>

Roll up/down with conditional formatting

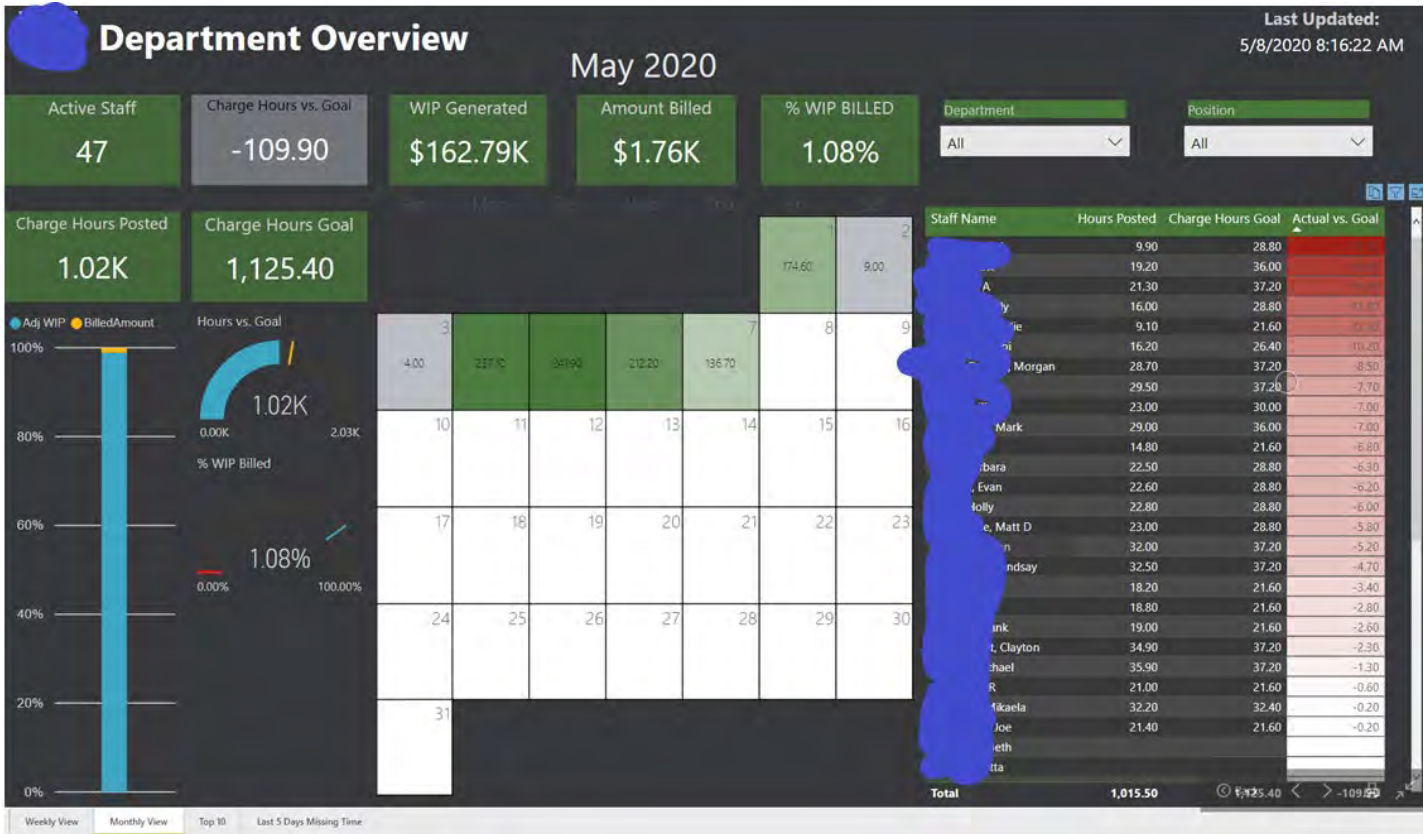


Figure 22 - Page 2 of the report - Monthly View



Figure 23 - Page 3 of the report - Top 10 (various dimensions)



Figure 24 - Page 4 of the report - Last 5 days missing time (non-compliance report)



# Example 5: Staff Personal Productivity Report - 1

Staff Personal Productivity reports are implemented with row-level security (RLS) to display only data pertinent to the user viewing the report.

In this example, in addition to controlling productivity data, the WIP and AR pages are only accessible to staff members at or above a certain level.

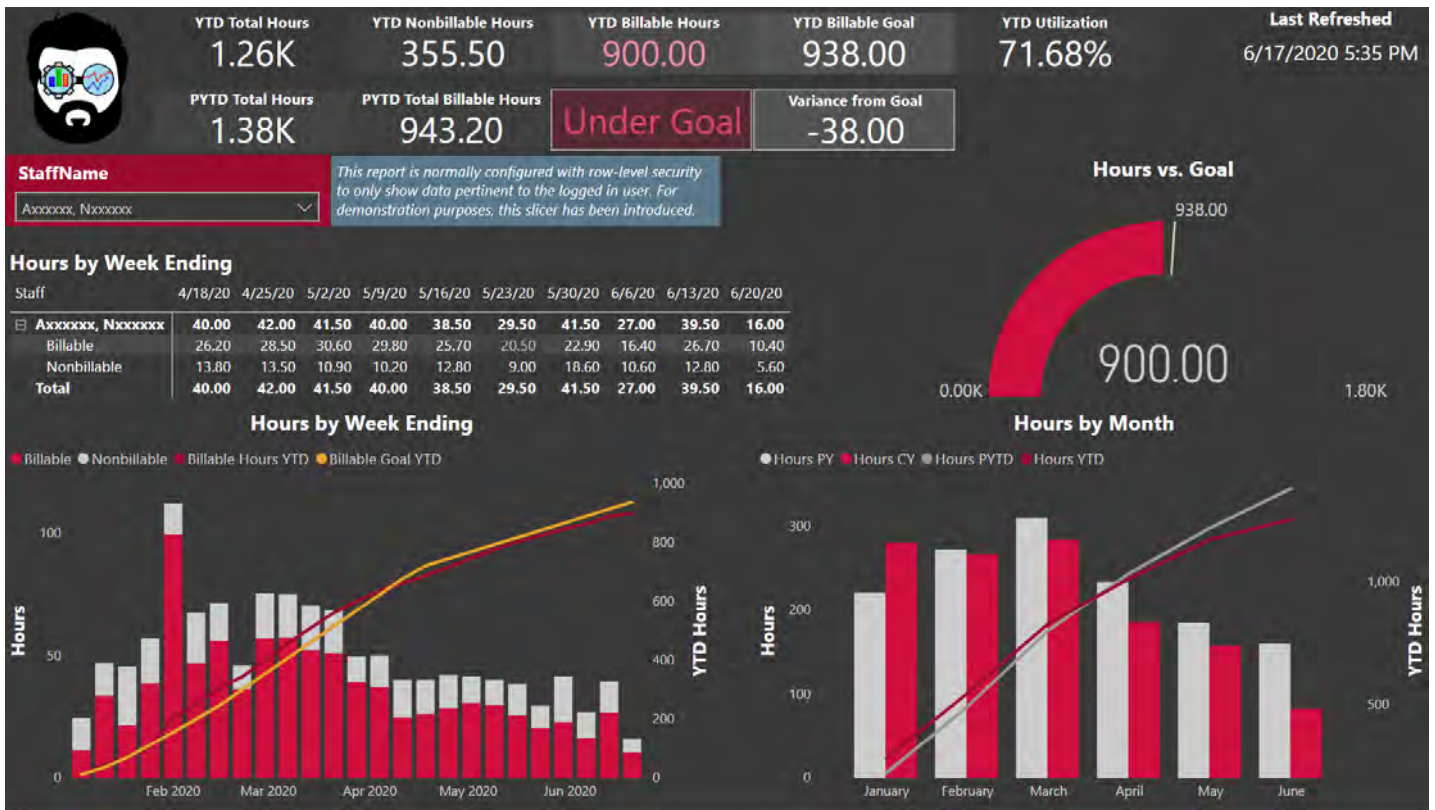


Figure 25 - YTD Productivity Overview

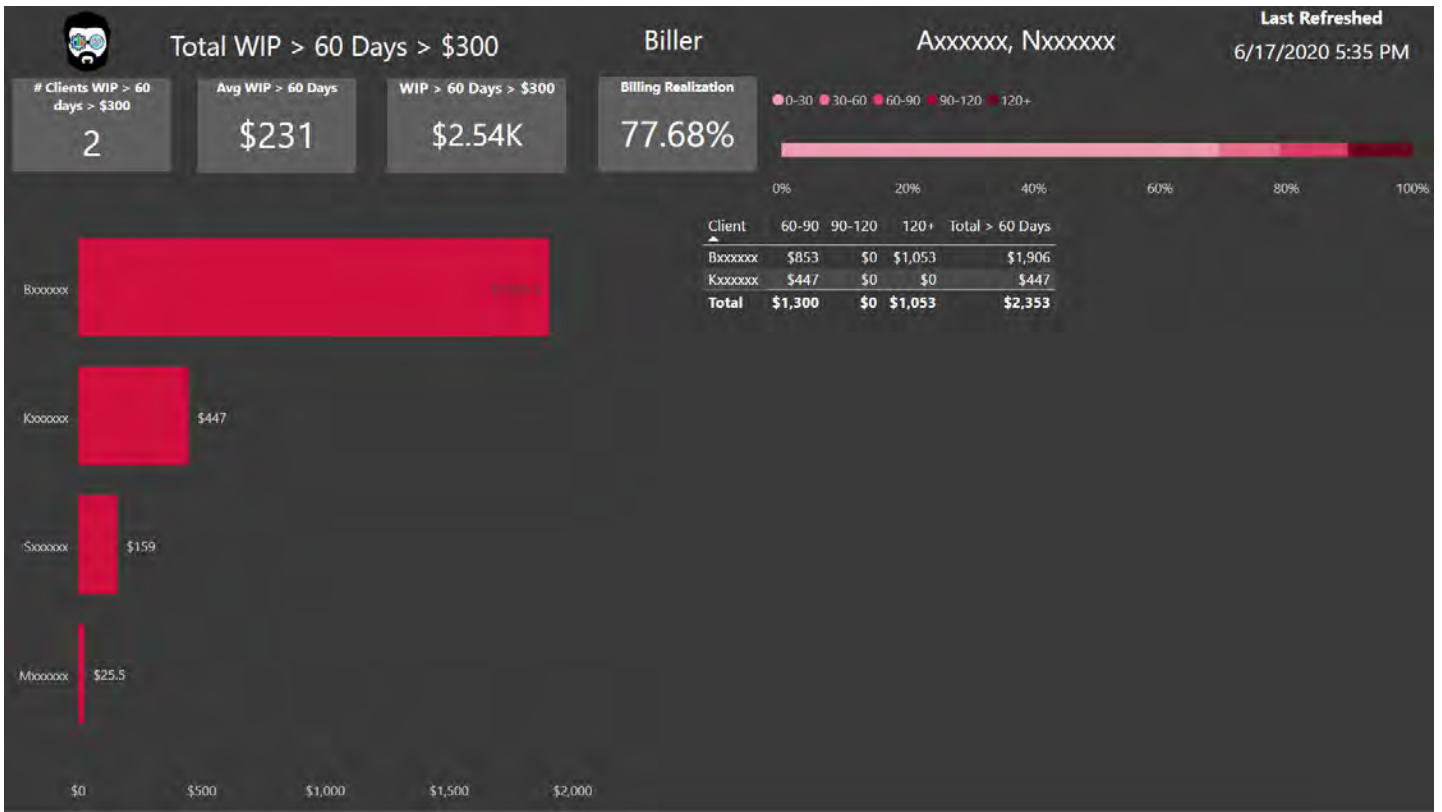


Figure 26 - WIP Aging

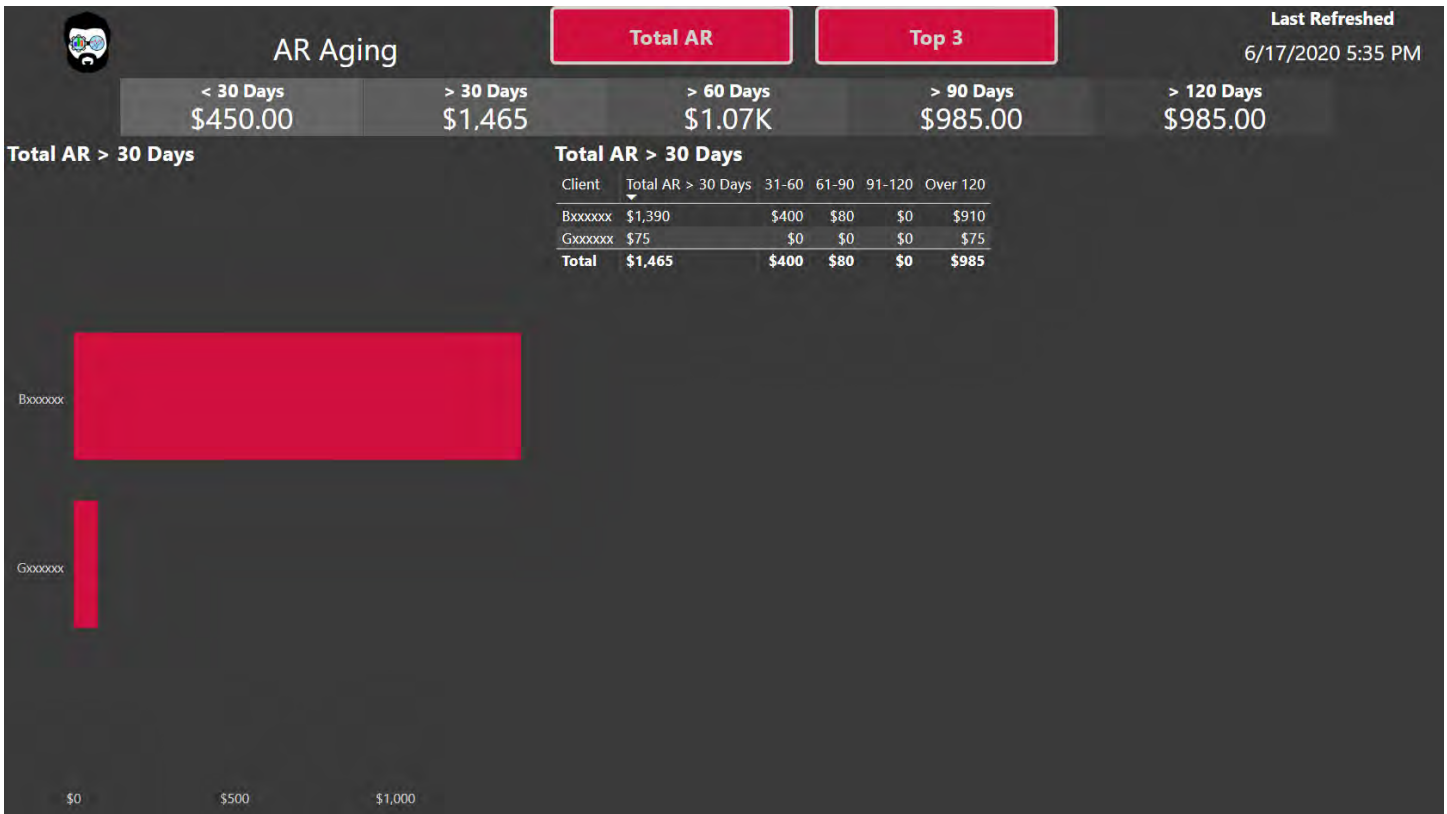


Figure 27- AR Aging

# Example 6: Staff Personal Productivity Report - 2

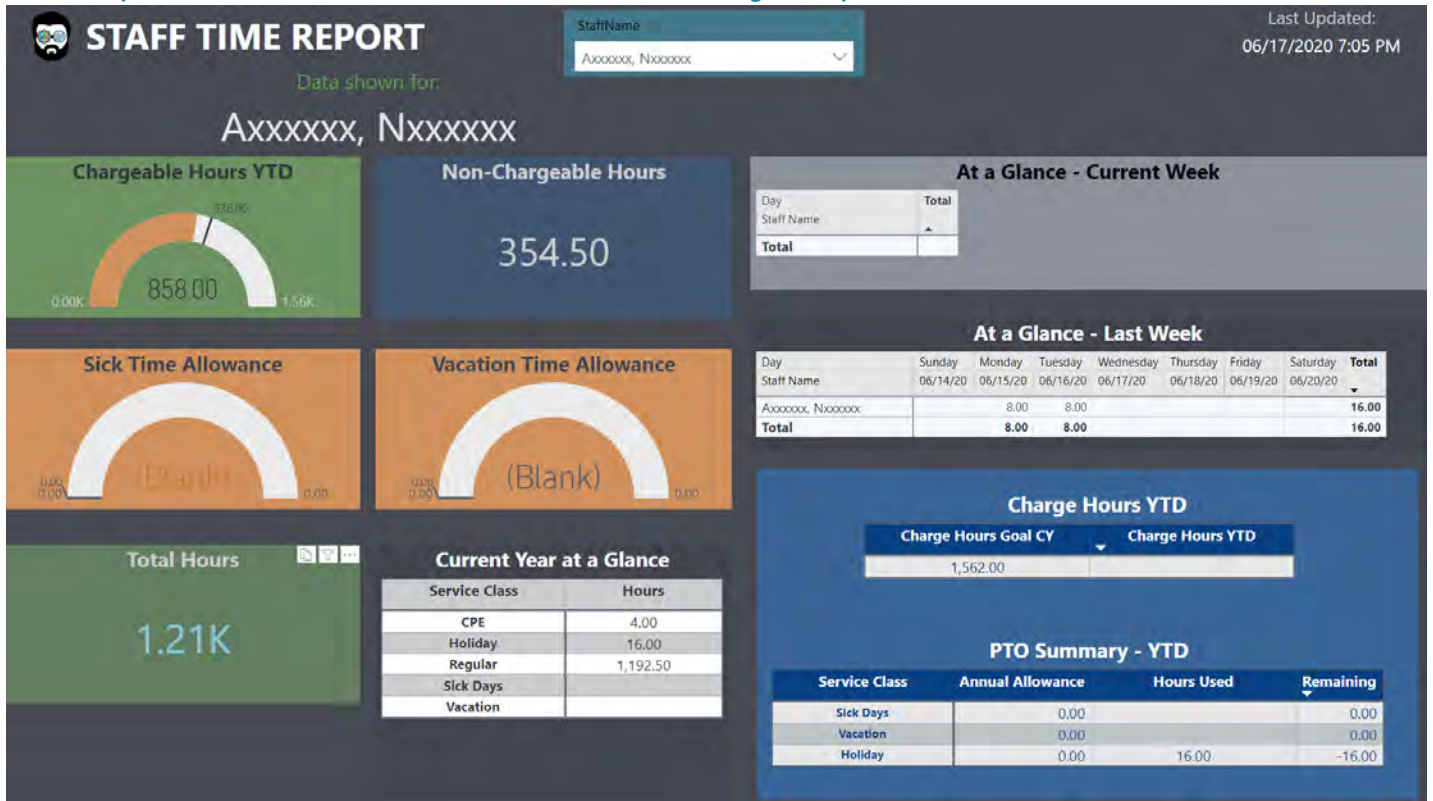


Figure 28 - Page 1 of the report (still under development, this report leverages RLS to filter the data for only the currently logged in user) - YTD

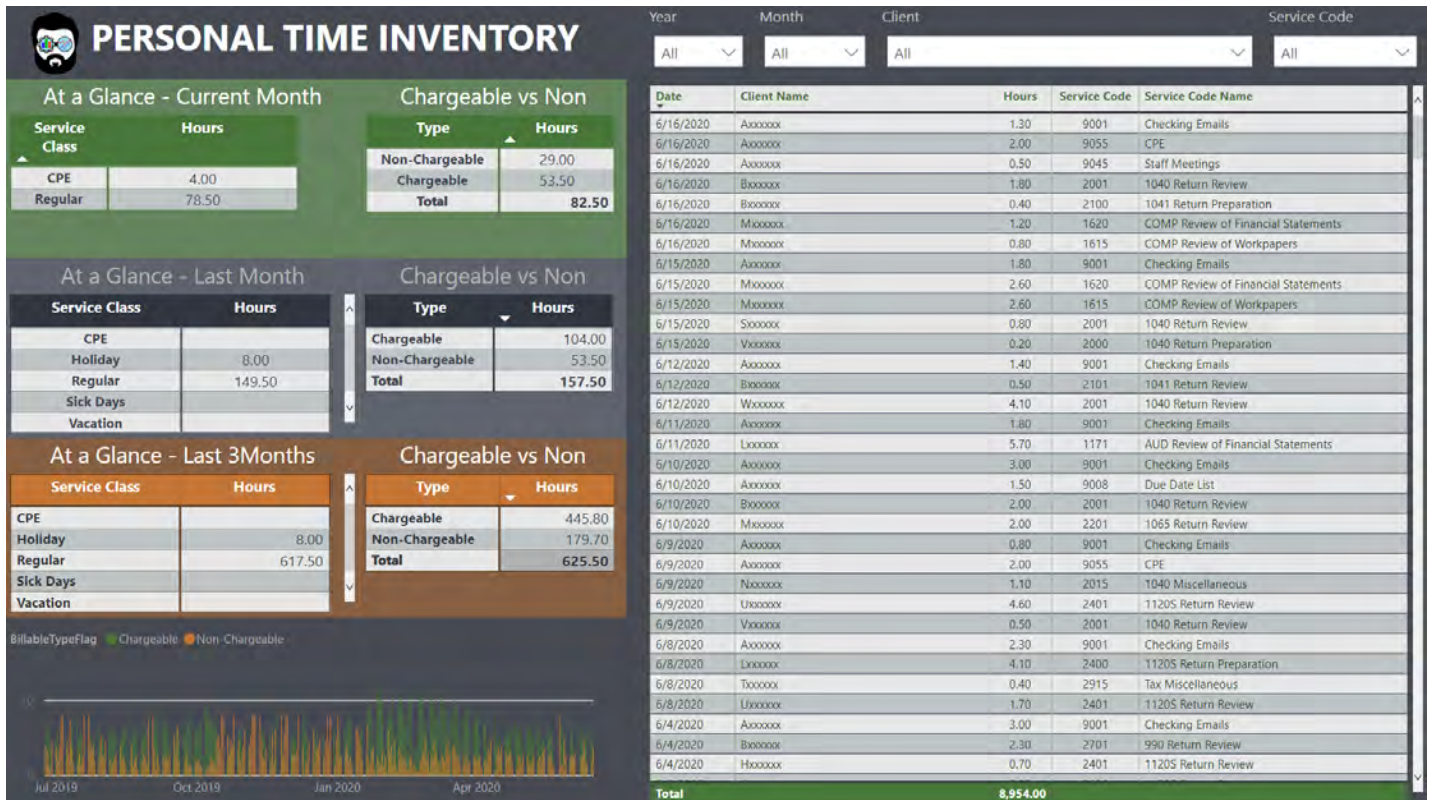


Figure 29 - Page 2 of the report - Time Inventory (historical through today)



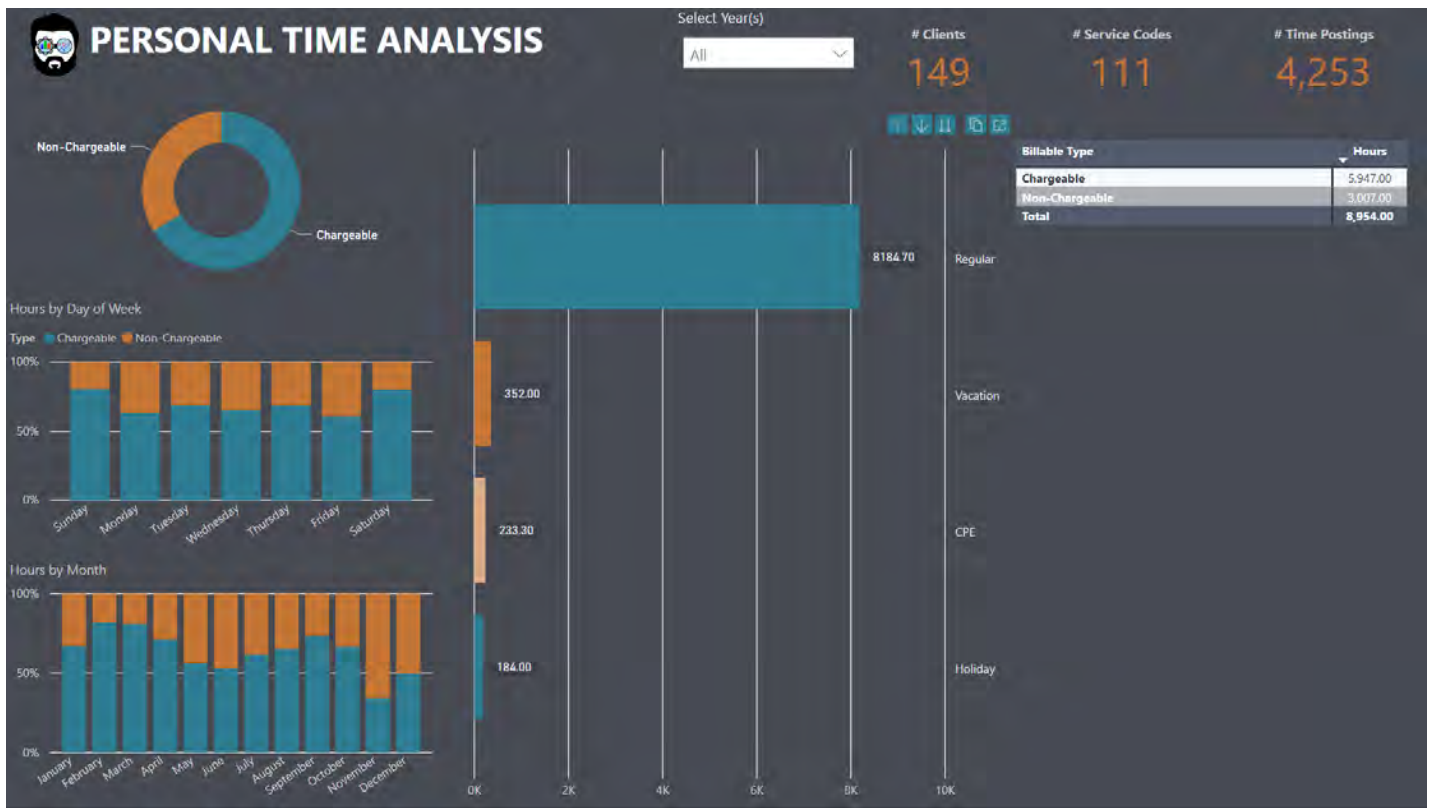


Figure 30 - Page 3 of the report - Time Analysis (historical through today)

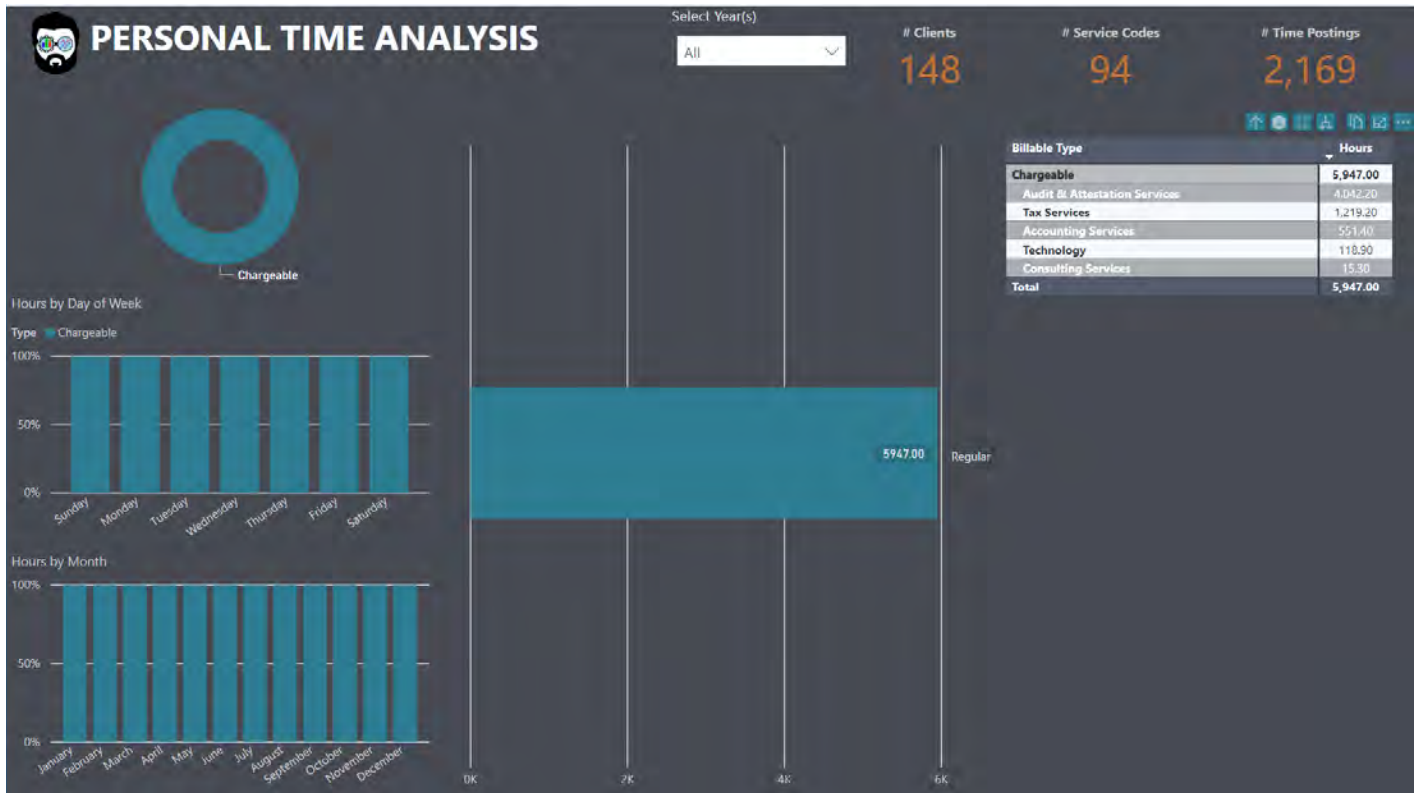


Figure 31 - Demonstration of report interactivity



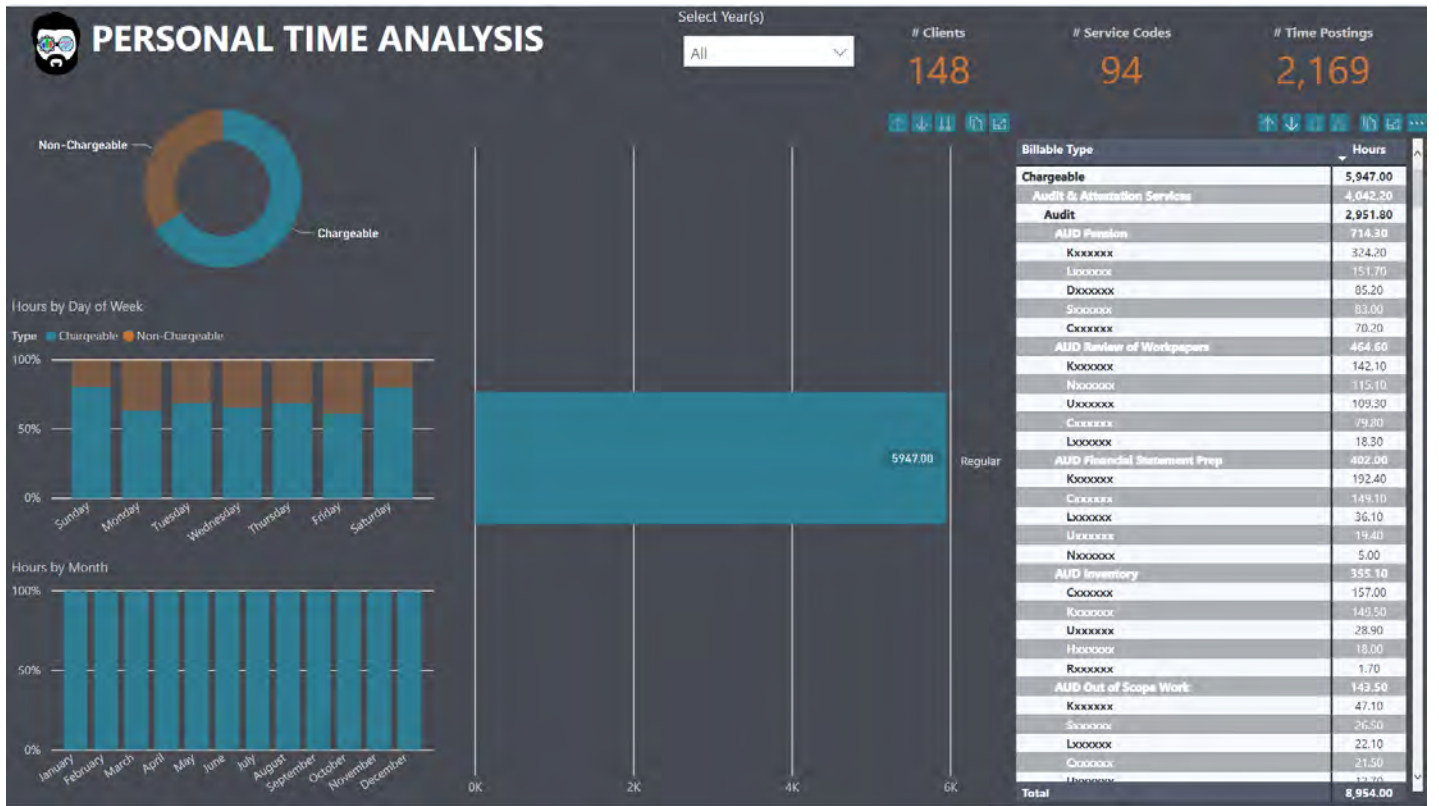


Figure 32 - Demonstration of 5-level drill-down from highest aggregation through most granular detail available (and every level in between)

# Example 7: E-Commerce Company

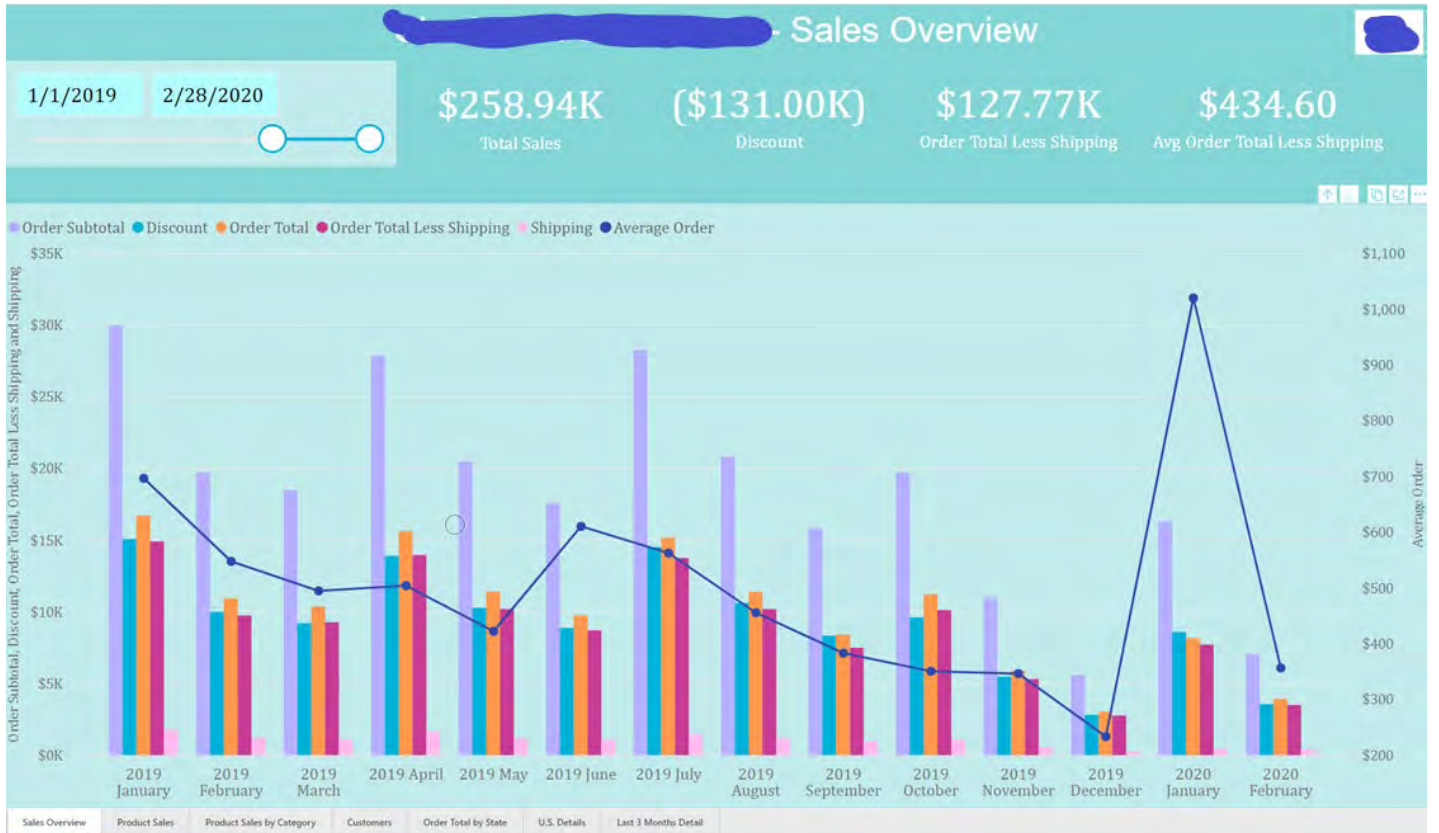


Figure 33 - Sales Overview

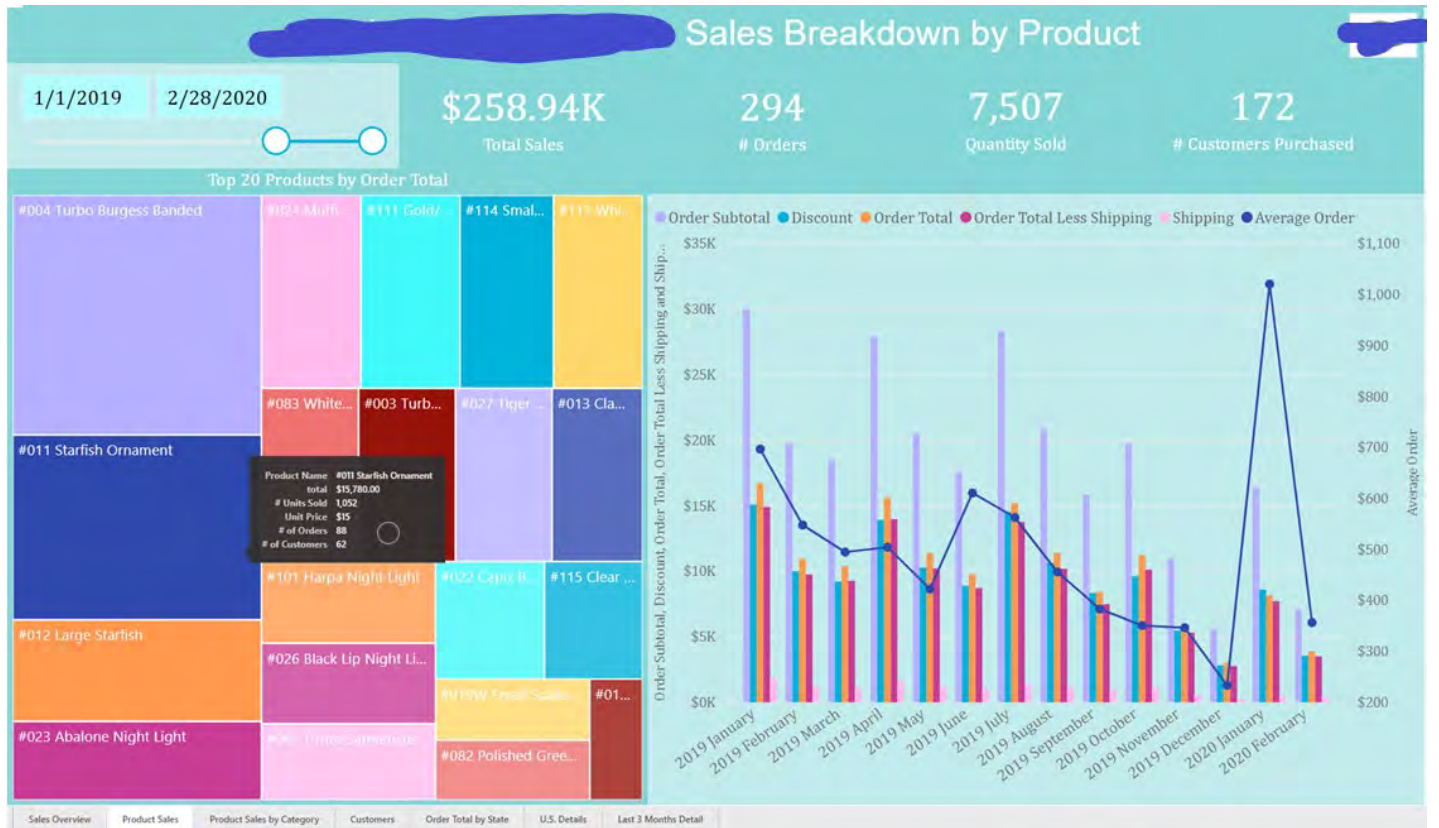


Figure 34 - Product Sales Overview

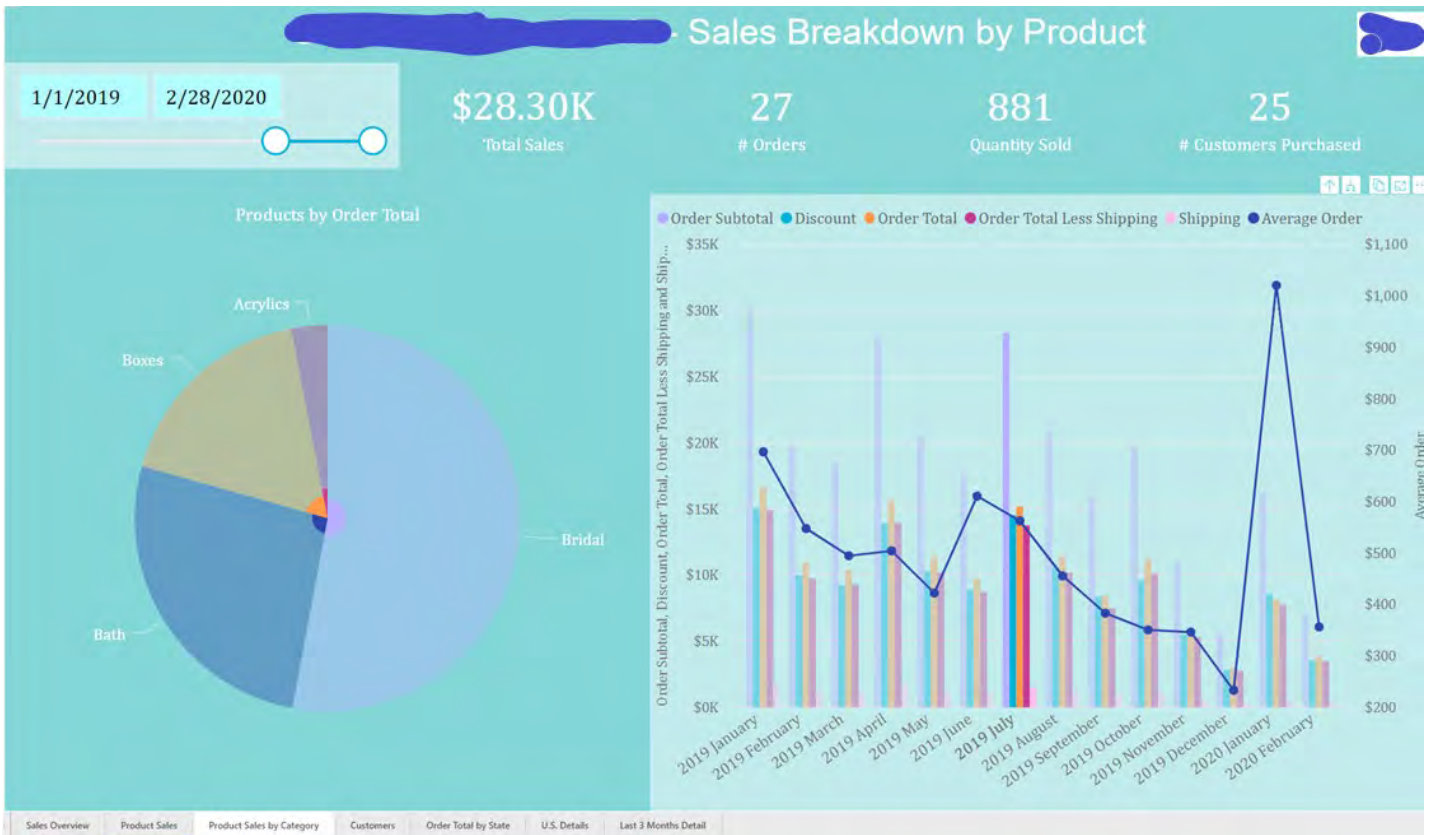


Figure 35 - Sales by Product Category

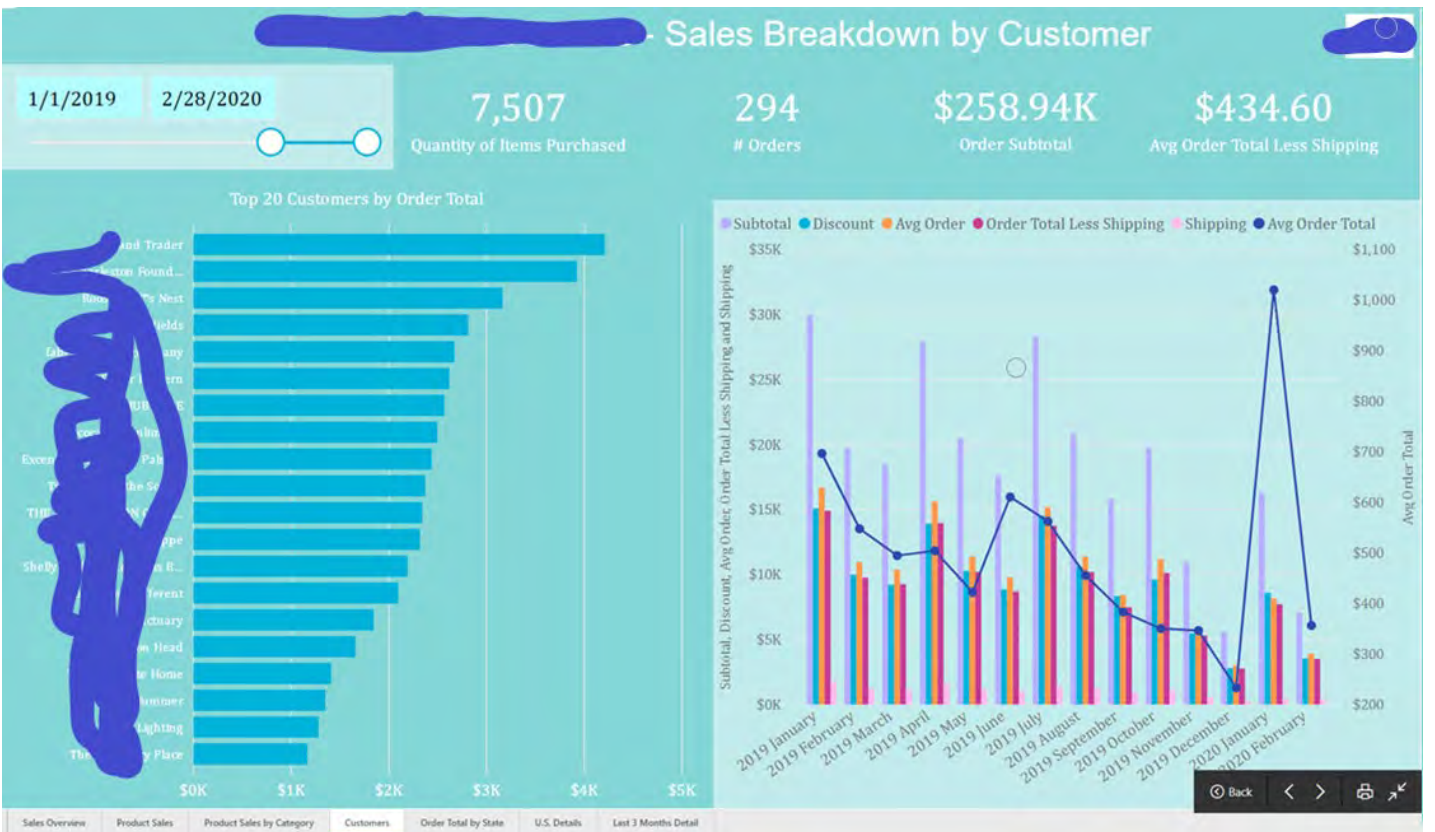


Figure 36 - Sales by Customer



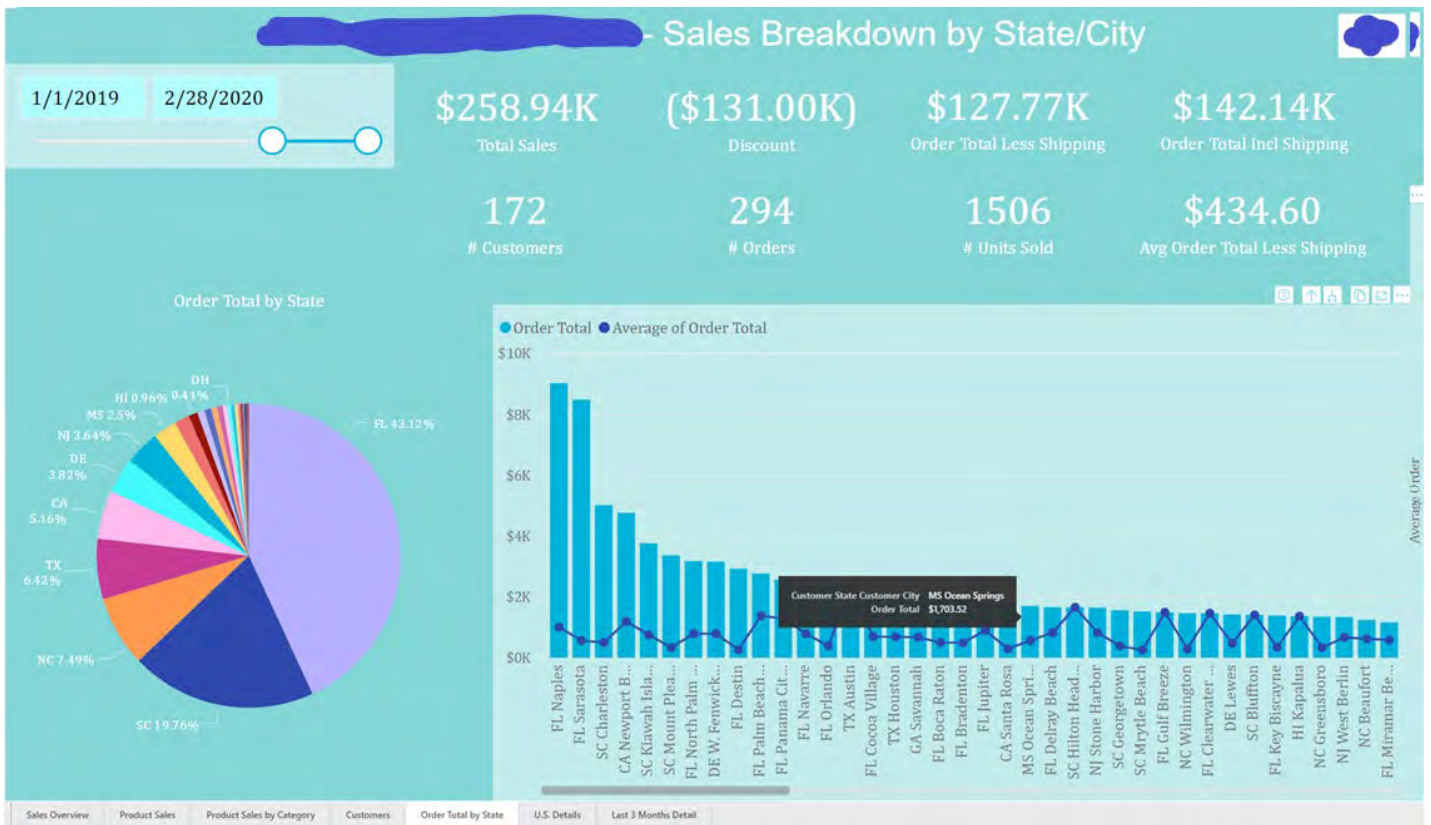


Figure 37 - Sales by Location

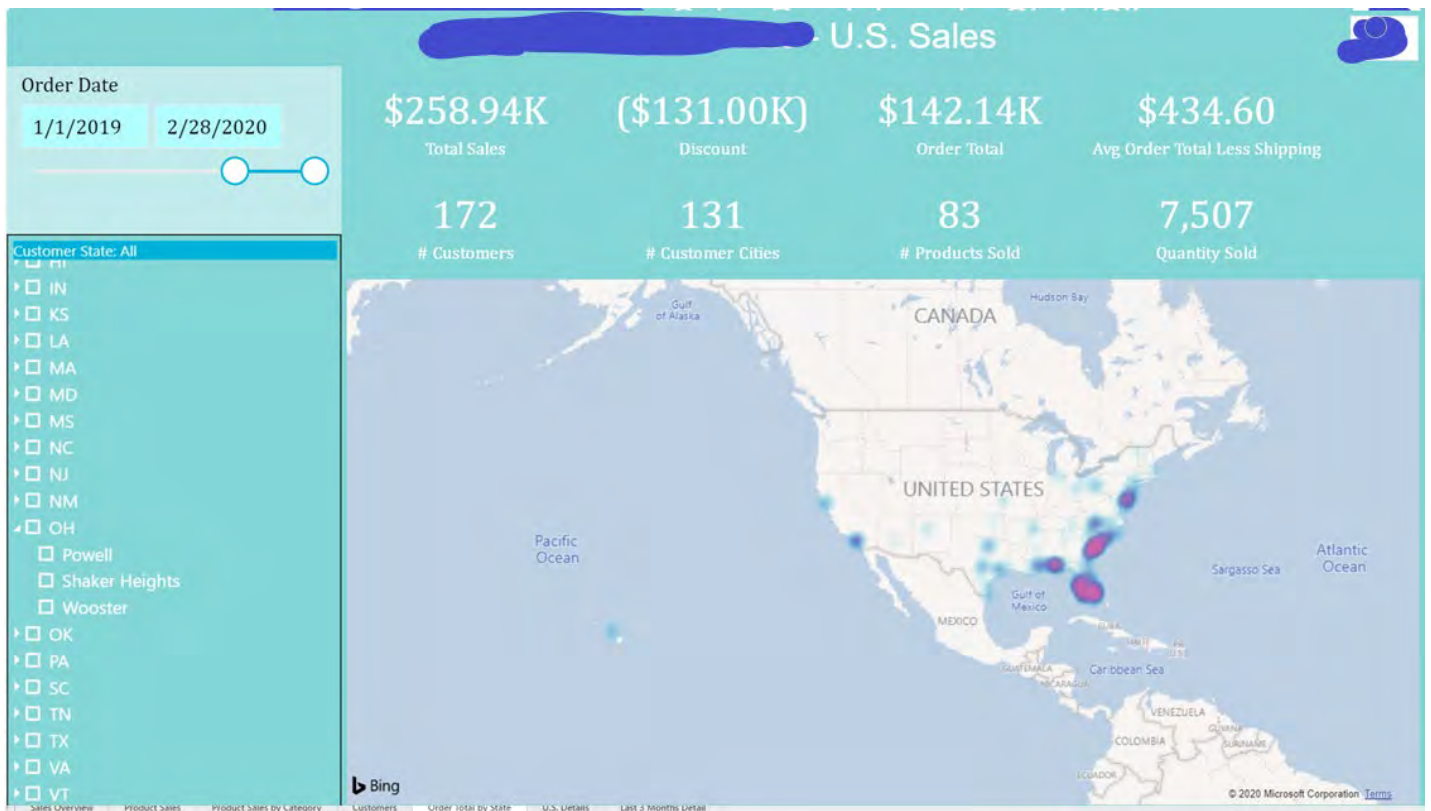


Figure 38 - Sales Heatmap

# Example 8: Safety Compliance Tracking

## Safety Compliance Report - Training Calendar

Training Name: All

- 2-DAY NEW HIRE ORIENTATION
- ADVANCED TRANSFORMERS - NLC
- CONFINED SPACE
- Crew Leadership
- Digger Derrick Safety-2 Days
- DRUG-FREE WORKPLACE
- DRUG-FREE WORKPLACE-SUPERVISORS
- FALL PROTECTION
- FE MOP Initial (Manual of Operations)
- FE MOP Refresher (Manual of Operations)
- FE Sub-Station Entry
- FIRST AID/CPR/AED
- Foreman Expectation Review
- GROUNDING & BONDING - NLC
- HELICOPTER
- JWD Leadership Review Training
- LEPP0-Bucket Truck
- LEPP0-MEWP
- LEPP0-Skid Steer
- LEPP0-Telehandler
- OSHA 10 ET&D POWER DELIVERY
- OSHA 20 ET&D
- OSHA 30
- Other
- POLE TOP/BUCKET TRUCK RESCUE - NLC
- QES BAREHAND
- QES BOOTCAMP 5-DAY COURSE
- QES HOTSTICK
- QES LINEMASTER
- Quanta Basic Tier 1 Helicopter Training
- QUANTA SUPERVISOR TRAINING
- RADIO FREQUENCY
- RIGGING



**Upcoming Training Events**

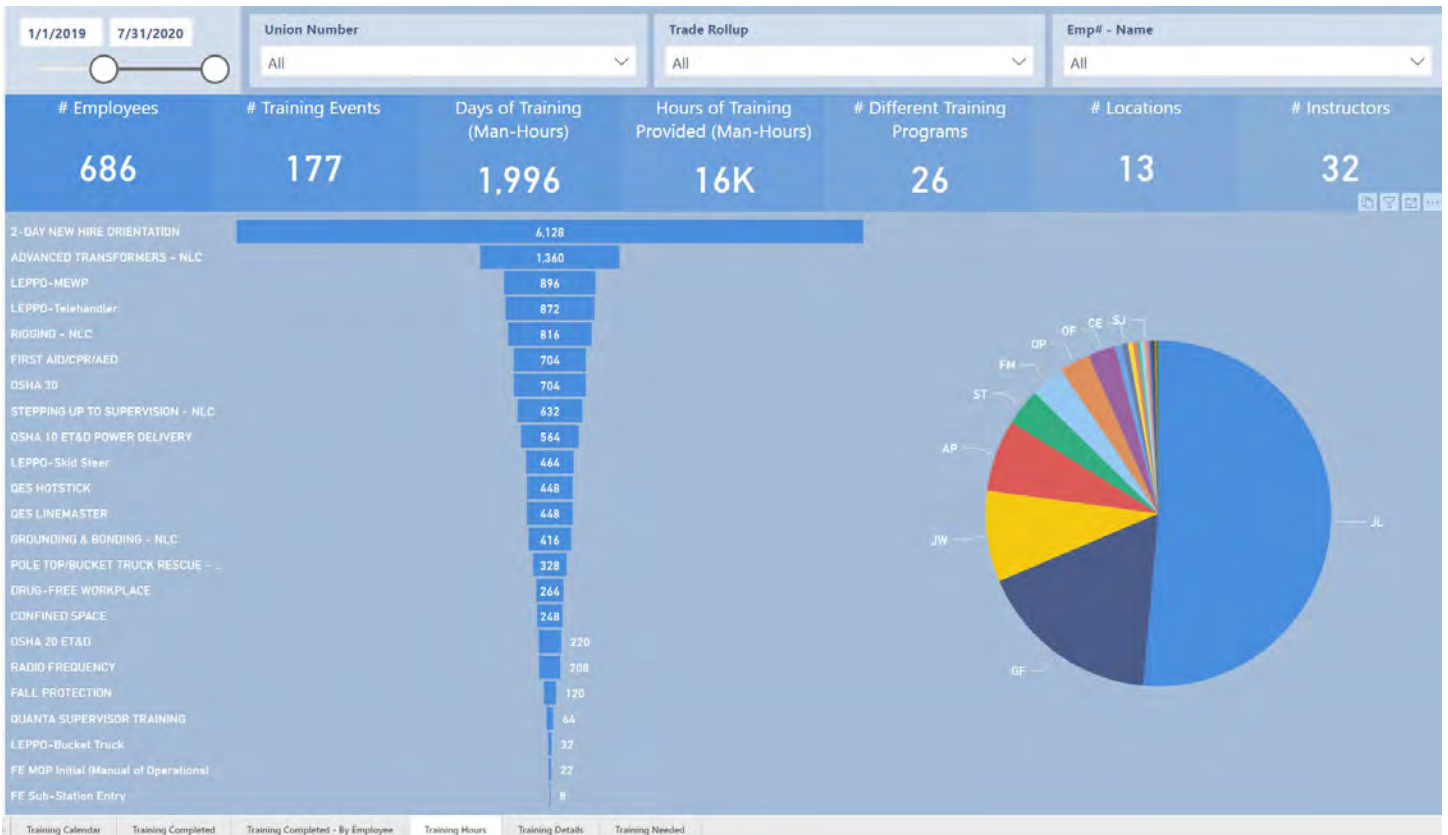
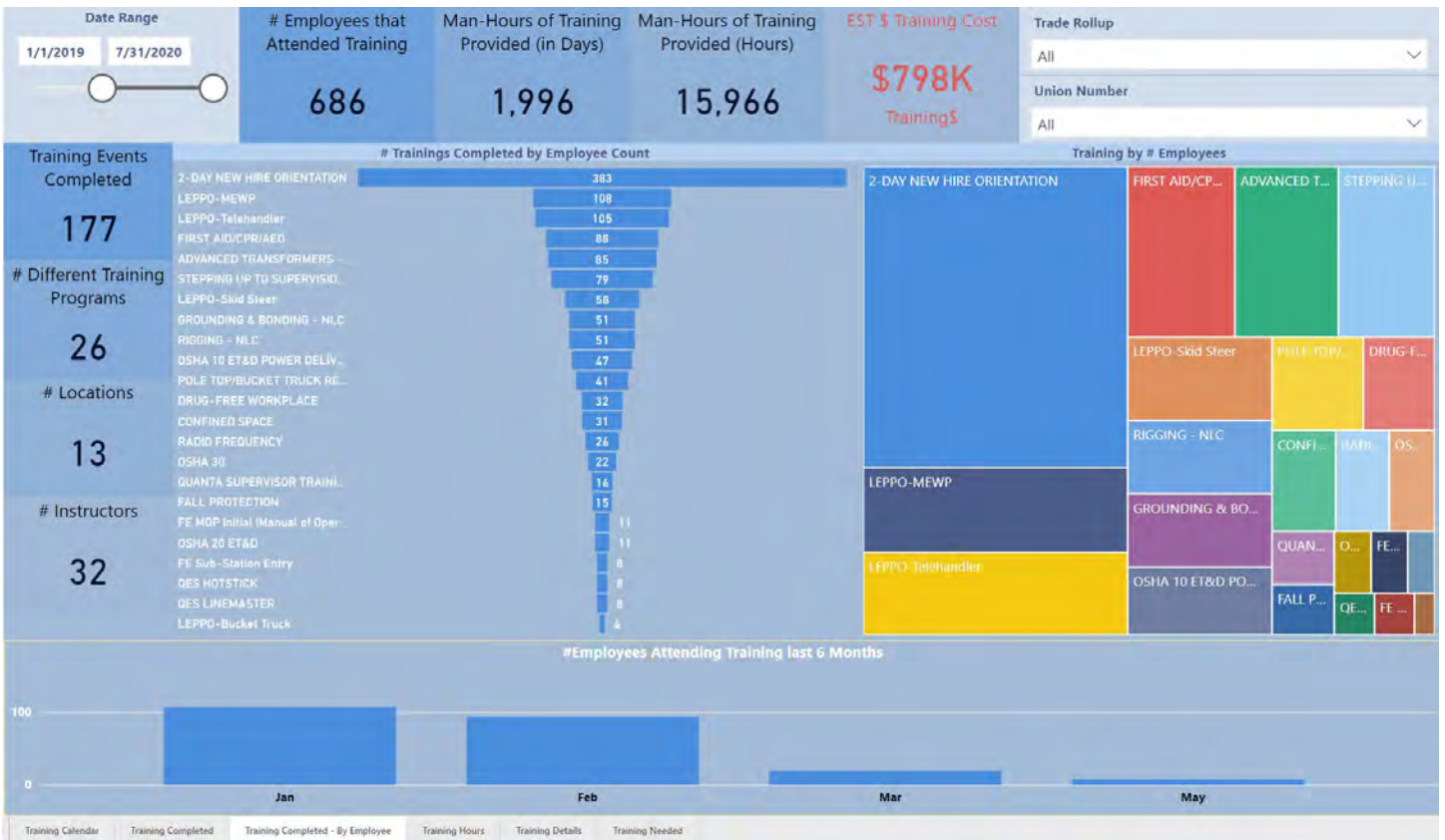
# Training Events	# Training Programs
1	1
# Different Locations	# Instructors
1	1
# Attendees Scheduled	# Upcoming Expirations (EES)
	2



Training Calendar   Training Completed   Training Completed - By Employee   Training Hours   Training Details   Training Needed











30 Days Ahead

# Training Expiring Next 30 Days: (Blank)

# Employees Training Needed: (Blank)

60 Days Ahead

# Training Expiring Next 60 Days: 1

# Employees Training Needed: 16

Training Name: All

Union Number: All

Employees w/ Upcoming Expiration next 60 Days

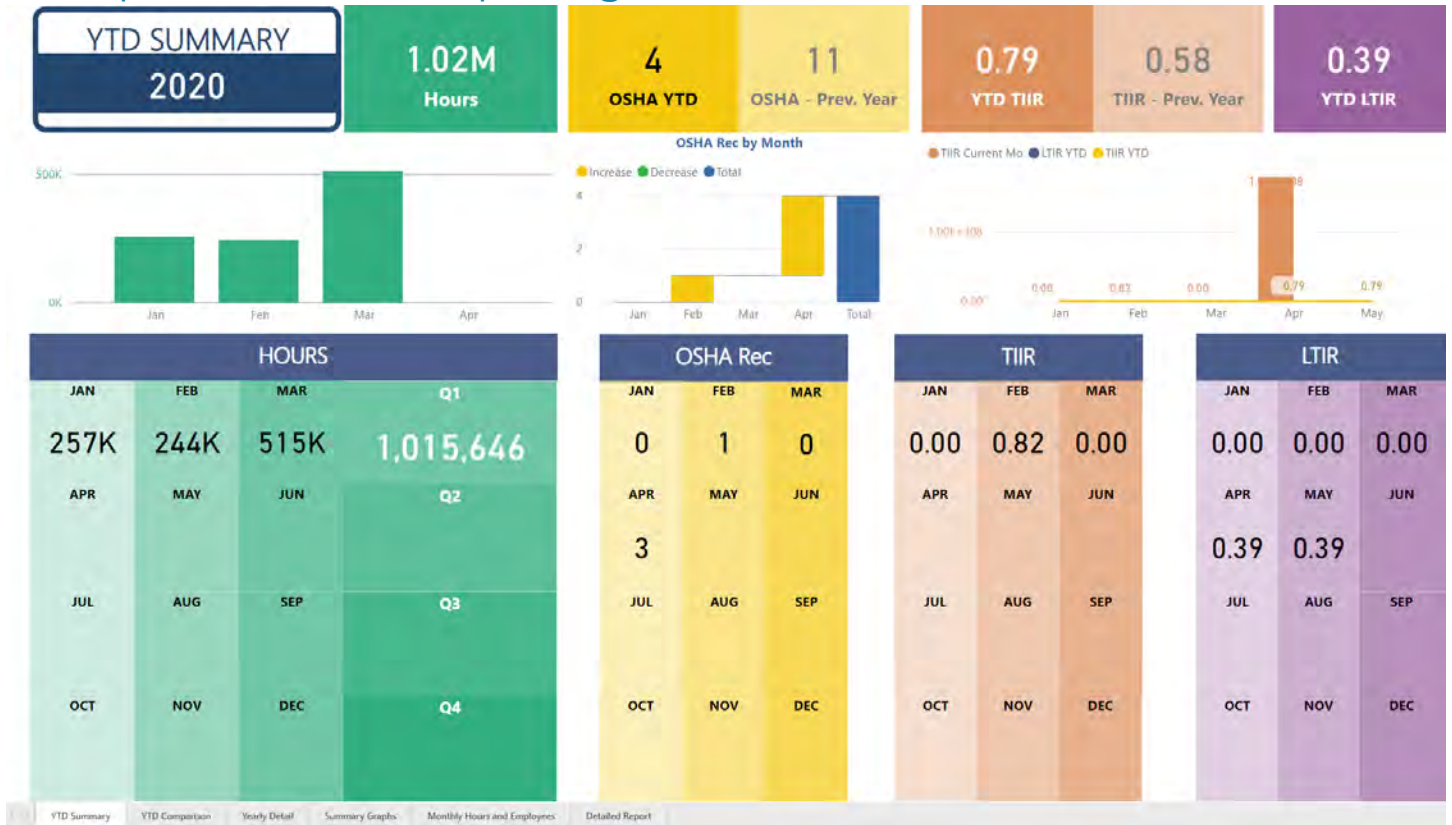
Employee	Trade	Union Number	Training Name	Expires
BURDEN, DANIEL JR	GM	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
CHAPIN, JED	ST	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
HILL, ZACHARY	AP	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
MATTOX, DAVID	JL	Union # 70	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
MCPEAK, RICHARD	OP	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
PARIDON, JASON	JL	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
RAWLINSON, MATHEW	JL	Union # 220	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/18/2020
DAUER, BRIAN JR	GF	Union # 245	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
JORDAN, DOUGLAS	OP	Union # 317	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
MOORE, SCOTT	JL	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
NESBITT, BRANDON	GF	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
RODRIGUEZ, JAVIER	JL	Union # 39	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
SLADKY, MATTHEW	JL	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
VALADEZ, RANDY	JL	Union # 681	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
VIAR, NORMAN	JL	Union # 71	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020
WOOD, HUNTER	GT	Union # 84	POLE TOP/BUCKET TRUCK RESCUE - NLC	6/19/2020

Employees w/ Expired Training last 30 days

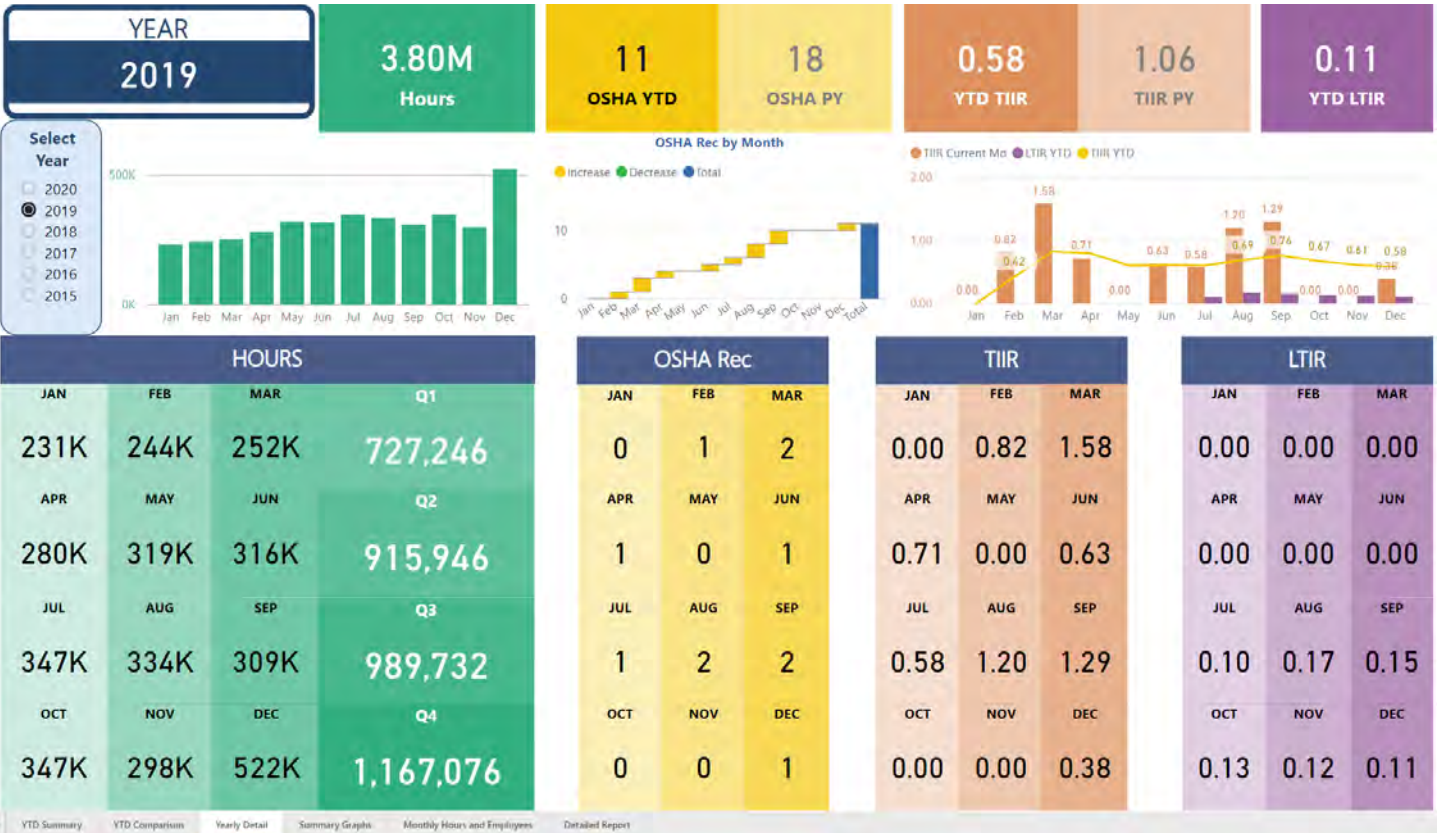
Employee	Training Name	Expired
DAUER, BRIAN JR	QES HOTSTICK	Wednesday, April 29, 2020
DAUER, BRIAN JR	QES LINEMASTER	Wednesday, April 29, 2020
ERICKSON, PHILLIP	QES HOTSTICK	Wednesday, April 29, 2020
ERICKSON, PHILLIP	QES LINEMASTER	Wednesday, April 29, 2020
FAUX, DUSTIN	QES HOTSTICK	Wednesday, April 29, 2020
FAUX, DUSTIN	QES LINEMASTER	Wednesday, April 29, 2020
GALFORD, JOSEPH	QES HOTSTICK	Wednesday, April 29, 2020
GALFORD, JOSEPH	QES LINEMASTER	Wednesday, April 29, 2020
HENRY, JAMES	QES HOTSTICK	Wednesday, April 29, 2020
HENRY, JAMES	QES LINEMASTER	Wednesday, April 29, 2020
JAKAUB, MATTHEW	QES HOTSTICK	Wednesday, April 29, 2020

Navigation: Training Calendar, Training Completed, Training Completed - By Employee, Training Hours, Training Details, Training Needed

# Example 9: Incident Reporting and Rate Calculations



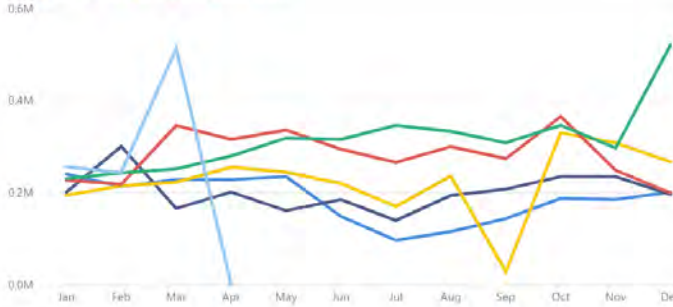




## OSHA Recordables

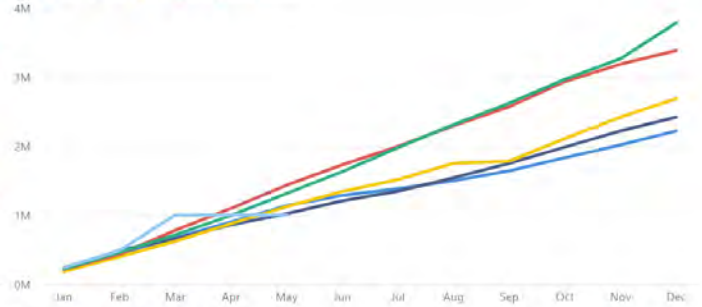
Monthly Manhours by Year

Year ● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020



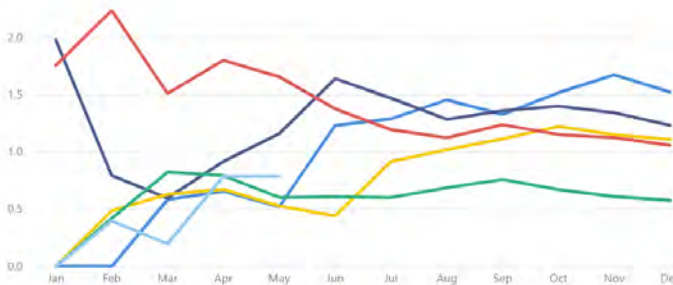
Cumulative Manhours by Year

Year ● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020

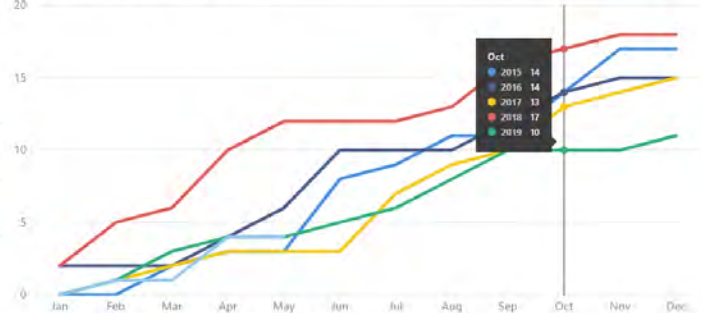


Monthly TIIR by Year

Year ● 2015 ● 2016 ● 2017 ● 2018 ● 2019 ● 2020

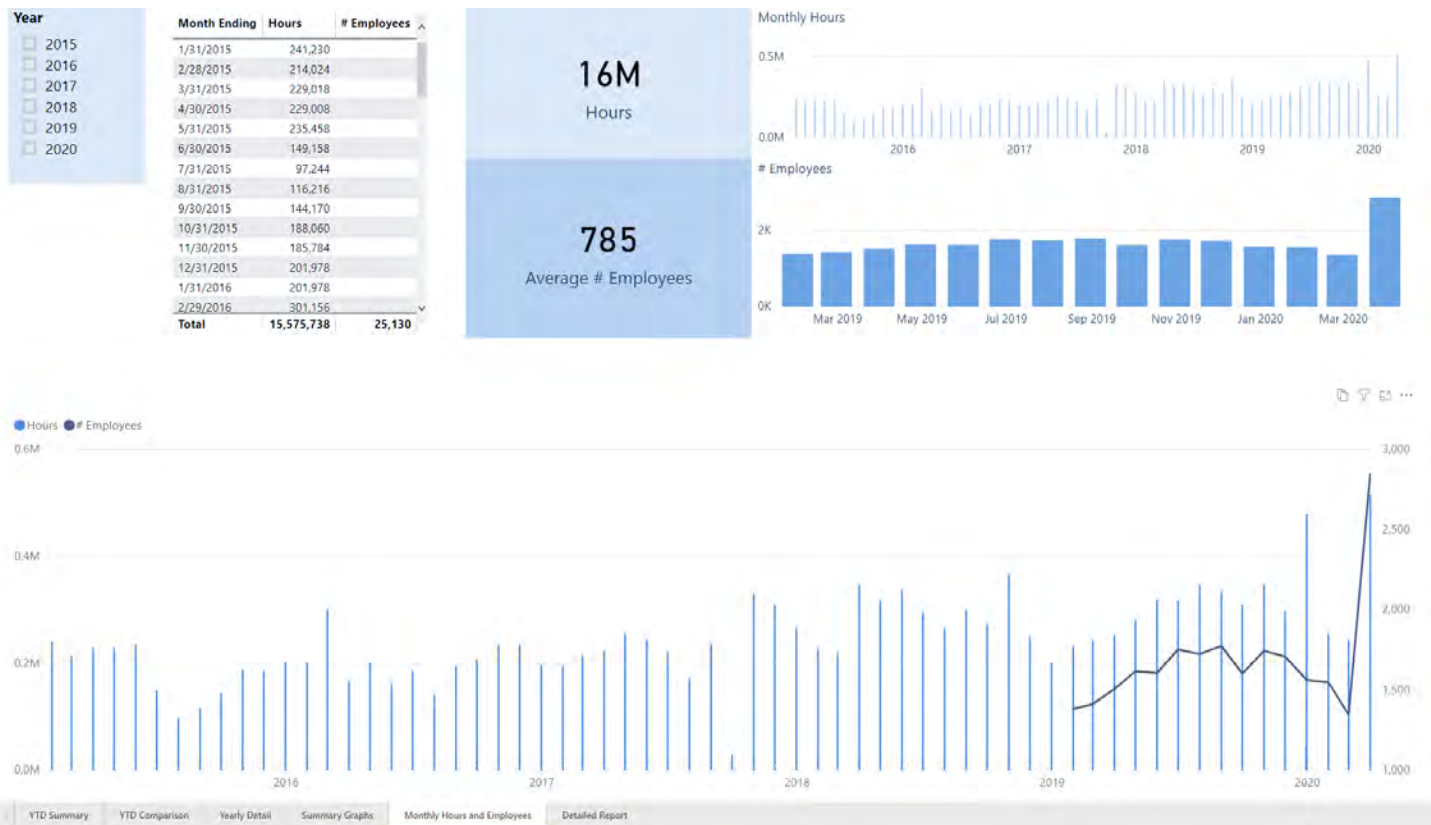


OSHA Recordables - Cumulative by Year



YTD Summary YTD Comparison Yearly Detail Summary Graphs Monthly Hours and Employees Detailed Report





## Example 10: Safety - Combined Dashboard

