CREATING A DASHBOARD TO TRACK PERFORMANCE

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This project showcases the use of performance measurement skills and Excel Power skills to create a sales dashboard.

The Case

MavenTech (a fictitious company) sells computer hardware to large businesses. They have a new CRM system that tracks their sales opportunities, but outside of the platform, they have no visibility of the data.

In order to become a more data-driven organization, they would like a set of data visualizations that allows sales managers to track their team's quarterly performance.

The CRM Dataset

Structure: 4 tables
(sales pipeline, accounts, products, and sales teams)

File type: CSV

# of Records: 8800 records

# of Fields: 18

Source: Maven Sales Challenge

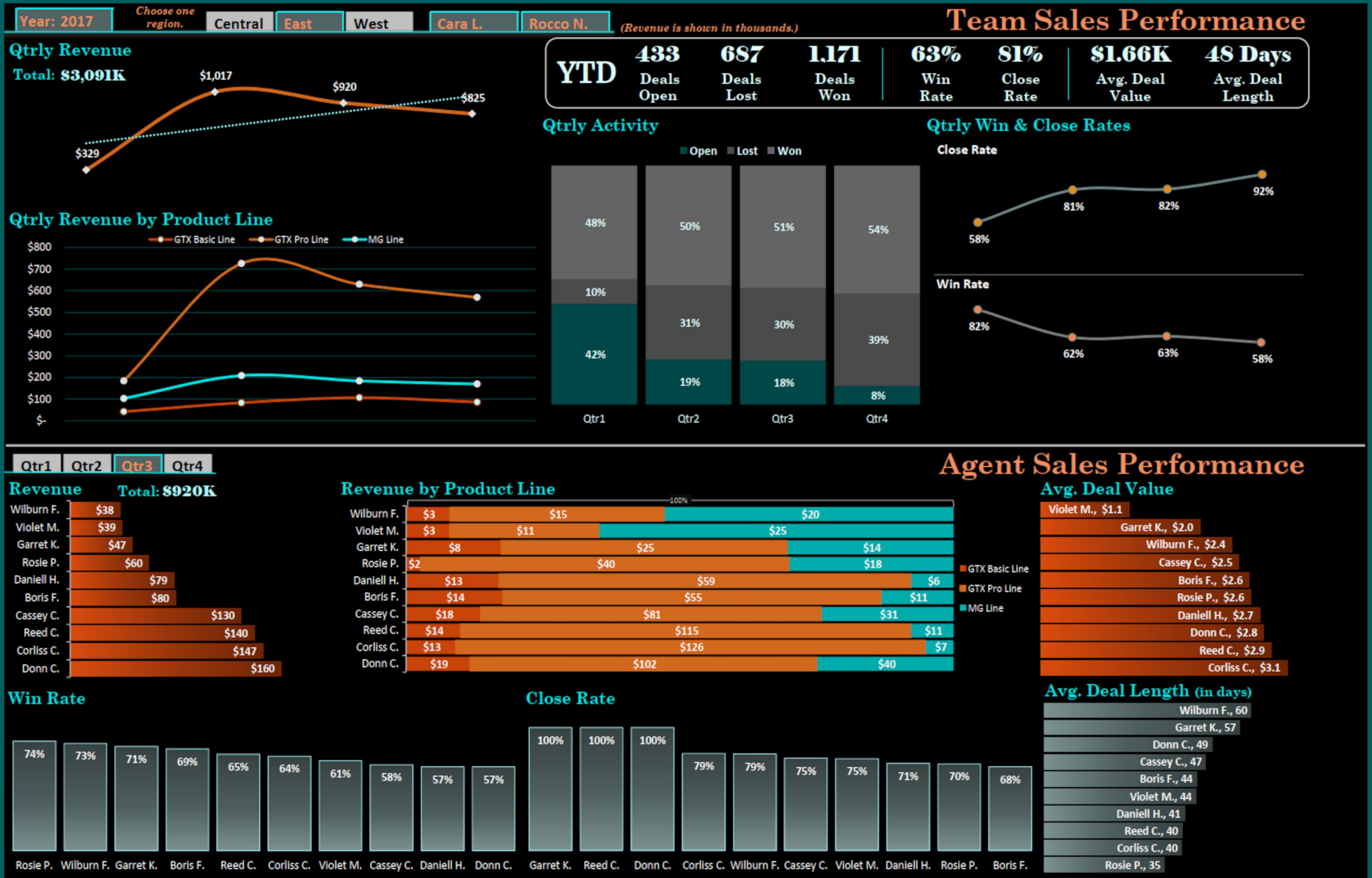
Solution Overview

Considering the outlined scenario, I approached the project as the team's BI Developer and created an interactive dashboard to help sales managers track team performance.

Taking into account that Sales is a fast-paced environment, I designed the dashboard to show the overall team performance at the top so managers can access high-level information quickly. The bottom section contains a selection of the metrics used at the top, but these show the performance of team members.

To complete this project, I achieved the following objectives:

1. Prepared the data with Power Query and created a relational model with Power Pivot.
2. Identified sales metrics.
3. Built the dashboard using pivot



Year: 2017
Choose one region.
Central
East
West
Cara L.
Rocco N.
(Revenue is shown in thousands.)
Team Sales Performance
Qtrly Revenue
Total: $3,091K
$329
$1,017
$920
$825
YTD
433 Deals Open
687 Deals Lost
1,171 Deals Won
63% Win Rate
81% Close Rate
$1.66K Avg. Deal Value
48 Days Avg. Deal Length
Qtrly Activity
Open
Lost
Won
48%
10%
42%
50%
31%
19%
51%
30%
18%
54%
39%
8%
Qtr1
Qtr2
Qtr3
Qtr4
Qtrly Win & Close Rates
Close Rate
58%
81%
82%
92%
Win Rate
82%
62%
63%
58%
Qtrly Revenue by Product Line
GTX Basic Line
GTX Pro Line
MG Line
$800
$700
$600
$500
$400
$300
$200
$100
$-
Qtr1
Qtr2
Qtr3
Qtr4
Agent Sales Performance
Revenue
Total: $920K
Wilburn F. $38
Violet M. $39
Garret K. $47
Rosie P. $60
Daniell H. $79
Boris F. $80
Cassey C. $130
Reed C. $140
Corliss C. $147
Donn C. $160
Revenue by Product Line
100%
Wilburn F. $3 $15 $20
Violet M. $3 $11 $25
Garret K. $8 $25 $14
Rosie P. $2 $40 $18
Daniell H. $13 $59 $6
Boris F. $14 $55 $11
Cassey C. $18 $81 $31
Reed C. $14 $115 $11
Corliss C. $13 $126 $7
Donn C. $19 $102 $40
GTX Basic Line
GTX Pro Line
MG Line
Avg. Deal Value
Violet M., $1.1
Garret K., $2.0
Wilburn F., $2.4
Cassey C., $2.5
Boris F., $2.6
Rosie P., $2.6
Daniell H., $2.7
Donn C., $2.8
Reed C., $2.9
Corliss C., $3.1
Win Rate
Rosie P. 74%
Wilburn F. 73%
Garret K. 71%
Boris F. 69%
Reed C. 65%
Corliss C. 64%
Violet M. 61%
Cassey C. 58%
Daniell H. 57%
Donn C. 57%
Close Rate
Garret K. 100%
Reed C. 100%
Donn C. 100%
Corliss C. 79%
Wilburn F. 79%
Cassey C. 75%
Violet M. 75%
Daniell H. 71%
Rosie P. 70%
Boris F. 68%
Avg. Deal Length (in days)
Wilburn F., 60
Garret K., 57
Donn C., 49
Cassey C., 47
Boris F., 44
Violet M., 44
Daniell H., 41
Reed C., 40
Corliss C., 40
Rosie P., 35

Identifying the Sales Metrics

After completing some exploratory data analysis, metrics related to revenue and the sales pipeline were identified to provide visibility of various elements of sales performance.

Financial Health & Product Performance

- Quarterly Revenue
- Quarterly Revenue by Product Line
- Average Deal Value

Productivity & Pipeline Management

- Deals Open
- Deals Won
- Deals Lost

Sales Effectiveness & Efficiency

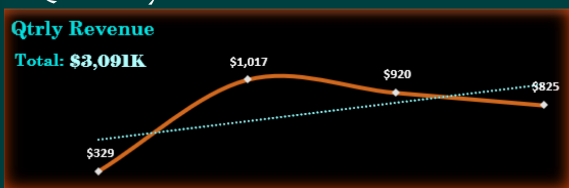
- Win Rate
- Close Rate
- Average Deal Length

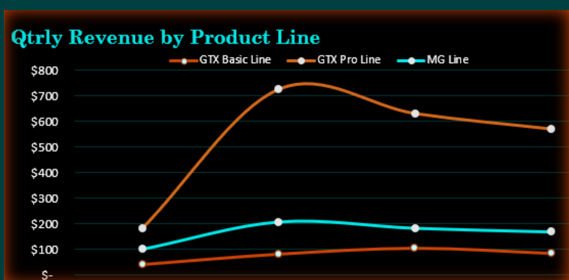
Creating the Dashboard

At the top of the dashboard, managers may filter the data by year, region, and regional manager. At the team level, the dashboard provides an at-a-glance view of quarterly trends and YTD performance. At the agent level, it provides YTD performance with the option to select a specific quarter for a point-in-time view.

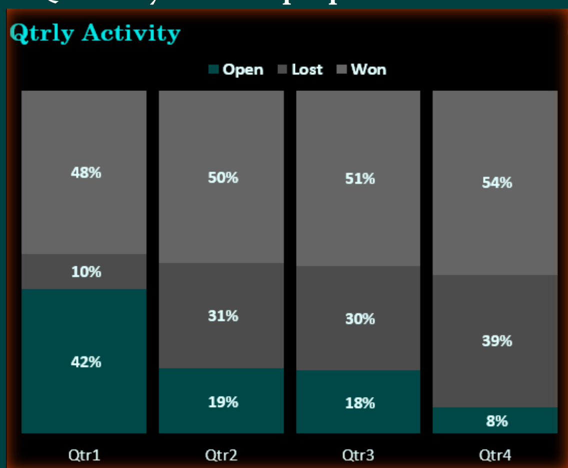
Team-level Visualizations

- Quarterly trends





- Quarterly trend & proportions



- YTD metrics

433 Deals Open

687 Deals Lost

1,171 Deals Won

63% Win Rate

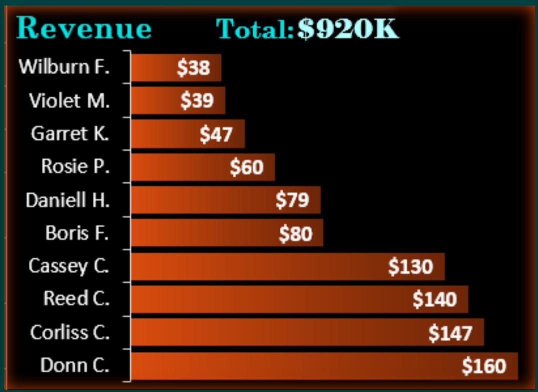
81% Close Rate

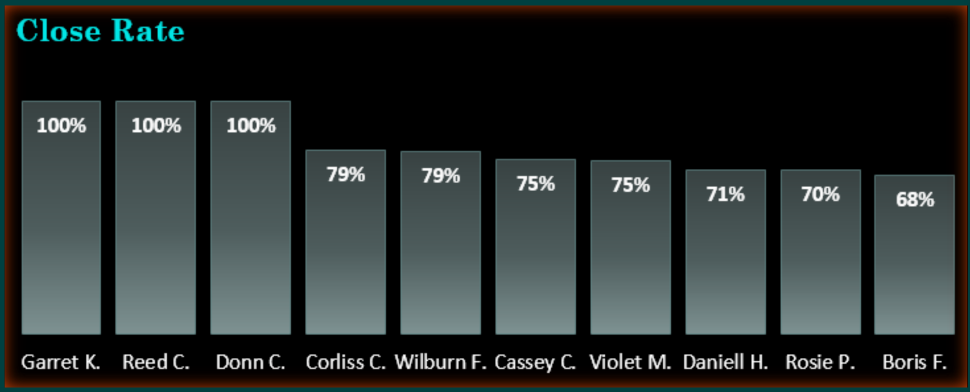
$1.66K Avg. Deal Value

48 Days Avg. Deal Length

Agent-level Visualizations

Except for the quarterly activity, the same team-level metrics are used to show agents' performance with the option to filter by quarter or YTD.





Tech Spotlight: Preparing & Modeling the Data

To prepare the data, a connection to the four tables was setup in Power Query. Some data cleaning was done and then, custom columns were added.

Working Days	dates_combined
133	3/1/2017
138	3/11/2017
134	3/7/2017
136	3/9/2017

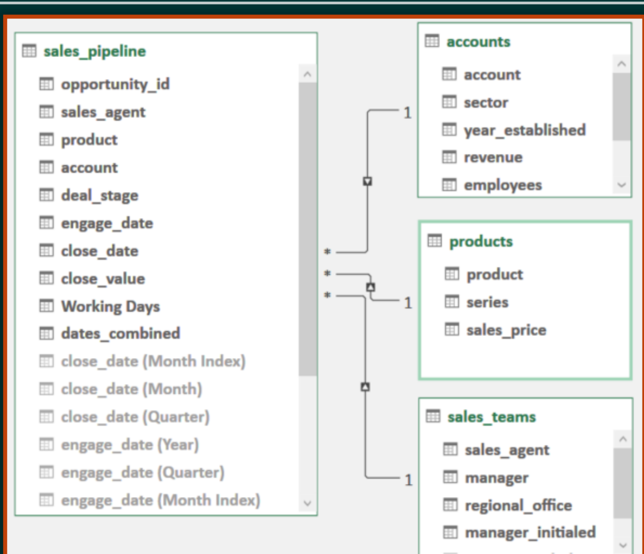
To the sales pipeline table, a column was added to tally the days between the engage date and the close date. Because several dates fall on nontraditional working days, weekends and holidays weren't excluded. A second column was added to have a single date for each opportunity. If the deal closed, the close date is used; if not, the engage date is used. This allows the data to be filtered by quarters using just one slicer.

product	series
GTX Basic	GTX Basic Line
GTX Pro	GTX Pro Line
MG Special	MG Line
MG Advanced	MG Line
GTX Plus Pro	GTX Pro Line
GTX Plus Basic	GTX Basic Line
GTK 500	GTK 500 Line

In the products table, the series column was edited to group products by product line.

manager_initialed	agent_initialed
Dustin B.	Anna S.
Dustin B.	Cecily L.
Dustin B.	Versie H.
Dustin B.	Lajuana V.

To the sales team table, two custom columns were added to have just the initial for employees' last names. This helped reduce the space needed for two of the dashboard slicers.



With the data preparation step done, the tables were added to Power Pivot and a one -to-many relational model was created from the accounts, products and sales teams tables to the sales pipeline table.

Measure Name: Win Rate

Value Description: Won Deals / Closed Deals

Formula: *fx* Check DAX Formula

```
=CALCULATE( [Count of deal_stage], FILTER(sales_pipeline, [deal_stage] = "Won") )
/
CALCULATE( [Count of deal_stage], FILTER(sales_pipeline, ([deal_stage] = "Won") || [deal_stage] = "Lost"))
```

In addition, DAX was used to create measures for calculating the win rate and close rate.