This is a small project using real data that I've compiled from my job. The data set used covers a 4-year period, from the start of 2019 to the end of 2022. For this particular time period, there are over 70,000 rows of data across several sheets and tables. The data consists of product/service order information from clients of our company, and contains data entries such as the client's name, order ID, the product/service, and date of request and date of delivery.

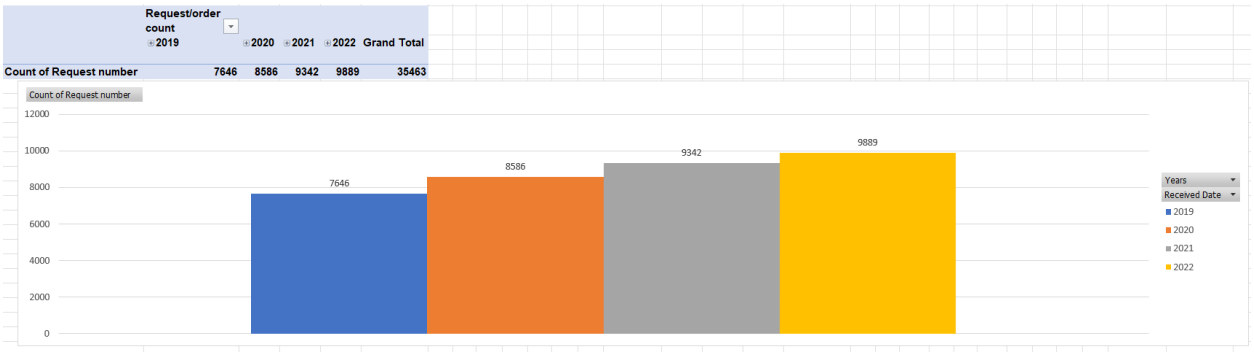
The data set has been modified to remove sensitive information.

As a side note, this is data that I've compiled manually and have maintained throughout; and although the data used for this small project will be confined to the period listed above, I have been working with this data since pre-2019.

Under a real working scenario, I could analyze the order information of our clients on an annual basis using historical data, and see if there are any patterns of higher or lower frequencies related to said order information (i.e., incoming requests) throughout a particular year. In doing so, it could offer insights or indicate certain trends – and with that data – it may be possible to predict similar patterns or trends for the following year(s).

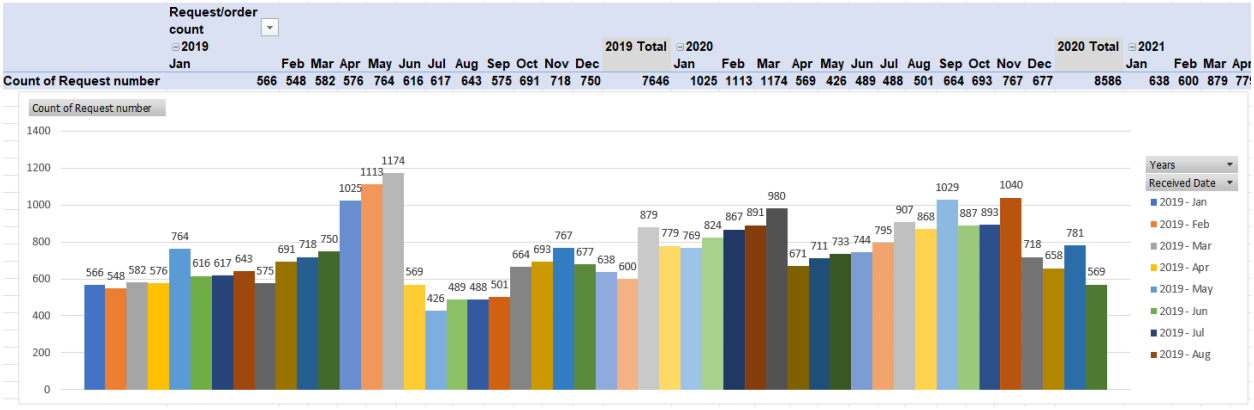
However please note that no hypothesis will be presented during this small project. But, under normal circumstances, one would analyze this data with the goal of discovering useful and/or relevant information and then utilize the data to make informed conclusions to support the decision-making process.

To compile this, a pivot table was created, with the request date set as a column, and the order ID count set as the value. Then, a (clustered) column chart was inserted for the visualization.

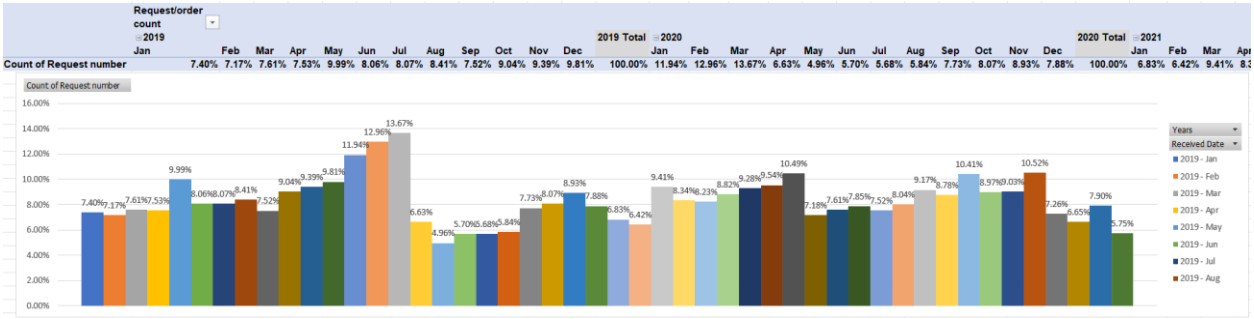


One useful feature of the pivot table is that when inserting a chart, any changes made to the filters will automatically update the chart's visuals in real time.

For example, the below is the same chart as the one above, with the years expanded out to show the monthly request/order count.



Note that the above charts show the values as raw counts, while another option is to show the values as percentages of the parent totals. Doing this would enable us to see the monthly volume as percentage values relative to the calendar year.



From a separate sheet, I will also introduce the data set of a particular client that I compiled in Q1 of 2022 for QBR analysis at the time. Again, the data set has been modified to remove sensitive information.

Month	No. of requests received	No. of requests completed
2022 January	484	475
2022 February	590	488
2022 March	687	632

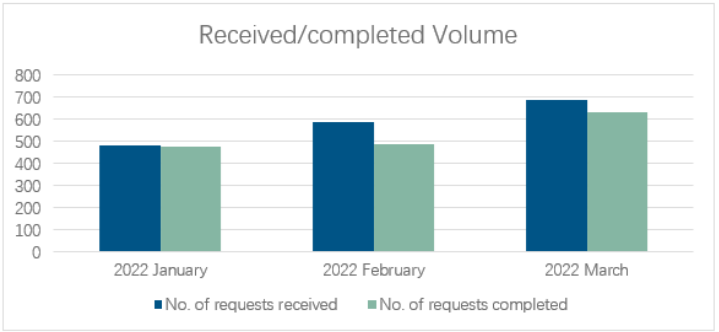


Fig. A

A (clustered) column chart depicting the number of requests received in Q1 of 2022 against the number of requests completed for a client. As the volume is shown to be consistently high, the number of

requests received was continuously higher than the number of requests completed, as any incomplete requests would be completed in the following month.

Orders A		
Month	No. of searches completed	Average TAT (Net Working Days)
2022 January	323	5.18
2022 February	326	5.38
2022 March	419	6.36

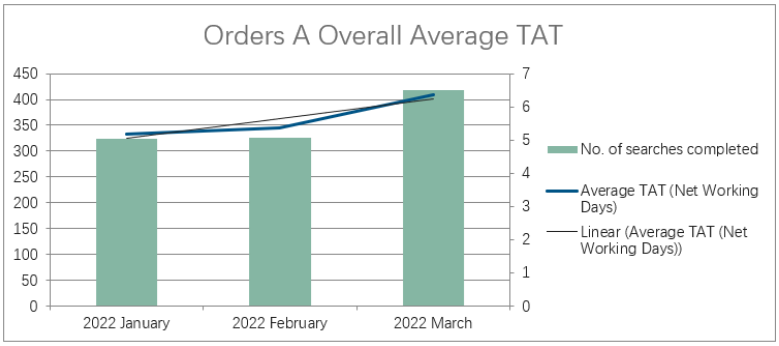


Fig. B

This leads us to the TAT (turnaround time) chart, which is a custom combination of a clustered column and line chart. A linear trendline was also added to the chart.

In order to calculate the average TAT, a separate sheet was created using three (3) metrics of data: the date of request, date of delivery, and order ID. Then, the =NETWORKDAYS formula was applied, which returns the number of whole workdays between two dates (i.e., date of request, and date of delivery). If a public holiday fell on a weekday, then that day would not be counted as a work day, meaning that day would need to be removed from the =NETWORKDAYS formula. This was accomplished by assigning the holiday date(s) to certain cells, which were referenced to via absolute references, and finally adding -1 to the end of the formula.

Category	Reasons	Incomplete Count	%	Cumulative %
A	1a	2	3%	4%
	2a	1	1%	
B	1b	2	3%	3%
	2b		0%	
	3b		0%	
	4b		0%	
C	1c	39	53%	93%
	2c	26	36%	
	3c	3	4%	
Total		73	100%	100%

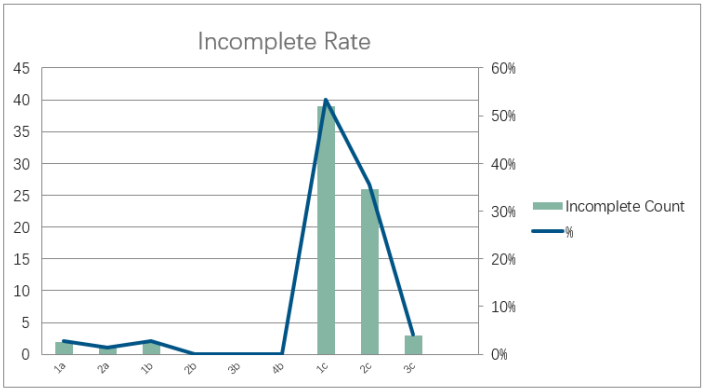


Fig. C

The Incomplete Rate chart is also a custom combination (clustered column and line chart) with count and percentage values.

For the % column in the table, the =SUM formula was used and the number type was changed to percentage, to calculate the percentage total out of 100, based on the Incomplete Count, divided by the

Incomplete Count total. And the cumulative % column totals the listed percentages per section as differentiated in the category column, using the =SUM formula.

Note that the Incomplete Count total was calculated prior for the month.

There was further analysis conducted from this data set, however the formulas and visualizations used are the same as listed above and hence will not be introduced here.