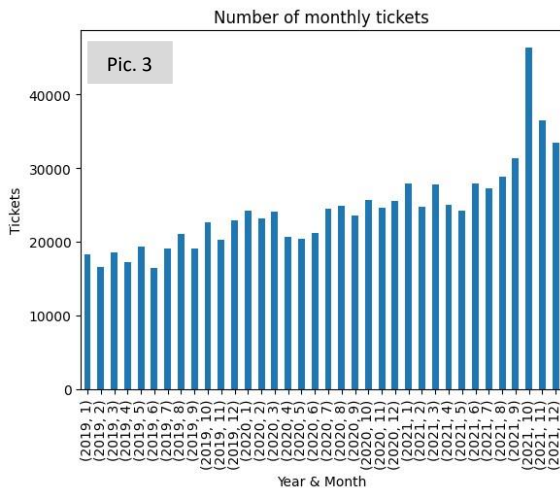
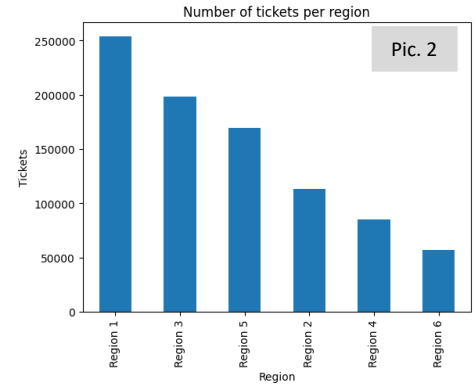
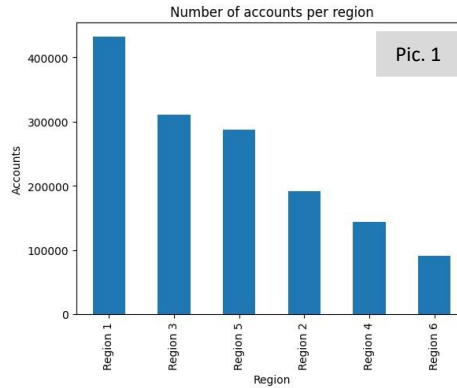


New router model impact

The statement: The Company wants to introduce a new router model. To reduce the impact in case the router does not work as expected and to gain experience with the new model, the router is first introduced in two piloting regions using two different methods (method A and B). Contrary to method B, method A is a staggered rollout, furthermore the router has a slightly different configuration. Vodafone plans to introduce the router in the remaining regions over the next months.



The methodology:

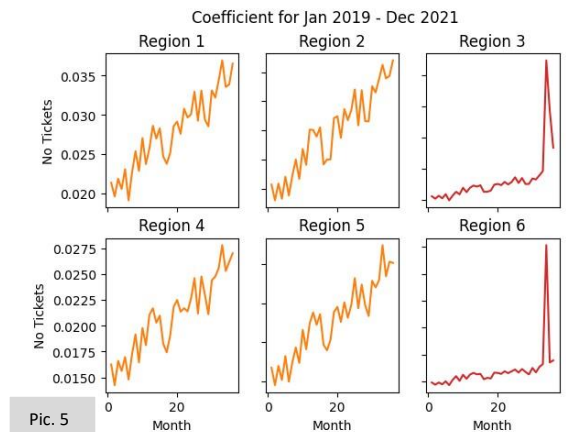
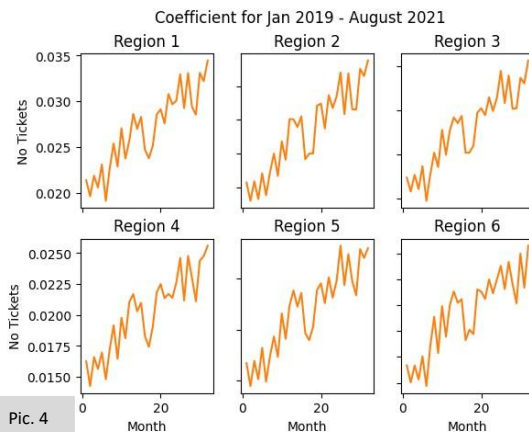
- **data processing:** were detected and deleted 22077 duplicated account numbers that appears in the same region and 78640 from different regions. To avoid any confusion in case an account number is present in multiple regions, it was removed. Were deleted 458 duplicated tags.

- **data analysis:** was calculated the number of accounts per region and number of tickets per region, pictures 1 and 2 show that there is a strong correlation between these two metrics. Was calculated number of tickets per month shown in the picture 3, that shows that there is an ascendent trend of number of tickets, only October 2021 is an outlier month. Also, the analysis has shown that the data for January 2022 is not relevant for quantitative analysis because there were records only for one day. This data was deleted from the final dataset.

The process was iterated until the data was digested and further steps became possible to conduct.

The model: Regions 3 and 6 were chosen for initial rollout as shown in picture 5. Based on this result the coefficients for predicting the number of tickets for the rest of the regions were calculated.

In conclusion, it is recommended to use method A.



Region 1 - Method A:

January 2022: **39667** tickets.
February 2022: **40046** tickets.
March 2022: **40456** tickets.

Region 2 - Method A:

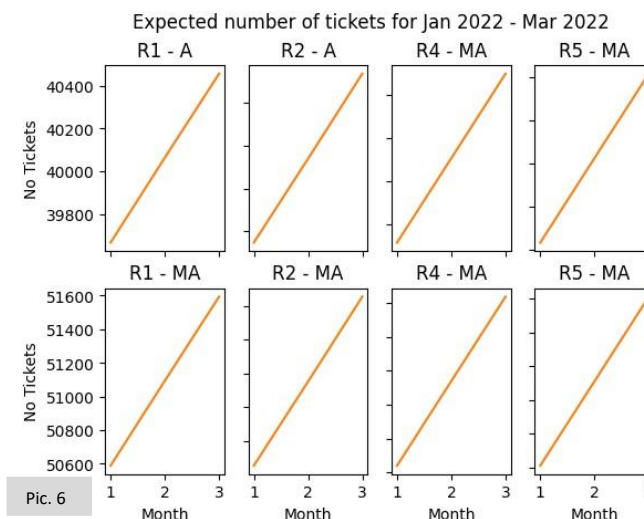
January 2022: **24348** tickets.
February 2022: **24740** tickets.
March 2022: **25137** tickets.

Region 4 - Method A:

January 2022: **21516** tickets.
February 2022: **21908** tickets.
March 2022: **22301** tickets.

Region 5 - Method A:

January 2022: **30432** tickets.
February 2022: **30825** tickets.
March 2022: **31217** tickets.



Region 1 - Method B:

January 2022: **50589** tickets.
February 2022: **51094** tickets.
March 2022: **51594** tickets.

Region 2 - Method B:

January 2022: **31052** tickets.
February 2022: **31552** tickets.
March 2022: **32507** tickets.

Region 4 - Method B:

January 2022: **27439** tickets.
February 2022: **27940** tickets.
March 2022: **28440** tickets.

Region 5 - Method B:

January 2022: **38811** tickets.
February 2022: **39311** tickets.
March 2022: **39812** tickets.