Aalto & UTU

Tableau Analytics Challenge

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Overview of the Tableau Analytics Challenge

- **Stakeholders**: The Finnish Transport Infrastructure Agency, the Finnish Transport and Communications Agency, and local authorities of 10 biggest cities in Finland.
- **Available Assets**: Traffic Accidents 2018-2021 - published data source
  - From the Finnish Transport Infrastructure Agency
  - The real dataset of all traffic accidents from the past 4 years in Finland.
- **Competition Task**: Use this data to produce data-driven insights that
  - highlight the dangerous driving conditions, hazardous roads
  - other insights with impact to road safety
  - present these back to project board.

DETAILED REQUIREMENTS

The aim of the project:

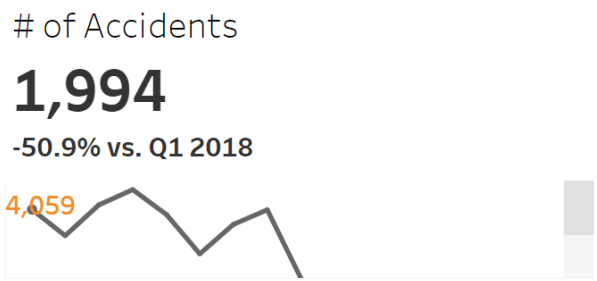
- Identify the common issues in road safety including hazardous traffic conditions
- Reveal possible outliers among 10 biggest cities in Finland
- How to reduce the number of accidents overall and especially serious accidents Use the available data to derive insights that help the project board to take new safety measures to improve road safety.

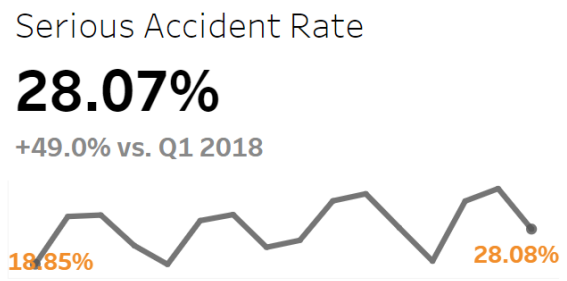
Requirements for data visualization:

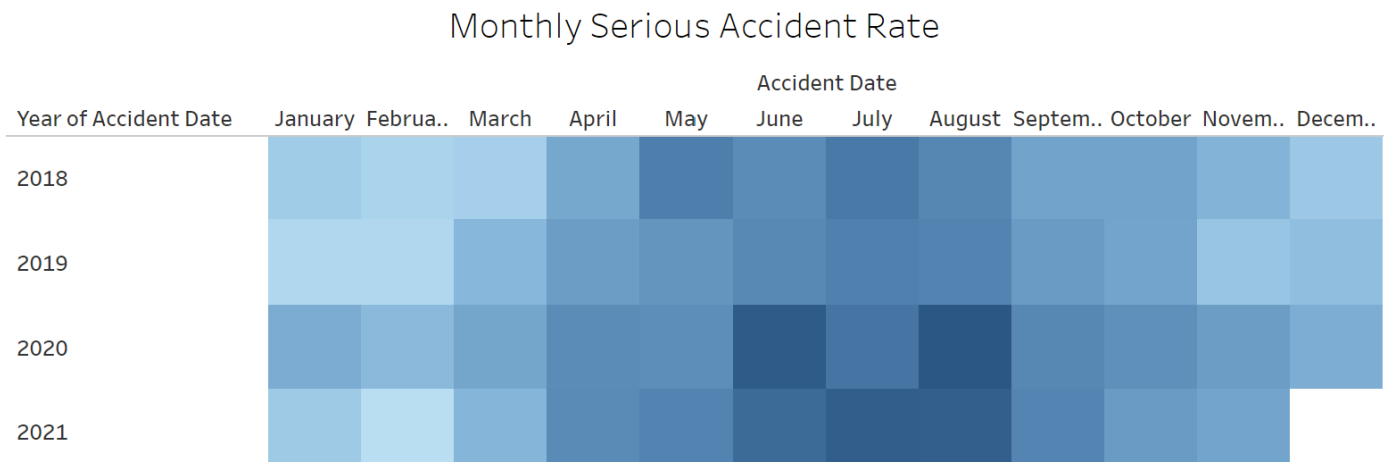
- Show for the 10 biggest Finnish cities (filter on Municipality column) - 1. Helsinki, 2. Espoo, 3. Tampere, 4. Vantaa, 5. Oulu, 6. Turku, 7. Jyväskylä, 8. Kuopio, 9. Lahti and 10. Pori.
- Prepared to answer questions relating to the data and produced insights during the live Tableau Analytics Challenge final.

FINDING 1

Serious accidents are seasonal







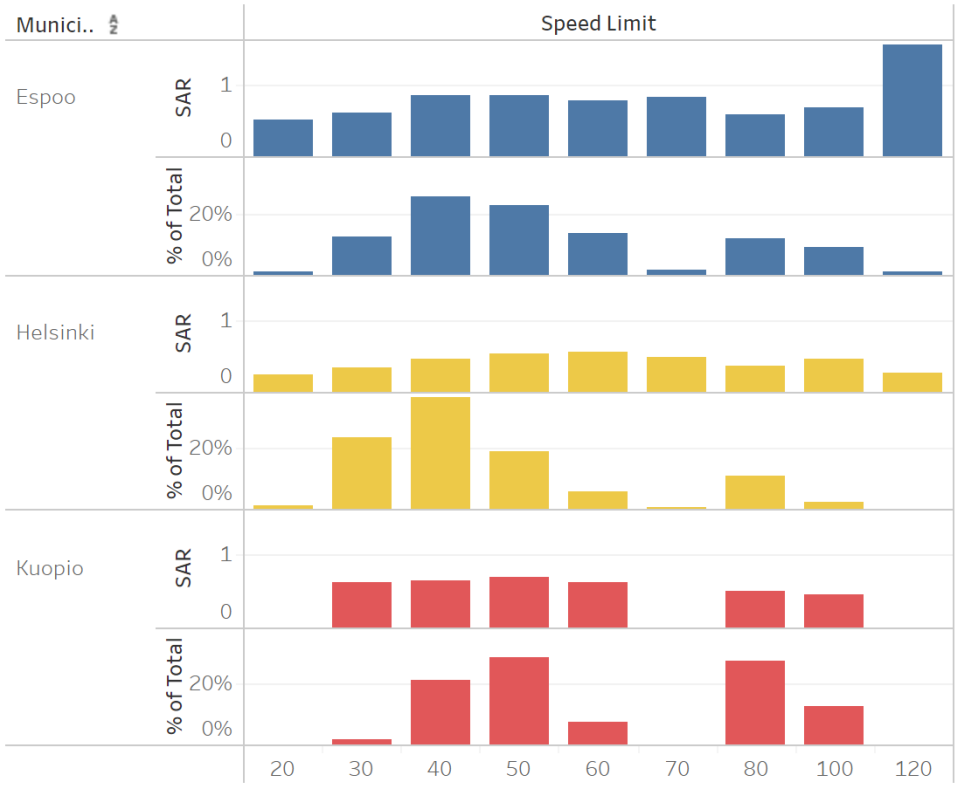
- Whilst the total number of accidents were dropping, the serious accident rate was seemingly increasing, and peaked annually during the summer months
- From the heatmap below, we see that the serious accident rate has been getting worse each summer.

OUTLIERS AMONG BIGGEST 10 CITIES

SAR by Speed Limits

-18.38%

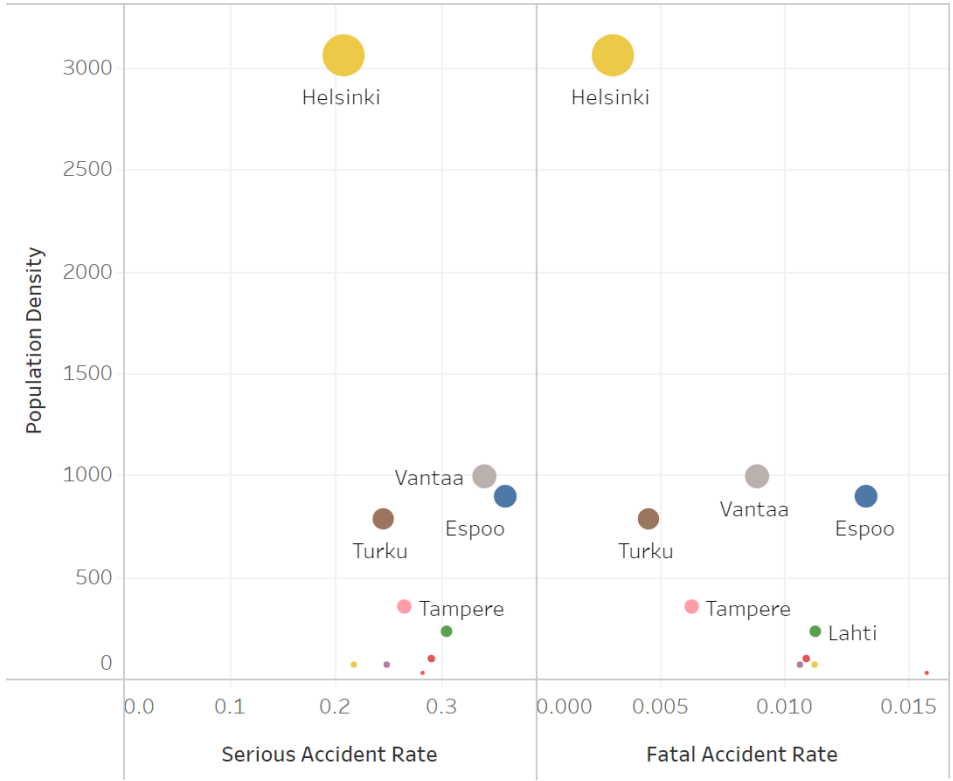
Big Cities Accidents (CAGR)

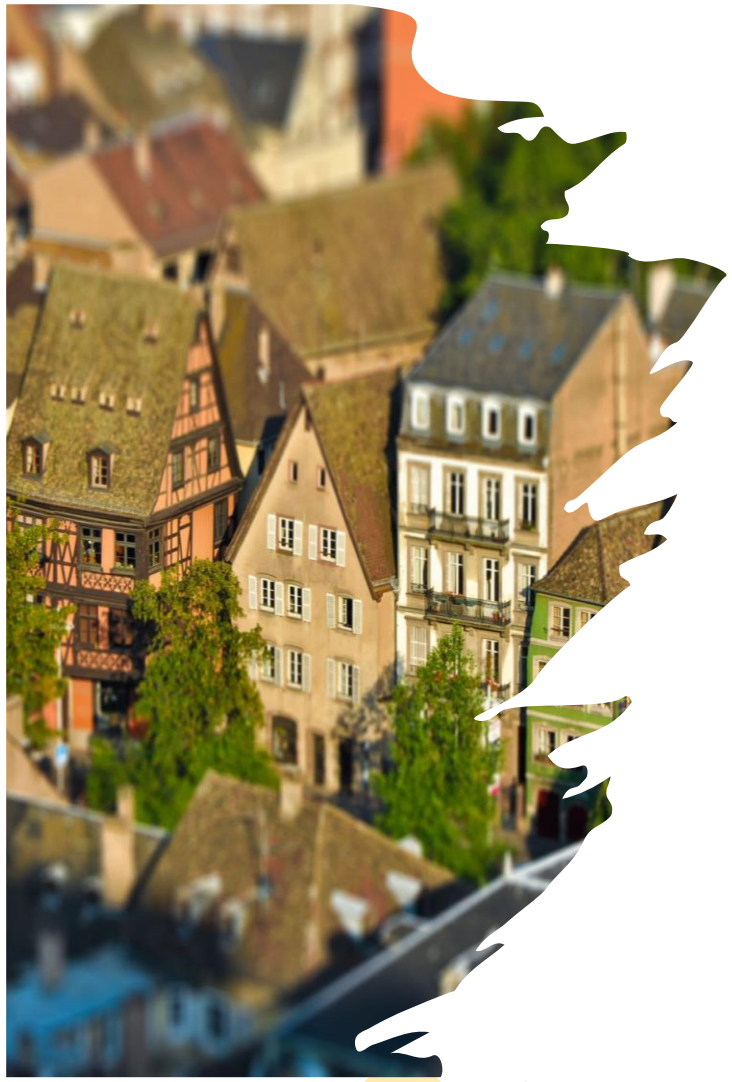


SAR by Population Density

9.81%

Big Cities SAR (CAGR)





FINDING 2

Espoo and Kuopio are the outliers

- Whilst most of the lower population densities have higher rates of collisions, Espoo is an outlier in the bigger cities
- Espoo had the highest serious accident rates, with Kuopio having the highest fatal accident rates
    - Espoo should be located more between Vantaa and Turku, but is higher than that
    - Kuopio on the other hand had 5x the fatality rate of Helsinki
- Roughly 70% of Espoo's serious accidents occur in carriageways, whilst Kuopio had a higher than normal serious accident rate at lower speeds

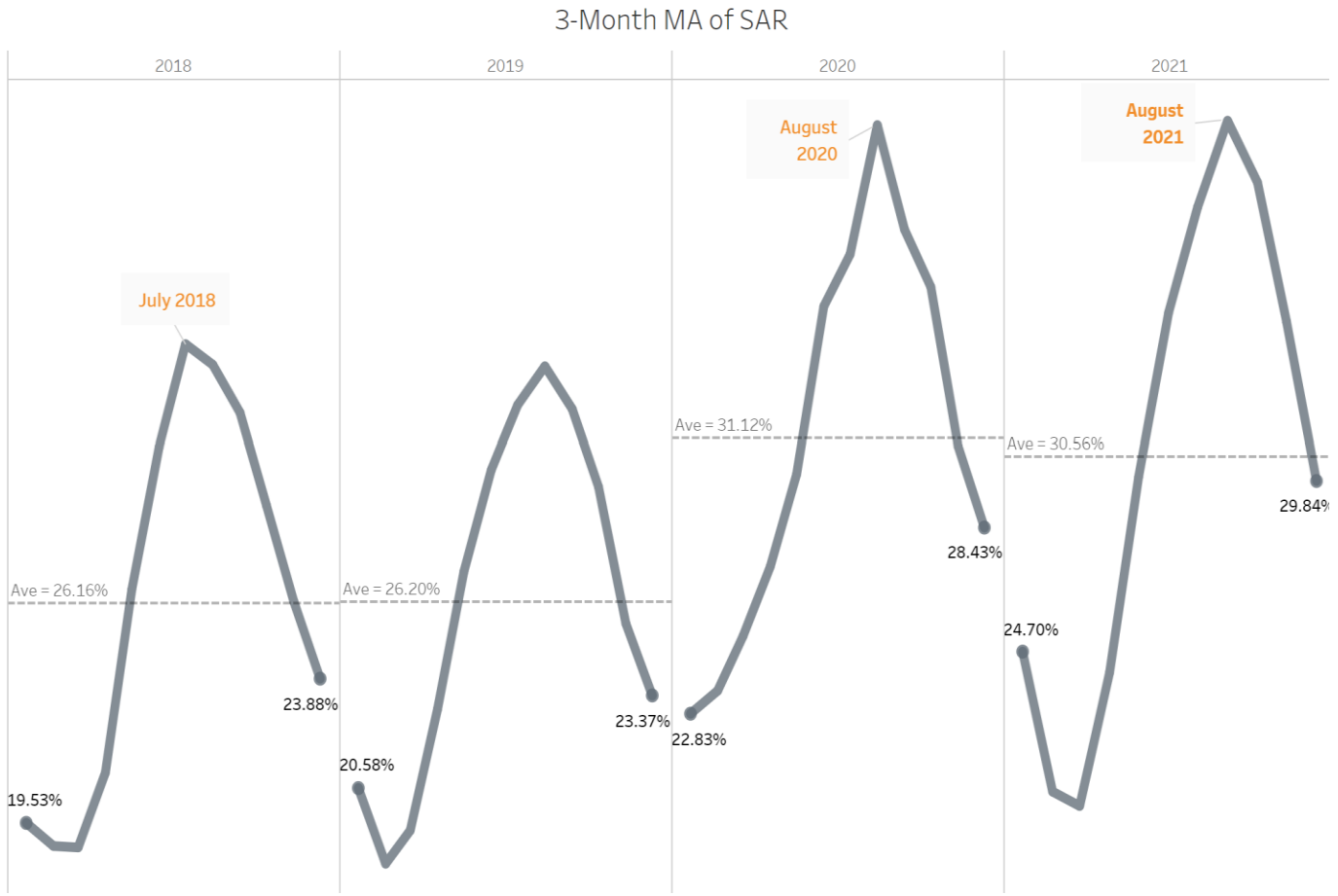
Possible explanation:

- Espoo is a connecting route to other large cities (Turku, Pori etc.)
- Espoo has a lot more BMW drivers
- The lower traffic areas have more people driving fast

Recommendation 1

Extensive marketing campaign before the start of summer

- Increasing marketing efforts just before the summer period to raise awareness.
- Carefully choose the platforms that people use and are genuinely present to spread education.
- Communicate the message of driving safe via influencers that have many audiences and who they listen to, for example, the “Pidä pääsi”.



Recommendation 1

Install speed cameras in low population density cities

More speed cameras should be added to high-risk areas. The new generation of speed cameras have been able to reduce speeding and therefore will be efficient in reducing risky driving habits.