

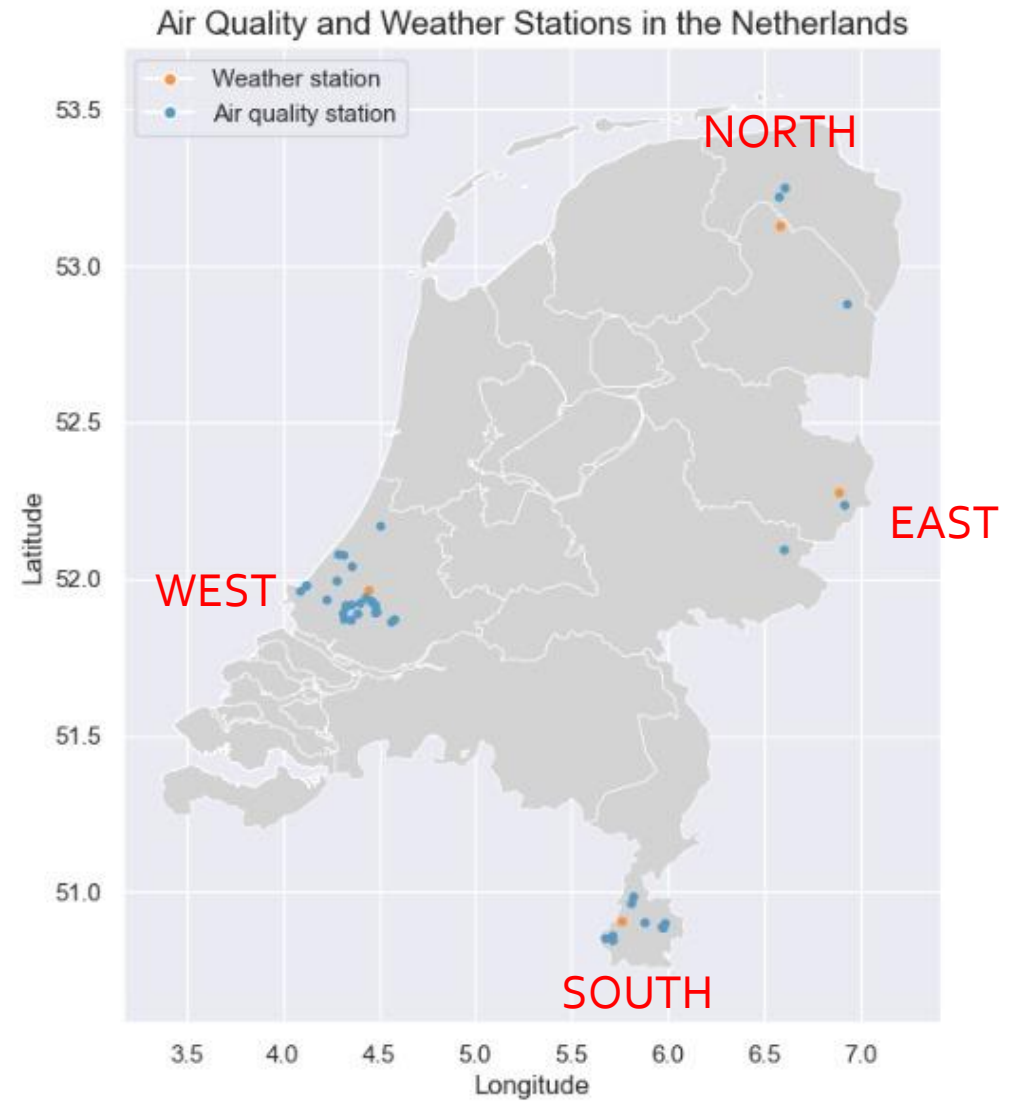
# Pitch – Group 2

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# Hypothesis

- Dutch regions with average winter temperatures **lower** than **4.5** degrees Celsius record **higher** instances of **NO** concentration peaks over the winter median **NO** concentration of the country than those **over 4.5** degrees average winter temperatures.
- If temperature is lower than 4.5 → higher NO concentration
- If temperature is higher than 4.5 → lower NO concentration

# Regions



# Hypothesis testing

- Proportion (p): Number of times that each region records an NO concentration value over the national median threshold (2.7 ppm) during the winter period
  - Null hypothesis:  $p_1\text{-north} = p_2\text{-southwest}$  (cannot be rejected, high p-values)
  - Our hypothesis (alternative):  $p_1\text{-north} > p_2\text{-southwest}$
- Means ( $\mu$ ): Average concentration of NO for each region during the winter and determine which is higher.
  - Null hypothesis:  $\mu\text{-north} = \mu\text{-southwest}$  (cannot be rejected, high p-values)
  - Our hypothesis (alternative):  $\mu\text{-north} > \mu\text{-southwest}$

# Results

- P-values for all region comparisons close to 1 indicate no statistically significant variations in NO concentration between the designated regions (above 4.5 vs below 4.5 degrees temperature).
- Considerations of confounding variables: pollution sources, rural/urban, factories differ per region.
- Further investigation into the specific causes of the observed differences and consideration of additional variables could enhance the understanding of the results.

You people are  
legends!

