

## IDEAS:

Map: - Choropleth

- Proportional Symbol
- Scaled Cartogram
- Dot Density
- Framed Bar Charts
- Pie Charts

charts: - Column

- Stacked Column
- Grouped Column

Bar

- Bar
- Stacked Bar
- Grouped Bar
- Pie
- Donut
- Tree Map
- Bubble

## COMBINE & REFINES:

- Choropleth + Proportional Symbol or + Pie Charts

Using a Choropleth map to show the predominant vehicle type, and use proportional symbol or pie charts to show the proportions of each type.

## FILTER:

Map: - Choropleth

- Proportional Symbol
- Pie Charts

Charts: - Stacked Bar

- Grouped Bar
- Pie
- Bubble

## CATEGORIZE:

Map: - Choropleth

- Proportional Symbol
- Pie Chart Map

Proportional: - Pie

- Stacked Bar
- Grouped Bar

Absolute: - Stacked Bar

- Grouped Bar
- Bubble

## QUESTION:

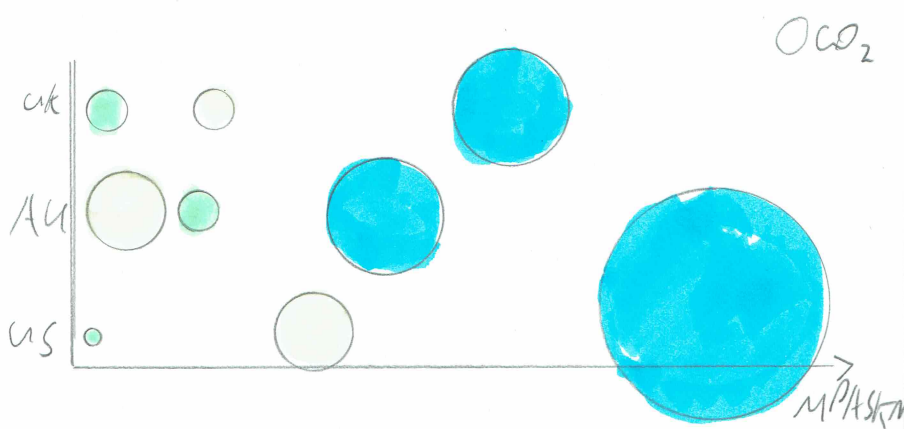
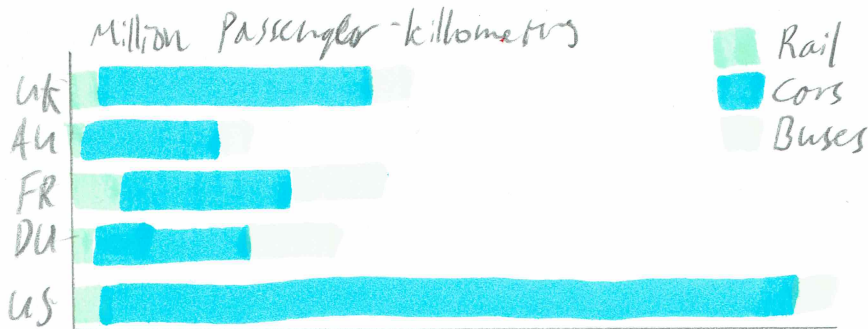
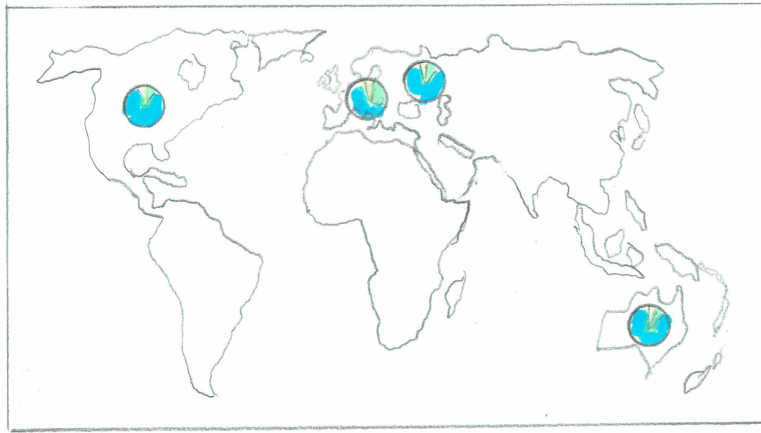
The Map Idioms would make it easy to compare data between countries

Bubble charts would allow multiple aspects to be compared in one chart

Bar charts would allow comparisons between fields

either due to the use of the length channel

# LAYOUT:



TITLE: Sheet 2  
AUTHOR: Bradley Spiers  
DATE: 12/10/2025  
SHEET: 2  
TASK: Visualization 2

## OPERATION:

Tool Tip to show numerical data

Drop down menu to Filter by vehicle Type (For Bar and Bubble Charts)

## FOCUS:

Pie Chart Map

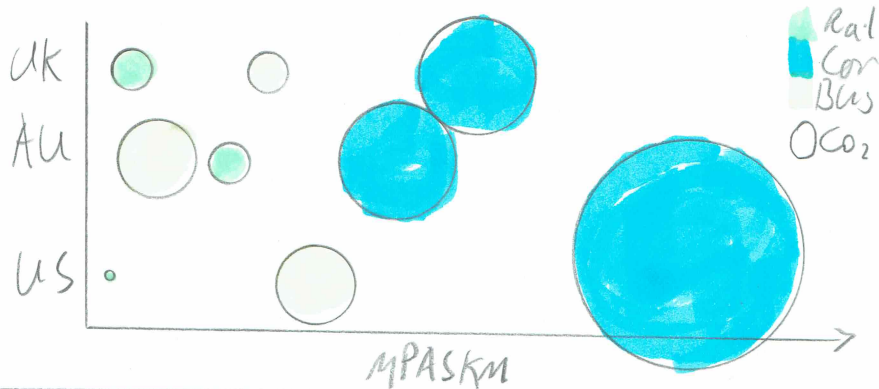
Total MPASKM Bar Chart

$CO_2$  and MPASKM Bubble Chart

## DISCUSSION:

- Pie Charts may become unclear when clustered together
- Vega-Lite is not an appropriate program for a pie chart map
- Total Passenger-kilometers bar charts may become difficult to read due to the data for the U.S.

# LAYOUT:



## DISCUSSION:

- Symbols may become unclear when clustered together
- Symbol map is better for vega-lite
- Percentage bar charts lead to less white space
- Side by side bar charts would be cluttered with axis titles and legends, could also decrease readability and fidelity of data

TITLE: Sheet 3  
 AUTHOR: Badley Spiers  
 DATE: 12/10/2025  
 SHEET: 3  
 TASK: Visualisation 2

## OPERATION:

Tooltip to display numerical information  
 Dropdown menu to filter bar charts and bubble chart by vehicle type

## Focus:

Proportional Symbol Map

% PASKM

Bar Chart

% CO2

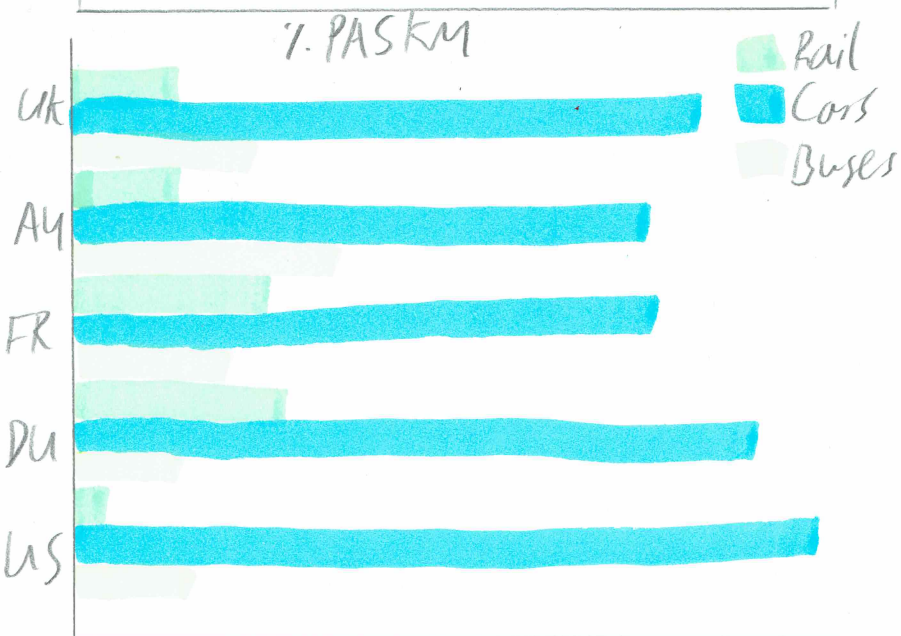
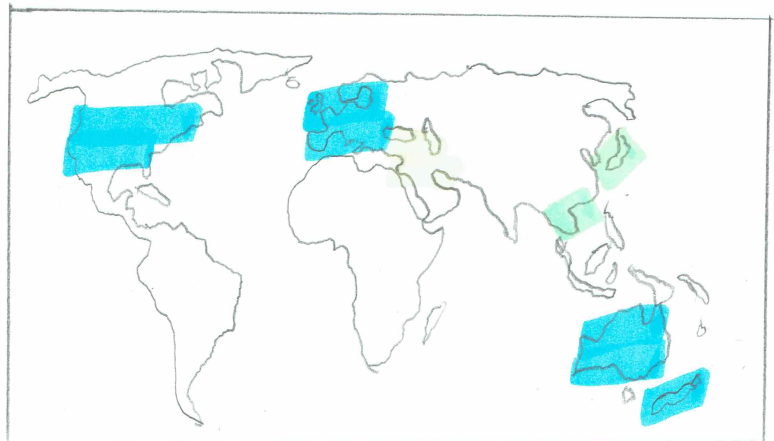
Bar Chart

CO2 and Paskm

Bubble Chart



## LAYOUT:



TITLE: Sheet 4  
AUTHOR: Bradley Spiers  
DATE: 12/10/2025  
SHEET: 4  
TASK: Visualization 2

## OPERATION:

Tooltip to display numerical data  
Dropdown menu to filter by Transport type

## FOCUS:

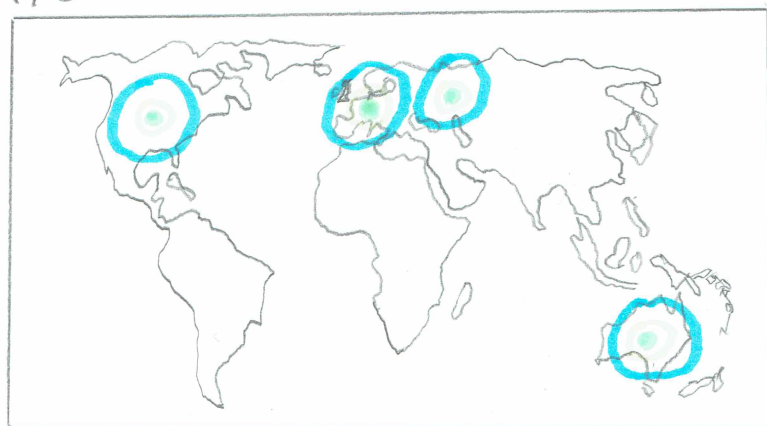
Choropleth Map

Grouped Bar Chart  
1. PASKM

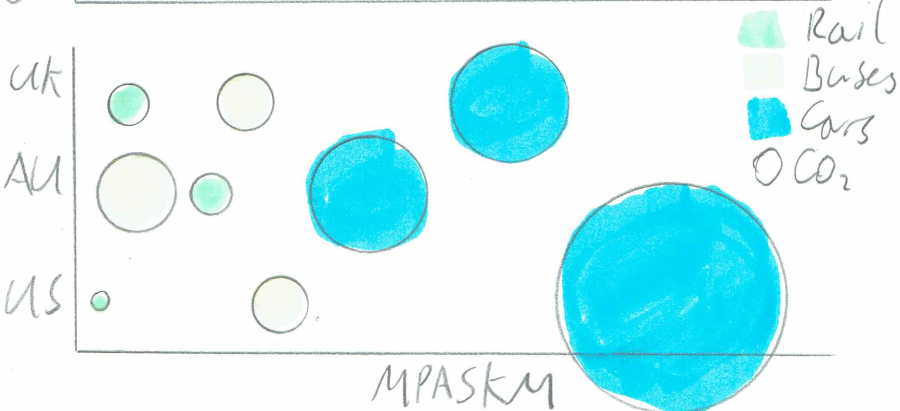
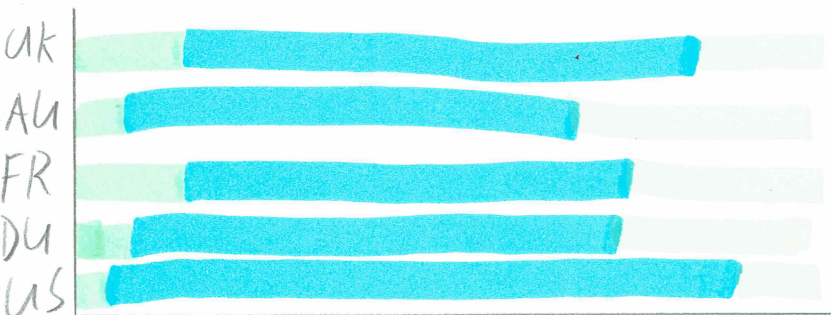
## DISCUSSION:

- Choropleth map displays limited information, it does not allow for comparisons of multiple types of transport
- Grouped bar chart is not spatially efficient leaving white space
- Choropleth map more effectively shows which countries have data, and which do not

# LAYOUT:



% PASKM



MPASKM

TITLE: FINAL

AUTHOR: Bradley Spiers

DATE: 12/10/2025

SHEET: 5

TASK: Visualisation 2

## OPERATION:

Tooltip to display Numerical Information

Dropdown menu to filter Barchart and Bubble Chart by Vehicle Type

## FOCUS:

Proportional Symbol Map

% Pas KM  
Stacked Bar Chart

CO<sub>2</sub> and PASKM  
Bubble Chart

## DETAIL:

- The Visualisation will use data from the OECD website
- The data will need to be normalized to total Passenger - kilometres of each country
- Average CO<sub>2</sub> Emissions per Passenger kilometres will need to be sourced and applied to the OECD Data
- The visualisation should be complete within 5 days