

# UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK WITH TABLEAU

## 1.Introduction

### 1.1.Overview

This Global Air Transportation Network dataset is a comprehensive collection of information on airports, airlines and their routes. It contains information such as names, cities, countries, codes (IATA and ICAO) longitudes, latitudes and altitudes of airports across the world with detailed time zone and daylight saving time data.

### 1.2.purpose

This dataset has been compiled through meticulous labor by researchers all over the world to give you a comprehensive detail into air transportation networks from around the globe.

## 2.Problem definition & design thinking

### 2.1.Empathy map

The screenshot shows a Windows desktop with an Adobe Reader window open. The document is titled 'empathy\_2023-09-03\_08-04-29.pdf'. The main content is an empathy map centered around the title 'Unlocking Insights into the Global Air Transportation Network with Tableau'. The map is divided into four quadrants by a central circle, each with a different color and icon:

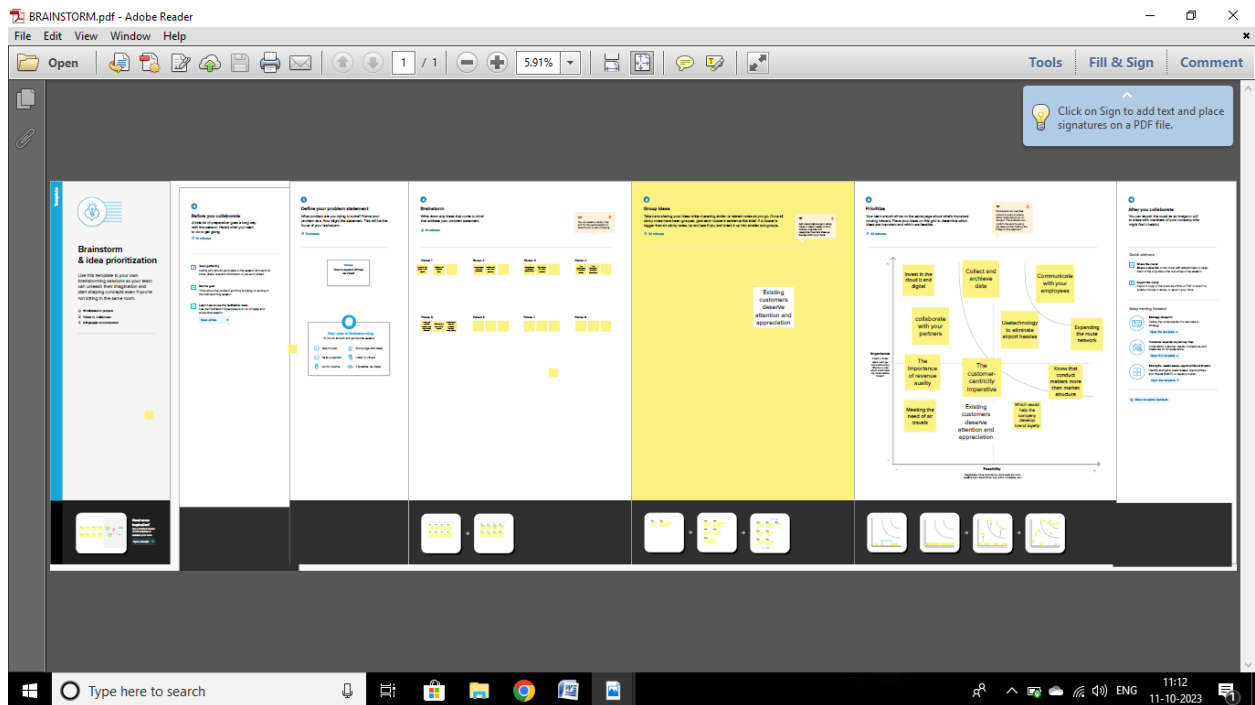
- Says (Green):** Includes boxes for 'Air travel costs more', 'Travel time is short period', 'Security at Airports is very tight', and 'Airplanes can carry very heavy cargo'.
- Thinks (Blue):** Includes boxes for 'How do airplanes travel using latitude and longitude?', 'What are airplanes made of?', and 'How do they calculate flight time?'.
- Does (Purple):** Includes boxes for 'Asking friends', 'More research', and 'I will learn about airplanes'.
- Feels (Pink):** Includes boxes for 'It's rarely dangerous', 'Plane for the smoothest ride', 'Sheer dedication to travelling', and 'Excitement'.

At the bottom of the map, there are two small sections: 'Does' (What behavior have we observed? What can we imagine them doing?) and 'Feels' (What are their fears, frustrations, and wishes? What other feelings might influence that behavior?).

On the right side of the Adobe Reader window, there is a sidebar with the 'Export PDF' tool. It shows the file 'empathy\_2023-09-03\_08-04-29...' selected for conversion to 'Microsoft Word (\*.docx)'. Below this, there are options to 'Create PDF', 'Edit PDF', 'Send Files', and 'Store Files'.

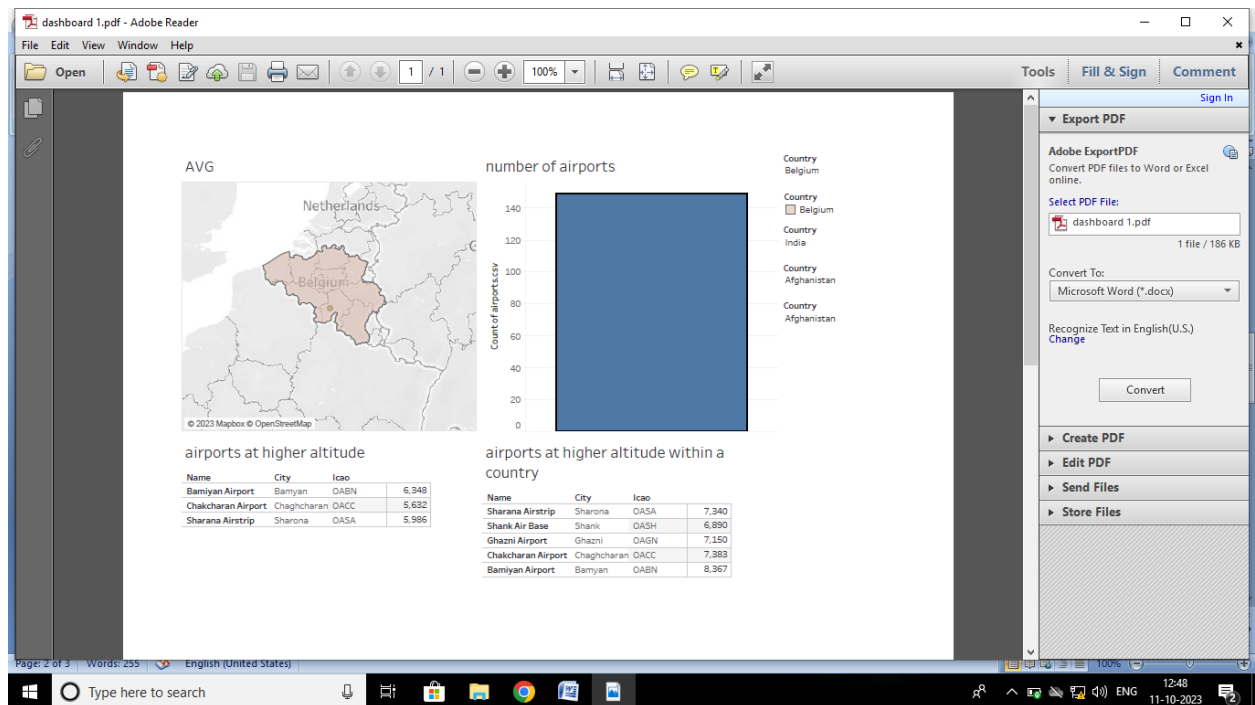
A Windows notification is visible in the bottom right corner, stating: 'Windows Script disabled by Smadav. To enable it: Right click in the smadav system tray icon (near clock), then choose "Allow Windows Script & Macro" Smadav USB Antivirus & Additional Protection'.

## 2.2.Brainstroming

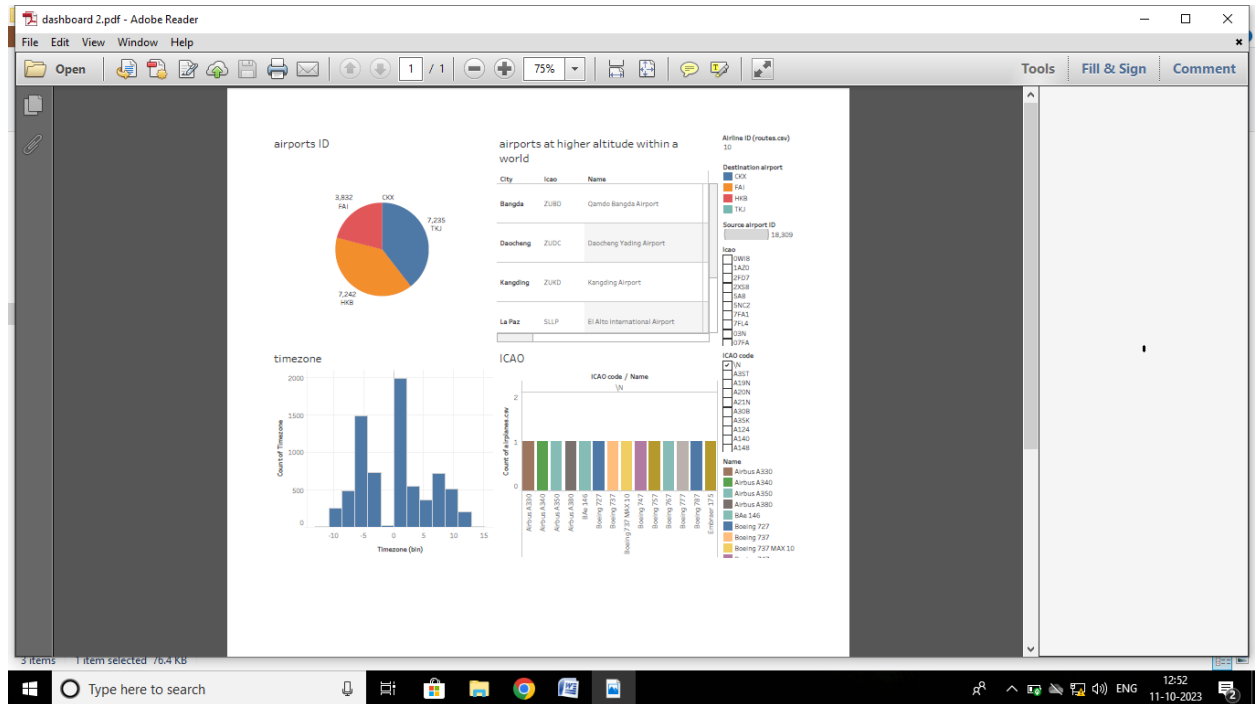


## 3.Result

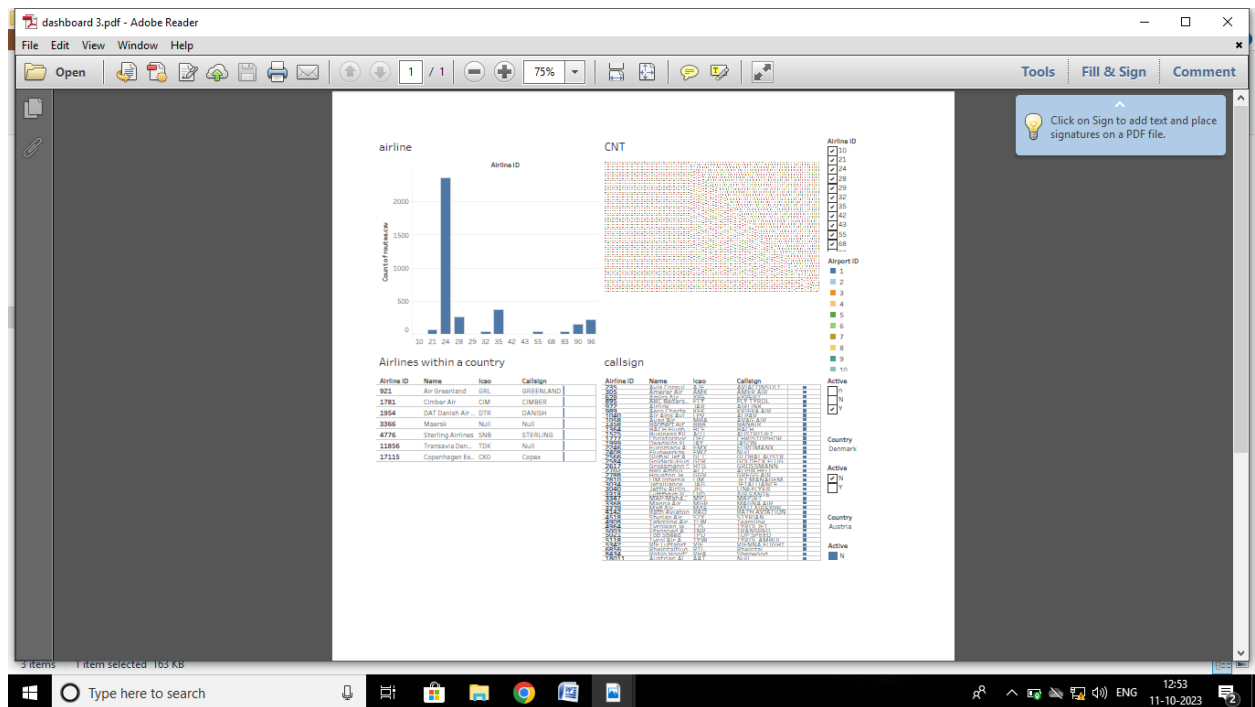
### Dashboard 1



## Dashboard 2

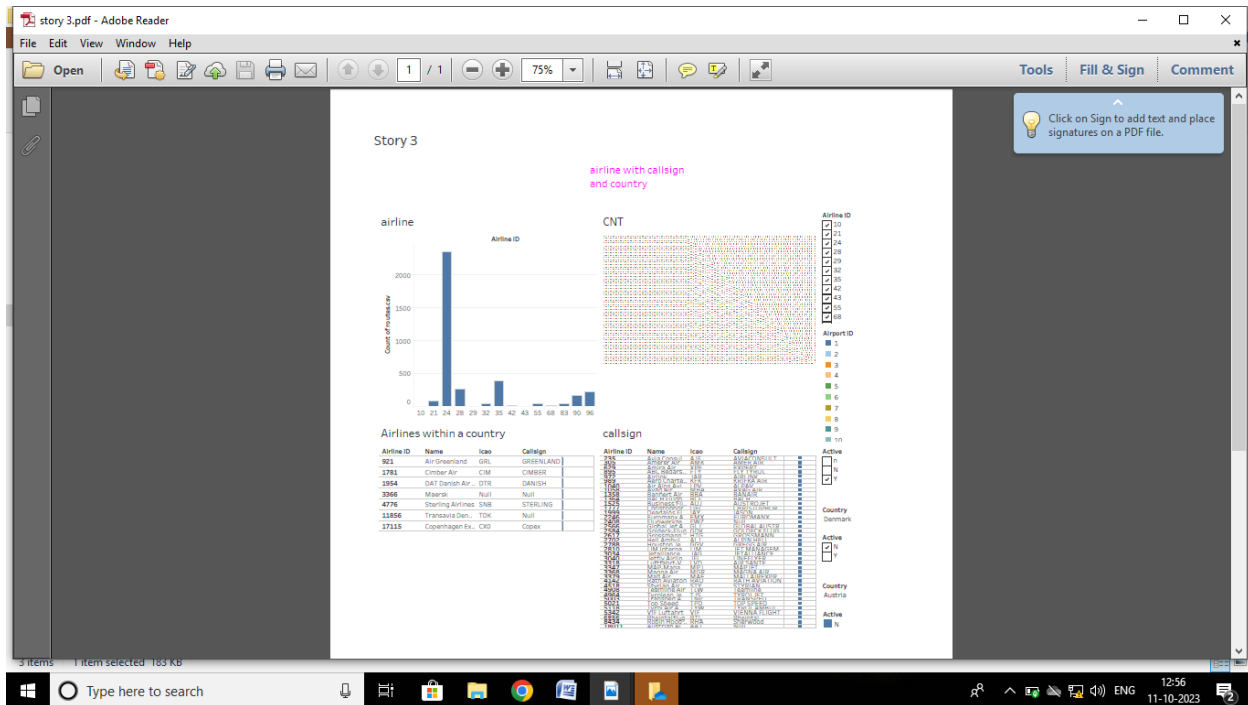


## Dashboard 3



## Story 1





#### 4. Advantages & Disadvantages

- Advantages of Air Transport: Global Reach. Reliable Timelines. Reduced Inventory Holding Costs. Enhanced Security.
- Disadvantages of Air Transport. Higher Cost. Limited Capacity. Restrictions on Hazardous Goods.

#### 5. Applications

The worldwide air transportation network is a critical infrastructure with high impact on mobility, trade and economy. Another examples are the air transport systems of a country or a country's own air transport company.

#### 6. Conclusion

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#### 7. Future scope

The most recent estimates suggest that demand for air transport will increase by an average of 4.3% per annum over the next 20 years. If this growth path is

achieved by 2036 the air transport industry will then contribute 15.5 million in direct jobs and \$1.5 trillion of GDP to the world economy.