



## Unlocking Insights into the Global Air Transportation Network With Tableau

Project Based Experiential Learning Program

# **Global air transportation network:**

## **INTRODUCTION:**

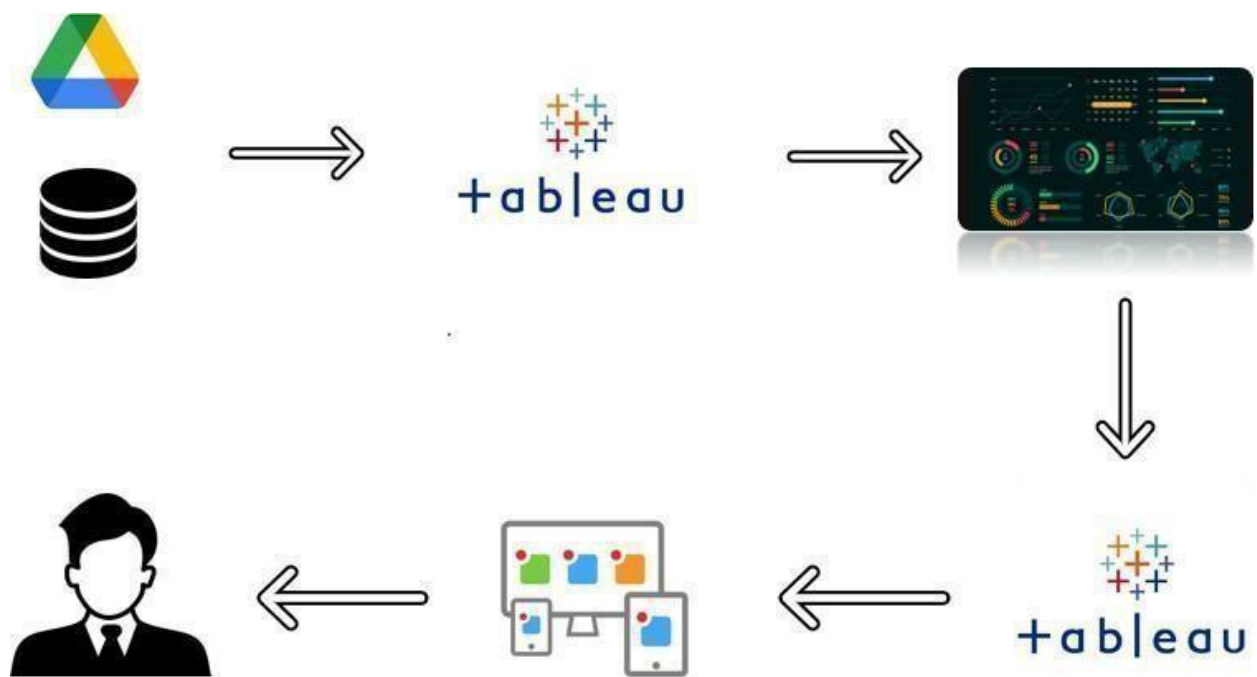
### **1.1 overview**

The air transportation network is a complex network which has the properties of small-world networks and scale-free networks. The degree distribution of the nodes displays a heavy-tailed distribution. The hubs of the network have large connectivities and long-distance connectivities at the same time.

### **1.2 purpose**

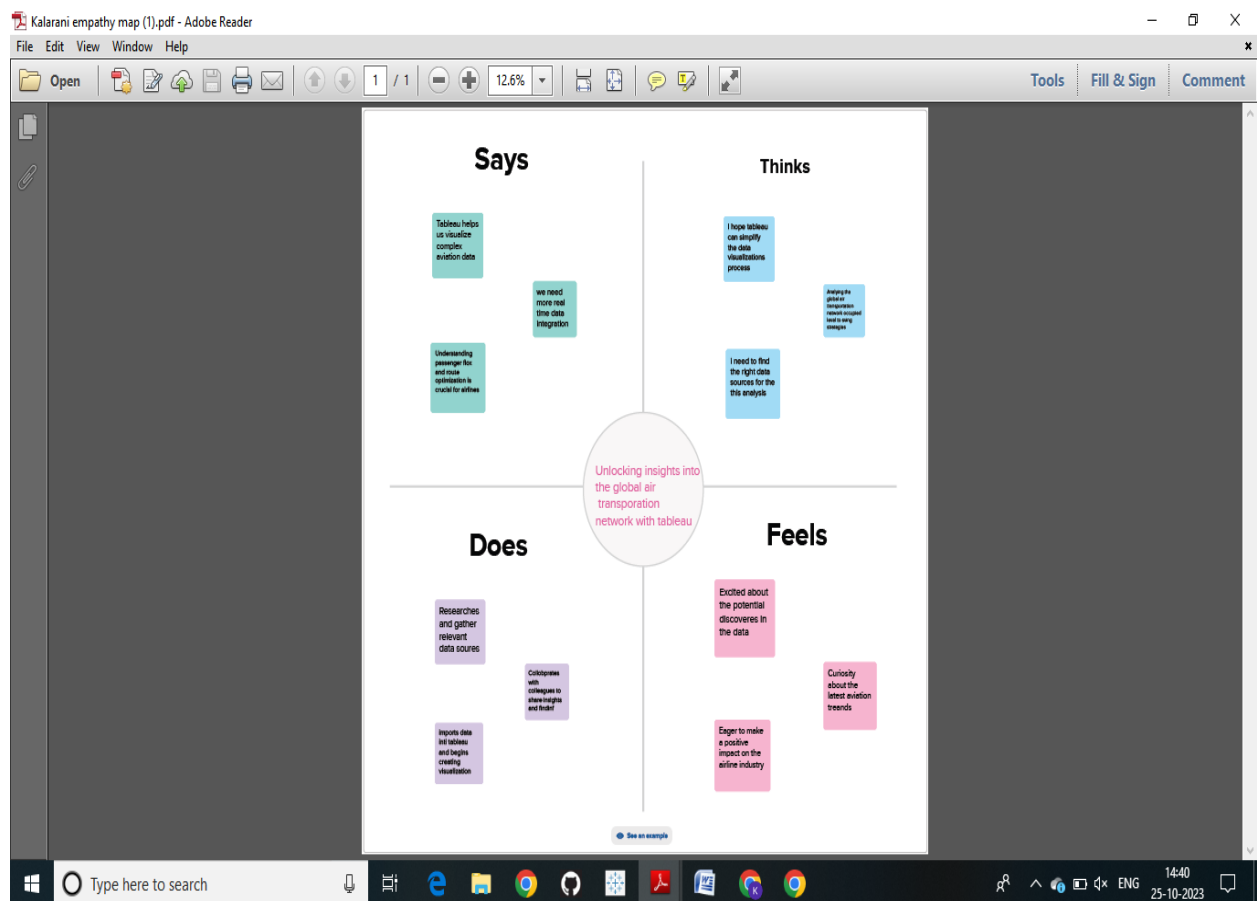
The air transport network is a key infrastructure asset. It is the only worldwide passenger and cargo transportation network, providing an essential link between individual countries and the wider global economy. Air services create significant value for passenger and freight users.

## Technical Architecture:

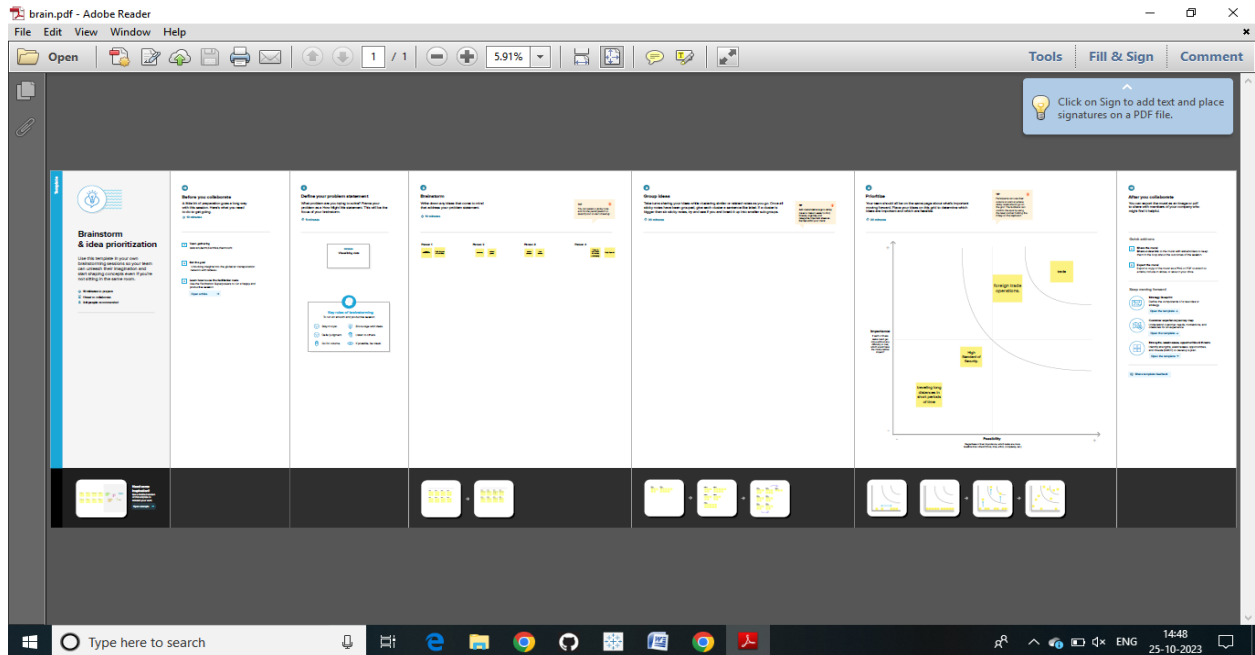


## 2.Problem and Definition

### 2.1 Empathy map Screenshot:

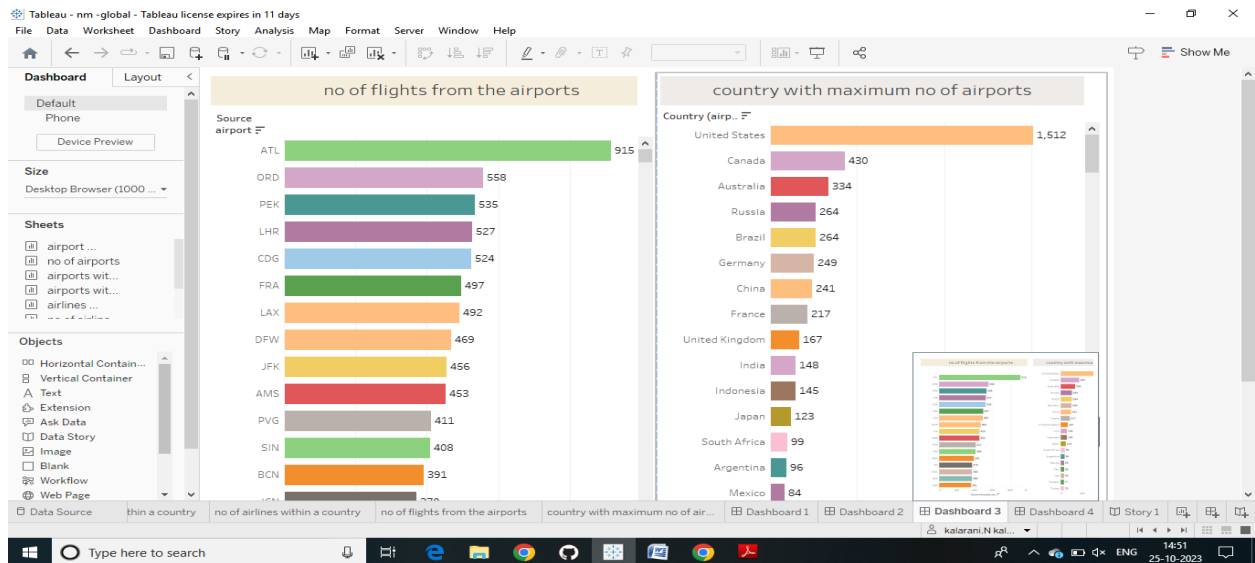


## 2.2 Ideation and Brainstorming :



## 3.Result

### 3.1 Dashboard



## 3.2 Story

The screenshot shows the Tableau Story interface. The main view is a table titled "airlines within a country". The table has columns for Airline ID, Name, Icao, and Callsign. The data rows are:

Airline ID	Name	Icao	Callsign
1026	Alliance Air	LLR	ALLIED
1370	Blue Dart Aviation	BDA	BLUE DART
2001	Deccan Aviation	DKN	DECCAN
2634	Gujarat Airways	GUJ	GUJARATAIR
2851	India International Airways	IIL	INDIA INTER

On the right side, there are filters for "Active" (set to N) and "Country" (set to India). A tooltip is visible over the "Deccan Aviation" row, showing details: Active: N, Airline ID: 2001, Callsign: DECCAN, Icao: DKN, Name: Deccan Aviation.

The left sidebar shows the "Story" panel with a "New story point" section containing "Blank" and "Duplicate" buttons. Below this is a list of story points, including "airport details", "no of airports", "airports with ...", "airlines within ...", "no of airlines ...", "no of flights ...", "country with ...", and several dashboards. The "Size" section shows the story is 1016 x 964.

The bottom of the interface shows the Windows taskbar with the search bar and various application icons.

[https://public.tableau.com/views/nm-global/Dashboard3?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/nm-global/Dashboard3?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

## **USES OF AIR TRANSPORTATION NETWORK:**

The air transport network is a easy infrastructure asset. It is the only worldwide passenger and cargo transportation network, providing an essential link between individual countries and the wider global economy. Air services create significant value for passenger and freight users.

### **Air Transport**

- Helicopter.
- Airplane
- Plane.
- Hot air balloon
- Airship or Zeppelin.
- Paragliding
- Paramotor
- Cableway.

## **Importance of global air transportation:**

The importance of air transport lies in its ability as an economic engine to generate and support jobs, strengthen trade and connectivity between people and countries, promote tourism, and connect remote communities.

## **Advantages of Global Air Transport:**

- High Speed. Air is the type of freight capable of traveling long distances in short periods of time.
- Fast Service.
- Send almost everywhere your freight
- High Standard of Security
- Natural Route
- There is less need for heavy packaging.
  - deliver items quickly over long distances
  - give you high levels of security for sensitive items



- be used for a range of goods

## **Disadvantages of Global Air Transportation network:**

- Risky. Air travel is the riskiest mode of transport, since there can be considerable losses to goods, customer and crews as a result of a minor crash.
- Cost.
- Some Product Limitation.
- Capacity for Small Carriage.
- Enormous investment
  - air transport can involve higher costs than other options, and is not suitable for all goods
  - flights are subject to delay or cancellation
  - you will need to pay taxes at each airport you use
  - fuel and currency surcharges will usually be added to freight costs
  - further transportation may be needed from the destination airport to the final destination

## **CONCLUSION**

The air transport industry is not only a vital engine of global socio-economic growth but is also of vital importance as a catalyst for economic development in most countries and for many regions within each country. Its importance arises not only from its ability to facilitate the movement of people but also its ability to expedite the movement of goods. Currently, rising operating costs, stoked by the high price of aviation fuel combined with slowing or even negative demand growth, will lead to dramatic restructuring of the airline industry and the collapse of many airlines especially smaller ones. Reduced access to air services for both passengers and freight may put many communities at a disadvantage.

The air transport industry needs not only to be financially sound to be effective as an economic catalyst for growth but also to be environmentally responsible. Governments need to be sensible, transparent and long-term in their approach. Priority must be given to tackling obstacles such as inefficient and fragmented ATMs, restrictive air service agreements, inadequate airport infrastructures and unjustified government charges and taxes. The development of more fuel efficient aircraft and engines must also be encouraged.