

# **UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK WITH TABLEAU**



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# **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.

Additionally, this includes information about airlines including their IDs, name aliases, IATA and ICAO codes, callsigns country of origin and active/inactive status.

Similarly, it also covers route details such as airline sources to destination airports along with essential details like codeshare stakeholder if

any stops required during this journey along with the type of aircraft being used for that particular journey.

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

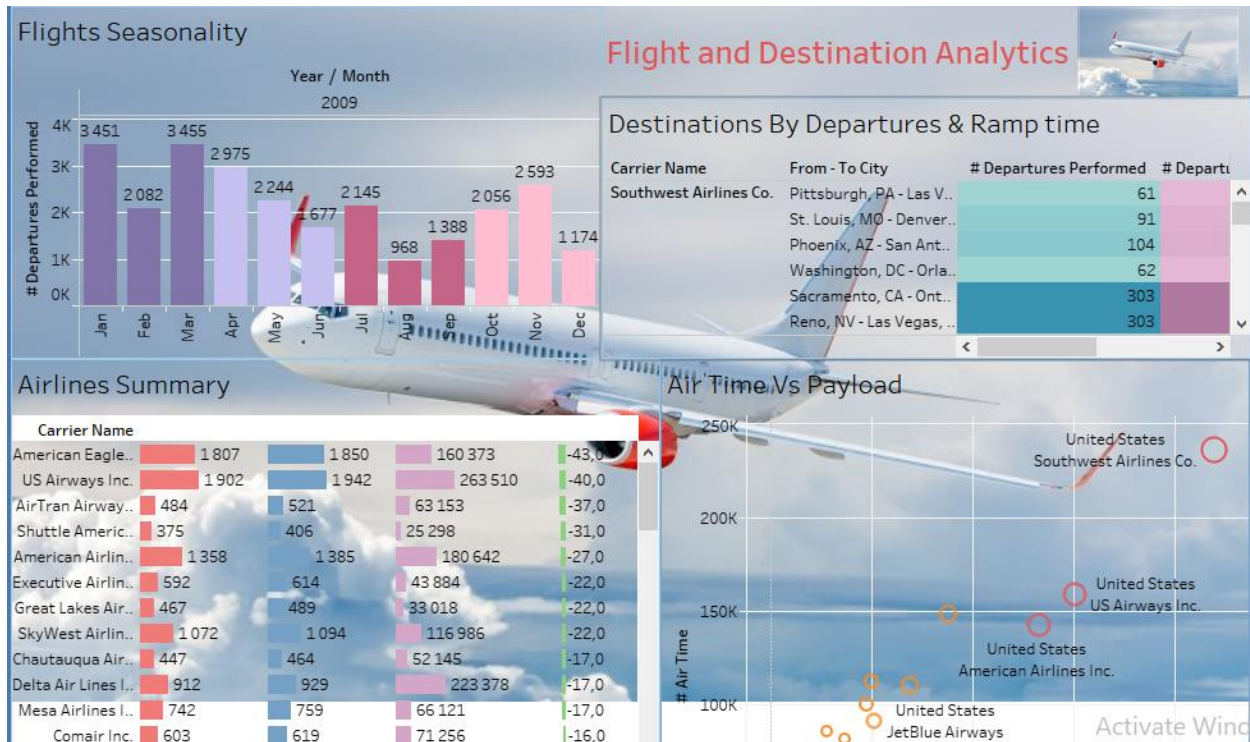
## **1.2 PURPOSE**

**IATA aims to be the force for value creation and innovation driving a safe, secure and profitable air transport industry that sustainably connects and enriches the world. IATA's mission is to represent, lead, and serve the airline industry.**



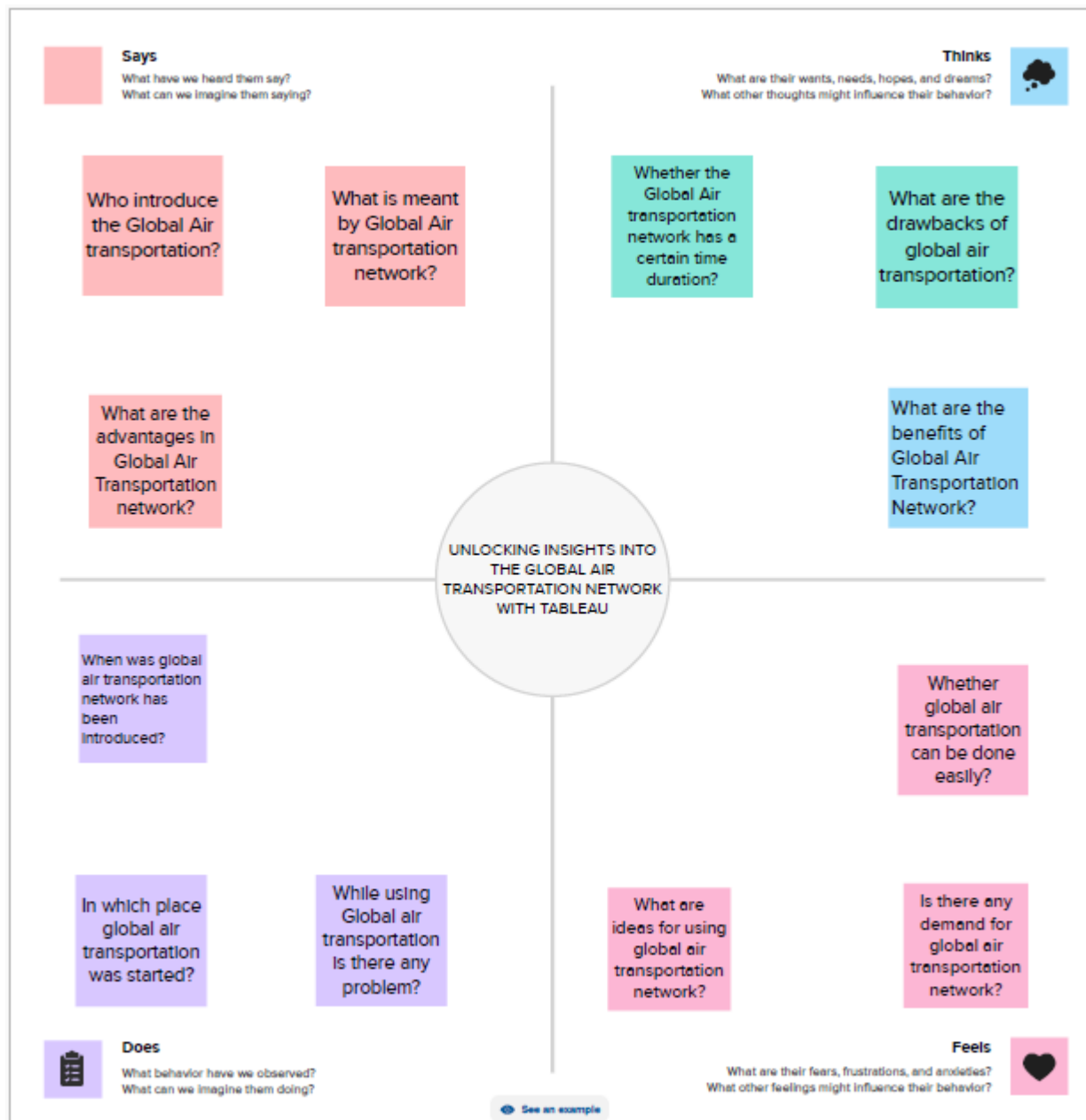
The importance of air transport lies in its ability as an economic engine to generate and support jobs, strengthen trade and connectivity between people and countries, promote tourism, and connect remote communities.

The main characteristics and advantages of air freight transport are speed, reliability in terms of cargo security, and freedom from limitations to accessing remote locations.




## 2.PROBLEMS DEFINITION AND DESIGN THINKING

### 2.1. EMPATHY MAP



## 2.2 BRAINSTORMING MAP



## Brainstorm & idea prioritization

Use this template if your team is generating ideas to solve a problem and you want to prioritize them. It's a great way to get everyone's input and make sure you're focusing on the most important ideas.

- 1. Brainstorm ideas
- 2. Prioritize ideas
- 3. Implement ideas

### Before you collaborate

A list of questions to ask before you start brainstorming. These questions will help you focus on the most important ideas and make sure you're all on the same page.

- 1. What is the problem we're trying to solve?
- 2. What are the goals of the project?
- 3. What are the constraints of the project?

### Define your problem statement

Write down a clear, concise statement of the problem you're trying to solve. This will help you focus your brainstorming and make sure you're all working towards the same goal.

**How to write a problem statement:**

- 1. Start with a clear, concise statement of the problem.
- 2. Include the goals of the project.
- 3. Include the constraints of the project.

### Brainstorm

Brainstorming is a process of generating ideas. It's a great way to get everyone's input and make sure you're focusing on the most important ideas. Here are some tips for brainstorming:

- 1. Set a time limit.
- 2. Encourage everyone to participate.
- 3. Don't judge ideas.
- 4. Write down all ideas.

### Group ideas

After you've brainstormed, it's time to group your ideas. This will help you identify the most important ideas and make sure you're all working towards the same goal. Here are some tips for grouping ideas:

- 1. Look for common themes.
- 2. Group ideas that are related.
- 3. Prioritize ideas.

### Prioritize

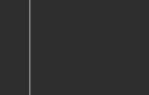
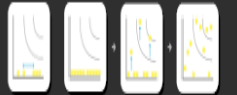
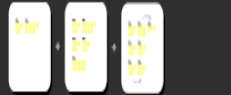
Now that you've grouped your ideas, it's time to prioritize them. This will help you focus on the most important ideas and make sure you're all working towards the same goal. Here are some tips for prioritizing ideas:

- 1. Look for ideas that are easy to implement.
- 2. Look for ideas that have a high impact.
- 3. Look for ideas that are aligned with the goals of the project.

### After you collaborate

After you've brainstormed and prioritized your ideas, it's time to implement them. This will help you solve the problem and make sure you're all working towards the same goal. Here are some tips for implementing ideas:

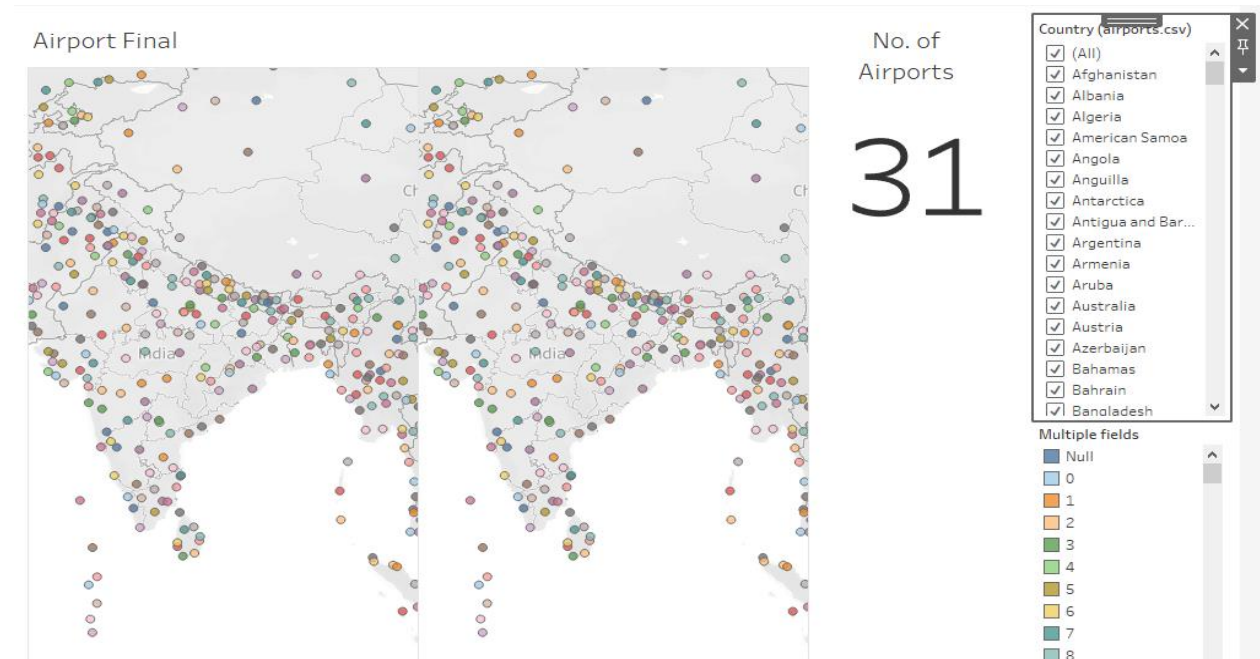
- 1. Assign tasks to team members.
- 2. Set a timeline.
- 3. Monitor progress.








### 3.RESULTS

## 1.Dashboard



## 2.Dashboard

Airlines within a country

Airline ID	Name	Icao	Callsign	
921	Air Greenland	GRL	GREENLAND	
1781	Cimber Air	CIM	CIMBER	
1954	DAT Danish Air Transport	DTR	DANISH	
3366	Maersk	Null	Null	
4776	Sterling Airlines	SNB	STERLING	

Active

☐ (All)

☐ N

☒ Y

Country

Denmark

Active

☒ Y

No. of Airports

31

Country (airports.csv)

Denmark

## 3.dashboard

airports at higher altitude within a country

Country (airports.csv)

Afghanistan ▼

Index no.	Name (airports.csv)	City	ICAO (airports.csv)	
1	Zaranj Airport	Zaranj	OAZJ	1,572
	Tarin Kowt Airport	Tarin Kowt	OATN	4,429
	Shindand Airport	Shindand	OASD	3,773

Airports at Highest Altitude in World

Name (airports.csv)	City	ICAO (airports.csv)	
Daocheng Yading Airport	Daocheng	ZUDC	14,472
Qamdo Bangda Airport	Bangda	ZUBD	14,219
Kangding Airport	Kangding	ZUKD	14,042
Ngari Gunsa Airport	Shiquanhe	ZUAL	14,022
El Alto International Airport	La Paz	SLLP	13,355
Capitan Nicolas Rojas Airport	Potosi	SLPO	12,913

# Story:

## Global Air Transportation Network

< World Map Showing Countries with details of Countries Table showing Airports which are at Worldwide Distribution Table showing List of All Airlines within the country >

Airport Final



No. of Airports

31

Country (airports.csv)

- ☒ (All)
- ☒ Afghanistan
- ☒ Albania
- ☒ Algeria
- ☒ American Sam...
- ☒ Angola
- ☒ Anguilla
- ☒ Antarctica
- ☒ Antigua and B...
- ☒ Argentina
- ☒ Armenia
- ☒ Aruba
- ☒ Australia
- ☒ Austria
- ☒ Azerbaijan
- ☒ Bahamas
- ☒ Bahrain

Multiple fields

- ☐ Null
- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10
- ☐ 11
- ☐ 12
- ☐ 13
- ☐ 14
- ☐ 15

Country (airports.csv)

Denmark

## **4.ADVANTAGES AND DISADVANTAGES:**

### **Advantages:**

**Advantages of air transport for international trade Some of the advantages of transporting your goods by air include:**

**Deliver items quickly over long distances give you high levels of security for sensitive items be used for a range of goods.**

### **Disadvantages:**

**Disadvantages of air transport for international trade there are some disadvantages of transporting your goods by air, including:**

**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.**

## **5.APPLICATIONS:**

**Global Air transportation application for various purposes, such as business and leisure travel, the delivery of time-sensitive Goods, and emergency response and rescue missions.**

## **6.CONCLUSION**

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. These are the conclusion about global air transportation.

## **7.FUTURE SCOPE**

Network (or route) planning is a process of designing, creating, refining and optimizing an airline's flight schedule to maximize profitability and satisfy traveler demand.



