

# UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK WITH TABLEAU



## 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, call signs, country of origin and active/inactive status.

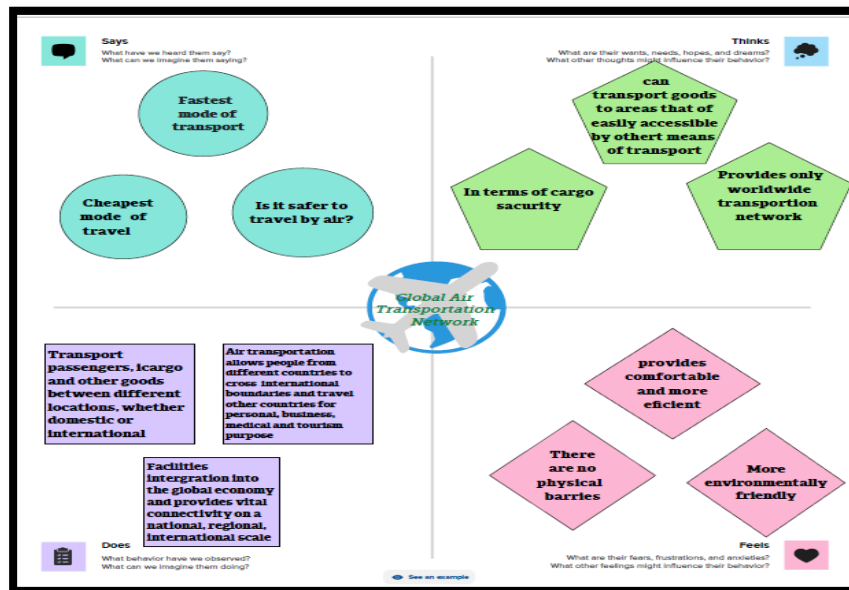
### 1.2 PURPOSE:

- ♦ Air transport allows people from different countries to cross international boundaries and travel other countries for personal, business, medical, and tourism purposes.
- ♦ 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.

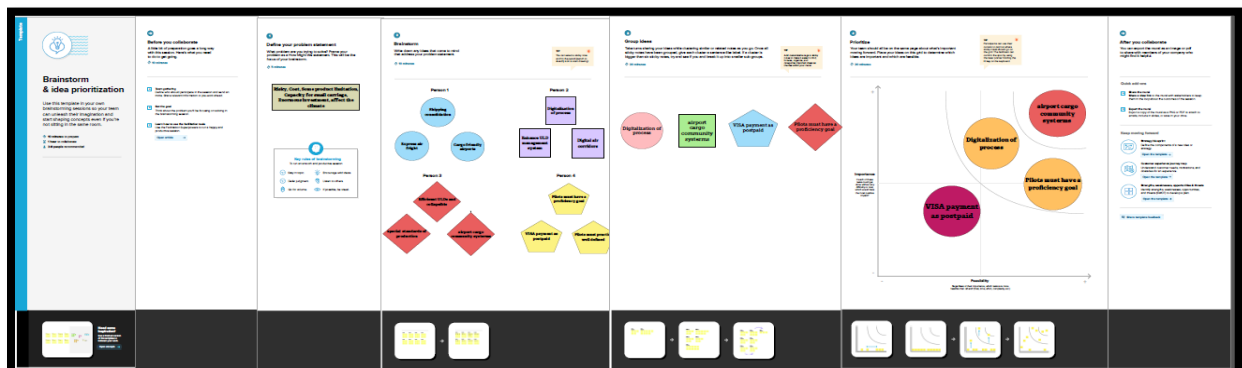
## PROBLEM DEFINITION AND DESIGN THINKING

- ✓ Empathy Map
- ✓ Brainstorming map

### EMPATHY MAP



### BRAINSTORMING MAP



## RESULT:

### ❖ COLLECTION DATA

	A	B	C	D	E	F	G	H	I
1	index	Airport ID	Name	City	Country	IATA	ICAO	Latitude	Longitude
2	0	1	Goroka Airport	Goroka	Papua New Guinea	GKA	AYGA	-6.081689835	145.3919983
3	1	2	Madang Airport	Madang	Papua New Guinea	MAG	AYMD	-5.207079887	145.7890015
4	2	3	Mount Hagen Kagan	Mount Hagen	Papua New Guinea	HGU	AYMH	-5.826789856	144.2960052
5	3	4	Nadzab Airport	Nadzab	Papua New Guinea	LAE	AYNZ	-6.569803	146.725977
6	4	5	Port Moresby Jackson	Port Moresby	Papua New Guinea	POM	AYPY	-9.443380356	147.2200012
7	5	6	Wewak International	Wewak	Papua New Guinea	WWK	AYWK	-3.583830118	143.6690063
8	6	7	Narsarsuaq Airport	Narsarsuaq	Greenland	UAK	BGBW	61.16049957	-45.42599869
9	7	8	Godthaab / Nuuk Air	Godthaab	Greenland	GOH	BGGH	64.19090271	-51.67810059
10	8	9	Kangerlussuaq Airpo	Søndrestrom	Greenland	SFJ	BGSF	67.0122219	-50.71160316
11	9	10	Thule Air Base	Thule	Greenland	THU	BGTL	76.53119659	-68.70320129
12	10	11	Akureyni Airport	Akureyni	Iceland	AEY	BIAR	65.66000366	-18.0727005
13	11	12	Egilsstaðir Airport	Egilsstaðir	Iceland	EGS	BIEG	65.28330231	-14.40139961
14	12	13	Hofnafjörður Airport	Hofn	Iceland	HFN	BIHN	64.295601	-15.2272
15	13	14	Húsavík Airport	Húsavík	Iceland	HZK	BIHU	65.952301	-17.426001
16	14	15	Ísafjörður Airport	Ísafjörður	Iceland	IFJ	BIIS	66.05809784	-23.13529968
17	15	16	Keflavík International	Keflavík	Iceland	KEF	BIKF	63.98500061	-22.60560036

### ❖ CONNECT DATASET WITH TABLEAU

Name	airlines.csv1
Index (Airlines.Csv1)	airline ID (airlines.csv1)
Type	Physical Ta...
Field Name	airlines.csv1
Physical Ta...	index ...

### ❖ DATA VISUALIZATION

1. World map showing details of all airports within a country.
2. Number of airports within the country.
3. Airports at higher altitude within a country.
4. Airports at higher altitude within the world.
5. Airlines within a country.
6. Number of flights from airports

## ❖ DASHBOARD

### 1.Dashboard



### 2.Dashboard

Airlines within a Country				
Airline ID (airlines.csv1)	Name (airlines.csv1)	ICAO (airlines.csv1)	Callsign (airlines.csv1)	
15	Abelag Aviation	AAB	ABG	
271	Allied Command Europe (Mobile Force)	ALF	ACEFORCE	
538	ASL	XXX	Null	
634	Airventure	RVE	AIRVENTURE	
1346	Belgian Air Force	BAF	BELGIAN AIRFORCE	
1373	Belgian Army	AYB	BELGIAN ARMY	
1428	Belgavia	BLG	BELGAVIA	
1515	Brussels International Airlines	BXI	XENIA	
1531	Brussels Airlines	DAT	BEE-LINE	
1551	Belgian Navy	NYB	BELGIAN NAVY	
2235	Eurocontrol	EUC	Null	
2252	European Air Transport	BCS	EUROTRANS	
2431	Flying Service	FYG	FLYING GROUP	
2528	Gendarmerie Belge	GDB	BELGIAN GENDARMERIE	
2800	International Air Carrier Association	ITC	Null	
3032	Jetairfly	JAF	BEAUTY	
3821	Ostend Air College	OCO	AIR COLLEGE	
4445	SITA	SIT	Null	
4734	Sky Service	SKS	SKY SERVICE	

Active (airlines.csv1)

☒ (All)

☒ N

☒ Y

Country (airlines.csv1)

Belgium

Active (airlines.csv1)

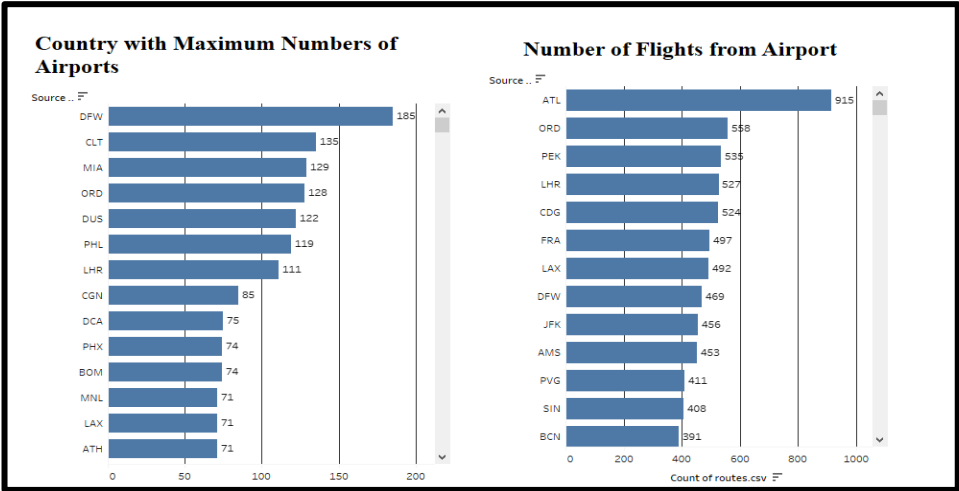
☒ N

☒ Y

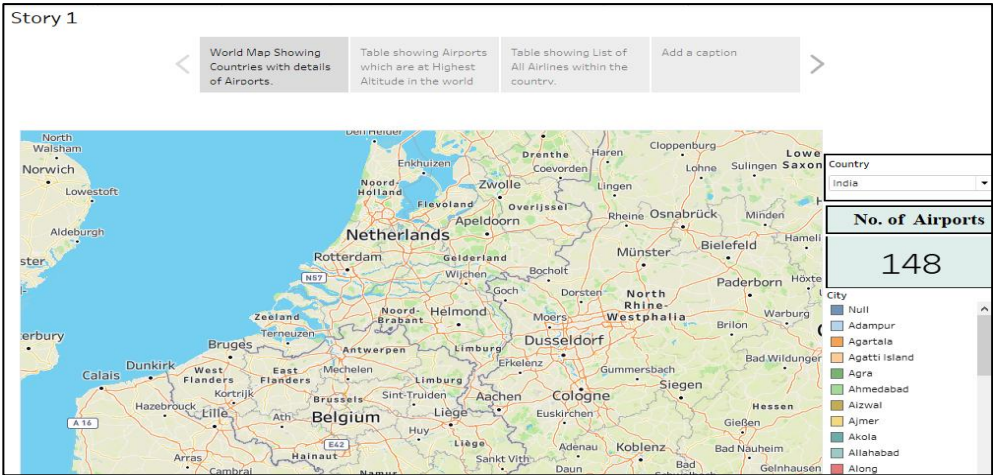
### 3.Dashboard

Airports at higher altitude within a country					Country
					Afghanistan
Difference i...	Name (airp...	City	Icao		
Null	Zaranj Airport	Zaranj	OAZJ		1,572
-4,070	Mazar-i Sheri...	Mazar-i-sharif	OAMS		1,284
-3,992	Kandahar Air...	Kandahar	OAKN		3,337
-3,646	Shindand Air...	Shindand	OASD		3,773
-2,936	Fayzabad Air...	Fayzabad	OAFZ		3,872
-1,076	Chakcharan ...	Chaghcharan	OACC		7,383
-1,020	Bagram Air B...	Kabul	OAX		4,895
-2	Jalalabad Air...	Jalalabad	OAJL		1,814
-1	Tarin Kowt A...	Tarin Kowt	OATN		4,429
	Maimama Air...	Maimama	OAMN		2,743
	Herat Airport	Herat	OAGR		3,206
1	Sheberghan ...	Sheberghan	OASG		1,053
2	Hamid Karza...	Kabul	OAKB		5,877
4	Kunduz Airp...	Kunduz	OAUZ		1,457
33	Bamiyan Air...	Bamiyan	OABN		8,367
67	Shank Air Ba...	Shank	OASH		6,890
205	Camp Bastio...	Camp Bastion	OAZI		2,943
478	Bost Airport	Lashkar Gah	OABT		2,464
2,119	Farah Airport	Farah	OAFR		3,083
3,987	Khost Airport	Khost	OAKS		3,756
4,001	Sharana Air...	Sharona	OASA		7,340
5,545	Ghazni Airpo...	Ghazni	OAGN		7,150

4.Dashboard



STORY :



#### **4.ADVANTAGES & DISADVANTAGES:**

##### **ADVANTAGES:**

- ♦ Fast Speed .
- ♦ Rapid service.
- ♦ Low infrastructure.
- ♦ No physical barriers.
- ♦ Defense service.
- ♦ Security.

##### **DISADVANTAGES:**

- ♦ Costly service.
- ♦ Limited capacity.
- ♦ Undependable and risky.
  - ♦ Accident-prone.
  - ♦ Requires skill.
- ♦ Unfit for cheap and bulky goods.

#### **5.APPLICATIONS:**

- ★ The fastest and modern mean of Transportation.
- ★ Useful for transporting costly and light-weight consignments.
- ★ Used in spraying pesticides in agricultural fields.
- ★ It is a very expensive means of transport.

#### **6.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.

#### **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.**

## **8.APPENDIX:**

### **Source code**

#### **DATASET LINK:**

<https://drive.google.com/drive/folders/1ne7iXfuOn5xwEML1BLaELpDUxMvVFh6B?usp=sharing>

#### **DASHBOARD :1**

[https://public.tableau.com/views/dashboard1\\_16958846880880/Dashboard1?:language=enUS&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/dashboard1_16958846880880/Dashboard1?:language=enUS&publish=yes&:display_count=n&:origin=viz_share_link)

#### **DASHBOARD:2**

[https://public.tableau.com/views/dashboard2\\_16958844230660/Dashboard2?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/dashboard2_16958844230660/Dashboard2?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

#### **DASHBOARD:3**

[https://public.tableau.com/views/Dashboard3\\_16958043006820/Dashboard3?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Dashboard3_16958043006820/Dashboard3?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

#### **DASHBOARD:4**

[https://public.tableau.com/views/Dashboard4\\_16958034802410/Dashboard4?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Dashboard4_16958034802410/Dashboard4?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

#### **STORY:**

[https://public.tableau.com/views/Story\\_16958029158080/Story1?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Story_16958029158080/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

