

# **GLOBLE AIR TRANSPORTION**

## **NETWORK**

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### **1 INTRODUCTION**

Air transportation is a major industry in its own right and it also provides important inputs into wider economic, political, and social processes. The demand for its services, as with most transport, is a derived one that is driven by the needs and desires to attain some other, final objective. Air transport can facilitate, for example, in the economic development of a region or of a particular industry such as tourism, but there has to be a latent demand for the goods and services offered by a region or by an industry. Lack of air transport, as with any other input into the economic system, can stymie efficient growth, but equally inappropriateness or excesses in supply are wasteful.

#### **1.1 Overview**

\* This Global Air Transportation Network dataset is a comprehensive collection of information on airports, airlines and their routes.

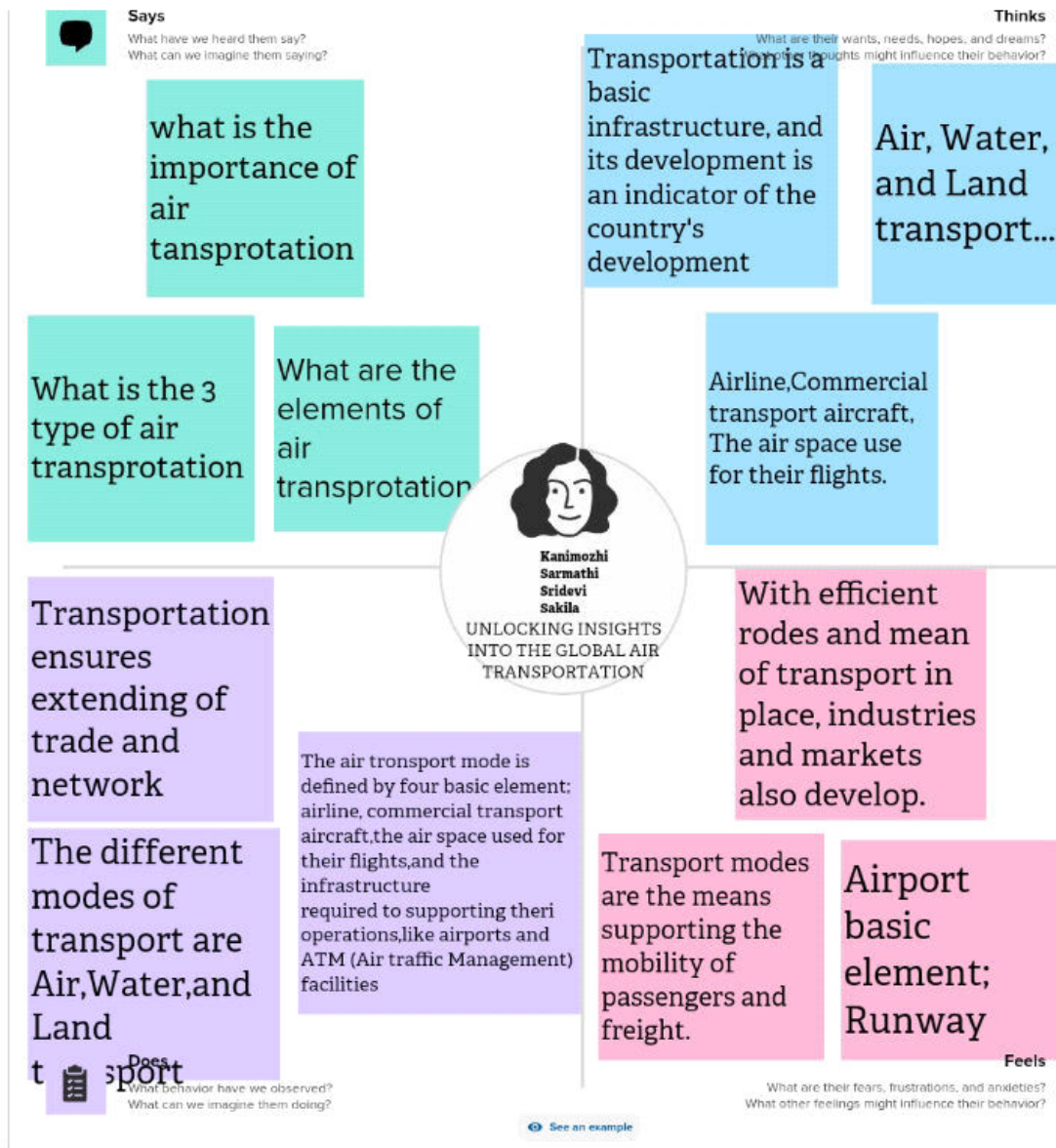
\*It contains information such as name, cities, countries, codes (IATA and ICAO) longitudes, latitudes and altitudes of airports across the world with detailed time zone and daylight save time data.

## 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

# 2 **Problem Definition & Design Thinking**

## 2.1 **Empathy Map**



## 2.2 Ideation & Brainstorming Map

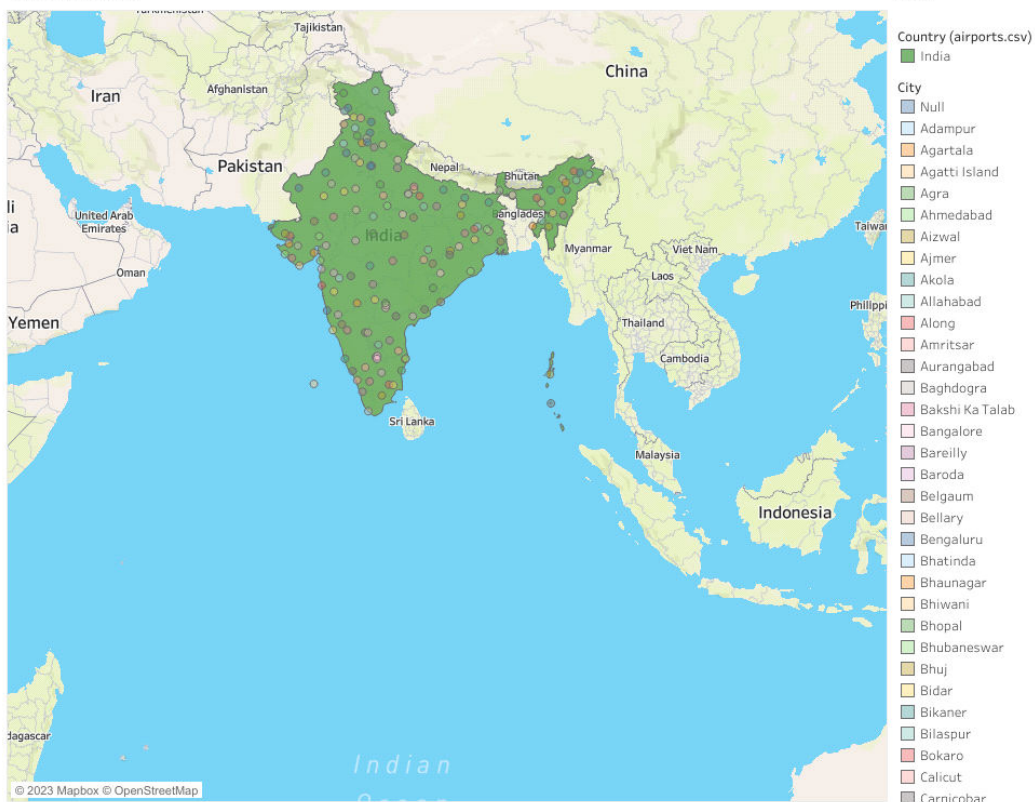


### 3 RESULT

## Global Air Transportation Network

World Map Showing Countries with details of Airports	Table showing Airports which are at Highest Altitude in the world, and w...	Table showing List of All Airlines within the country..	Bar Graphs showing Countries with Max No. of Airports & No. of Flights f..
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Airport Final



# Global Air Transportation Network

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## Airports at higher aititude within a country

Index	Name (airports.csv)	City	ICAO (airpo..	
Null	Ghazni Airport	Ghazni	OAGN	7,150
	Farah Airport	Farah	OAFR	3,083
	Bost Airport	Lashkar Gah	OABT	2,464
	Bamiyan Airport	Bamiyan	OABN	8,367
1,978	Herat Airport	Herat	OAHR	3,206
1,979	Jalalabad Airport	Jalalabad	OAJL	1,814
1,980	Hamid Karzai Internation..	Kabul	OAKB	5,877
1,981	Kandahar Airport	Kandahar	OAKN	3,337
1,982	Maimana Airport	Maimama	OAMN	2,743
1,983	Mazar I Sharif Airport	Mazar-i-sharif	OAMS	1,284
1,984	Shindand Airport	Shindand	OASD	3,773
1,985	Sheberghan Airport	Sheberghan	OASG	1,053
1,986	Konduz Airport	Kunduz	OAUZ	1,457
4,589	Fayzabad Airport	Faizabad	OAFZ	3,872
5,328	Bagram Air Base	Kabul	OAIY	4,895

Country (airports.csv)  
Afghanistan

## Airports at higher altitude in the world

Name (airports.csv)	City	ICAO code	
Coronation Airport	Coronation	A148	2,595
Fort St John Airport	Fort Saint John	\N	2,280
Kelowna International Air..	Kelowna	\N	1,421
Prince Albert Glass Field	Prince Albert	\N	1,405
Fort McMurray Airport	Fort McMurray	\N	1,211
Geraldton Greenstone Re..	Geraldton	\N	1,144
Penticton Airport	Penticton	E135	1,129
Campbell River Airport	Campbell River	\N	346
Kingston Norman Rogers ..	Kingston	\N	305
Keflavik International Air..	Keflavik	A20N	171
Charlottetown Airport	Charlottetown	E135	160
Charlo Airport	Charlo	A124	132
Nanaimo Airport	Nanaimo	\N	92
Clyde River Airport	Clyde River	A225	87
Stephenville Airport	Stephenville	\N	84
Tofino / Long Beach Airport	Tofino	\N	80
Kugluktuk Airport	Coppermine	A140	74
Húsavík Airport	Husavik	A19N	48
Reykjavik Airport	Reykjavik	A21N	48
Natashquan Airport	Natashquan	\N	39
Iles-de-la-Madeleine Airp..	Iles De La Madeleine	\N	35
Arviat Airport	Eskimo Point	\N	32
Chilliwack Airport	Chilliwack	A158	32
Siglufjörður Airport	Siglufjordur	\N	10

# Global Air Transportation Network













World Map Showing Countries with details of Airports

Table showing Airports which are at Highest Aitude in the world. and w...

Table showing List of All Airlines within the country.

Bar Graphs showing Countries with Max No.of Airports & No.of Flights f..

## Airline within a country

Airline ID (r..	Name	Icao	Callsign	
24	Air Alps Aviation (A6)	\N	ALPAV	
	Comtel Air	COE	Null	
	ConneX European Airline	2CO	ConneX	
	Salzburg arrows	\N	SZA	
	Welcome Air	WLC	WELCOMEAIR	
1173	Charter Air	CHW	CHARTER WIEN	
1469	Intersky	ISK	INTERSKY	
1629	Niki	NLY	FLYNIKI	
2548	Tyrolean Airways	TYR	TYROLEAN	
3856	Lauda Air	LDA	LAUDA AIR	
	LTU Austria	LTO	BILLA TRANSPORT	
20710	Austrian Airlines	AUA	AUSTRIAN	

Active

☐ N

☒ Y

Country

Austria

Active

 Y

## Global Air Transportation Network

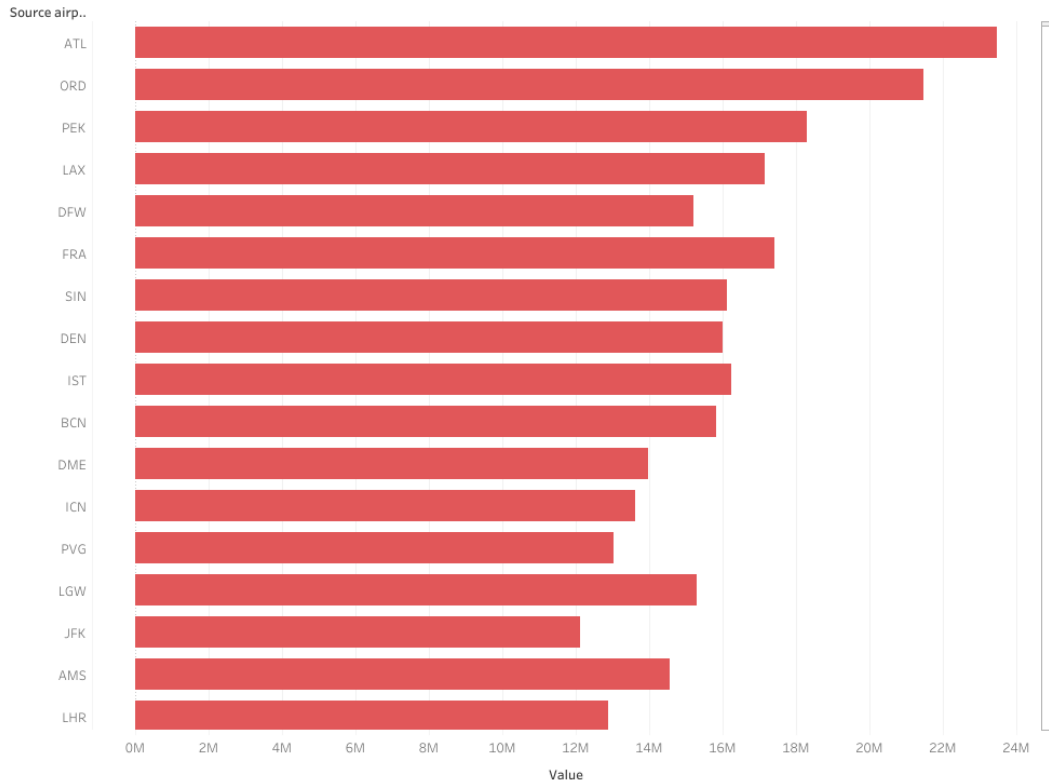
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Number of flights from Airport



## 4

### ADVANTAGES & DISADVANTAGES

#### Advantages:

\*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

Disadvantages:

\*Risky. Air travel is riskiest mode transport,since there can be considerable losses to goods,customer and crews as a result of a minor crash...

\*Cast...

\*Some Product Limitation...

\*Capacity for small Carriage....

\*Enormous investment.

## 5 **APPLICATION**

Modeling air transport networks aims airline companies to organize their routes in cost-efficient way and therefore maximize their profits. Air transport network models are also the tool to investigate system robustness.They help to determine weaknesses of the system in case of various kinds of disruption [4] [6] Once weaknesses are determined, a substitute node can be identified through the alternative strength for the pair [7].

## 6 **CONCLUSION**

In conclusion, the Indian aviation industry has undergone significant developments and growth in recent years. The expansion of regional connectivity, emergence of low-cost carriers, increased investment in infrastructure, and adoption of



technological advancements have all contributed to the growth of the industry.