

# UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK



**NAAN MUDHALVAN TEAM PROJECT**

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# UNLOCKING INSIGHTS INTO GLOBAL AIR TRANSPORTATION NETWORK

## INTRODUCTION:

### □ OVERVIEW

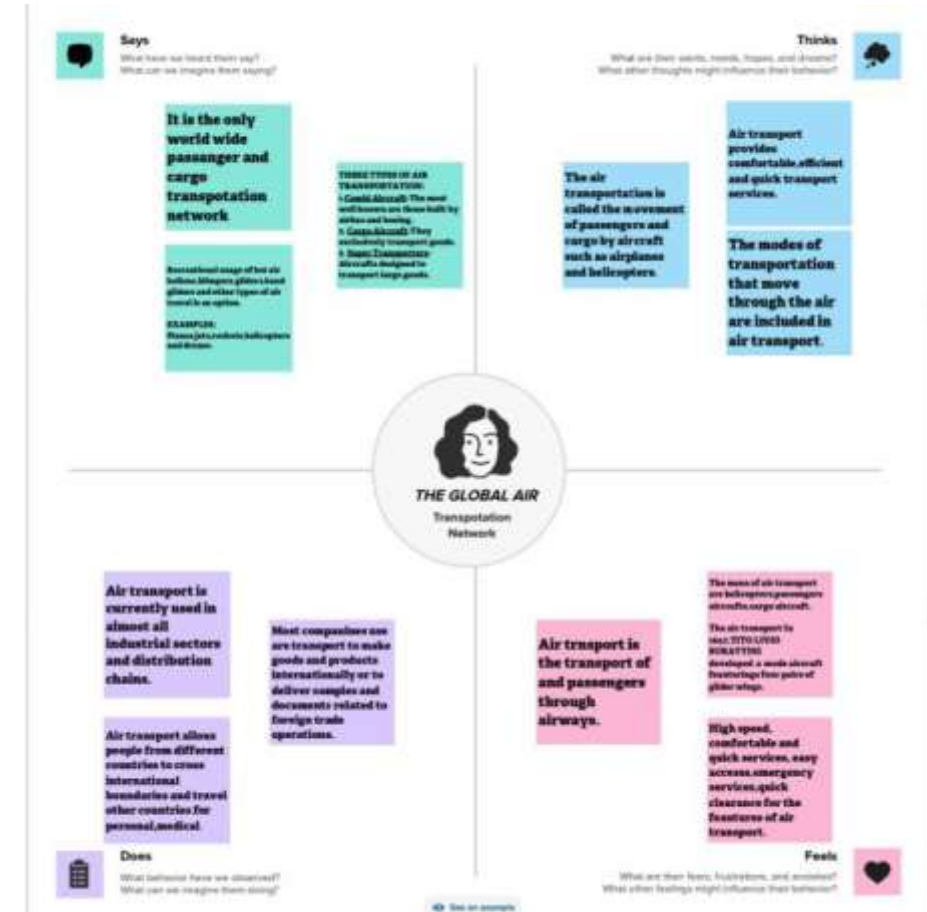
- ❖ The air transportation network is a complex network which has the properties of small-world networks and scale-free networks.
- ❖ The degree distribution of the nodes displays a heavy-tailed distribution .

### □ PURPOSE

- ❖ Air transport is an important enabler to achieving economic growth and development.
- ❖ Air transport facilitates integration into the global economy and provides vital connectivity on a national , regional and international scale.

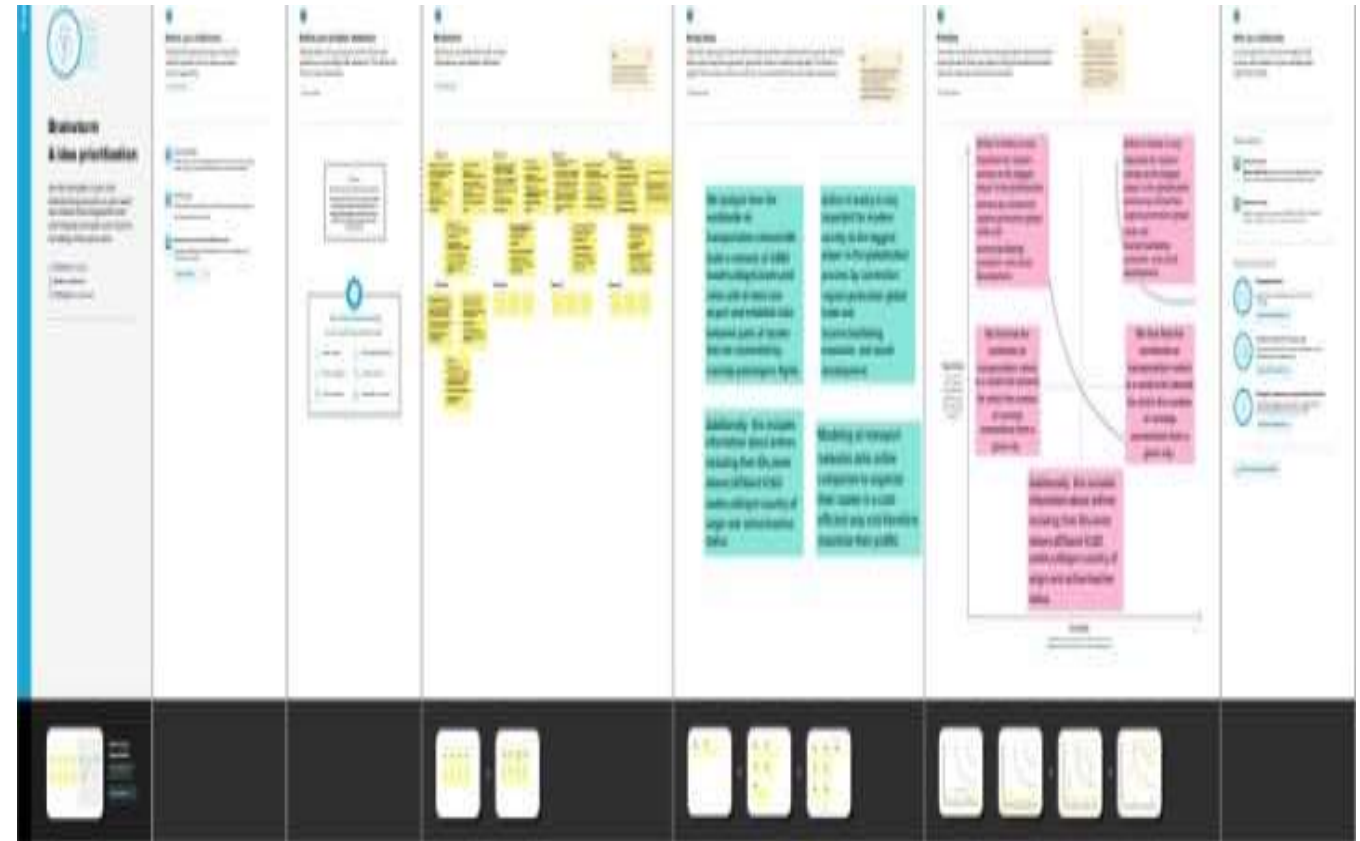
# PROBLEM DEFINITION & DESIGN THINKING

## EMPATHY MAP



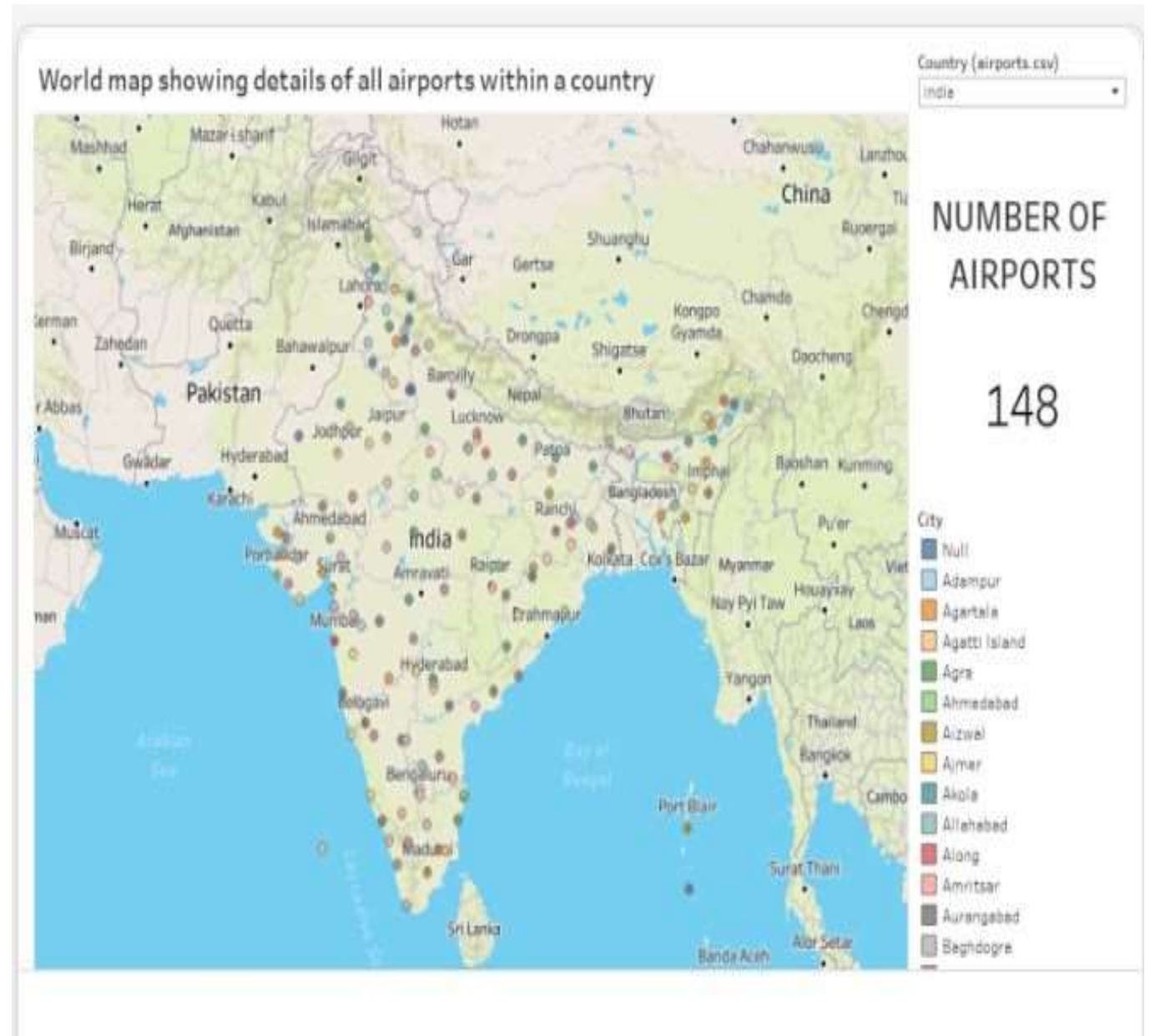
# PROBLEM DEFINITION & DESIGN THINKING

## BRAINSTORM



## RESULT:

- ❑ Airport planning is a systematic process that establishes a strategy for the efficient development of airports consistent with local, state and national goals.
- ❑ In 1922, the first permanent airport and commercial terminal solely for commercial aviation was opened at near what was then Königsberg, East Prussia.





# RESULT:

- ❑ PC-12 planes .
- ❑ The world's highest airstrip at 16,700 feet (5,100 m).
- ❑ Topping the list at number one is Telluride Regional Airport (TEX), at an altitude of 9,078 feet.
- ❑ Located in San Miguel County, Colorado, TEX is served by San Francisco-based commuter airline Boutique Air which flies a fleet of eight-passenger Pilatus.

## AIRPORTS AT HIGHER ALTITUDE WITHIN A COUNTRY

Index numb..	Name (airports.csv)	City	ICAO (airpo..	
1	Adampur Airport	Adampur	VIAX	775
	Agartala Airport	Agartala	VEAT	46
	Agatti Airport	Agatti Island	VOAT	14
	Agra Airport	Agra	VIAG	551
	Akola Airport	Akola	VAAK	999
	Allahabad Airport	Allahabad	VIAL	322
	Along Airport	Along	VEAN	900
	Ambala Air Force Station	Nuli	VIAM	909
	Aurangabad Airport	Aurangabad	VAAU	1,911
	Bagdogra Airport	Bagdogra	VEBD	412
	Bakshi Ka Talab Air Force	Bakshi Ka Talab	VIBL	385
	Bareilly Air Force Station	Bareilly	VIBY	580
	Begumpet Airport	Hyderabad	VOHY	1,742
	Belgaum Airport	Belgaum	VABM	2,487
	Bellary Airport	Bellary	VOBL	30
	Bhatinda Air Force Station	Bhatinda	VIBT	662
	Bhavnagar Airport	Bhavnagar	VABV	44
	Bhiwani Airport	Bhiwani	VIBW	720
	Bhuj Airport	Bhuj	VABJ	268
	Bidar Air Force Station	Bidar	VOBR	2,178
	Biju Patnaik Airport	Bhubaneswar	VEBS	138
	Bilaspur Airport	Bilaspur	VABI	899

Country (airports.csv)






















India

## Airports at higher altitude in world

Name (airports.csv)	City	ICAO (airpo..	
Capitan Nicolas Rojas Airport	Potosi	SLPD	12,913
Copacabana Airport	Copacabana	SLCC	12,591
Daocheng Yading Airport	Daocheng	ZUDC	14,472
El Alto International Airport	La Paz	SLLP	13,355
Golog Maqin Airport	Golog	ZLGL	12,426
Inca Manco Capac International Airport	Juliaca	SPJL	12,552
Kangding Airport	Kangding	ZUKD	14,042
Ngari Gunsa Airport	Shiquanhe	ZUAL	14,022
Qamdo Bangda Airport	Bangda	ZUBD	14,219
Yushu Batang Airport	Yushu	ZYLS	12,816


## RESULT:

- ❑ The first commercial airline in present-day India was Handley Page Indo-Burmese Transport . On 15 October 1932,J.R.D. Tata flew a consignment of mail from Karachi to Juhu Airport.
- ❑ His Airline later become Air India.
- ❑ There are over 5,000 airlines with ICAO codes.
- ❑ The world's largest airline by fleet size and passengers carried is American Airlines , operating from the United States.

Airlines within a country				
Airline ID	Name	Icao	Callsign	
218	Air India Limited	AIC	AIRINDIA	
241	Air Sahara	RSH	SAHARA	
569	Air India Express	AXB	EXPRESS INDIA	
1026	Alliance Air	LLR	ALLIED	
1370	Blue Dart Aviation	BDA	BLUE DART	
2001	Deccan Aviation	OKN	DECCAN	
2575	Go Air	GOW	GOAIR	
2634	Gujarat Airways	GUJ	GUJARATAIR	
2850	IndiGo Airlines	IGO	IFLY	
2851	India International Airways	IIL	INDIA INTER	
2852	Indian Air Force	IFC	INDIAN AIRFORCE	
2853	Indian Airlines	IAC	INDAIR	
3000	Jet Airways	JAI	JET AIRWAYS	
3142	Kingfisher Airlines	KFR	KINGFISHER	
3907	Paramount Airways	PMW	PARAWAY	
3918	Pawan Hans	PHE	PAWAN HANS	
4375	Spicejet	SEJ	SPICEJET	
13105	Air India Regional	\N	ALLIED	
13106	MDLR Airlines	\N	MDLR	
13107	Jagson Airlines	JGN	JAGSON	
13905	Skyline nepc	\N	Null	
16327	Indya Airline Group	IGI	Indya1	

Active  
☒ (All)  
☒ N  
☒ Y

Country  
India

Active  
 N  
 Y

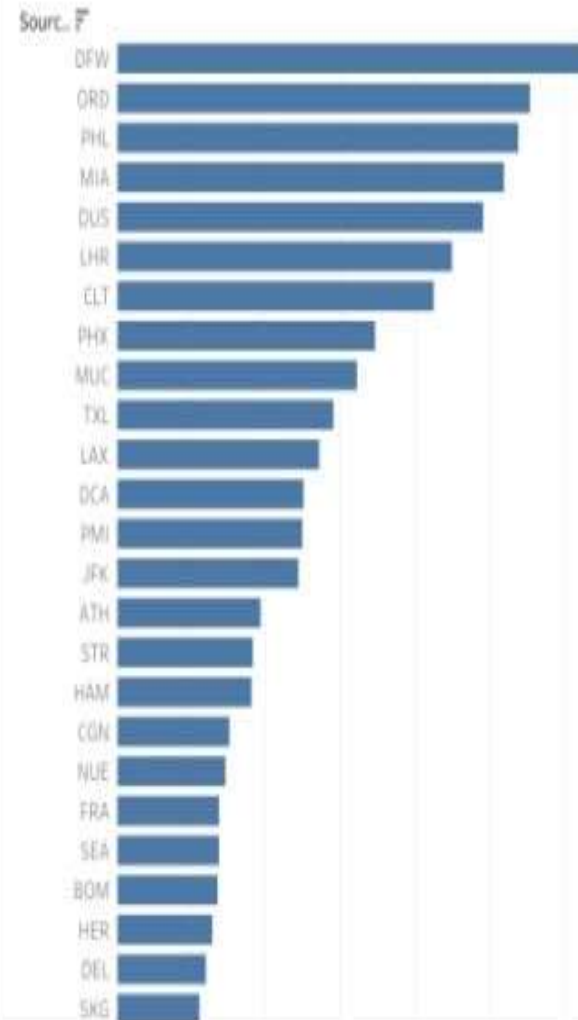
NUMBER OF AIRLINES  
29

Country  
India

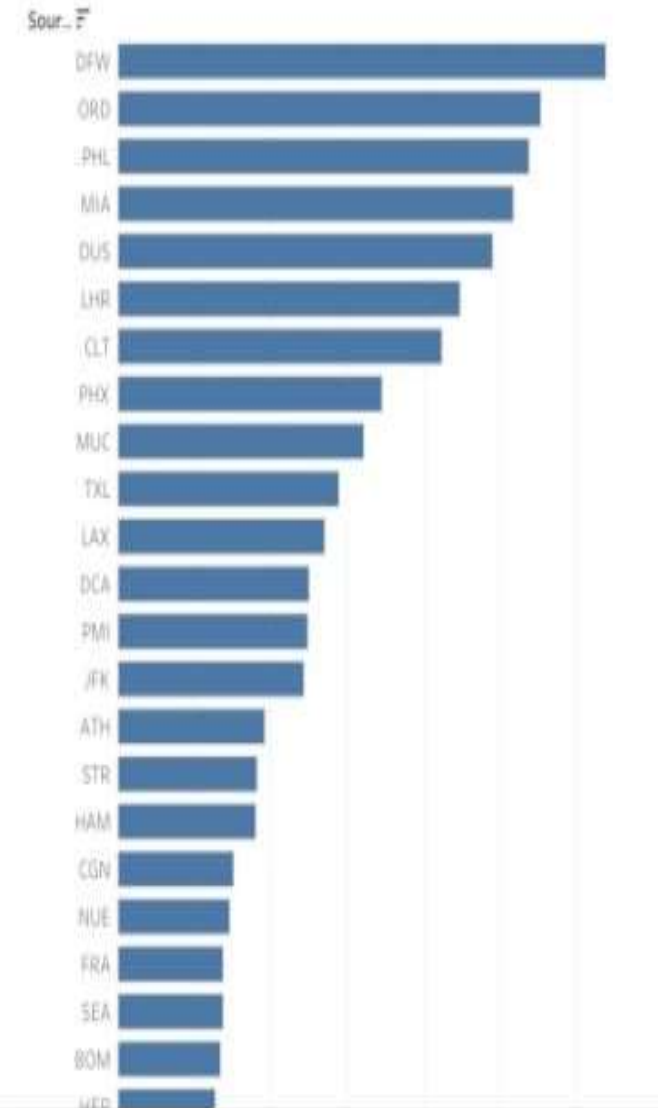
## RESULT:

- ❑ United States.
- ❑ With a total of 13,513 airports, the United States has the most airports in the world.
- ❑ Airports are the authorized spaces for aircraft takeoff and landing.
- ❑ While some airports are small private and commuter hubs, we generally think of more extensive commercial flight operations when referring to airports.

COUNTRY WITH MAXIMUM NUMBER OF AIRPORTS



NUMBER OF FLIGHT FROM AIRPORTS





# ADVANTAGES & DISADVANTAGES

## ADVANTAGES

- ☐ Fast speed of transport.
- ☐ Rapid service facility.
- ☐ Low infrastructure required to establish this service.
- ☐ No physical barriers can affect its speed.
- ☐ Aviation is very important in service to protect any nation.
- ☐ It provides a safe and secure environment to travel by valuable goods.

## DISADVANTAGES

- ☐ Costlier than other modes.
- ☐ Limited capacity of people or goods can move.
- ☐ Undependable and risky since it depends on weather conditions.
- ☐ Requires skill to fly or operate any aircraft.
- ☐ Unfit for cheap bulky goods since travel costs can be higher than the goods cost.
- ☐ More accident – prone than other modes.

# CONCLUSION

- ❖ From the International Air Transport Association has been instrumental in developing and improving the air transport industry.
- ❖ From Flight planning is important for making the flight safe and efficient , where the most priority for any flights is to achieve safety , then as any commercial organization , they care about making efficient flight without compromising with safety.

THANK YOU