A PROJECT REPORT ON

GLOBAL AIR TRANSPORTATION NETWORK

INTRODUCION:

1.1 OVERVIEW

- The provided 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. Additionally, this includes information about airlines including their ID's, name aliases, IATA and ICAO codes, call signs country of origin and active/inactive status.

- Using data analytics and visualisation tools like Tableau, the dataset can be analysed to identify trends and patterns in the air transportation network, providing valuable insights into the state of the industry.

1.2 PURPOSE

- The requirements of the Global Air Transportation Network - Airports, Airlines, and Routes dataset is to provide stakeholders in the aviation industry with accurate, up-to-date information on the worldwide air transportation network.

- The dataset is intended to help stakeholders make informed decisions related to business growth, investment, capacity planning and infrastructure development.

- The provided information can be used to optimize routes, improve operational efficiency, and enhance customer experience.

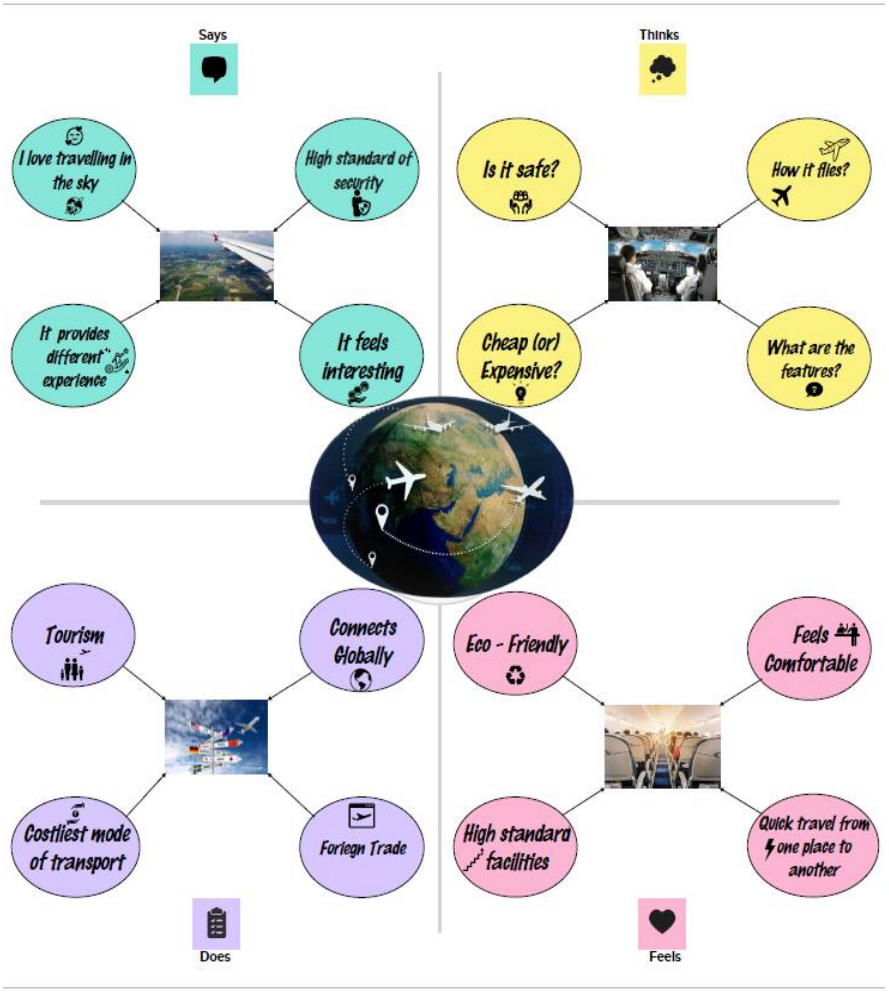
- By providing stakeholders with the comprehensive understanding of the air transportation network, the dataset can help to optimize routes and reduce congestion in the air, leading to improved air quality and reduced carbon emissions. This can contribute to the overall well- being of communities around the world, by making air travel more accessible, affordable, and eco-friendly.

- Moreover, the dataset can be used by investors to identify promising sectors and geographic areas for investment in the aviation industry.

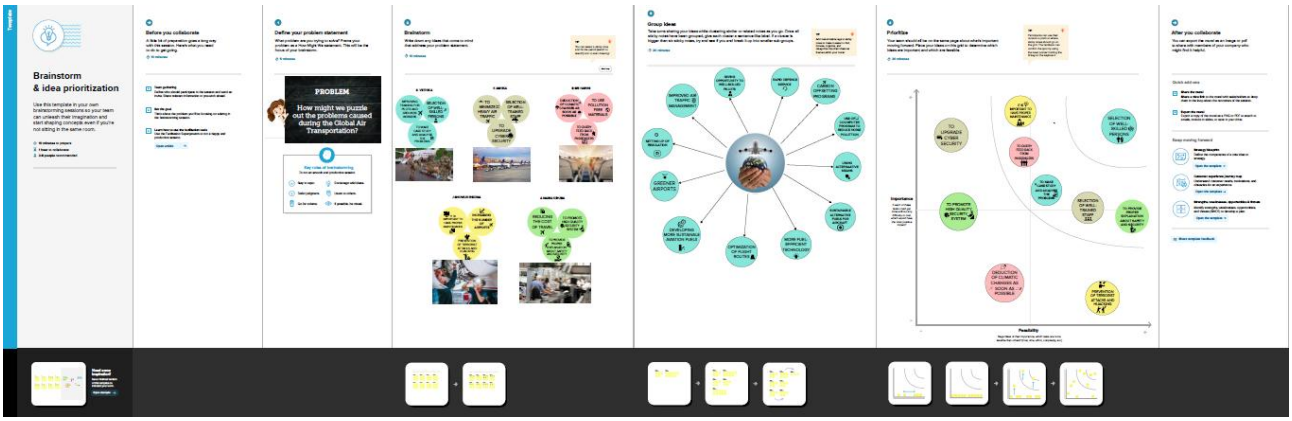
- Our purpose of our project is to make dataset into visualization which is easy to understand the details provided in dataset.

PROBLEM DEFINITION & DESIGN THINKING:

2.1 EMPATHY MAP



2.2 IDEATION & BRAIN STORMING MAP



1

Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

5 minutes

PROBLEM

How might we puzzle out the problems caused during the Global Air Transportation?

Key rules of brainstorming

To run an smooth and productive session

- Stay in topic.
- Defer judgment.
- Go for volume.
- Encourage wild ideas.
- Listen to others.
- If possible, be visual.

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

Mind map

S VETHIKA

- IMPROVING TRAINING FOR PILOTS AND GROUND WORKERS
- SELECTION OF WELL-SKILLED PERSONS
- TO MAKE CASE STUDY AND ANALYSE THE PROBLEMS

K ASHIKA

- TO MINIMIZE HEAVY AIR TRAFFIC
- SELECTION OF WELL-TRAINED STAFF
- TO UPGRADE CYBER SECURITY

B SRI HARINI

- DEDUCTION OF CLIMATIC CHANGES AS SOON AS POSSIBLE
- TO USE POLLUTION FREE MATERIALS
- TO QUERY FEED BACK FROM PASSENGERS

J SNOWLIN REXIMA

- IT IS IMPORTANT TO HAVE PROPER MAINTENANCE
- INCREASING THE NUMBER OF AIRPORTS
- PREVENTION OF TERRORIST ATTACKS AND HIJACKING

A MARIA KIRUBA

- REDUCING THE COST OF TRAVEL
- TO PROMOTE HIGH QUALITY SECURITY SYSTEM
- TO PROVIDE PROPER EXPLANATION ABOUT SAFETY AND SECURITY

3

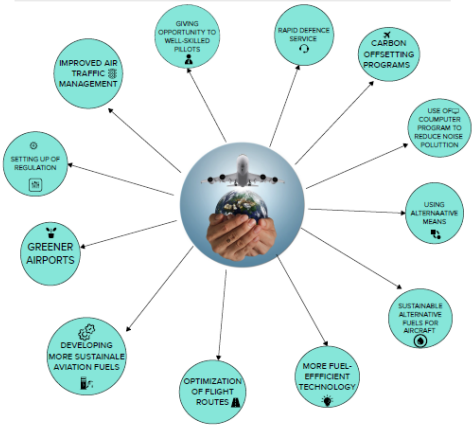
Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.



4

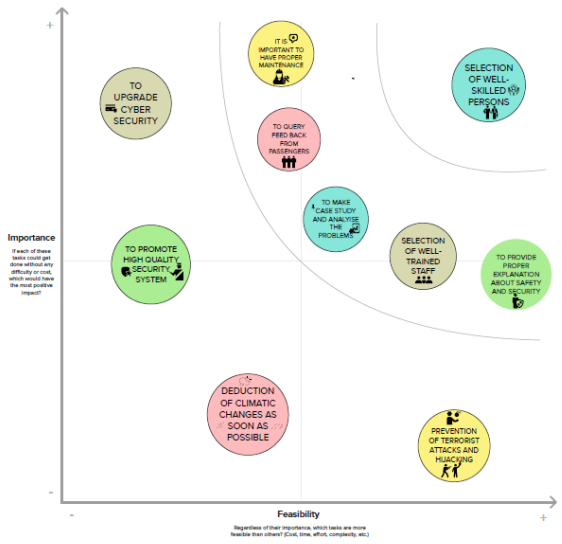
Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the H key on the keyboard.



RESULT:

WORLD MAP MANIFESTING COUNTRIES WITH DETAILS OF THE AIRPORTS.

TABLE MANIFESTING THE AIRPORTS WHICH ARE AT THE HIGHEST ALTITUDESIN THE WORLD AND WITHIN THE COUNTRIES

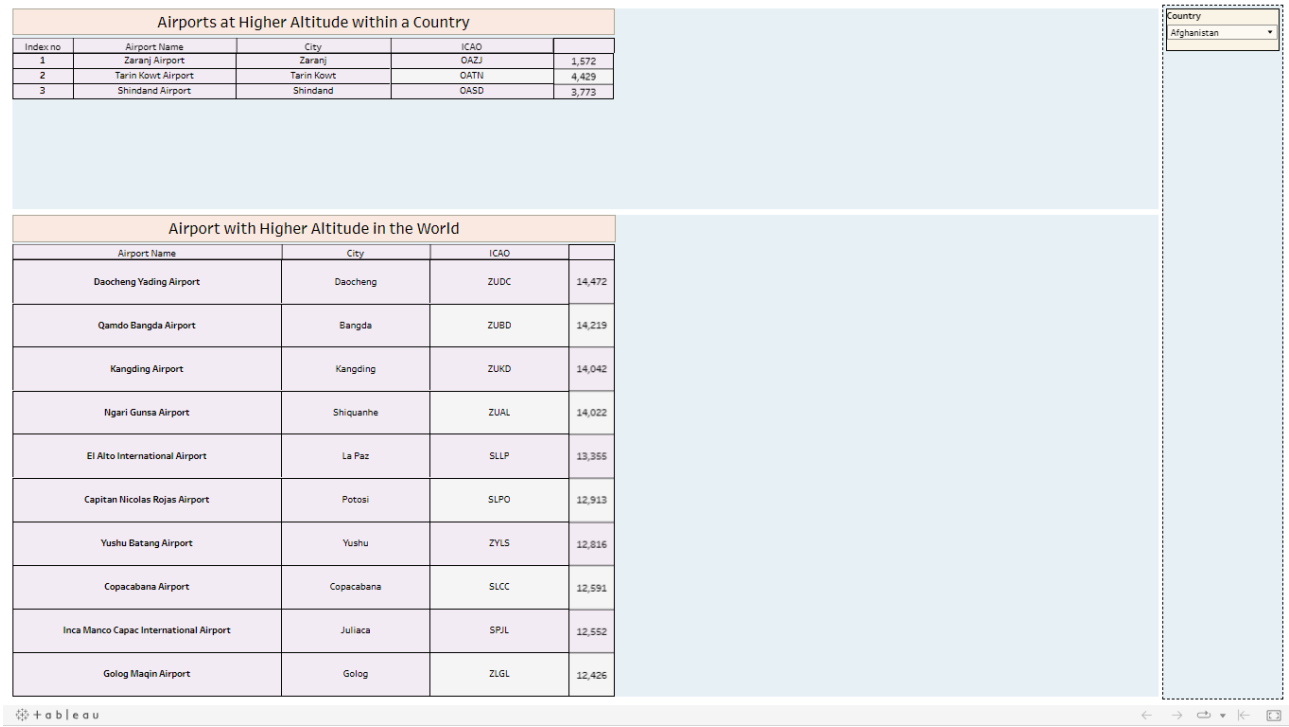
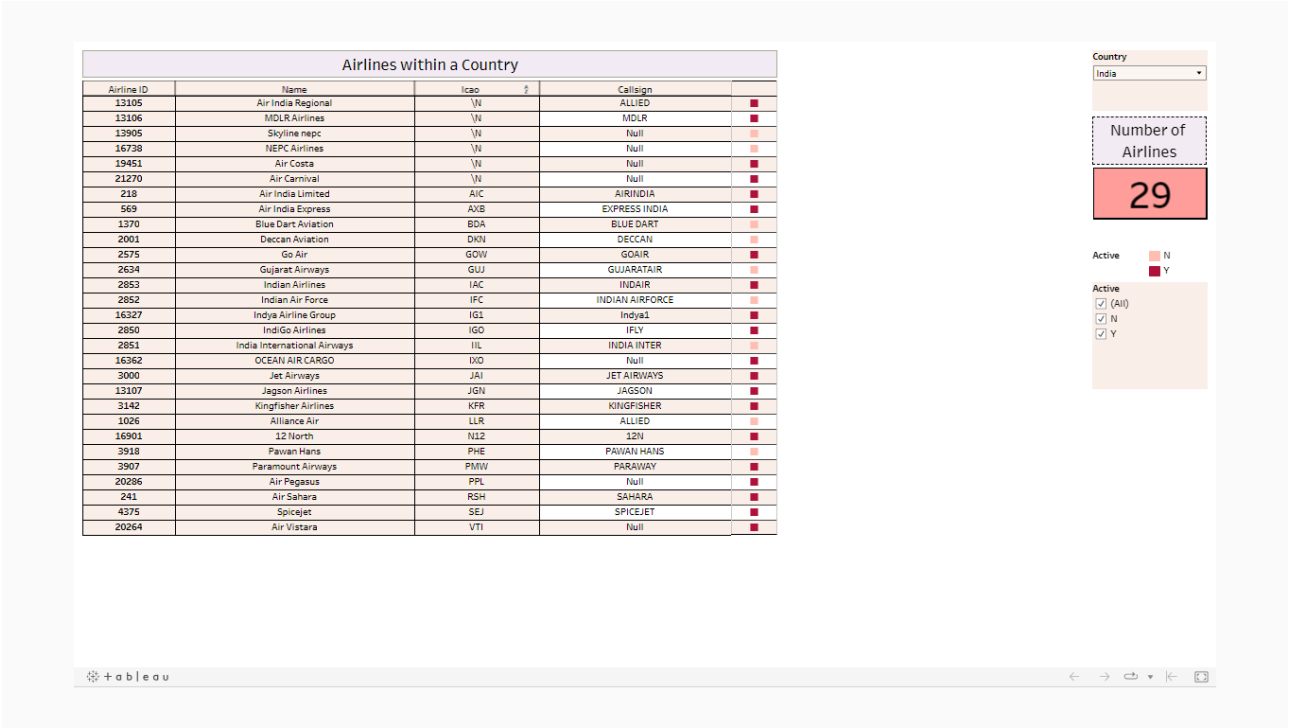


TABLE MANIFESTING THE LIST OF ALL AIRLINES WITH THE COUNTRY.



Airlines within a Country

Airline ID	Name	Icao	Callsign	
13105	Air India Regional	\N	ALLIED	
13106	MDLR Airlines	\N	MDLR	
13905	Skyline nepc	\N	Null	
16738	NEPC Airlines	\N	Null	
19451	Air Costa	\N	Null	
21270	Air Carnival	\N	Null	
218	Air India Limited	AIC	AIRINDIA	
569	Air India Express	AXB	EXPRESS INDIA	
1370	Blue Dart Aviation	BDA	BLUE DART	
2001	Deccan Aviation	DKN	DECCAN	
2575	Go Air	GOW	GOAIR	
2634	Gujarat Airways	GUJ	GUJARATAIR	
2853	Indian Airlines	IAC	INDAIR	
2852	Indian Air Force	IFC	INDIAN AIRFORCE	
16327	Indya Airline Group	IG1	Indya1	
2850	IndiGo Airlines	IGO	IFLY	
2851	India International Airways	IIL	INDIA INTER	
16362	OCEAN AIR CARGO	IXO	Null	
3000	Jet Airways	JAI	JET AIRWAYS	
13107	Jagson Airlines	JGN	JAGSON	
3142	Kingfisher Airlines	KFR	KINGFISHER	
1026	Alliance Air	LLR	ALLIED	
16901	12 North	N12	12N	
3918	Pawan Hans	PHE	PAWAN HANS	
3907	Paramount Airways	PMW	PARAWAY	
20286	Air Pegasus	PPL	Null	
241	Air Sahara	RSH	SAHARA	
4375	Spicejet	SEJ	SPICEJET	
20264	Air Vistara	VTI	Null	

Country: India

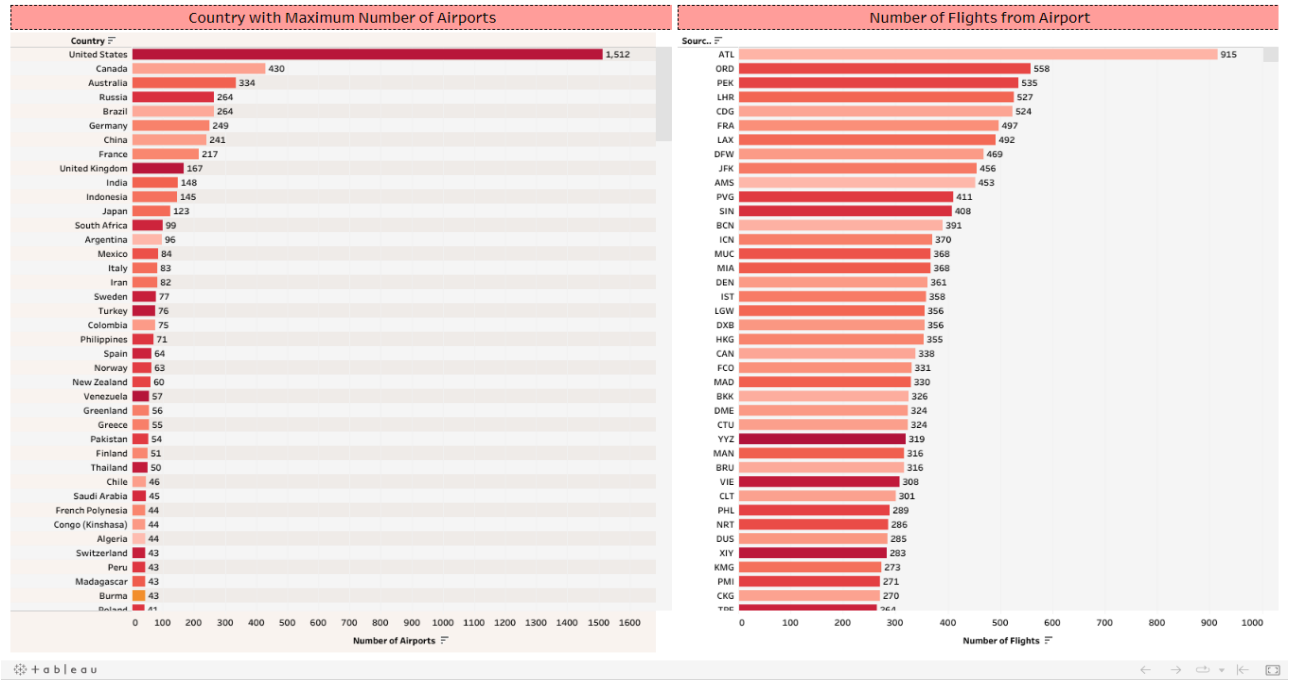
Number of Airlines: 29

Active: N, Y

Active: (All), N, Y

+ableau

BAR GRAPHS MANIFESTING THE COUNTRIES WITH MAXIMUM NUMBER OF AIRPORTS & NUMBER OF FLIGHTS FROM AIRPORTS.



ADVANTAGES & DISADVANTAGES:

ADVANTAGES	DISADVANTAGES
▪ Data visualization of Global Air Transportation network helps the stake holders in the aviation industry with accurate up-to-date information.	▪ If the data set has no sufficient data it would be difficult.
▪ The visualization provides valuable insights into the state of the industry.	▪ Subject to delays due to bad weather, strikes and technical problem.
▪ These helps the investor to identify promising sectors & geographic areas for investment in the aviation industry.	▪ Large investment is required for construction & operation of modern airport.
▪ This helps the stake holders to take decision related to business growth, investment, capacity planning & infrastructure development.	▪ It is most expensive mode of transportation.
▪ It also helps the stakeholders how to optimize routes & reduce congestion in the air, leading to improved air quality & reduced carbon emission.	▪ Limited caring capacity.

APPLICATIONS:

- ✓ To optimize routes.
- ✓ To improve operational efficiency.
- ✓ To enhance customer experience.
- ✓ To reduce congestion in the air, leading to improved air quality which reduce the carbon emissions.
- ✓ Helps airlines, airport authorities, tourism boards and government agencies to identify business opportunity.
- ✓ Helps to identify promising sectors & geographical areas for investments in aviation industry.
- ✓ To promote personal, business, medical & tourism purpose.
- ✓ Connecting people and Economic growth.
- ✓ Generating trade, promoting tourism and creating employment opportunities.
- ✓ Generating numerous socio-economic benefits.
- ✓ Increases consumer benefits and choices.

CONCLUSION:

We have made an effective Empathy map and Brainstorm. And from the provided dataset we have made dashboards and stories. This shows the world map manifesting countries with details of airports, table manifesting the airports which are at the highest altitudes in the world and within the countries, table manifesting the list of all airlines within the country and bar graphs manifesting the countries with maximum number of airports & Number of flights from airports.

FUTURE SCOPE:

- Making air travel accessible to underserved areas of the world.
- Economic growth in underserved areas.
- The transition from manual to automation.