

PROJECT REPORT

1.INTRODUCTION

1.1 Overview:

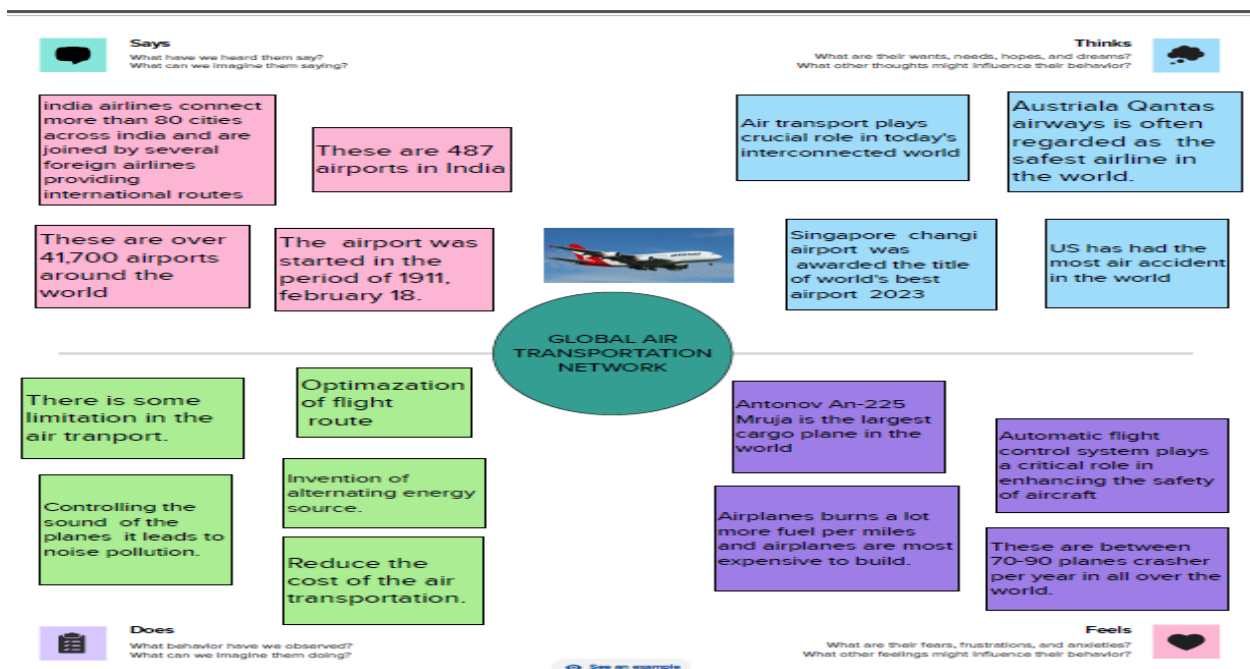
The air transport system generally includes airports, ATC (air traffic control) system, and airlines. The airports represent the ground part of the system's infrastructure handling the aircraft operated by different airlines transporting passengers and freight/cargo shipments.

1.2 Purpose

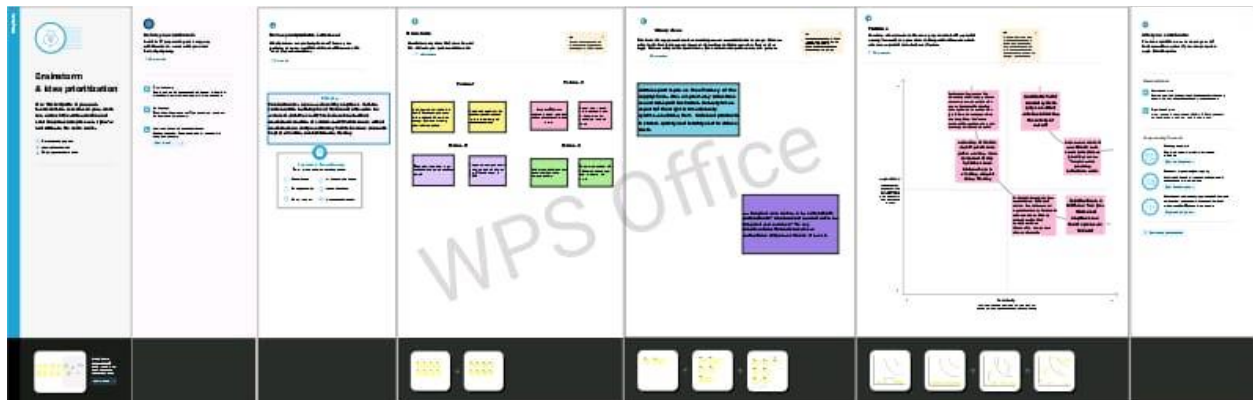
The air transport network is a key infrastructure asset. It is the only worldwide passenger and cargo transportation network, providing an essential link between individual countries and the wider global economy. Air services create significant value for passenger and freight users.

2.Problem Definition & Design Thinking:

2.1 Empathy Map:

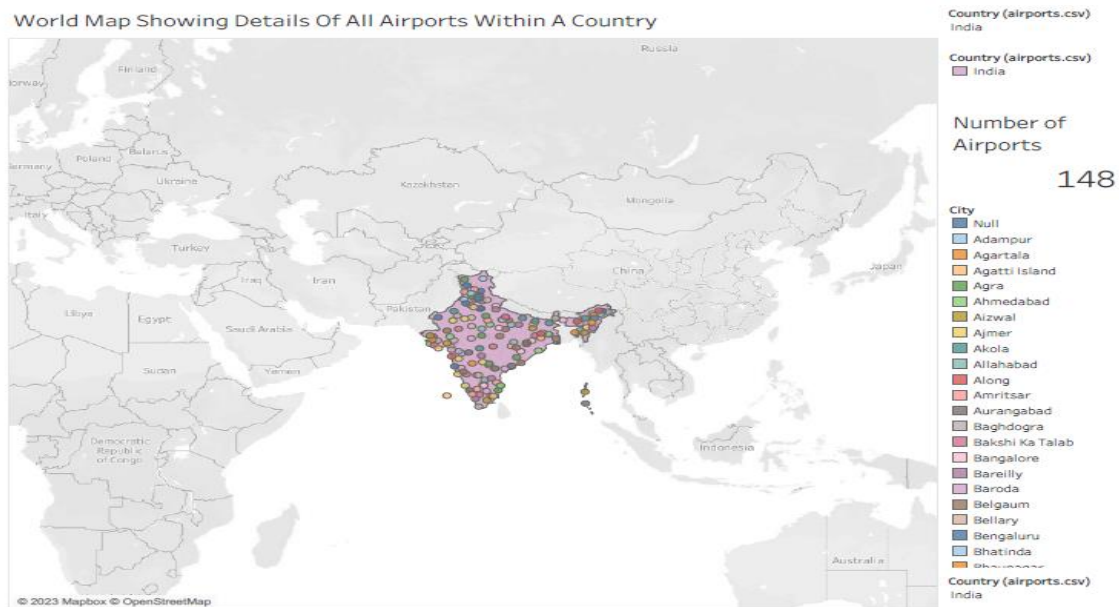


2.2 Ideation & brainstorming Map



3.RESULT:

3.1 World Map Showing Details of All Airports Within a Country



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3.2 Airport at Highest Altitude in the World and Country

Airports at Highest
Altitude in The World

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

Country (airports.csv)
Malaysia


Airports at higher altitude within a
country

City	ICAO (airpo..	Name (airports.csv)	
Bario	WBGZ	Bario Airport	3,350
Bakalalan	WBGQ	Bakalalan Airport	2,900
Long Datih	WBGF	Long Lellang Airport	1,400

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3.3 Airlines Within a Country

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	
11856	Transavia Denmark	TDK	Null	
17115	Copenhagen Express	CXO	Copex	

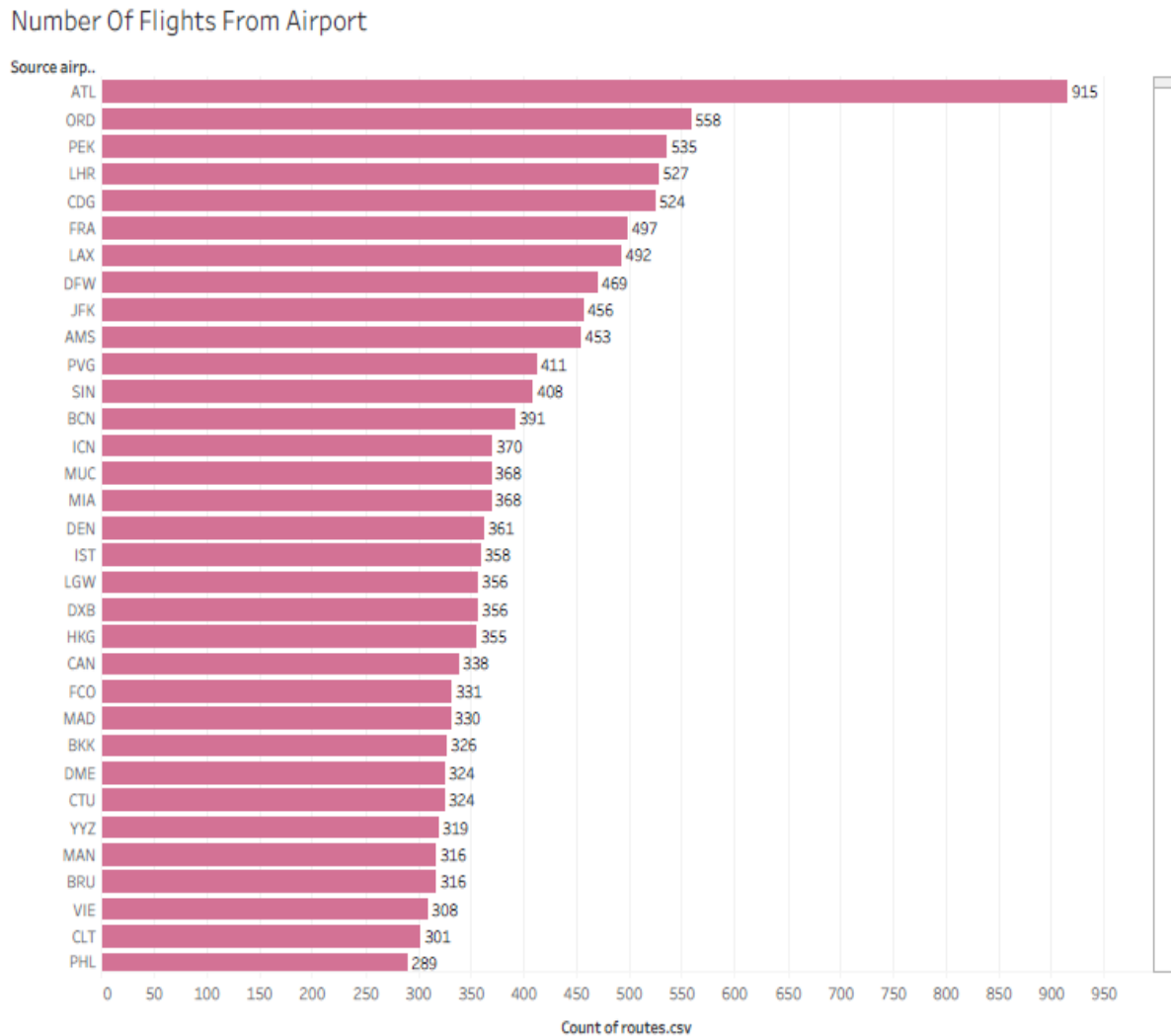
Active
☐ N
☒ Y

Country
Denmark

Active
 Y

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3.4 Number of Flights from Airport



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3.5 Story

Global Air Transportation Network

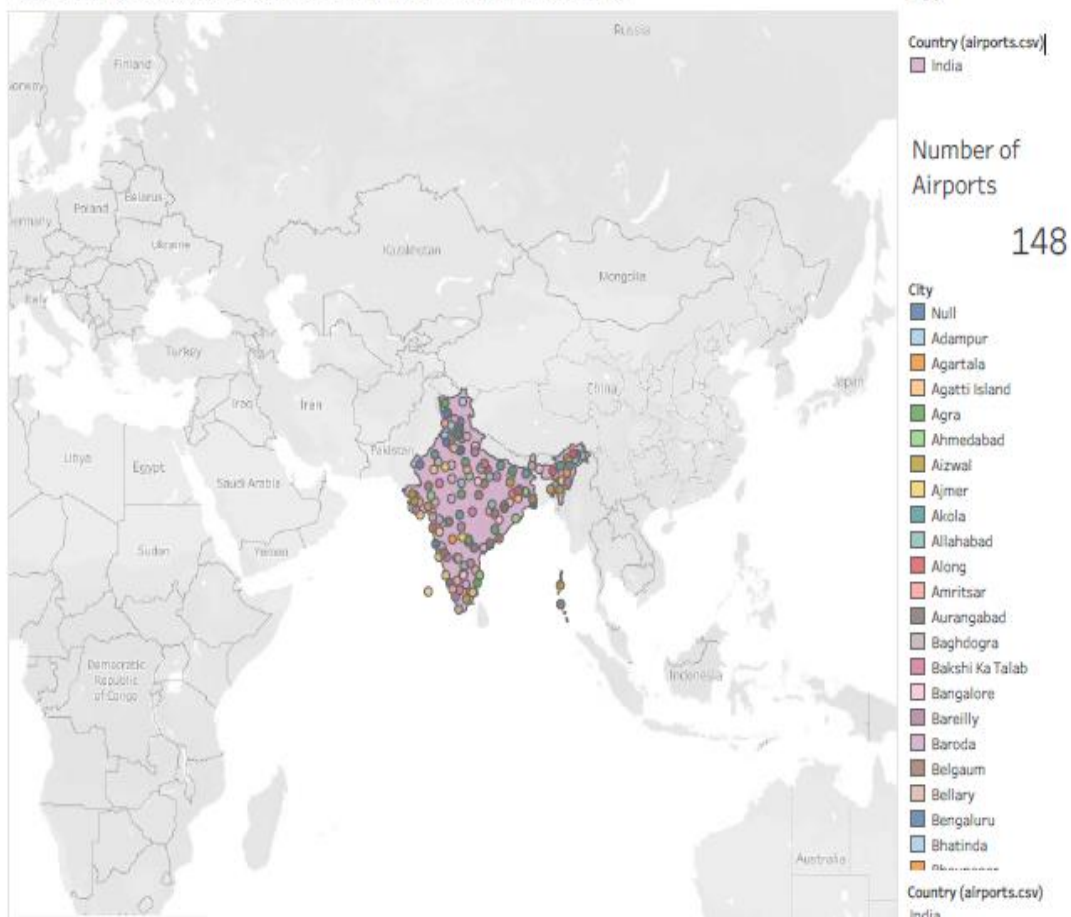
World Map Showing
Countries With detail...

Table showing
Airports which are Hi...

Table Showing List of
All Airlines Within the...

Bar Graphs Showing
Countries with Max N...

World Map Showing Details Of All Airports Within A Country



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ADVANTAGES OF AIR TRANSPORT

1.High Speed

Air is the type of freight capable of traveling long distances in short periods of time. This makes this an optimum choice if the client has an urgent need to ship a product or if their freight demands special standards of protection or acclimation. It is the quickest transport mode and is therefore ideal for long-distance transport of goods. It takes less time.

2.Fast Service

Air transportation offers convenient, reliable and fast services of transport. It is considered the cheapest way to ship peregrinated goods. It offers a standard, convenient, reliable and fast service.

3.Send Standard of Security

In regions that are not readily accessible to other modes of transport, air transport is considered to be the only means of transport. Open to all regions, irrespective of land interference. A vast network of airlines covering nearly the whole global is available for many airlines. This ensures that the package can be sent almost anywhere.

4.High Standard of Security

High standard of protection with a low risk of robbery and injury. Shipping by air has a high degree of security since airport safety restrictions on cargo are strictly enforced. Tightly controlled airport controls also minimize cargo theft and loss.

5.Natural Route

An aircraft can fly to any location without seeing any natural obstacles or barriers. Since customs formalities are easily compiled. It eliminates the need for more time to seek clearance. Air travel is used for relief operations during earthquakes, floods, accidents, and famines.

6. There is less need for heavy packaging

Air exports in general, entail less hard packaging than ocean shipments. This ensures you save both time and money by not having to provide extra packaging services.

DISADVANTAGES OF AIR TRANSPORT

1. Risky

Air travel is the riskiest mode of transport, since there can be considerable and crews as a result of a minor crash. Compared to other means of travel, the risks of collisions are higher.

2. cost

Air travel is considered to be the most expensive means of transportation. The cost of maintaining aircraft is higher and the costs for the building of aerodromes and avions are much higher. That's why air travel is so expensive that it gets beyond ordinary people's grasp.

3. Some Product Limitation

There is a whole variety of materials not suitable for such products, from explosives, gases, batteries, fired solids and liquids, which cannot be shipped by air name but a few.

4. Capacity for small carriage

The aircraft have no room and therefore are not ideal for carriage of voluminous and cheaper materials. As is seen for rails the load volume cannot be raised.

5. Enormous investment

Air travels calls for enormous spending in aerodrome building and servicing. It also calls for professional, qualified and qualified staff that need a significant investment.

6. Unreliable

These are many things to consider when choosing an air carrier, including the weather. Normally, if the weather is not safe and suitable, the flight may be delayed and cause financial losses.

APPLICATION

In Singapore's Changi airport, an airport collaborative decision making platform allows air traffic controllers to sequence the departure of flights in advance based on expected readiness of flights. This helps to reduce the waiting time for departures and to cut taxiing time.

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. Its importance arises not only from its ability to facilitate the movement of people but also its ability to expedite the movement of goods. Currently, rising operating costs, stoked by the high price of aviation fuel combined with slowing or even negative demand growth, will lead to dramatic restructuring of the airlines industry and the collapse of many airlines especially smaller ones. Reduced access to air services for both passengers and freight may put many communities at a disadvantage. The air transport industry needs not only to be financially sound to be effective as an economic catalyst for growth but also to be environmentally responsible. Governments need to be sensible, transparent and long-term in their approach. Priority must be given to tackling obstacles such as inefficient and fragmented ATMs, restrictive air service agreements, inadequate airport infrastructures and unjustified government charges and taxes. The development of more fuel efficient aircraft and engines must also be encouraged.

FUTURE SCOPE

- ❖ *The future of aviation holds immense potential for expansion, advancement, and the generation of new employed opportunities. With the increasing demand for air travel, there is a pressing requirement for proficient individuals across a wide range of domains within aviation.*
- ❖ *The industry experts predict that the growth in the aviation sector will fuel tourism, both of which have shown resilience and are recovering from*

the COVID-19 pandemic. India's aviation market is currently the third-largest and fastest-growing in the world, with enormous potential for further growth.

- ❖ ***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. If this growth path is achieved by 2036 the air transport industry will then contribute 15.5 million in direct jobs and \$1.5 Trillion of GDP to the world economy.***