Project report

Unlocking Insights into the Gobal Air Transportation Network

TEAM I'D :

NM2023TMID06104

TEAM MEMBERS

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1.Introduction :

1.1 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. The hubs of the network have large connectives and long distance connectivities at the same time. Several air transport network data sources are available from academic and the commercial databases. In order to construct a network from the data, airports are represented by nodes and flights are represented by weighted links.

1.2 Purpose :

The purpose of using airlines, or air travel, is to efficiently and quickly transport people and goods by air from one location to another. This mode of transportation serves various purposes, including:

1. Travel: It allows individuals to reach distant destinations for business, tourism, family visits, and other personal reasons.

2. Business: Air travel facilitates business meetings, conferences, and the transportation of goods, contributing to global commerce.

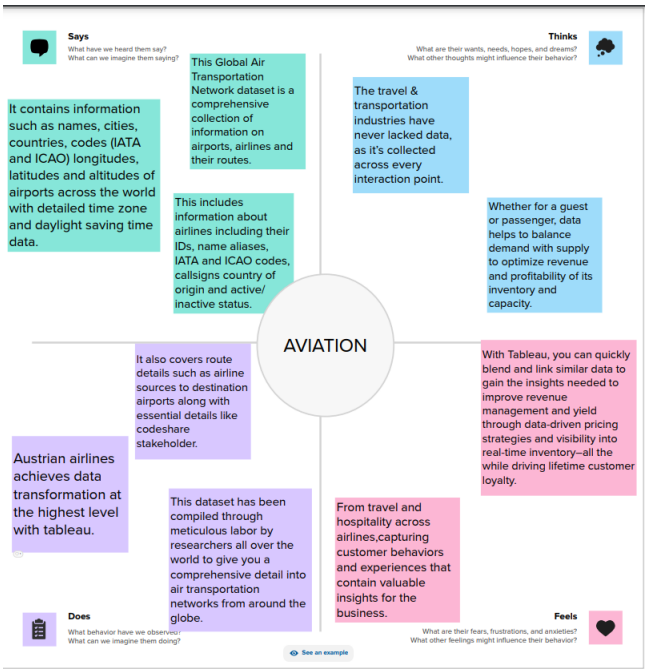
3. Migration: Air travel is used by individuals and families relocating to other countries for work, seeking asylum, or other purposes.

In essence, airlines are a versatile mode of transportation that serves a wide range of purposes, contributing to global connectivity

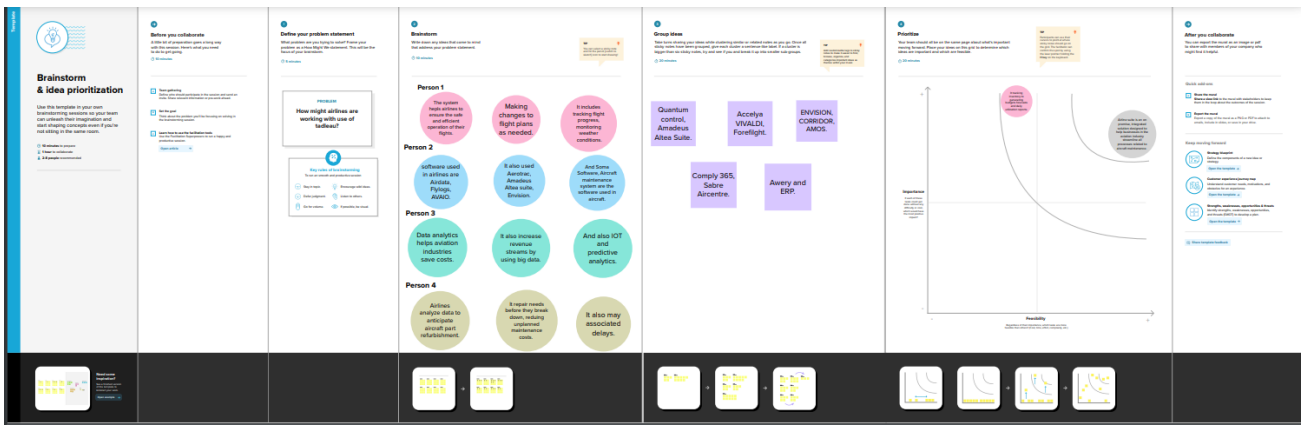
and economic, social, and cultural interactions.

2.Problem definition and design thinking :

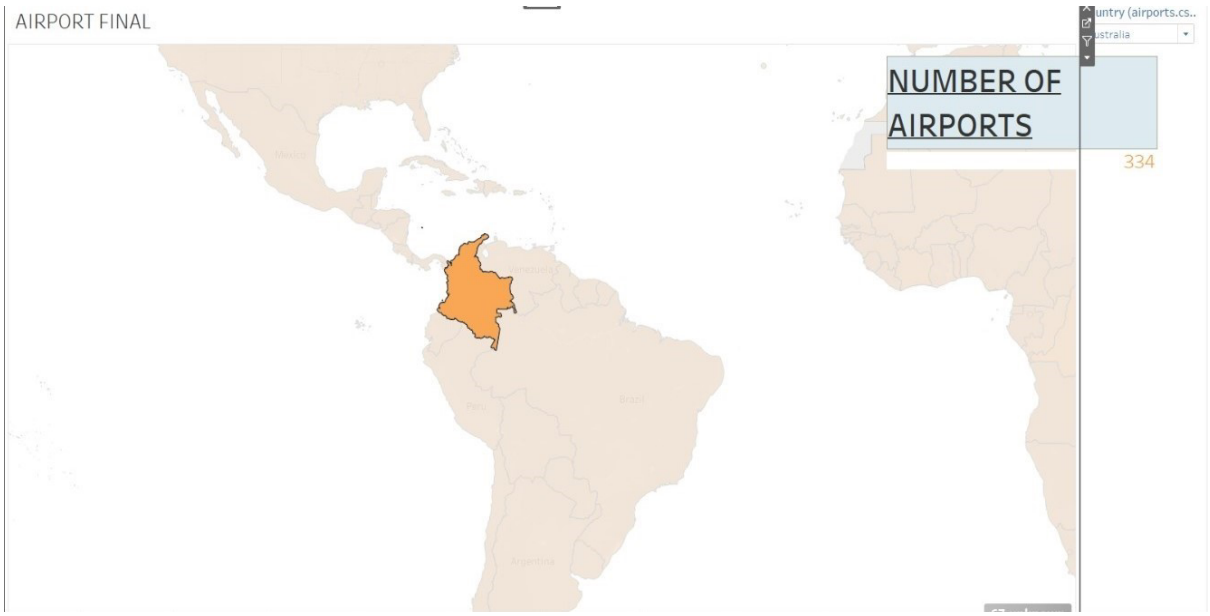
2.1 Empathy map :

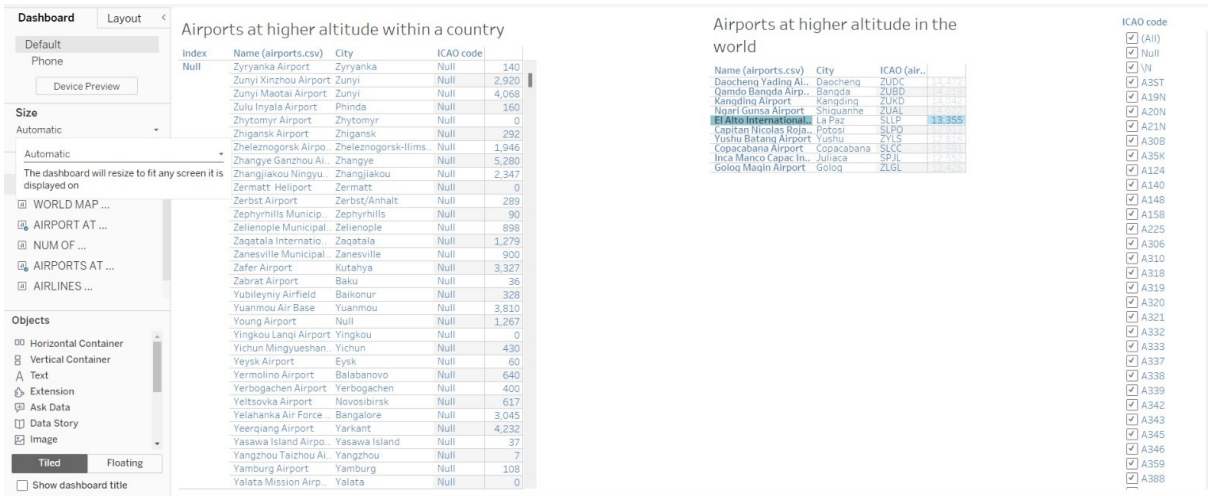


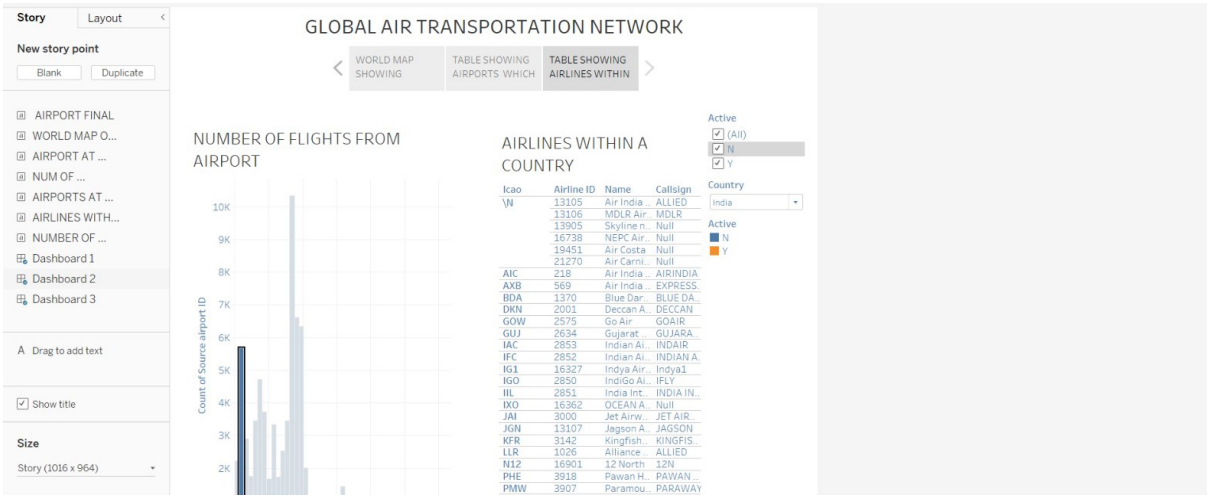
2 .2 Ideation and Brainstorming map :



3. Result:







4. Advantanges :

- Speed: it is the fastest mode of transport that exists and, therefore, it is especially recommended when time is an important factor.
- There are no physical barriers: thanks to this it is possible to make a trip without interruption choosing the shortest and most direct route through seas, mountains.
- Easy access: Air transport can transport goods to areas that are not easily accessible by other means of transport.
- Suitable for transporting high-value or perishable goods over long distances.

Disadvantages :

- Very expensive economically: it is the most expensive means of transport.
- Uncertain: air transport is largely conditioned by weather conditions. Snow, rain, fog, etc., can cause the cancellation of scheduled flights and the suspension of air service.
- Not suitable for cheap and high volume goods due to its limited capacity and high cost.
- Legal restrictions: Many countries have legal restrictions in the interest of their own security.

5. Applications :

Air transport is currently used in almost all industrial sectors and distribution chains. Most companies use air transport to market goods and products internationally or to deliver samples and documents related to foreign trade operations. 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. It helps generate trade, promote tourism, and create employment opportunities.

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. n 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.

7. Future Scope :

The industry has a number of domestic and international airlines, as well as a large network of airports. The future of the aviation industry in India is likely to see continued growth and expansion, driven by factors such as a growing middle class, increased tourism, and government policies supporting the

industry.

THANKING YOU!