**MOTHER GNANAMMA WOMEN’S COLLEGE OF ARTS AND SCIENCE**

**VARADARAJANPET**

**(Affiliated to Bharathidasan University, Tiruchirappalli)**

**Team ID : NM2023TMID04451**

**UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK WITH TABLEAU**

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**1.INTRODUCTION**

**1.1 Overview**

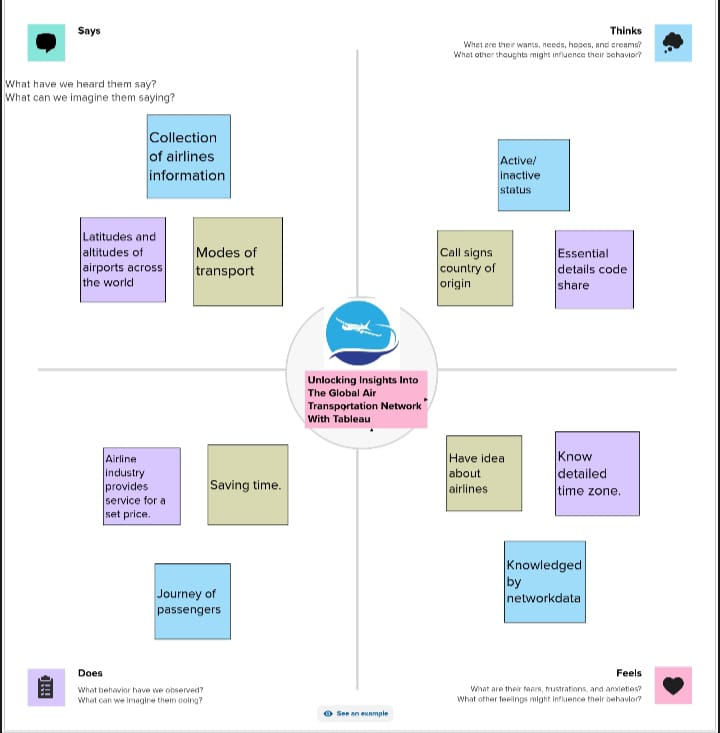
* **The worldwide air transportation network is a critical infrastructure with high impact on mobility, trade and economy. Another examples are the air transport systems of a country or a country’s own air transport company.**
* **The global structure of the worldwide air transportation network, a critical infrastructure with an enormous impact on local, national and international economies. We find that the worldwide air transportation network is a scale - free small - world network**

**1.2 Purpose**

**Modeling air transport networks aims airline companies to organize their routes in a 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 are determined, a substitute node which can support all or part of the traffic load can be identified through the alternative strength for the pair.**

**2.PROBLEM DEFINITION & DESIGN THINKING**

**2.1 Empathy map**

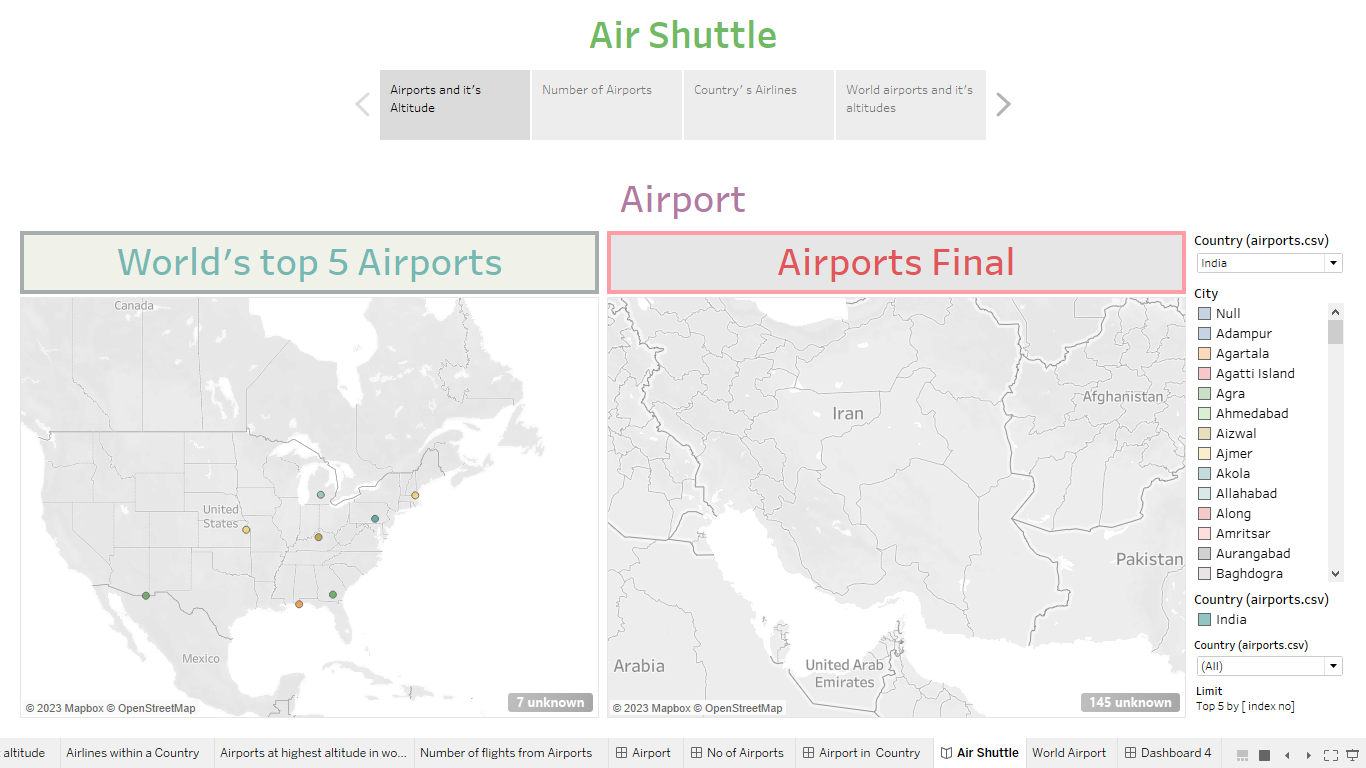
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**2.2 Ideation & Brainstorming map**

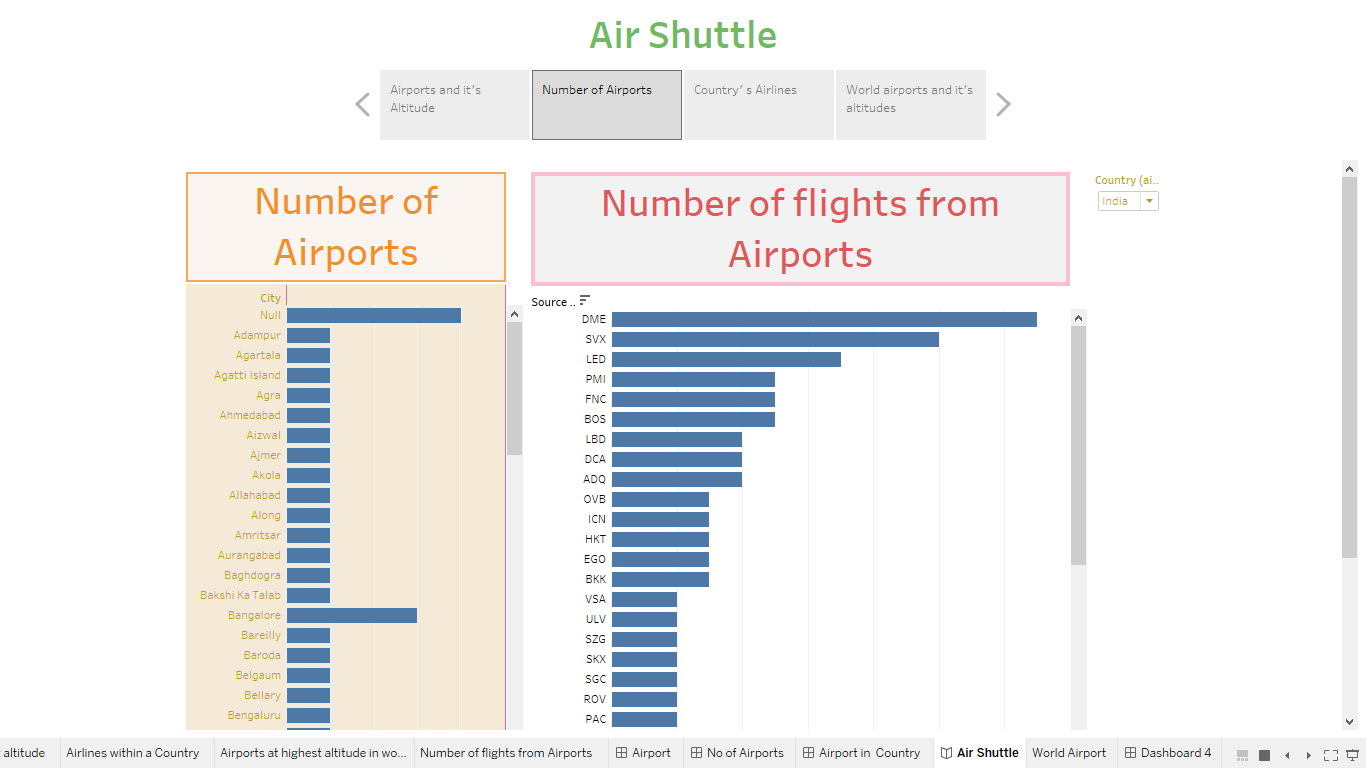


**3. RESULTS**

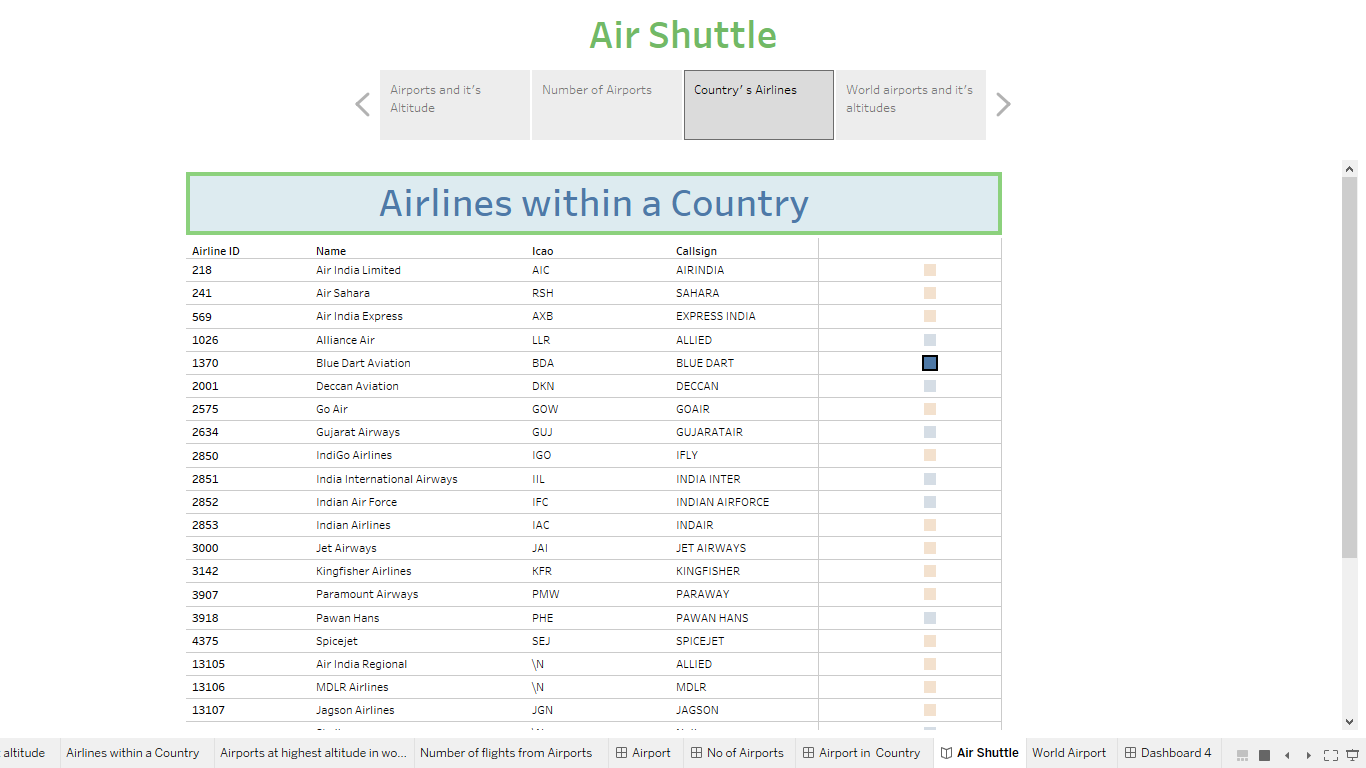
**Story 1**



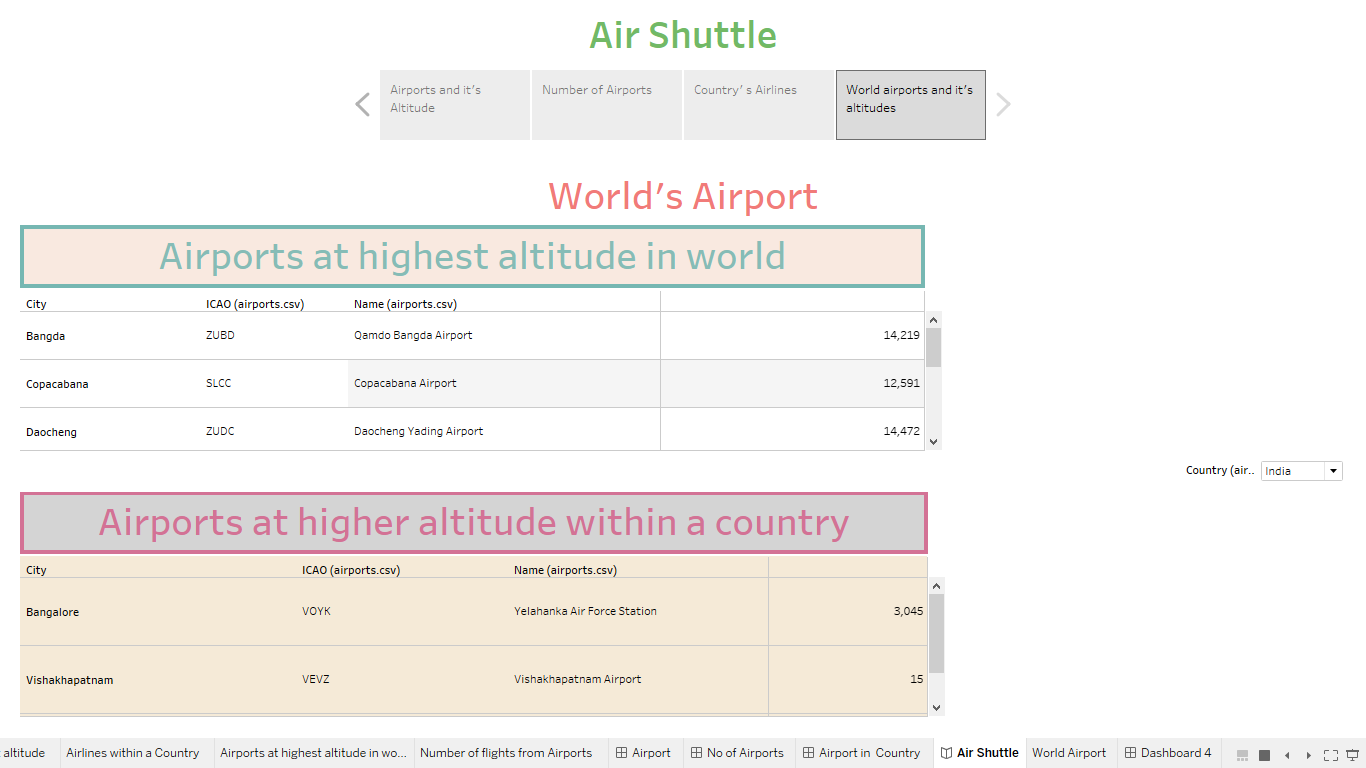
**Story 2**



**Story 3**

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Story 4



**4. ADVANTAGES & DISADVANTAGES**

**Advantages**

**High speed :**

**1. Air is the type of freight capable of traveling long distances in short periods of time.**

**2. This makes this model 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.**

**Fast service :**

1. **Air transportation offers convenient, reliable and fast services of transport.**
2. **It is considered the cheapest way to ship peregrinated goods.**

**Send almost everywhere your freight :**

1. **In regions that are not readily, accessible to other modes of transport, air transport is considered to be the only means of transport.**
2. **Open to all regions, irrespective of land interference.**

**High Standard of Security :**

1. **Shipping by air has a high degree of security since airport safety restrictions on cargo are strictly enforce.**

**Natural Route :**

1. **An aircraft can fly to any location without seeing any natural obstacles or barriers.**
2. **Air travel is used for relief operations, during earthquakes, floods accidents, and famines.**

**There is less need for heavy packaging :**

1. **This ensures you save both time and money by not having to provide extra packaging services.**

**Disadvantages**

**Risky :**

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

**Cost :**

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

**Some Product Limitation :**

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

**Capacity for Small Carriage :**

1. **The aircraft have no room and therefore are not ideal for carriage of voluminous and cheaper materials.**

**Enormous investment :**

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

**APPLICATIONS**

1. **No Physical barrier**

**Air transport is free from physical barriers because it follows the shortest and direct routes where seas, mountains and forest do not obstruct.**

1. **Natural route**

**Aircrafts travels to any place without any natural obstacles or barriers because the custom formalities are compiled very quickly. It avoids delay in obtaining clearance.**

1. **National defence**

**It plays a significant role in the national defence of the country because modern wars are conducted with the help of aeroplane. Airways has a upper hand a destroying the enemy in short period.**

**FUTURE SCOPE**

**India is currently the third largest aviation market in the world, with over 340 million passengers travelling by air annually in 2019. The industry has a number of domestic and international airlines as well as 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. However, the industry is also likely to face a number of challenges, including infrastructure constraints and competition from low- cost carriers.**

**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.**