

PROJECT REPORT TEMPLATES  
UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION  
WITH TABLEAU

## 1. INTRODUCTION

### 1.1 OVERVIEW

#### AIR TRANSPORTS

Air transport enables highly perishable and valuable products to be moved fast over long distances, but it lacks the environmental control that is possible for other modes. In-flight storage will be at hold at temperature and whilst it may be quite low over most of the distance, the quality of the product will be highly dependent on prompt and speedy handling at the airports. Exposure to local weather conditions whilst waiting to be loaded onto a plane or being moved to and from the airport can constitute a major part of the total traveling time. Cold rooms are provided at some airports to store produce immediately before and after transit. Solid carbon dioxide (dry ice) is used for short-term cooling of airlines passenger meals.

### 1.2 PURPOSE

#### USES OF AIR TRANSPORTS

- HIGH SPEED:

The supreme advantage of air transports is its high speed. It is the fastest mode of transport and thus it is the most suitable means where time is an important factor.

- COMFORTABLE AND QUICK SERVICES

It provides regular, comfortable, efficient and quick services.

- NO INVESTMENT IN CONSTRUCTION OF TRACK:

It does not require huge capital investment in the construction and maintenance of surface track.

Promotes foreign trades, mobility of labour and capital.

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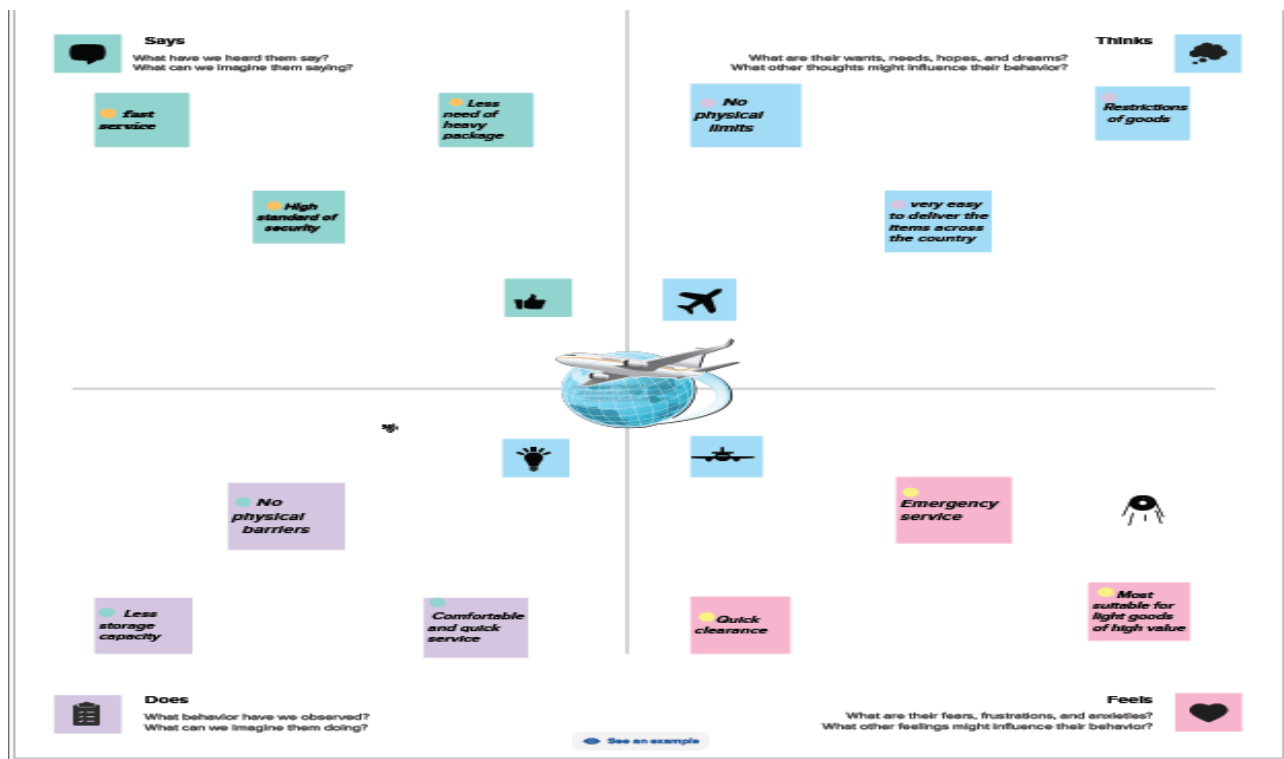
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- **NATIONAL DEFENSE:**

Air transport plays a very important role in the defense of the country. Modern wars have been fought mainly by airplanes.

## 2. PROBLEMS DEFINITIONS 7 DESIGN THINKING

### 2.1 EMPATHY MAP

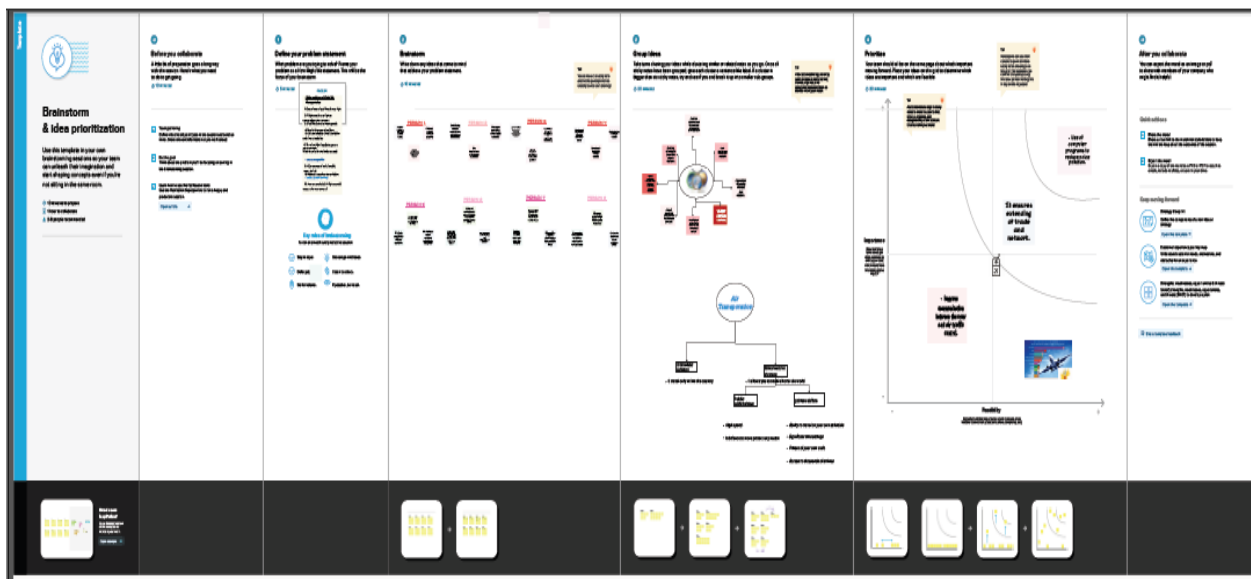


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### 2.2 IDEATION & BRAINSTORMING MAP

THE PICTURE OF BRAIN STOMING ABOUT GLOBAL AIR TRANSPORTATION IS GIVEN BELOW



### IMPORTANCE OF GLOBAL AIR TRANSPORTATIONS

Some of the importance of air transportation are.

It is the fastest means of transport and can save time and money.

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- It is efficient and comfortable for passengers and cargo.
- It has a high level of security and no border control issues.
- It has a great strategic importance for defense and trade.
- It is free from physical barriers such as mountains, rivers, and forests.

### Case study outline

This paper summarizes an intense collaboration project between Airbus (industrial practitioners) and academics that bring in new complexity methodologies to add new knowledge value. The goal is to review and explore the network science and interaction modeling methods that can be used to gain fundamental understanding into the complexity of air transport networks.

Two fundamental approaches are tackled in this review:

- Bottom-up entropy-maximization interaction model, which considers consumer choice;
- Top-down network science analysis, which seeks to uncover common statistical patterns and infer latent knowledge.

The former gives a complex and detailed understanding of how spatial networks (i.e., flights) form from spatial processes (i.e., airports) and what the weight of each edge (i.e., passenger volume) is with respect to cost (impedes flow) and benefit (attracts flow) functions that relate to consumer behavior. The latter approach gives a statistical understanding into the fundamental network properties and how they evolve over time, enabling the application of generalized network scaling laws that can be used to predict the future structure of the

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network. Both the bottom-up and the top-down approach is of fundamental interest to network science and industry.

## **ECONOMICAL BENEFITS OF AIR TRANSPORTATIONS**

Air transport is an important enabler to achieving economic growth and development. It 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<sup>12</sup>. The following are the main advantages of air transport<sup>3</sup>:

- High speed
- Minimum cost
- Strategic importance
- Easy transport of costly and light goods
- Free from physical barriers



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## Air transportation - statistics & facts

As the global economy is becoming more and more connected, the aviation industry is one of the fastest transportation sectors. The aviation industry provides a total of 87.7 million jobs worldwide. It directly generates employment opportunities within the airlines, air navigation services providers and airport operators, and additionally creates jobs via the supply chain in the transportation of goods and services. Air transportation also plays an important role for tourism, contributing to economic growth, especially in developing countries.

### Types of air transport

Airplanes  
Helicopters  
Hot air balloons  
Blimps  
Gliders

### Types of airlines

- **Low cost airlines**
- **Charter airlines**
- **Scheduled airlines**

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### What is air transport?

Before we get started, we must firstly understand what air transport *actually* is.

Put simply, air transport is any type of transport that moves through the air.

Any vehicle that can sustain flight is part of the air transport industry, and there are various different types.

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*AIR TRANSPORTS IS THE MOST EASY AND BEST  
TRANSPORT WHICH IS EASY TO TRANSPORT THE GOODS  
AND TRAVEL ALL OVER THE WORLD. THE RESULTS AND  
THE SCOPES OF AIR TRANSPORTATIONS ARE BELOW*

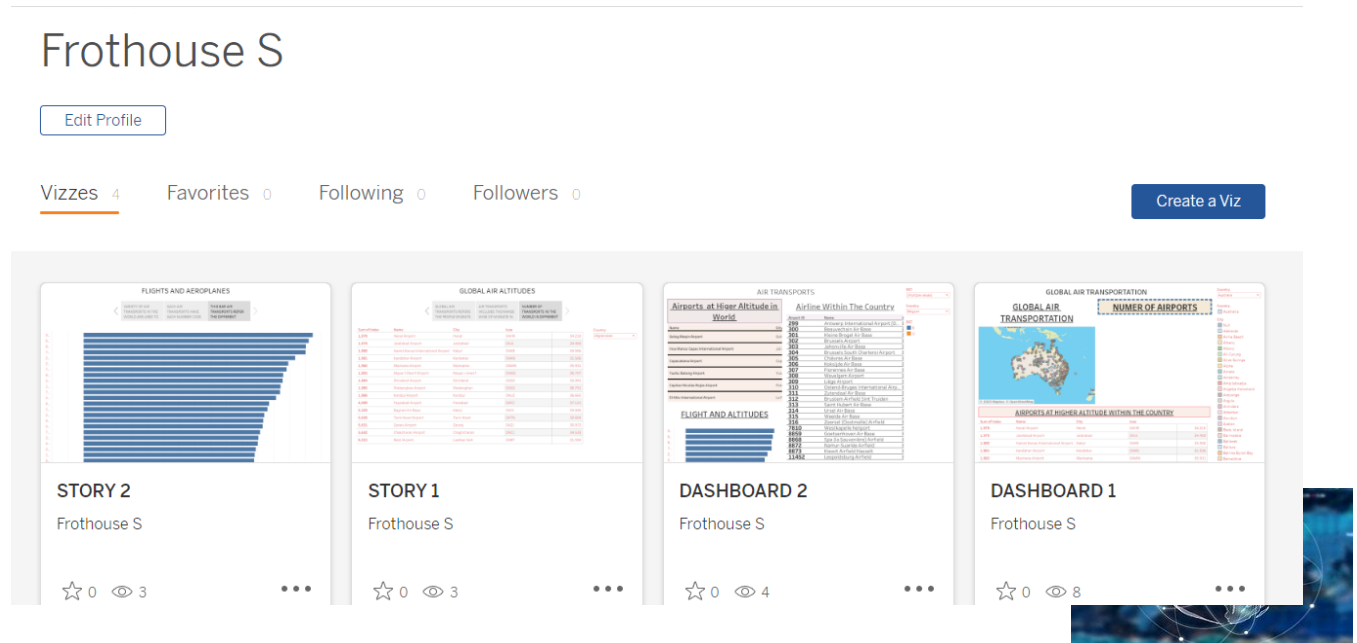
### **3. RESULT**

Final findings(Output) of project along with screenshots are given below



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## 4.ADVANTAGES AND DISADVANTAGES

### ADVANTAGE OF AIR TRANSPORTS

- ☐ High speed. Air is the type of freight capable of traveling long distances in short periods of time.
- ☐ Fast service. Send almost everywhere your flight.
- ☐ High standard of security. Natural routes.
- ☐ There is less need for heavy packages.
- ☐ The most recent mode of travel is air transport. It offers standard, convenient, reliable, fast services.

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*DISADVANTAGES OF AIR TRANSPORT*

- *Air travel is the riskiest mode of transport, since there can be considerable losses to goods.*
- *Air travel is considered to be the most expensive means of transportation.*
- *There is a whole variety of materials not suitable for such products, from explosives, gas, batteries and liquid.*
- *The aircraft have no room and therefore are not ideal for carriage of voluminous and cheaper materials.*
- *Air travel calls for enormous spending on aerodrome building and servicing.*



## 5. APPLICATIONS

1. Use of technology. Carbon offsetting programs. Using alternative means. Use of computer programs to reduce noise pollution.

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2. Setting up regulations. As a solution to environmental degradation due to air travel, industry regulation is needed.

3. These challenges include infrastructure limitation, regulatory complaints, skilled workforce shortages, high cost structure, security concerns and environmental impacts.

## **6. CONCLUSION**

*Concluding the Unlocking Insights into the Global Air Transportation Network With Tableau.*

## **7.FUTURE SCOPE**



Mobility and its pillars of transport (air, inland and maritime) are at the very center of our socio-economic fabric. They underpin social

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connections and facilitate access to goods and services, including trade, jobs, health care and education. In today's world, mobility by air, road and water is all about efficiency, speed, interconnectivity and accessibility. However, this raises the issue about sustainability. The UN predicts that by 2050 two thirds of the world population will live in cities<sup>1</sup>. How can we adapt and enhance today's already-stretched mobility system for it to respond to our expectations and increased demands? How can mobility be reinvigorated for it to be sustainable and support the 2030 Agenda of Sustainable Development and its 17 Sustainable Development Goals (SDGs)?



For a start, mobility actors should come together in a shared vision. This is where the World Bank-led Sustainable Mobility for All (SuM4All) steps in. For the first time ever, the SuM4All provides the transport sector and its modes of transport with the opportunity to speak with one voice and jointly unpack a Roadmap of Actions that is tailored to countries and cities to implement on a voluntary basis. The SuM4All includes all modes of transport, including aviation. Aviation facilitates access to countries and cities, increases multi-layered efficiencies in travel and makes safety and security in travel top priorities. The aviation sector is rapidly taking gender equality at heart.