UNLOCKING INSIGHTS INTO THE GOLBAL TRANSPORTATION NETWORK

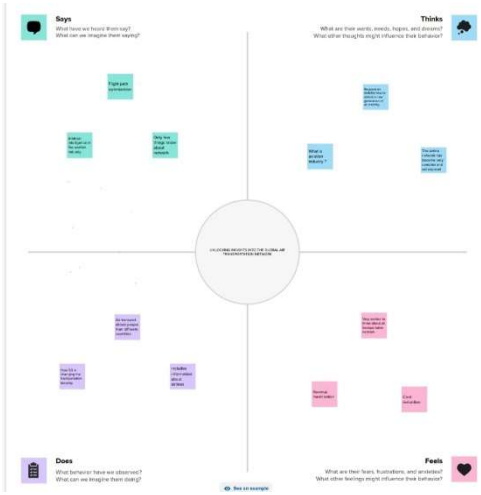
Overview

This 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 with detailed time zone and daylight saving time data. Additionally, this includes information about airlines including their IDs, name aliases, IATA and ICAO codes, callsigns country of origin and active/inactive status

Purpose

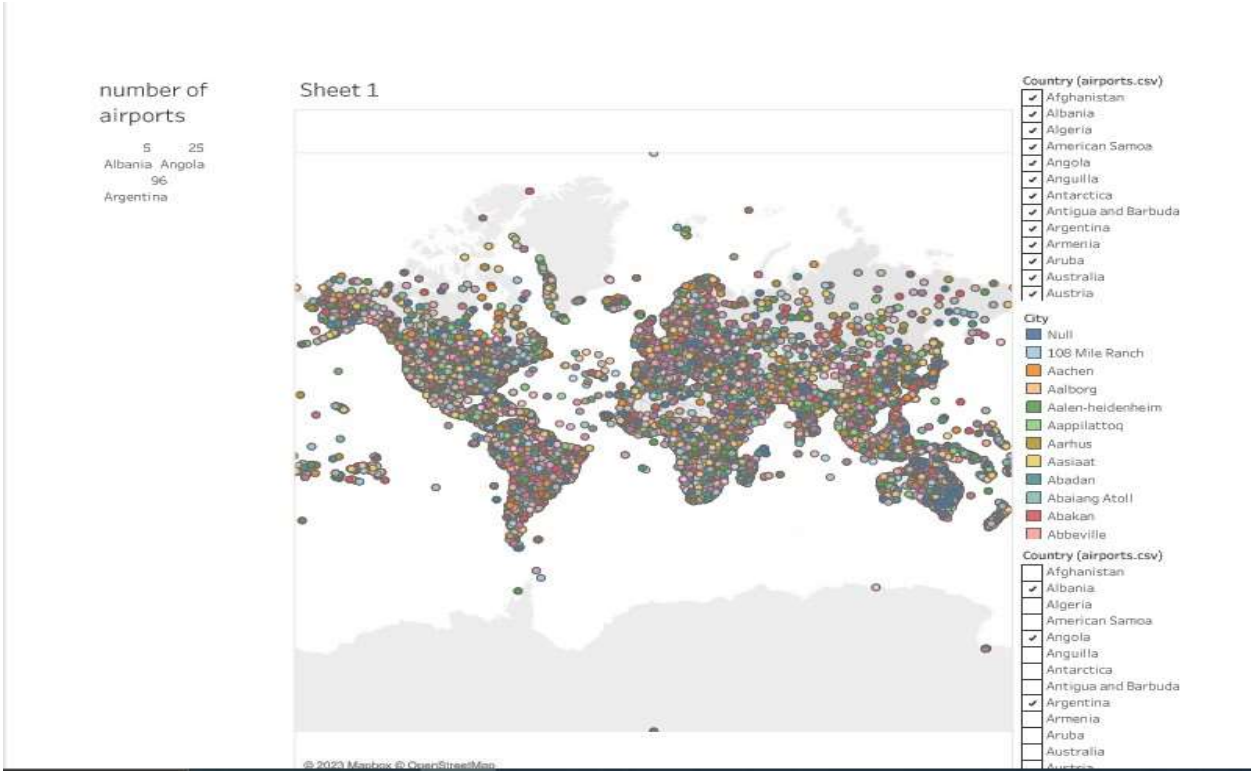
it also covers route details such as airline sources to destination airports along with essential details like codeshare stakeholder if any stops required during this journey along with the type of aircraft being used for that particular journey.

Problem definition and design thinking



Ideation and brainstorming map

RESULT



Sheet 4

Name (airp..	City	ICAO code	
Aguenar – ..	Tamanrasset	MD83	
Arviat Airp..	Eskimo Point	\N	
Bou Chekif ..	Tiaret	PC12	
Calgary Int..	Calgary	E3SL	
Campbell Ri..	Campbell Ri..	\N	
Djanet Ined..	Djanet	C130	
Fort McMur..	Fort Mcmur..	\N	
Fort St Joh..	Fort Saint J..	\N	
Geraldton ..	Geraldton	\N	
Goroka Airp..	Goroka	N262	
Îles-de-la-M..	Iles De La M..	\N	
Kelowna Int..	Kelowna	\N	
Kingston N..	Kingston	\N	
Mecheria Ai..	Mecheria	MD88	
Mount Hag..	Mount Hag..	S601	
Nanaimo Ai..	Nanaimo	\N	
Natashqua..	Natashquan	\N	
Prince Albe..	Prince Albert	\N	
Rocky Mou..	Rocky Mou..	C2SC	
Siglufjörðu..	Siglufjordur	\N	
Stephenvill..	Stephenville	\N	
Tofino / Lon..	Tofino	\N	
Williams La..	Williams La..	DC91	

airports at higher altitude within a country

Nam..	City	ICAO code

Sheet 5

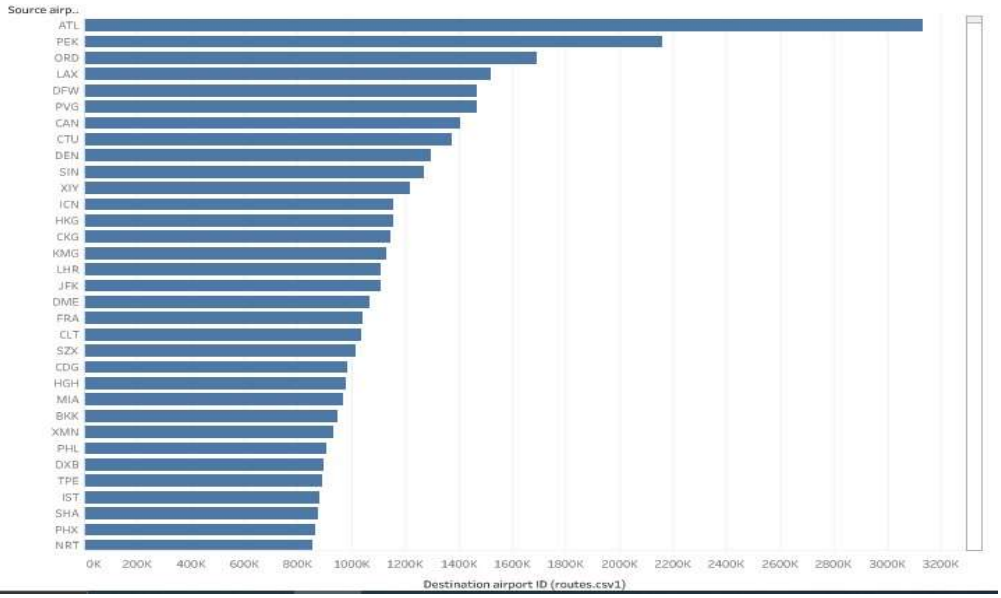
Airline ID	Name	Icao	Callsign	
15	Abelag Avia..	AAB	ABG	
271	Allied Com..	ALF	ACEFORCE	
538	ASL	XXX	Null	
634	Airventure	RVE	AIRVENTURE	
1346	Belgian Air ..	BAF	BELGIAN AIRF..	
1373	Belgian Ar..	AYB	BELGIAN ARMY	
1428	Belgavia	BLG	BELGAVIA	
1515	Brussels Int..	BXI	XENIA	
1531	Brussels Ai..	DAT	BEE-LINE	
1551	Belgian Navy	NYB	BELGIAN NAVY	
2235	Eurocontrol	EUC	Null	
2252	European A..	BCS	EUROTRANS	
2431	Flying Servi..	FYG	FLYING GROUP	
2528	Gendarmeri..	GDB	BELGIAN GENE..	
2800	Internation..	ITC	Null	
3032	Jetairfly	JAF	BEAUTY	
3821	Ostend Air ..	OCO	AIR COLLEGE	
4445	SITA	SIT	Null	
4734	Sky Service	SKS	SKY SERVICE	
4873	TNT Airways	TAY	QUALITY	
4896	Thomas Co..	TCW	THOMAS COOK	
5169	Thalys	Null	Null	
5333	Virgin Expr..	VEX	VIRGIN EXPRE..	
5383	VLM Airlines	VLM	RUBENS	
6002	TUI Airlines..	TUB	BEAUTY	
10224	Zz	\N	Null	
17963	VG Airlines , .	FVG	Nico	

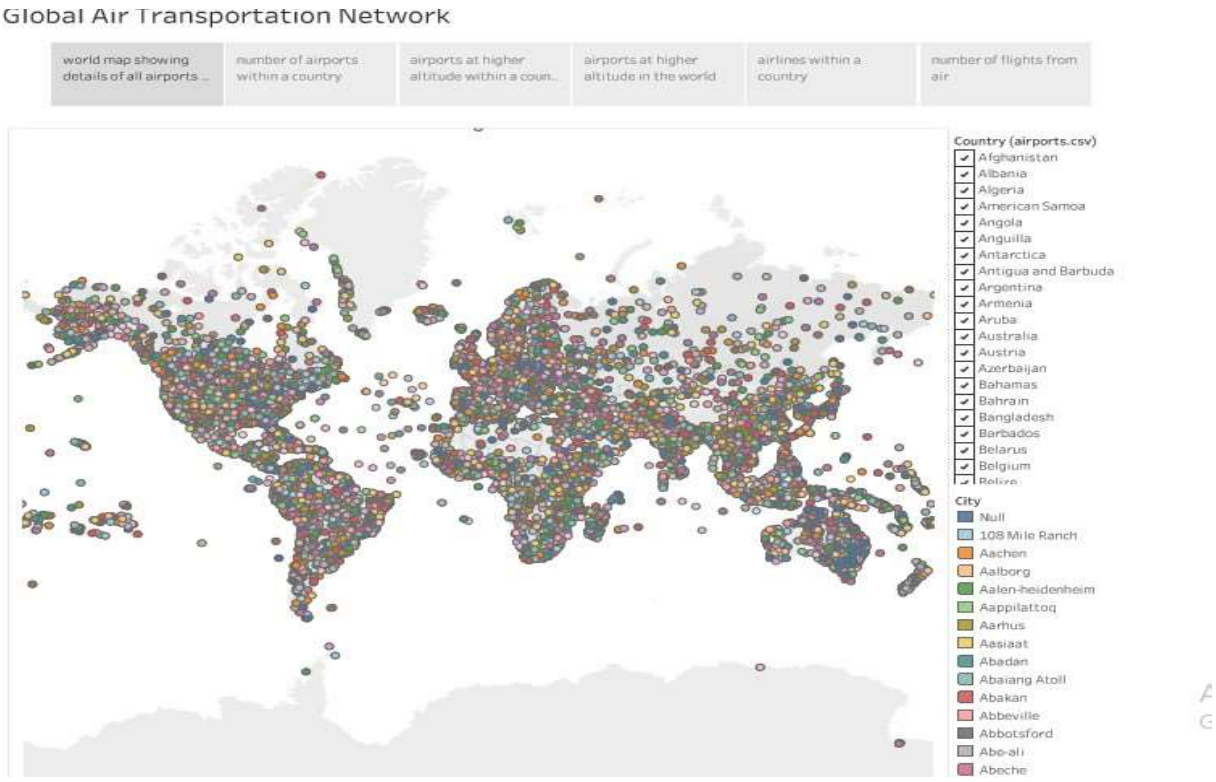
☑ N
☑ Y

Country
Belgium

Active
N
Y

Sheet 6





ADVANTAGES AND DISADVANTAGES

Advantages

Fast delivery times. Undoubtedly, one of the most advantageous features offered by air transport is its speedy delivery times. ...

No Physical Limits. ...

Very reliable transportation. ...

Long Distances. ...

Higher Cost. ...

Less storage capacity. ...

Restrictions on goods.

Disadvantage

Risky. 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. ...

Some Product Limitation. ...

Capacity for Small Carriage

APPLICATIONS

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 of the system in case of various kinds of disruptions.[4][6] Once 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.

An alternative application is modeling human disease networks. Air transport network is used by millions of people every day, therefore it plays key role in the spread of some infections, such as influenza or SARS. In this sense air transport network is a transmitter similar to sexual which is liable for the spread of AIDS and other sexually transmitted diseases.

CONCLUSION

The global air transportation network is a complex system that connects people and places all over the world. It is essential for global trade, tourism, and diplomacy. The network has grown rapidly in recent decades, and is expected to continue to grow in the future.

The global air transportation network is a scale-free small-world network. This means that it has a few highly connected hubs, and many other nodes that are less connected. This structure makes the network very efficient at transporting people and goods over long distances.

The global air transportation network is also highly resilient to disruptions. If one node or link in the network fails, the other nodes and links can quickly reroute traffic to ensure that people and goods continue to flow.

The global air transportation network is facing a number of challenges.

FUTURE SCOPE

Technological innovation: New technologies, such as electric aircraft, autonomous aircraft, and hypersonic aircraft, have the potential to revolutionize air travel.

Sustainability: The aviation industry is under increasing pressure to reduce its environmental impact. This is likely to lead to a shift towards more sustainable fuels and aircraft technologies.

Urbanization: The world's population is becoming increasingly urbanized. This is likely to lead to increased demand for air travel, particularly for short-haul flights.

Globalization: The global economy is becoming increasingly interconnected. This is likely to lead to increased demand for air travel for business and leisure purposes.