

UNLOCKING INSIGHTS INTO THE GLOBAL AIR TRANSPORTATION NETWORK

NAAN MUTHALVAN
TEAM PROJECT

TEAM: S. AROCKIA KURALMOZHI
K. ARUNDHEVI
P. BARANIKA
M. DEVAZHAGI



UNLOCKING INSIGHTS INTO GLOBAL AIR TRANSPORTATION NETWORK

INTRODUCTION:

❑ OVERVIEW

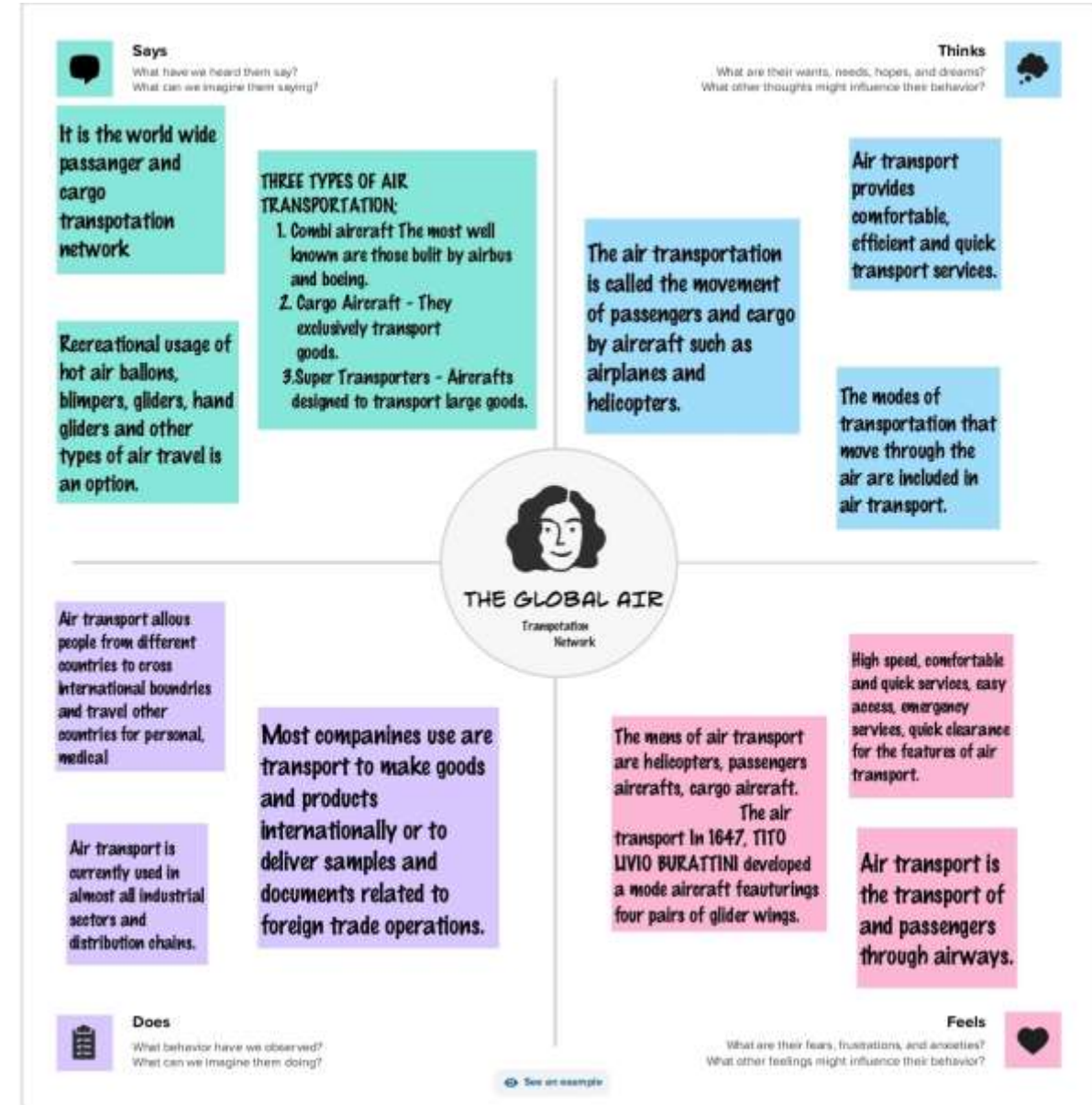
- The air transportation network is a complex network which has the properties of small-world network and scale-free networks.
- The degree distribution of the nodes displays a heavy-tailed distribution.

❑ PURPOSE

- Air transportation is an important enabler to achieving economic growth and development.
- The world bank has financed aviation-related projects for over six years.

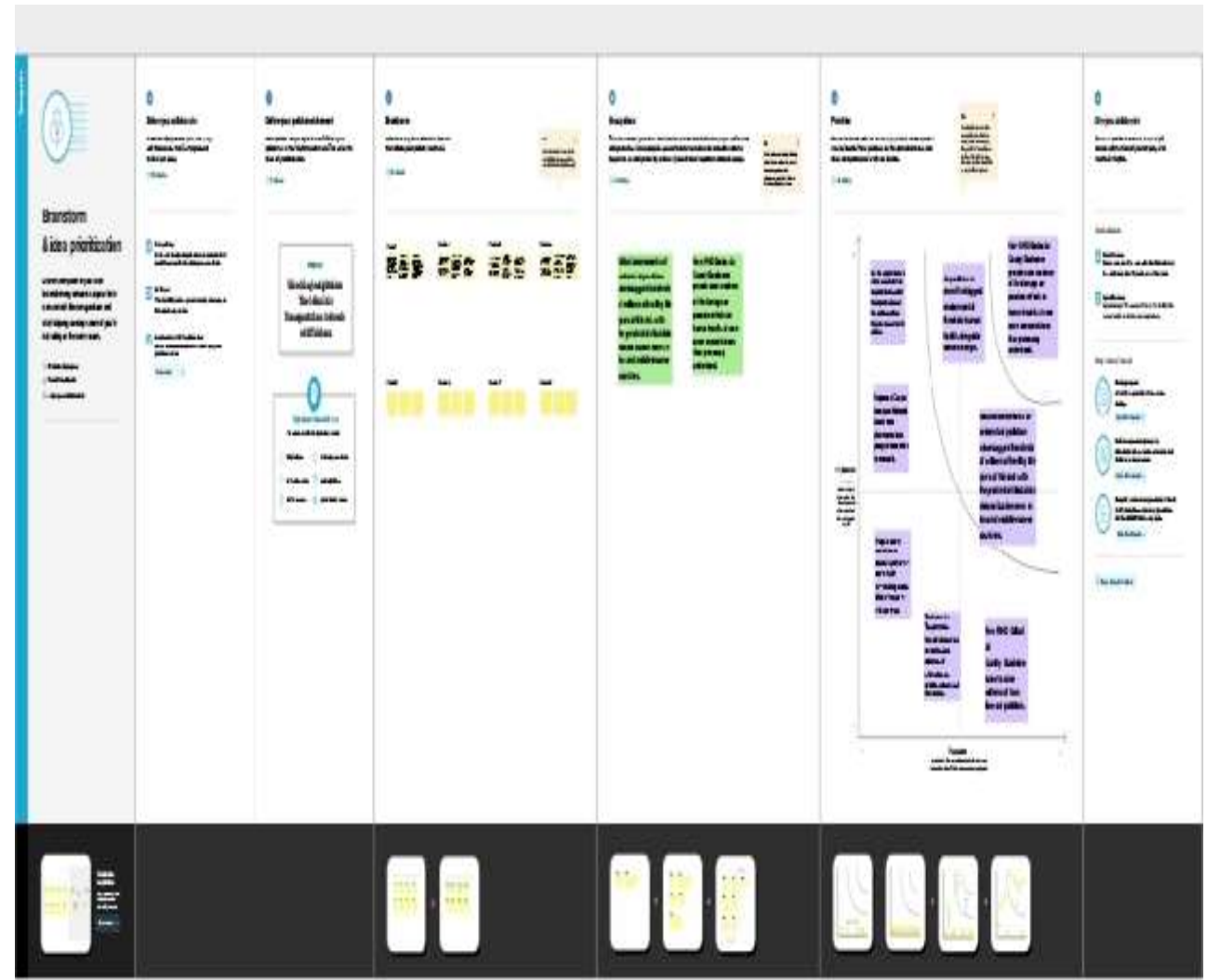
Problem Definition & Design Thinking

EMPATHY MAP



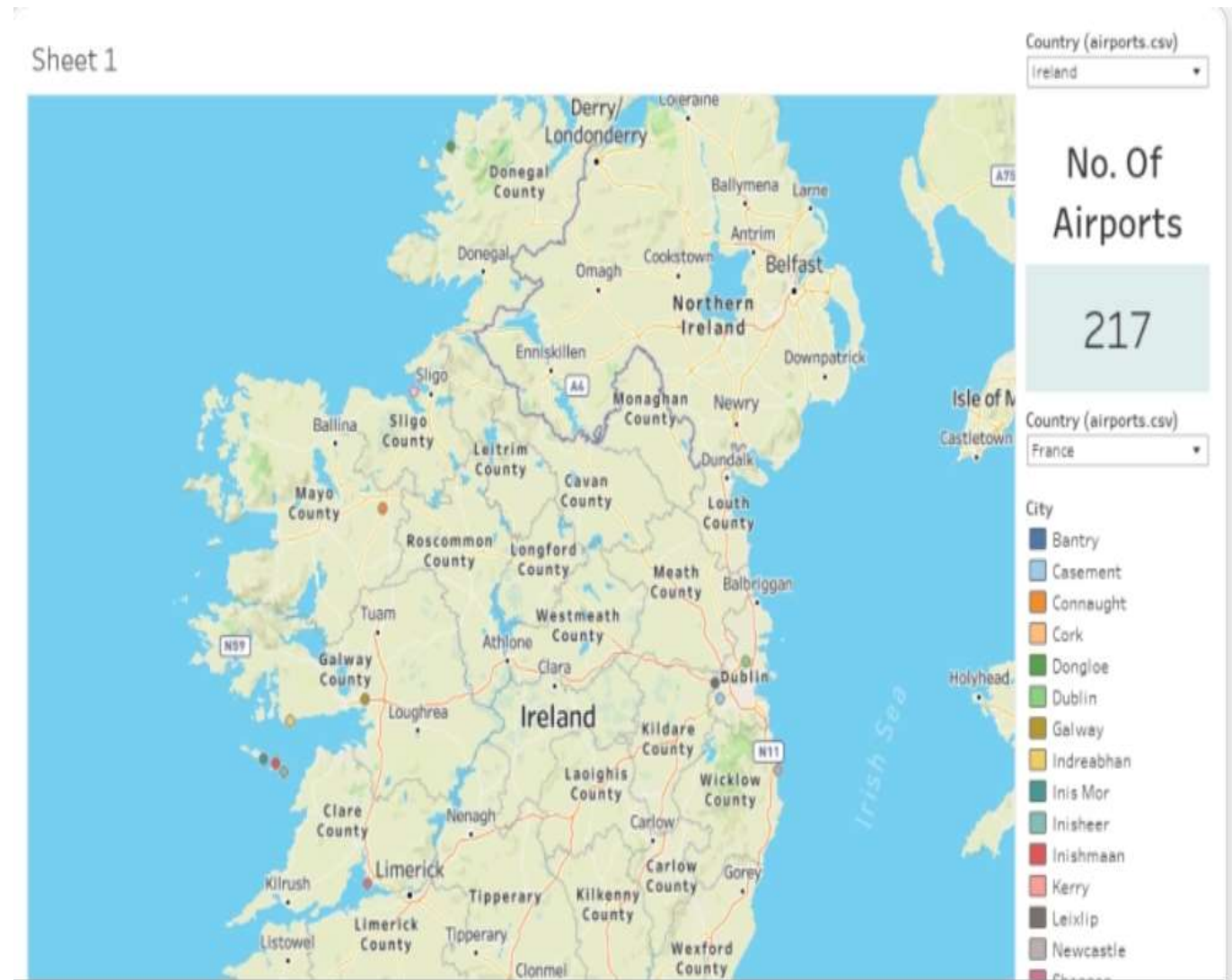
Problem Definition & Designs Thinking

BRAIN STORM



RESULT:

- ❖ Airport planning is a systemic process that establishes a strategy for the efficient development of airports consistent with local, state and national goals.
- ❖ In 1922 the first permanent airport and commercial terminal solely for commercial aviation was opened at Flughafen Drevanu near what was then Königsberg, East Prussia.



Dashboard 1

RESULT:

- ❖ Daocheng County, Sichuan, China-Daocheng Yading Airports; At 4,411 m (14,472 ft) above sea level, Daocheng Yading is the highest civilian airport in the world.
- ❖ Daulat Beg Oldi, Ladakh, India-Daulat Beg Oldi Advanced Landing ground.
- ❖ Topping the list at number one is Telluride Regional Airport (TEX), at an altitude of 9,078 feet.

airports at highest altitude in world

Name (airports.csv)	City	ICAO (airpo..	
Afutara Aerodrome	Afutara	AGAF	13,392
Aleknagik / New Airport	Aleknagik	SA8	4,773
Benson Airstrip	Uvalde	2XS8	17,022
Earl L. Small Jr. Field/..	Villa Rica	20GA	20,047
Haller Airpark	Green Cove Springs	7FL4	5,317
Mobile Airport	Mobile	1AZ0	17,614
Ocean Reef Club Airport	Ocean Reef Club Airport	07FA	16,881
Sky Ranch At Carefree ..	Carefree	18AZ	20,875
Sun Island Resort and ..	South Aari Atoll	\N	16,956
Utirik Airport	Utirik Island	03N	4,509

airports at higher altitude within a country

Country (airports.csv)

India ▼

index numb..	Name (airp..	City	ICAO (airpo..	
1	Adampur Ai..	Adampur	VIAX	Abc
	Agartala Ai..	Agartala	VEAT	Abc
	Agatti Airp..	Agatti Island	VOAT	Abc
	Agra Airport	Agra	VIAG	Abc
	Akola Airpo..	Akola	VAAK	Abc
	Allahabad A..	Allahabad	VIAL	Abc
	Along Airpo..	Along	VEAN	Abc
	Ambala Air ..	Null	VIAM	Abc
	Aurangaba..	Aurangabad	VAAU	Abc
	Bagdogra A..	Baghdogra	VEBD	Abc
	Bakshi Ka T..	Bakshi Ka T..	VIBL	Abc
	Bareilly Air ..	Bareilly	VIBY	Abc
	Begumpet ..	Hyderabad	VOHY	Abc
	Belgaum Ai..	Belgaum	VABM	Abc
	Bellary Airp..	Bellary	VOBI	Abc
	Bhatinda Ai..	Bhatinda	VIBT	Abc
	Bhavnagar ..	Bhaunagar	VABV	Abc
	Bhiwani Air..	Bhiwani	VIBW	Abc
	Bhuj Airport	Bhuj	VABJ	Abc
	Bidar Air Fo..	Bidar	VOBR	Abc
	Biju Patnai..	Bhubanesw..	VEBS	Abc
	Bilaspur Air..	Bilaspur	VABI	Abc

Dashboard 2

RESULT

- ❖ The first commercial airline in present-day India was Handley page into-Burmese Transport.
- ❖ On 15 October 1932, J.R.D. Tata flew a consignment of mail from Karachi to Juhu Airport.
- ❖ There are over 5,000 airlines with ICAO codes. The world's largest airline by fleet size and passengers carried is American Airlines, operating from the United States.

airline within a country					No. Of Airlines	
Airline ID	Name	ICAO (airpo..	Callsign			
170	AERFI Group	CYXS	AIR TARA	■		
190	Airplanes H..	CYYY	AIRHOLD	■		
216	Air Contrac..	DAAY	CONTRACT	■		
487	Aer Turas	EGGW	AERTURAS	■		
837	Aer Lingus	FASS	SHAMROCK	■		
948	Airlink Airw..	FOOL	HIGHFLYER	■		
1188	Aer Arann	LEBZ	AER ARANN	■		
1792	CityJet	MMTN	CITY-IRELAND	■		
2089	EU Airways	OJMF	EUROAIRWAYS	■		
2090	EUjet	OKBK	UNION JET	■		
2148	Ei Air Expor..	PCIS	AIR EXPORTS	■		
2149	Eirjet	PGRO	EIRJET	■		
2275	Executive A..	RKTN	ECHO	■		
2296	Excavia Lim..	RPUB	SKYMAN	■		
2479	Futura Gael	SBPV	Applewood	■		
2489	GECAS	SBST	GECAS	■		
2920	Iona Nation..	VIAL	IONA	■		
2928	Irish Air Cor..	VIBY	IRISH	■		
2929	Irish Air Tra..	VICG	IRISH TRANS	■		
2930	Irish Aviati..	VICX	AUTHORITY	■		
3031	JetMagic	VYAN	JET MAGIC	■		
4296	Ryanair	ENSD	RYANAIR	■		
4438	Skynet Airli..	KFAY	BLUEJET	■		
4594	Starair	NWWA	BLARNEY	■		
4970	Translift Ai..	YSRN	TRANSLIFT	■		
5321	Visionair	KMLD	VISIONAIR	■		
5330	Virgin Expr..	KSUS	GREEN ISLE	■		

Active

☒ (All)
☒ n
☒ N
☒ Y

Country

Ireland

Active

☒ N
☒ Y

Country (airports.csv)

India

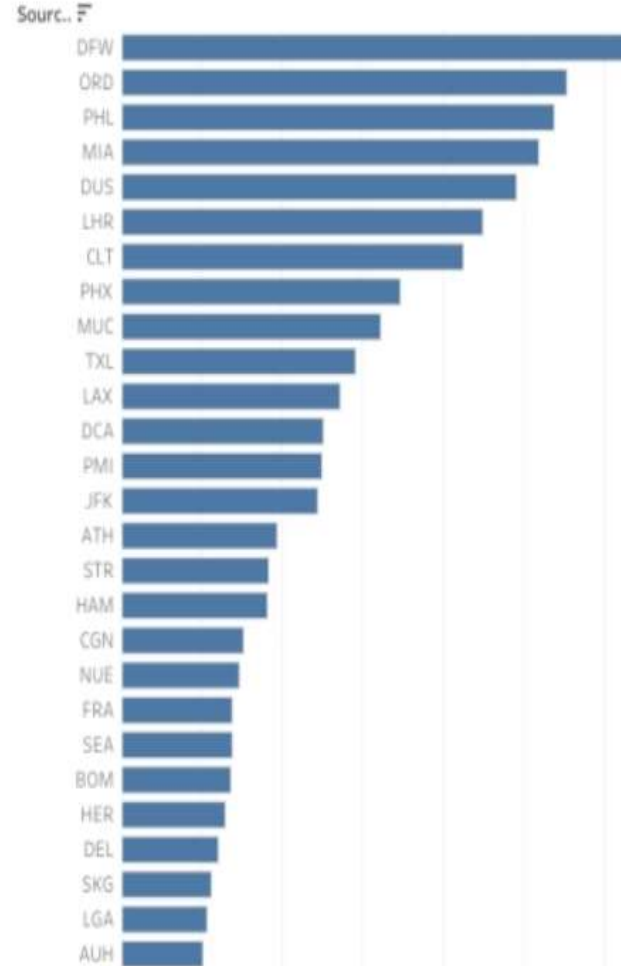
129

Dashboard 3

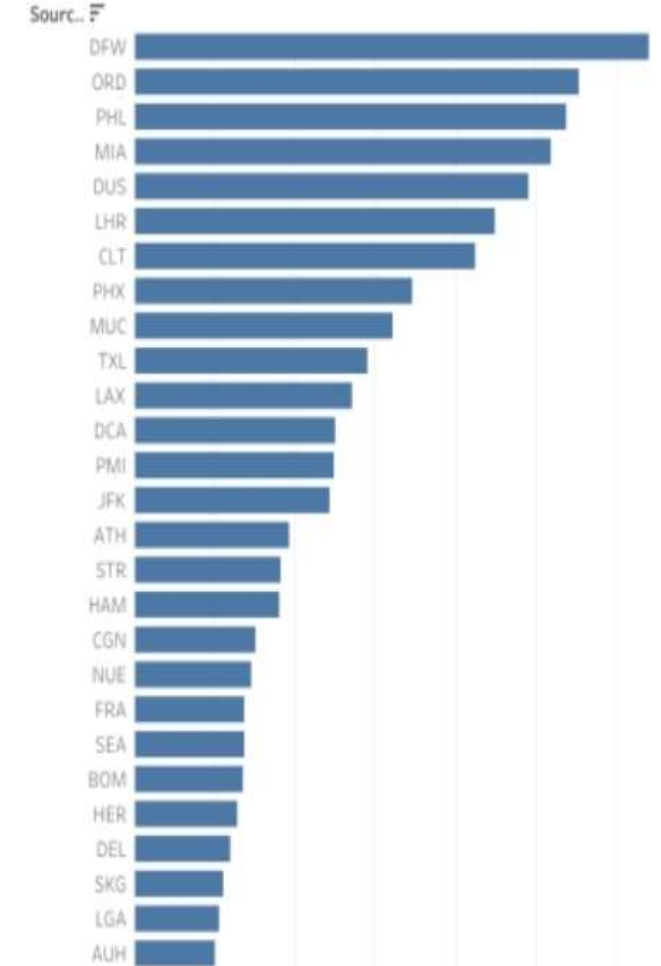
RESULT

- ❖ Airports are the authorized spaces for aircraft takeoff and landing.
- ❖ While some airports are small private and commuter hubs, we generally think of more extensive commercial flight operations when referring to airports.
- ❖ United States with a total of 13,513 airports, the United States has the most airport in the world.

number of flights from airport



Country with maximum number of airports



ADVANTAGES & DISADVANTAGES

ADVANTAGES

- ❖ Fast speed of transport.
- ❖ Rapid service facility.
- ❖ Low infrastructure required to establish this service.
- ❖ No physical barriers can affect its speed.
- ❖ Aviation is very important in service to protect any nation.
- ❖ It provides a safe and secure environment to travel by valuable goods.

DISADVANTAGES

- ❖ Costlier than other modes.
- ❖ Limited capacity of people or goods can move.
- ❖ Undependable and risky since it depends on weather conditions.
- ❖ Requires skill to fly or operate any aircraft.
- ❖ Unfit for cheap bulky goods since travel costs can be higher than the goods cost.
- ❖ More accident – prone than other modes.

CONCLUSION

- From the International Air Transport Association has been instrumental in developing and improving the air transport industry.
- From Flight planning is important for making the flight safe and efficient, where the most priority for any flights is to achieve safety, then as any commercial organization , they care about making efficient flight without compromising with safety.

THANK YOU