

## **Why the 5G Rollout in the US is Causing Airline Cancellations**

### **Why in news?**

Top US airlines wrote to the Biden administration stating that 5G services deployment around airports should be banned because it may interfere with sensitive airplane instruments.

### **What is the issue?**

- Frequencies within the C-band being used for the 5G services are near airwaves used for aviation communication.
- Deploying 5G around airports may interfere with sensitive airplane instruments such as altimeters and significantly hamper low-visibility operations.
- Following this, several airlines around the world including Air India have curtailed flights to the US. As a temporary measure
- AT&T and Verizon voluntarily limited 5G deployment near certain airports.

### **What is 5G network?**

- 5G refers to 5th generation mobile network that will represent a quantum leap over the current 4G mobile networks.
- 5G networks could deliver 10 times faster internet.
- There is more than 10 times improvement in latency (the time difference between sending and receiving messages) over 4G.
- 5G is expected to reduce latency to 1 millisecond.
- 5G has the potential to unleash a whole range of services in terms of scale and precision
- **Applications**
  - Mass deployment of autonomous cars
  - Drones for delivery
  - Remote healthcare
  - Precision agriculture
  - Virtual reality
  - Industrial automation

## What are the concerns raised by US airlines?

- 5G is being rolled out in over 40 countries but so far only the US airlines have raised concerns.
- Generally, all airlines ask passengers to switch off their phones during take-off and landing because of concerns related to interference with avionics.
- But so far, this concern has only been on paper because mobile operators and airlines have been using different frequency bands.
- But in the US, since both telecom companies and airlines use the **C-band**, there could be a **higher probability of interference**.
- There have been discussions over how the transition should take place in the US for years.
- The telecom companies and the aviation industry are yet to arrive at an agreement.
- **Challenges**- In the US, only the last 20 seconds of flight are protected from any interruption from 5G signals compared to 96 seconds in France.
- Also, 5G power levels are lower in France, but in the U.S., it is expected to be 2.5 times more powerful.
- The airlines may resume normal operations soon as the telecom operators have voluntarily decided to stop 5G deployment near airports as a temporary measure.

## What will be the impact on India's aviation sector?

- India is yet to auction 5G spectrum, and services are expected to be launched only by next year.
- So far none of the airlines have raised any issues with the proposed plan for spectrum auction.
- The Federation of Indian Pilots has sent a letter to the Civil Aviation Minister urging that the Directorate General of Civil Aviation and the TRAI ensure safe implementation of 5G services in C Band.
- The national broadcaster Prasar Bharti which uses it for its services has raised objections to the use of a specific frequency band for 5G.
- At the time of rolling 3G and 4G services in India, the armed forces and the space agency had claimed rights to specific frequency bands.
- But these differences were sorted out by the TRAI and the Wireless Planning and Coordination wing of the Department of Telecom.

## References

1. <https://www.thehindubusinessline.com/blexplainer/bl-explainer-5g-airlines/article64910045.ece>
2. <https://www.thehindu.com/opinion/editorial/technology-tangle-the-hindu-editorial-on-5g-services-and-flight-disruptions/article38293926.ece>

