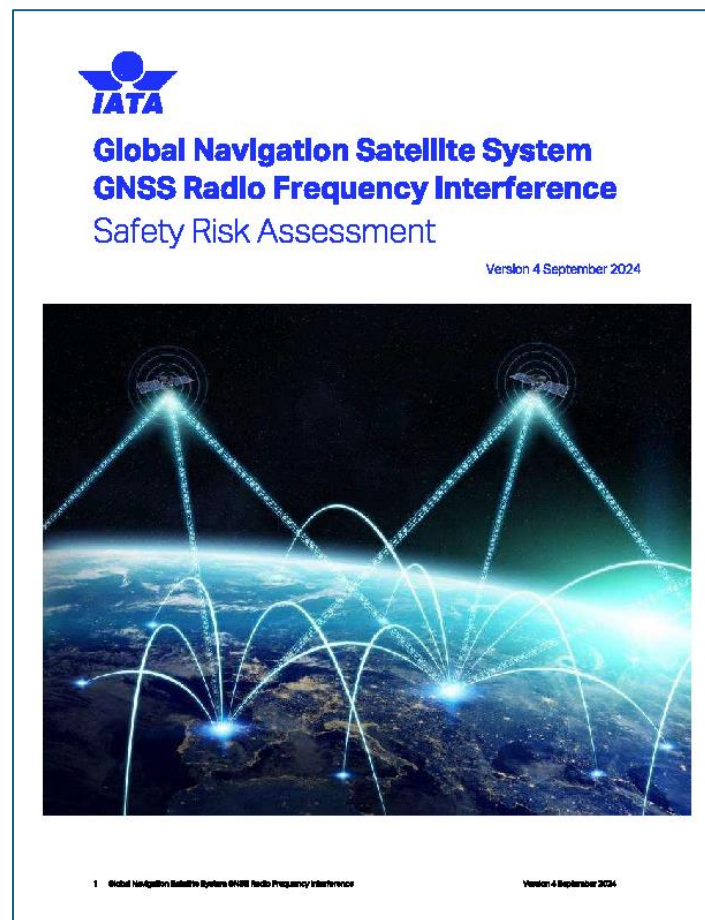




GNSS RFI IATA Activities

Second Half 2024

IATA GNSS Safety Risk Assessment



IATA Flight Data Exchange Statistics

August 2021 to June 2024:

On 18.4 million flights, 580,000+ loss-of-signal reports.

GPS Loss events - FDX program

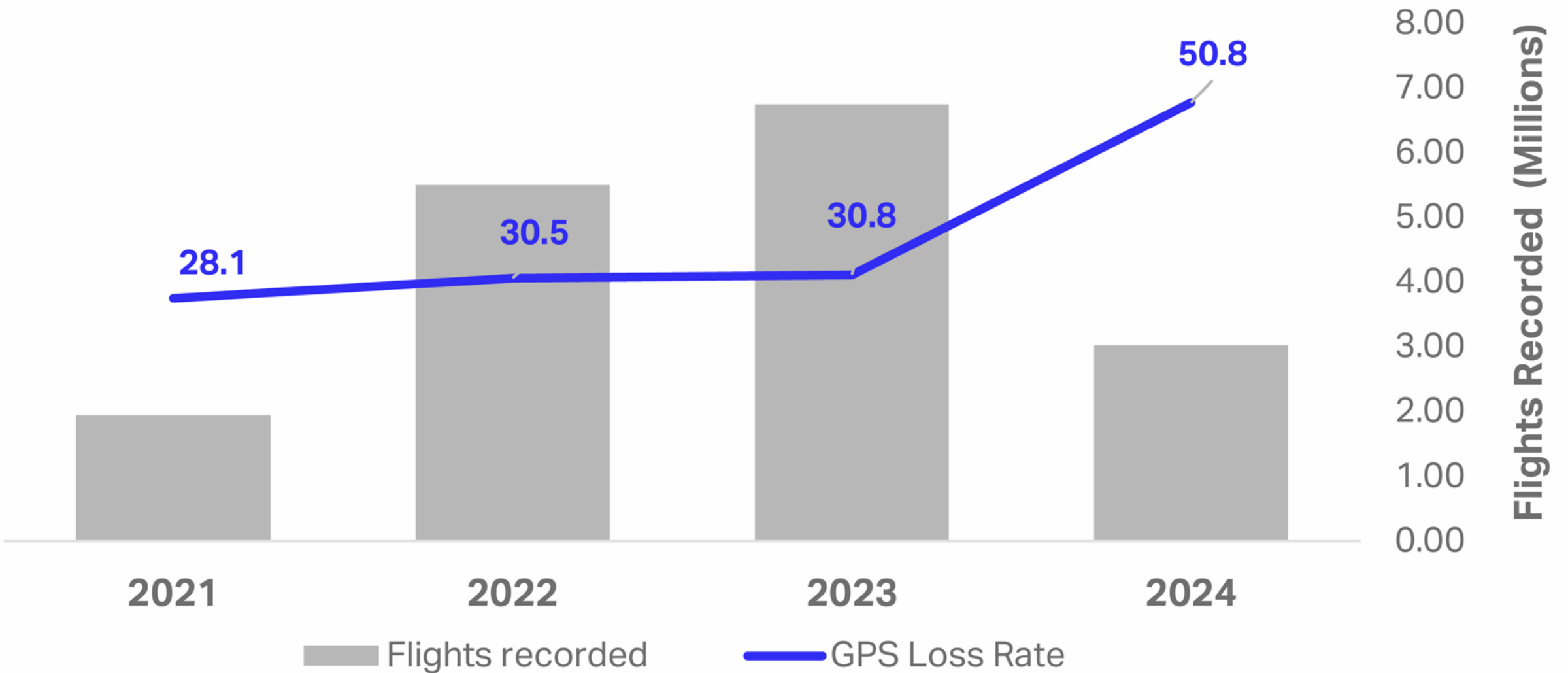
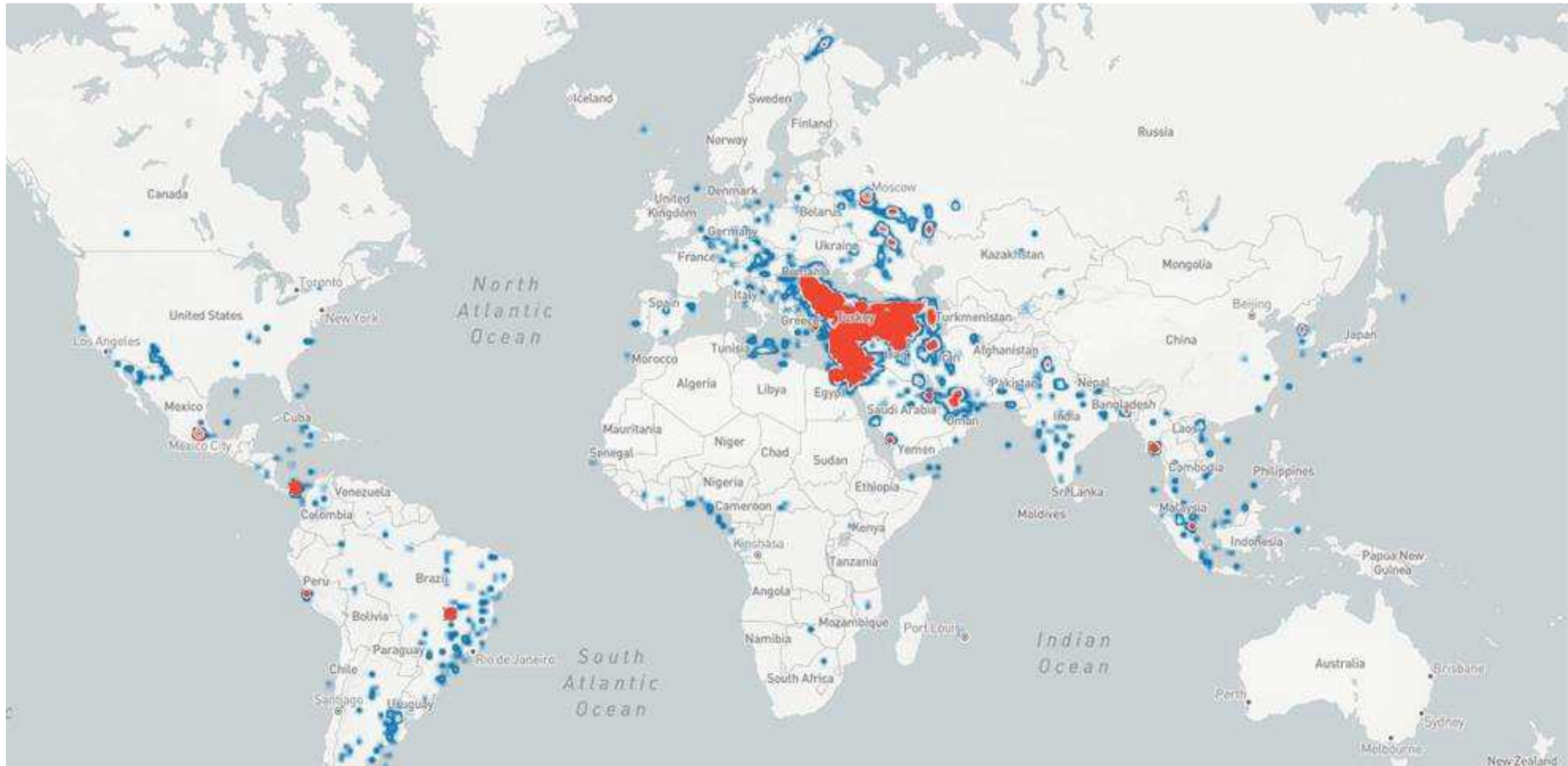
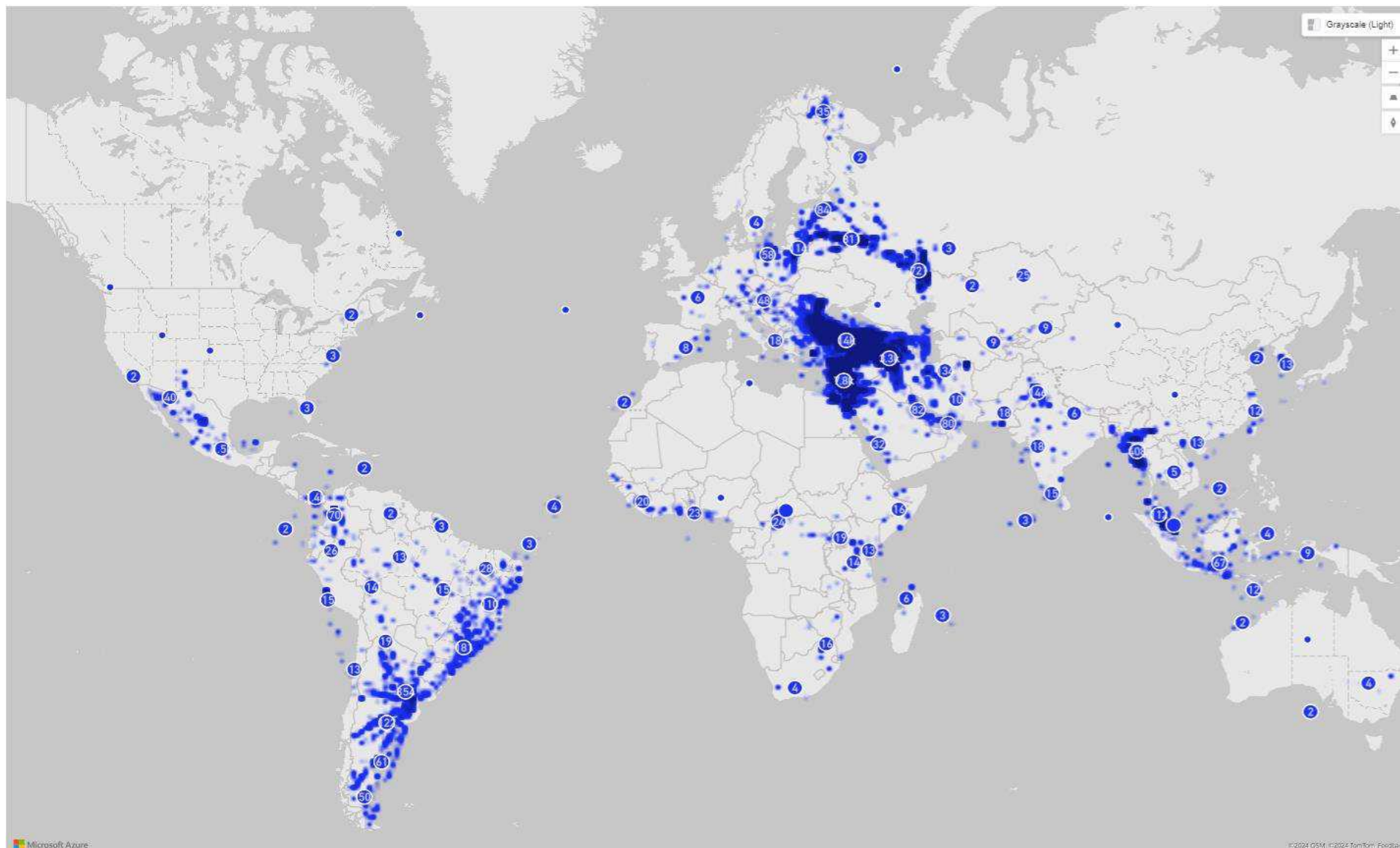


Figure 2 GPS loss events evolution

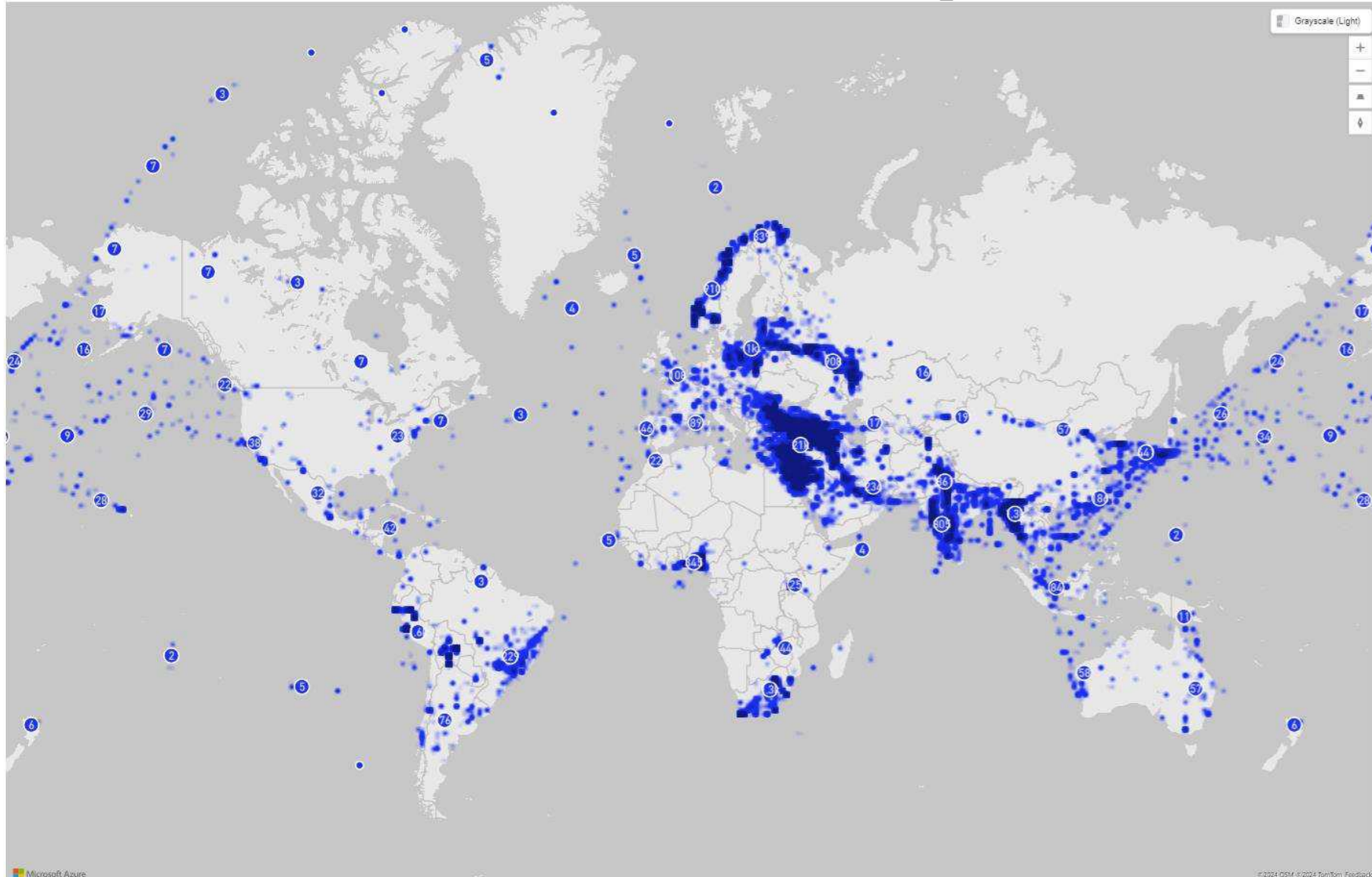
GNSS RFI Events - 2022



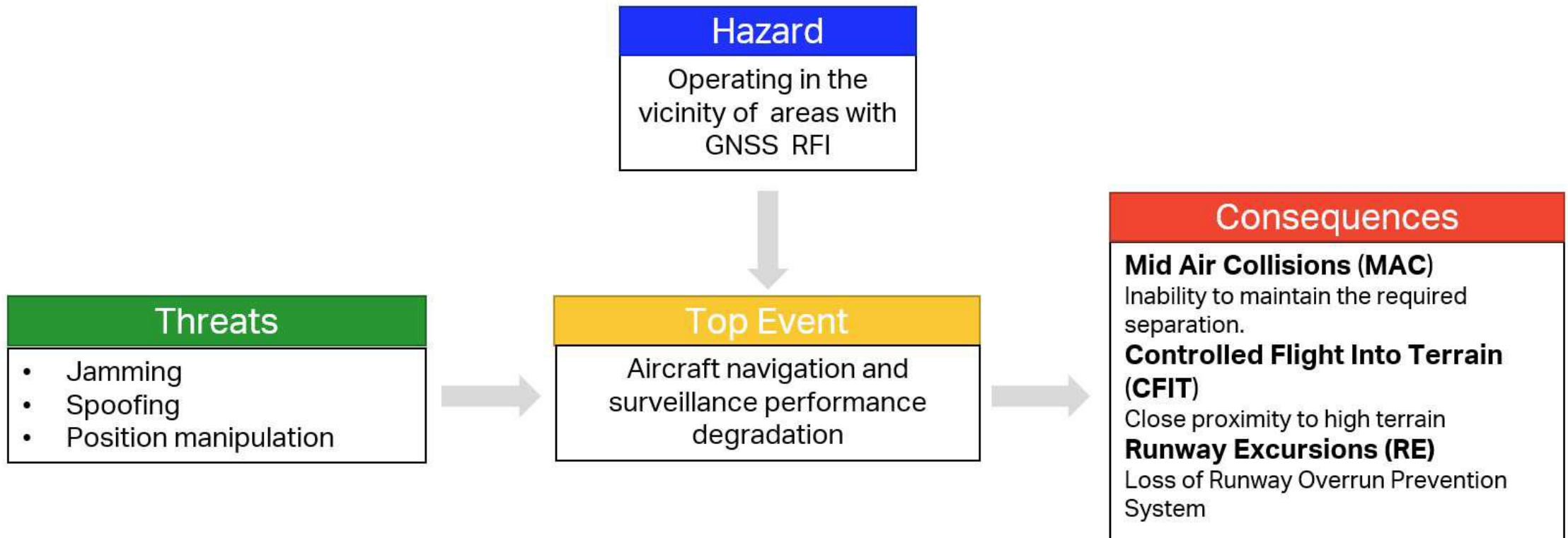
GNSS RFI Events - 2023



GNSS RFI Events – January-June 2024



Hazards and Consequences of GNSS RFI





AN-CONF/14

14th Air Navigation Conference

26 August to 6 September 2024 | Montréal, Canada

IATA Working Papers

- WP76 - Recommendations for dealing with GNSS RFI
- WP78 – Retention of ground-based systems and “minimal operating networks”

ICAO Resolution 2.2/2

Addressing global navigation satellite system interference and contingency planning

Resolved, that States:

- a. ensure that effective **GNSS RFI mitigation measures** are implemented, including the need to maintain a sufficient network of **conventional navigation aids**
- b. through regional groups, develop regional GNSS **reporting mechanisms** to raise operational awareness of affected geographical areas, to the extent feasible
- c. work with industry to --
 - identify means to **make aircraft systems more resilient** to radio frequency interference events
 - provide **guidance on detecting GNSS jamming or spoofing** and maintaining safe and efficient aircraft operation in case of global navigation satellite system anomalies
- d. **review aircraft minimum equipage lists** to ensure compatibility with States' implemented minimum operational networks.

ICAO Resolution 2.2/2 (continued)

Resolved, that ICAO:

- e. continue to assess the impact of GNSS interference on aviation safety; define adequate mitigation measures; remind States of their obligations
- f. develop a standardized implementation package for GNSS RFI mitigation, including optimization of conventional navigation aids to ensure continuity in the provision of air navigation services;
- g. develop guidance on GNSS RFI information exchange and civil-military coordination where harmful interference to GNSS is originated or detected by military authorities
- h. develop recommendations for globally harmonized minimum aircraft equipage lists to ensure that provided navigation infrastructure can be used by airspace users in line with available air traffic services.

Other IATA collaborative activities

Webinar - Civil Aviation Navigation Services Organization (CANSO)

Workshop - European Aviation Safety Agency

ICAO “SkyTalks” – video presentation in margins of ICAO’s 14th Air Navigation Conference (with Boeing and Airbus)