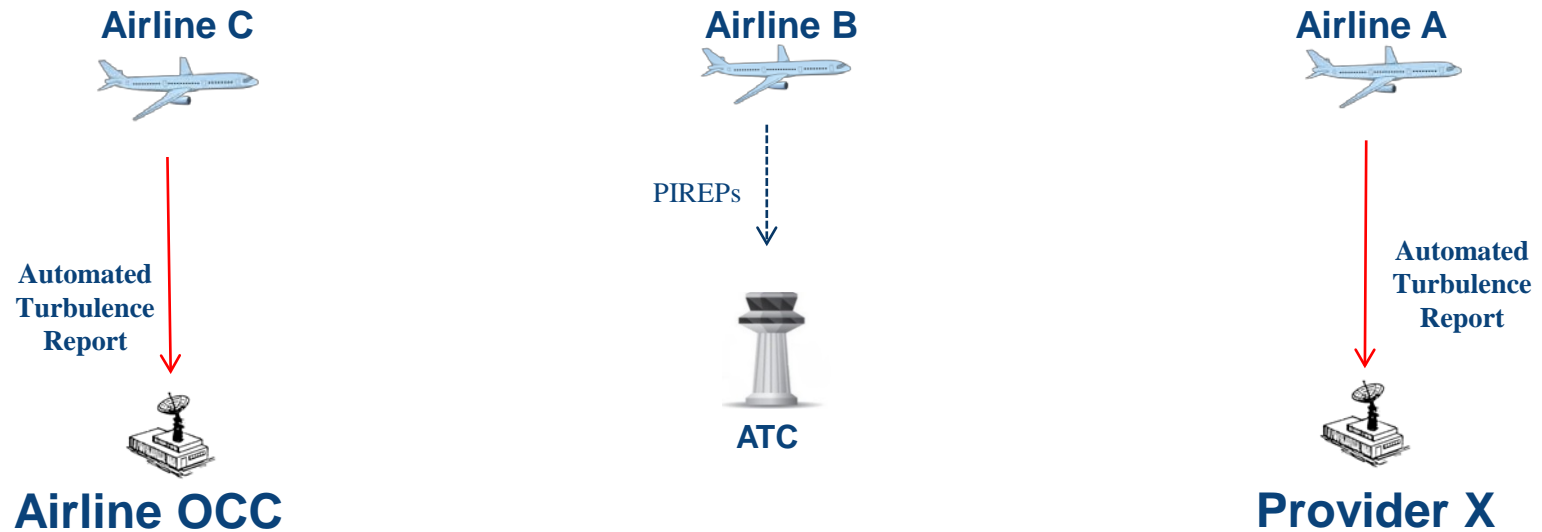




IATA Global Turbulence Database Development

Katya Vashchankova, Head, IATA MET Program
Turbulence Impact Mitigation Workshop, 2018

Current problem with turbulence data: **Too little shared**



Current limitation: Too often the case with aircraft flying through turbulence

- All 3 aircraft will hit the same turbulence because the data is too often not shared by ATC, nor between airlines or different solution providers
- All available data needs to be shared to mitigate turbulence encounters globally
- Airlines have requested **IATA to be the global turbulence data consolidator**

Why IATA?



Experience

Portfolio of global data sharing programs for the airlines:
- DDS, CDD, FRED, ACMG, GADM



Global

Global outreach and critical mass



Neutrality

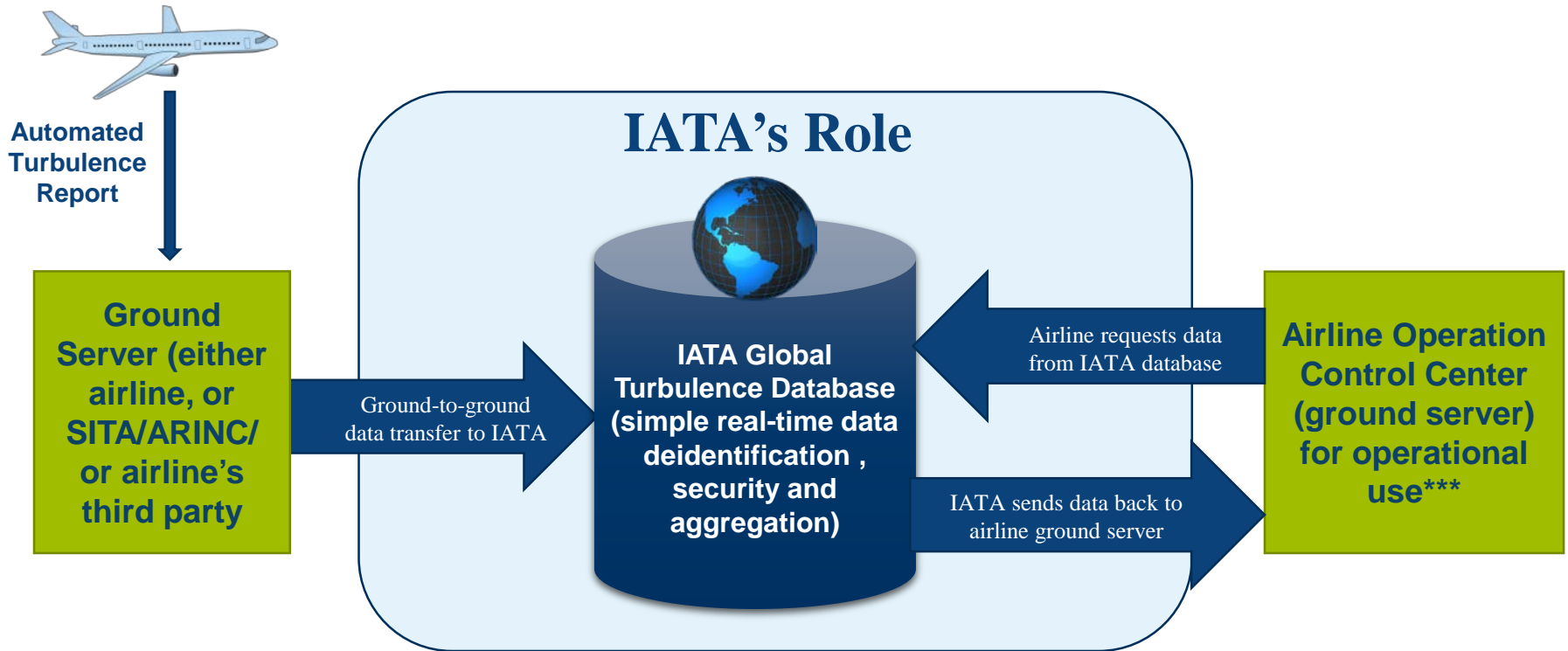
Neutral third party to protect airlines interests – governed by the airlines



Technology

Vendor agnostic solution

IATA's role is to facilitate **ground-to-ground** turbulence data sharing amongst airlines



IATA's role is to receive existing airline data from ground servers, consolidate data into one database (managed by a specialized, IATA contracted database vendor), and upon request provide the data back to airlines via ground-to-ground transfer

***** Airlines are free to decide how to use the data operationally with their existing dispatch or airborne alerting tools**

Progress to date

- Global Turbulence Study created to validate the need
- Regional workshops held in DOH, BJS, SIN, MIA, LON to validated the concept and create a base set of requirements
- Buy-in from multiple airlines globally to start build phase
- Request for Proposal released to industry in Jan 2018 to build the IATA Turbulence Data Exchange Platform
- Snowflake Software selected as partner to build platform
- IATA Turbulence Advisory Group established

Highly Collaborative Development

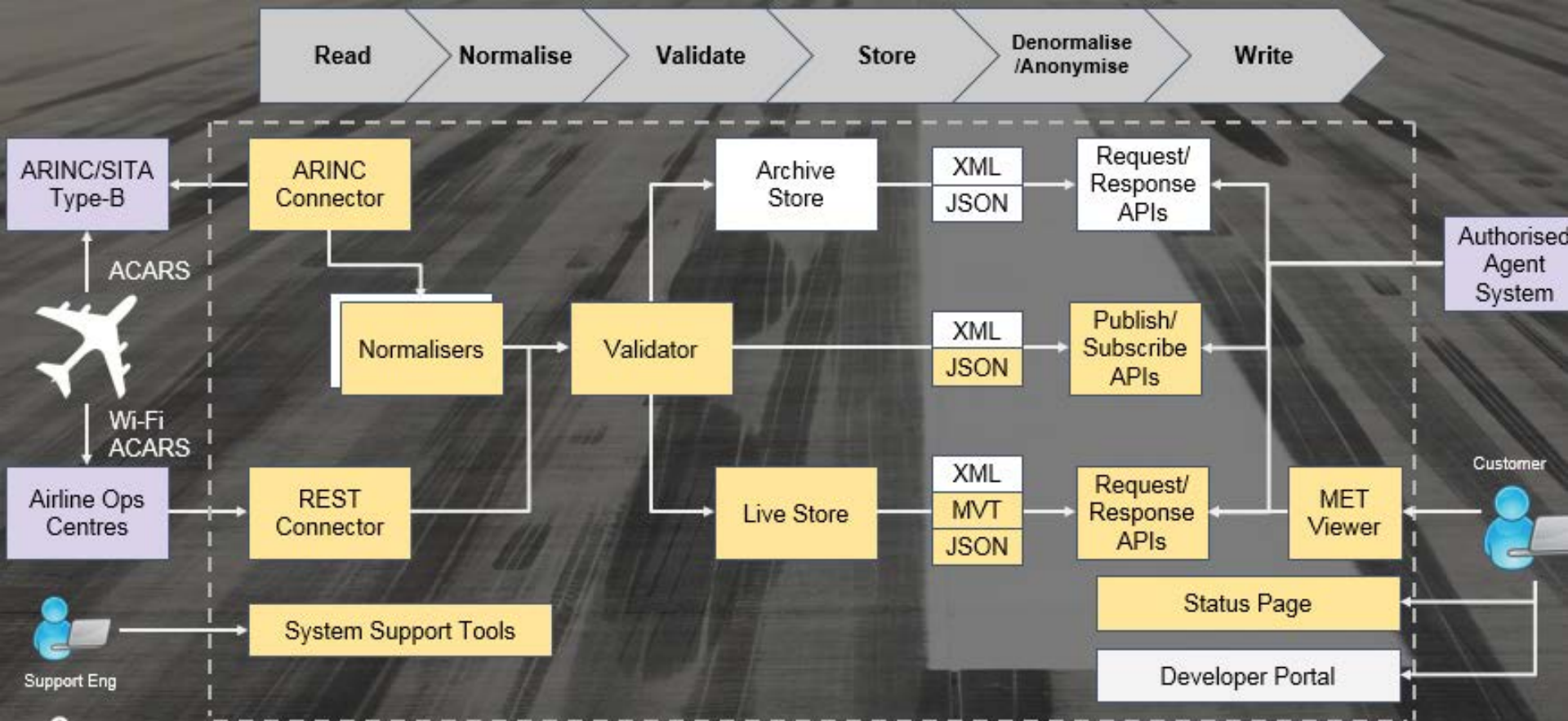
IATA Turbulence Advisory Group:



Platform Implementation Timeframe

- Development kick off workshop held in June 2018 in London with 12 major Airlines represented
- Jul – Dec 2018: Minimum Viable Product (MVP) operational platform delivered
- Jan 2019: Show and tell workshop & soft launch
- Feb 2019: Integration & Operational trials with 24/7 support
- Feb – Sept 2019: Minor releases based on Operational Trials
- Q3 2019: Final show and tell workshop prior to Full launch
- Dec 2019: Full launch

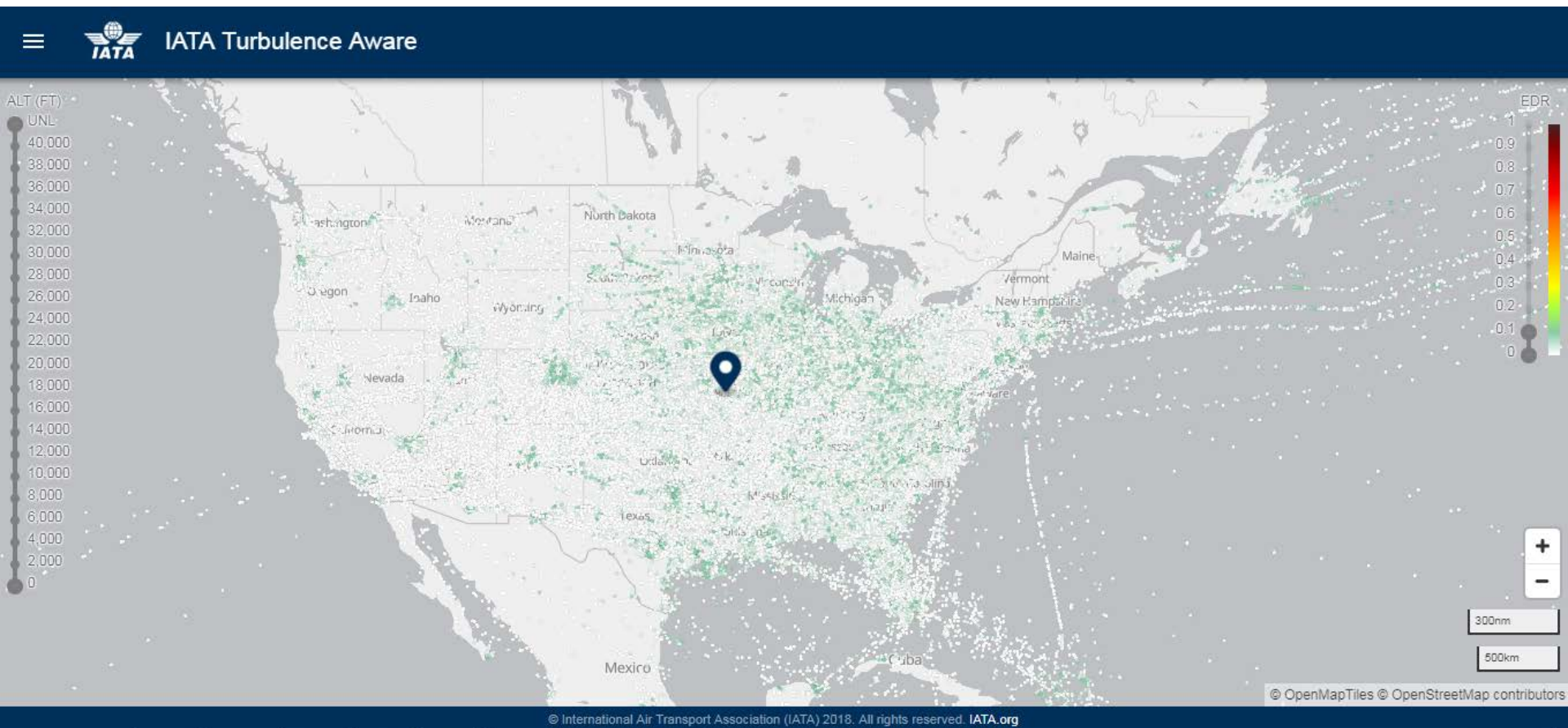
Platform Architecture and Functionalities Developed to Date



- 99.9% Availability
- Highly Scalable
- 24/7 Monitoring
- Highly Secure
- Anonymized Data
- Full logging & audit
- 30 seconds for data throughput

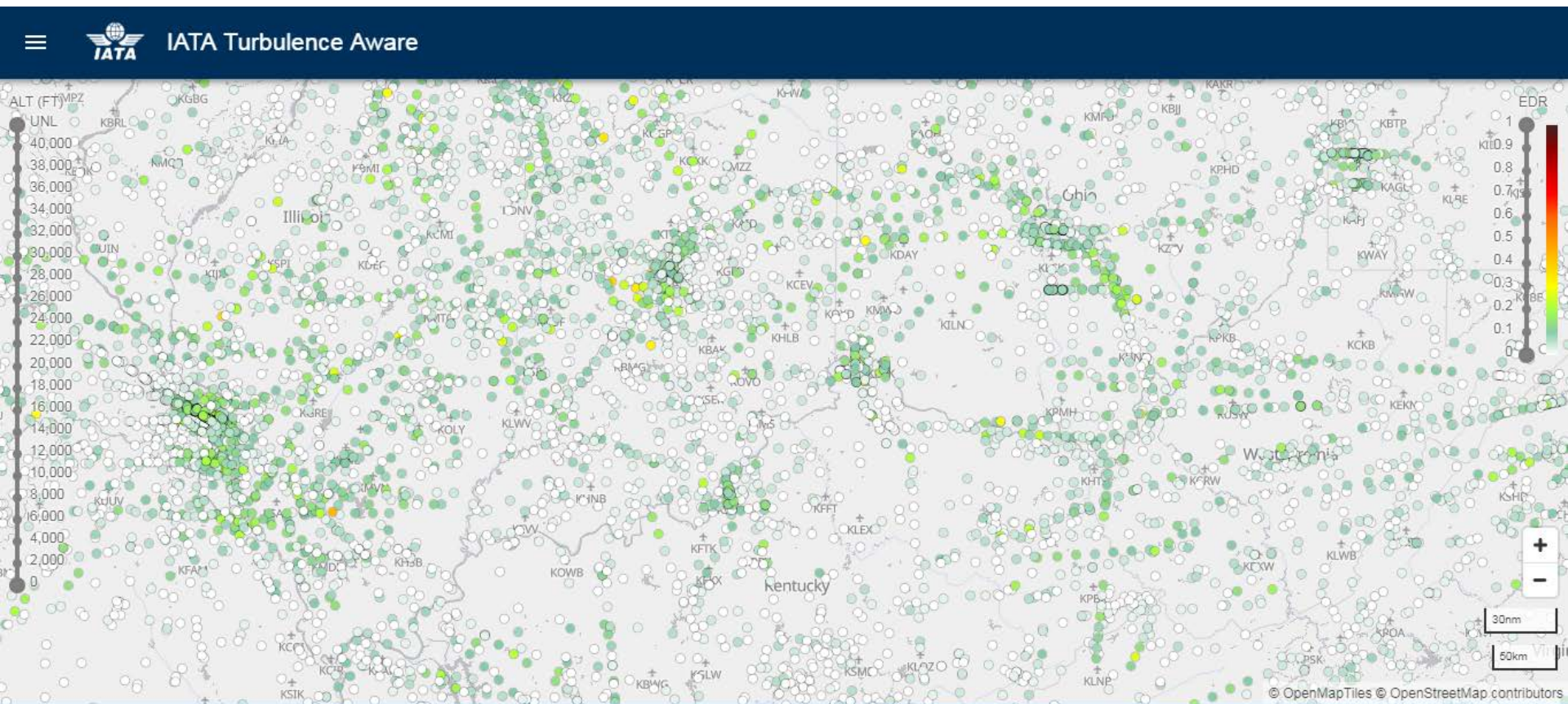
Platform Functionalities Developed to Date

➤ Basic turbulence viewer



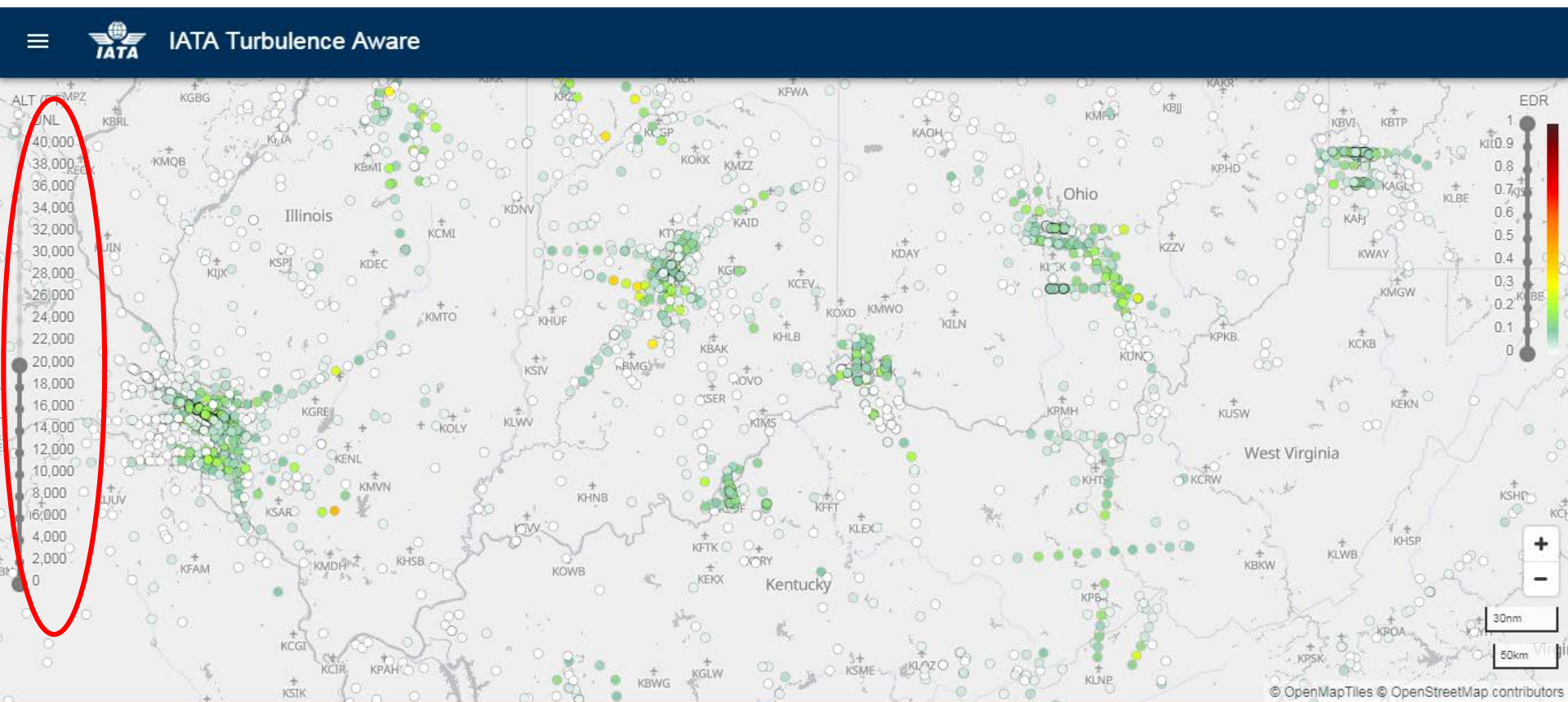
Platform Functionalities Developed to Date

➤ Color coded EDR reports



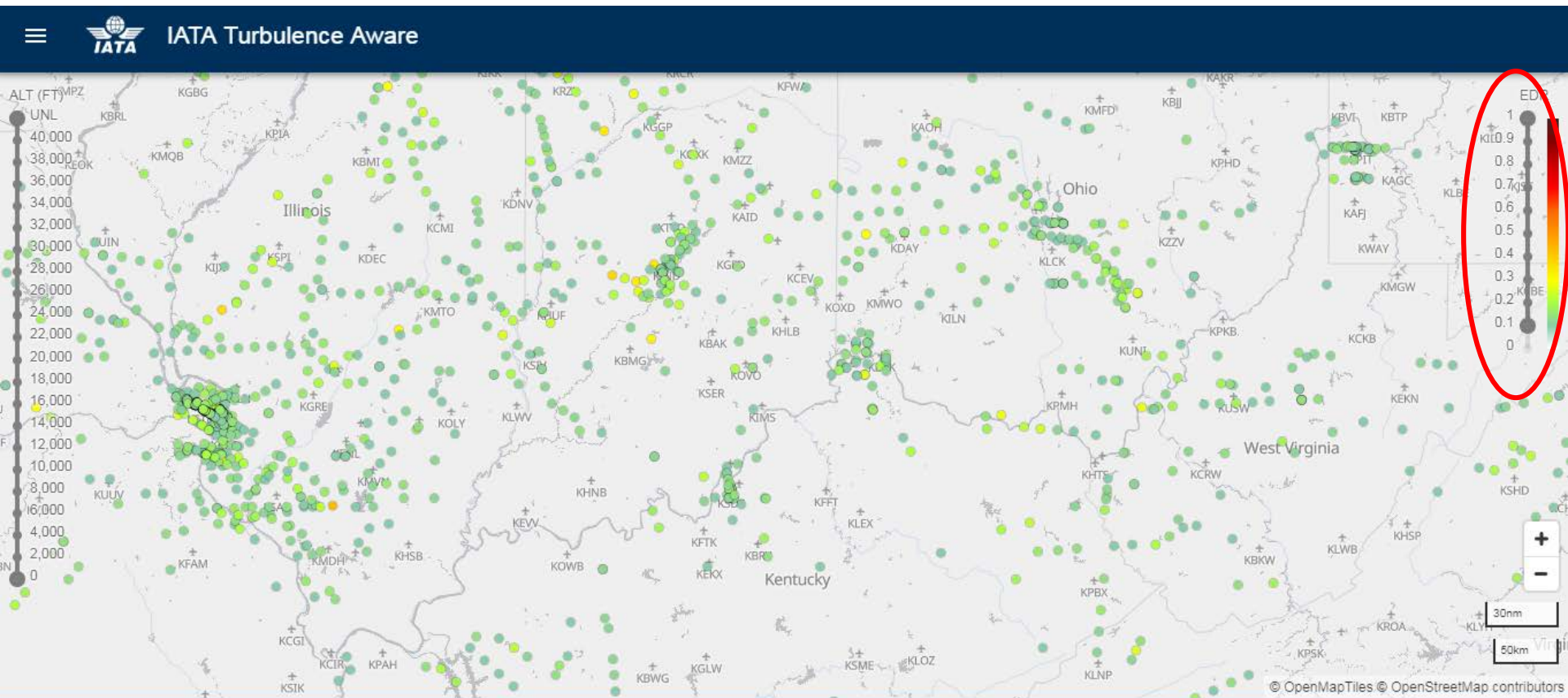
Platform Functionalities Developed to Date

➤ Altitude slider



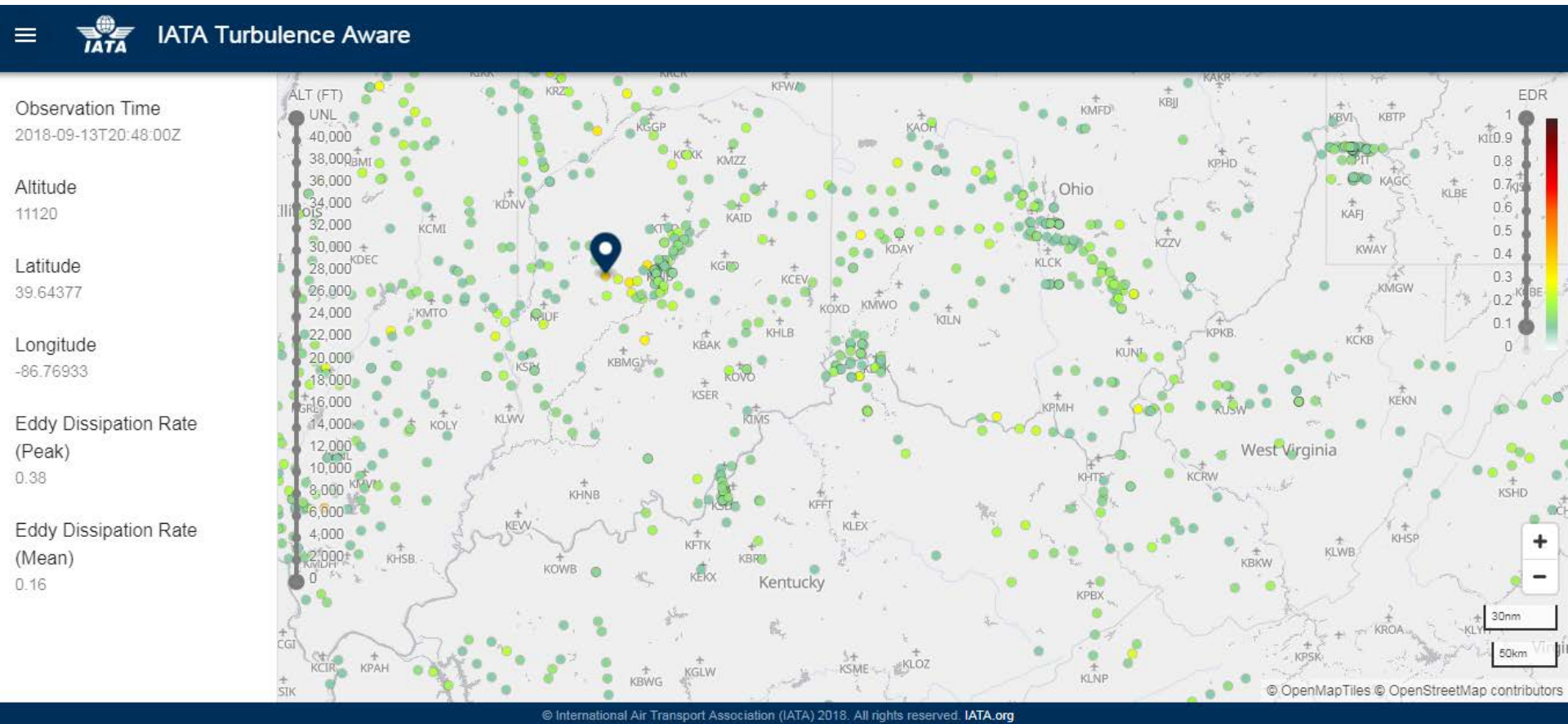
Platform Functionalities Developed to Date

➤ Turbulence intensity slider



Platform Functionalities Developed to Date

➤ Detailed report



AREAS OF FOCUS in 2018

- Turbulence Data Sharing Platform Development
- Outreach to the airline community to encourage the adoption of reporting technology globally (i.e. critical mass):
 - Implementation guidelines on how to implement turbulence reporting capability on the aircraft
- Outreach to technology solution providers to encourage the development of cost-effective turbulence reporting solutions while respecting airlines' data ownership rights

Thank you. Questions?