Costs of Turbulence to the Industry

Aircraft Operators:
- Injury compensation
- Damaged cabin interiors
- Diversions
- Aircraft inspections / out-of-service time
- Extra fuel burn
- Increased insurance premiums after serious accidents
- Legal fees
- Cost of brand damage

National Air Space:
- 2nd leading cause of impact to NAS capacity (FAA)
Dealing with Clear Air Turbulence: brand damage
#turbulence
Present Day Challenges

Turbulence costs are on the rise

Pilot Reports (PIREP) remain the standard way to report turbulence

Current industry efforts to collect automated turbulence reports are fragmented and the data is kept proprietary
Example

Aircraft flying through moderate-to-severe turbulence
What is the problem with the current situation?

- Limited critical mass
- Limited forecast improvement
- Limited understanding of the turbulence phenomenon
- Limited room for innovation

Benefits associated with data-driven turbulence management cannot be fully realized
Airline request to IATA

Develop a **global, real-time, objective** aircraft-sensed **turbulence data exchange** to improve safety and operational efficiencies
Solution

IATA Global Turbulence Database

- Collection
- Processing
- Common Model

Pub/Sub

- Topic A
- Topic B
- Topic C

Data Access Gateway

- HTTP Rest
- Marketplace
  - Integrators
  - Government
  - Weather Providers

Benefits

- IATA Global Turbulence Database
  - Collection
  - Processing
  - Common Model

Aircraft

Airlines

Ground Station(s)

Broadband or VHF
Potential benefits to operators

Improved safety and cost-savings (fewer crew and passenger injuries)

Better customer service

Flight operational efficiencies (flight planning based on accurate data and improved forecasts)
Progress to date

- Global Turbulence Study to validate the need

- Regional workshops in DOH, BJS, SIN, MIA, LON to validate the concept and collect requirements

- Conceptualized the technical and governance framework of the Platform

- Engaged in situ turbulence technical SMEs to collect best practices to share with the industry
Next steps

Pilot Project with live data exchange to be launched in early 2018

Operational platform to be available as of 2019
Potential data users

Equitable and fair access to the data

Protecting airlines’ interests as data owners
Thank you!

For more information, please contact iataturbulence@iata.org