

Total Turbulence



Your Challenge

Each year, turbulence costs airlines hundreds of millions of dollars in injury claims, operational inefficiencies, aircraft and sensitive cargo damage, and lost revenue.

Your Current Approach

Airlines rely on verbal pilot reports (PIREPs) of turbulence, which are subjective, often delayed and imprecise in location. The government issued turbulence SIGMETs and Significant weather guidance are not airframe or flight segment specific, leading to uncertainty about the location, extent and severity of enroute impacts. Further hampering decision-making, flight crews, controllers, and dispatchers do not always access the same information. This uncertainty can lead to extra contingency fuel, and suboptimal altitude and route plans, all of which drive profit erosion from the planned flight.

The Weather Company, an IBM Business Solution

Total Turbulence provides a workflow integrated end-to-end solution that improves certainty and reduces turbulence impacts and their associated costs. Fusing patented real-time turbulence detection, high-resolution numerical weather modeling, highly experienced aviation meteorologists, and proven delivery platforms, Total Turbulence delivers timely, precise and actionable turbulence alerts and guidance.

Total Turbulence relies on aircraft sensed data from The Weather Company's exclusive TAPS™ software-only technology. The Weather Company meteorologists receive TAPS reports and issue Turbulence



Advisories to alert dispatchers and crew of the imminent hazard on both The Weather Company applications like Fusion and Pilotbrief and aircraft communication displays. The Weather Company meteorologists also issue and continually update our industry-leading WSI Enroute Hazards SIGMETs and Flight Plan Guidance (FPG).

Key Benefits



- ✓ Improve Safety
- ✓ Reduce Maintenance Inspections
- ✓ Improve Efficiency
- ✓ Increase Passenger Comfort
- ✓ Enhance Operational Analysis



WSI Turbulence Auto PIREP System (TAPS) allows for timely and precise reporting of turbulence location and severity

- Patented, real-time, objective turbulence detection; accounts for airframe
- Proven in NASA and FAA research and operations
- Reports simple severity categories as well as EDR and RMS-g parameters

WSI Turbulence Advisory fills critical information gap and operational blind spots

- Issued for moderate or higher turbulence PIREP or TAPS report prior to SIGMET or FPG amendments
- Indicates clearly the severity and 3D airspace impacted
- Ensures timely alerting to mitigate impacts of emerging significant hazards

WSI Enroute Hazard SIGMETS and Flight Plan Guidance (FPGs) deliver precise, incisive and actionable view of turbulence impacts

- Tailored for transport class aircraft to optimize altitude and route plans
- Created using extensive global observations, publicly-available and proprietary PIREPs, as well as WSI's own weather modeling
- Monitored, redefined, and verified continuously by expert aviation meteorologists 24x7x365

WSI Decision Support Integration ensures all stakeholders are operating on the same page

- WSI Fusion for real-time alerting and optimal planning
- WSI Replay for on-demand post-event analysis
- WSI Pilotbrief for preflight and in flight crew awareness
- WSI S/WINDS enterprise data services; early maintenance notification
- Builds confidence, collaboration, and sharpens decision-making in all phases

WSI Service Level meets flight critical requirements

- Fully managed and supported
- Fully redundant, active data center architecture
- Premium service level available
- Focus scarce IT resources on airline operational optimization

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