SKY PATH

SkyPath Intro

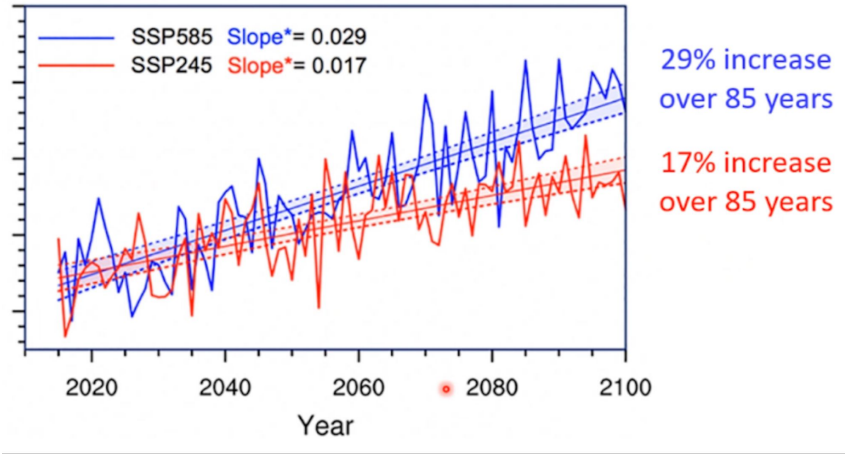
June 2023

“Turbulence is the most common airline accident type today and we must reduce turbulence-related injuries”

Bruce Landsberg, NTSB acting Chairman 2021

Turbulence is here to stay

- There are no adequate tools to **accurately report and predict turbulence**
- Legacy tools for managing turbulence have **insufficient coverage** and **require Aircraft integration**
- Most of available tools **<u>are not</u> used in practice by pilots** since they are not relevant



Turbulence is the #1 weather layer request from EFB customers

Problem

Turbulence causes injuries, stress, discomfort for passengers and crew, and unexpected fuel and maintenance costs

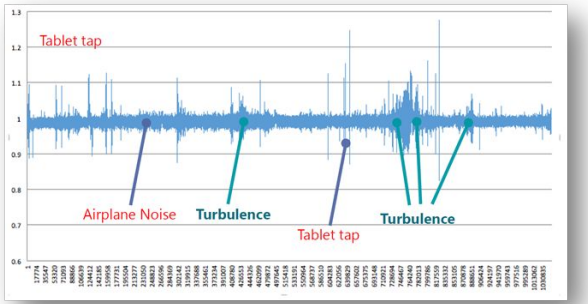
- Turbulence costs exceed $500M a year in the US alone (an average of $17M per airline)
- A single US airline experience an average of 30 turbulence events with an average cost of $50,000 per event
- Unscheduled inspection coupled with one day of out-of-service costs about $24,000 per incident
- Forecasts and other available tools are inadequate and not used in practice by most pilots

Source: turbulenceforcast.com

Introducing SkyPath

SkyPath is a unique crowdsourcing platform exhibiting real-time turbulence conditions based on iPad sensors

It is automatic turbulence reporting "sense and display" system



Patented algorithm tracks iPads' accelerometers

Server perform Aircraft normalization,
Noise filtering and AI

Data is distributed to SkyPath Ecosystem

Registered Patent: Europe, USA, Russia, China, Australia

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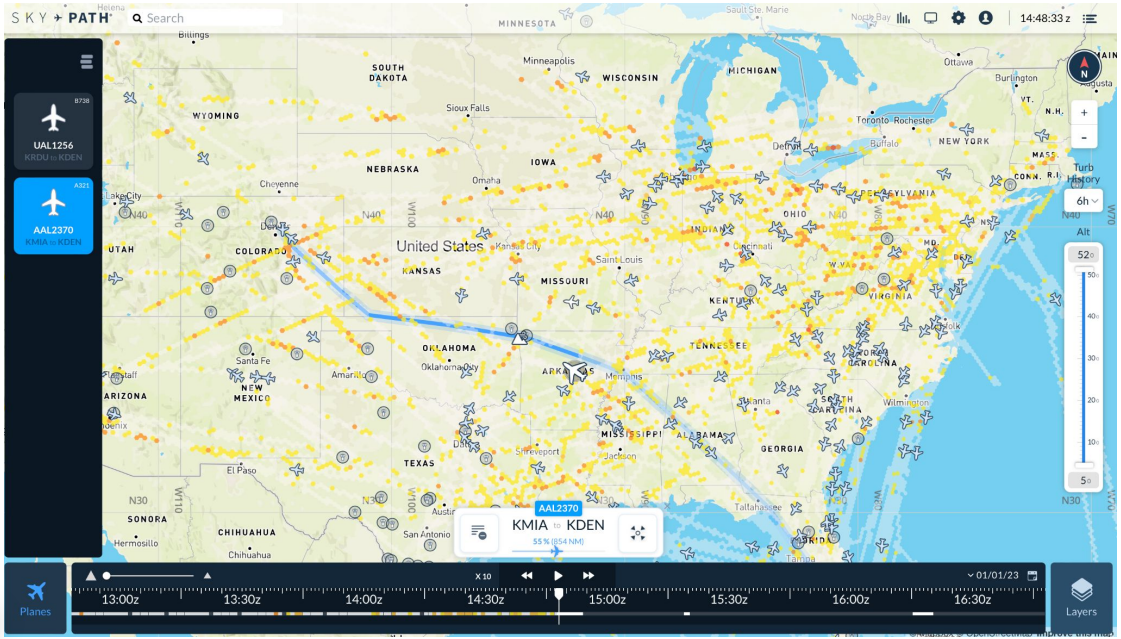
Pilot's/Dispatch's point of view



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SkyPath Ecosystem

Pilots

Stand alone app,
EFB integrated layer

Dispatchers

Stand alone webview, Data,
and Map integrated layer

Management BI

Analytics reports, Debrief
dashboard view

Turbulence DATA API

Weather forecasting,
Nowcasting and Flight
route optimization

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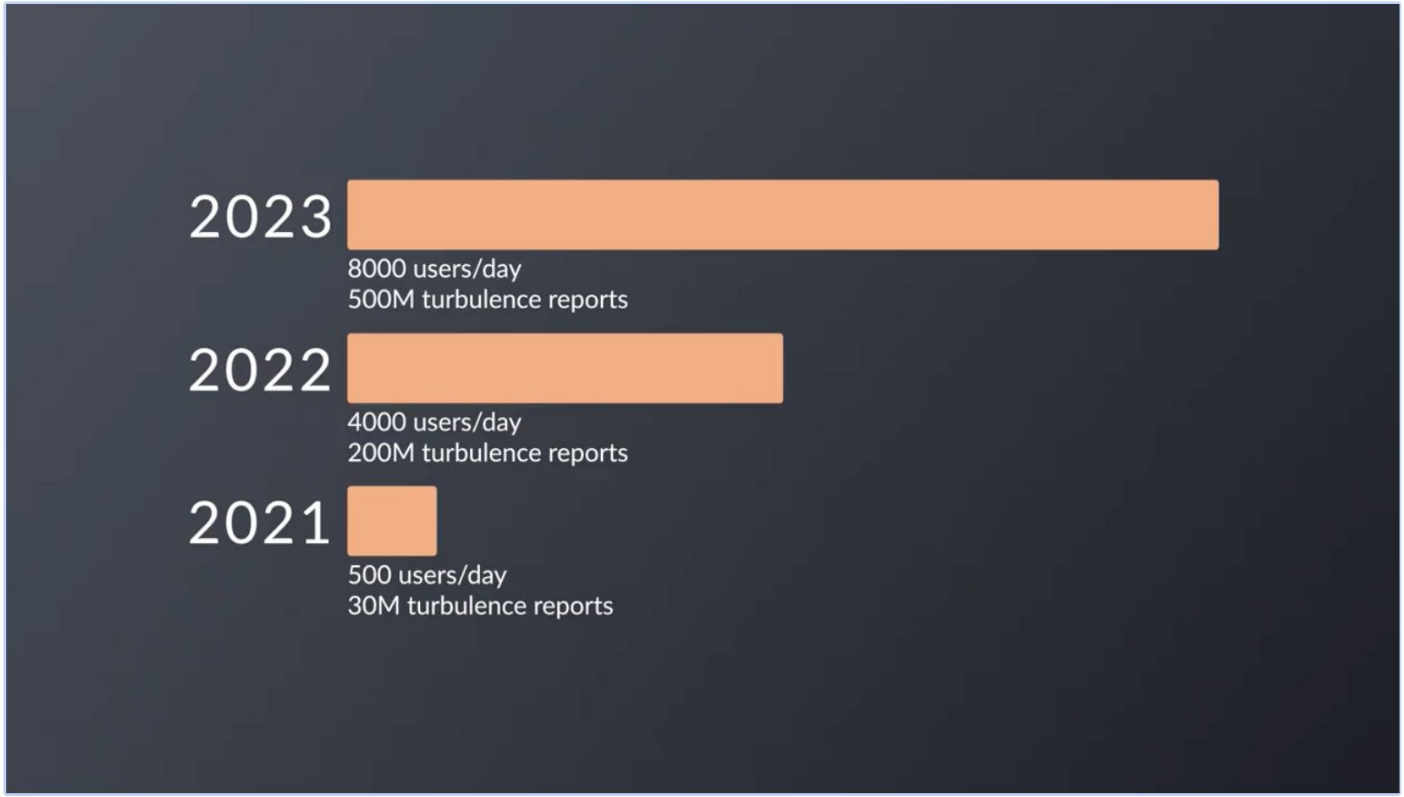
SkyPath Numbers

45K subscribed pilots

+500K turbulence alerts were triggered to pilots



SkyPath Strengths

- No aircraft integration
- 1 coherent algorithm that runs on every iPad
  - High correlation with existing solutions (87%)
- 2 iPads in every cockpit provide data validation and greater accuracy
- Scalability - Simple integration kits for every EFB/EFF
- Easy integration to any dispatch solution

"SkyPath is a double win, you get the highest resolution data in the industry and you can deploy it with the flick of a software switch. For the airline, get the greatest benefit, the fastest. Simple."
EFB Manager

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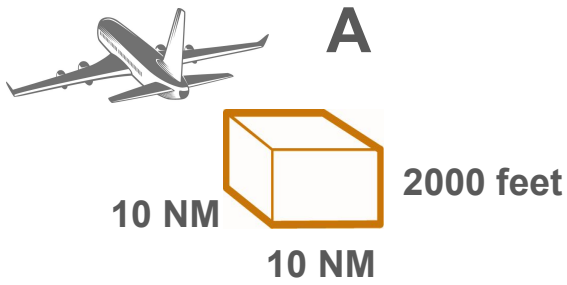
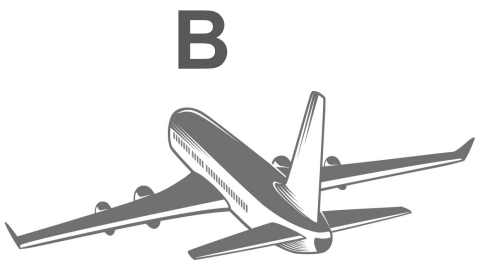
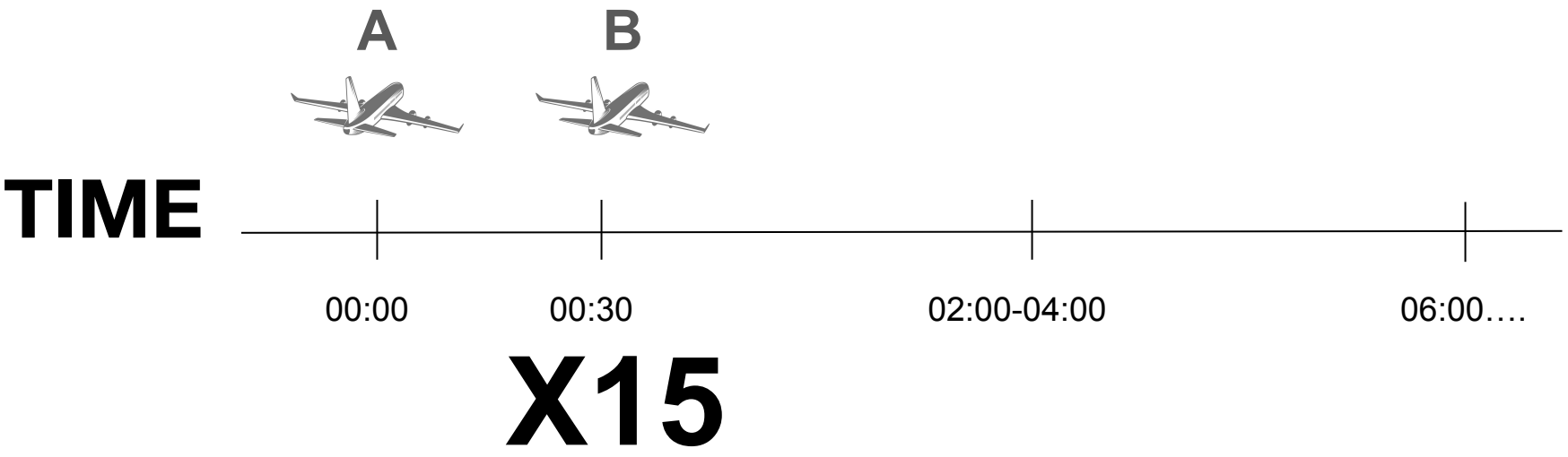
Turbulence Analysis

Smooth	45-56%
Light	29-45%
Lgt-Mod	29-39%
Mod	7-9%
Mod-Sev	0.5-0.9%
Sev	0.01-0.03%

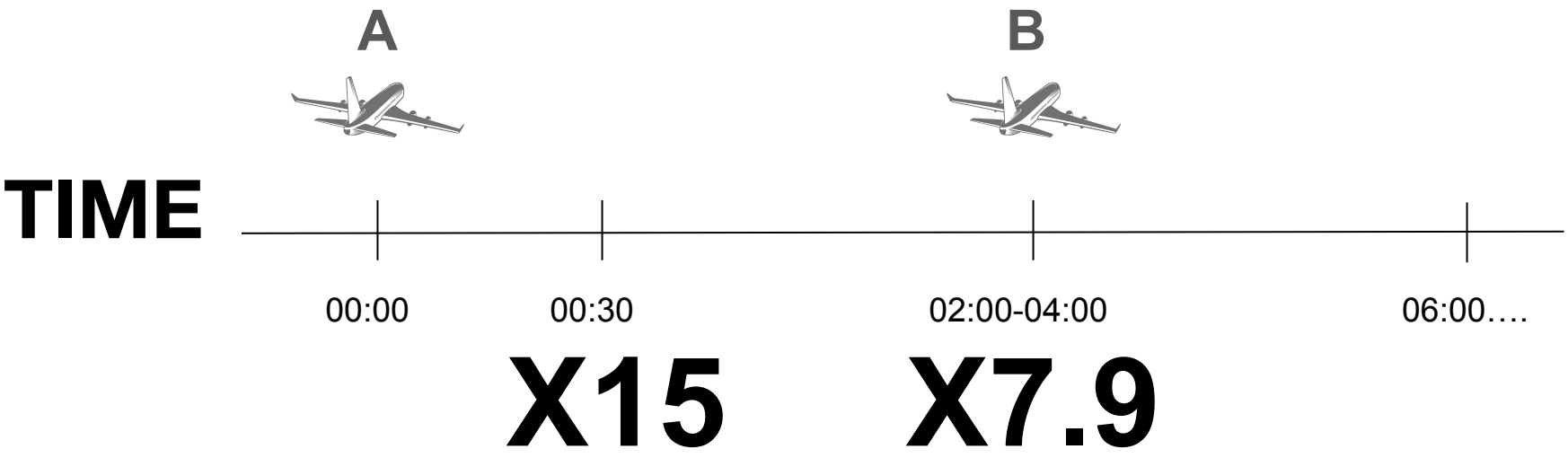






X15

Fly through Mod and above



Fly through Mod and above

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A

B

TIME

00:00 | 00:30 | 02:00-04:00 | 06:00….

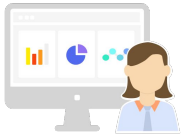
X15 | **X7.9** | **X1**

Fly through Mod and above

Roadmap

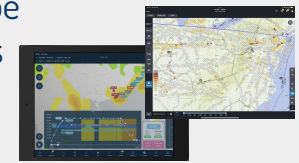

Cabin Crew


Dispatch

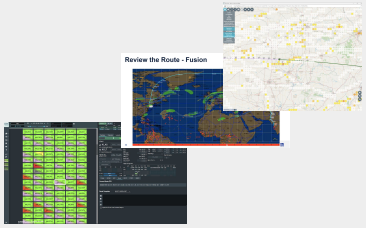

Management

Integrated Solutions

Jeppesen - FD Pro
Avio- Globe
FlightKeys



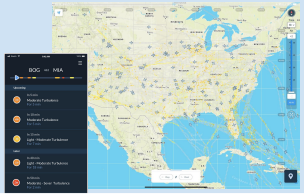
WSI – Pilotbrief & Fusion
Collins - Flight hub/Arinc
Lido - mPilot
Tomorrow
ATC/ NOTAM



Service Expansion

Ride conditions
Official PIREPS
Analytics + BI

NowCasting Layer
Flight attendants app
Advanced Deb. capabilities
Apple Watch



Airline customized solutions (MOTS)

ML Based Nowcasting

2023 → 2024

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SkyPath WithOut Wi-Fi Connectivity

Facts:

- Average US domestic flight - **500 miles** (roughly **1.5 hours**)
- Average EU domestic flight - **981 Km** (roughly **2.2 hours**)
- Beijing to Shanghai - Under **2 hours**
- Effective turbulence data valid for **4-5 hours**
  - (based on 200M annual turbulence reports)
- Inflight Wi-Fi connectivity is expanding rapidly

SkyPath App highly relevant for domestic flights without Wi-Fi!

Flying without connectivity - how it works:

- Pilots download turbulence data before takeoff - SkyPath update takes only a few seconds
- During flight, SkyPath uses downloaded turbulence data and continuously collects and stores new data offline
- Upon connecting to Wi-Fi - turbulence data syncs automatically (takes only a few seconds)

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Business Case

Increased flight safety, Airline cost saving

Annual Turbulence Costs

- Fuel savings, reduced carbon emissions
  - ~ $30K annually/tail
  - 1% US saving resolves in 1.6 million gallons annually
- 50% reduction in ground operations
  - Unscheduled inspection ~ $24K
- Turbulence causes 33% of US accidents involving a serious injury

Source:

[1] LSE Sky High Economics - evaluating the economic benefit of connected airline operations
[2] Journal of Aviation/Aerospace - Turbulence and Its Impact on Commercial Aviation

Our Unique Value Proposition

SkyPath service/ product is **Simple**, one of a kind. **Solving** a real problem

SkyPath is the **only product** today that provides **real time, accurate turbulence notifications**

Automated, Hands-free background operation, **No aircraft integration** or certification required

Integrated/ integration process with most of industry leading platforms, as part of SkyPath SaaS package

Support **improved flight optimization** capabilities and weather nowcast and forecast

SkyPath is becoming the industry Gold Standard

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