

# ADS-B Weather Update

Presented to: Friends and Partners in Aviation Weather

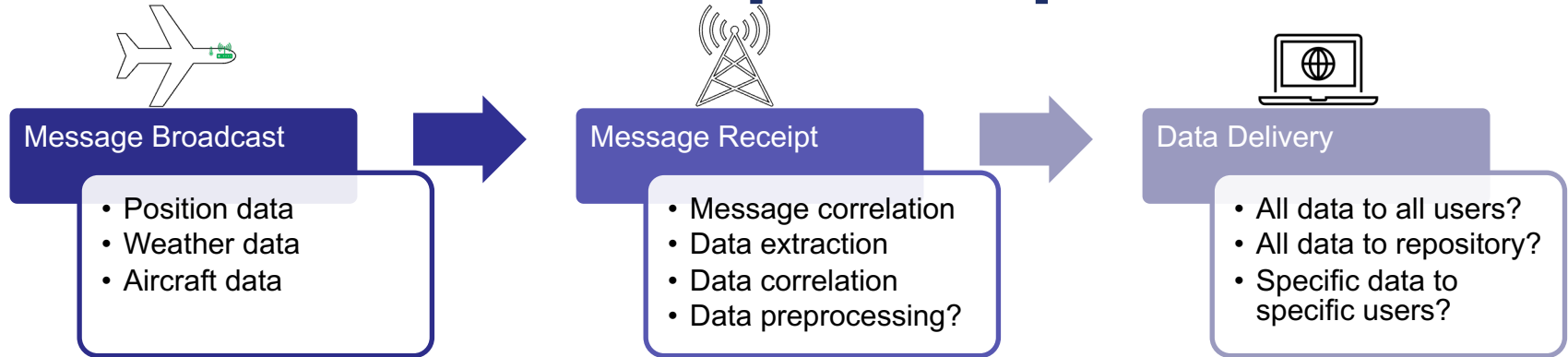
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**Federal Aviation  
Administration**

# ADS-B Wx Concept of Operations



- **Specific uses considered; e.g., flight deck applications and ground-based decision support tools need data in real time, climatology can work from historical archives**
- **Ensuring stakeholders are involved in the message broadcast, receipt, and data delivery planning**

# AIREP Parameters: 1090ES Messages

	Weather State Message 2.2 [s] Broadcast Interval	Alternate Weather State Message 2.2 [s] Broadcast Interval	Emergency/Priority Status Message 5.0 [s] Broadcast interval	Aircraft State Message 5.0 [s] Broadcast Interval
1	Icing Status	Icing Status (EHS Optional)	Mean EDR	Aircraft Configuration
2	Wind Quality Indicator	Roll Angle	Peak EDR	Aircraft Type
3	Wind Speed	Heading Type	Peak EDR Offset	Gross Weight
4	Wind Direction	Heading	Water Vapor	Wingspan
5	Air Temperature Type	Air Temperature Type		
6	Air Temperature	Air Temperature		
7	Airspeed Type	Airspeed Type		
8	Airspeed	Airspeed		

- **Only those parameters that the aircraft is equipped to send are sent**
- **There is no requirement for aircraft to equip to send all parameters**

# PIREP Parameters: 1090ES Messages (PIREP Data, not an Encoded PIREP)

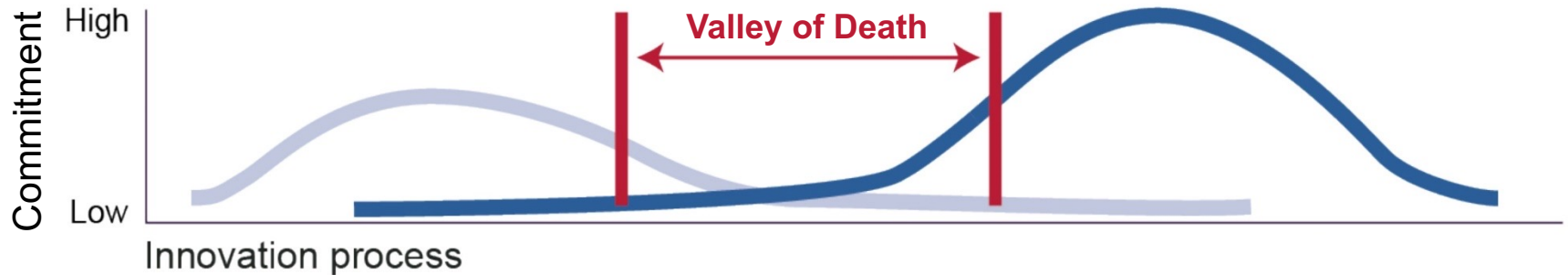
	Flight Weather Message On-condition Broadcast	Temp, Wind & Turbulence Message On-condition Broadcast	Hazardous Weather Message On-condition Broadcast
1	PIREP Time	PIREP Air Temperature	PIREP Icing
2	Flight Visibility	PIREP Air Temperature Type	Airspeed Change
3	Flight Weather 1	PIREP Wind Direction	Wind Shear Height
4	Flight Weather 2	PIREP Wind Speed	Braking Action
5	Flight Weather 3	Turbulence Duration	Runway Number
6	Layer 'A' Height	Turbulence Intensity	Runway Position
7	Layer 'A' Thickness	Turbulence Location	Layer 'C' Height
8	Layer 'A' Height Type	Layer 'B' Height	Layer 'C' Thickness
9	Layer 'A' Coverage	Layer 'B' Thickness	Layer 'C' Height Type
10		Layer 'B' Height Type	Layer 'C' Coverage
11		Layer 'B' Coverage	Flight Weather 1 Vicinity Direction
12			Flight Weather 2 Vicinity Direction
13			Turbulence Type

- **Only those parameters that the pilot chooses to send are sent, there is no requirement to send every parameter**

# How We (mostly) Got This Far...



# R2O: Crossing the “Valley of Death”



# What We Need to Increase...



# Get on the **ADS-B Wx Wagon!**

**I want to know...**

**Ask yourself...**

**What can ADS-B Wx do  
for you?**

**What can you do for  
ADS-B Wx?**

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