



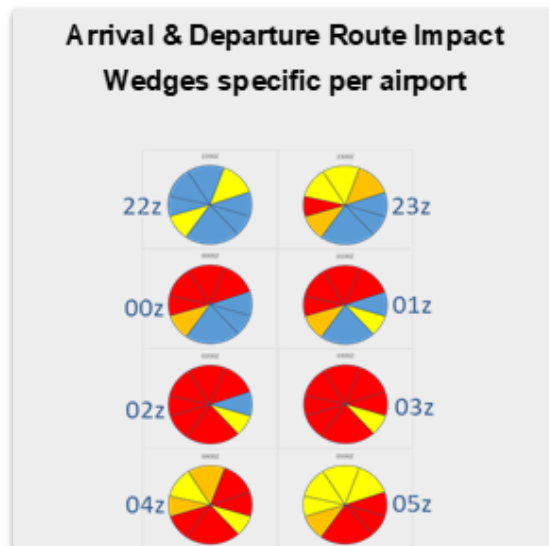
Reduce Operational Weather Impacts
Identify Adverse-Weather Disruptions
Plan for Expected Impact on Your Operation

At the intersection of **aviation weather**, **air traffic management**, and **operational decision support**, AvMet offers the aviation community solutions which help to actively mitigate adverse weather effects with our live Forecast/Observed Weather Impact Information Services.

With a deep understanding of how weather affects air traffic operations, AvMet excels at translating weather information into quantifiable operational impacts. AvMet's sophisticated tools and solutions help to reduce the weather's impacts, leading to more efficient air traffic operations. The relevant, concise information is provided via webservices, APIs, data feeds, hosted website dashboards, or direct email.

Weather Impacts on Arrival and Departure Routes in Terminal Airspace

Receive information on potential thunderstorm impacts on airport arrival and departure routes in the terminal airspace and beyond with our real-time visual convective impact forecast. The airspace around the airport is divided into wedges encompassing typical arrival and departure routes, customizable for each airport.



Airport Arrival and Departure Rates Forecast

Monitor airport arrival and departure rates for potential reduction due to inclement weather. AvMet solution provides an hour-by-hour rates breakdown and the anticipated runway configurations for major airports, projected up to 24 hours ahead.

Weather Impacted Arrival and Departure Rate Forecast							
Date	APT	Hour (Z)	Scheduled Rates		Weather Impacted Prediction		
			Scheduled Arrivals	Schedules Departures	WX Impacted Arrivals	Wx Impacted Departures	Anticipated Runway Configuration
52721	DFW	6	0	0	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	7	2	0	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	8	2	1	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	9	1	7	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	10	7	24	80	114	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	11	26	16	80	114	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	12	82	87	60	74	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	13	21	50	40	80	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	14	106	87	55	80	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	15	88	41	80	80	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	16	71	92	80	90	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	17	96	45	100	80	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	18	62	99	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	19	68	48	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	20	71	98	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	21	62	59	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	22	72	122	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	23	49	51	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	0	29	86	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	1	77	60	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	2	47	36	90	113	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	3	58	23	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	4	5	18	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A
52721	DFW	5	0	4	100	126	13R/A 17L/A 17R/D 17C/A 18L/D 18R/A

Translated Weather Impacts per Airport

Predicted significant weather impacts are provided for key arrival and departure periods per each airport and are listed by weather factor (both local and en-route), from most to least impactful.

Predicted Impacts by Airport / Weather Factor

Airport		5am-9am	9am-12pm	12pm-3pm	3pm-6pm	6pm-9pm	9pm-12am
Atlanta	ATL			LocTS/EnrTS	LocTS/EnrTS	EnrTS	
Boston	BOS		LateArr/Volume		LateArr	LateArr	Volume/LateArr
Baltimore-Washington	BWI	LowCV	EnrTS/LowCV	LowCV/EnrTS			
Charlotte	CLT				EnrTS	EnrTS	
Washington Reagan	DCA			LateArr	LateArr	LateArr	
Denver	DEN					EnrTS	
Dallas-Ft. Worth	DFW			EnrTS	EnrTS		
Newark	EWR			EnrTS/LowCV	LowCV/EnrTS		
Washington Dulles	IAD			LateArr	LateArr	LateArr	Volume/LateArr
Houston Intercont.	IAH			EnrTS	EnrTS	EnrTS	

Weather Impacts on Jet Routes and ATC Sectors

Assess jet route or airspace impacts and how they vary by time-of-day and severity, across pertinent airspace regions. Compare potential airspace management tactics and strategies when weather-induced irregular operations are anticipated. Our visualized convective weather impact forecast depicts the “expected amount” of convective weather along a given jet route, ATC center, or another defined airspace area. The forecast impact is quantified for the entirety of a jet route and along the route’s segments in each sector it traverses.

Jet Route Weather Impact Forecast

Airway	Hour(Z)	Overall Impact	Within Specific ARTCC		
			ZID	ZNY	ZBW
J80	16	Yellow	Yellow	Yellow	Green
J80	17	Yellow	Yellow	Green	Green
J80	18	Red	Red	Red	Red
J80	19	Red	Red	Red	Red
J80	20	Red	Yellow	Red	Red
J80	21	Red	Green	Yellow	Red
J80	22	Red	Green	Red	Green
J80	23	Green	Green	Green	Green

Enabling Technologies

AvMet collects and archives vast amounts of weather/forecast, traffic, and traffic management advisory data on an hourly and daily basis. Leveraging our in-house weather-to-impact translation algorithms, we import operationally relevant data into our fast-time simulation tools to explore potential “what-if” scenarios. This helps identify opportunities, best practices, and lessons learned when managing weather constraints on air traffic, which in turn provides the foundation behind our product offerings. Here are some of our technologies:

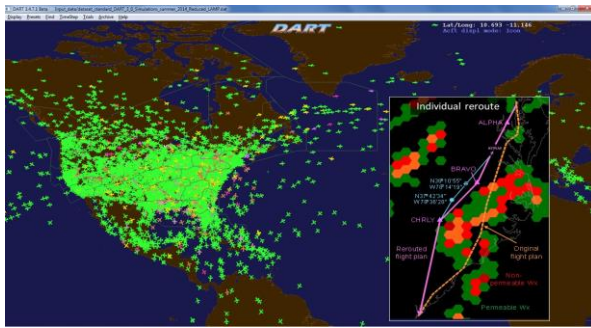
Similar Weather Analysis Tool (SWAT): Identify similar convective and non-convective weather events as well as resulting operational impacts within a large multi-year data archive in seconds.

Weather Delay Prediction Capability (WDPC): Predict weather delays at major US airports up to 72 hours in advance based on available weather forecast generated by the NWS models.

Urban Air Mobility Weather Impact Model (UWIM): Translates and visualizes the impact of various weather phenomena—wind, reduced visibility, high/low temperature, rain, snow, freezing precipitation and others—on UAM operations.

Dynamic ATM Research Technology (DART): Cloud-based, weather-aware, runway-to-runway, superfast-time National Airspace System (NAS) simulation model and historical weather and traffic playback capability.

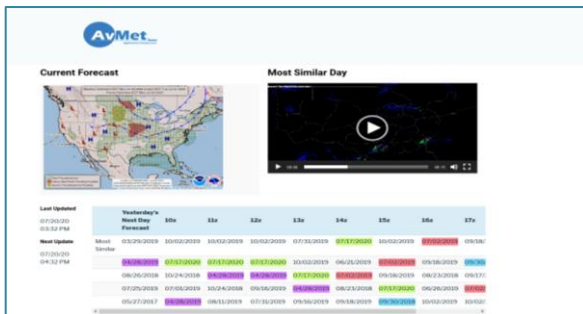
Dynamic ATM Research Technology



UAM Weather Impact Model



Similar Weather Analysis Tool



Weather Delay Prediction Capability



About AvMet Applications, Inc.

Since its founding in 2000, AvMet Applications has been developing state-of-the art analysis tools and weather-aware fast time simulation models that can identify and measure the impact of adverse weather on aviation operations.

Our mission is to help the aviation community answer questions associated with weather impacts: “When and where will adverse weather be disruptive? What is the expected impact on my operation? What can we do to reduce this negative impact?”

With a deep understanding of how weather affects air traffic operations, AvMet excels in its abilities to translate weather data into actionable solutions to support government and commercial organizations.

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