



Operational Decisioning in Weather

A Modern Playbook for
Margin, Growth & Risk
Performance

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Weather volatility is intensifying, creating risks that ripple across every industry — from aviation and utilities to transportation, events, and agriculture. Extreme events are more frequent, regulatory demands are evolving, and customer expectations are rising. Traditional approaches to weather forecasting and risk management are no longer enough.

- Diagnose the operational challenges driven by weather volatility
- Align decisions with margin, growth, and risk priorities
- Access practical steps to modernize weather-informed operations
- Learn how DTN Weather Hub powers smarter, faster, and safer outcomes

With real-time visibility, AI-enhanced forecasts, and trusted neutrality, DTN brings decision-grade weather intelligence to organizations worldwide.

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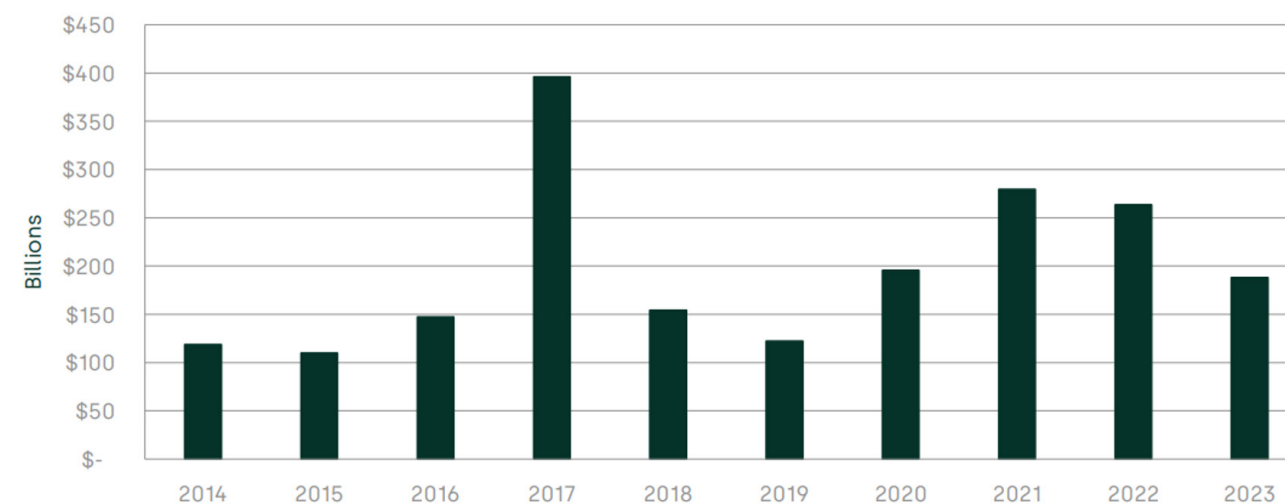
A new operating reality in weather

Organizations are facing unprecedented weather challenges:

- More frequent and severe extreme weather events
- Rising costs from disruptions, liability, and regulatory complexity
- Legacy systems that are slow, siloed, and unable to scale

The result is a growing divide: companies modernizing with operational decisioning are pulling ahead, while others fall further behind.

Economic impact of climate-related extreme weater events, 2014 to 2023



Note: all result expressed in terms of 2023 USD. Th spike in 2017 is due to an active Atlantic hurricane season, causing significant destruction in the region. The year 2017 saw the first (Hurricane Harvey, U.S.) third (Hurricane Maria, Puerto Rico), and fifth (Hurricane Irma, U.S.) largest events by economic impact across all years. These three events alone accounted for 70% of the estimated economic impact recorded in 2017.

Source: [International Chamber of Commerce](#)

Climate-driven fixed asset losses equate to a **6.6 - 7.3% drop in earnings** by 2035 for the average company, accelerating to 9.9-12.8% by 2055.

Source: [World Economic Forum](#)

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The competitive divide in weather operations

Relying on lagging forecasts and manual workflows creates unacceptable risk. Leaders are shifting to models built on real-time data, probabilistic forecasting, and automated workflows.

Symptoms of falling behind include:

- Missed revenue due to preventable downtime or cancellations
- Safety incidents tied to lagging or siloed weather intelligence
- Inefficient resource allocation and ballooning operational costs

DTN delivers a differentiator: the DTN Weather Hub.

With 180+ meteorologists, proprietary AI-ready datasets, and global API delivery, it turns weather into a source of competitive advantage.

In the Winter of 2024, businesses experienced monetary loss due to extreme weather for the period ending February 11, 2024.

31.3%
of businesses in
Tennessee

28%
of businesses in
Arkansas

40%
of businesses in
Oregon

Source: [US Census Bureau](#)

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A new playbook for weather risk professionals

- 1 Verticalization: Sector-specific weather intelligence**
 Purpose-built hubs for aviation, utilities, logistics, events, marine, and more.
- 2 Data superiority: Unmatched weather intelligence**
 70K+ inputs, hyperlocal forecasts, and decision-grade datasets refined for operational AI.
- 3 AI-driven insight: Anticipating extreme events**
 Scenario modeling for storms, wildfires, floods, and outages to reduce exposure and plan contingencies.
- 4 Decision velocity: From forecast to action**
 Automated workflows connect forecasts to risk communication, planning, and execution.
- 5 Trust and neutrality: A reliable partner**
 With rigorous governance, neutrality, and verified outputs, DTN ensures decision integrity.



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How to operationalize the new weather model

Step 1

Identify weather-driven decision bottlenecks

Step 2

Quantify impacts on safety, compliance, and margins

Step 3

Deploy decision-grade forecasts and alerts into operations

Step 4

Automate planning and risk communication workflows

Step 5

Embed a trusted intelligence layer across teams and assets



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Weather sector deep dive: Outcomes by role

Utilities and renewables

Predict outages, plan crews, and improve grid reliability with AI-enhanced forecasts.

Transportation and logistics

Reduce crash risk and optimize fleet routes with real-time hazard intelligence.

Aviation and events

Make safer go/no-go decisions, reduce liability, and improve passenger/attendee safety.

Enterprise operations

Correlate KPIs with weather data to link environmental risk with business performance.



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The DTN weather decisioning difference

DTN empowers weather-driven decisioning with:



Dedicated Weather Hub

Purpose-built for operational weather intelligence



Real-time, proprietary data

Decision-grade insights from exclusive datasets.



Real-time, proprietary data

From risk alerts to planning workflows



Neutral, trusted stewardship

Ensuring integrity, transparency, and resilience

Why DTN?

Purpose-built weather intelligence

+

Decision-Grade Data

+

Trusted neutrality

=

A new frontier for operational performance.



Next steps for weather risk professionals

DTN is the operational decisioning company trusted across weather-sensitive industries worldwide. With proprietary data, AI-driven insights, and sector-specific expertise, we help organizations minimize weather risk and maximize performance.

Your route to transformation

- Diagnose where weather risk erodes safety, cost, or margin
- Deploy live weather intelligence into operations
- Pilot automated workflows for risk communication and planning

Are you ready?

Take the next step

