Complete Weather Intelligence for Transportation from DTN

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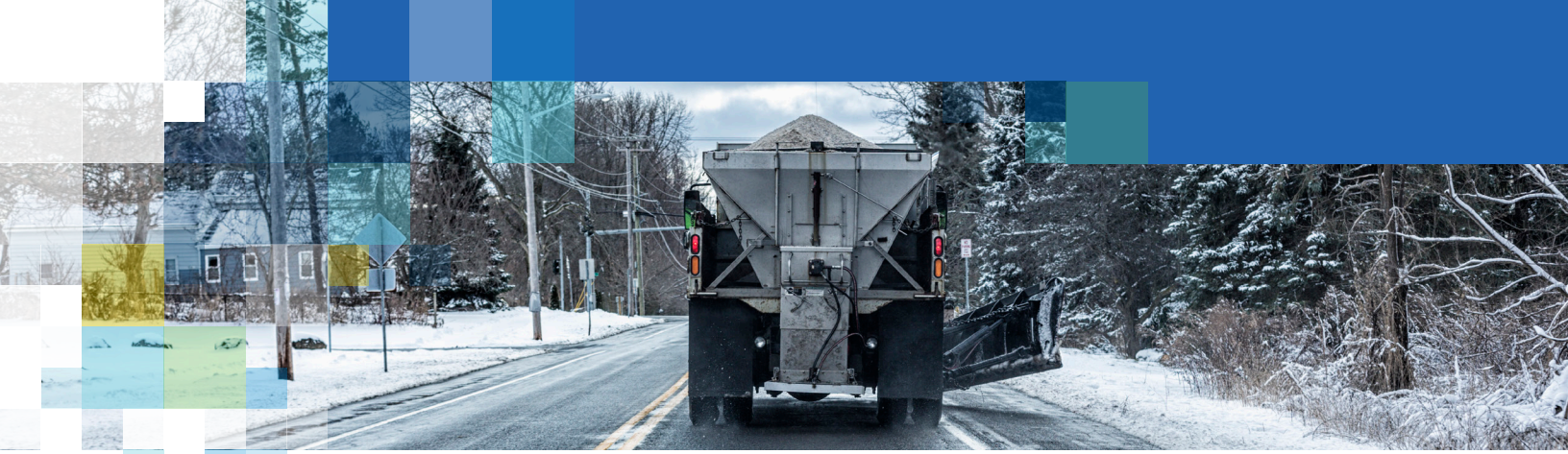

Every year, adverse weather creates more than 500 million vehicle-hours of delay. The weather's impact on roadways takes a toll on human lives. On average, 1,921 people are killed and 146,647 more are injured each year in accidents involving snow, slush, sleet, and ice.

In addition, for trucking companies, these delays add up to $3 billion in lost productivity every year. Agencies responsible for road conditions spend $2.3 billion every year fighting snow and ice, which amounts to about 20 percent of their annual maintenance budgets.

When adverse weather threatens road conditions, maintenance managers must take many factors into consideration in order to plan an effective response:

- Which routes to treat
- When to apply chemicals
- What type of chemical to apply
- What chemical application rate to use
- The cost of the chemicals, fuel, and labor
- The environmental impact of the chemicals

To make the most effective decisions, agencies need technology driven by the best available observed and forecast weather information, along with data-driven recommendations for the best response.

For the surface transportation industry, this tool is known as a maintenance decision support system (MDSS). An MDSS integrates relevant road weather forecasts, coded maintenance rules of practice, and maintenance resource data to provide winter maintenance managers with recommended road treatment strategies, based on available resources and best practices.

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Know not only what's coming, but how to prepare

WeatherSentry® Transportation Edition is the MDSS solution from DTN. Using DTN's highly accurate forecasts, it analyzes observed and predicted weather and pavement conditions to determine what's expected to happen on roadways in the near future. In addition, it delivers national meteorological service bulletins as well as winter road maintenance best practices and strategies for a 36-hour window.

The point-based pavement forecasts in WeatherSentry Transportation Edition glean data from Road Weather Information System (RWIS) sensors, which include data for dew points, pavement conditions, friction, and pavement temperatures on roads and bridges. For stretches of road between static RWIS stations, WeatherSentry can integrate data gathered from mobile sensors mounted to your agency's vehicles, giving you a full range of data points for every mile of road you're responsible for. With this information, you'll understand current conditions and be able to evaluate the effectiveness of your responses.

The same accurate weather information that helps you manage winter challenges is also valuable in the summer. You'll see where severe weather — particularly lightning strikes and high winds — is occurring and predicted, and you can adjust operations to ensure the safety of your crews. It's also ideal for scheduling maintenance such as mowing, striping, and paving.

Make timely, accurate decisions for entire routes

Route-based forecasts in WeatherSentry Transportation Edition enable you to interpret critical data at a glance. The map provides an animated forecast showing pavement conditions, pavement and bridge temperatures, and snow depth on specific routes. Color-coding indicates the routes that will be affected by weather and when they'll need attention, while chemical treatment recommendations are represented with bold icons within a detailed, hourly forecast table.

DTN: The only MDSS with consistently top-rated forecasts

Any MDSS is only as accurate as the forecast information that it integrates, making it vital to choose the right weather data provider. DTN has been providing forecasts for transportation clients for more than 35 years. Our current clients include many state and provincial departments of transportation as well as many city and county departments of public works. All versions of WeatherSentry Transportation Edition receive weather data prepared by a staff of 50 experienced meteorologists, four of whom are Certified Consulting Meteorologists. As a result of this expertise and experience, DTN's forecasts have been rated the most accurate in the U.S. for ten consecutive years in an independent industry evaluation.

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DTN's route-based solution is fully customizable to your agency's needs. You can add specific parameters, such as the route, traffic impact, cycle times, chemical types and rates, and application best practices based on your own experience. This capability results in treatment recommendations that are calculated to your unique weather and pavement condition scenarios.

In addition, you can see what would happen on selected routes if no chemical treatments were performed. This allows you to prioritize routes for treatment in times when your resources are limited. You'll know which roads can wait — and which absolutely need to be treated, and when.

The information you need, delivered how you need it

WeatherSentry Transportation Edition provides maintenance managers with the insight needed to make timely, effective decisions during winter events, which helps mitigate dangerous road conditions. Instead of reacting to changing weather, you can proactively treat roadways with targeted amounts of chemicals at the right time — before, during, and after a storm — to keep road surfaces free of snow and ice.

Depending upon when and how you need the information, WeatherSentry Transportation Edition is available via:

- **WeatherSentry Online** — Delivered wherever there's an internet connection
- **WeatherSentry SmartPhone** — Mobile app that includes pavement forecasts and RWIS observations
- **WeatherSentry Web Services** — The same high-quality content as in WeatherSentry Online — including radar, forecasts, NWS bulletins, temperature, wind speed and local storm reports — but delivered via web services. This enables you to integrate the same weather data driving your operational decisions into your existing applications, such as traffic management systems, mobile asset management systems and 511 traveler information.
- **Powerful RWIS tools** — We help you better manage your sensors and data. Easily visualize your historical RWIS data to spot trends and improve post storm analysis with hands-on historical data graphs. Instantly determine the health of your RWIS network with our summary enhancement tools, which allow you to view sensors with errors or data availability issues.

Make an investment proven to deliver results

A 2009 RITA case study on MDSS revealed a significant cost/benefit ratio. For every dollar spent on an MDSS, agencies realized $1.33 to $8.67 in benefits. Today's advanced technology enables an MDSS to deliver even more value to your agency, particularly when driven by DTN's award-winning forecasts. WeatherSentry can help your agency realize:

- Faster time to bare pavement
- Safer travel conditions and reduced crash risks
- Increased mobility due to restored capacity, reduced delays and more uniform traffic flow
- Improved productivity for commercial freight and the traveling public
- More efficient use of chemicals, equipment and labor, resulting in reduced winter road maintenance costs
- Reduced environmental impact
- Increased employee satisfaction through strategic use of human resources
- Better use of budget dollars
- Increased management approval

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