

Vaisala RoadDSS® Manager



RoadDSS Manager is a complete tool for road weather management.

The Vaisala RoadDSS Manager is a road weather software system that provides the decision maker with a complete set of tools to make operational decisions. RoadDSS Manager is the most advanced product from the Vaisala RoadDSS Suite of road weather software. The system provides one location for the decision maker to access all relevant weather data, such as fixed road weather stations, mobile road weather data, vehicle traffic, satellite and radar information. RoadDSS Manager also provides a complete view of road weather data through time, by providing historical views of past information, conditions in near real-time, and provides predictions of conditions in the future with road weather forecasts that allow for proper planning. Using all of this information, Manager goes one step further integrating the road authority's own operational guidelines and policies to provide treatment proposals, delivering a consistent guide for decision makers. The Vaisala RoadDSS Manager is a complete Maintenance Decision Support System for customers wanting to improve their operations.

A True Decision Tool

There is a growing trend in decision management tools to not only provide quality information to make a decision, but go one step further and provide a proposed action. RoadDSS Manager can do exactly that. By taking in current conditions, past maintenance activities, and road weather forecasts, RoadDSS Manager can provide a treatment or maintenance strategy. The proposals are never meant to replace an actual human decision maker, but give guidance as to what they could be doing based on best practices and approved policies. This is a perfect tool for inexperienced supervisors, or agencies wanting to deliver efficiency and consistency in decision making. Vaisala RoadDSS Manager goes one step further, enabling the implementation plan to be tracked through to completion in the operations screen. This ensures the agency has a full audit trail of operational activity.

A final critical piece of decision making is communicating information out to the stakeholders in a efficient and uniform way. Manager takes care of this for you, improving your speed of decisions.

All in One Place

Like most things today weather information can be accessed from many different sources. National Meteorological services, internet websites, and your own road weather stations for example, all provide detailed and effective weather information for decision making. However, in an environment of little time and shrinking budgets, having a source that brings all of the information together enables easy on-going communication from one location. This co-location of data more easily enables you to look at all of the important pieces of information, shortening the time needed to make the decision. Limiting training requirements to one system will also help to improve user acceptance.

Key features and benefits provided by RoadDSS Manager:

- Treatment proposals based on your agency's guidelines
- Proposals can be automated or manual
- Chemical Supply Management
- Complete transportation forecast services (atmospheric, road surface and friction, consultative)
- User personalization
- Live and archived road weather data
- Radar and satellite overlay (where available)
- Operations management
- Reporting capabilities
- Customer designed interface with customizable views
- View multiple stations or single sites
- Hosted solution so no need to manage server(s)
- Provide road weather data - past, present, and future
- Street level mapping provides improved detail
- Combines fixed, mobile, and other weather data in one platform
- Data import/export capabilities
- Internal and External Communication

Data Across Time

A key feature of the Vaisala RoadDSS Manager is the ability of the decision maker to get a total view of the data throughout time. Historical data is easily accessible and the user can see the displays exactly how they would have appeared during an event. Historical data provides a learning tool for analysis of past performance with a real understanding of the outcome. Manager also provides a wealth of current road weather information in several views and displays. Other weather data, such as radar and satellite images (if available) can be viewed with the road weather data, providing a complete weather picture. However, the most critical weather information for decision making is knowing the future state of the road. RoadDSS Manager enables the decision-maker to view the forecast surface state with intended treatment before confirming the plan.

Technical data

Map Displays

Street level resolution map displaying station information, including air and surface temperature, surface state, wind, camera images, precipitation, humidity, traffic data and much more, depending on the sensors installed.

Color coded status parameters including surface temperatures, surface state, wind speed, level of grip, and visibility.

Optional displays such as radar, lightning, and terrain maps.

Zooming in an out capability and the ability to go back or forward 24hrs to see observed and forecast values of all station parameters.

Station Summary

Ability to select parameters displayed in columns to show only those relevant to the requirement.

Ability to arrange column displays to suit the individuals' workflow.

Ability to show only relevant stations.

View of all the stations and their sensor output in one screen, grouped in any way that makes sense to the individual user.

Stations

Display camera image, if available, along with surface state and select weather parameters, in addition to a wind rose indicating wind speed and direction.

Graph tab to display any number of weather parameters limited only by the number of sensors and the forecast availability. For example, an x-y graph showing the air temperature, the surface temperature both for the last 24 hours and the next 3 days, combined with the road level of grip (or friction), provides valuable insight into the current and future road conditions.

Surface state bars showing road conditions and road state, past current and forecasted.

Wind speed and direction on a timeline that can be adjusted to see more or less past conditions and forecast.

Forecast text describing conditions for the next hours or days.

Alert Management capability to provide weather alerts on wind speed, visibility, and slippery conditions, and choice of e-mail and/or SMS messages.

Camera Wall showing current image displays from weather stations equipped with cameras.

Wind Rose Wall displaying wind data and threshold breach alerts from all weather stations equipped with appropriate instrumentation on the network.

Weather Forecast

Text and chart displays of multiple forecasts including Morning Summary, 24 hour forecasts, 2-5 day forecast, or other type, based on forecast supplier data.

Planning

Ability to set up an unlimited number of routes, with the flexibility to group them according to the operational workflow.

Auto-propose capabilities that takes the current and forecasted conditions and proposes treatment as a starting point, based on previously set up road authority guidelines.

Ability to manually propose treatments or edit auto-propose actions.

Surface state displays of road conditions before and after proposed treatment, in the forecasted side of the timeline.

Display of the Stations graphs with the added benefit of seeing the forecast surface state after one or more treatments.

Selection of Cause, Action, Start Time, and Comments for each of the treatment proposals (manual or automatic).

Continuous tracking of events and treatment proposals.

Operations

Software can be used to efficiently communicate current maintenance strategies to crews and other stakeholders.

Continuous tracking of operations including:

- Plan operation
- Acknowledge operation
- Start operation
- Complete operation

Ability to adjust start and end times of the operation.

Ability to add comments for justifying each operation or indicating changes to the standard procedure.

Track start and end times, treatment cause, and comments for each phase of the operation.

Electronic date time and user stamp associated with each logged activity enabling comprehensive audit trail.

Miscellaneous

Archiving capabilities to review past performance and decisions made. Screens display the same information that was displayed at the time.

User hierarchy to manage access rights and enable tailoring in accordance with job role.

Data, Reports and Help:

- Regional PDF status reports
- Station data
- Meteorological report
- Performance index
- Treatment and action plan
- Chemical Supply Management

Multiple logins per customer, with user personalized displays
Comprehensive audit trail.