



RWDI's Envision is a suite of tools that lets users explore, visualize, and make sense of the complex world of air quality, meteorology and weather forecasts through versatile graphic and textual reports.

Envision utilizes an adaptable framework designed to collect, manage, and deliver relevant weather and air quality information via web browsers (internet, intranet), mobile devices, or e-mail.

Driven by a highly customizable engine of data collection and visualisation components, Envision can integrate local weather information from site-specific or publicly available meteorological towers with weather forecasts provided by Canadian and US forecast centres. It can also be used to collect, explore and visualize any type of environmental sensor data from public or industry-operated monitoring stations.

Envision is for those who need to know what "has", "is currently", and "will" happen. For the farmer who is concerned about frost, the dock supervisor who needs to know whether winds are too high to unload a ship full of ore, or the industry operator who needs to know when to curtail operations, Envision delivers the information needed to make educated management decisions.

OUR ENVISION SERVICES:

- Custom weather forecasting at high spatial and temporal resolutions
- Delivery and presentation of Environment Canada and US National Centers for Environmental Prediction (NCEP) operational weather forecast data
- Integration with real-time atmospheric dispersion modelling applications via RWDI's Plume-RT framework
- Dispersion modelling at RWDI's supercomputing facility
- Forensic meteorological assessments
- Data collection and presentation from weather stations and air quality monitoring stations
- Siting of weather stations and air quality monitoring stations
- Custom software development and data management (collection, management, archiving, reporting, etc.)

Example Applications:

- Operations Management & Planning
- Marine & Dock-side Activities
- Air Quality Monitoring (SO₂, H₂S, PM_{2.5}, etc.)
- Agriculture (fertilizer application, frost protection, prescribed burns, etc.)
- Emergency Response Planning
- Wind Gust Forecasting for construction sites, heavy lifts, bridge spans, etc.



Envision Features:

Collects, manages & delivers environmental information from multiple instruments:

- Meteorological Towers
- Air Quality Monitoring Stations
- Sonic Detection and Ranging (SODAR) Units
- Noise & Vibration Sensors

Integrates weather forecasts from National Centre for Environmental Prediction (NCEP), Environment Canada, or RWDI's Forecast Data Centre.

Adapts to a wide range of applications

Supports multiple platforms (internet, intranet, e-mail, FTP, mobile devices, etc.)

Provides a rich set of ad-hoc reporting features and options:

- Time-series plots of temperature, wind speed, mixing height, etc.
- Wind roses
- Measured vs. forecasted summary plots
- Wind vector plots
- Ventilation index plots
- Air Quality Data
- Wind Gust Predictions

Customized alert thresholds and alerting by email or SMS text messaging.

Other Services from RWDI

- Environmental Impact Assessments
- Regional Atmospheric Modelling
- Meteorology
- Site Remediation
- Industrial Waste Water Treatment
- Biosolids Management
- Air Quality Modelling
- Best Management Practices Plans – Odour and Dust
- Emission Inventories and Reporting
- Ambient Monitoring
- Ventilation & Control Systems
- Stack Testing
- Hydrogeological Services
- Real-Time Modelling



Consulting Engineers
& Scientists

Air, Noise, Water & Waste Services

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