

AUTOMATIC WEATHER STATIONS FOR
SURFACE OBSERVATION

Mercury

NOVA



 **STERELA**
METEO

www.sterela-meteo.com

SURFACE OBSERVATION WEATHER STATION



NOVA series

Synoptic and climatological network

Road weather station

Agro-meteorological weather station

Weather station for site surveillance

As a specialist in acquisition, communication and operating systems, **Sterela** has been designing and manufacturing weather stations for surface observations for more than 20 years.

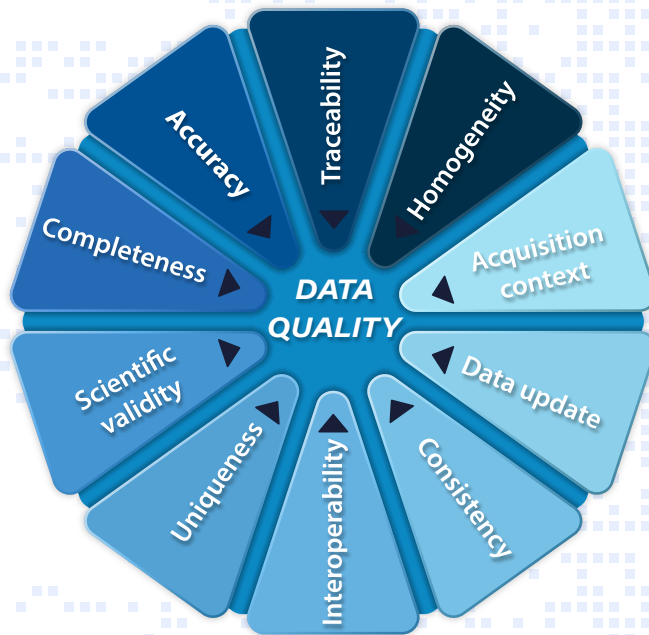
Sterela's weather stations stand out first and foremost for their reliability and modularity. Many institutions have repeatedly placed their trust in us over recent years, making their projects reality with our product line.

They trust us





Data quality: a necessary condition for the analysis



A real prerequisite for the implementation of analysis and management tools, data quality is a major issue in our sector.

Sterela ensures high standards regarding the data reliability in all its equipment and software.

At your side, from expertise to execution

Sterela supports you throughout your projects to ensure their success.



Mercury **SYNOP**

Automatic weather station for synoptic and climatological network



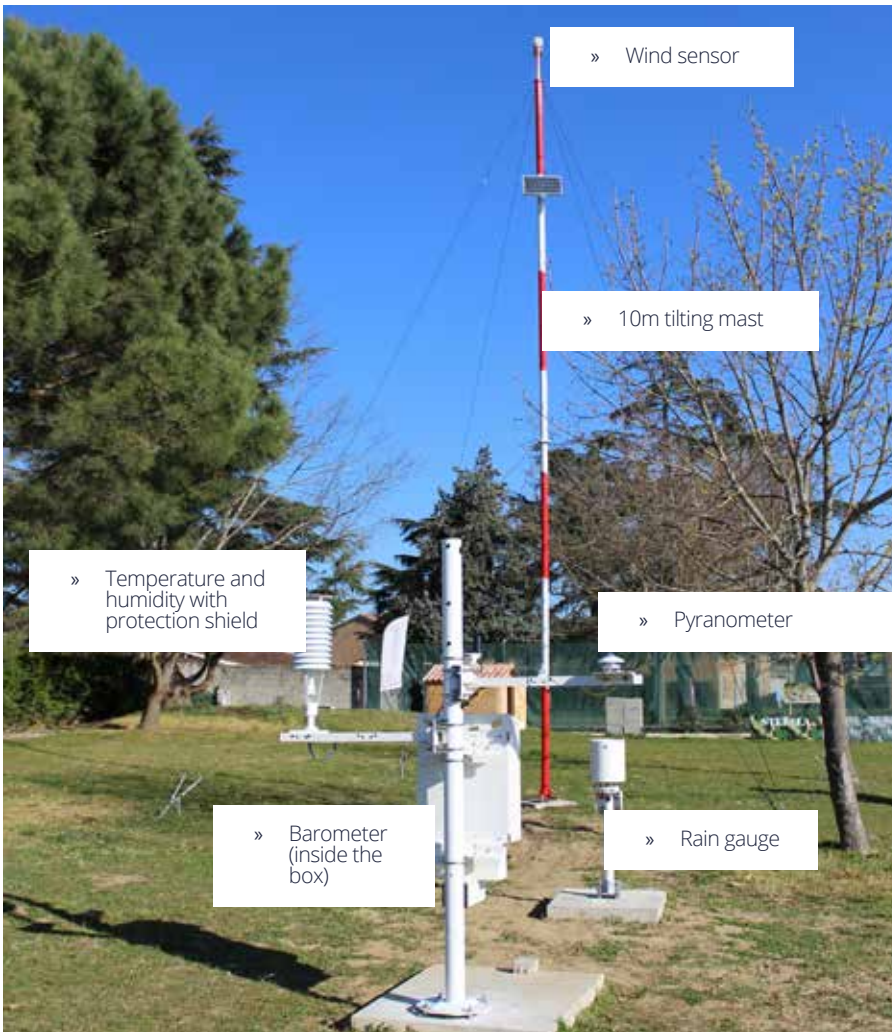
The multipurpose design of this station allows national meteorological services to have one single solution that can meet all the constraints imposed by large-scale networks.

Advantages

- Quick and easy to use
- Compliant with WMO standards
- High quality data processing
- Efficient remote maintenance
- Variety of available sensors
- Weather station protected (lightning, theft,...).

Sensors

- » Air temperature and humidity
- » Dew point
- » Wind speed and direction
- » Precipitation: intensity and quantity
- » Absolute pressure and sea level pressure
- » Solar radiation (global, diffuse, direct)
- » Soil temperature
- » Actinothermic index



Mercury SYNOP

Mercury SYNOP stations are designed for quick and easy handling by users. The latest generation of sensors and data acquisition system ensure the transmission of high quality data.

Accompanied by *Mercury Maintainer* or *WebMet®* software, Mercury SYNOP stations offer various tools to improve station performance, increase data availability and ensure the reliable transmission of weather messages.

Dedicated maintenance and calibration features reduce the operating costs of Mercury SYNOP stations and increase their service life.



Mercury ROAD

Automatic weather station
for road weather



Sterela offers a complete decision-making solution for road professionals, with the aim of improving the analysis of winter phenomena, anticipating interventions and reducing operating costs.

Advantages

- Modular, scalable and robust station
- Reduced maintenance costs
- Simultaneous measurement on several traffic lanes
- Day/night video camera
- Complies with standards NF/EN 15 - 518 1/2/3 and NF P 99-320/321

Sensors

- » Air temperature and humidity
- » Dew point
- » Wind speed and direction
- » Precipitation: intensity and quantity
- » Type of precipitation (rain, snow, hail)
- » Percentage of de-icing materials (NaCl, MgCl, CaCl),
- » Road condition (dry/damp/wet/ice or snow, damp with salt, wet with salt)
- » Visibility
- » Snow height



Mercury ROAD

Mercury ROAD stations are designed to be easily integrated into a road network.

Interfacing numerous sensors dedicated to the road domain, the Mercury ROAD station has assets dedicated to road weather, including :

- *Pavement condition sensors that can be removed before the pavement is planed,*
- *Maintenance and cleaning free precipitation sensor,*
- *Remote monitoring of stations and sensors with Mercury Maintainer...*

Suitable for light duty configurations in temperate zones, as well as high risk areas, Mercury ROAD stations can monitor multiple lanes simultaneously, integrate video camera systems and interface with front ends software of monitoring centres.



Mercury **AGRO**

Automatic weather station
for agro-meteorology



Sterela offers a reliable and robust solution for agricultural areas and farms.

Multiple control and management :

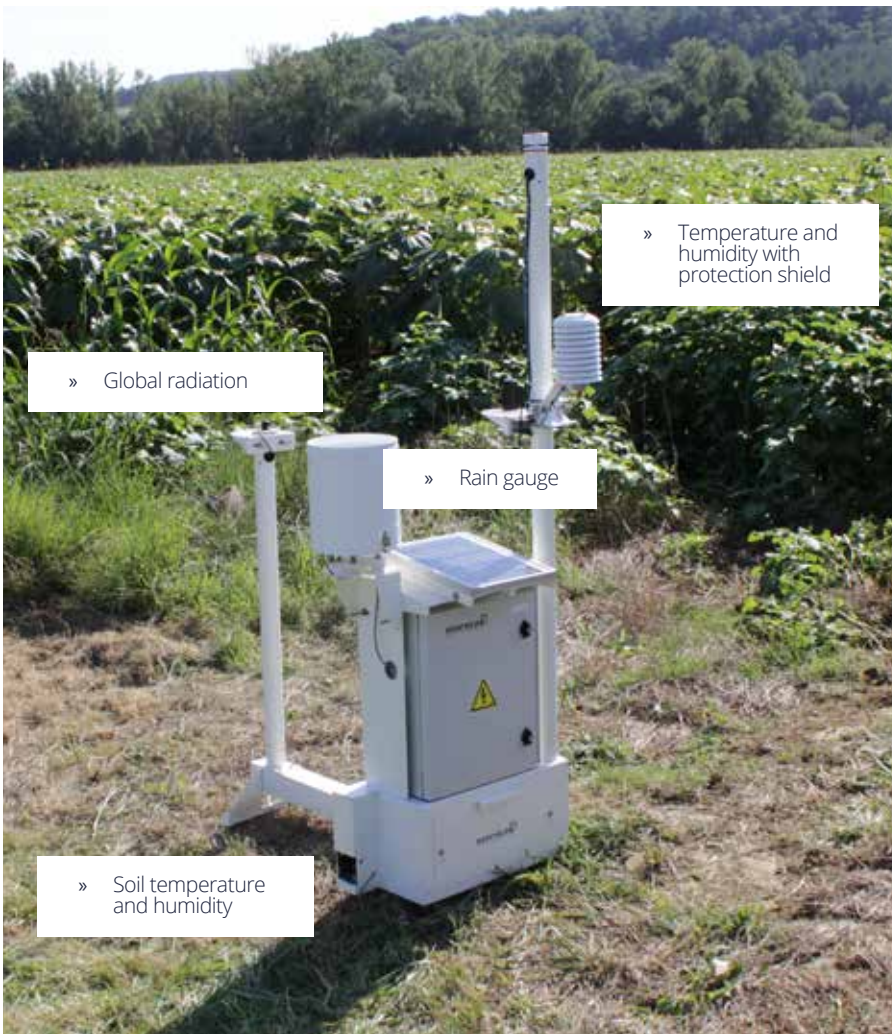
- Frost and disease control
- Crop protection
- Irrigation
- Plant development

Advantages

- Modular, scalable and robust station
- Resistant to tropical conditions (high heat, high humidity)
- Compliant with WMO standards
- Simple and quick deployment, with or without civil engineering
- Tamper-proof solar panel
- Variety of sensors available

Sensors

- » Air temperature and humidity
- » Dew point
- » Wind speed and direction
- » Solar radiation
- » Precipitation
- » Soil moisture and temperature
- » Leaf wetness
- » Evapotranspiration
- » Sunshine duration



Mercury **AGRO**

The **Mercury AGRO** station is designed for monitoring of agricultural areas.

It is simple, quick and flexible to deploy, it allows different sensor configurations depending on the need. Self-sufficient in energy and protected against vandalism, it can be easily installed in the operating areas to be monitored.

Meeting the highest standards of data acquisition, the **Mercury AGRO** station guarantees the transmission of quality meteorological data, which will allow decision making software to be highly efficient and reliable.



Mercury SENTINEL

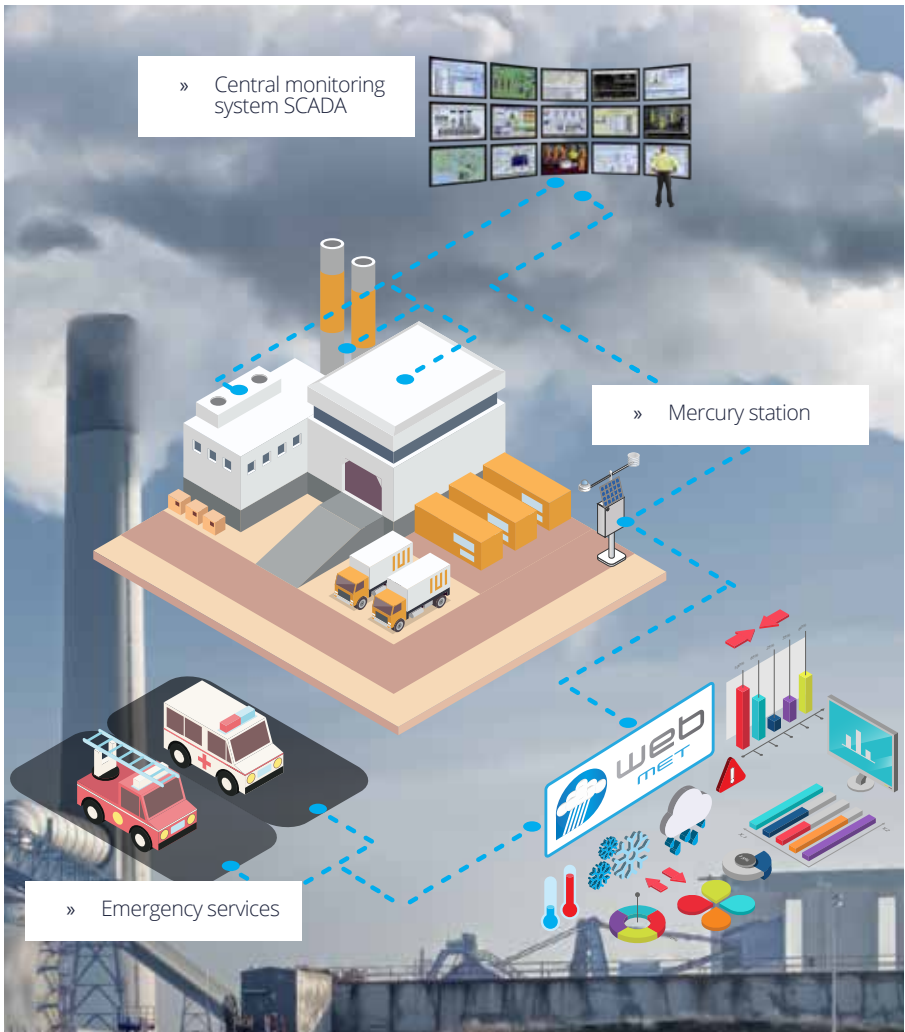
Automatic weather station for industrial site monitoring



Sterela offers a reliable and robust solution for monitoring sensitive areas. The weather station interfaces with the central site supervision system. A second communication line can be set up to provide access to real-time weather data for third-party services (e.g. emergency services).

Advantages

- Versatile measuring station
- Library of over 50 sensors
- Reliable and scalable
- SEVESO site compatible
- SCADA interface
- Backup communication line
- Energy autonomy



Sensors

- » Air temperature and humidity
- » Dew point
- » Wind speed and direction
- » Solar radiation
- » Precipitation
- » Atmospheric pressure
- » Other sensors on demand

Mercury SENTINEL

Mercury SENTINEL stations are particularly suitable for monitoring sensitive sites.

The station is highly reliable and can be adapted to the most complex integration, measurement or communication requirements.

Mercury SENTINEL stations can simultaneously transmit their data locally to a SCADA system and remotely to the WebMet® platform.





Mercury Maintainer

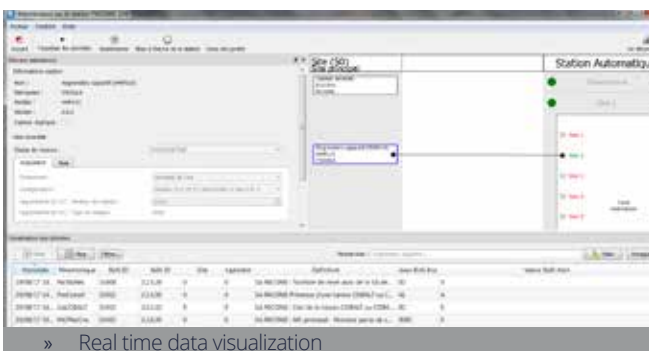
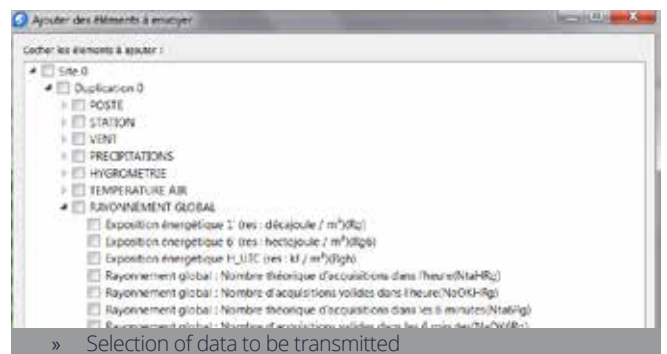
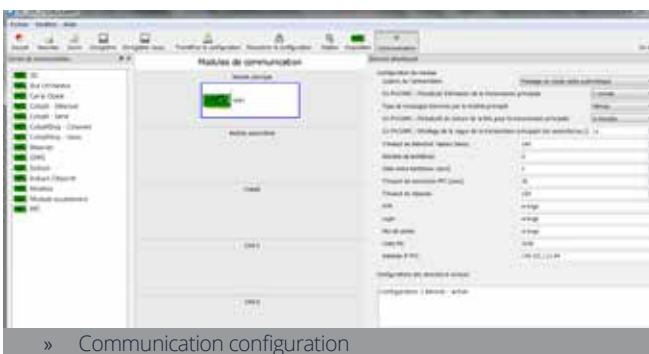
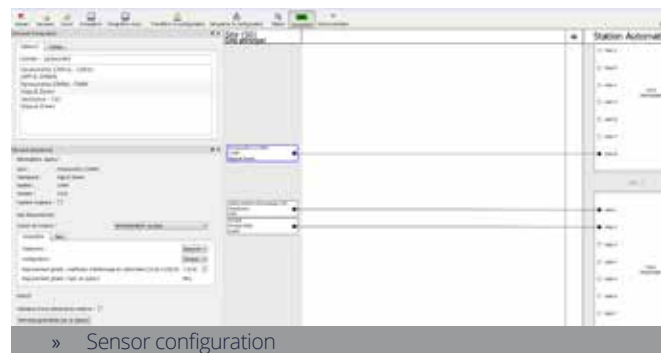
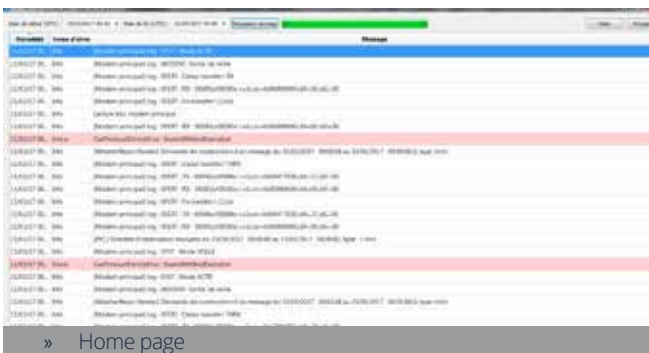
Configuration and maintenance software

This software makes it possible to configure and maintain MERCURY stations.
Its interface, both simple and intuitive, enables a fast learning of the software.



Advantages

- ▶ Makes configuration of Mercury stations simple and intuitive
 - Creation of configuration templates
 - Load/unload templates with a single click
- ▶ Simplified diagnostics
 - Real time viewing of weather and supervision data
 - Read/retrieve event log
 - Read/retrieve archived weather and supervision data
- ▶ "Test" mode
 - Activated channel by channel, it stops the recording and data transfer during maintenance operations.
- ▶ Ensures the modularity and scalability of the station
 - Modification of configurations
 - Updating of station software





WebMet[®]

Data collection, processing and operating platform

Sterela offers a professional and complete web solution, with direct access to your data on an intuitive and user-friendly platform. Hosted locally on your servers or in the cloud.



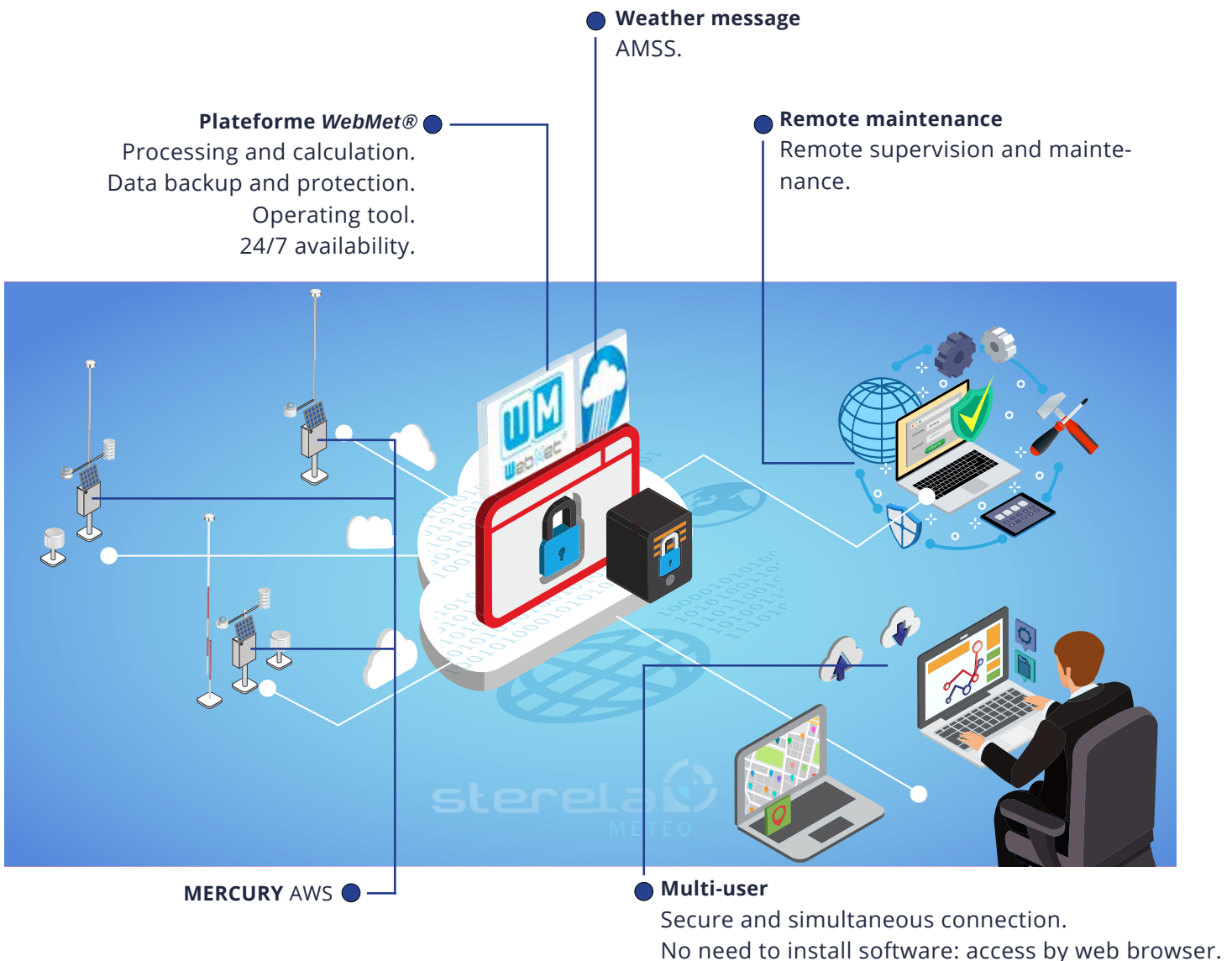
Strengths & Functionalities

▶ ADVANTAGES

- Full Web access
- Secure platform
- Multi-users
- Tables and graphs
- Decision support
- Advanced customisation
- High availability of the service
- Supervision
- Data consistency check
- Remote maintenance of weather stations
- Mobile application

▶ FEATURES

- Alerts
- Mapping
- Weather data distribution
- Graphical reports
- Data export
- Account administration
- Database management
- Feature configuration
- Real-time viewing by station / multi-station



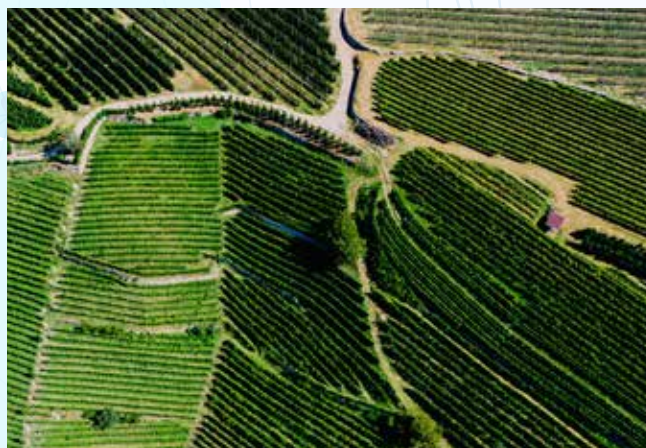
Network & connectivity

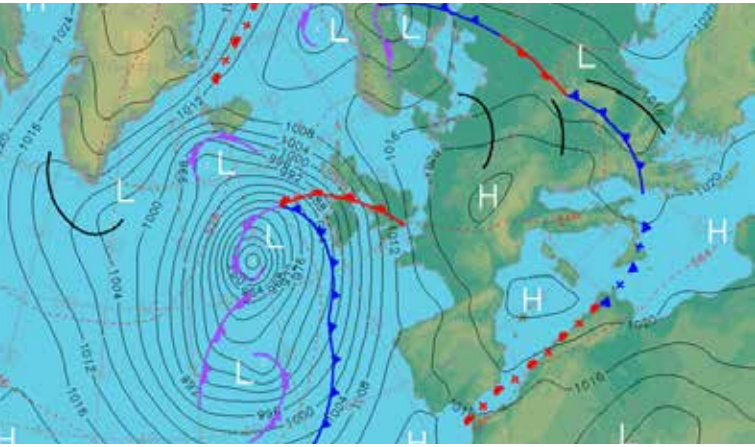
Mercury Network



In SAAS or ON PREMISE mode, **Web Met**® ensures the collection, processing and distribution of weather data to users.

Based on a redundant and secure architecture, the platform is designed to guarantee high availability of the service 24/7.





Synop

- WebMet ON PREMISE
 - Weather station data collector.
 - Data quality control: consistency, temporal, measurement range
 - Supervision tools for weather station networks
 - Alert system, summary tables, mapping
 - Weather message broadcasting tool - BUFR Synop, Climate, Csv, Customized message, etc
 - Redundancy, backup, supervision, system security
-



Road

- WebMet SAAS
 - Decision support tool - Winter maintenance
 - Creation and broadcast of Mail / SMS alerts
 - Ice risk warning
 - Dissemination of data to forecasting services
 - WebMet app : android application for smartphone
-



Agro

- WebMet SAAS
 - Decision support tool - Winter maintenance
 - Creation and broadcast of Mail / SMS alerts
 - Ice risk warning
 - Dissemination of data to forecasting services
 - WebMet app : android application for smartphone
-



Sentinel

- WebMet SAAS or ON PREMISE
- Data quality control: consistency, temporal, measurement range
- Supervision tools for weather station networks with alert system, dash board, mapping
- Data transmission to forecasting services

Sterela Meteo SERVICES



Expertise, design and production

Sterela supports you in all phases of your projects, from expertise to achievement:

- Compliance with regulations
- State of the art design and construction
- Continuous improvement of our products
- Single point of contact for your projects
- Technology watch
- Expertise
- Technical reports
- Steering Committee
- Management Plan
- Configuration and performance
- Obsolescence management
- Hot-Mail and Hot-Line
- Preventive and corrective maintenance
- Technical Support

STERELA's technical service

has all the skills needed to provide a complete service, while respecting the environment:

- Installation and commissioning
- Level 1 maintenance contract
- Level 2 maintenance contract
- Training courses



Installation & Commissioning

- Infrastructure works (civil engineering)
- Installation of sensors in the roadway
- Installation and commissioning of stations
- Configuration and operational check-up



Maintenance contract level 1

- Annual preventive maintenance
- Corrective maintenance on customer's request
- Hot-mail and Hot-line
- Activity report at each



Maintenance contract level 2

- Level 1 maintenance included
- Supervision of all equipment
- Priority intervention on Sterela or customer's request
- Monthly and annual activity report



Training

- Installation training
- Maintenance training (level 1 & 2)
- WebMet training

Our expertise

Research

Industrialization and production

Installation and training

After sales and maintenance



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