



From data to sustainable solutions for weather sensitive industries

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HydroLogic



South African
Weather Service

ISO 9001 Certified Organisation



A country with water stress and drought: water demand will exceed water supply before 2030



Water challenges: Huge water losses - non revenue water (physical leakage or commercial loss) >35%

The Weather Service Challenges

- Large amounts of data available at SAWS
 - However, data not easily accessible to stakeholders in various industries eg. the Agriculture, Water and Energy Sectors
- Depleting shareholder support
 - Limited revenue from data with high costs for maintenance and data processes
- Backend processes are not fully automated
 - Requiring additional time from SAWS staff
- Need for innovative solutions





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Cooperation with SAWS



EOF THE FUTURE

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ETHERLA

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Solution

Provide easy online access to the best available historical, actual (real-time) and forecasted weather information

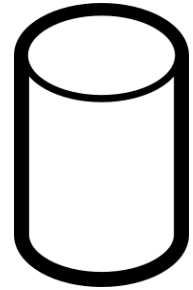
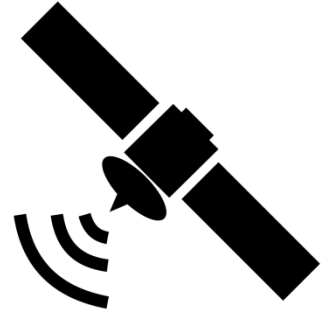
- Configured the HydroNET RainMap, Weather Station and Forecast applications with SAWS data with additional tools
- Implement Software solutions eg SCOUT to improve data quality and automate data processing
- Automate processes so that client facing staff can focus on value-added activities



- No data? No information...
- No information? No knowledge...
- No knowledge? No good decisions...

It all starts with data

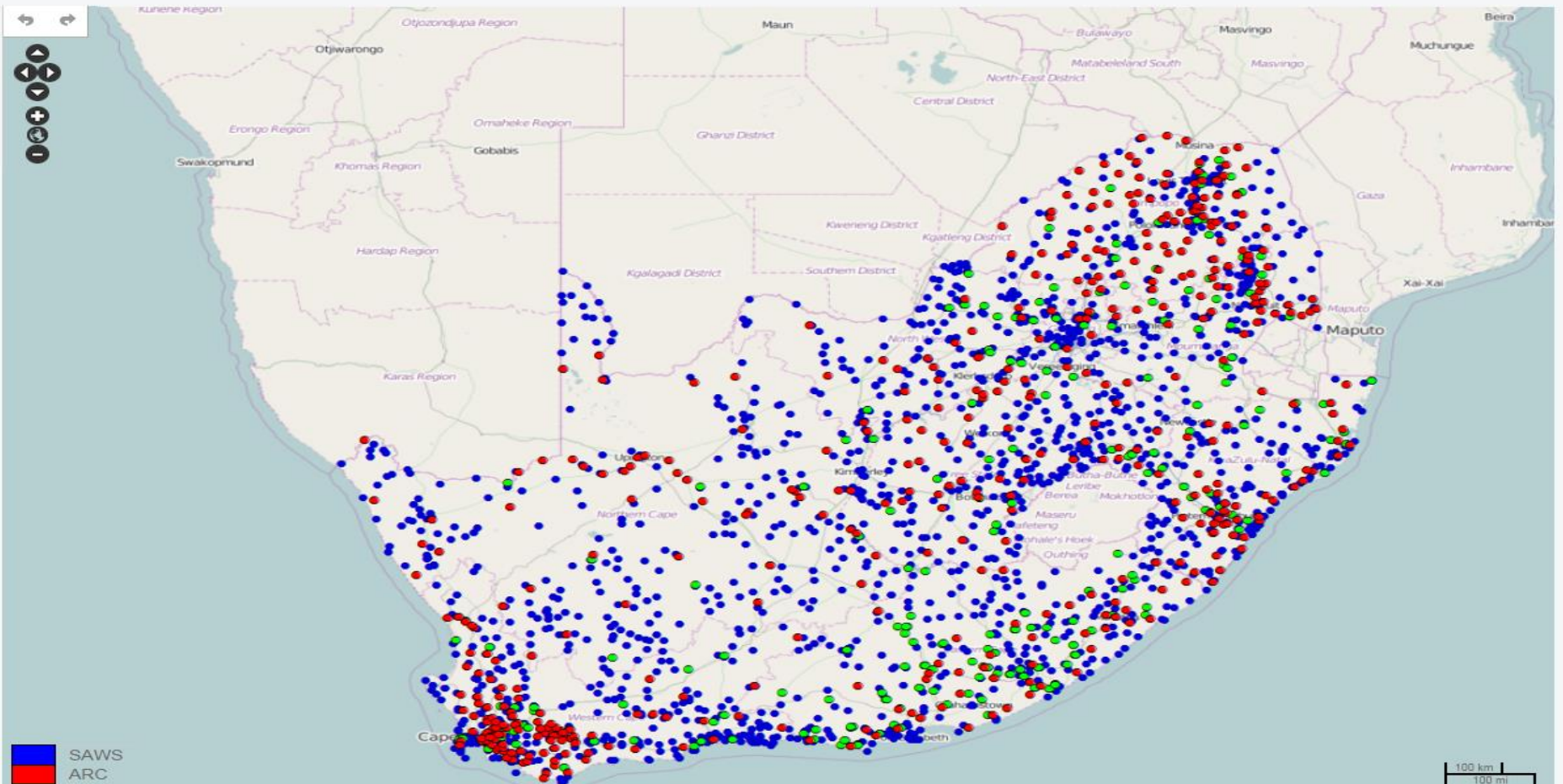




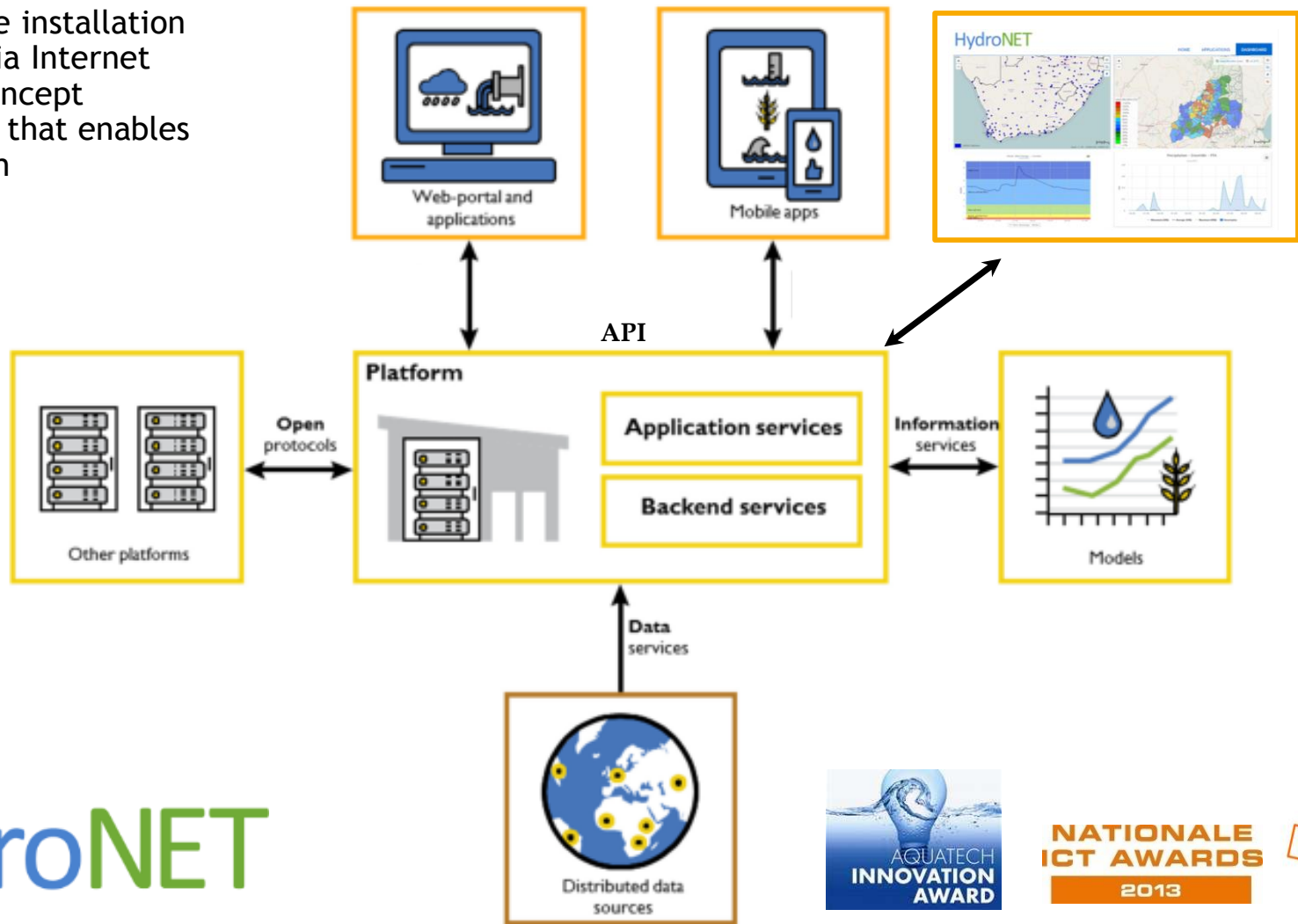
26-09-2013 10:00 - 01-01-2014 10:00

Source: All available data sources

Information Disclaimer



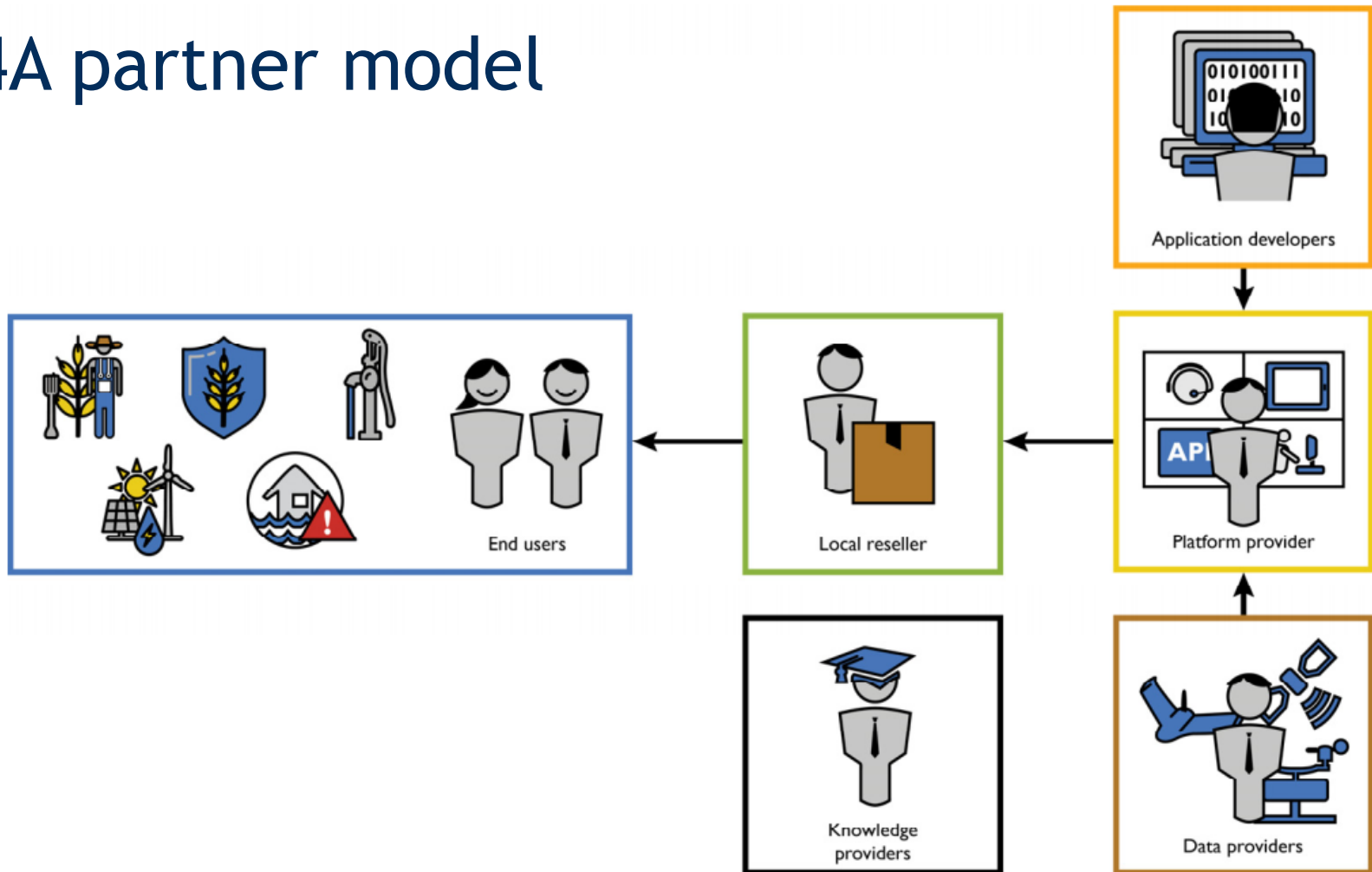
- No software installation
- Available via Internet
- Scalable concept
- Technology that enables cooperation



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R4A partner model





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Turns weather data into valuable maps and graphs enabling better decisions for sustainable management of South African resources

Objective of the R4A project



“Compose the **best available** historical, actual and forecasted **weather data** and make it **easily accessible via applications** for each food producer, weather services, added value provider and other potential clients in South Africa, at an affordable price.”



4 target groups

1. Small Scale Farmers (125 000)

Other target groups to make the business model sustainable:

2. Commercial farmers

3. African National Weather Services

4. Application Developers to reach other clients

- Governmental organisations
- Insurance companies
- Mining companies
- Multinationals
-



Deliverables for commercial users

- Easy access to improved weather and climate data for (southern) Africa
- Easy access to weather and climate decision support solutions for the energy, water, insurance and agro industries



RainWatch

- Three applications:
- Weather Stations
 - RainMap
 - Weather Forecast



South African
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HydroNET Portal - Application X

Secure | <https://portal.hydro.net.com/default.aspx?page=6>

Welcome Admin, SAWS

FEEDBACK SIGN OUT

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HOME APPLICATIONS DASHBOARD

Download Forecast HydroDoc HydroView HydroWatch HydroWatch 2.0 Layer Configurator Legend Configurator Photo Report RainMap Stations

Upload

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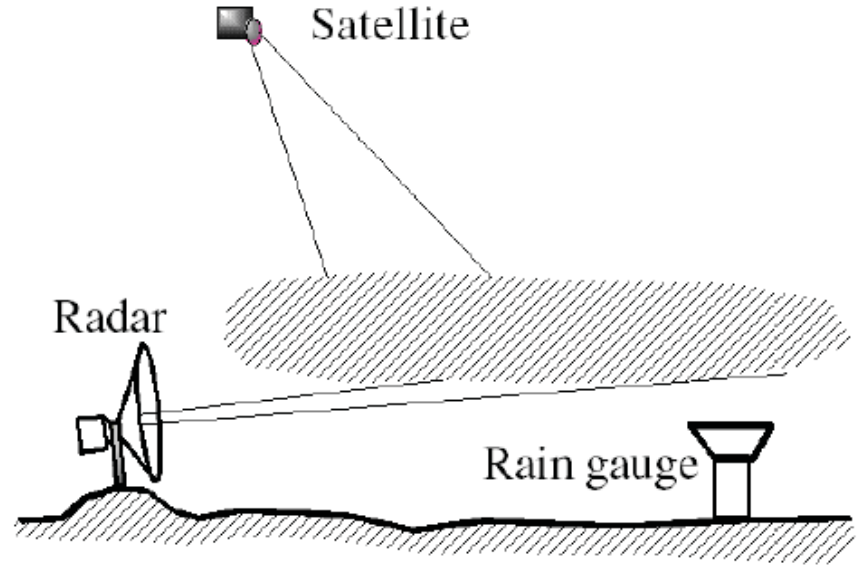
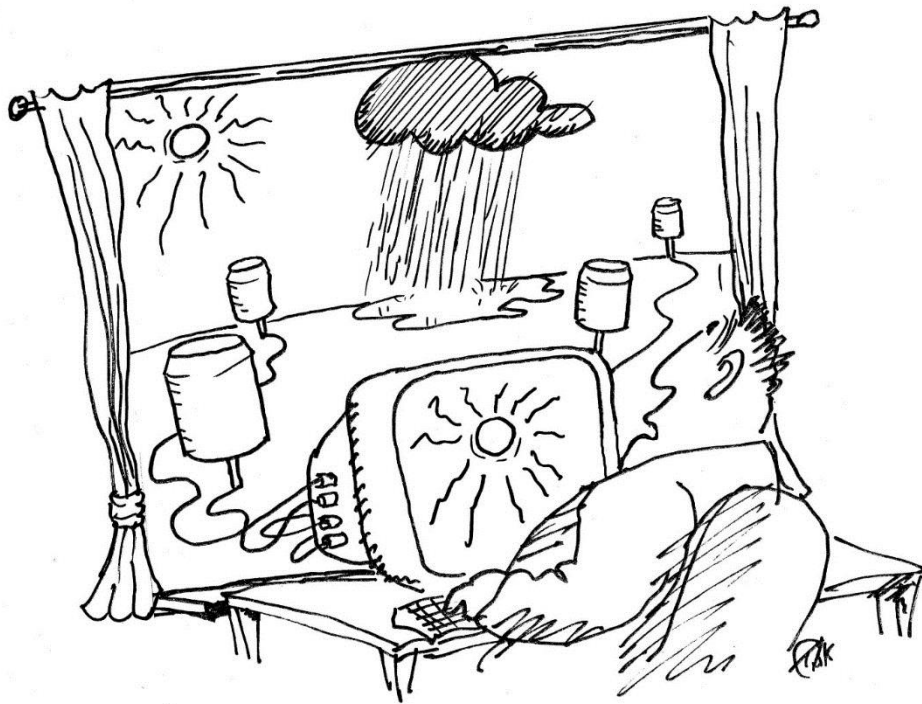
WeatherSmart Forecasts

 Download	 Forecast	 HydroDoc	 HydroView	 HydroWatch	 HydroWatch 2.0	 Layer Configurator	 Legend Configurator	 Photo Report	 RainMap	 Stations
 Upload										

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WeatherSmart Stations





Unified model

SAWS Satellite

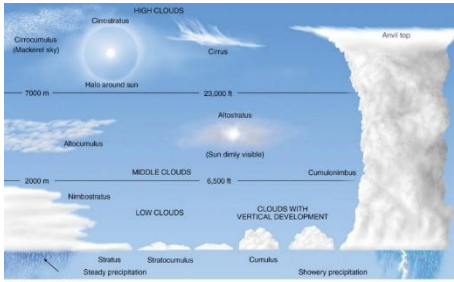
SAWS Radar

Raw precipitation product

SAWS Automatic Stations

SAWS Manual Stations


Calibrated precipitation product




HydroNET Portal - Appli X
Secure | <https://portal.hydro.net.com/default.aspx?page=6> ☆ ⓘ ⌵

Welcome Admin, SAWS FEEDBACK SIGN OUT


HydroNET HOME APPLICATIONS DASHBOARD




Download




Forecast




HydroDoc




HydroView




HydroWatch



HydroWatch 2.0



Layer Configurator



Legend Configurator







Photo Report



RainMap



Stations

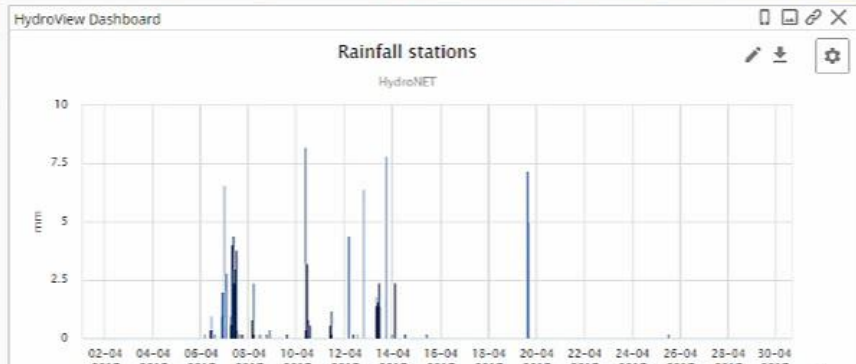
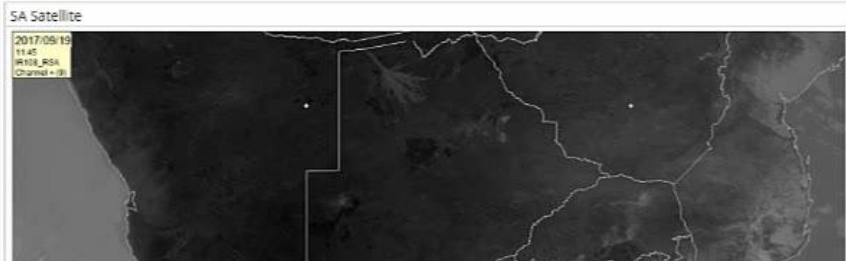
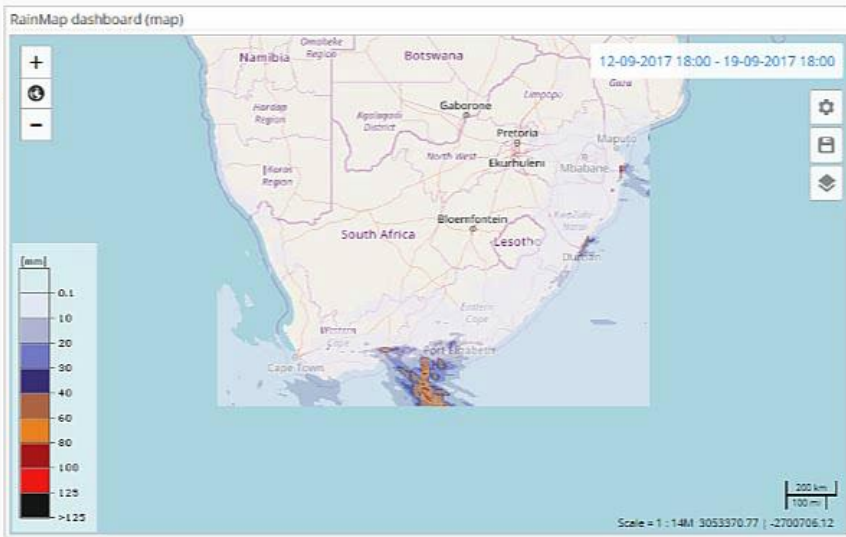


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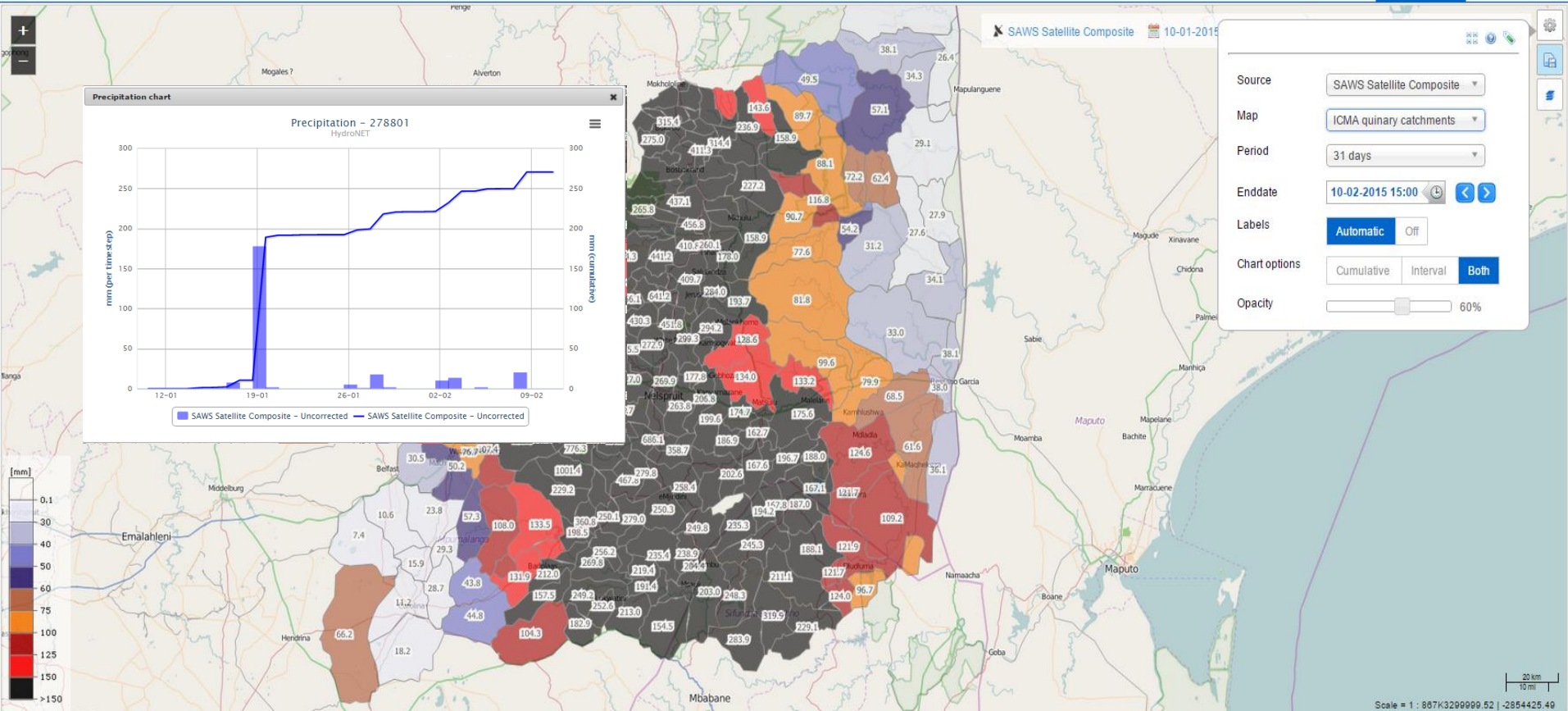
WeatherSmart RainMap

- Dashboard
- Mobile Dashboard
- Rainfall historical
- Rainfall forecast
- Stations data



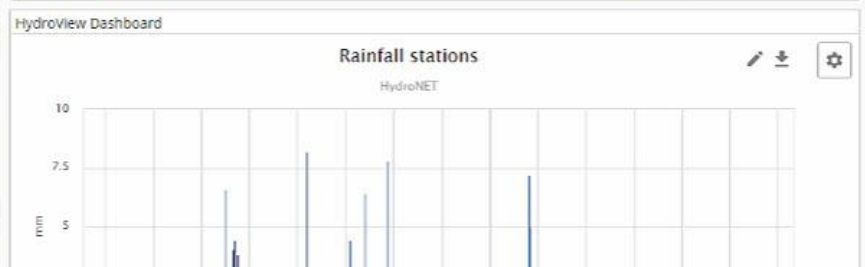
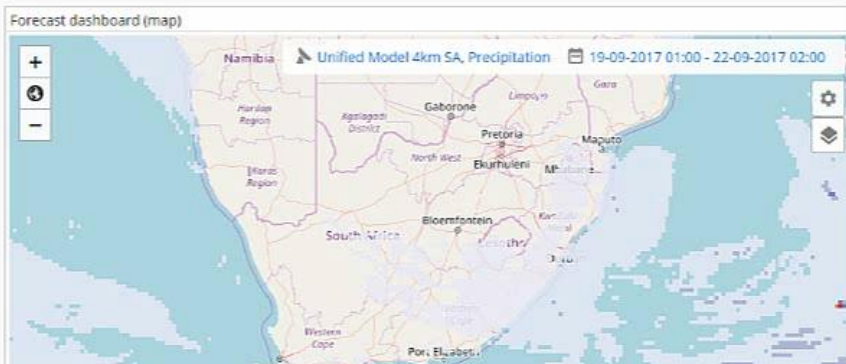
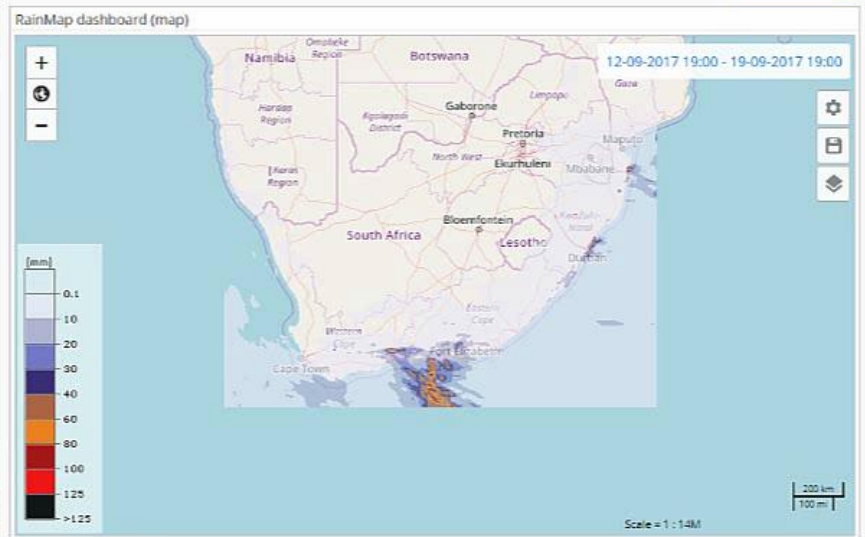
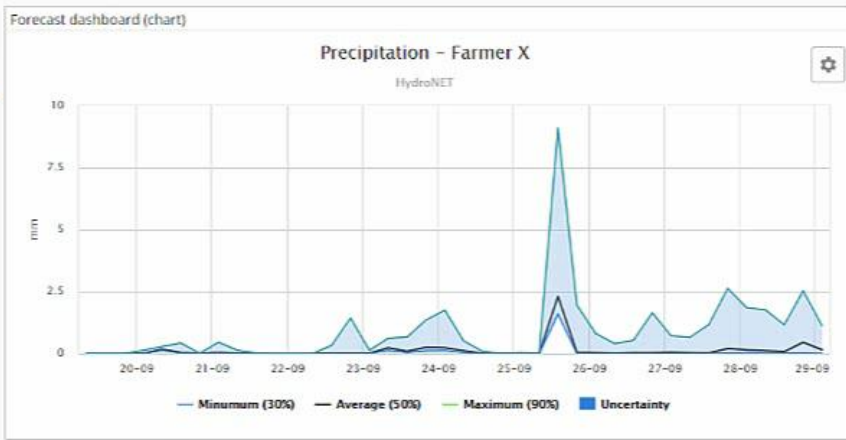
RainWatch dashboards

Customised information for any location



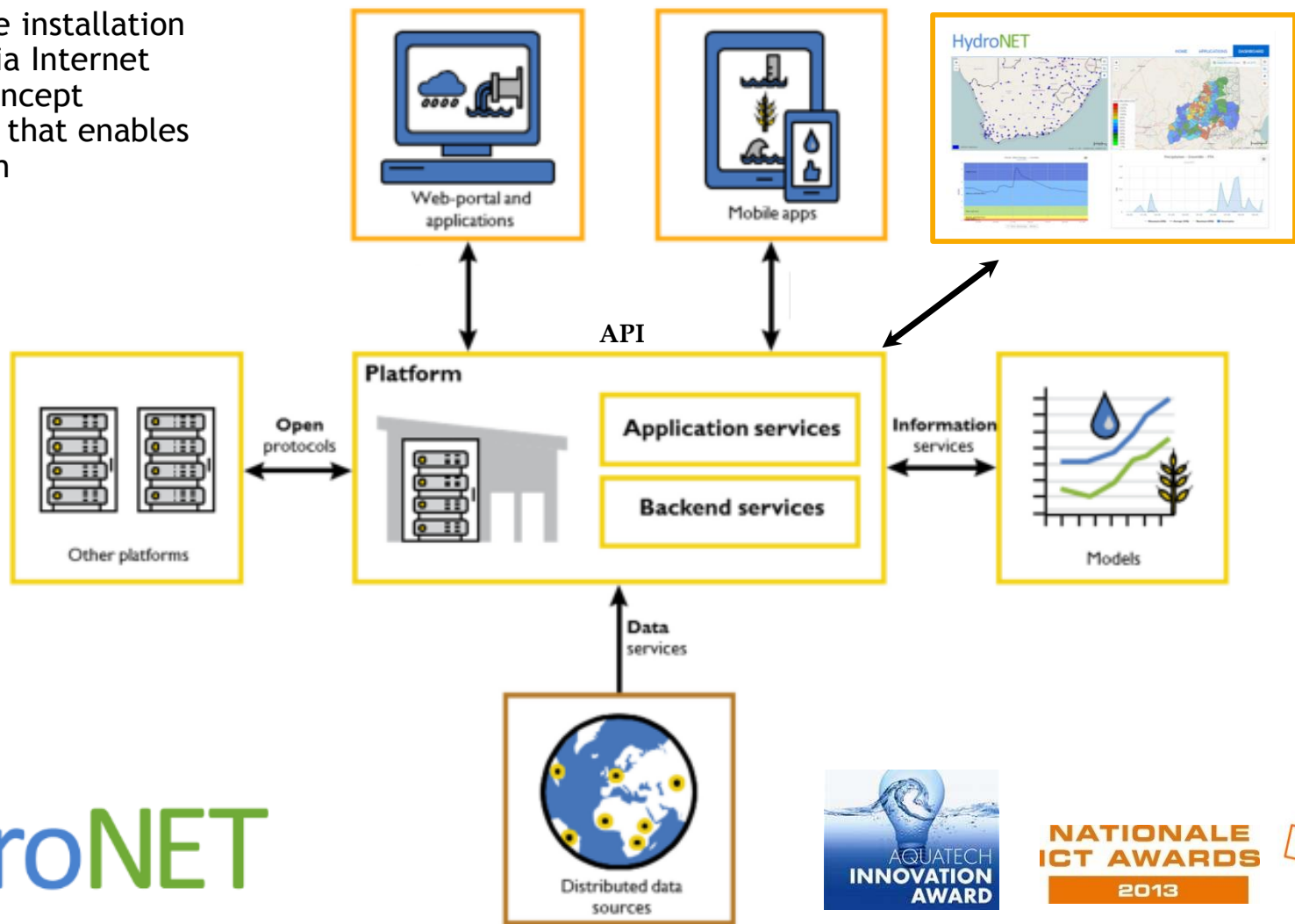


- Dashboard
- Mobile Dashboard
- Rainfall historical
- Rainfall forecast
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Weather Report

- No software installation
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Deliverables for application developers

- Easy and secured access to weather and climate data or R4A services via
 - Application Programming Interface (API)
 - Web Mapping Services (WMS)
 - Data export (DE)
- Software Development Kit to develop web applications and services from the R4A platform
 - HydroView, HydroWatch, Web Publisher, Report Generator, Control Room



Grape Compass on HydroNET in South Africa



Data Providers



South African Weather Service



Application Developers



Weather Impact



Platform Provider

HydroNET



Local distributor Capacity builder



South African Weather Service



ARC • LNR
Excellence in Research and Development



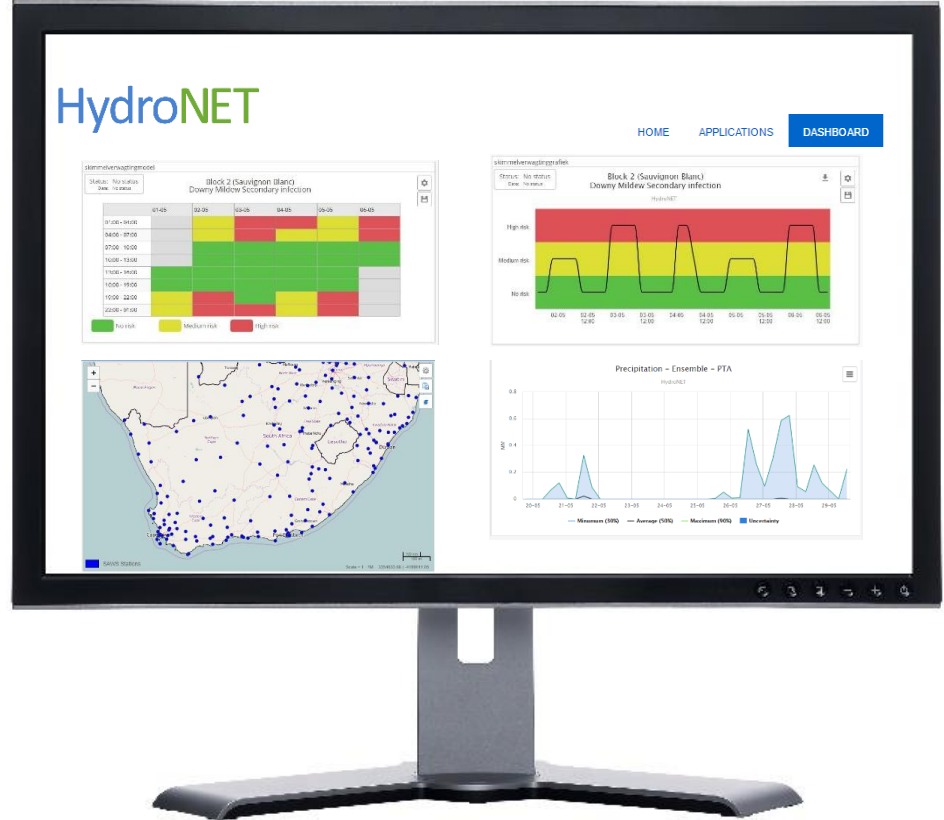
End User



MURATIE



Top South African Wine Cellars



Grape Compass

- Fungal disease risk forecasts up to 5 days
- Location-specific updates every 3 hours
- Reliable estimations based upon best weather data available
- Use of academic fungal disease models
- Zero-tolerance approach to risk levels
- Easy access via an user-friendly, interactive Word-document on your PC

<https://www.youtube.com/watch?v=rL5qdKvFYYY&feature=youtu.be>

Video on Grape Compass



Grape Compass
Enabling quality grapes

Grape Compass: user testimonials

“We saved about 15-20% on sprays in 2015/16 growing season. Therefore, Grape Compass definitely meets our expectations.”

“Grape Compass makes it possible to micro-manage your vineyard to improve operations.”

“Grape Compass takes precision management in the vineyard to the next level.”



Grape Compass
Enabling quality grapes

Future products

- Hail and Lightning forecasts
- Lightning (Flash density; real-time)
- Seasonal prediction
- Climate data (historical long data set)
- Climate projection
- Rapidly developing thunderstorms
- Common Alert Protocol warnings
- SA Flash Flood Guidance and regional models





From data to profitable solutions

When every raindrop counts.....

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