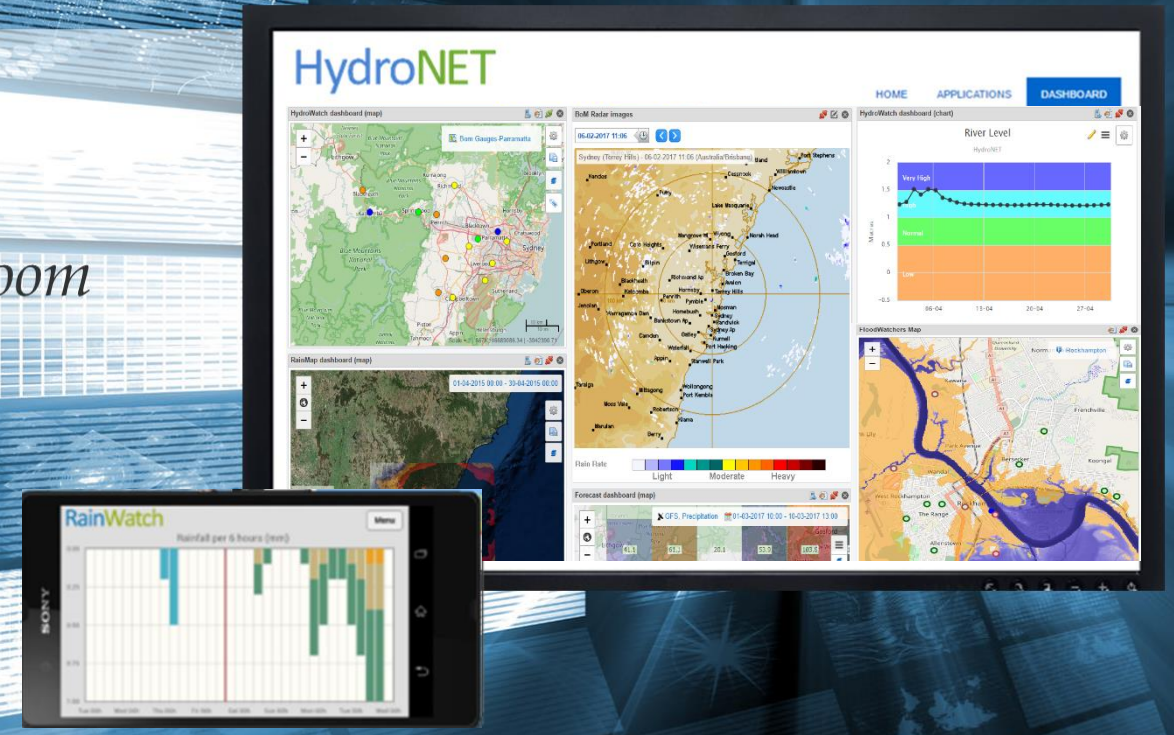
HydroNET

Your water control room



HydroNET and FEWS

Brian Jackson

Senior Principal Engineer, Water Technology

Connect View Watch Alert Report

Too much to do and not enough time!?

Share your water information with us

Stakeholder

Can my house flood?

Community

What is the flow at the border?

Partner

Can you give me information about water levels?

Colleagues

Give us an overview about what you have achieved

Funders

Do you have information that we can use in our project

Consultant

Can you give me a monthly report on the water system status

Board members

I can focus now on making the right decisions with my partners

Stakeholder

Funders

Community

Consultant

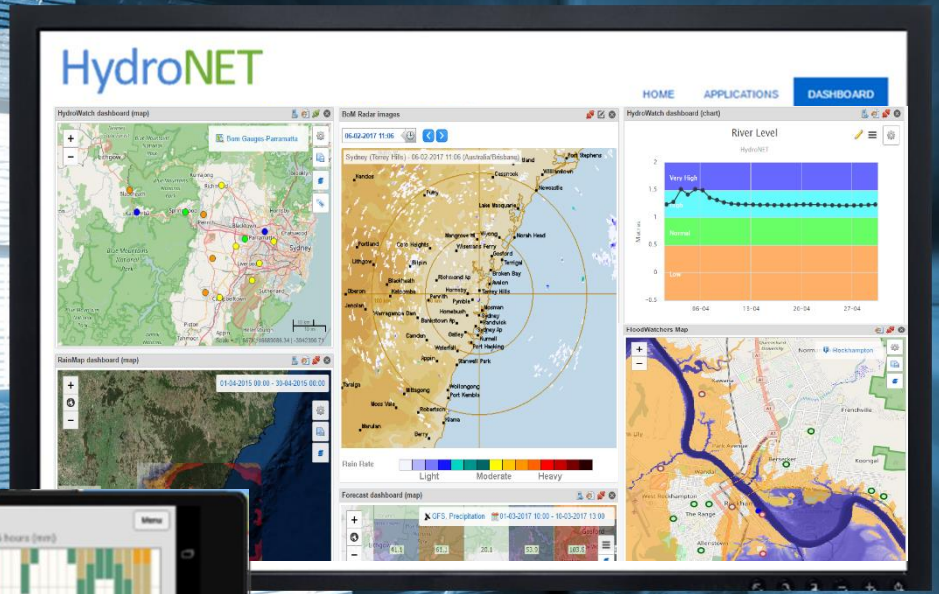
Partner

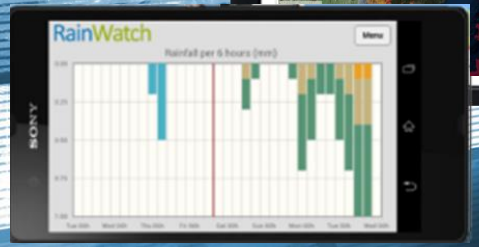
Colleagues

Board members

HydroNET

Your water control room

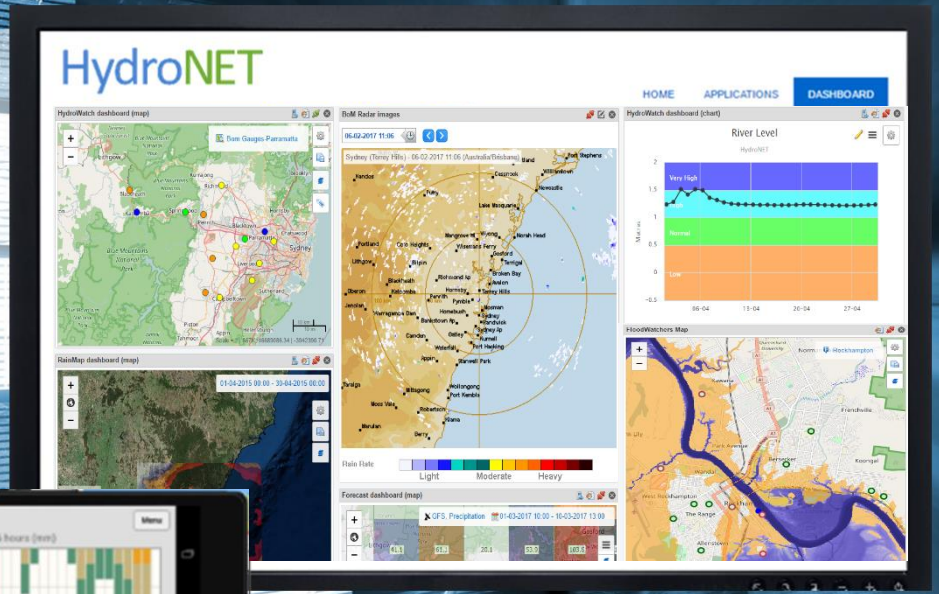


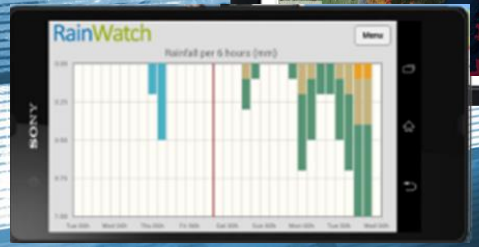


Our mission: Easy access to personalized dashboard and reports to make informed decisions

HydroNET

Your water control room



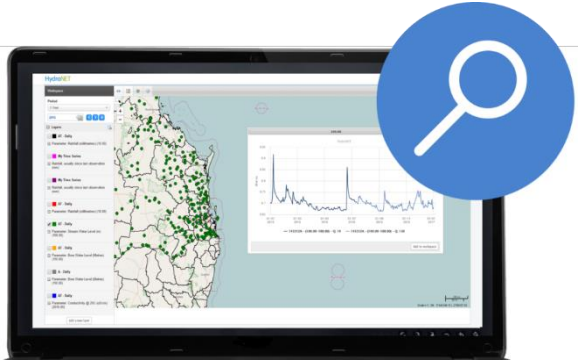


An open platform developed with and for water professionals.

SaaS solution: An internet connection is all the infrastructure you need.

NTERNATIONAL software – LOCAL partners – TAILORED solutions

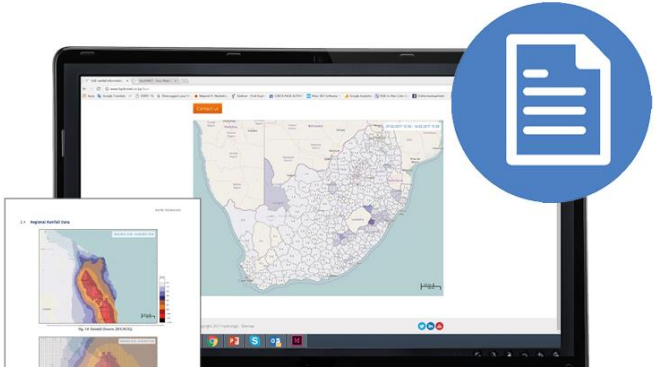
CONNECT internal and external data (consult)



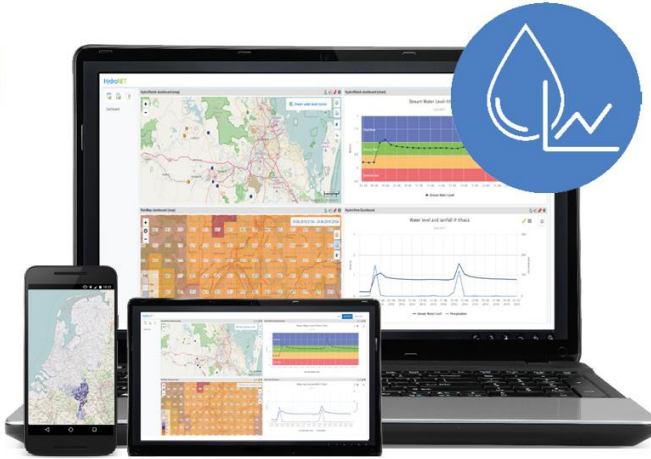
VIEW, combine and analyse

WATCH keep an eye on your water system,

ALERT, timely alerts and reduced impact



REPORT information to stakeholders



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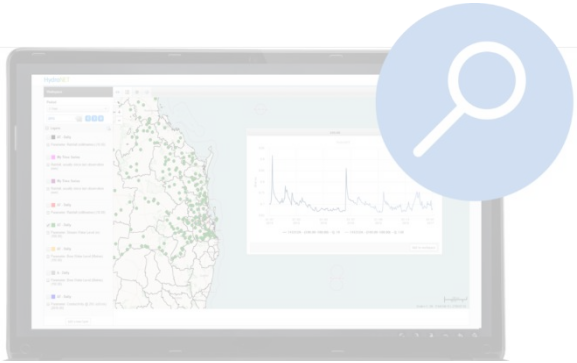

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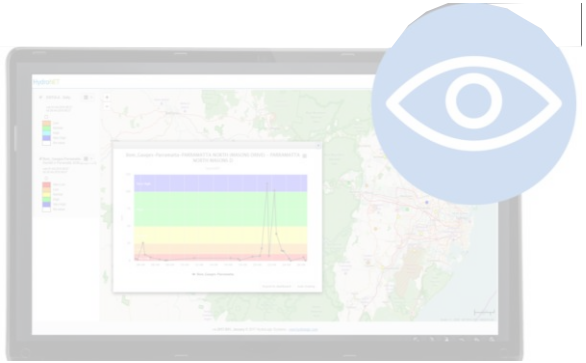

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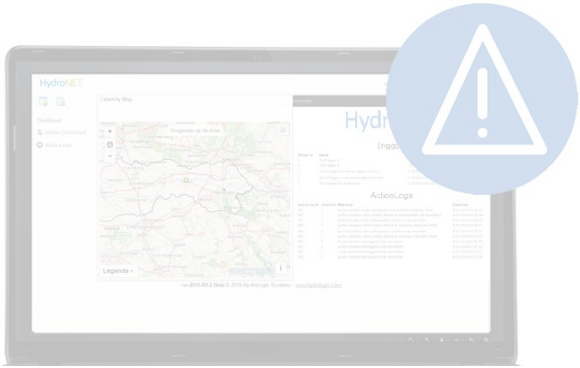

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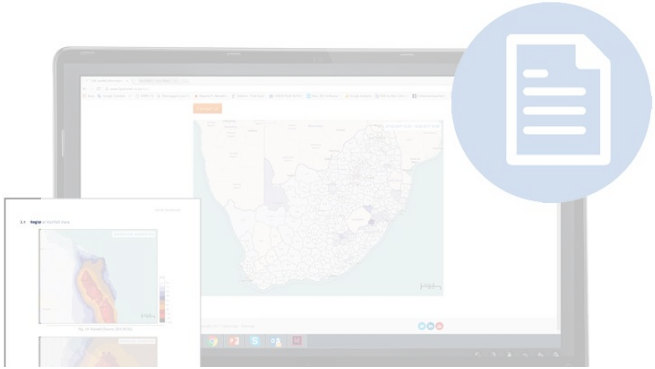

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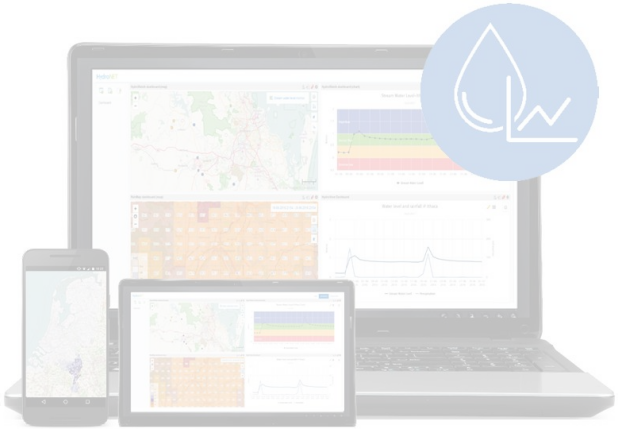
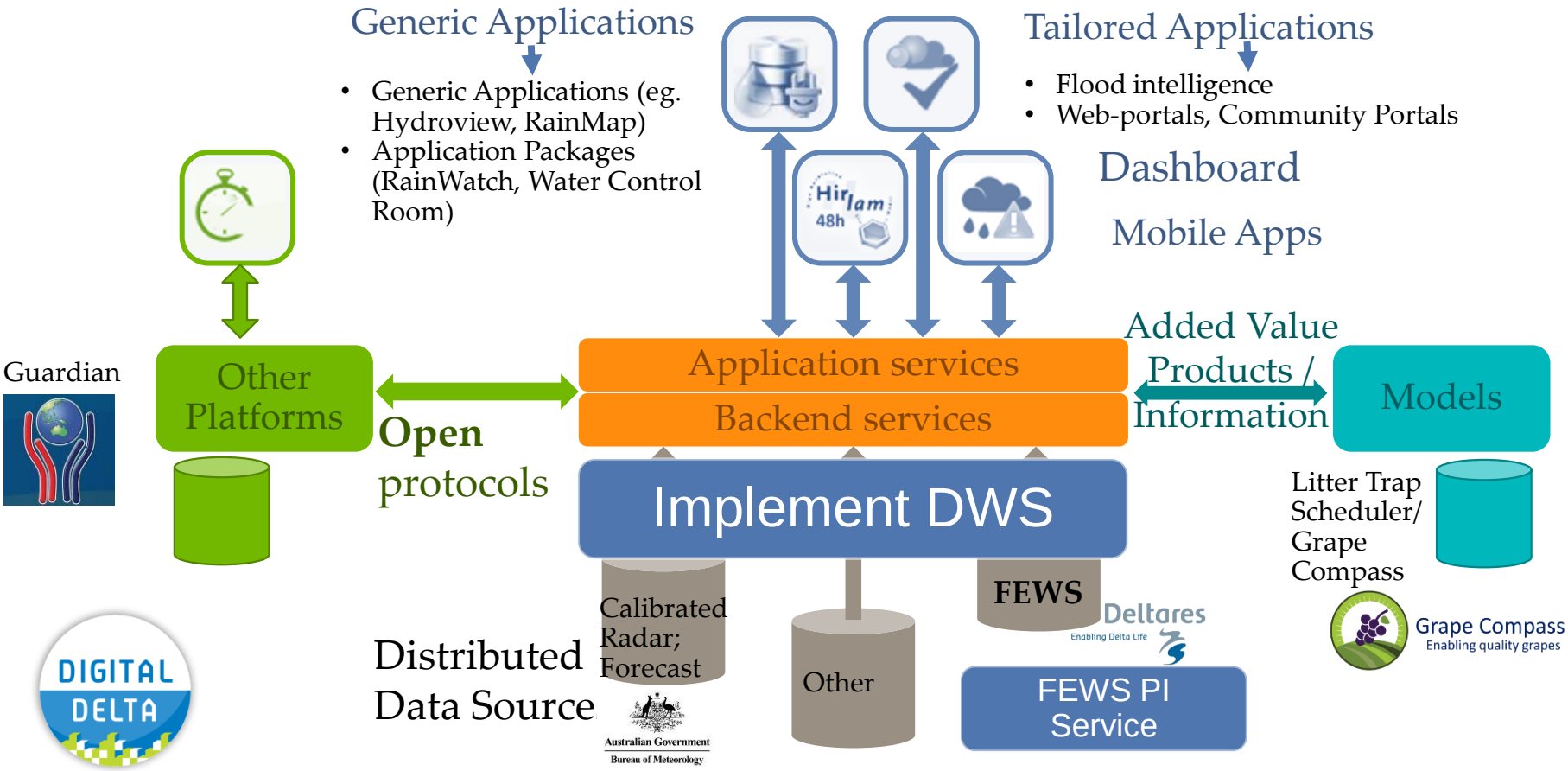


The HydroNET SaaS solution in a Nutshell



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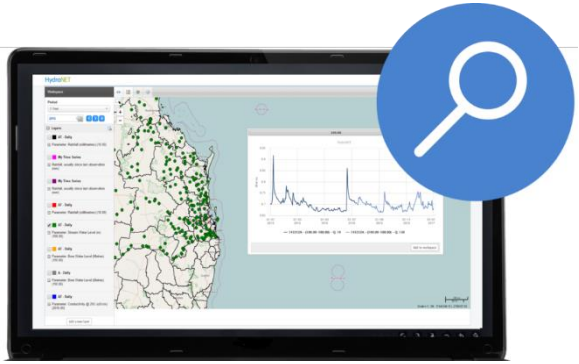

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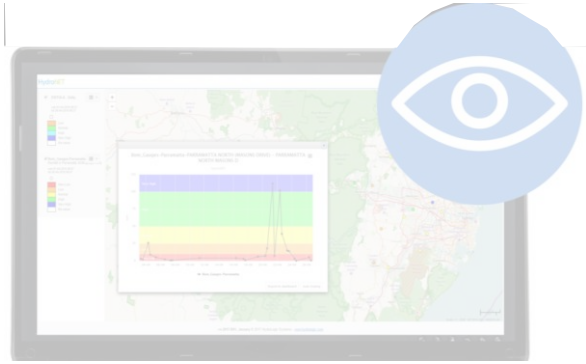

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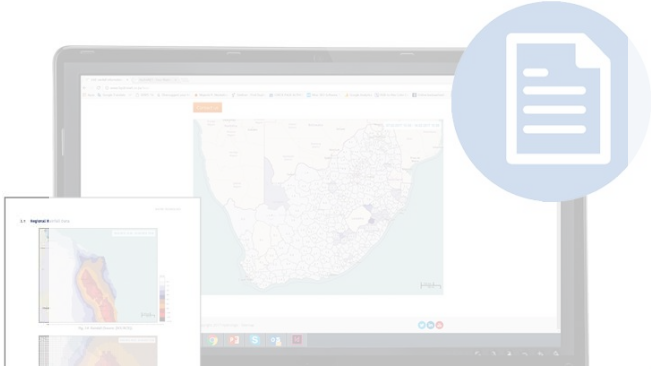

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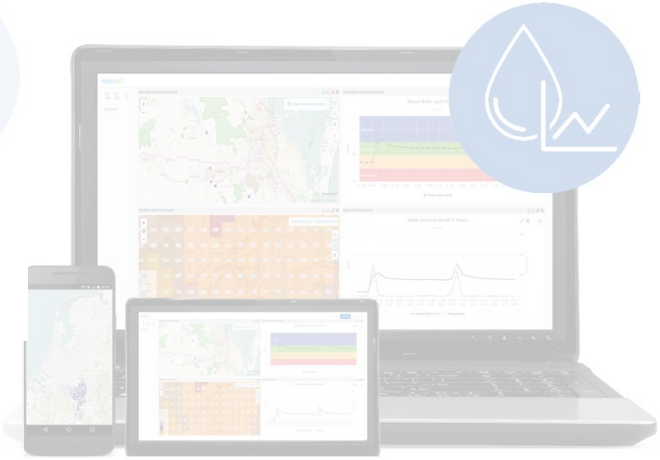
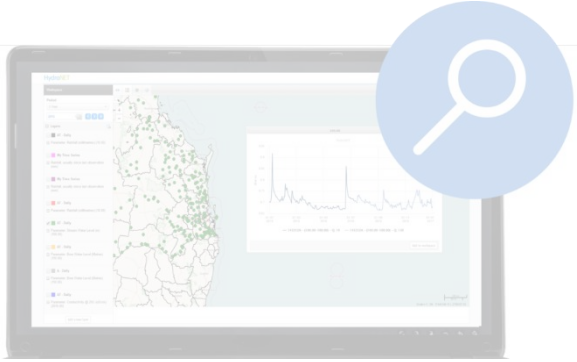


Personalised Dashboards

CONNECT internal and external data (consult)



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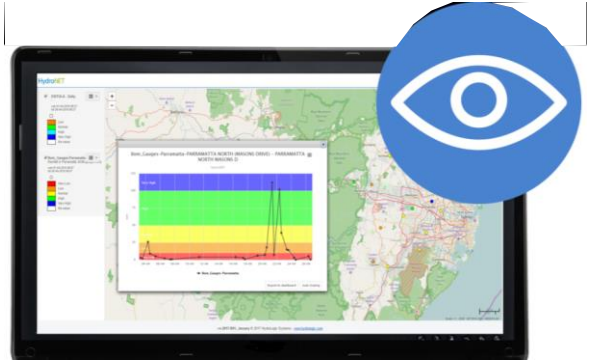

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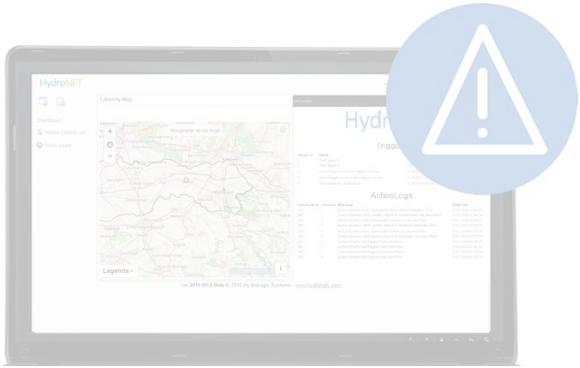

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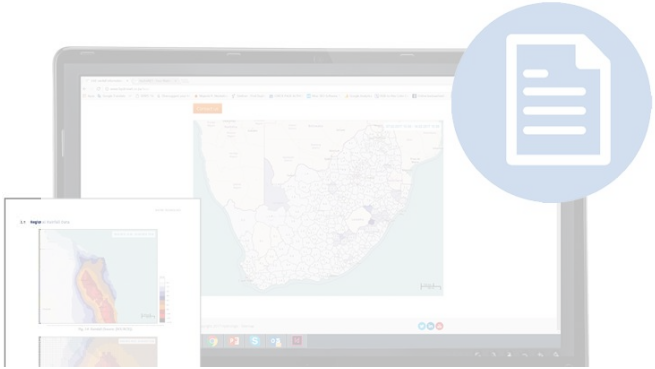

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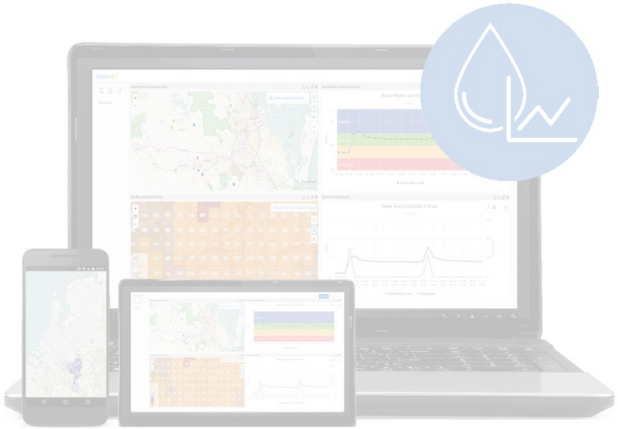
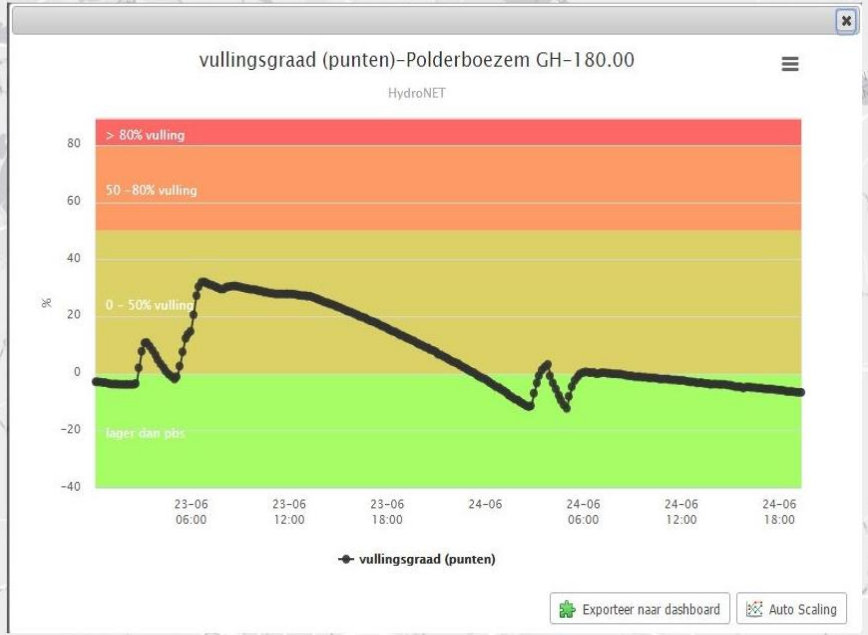


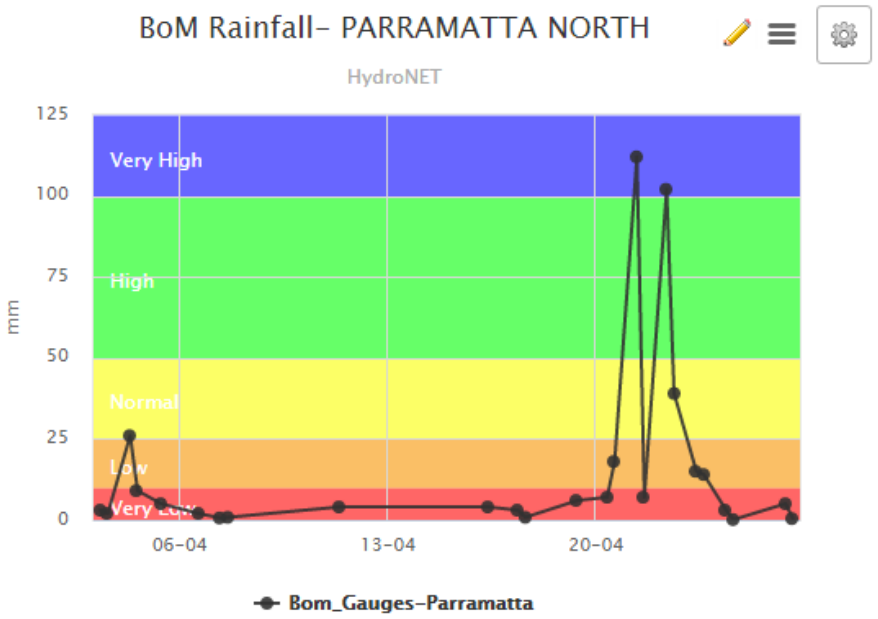
03 - Vullingsgraad



Kaartlagen

Beregeningsbeleid Voorjaarssituatie 2017

HydroWatch dashboard (chart)



Kaartlagen

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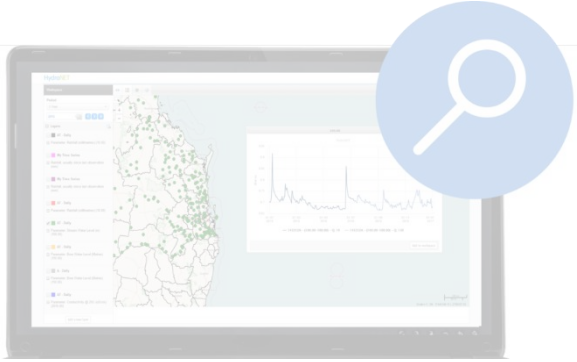

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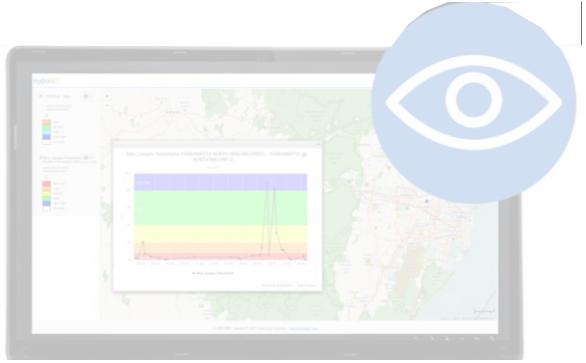

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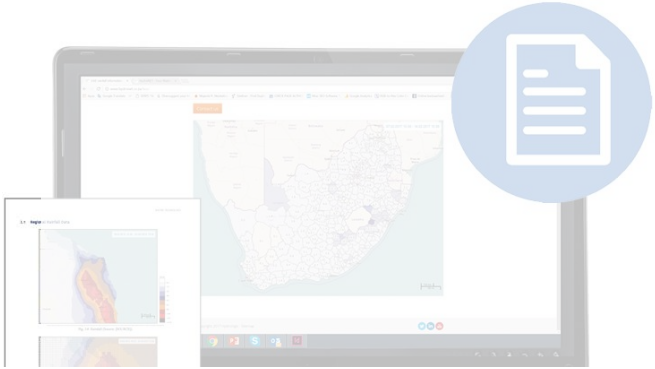

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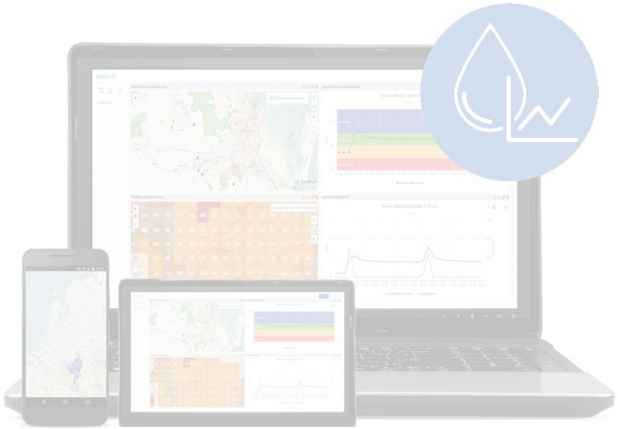

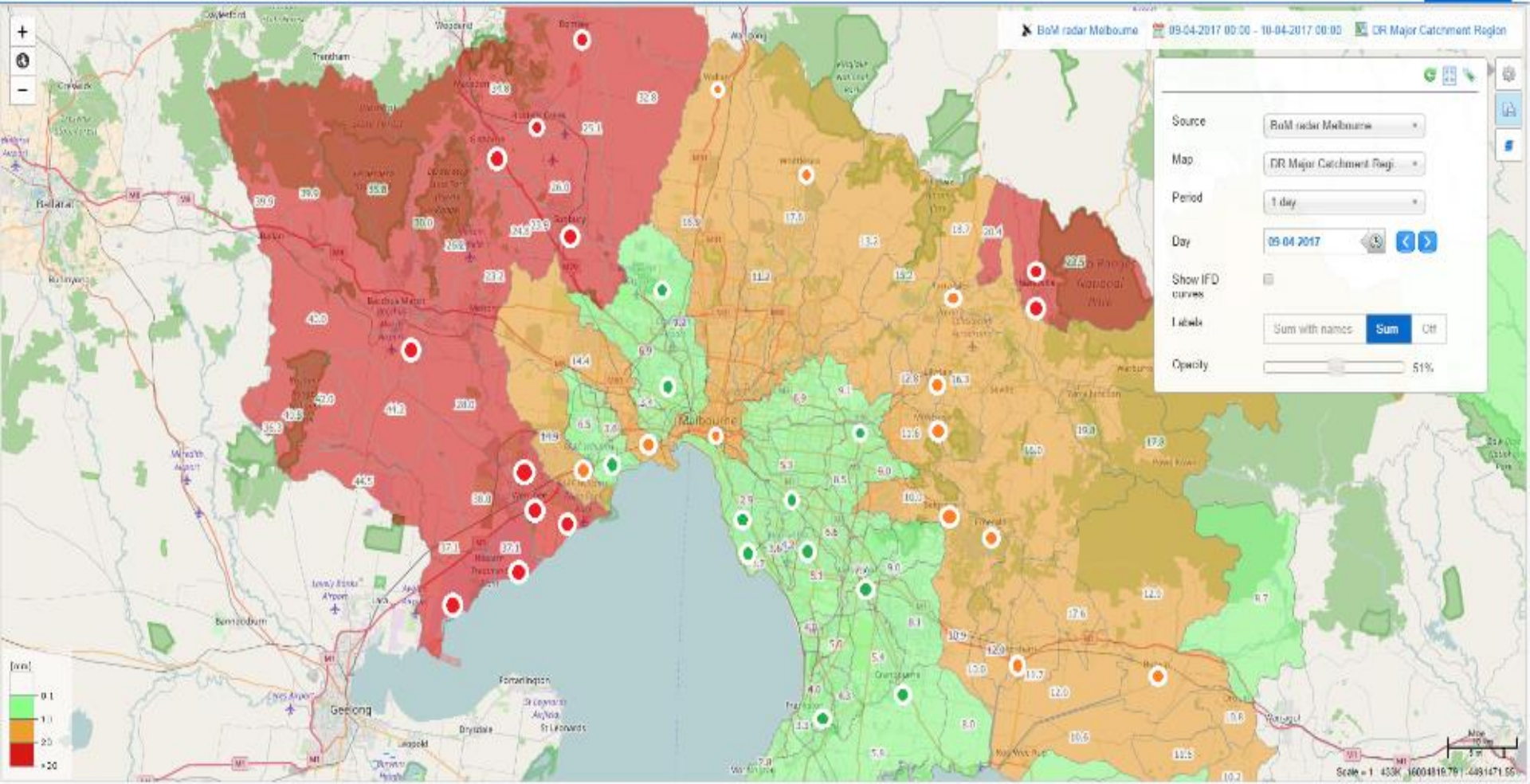
BoM radar Melbourne
09-04-2017 00:00 - 10-04-2017 00:00
DR Major Catchment Region
Source
BoM radar Melbourne
Map
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Period
1 day
Day
09 04 2017
Show IFD curves
Labels
Sum with names
Sum
Off
Opacity
51%
Melbourne
Geelong
Ballarat
Bacchus Marsh
Werribee
Wallan
Trentham
Woodend
Lancefield
Romsey
Kilmore
Seymour
Yea
Healesville
Warburton
Yarra Junction
Wonthaggi
Inverloch
Phillip Island
Torquay
Lorne
Colac
Apollo Bay
Port Campbell
Warrnambool
Portland
Hamilton
Ararat
Stawell
Maryborough
Castlemaine
Kyneton
Gisborne
Melton
Sunbury
Bacchus Marsh
Werribee
Point Cook
Wyndham Vale
Tarneit
Hoppers Crossing
Laverton
Altona
Williamstown
Footscray
Brunswick
Coburg
Preston
Northcote
Reservoir
Thomastown
Epping
Whittlesea
Mernda
Doreen
Hurstbridge
Diamond Creek
Eltham
Greensborough
Montmorency
Ringwood
Croydon
Mooroolbark
Lilydale
Yarra Glen
Healesville
Kinglake
Whittlesea
Wallan
Kilmore
Broadford
Seymour
Yea
Alexandra
Eildon
Marysville
Warburton
Yarra Junction
Gembrook
Pakenham
Officer
Cranbourne
Clyde
Berwick
Narre Warren
Dandenong
Frankston
Mornington
Rosebud
Dromana
Hastings
Somerville
Tyabb
Crib Point
Western Port
Phillip Island
Wonthaggi
Inverloch
Korumburra
Leongatha
Foster
Meeniyan
Fish Creek
Toora
Yarram
Port Albert
Sale
Maffra
Stratford
Bairnsdale
Lakes Entrance
Orbost
Mallacoota
Cann River
Genoa
Mallacoota Inlet
Point Hicks
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Twofold Bay
Merimbula
Pambula
Tathra
Bermagui
Narooma
Batemans Bay
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Central Tilba
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Tomakin
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Milton
Mollymook
Sussex Inlet
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Nowra
Bomaderry
Shoalhaven Heads
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Greenwell Point
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Kiama
Shellharbour
Albion Park
Dapto
Wollongong
Thirroul
Bulli
Woonona
Bellambi
Corrimal
Tarrawanna
Port Kembla
Lake Illawarra
Windang
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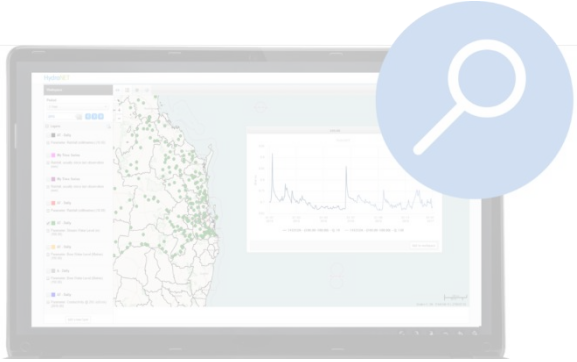

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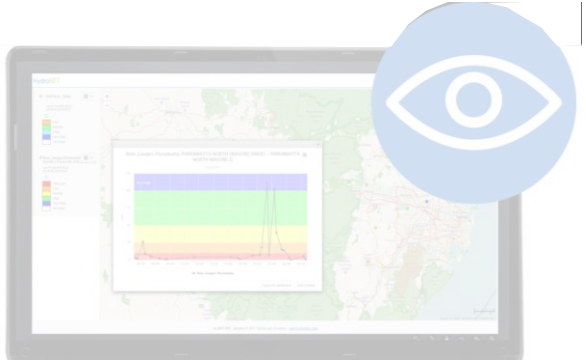

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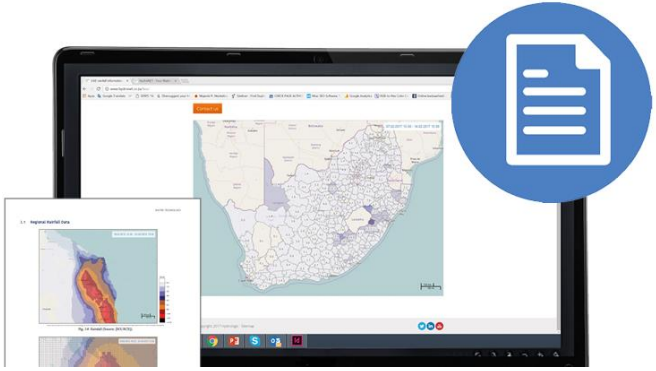

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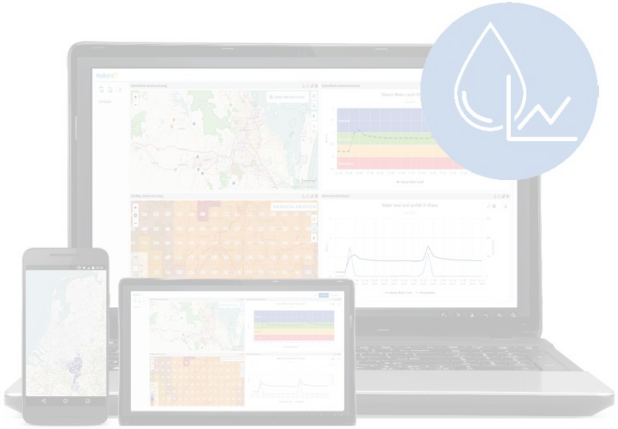
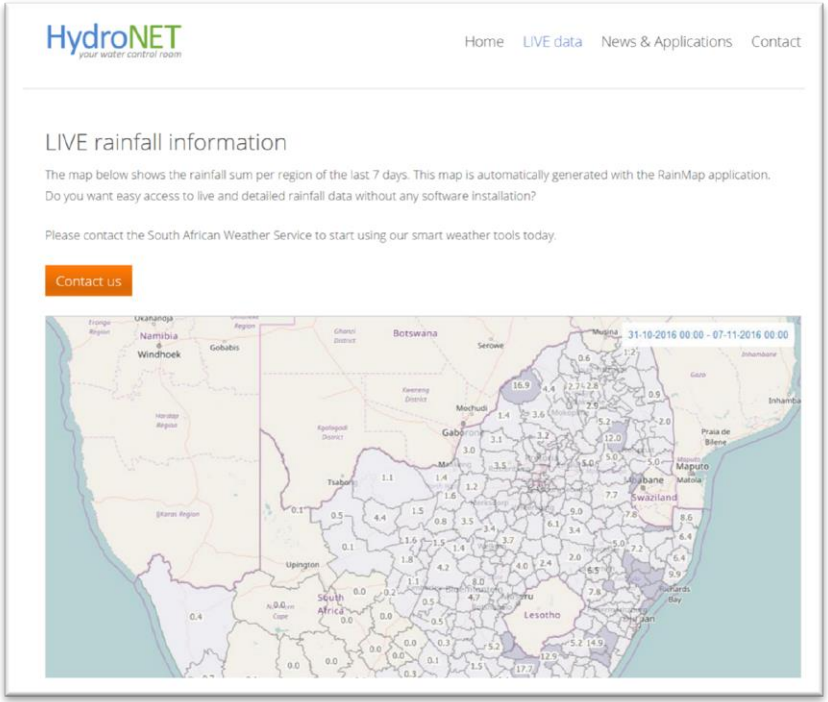


HydroREPORT: generate reports in seconds

Automatically generate
Word or PDF documents



Publish real-time
information on website

CURRENT DAILY RAINFALL AND WEEKLY RAINFALL FORECAST WITH HYDRONET

A 'DASHBOARD' EXAMPLE FROM HYDRONET

Provided via the **HydroNET platform** with Bureau of Meteorology Rainfall Radar data.

HydroNET helps brings together the data you need, when you need it, for better decision making. The following images are an example of how the HydoNET Dashboard reporting elements can be used on a website or similarly with a reporting document.

Daily Rainfall in Notting Hill, Victoria

Daily Rainfall in South Brisbane, Queensland

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Actuele waterstanden - waterschap Rijn en IJssel (serie webmaps)

1 Waterstanden

Wanneer het hard geregend heeft stijgen de waterstanden en wanneer het langere tijd droog zakken de waterstanden. In deze kaart is te zien waar de waterstanden relatief hoog of laag staan.

Bron: uurgemiddelde waterstanden (m+NAP) gemeten door waterschap Rijn en IJssel
Actualiteit: De meest actuele waarde wordt getoond. Meetwaarden ouder dan 6 uur worden niet getoond.

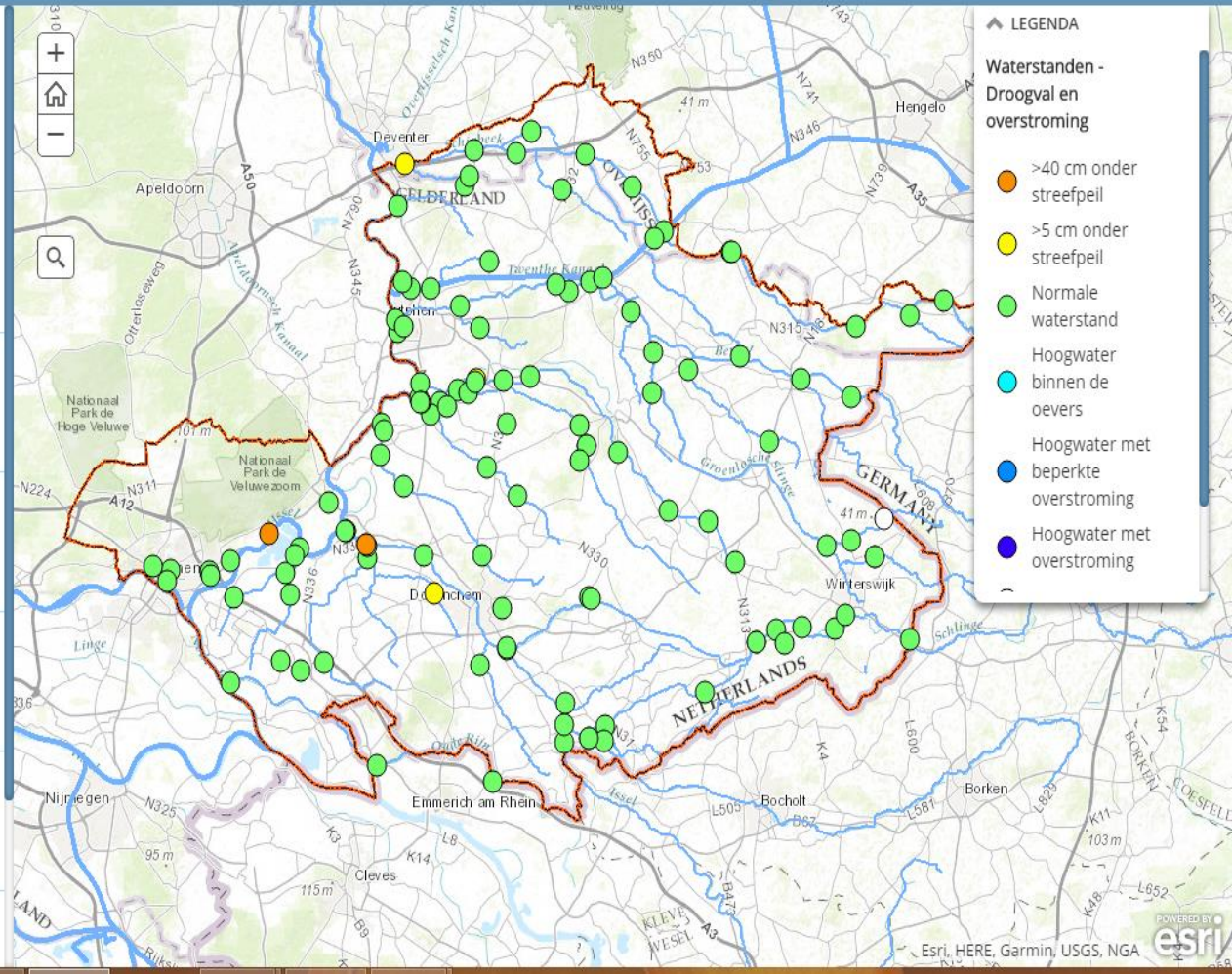
2 Waterafvoer

3 Status gemalen

4 Grondwaterstanden onder maaiveld

5 Watertemperatuur

6 Neerslag in de afgelopen 24 uur



Actuele waterstanden - waterschap Rijn en IJssel (serie webmaps)

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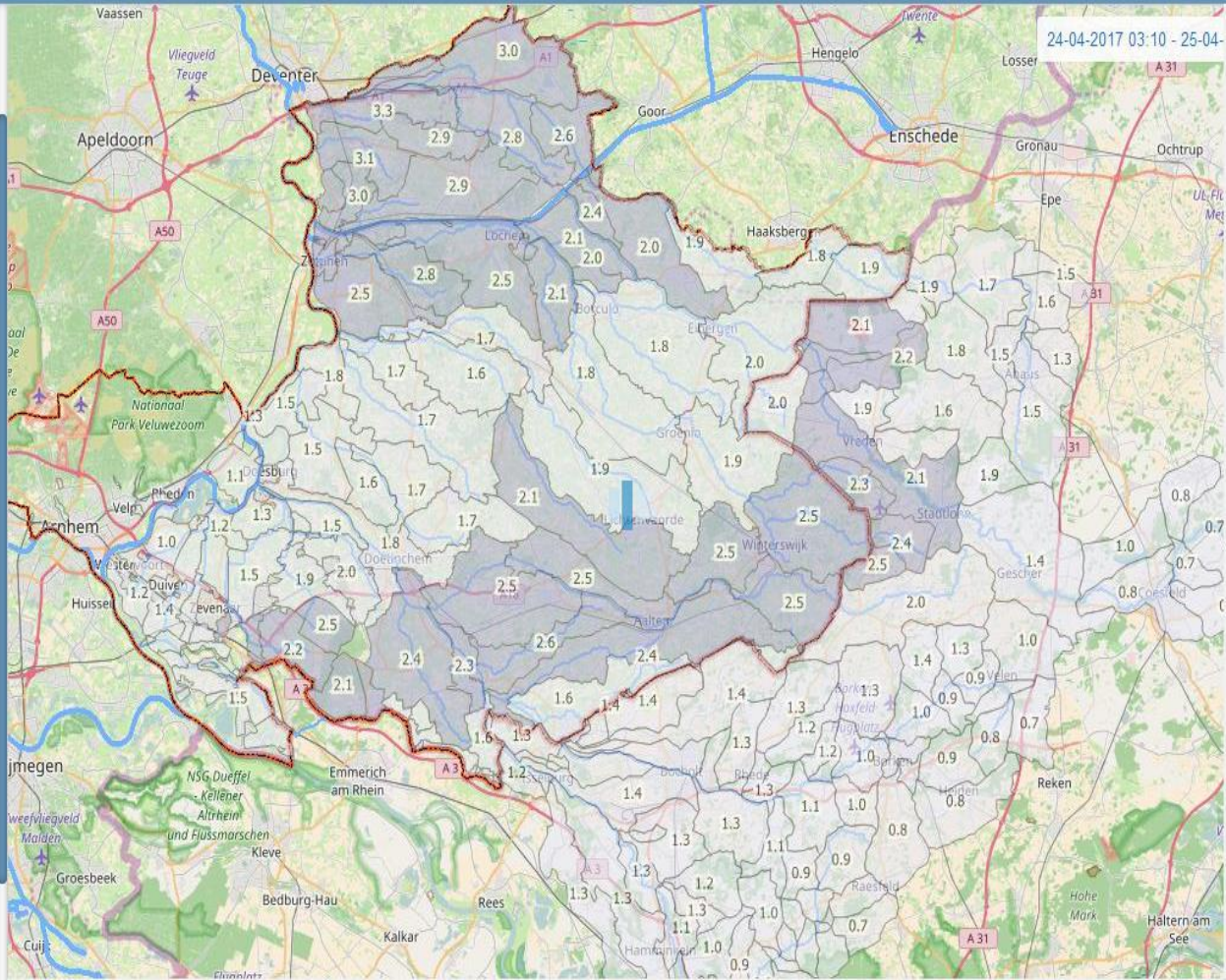
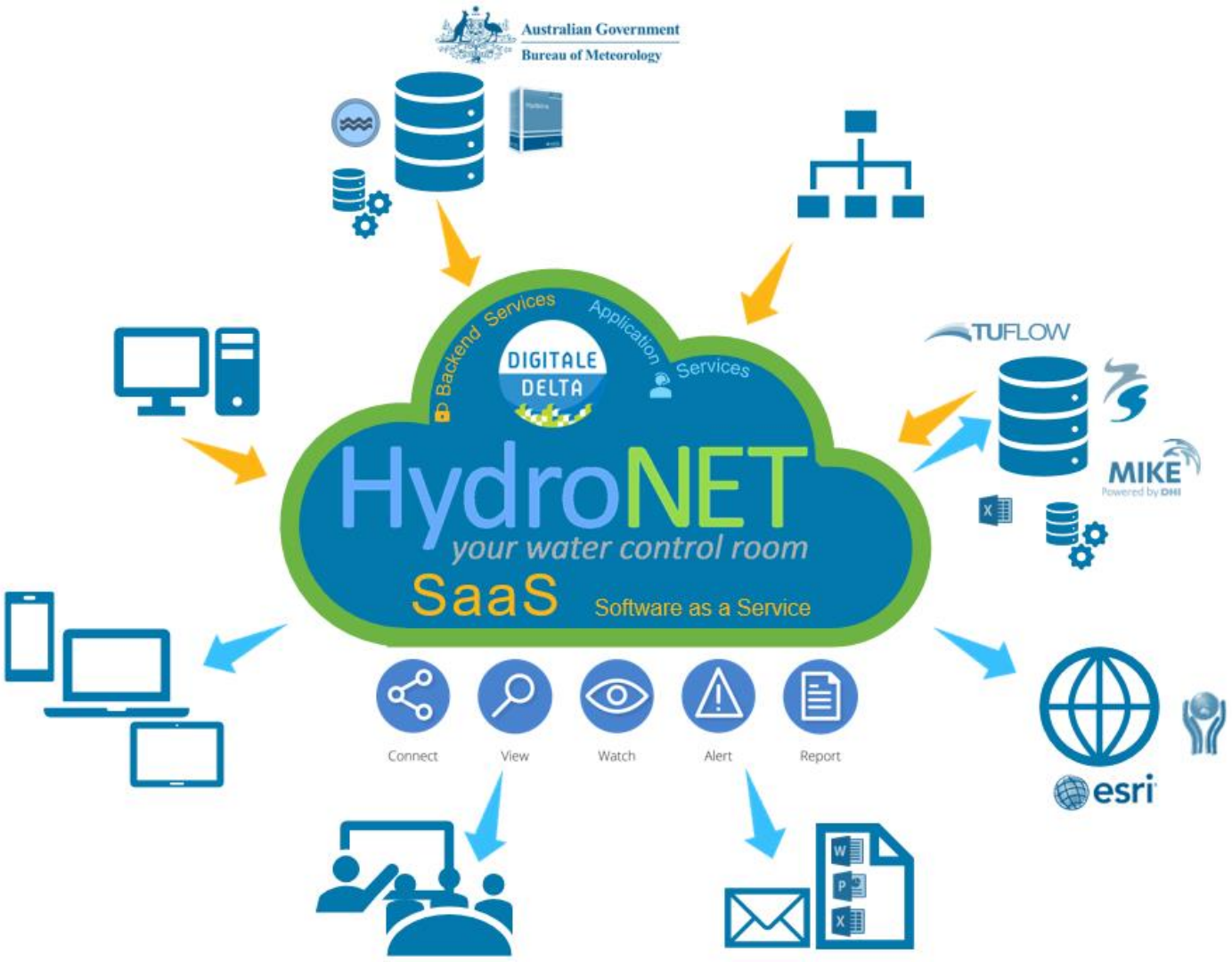
5 Watertemperatuur

6 Neerslag in de afgelopen 24 uur

Deze kaart geeft de hoeveelheid neerslag (mm) weer die de afgelopen 24 uur is gevallen. Deze neerslag is verkregen aan de hand van radarbeelden en enkele automatische regenmeters op de grond. De waarden kunnen afwijken van de realiteit, zeker bij heel intensieve plaatselijke buien. Ter indicatie: de grootste etmaalsom van neerslag op een willekeurige plaats in Nederland die 1x/jaar voorkomt is 36 mm en 1x/10 jaar is dat 58 mm. Etmaalsommen van boven de 100 mm komen heel weinig voor.

Bron: lopend 24-uursom neerslag o.b.v. neerslagradarbeelden (KNMI) en neerslagmetingen aan de grond (KNMI) en samengesteld door Hydrologic b.v.




Australian Government
Bureau of Meteorology
Backend Services
Application Services
DIGITALE DELTA
HydroNET
your water control room
SaaS
Software as a Service
TUFLOW
MIKE
Powered by DHI
Connect
View
Watch
Alert
Report
esri

Internationaal kansen verzilveren

WATER PROOF

HydroLogic Systems B.V.

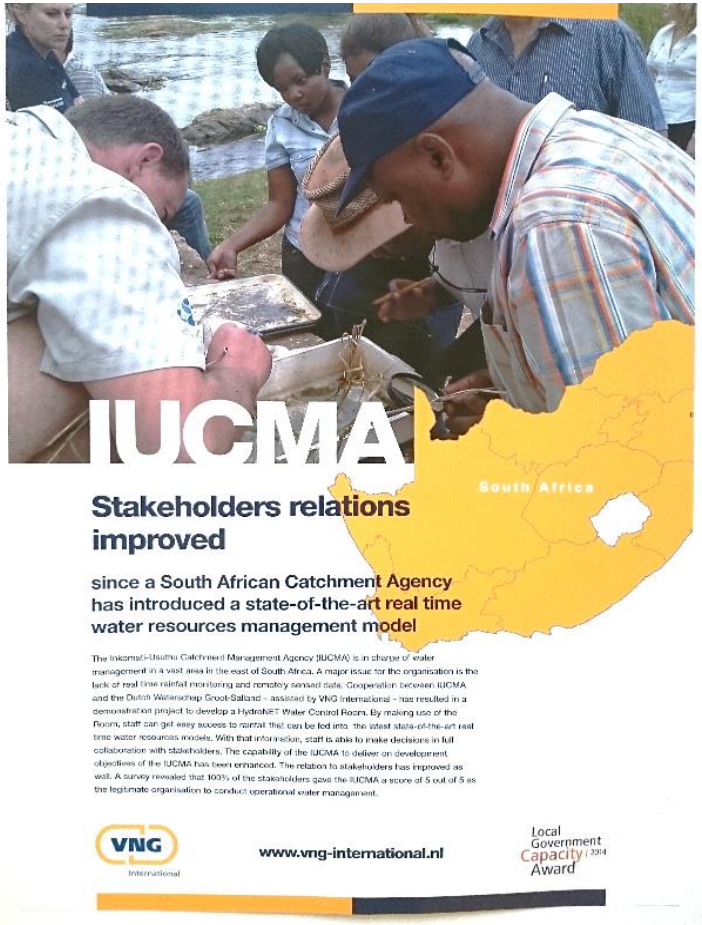
Winnaar Partners voor Water Award 2017

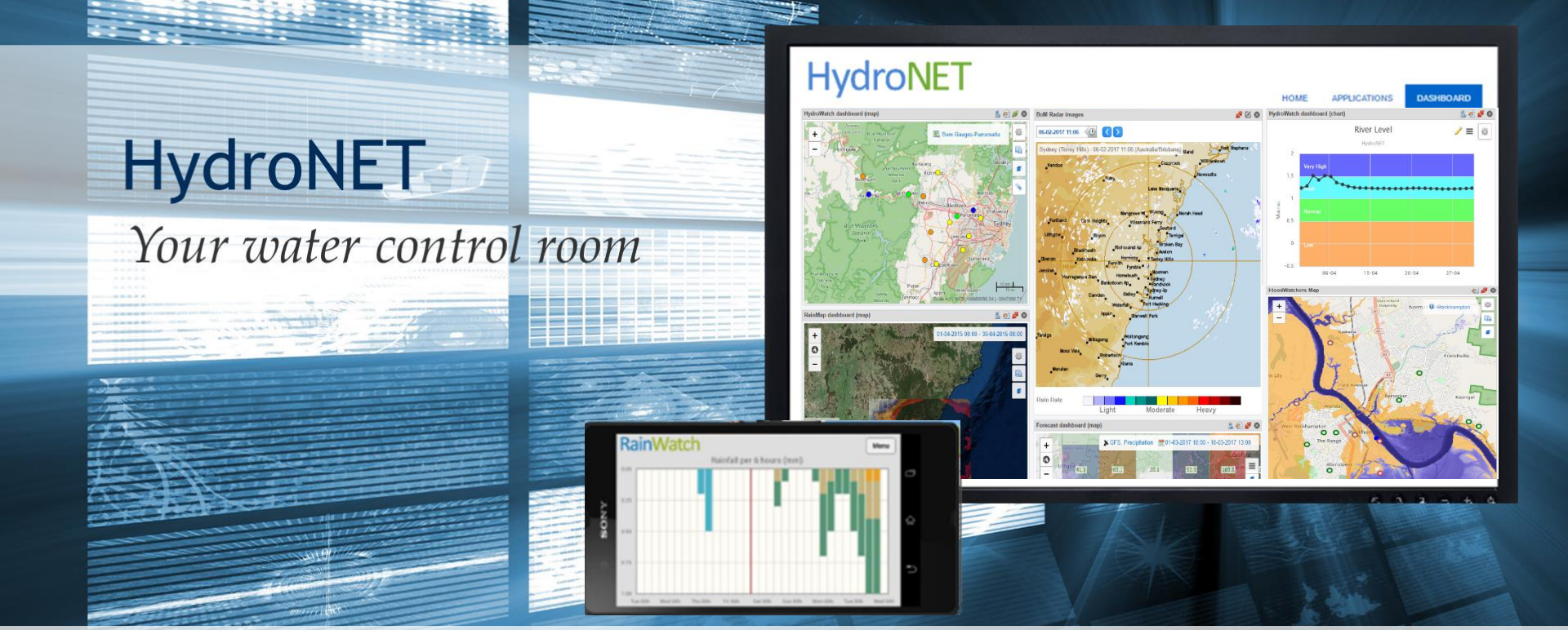
MET HET PROJECT
Demonstration of the HydroNET Water Control Room
in South Africa

CONSORTIUMPARTNERS
Universiteit Twente
Waterschap Groot Salland
Waterwatch B.V.
KNMI
Winejob

Maarssen, 13 april 2017

VNG International Award





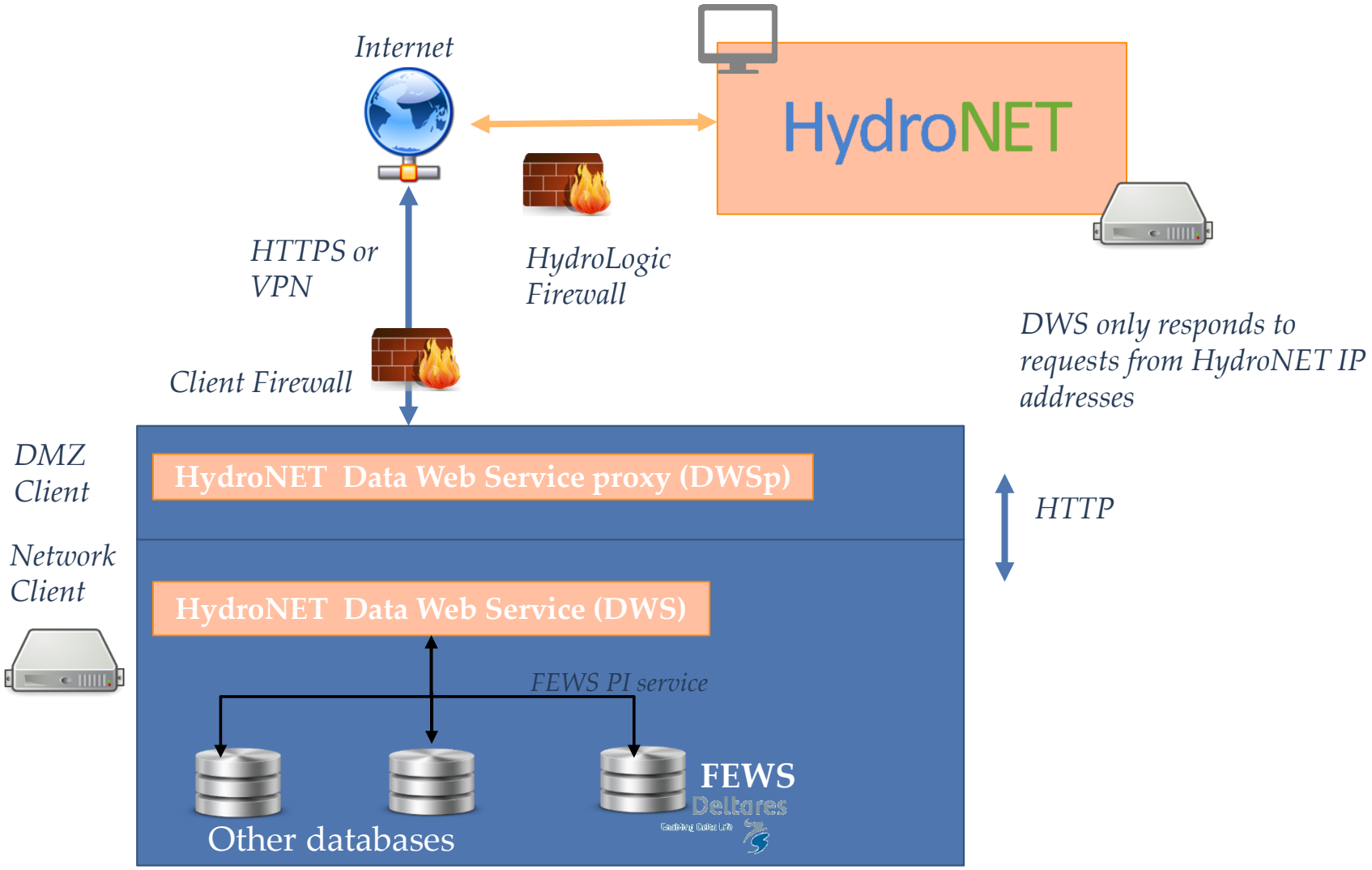
Thank You

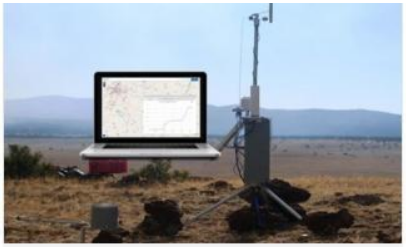
For more information go to www.hydronet.com.au
Or contact Brian Jackson at brian.jackson@watertech.com.au

Conducted user requirement analysis

HydroNET Users today

2604


Internet
HydroNET
HTTPS or
VPN
HydroLogic
Firewall
Client Firewall
DWS only responds to
requests from HydroNET IP
addresses
DMZ
Client
HydroNET Data Web Service proxy (DWSp)
HTTP
Network
Client
HydroNET Data Web Service (DWS)
FEWS PI service
FEWS
Deltares
Other databases



Weather Stations: access to **BoM rain gauges**

Weather forecast: be prepared for the storm

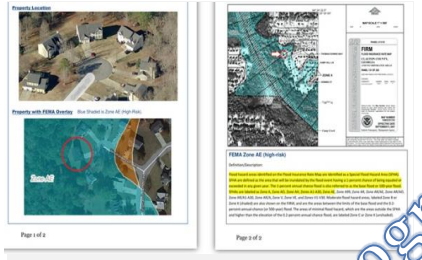
RainMap: easy access to BoM **gridded rainfall** information

RainWatchers: **community** based **rainfall** measurements

WaterWatchers: the **crowd** to collect **flood evidence**

Water Control: **web reports** for FEWS and Hydstra

FloodReady App: share **flood information** with **community**



Statutory Flood reports f
the community

In progress

FloodIntelligence: easy access to all flood information

Flood Report Generator: **generate reports in seconds**

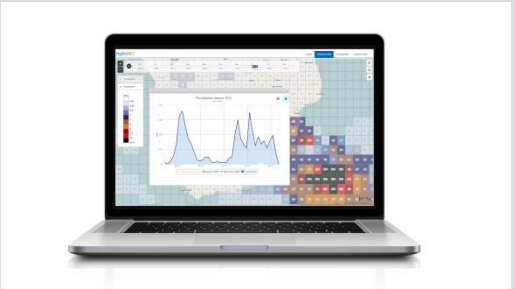
Salinity: impact of ground water level to salinity risk

More information about solutions for Australia:
www.hydronet.com.au

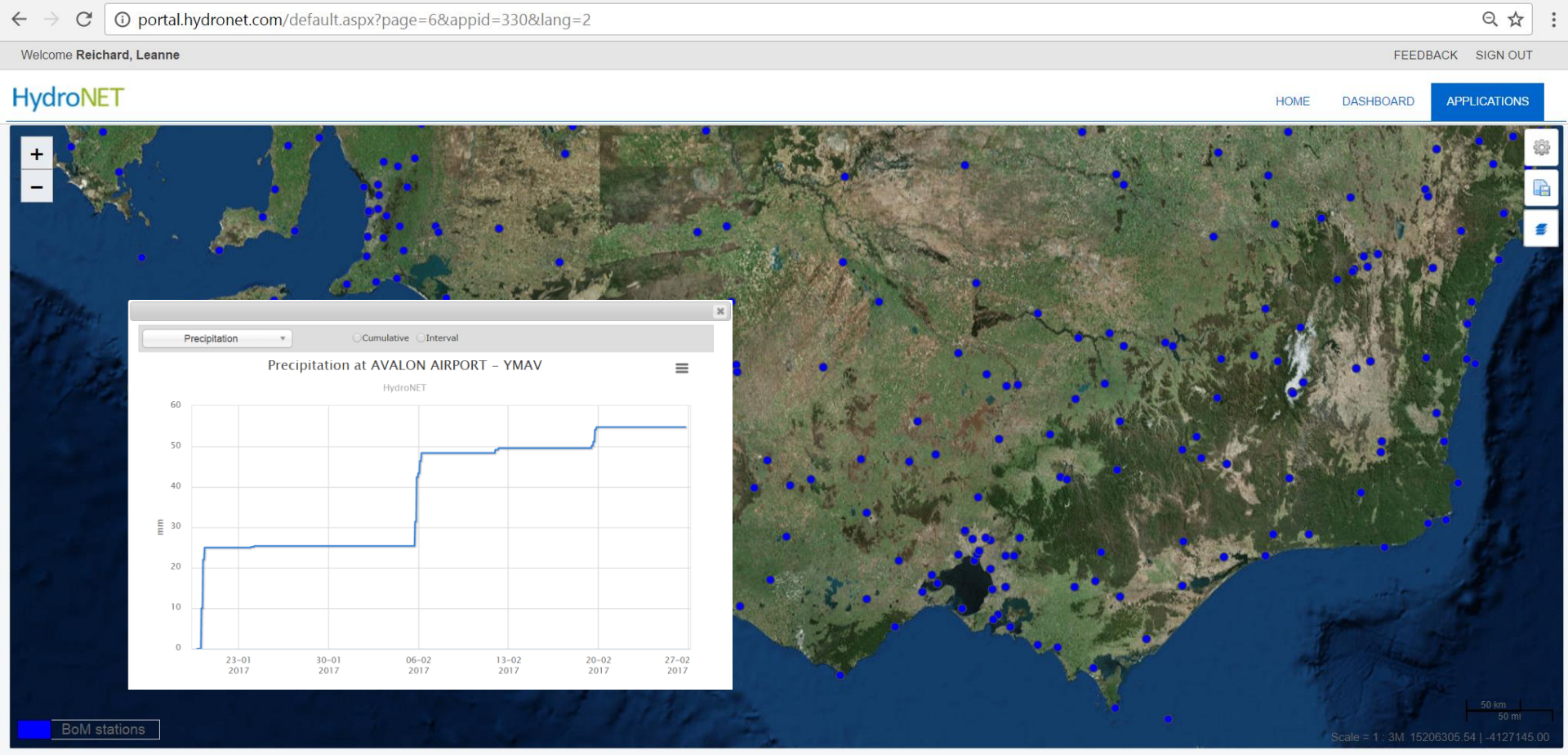
What is RainWatch?

- Easy online access to:
  - BoM weather forecasts
  - BoM weather stations
  - BoM radar data

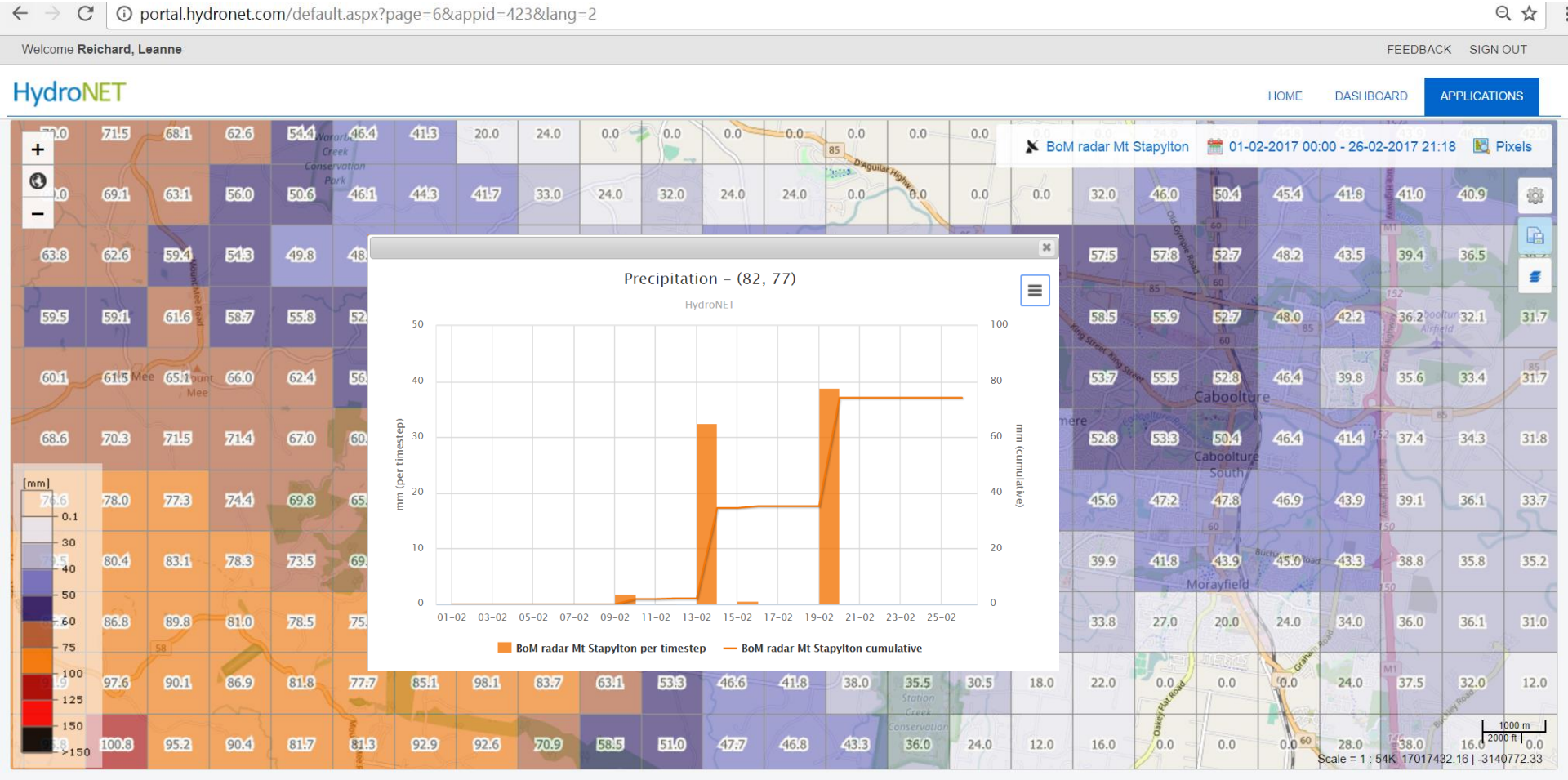
- Tools to enable water professionals
  - Export to model input files
  - Upload shape files for catchment averages
  - Generate rainfall reports
  - Download long time series
  - Access to data back to 1900



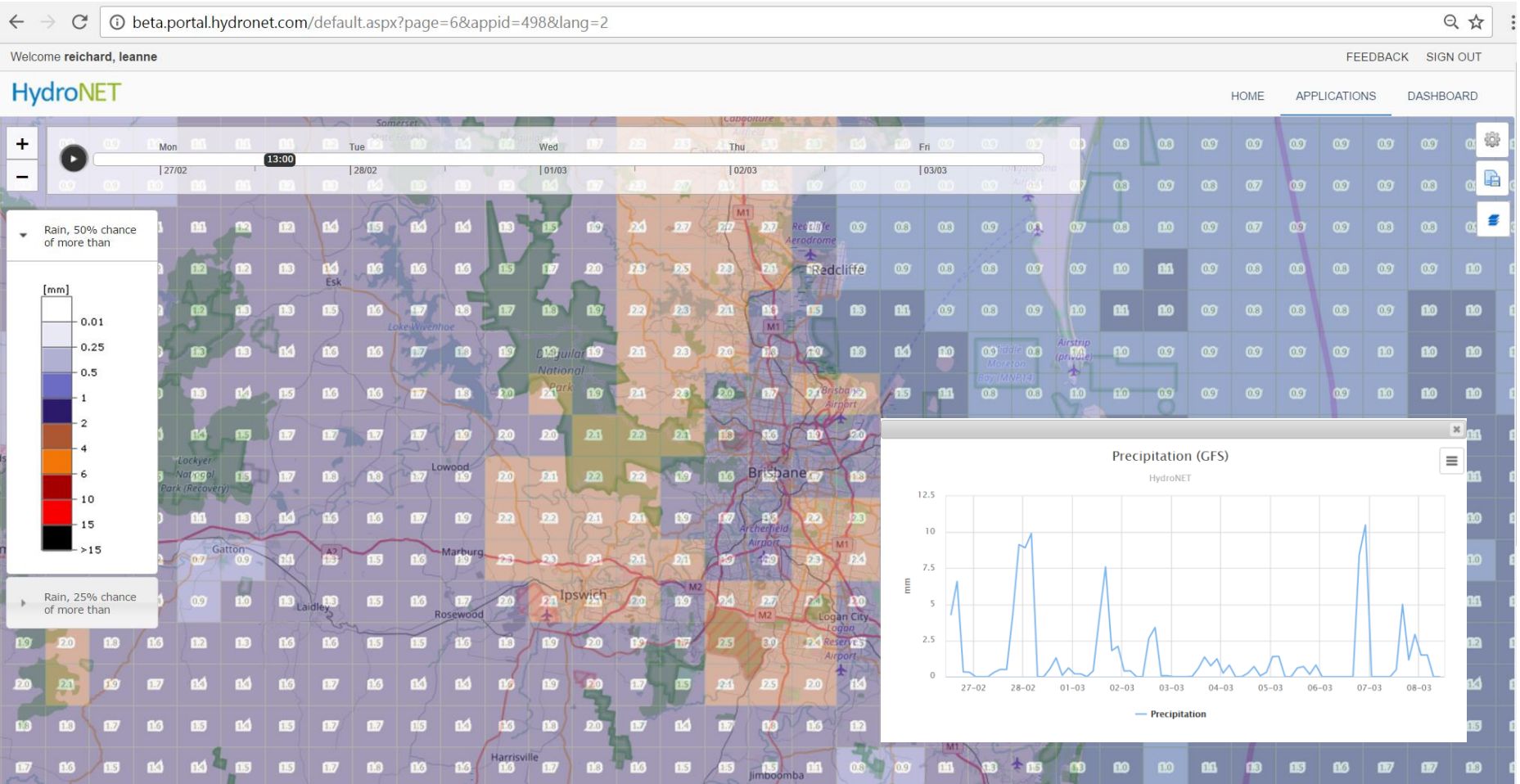
Access to BoM stations from behind your desk



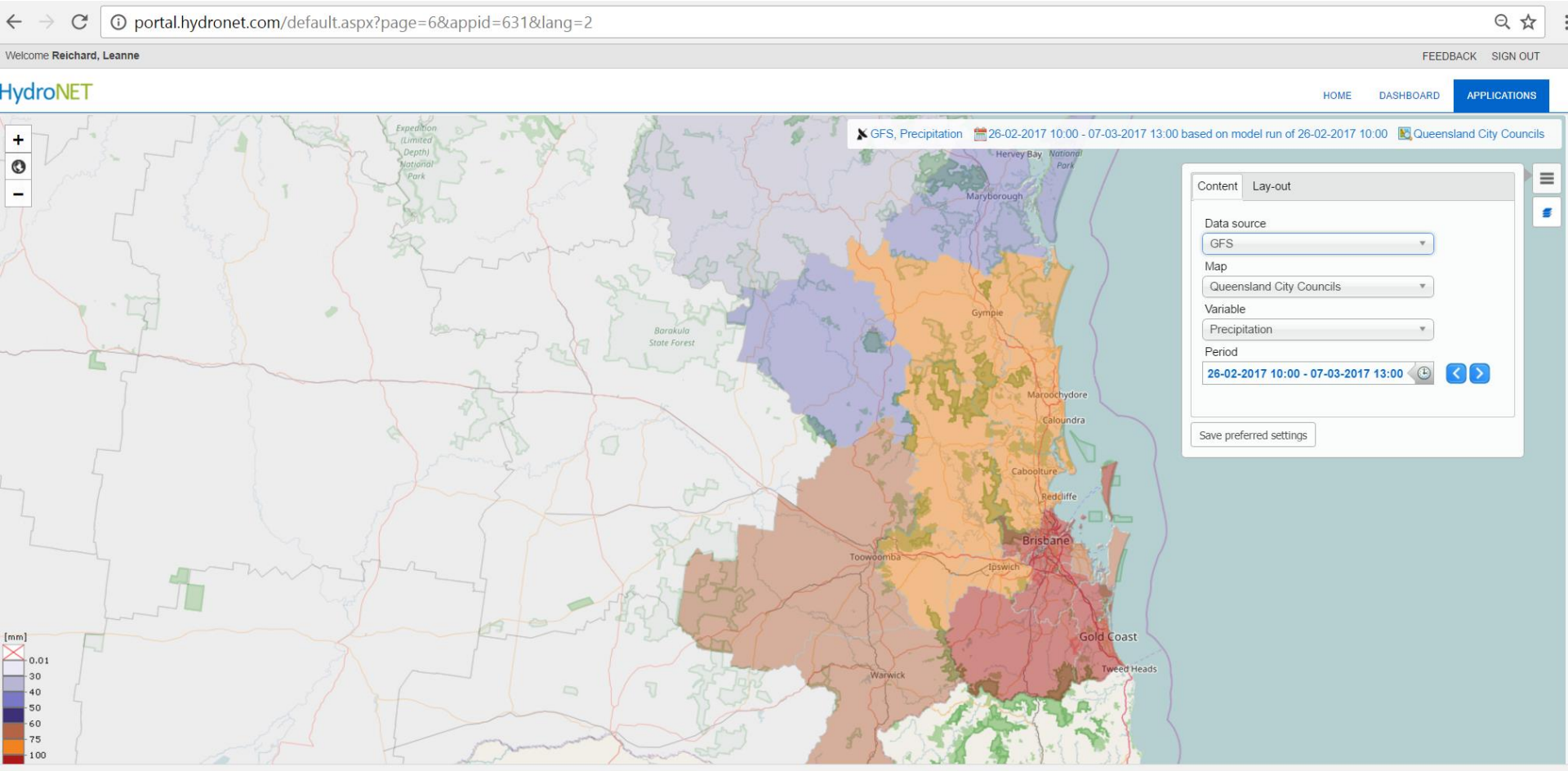
Access to BoM radar data

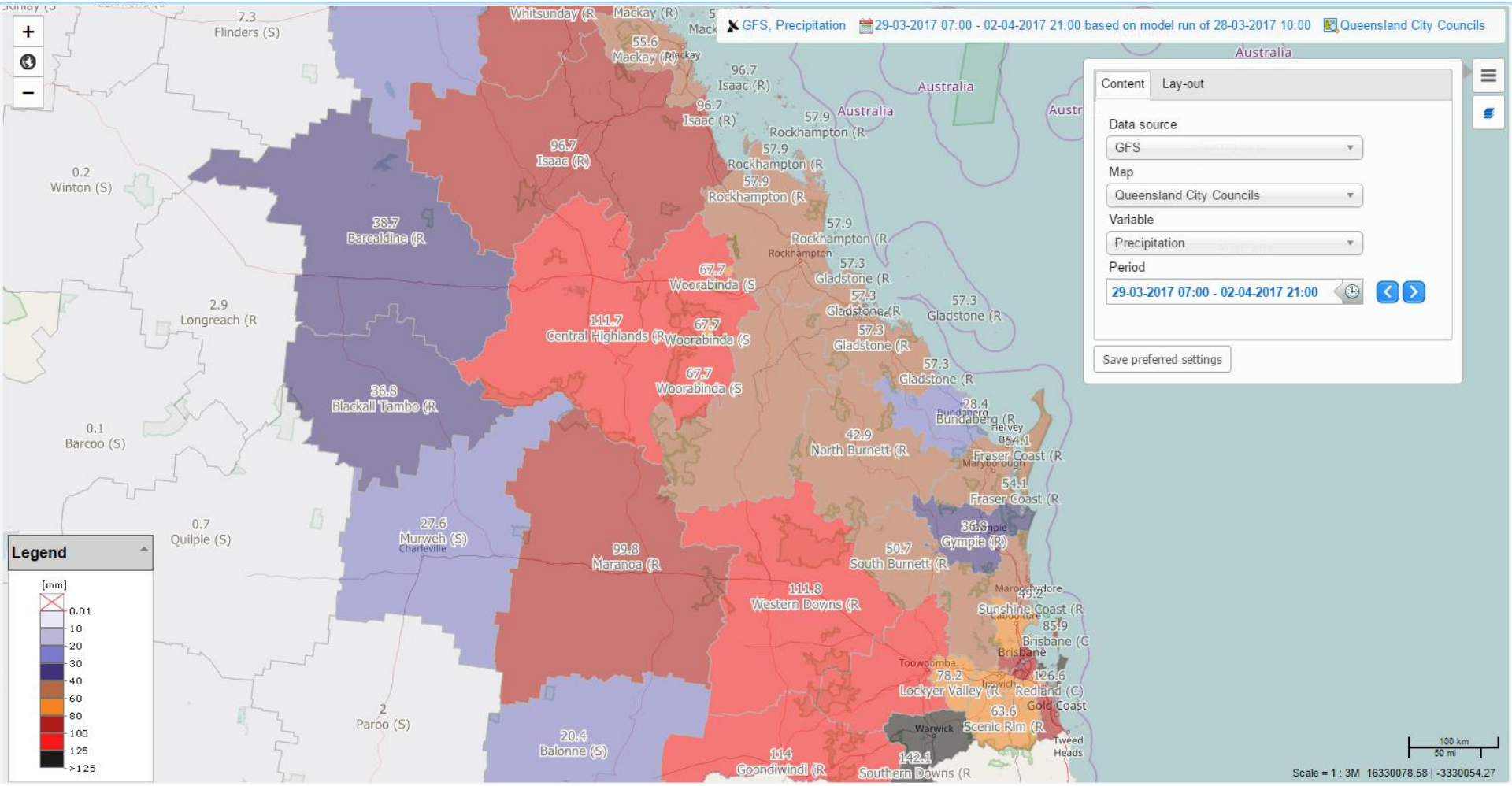


Access to weather forecast data

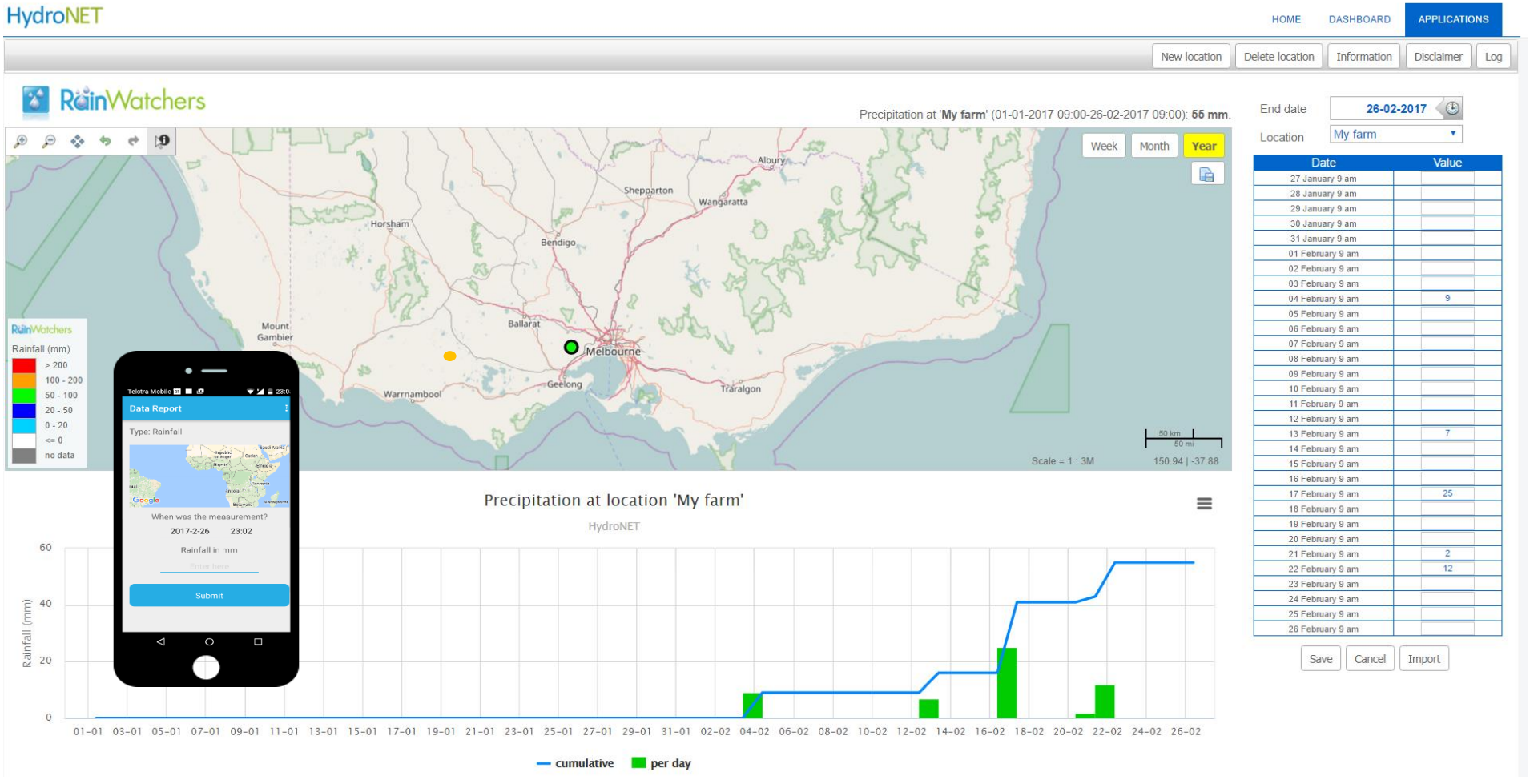


Flash flood alerts per polygon

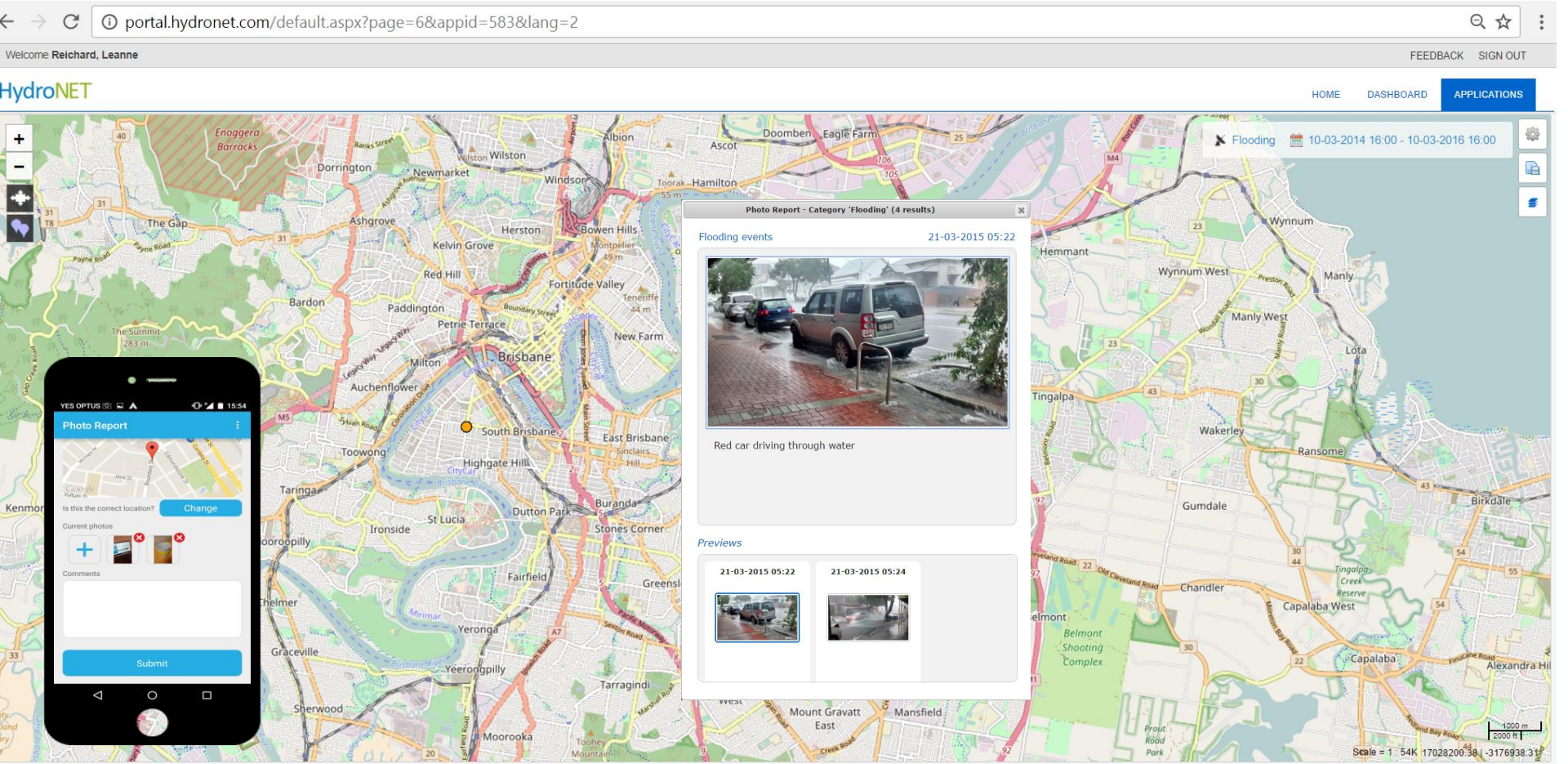


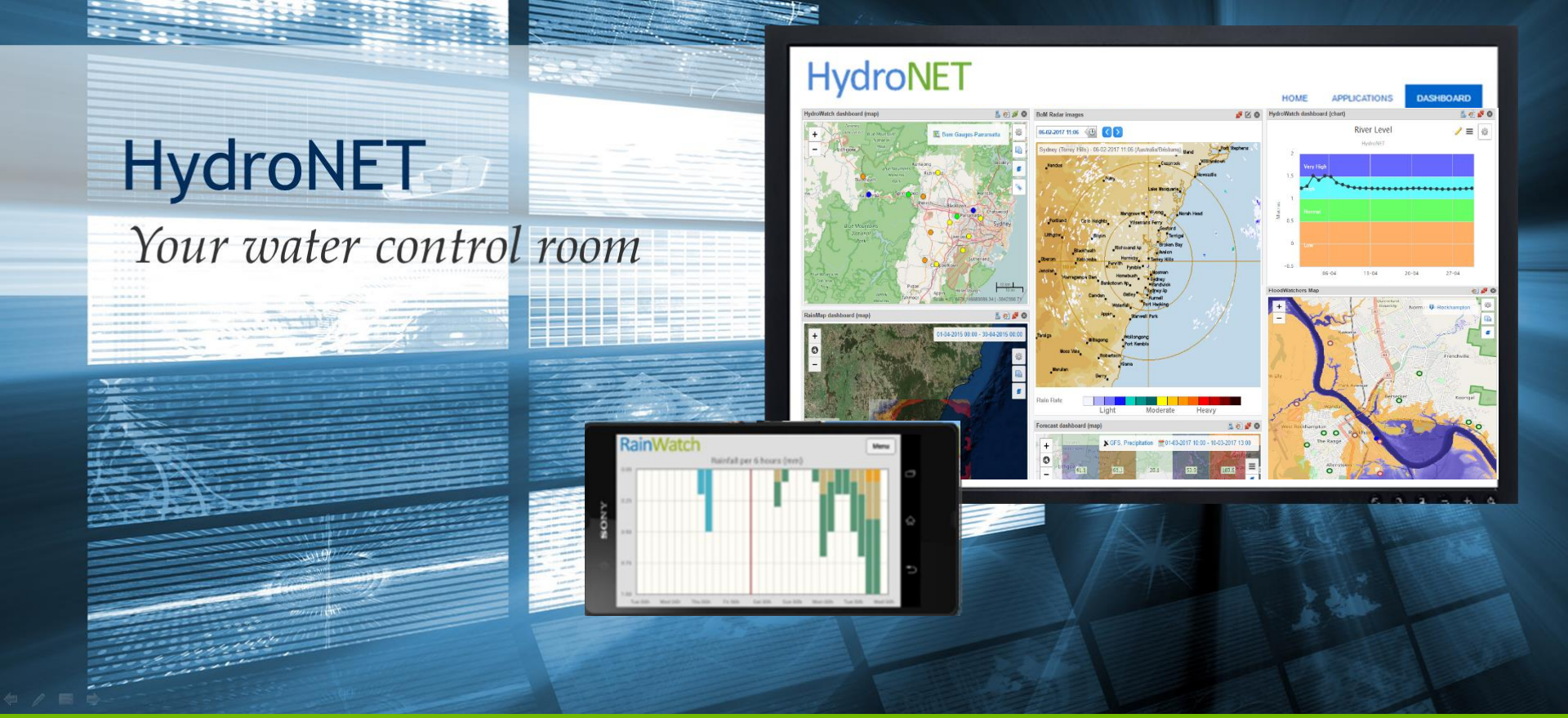

GFS, Precipitation
29-03-2017 07:00 - 02-04-2017 21:00 based on model run of 28-03-2017 10:00
Queensland City Councils
Content
Lay-out
Data source
GFS
Map
Queensland City Councils
Variable
Precipitation
Period
29-03-2017 07:00 - 02-04-2017 21:00
Save preferred settings
Legend
[mm]
0.01
10
20
30
40
60
80
100
125
>125
Whitsunday (R
Mackay (R)
Isaac (R)
Rockhampton (R
Gladstone (R
Woorabinda (S
Central Highlands (R
Barcaldine (R
Blackall Tambo (R
Longreach (R
Winton (S)
Barcoo (S)
Quilpie (S)
Murweh (S)
Charleville
Maranoa (R
Balonne (S)
Paroo (S)
Western Downs (R
Goondiwindi (R
Southern Downs (R
North Burnett (R
South Burnett (R
Bundaberg (R
Fraser Coast (R
Gympie (R)
Sunshine Coast (R
Brisbane
Toowoomba
Lockyer Valley (R
Scenic Rim (R
Redland (C)
Gold Coast
Tweed Heads
Warwick
Ipswich
Australia
100 km
50 mi
Scale = 1 : 3M 16330078.58 | -3330054.27

Rainwatchers: community based measurements



WaterWatchers: collect flood evidence





Where do you see opportunities?