



Klimaat bestendig waterbeheer ICONICS/Prodek

Data Driven Solutions at Scottish Water



Make the Invisible Visible™



Arthur Blom
Software Business Development



Frank van Empelen
CEO



Rene de Theije
Business Development

Prodek Solutions-Distributeur



Make the Invisible Visible™

ICONICS biedt automatiseringssoftware voor het realtime collecteren, normaliseren, historiseren, analyseren en visualiseren van data



Industriële data communicatie. EDGE routers, IoT Gateways & Modems



Communicatie oplossingen voor Siemens S7 / S5, OPC UA Services



Intelligent Building Software Stack (IBSS). Software oplossing voor intelligent gebouwbeheer en optimalisatie



Uw partner voor:

- Advies, consultancy en pilot projecten
- Samenwerking met System Integrators

Over ICONICS

Een Mitsubishi Electric Group Company

A Group Company of



Headquartered in Foxboro, MA
Since 1986



100+ Countries
400+ Partners



375,000+
Installations Worldwide
installed in 70% of Global 500 companies

Gold
Microsoft Partner



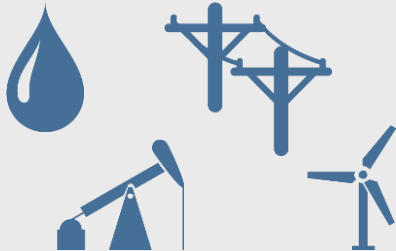
Globally Managed ISV and
Ten-time Microsoft
Partner of the Year



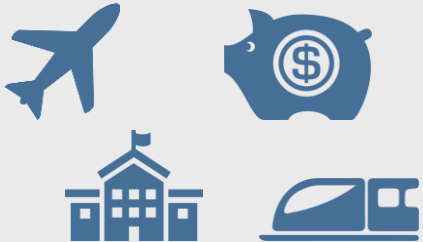
Smart Buildings
and Smart Cities



Manufacturing Intelligence
and Factory Automation



Power & Water Utilities
Oil & Gas



Public and Defense
Infrastructure

Enabling Digital Transformation

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A Group Company of





De belangrijkste uitdagingen in de waterindustrie hebben betrekking op kosten en efficiëntie

Verouderde infrastructuur

Kosten van materiaal

Operationele kosten

(Cyber)Security

Personeelstekort, vergrijzing personeel

Flexibiliteit

Huidige zorgen in de waterindustrie

Risico van non-innovatie

- Kwetsbaarheid voor bio- en cyberdreigingen
- Technische veroudering
- Gebrek aan oplossingen op lange termijn - om aan toekomstige eisen te voldoen
- Inefficiënties en verspilling
- Onvermogen om aan de vraag te voldoen



Referenties



Madison Metropolitan Sewerage District



HORTEN KOMMUNE
HORTENSKOLEN



SKIEN KOMMUNE

VESTRE TOTEN KOMMUNE



Over Scottish Water

Facts & Figures

- Leverancier van verse drinkwater aan 2,56 Miljoen huishoudens en 152.806 bedrijven in Schotland
- Dagelijkse levering van 1,44 Miljard liter schoon en veilig drinkwater
- Afvoer en verwerking van 983 Miljoen liter (afval)water
- Verantwoordelijk voor al het oppervlakte water, riolering, drinkwater en afvalwater (en kustwater) in Schotland.
- 125.000 km aan rivieren en 2.000 km² aan meren (totaal 25.500 meren)
- Ruim 1.826 afvalwater stations
- 32.940 Miles (ongeveer 53.011 km) aan riolering

**LOOKING AFTER
YOUR WATER
AND WASTE
WATER SERVICES**



Top-Down – Overkoepelende oplossing

Overstromingsgebieden
 Watermeters
 Assets (GIS)
 Voertuigen
 Loggers
 Weersinformatie
 Leidingnetwerk

**Geo-
informatie**

Alarms/Events (AE)
 Control (DA)
 Historical (HDA)

SCADA

Analyse/
Modelling

Historian

SAP/Maximo

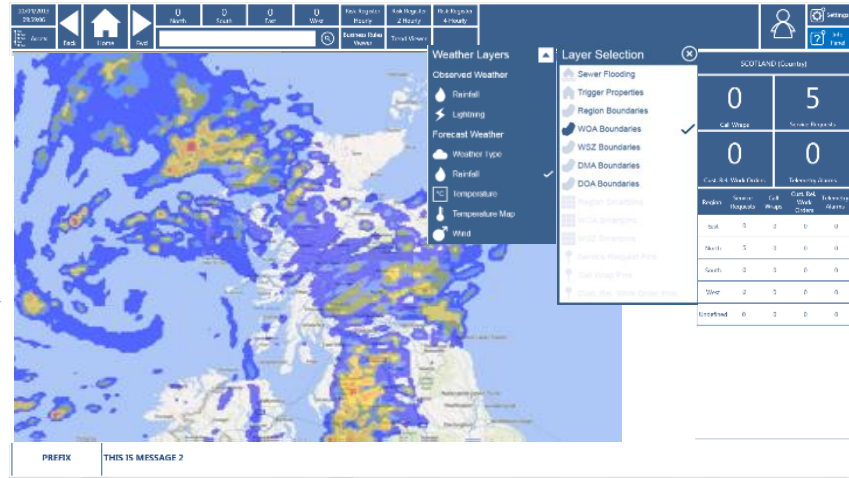
Werkbonnen

Klant
Werkorders

**Technische
tekeningen**

**Business
Management
Informatie**

Processen
 HSEC
 Foto's
 Asset structuur

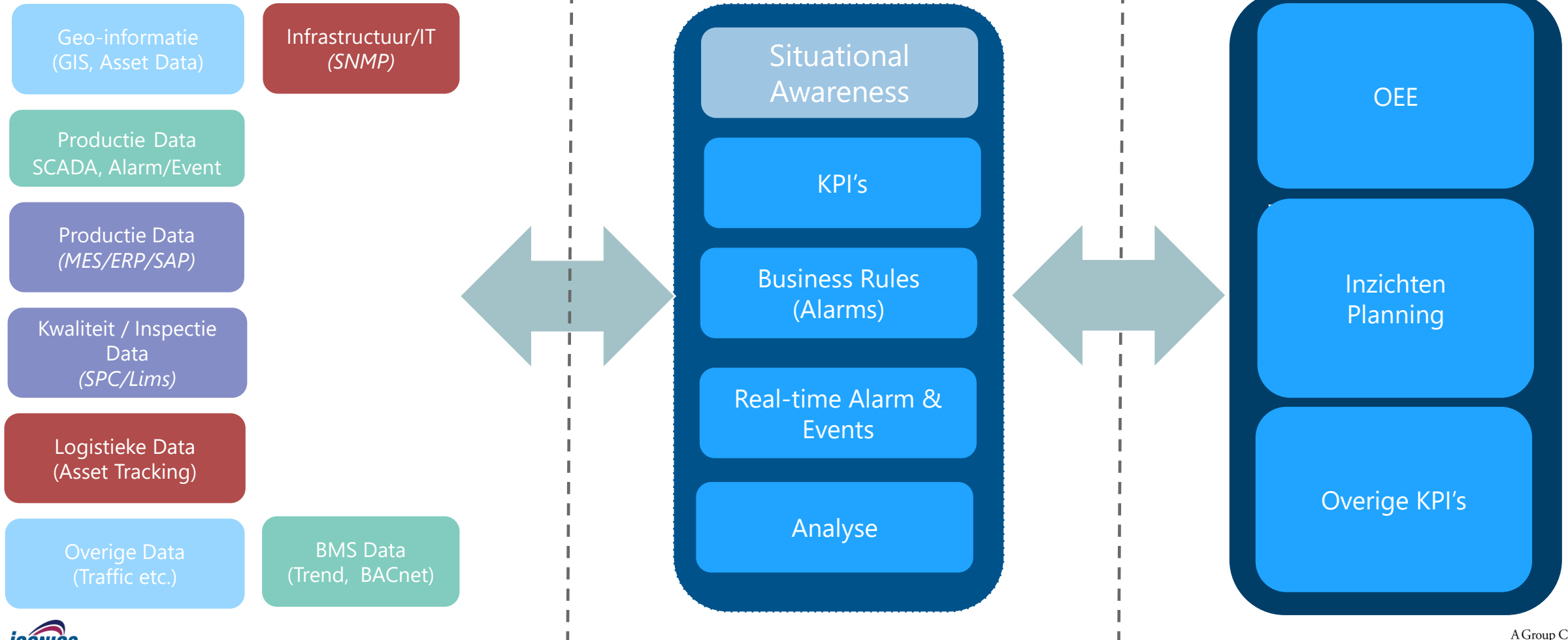


Data Flow

Data Laag

Business Laag

Presentatie Laag

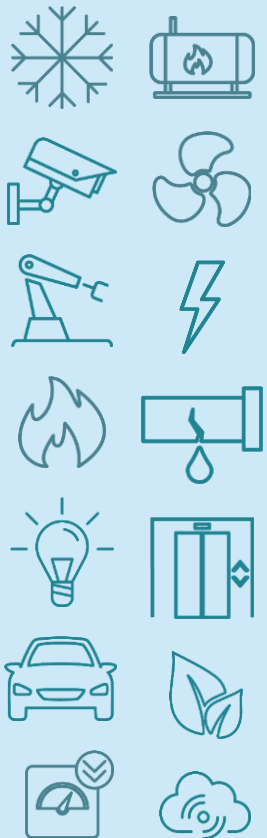


Infrastructuur/IT
(SNMP)

BMS Data
(Trend, BACnet)

Slimme Universele Connectiviteit

Sensors en apparatuur



Systemen



Open Protocollen



Centraal Platform
Visualisatie op elk
device op elke locatie



				70 North	45 South	80 East	24 West	0 Sewer Flooding	0 Weather Warning							
						0 5 Calls	0 Alarm & Calls	0 5 Calls & Alarm	0 ITS Early Warn.	0 5 No Water or LP	0 WSZ Event	0 Trig. Prop. Event		User : pmorris Profile: None		
						0 5 Calls	0 Alarm & Calls	0 5 Calls & Alarm	0 ITS Early Warn.	0 5 No Water or LP	0 WSZ Event	0 Trig. Prop. Event		1.2.4		

01/01/2014

Updated: 01/01/2014

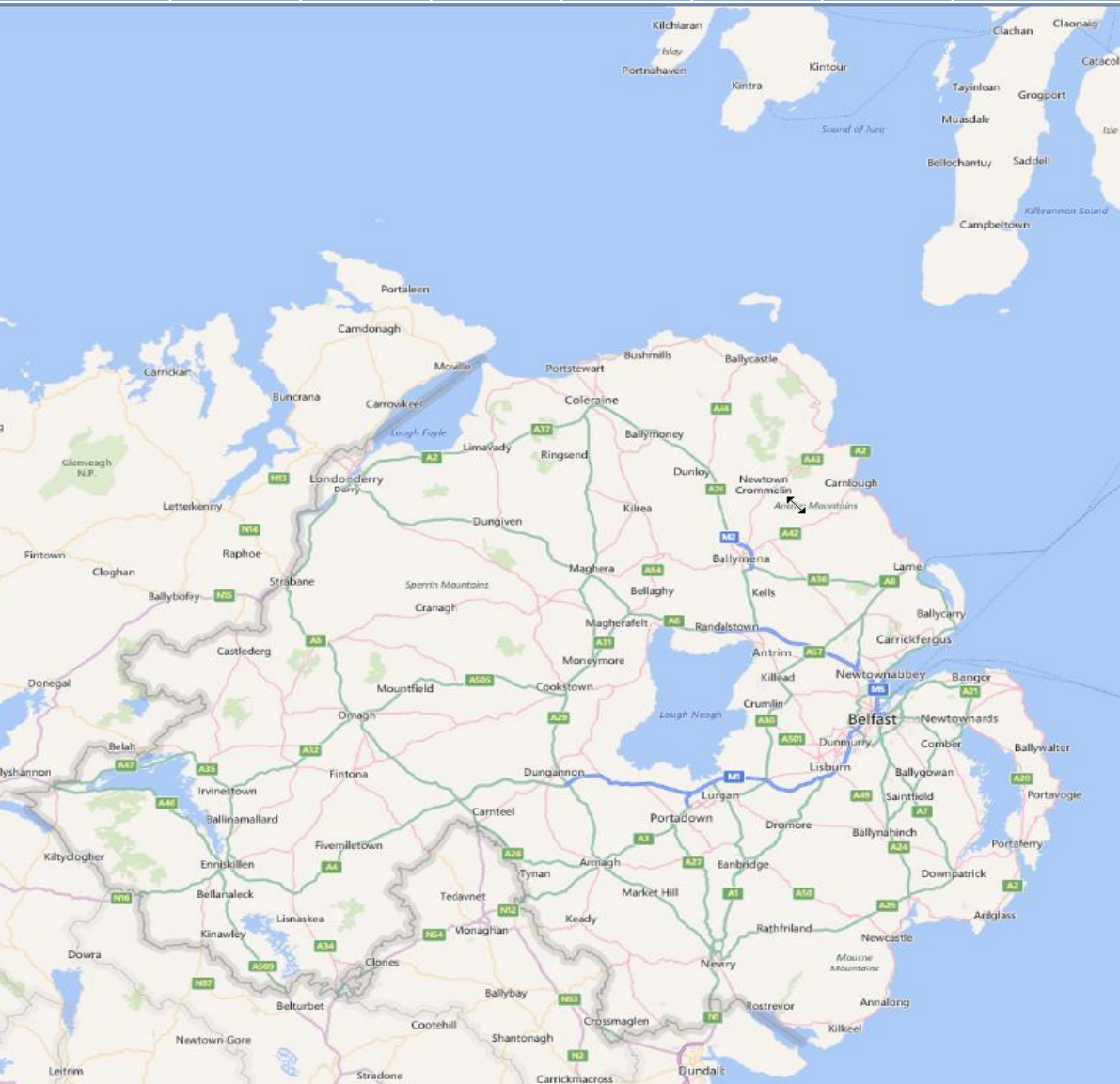
Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind



NORTHERN IRELAND (Country)

SR 97 Service Requests	WO 12 Cust. Rel. Work Orders	TA 219 Telemetry Alarms
CW 0 Call Wraps	EM 8 E&M Work Orders	BA 0 Business Alarms

Name	SR	CW	WO	EM	Total
South	29	0	2	7	38
North	25	0	2	0	27
West	23	0	3	0	26
East	18	0	4	1	23

Strategische Oplossing

- Top Down
- Integratie (Data/Systemen)
- Schaalbaar (Data/Ontwerp)
- Mobiliteit
- Inzet Cloud
- Analyse (FDD)
- Rationalisatie (Alarms)
- Internet of Things
- Communicatie – SMS
- Commercial Off The Shelf (COTS)
- Integratie van bestaande of nieuwe systemen wanneer nodig
- Continue verbeteringsproces
 - Verbetering Business Rules
 - Intelligent beheer
 - KPI Inzichten



Voordelen ten aanzien van wet- en regelgeving

- Verbeterde prestaties – minder boetes
- Verbeterde klantervaring
- Besparing in:
 - Onderbrekingen in de levering
 - Aantal woningen getroffen door riooloverstroming
 - Aantal woningen getroffen door lage druk
 - Milieuincidenten
 - Lekkages
 - Energieverbruik
- Verbeterde Asset Conditie

Scottish Water Story – The Big Picture

- Vereisten:
Een oplossing die een geïntegreerd beeld geeft van Asset Performance; Klantcontacten & Werkactiviteiten. Momenteel berust dit op een handmatige controle van meerdere systemen om dit 'grote plaatje' te verzamelen.
- Stap 0 – Diversiviteit aan systemen – beperken handmatige analyse
- Stap 1 – Situational Awareness – verrijk data met:
 - Klantcontacten en serviceverzoeken
 - Werkorders eigen personeel
 - Alarmen en afgeleiden daarvan
 - Geo-informatie – Weer, Voertuigen, Watermeters, Riolering, Standaarden, Overstromingsgebieden
- Stap 2 – Fout Detectie – Automatische analyse (en waarschuwing)
+ Alarm profiel+ Energiekosten

Scottish Water Story – The Big Picture

- Stap 3 – Ontwikkel een alarm management
 - van Proof of Concept naar een standaard alarm management platform voor Scottish Water
- Stap 4 – Volledige integratie van alle telemetrie & SCADA data
- Stap 5 - Ontwikkel een meer proactieve aanpak door nieuwe, intelligentere bedrijfsregels
- (bijv. Door weersinformatie te koppelen aan assets en regels)
- Stap 6 - Integreer alle Intelligent Control Center-systemen in Situational Awareness
 - Om zodoende 1 standaard platform te ontwikkelen voor werkorders en business management

23/10/2014 10:03:11

Clean Water

70 North

45 South

80 East

24 West

0 Sewer Flooding

0 Weather Warning

0

User: pmorris Profile: None

5 Calls

0 Alarm & Calls

0 5 Calls & Alarm

0 ITS Early Warn.

0 5 No Water or LP

0 WSZ Event

0 Trig. Prop. Event

1.2.4

Schematic View

01/01/2014

Updated: 01/01/2014

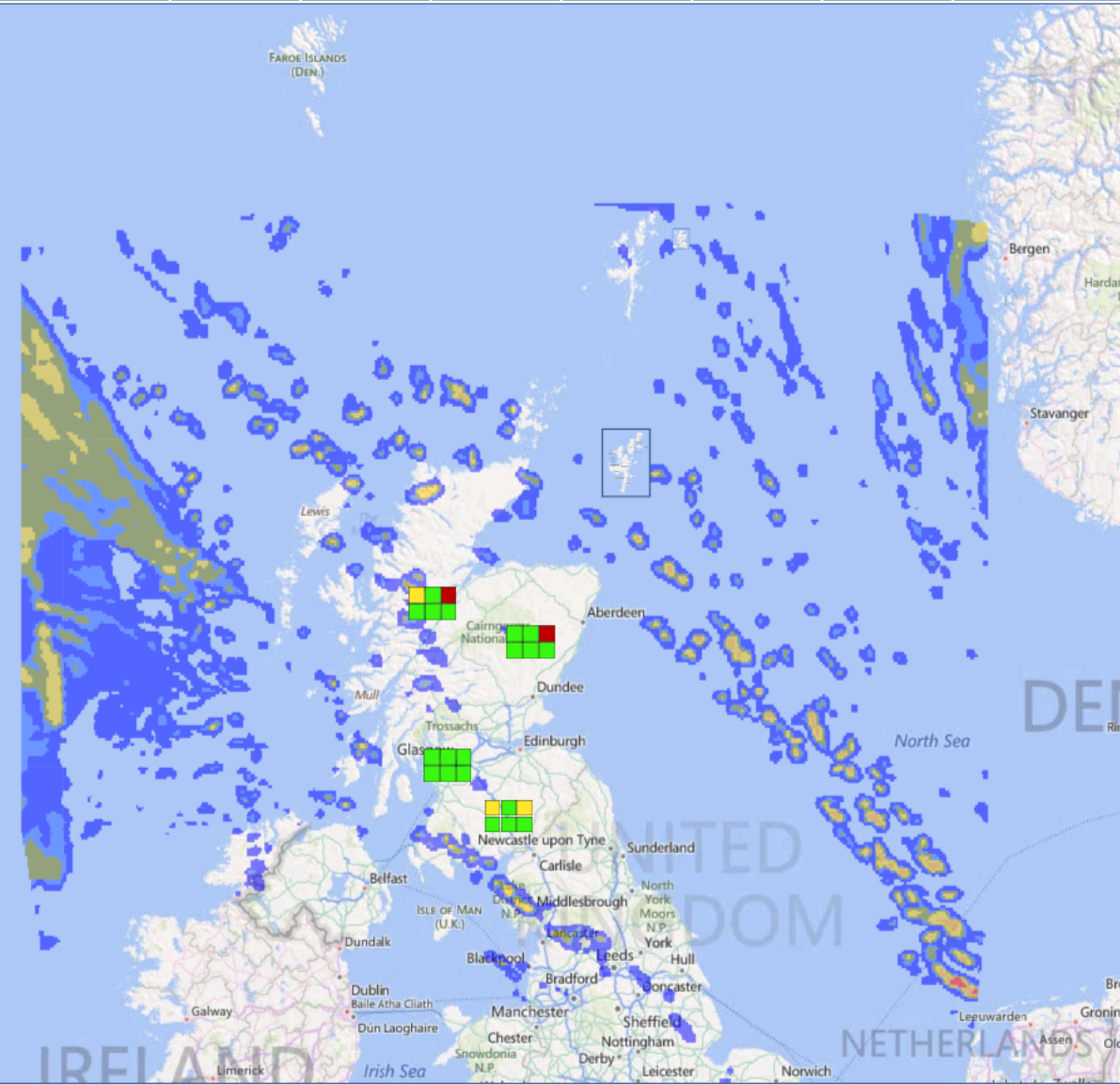
Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

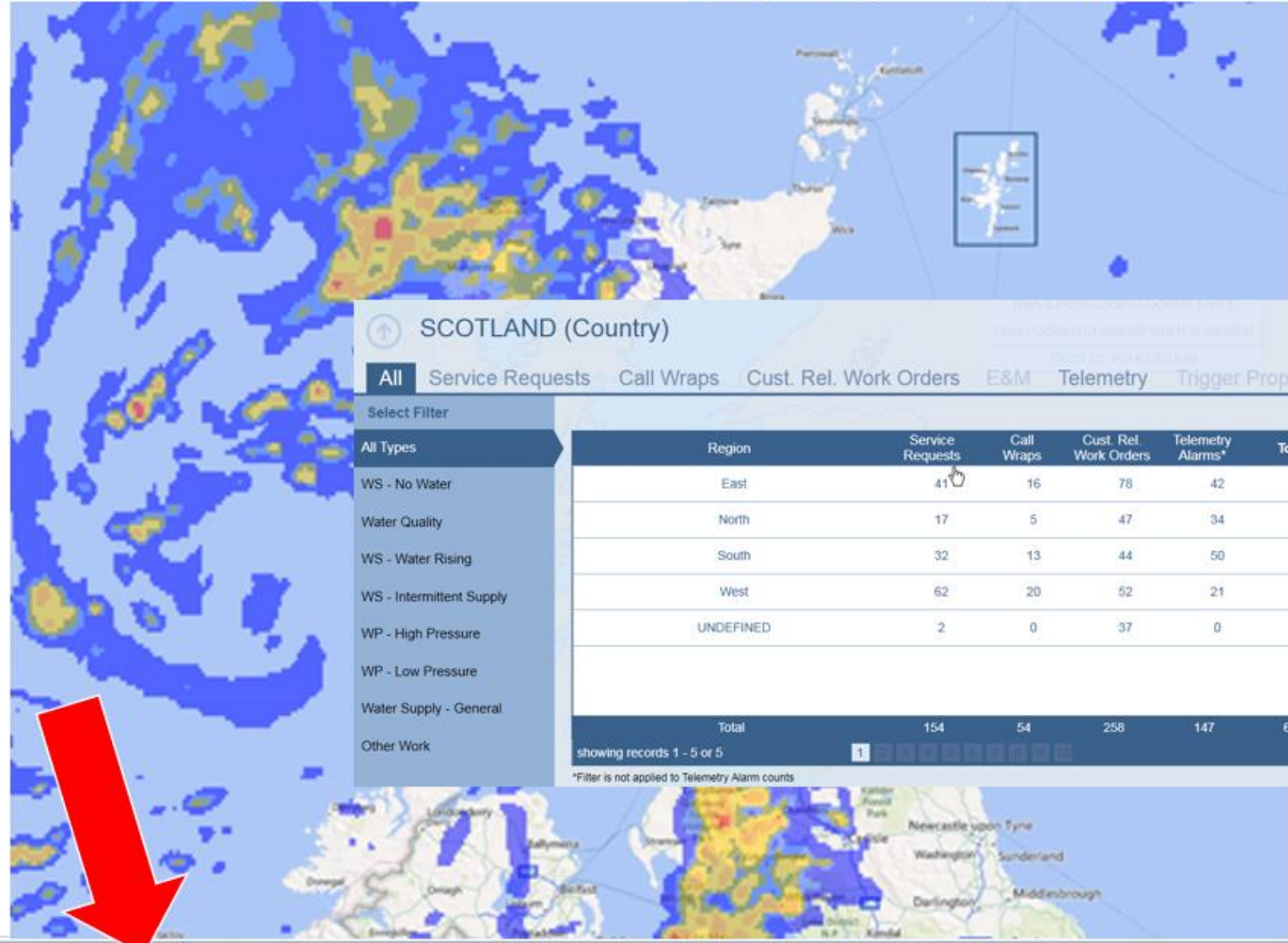
- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind



NORTHERN IRELAND (Country)

SR 97 Service Requests	WO 12 Cust. Rel. Work Orders	TA 219 Telemetry Alarms
CW 0 Call Wraps	EM 8 E&M Work Orders	BA 0 Business Alarms

Name	SR	CW	WO	EM	Total
South	29	0	2	7	38
North	25	0	2	0	27
West	23	0	3	0	26
East	18	0	4	1	23



Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind

SCOTLAND (Country)

0	5
Call Wraps	Service Requests
0	0
Cust. Rel. Work Orders	Telemetry Alarms

Region	Service Requests	Call Wraps	Cust. Rel. Work Orders	Telemetry Alarms
East	0	0	0	0
North	5	0	0	0
South	0	0	0	0
West	0	0	0	0
ndefined	0	0	0	0

SCOTLAND (Country)

All Service Requests Call Wraps Cust. Rel. Work Orders E&M Telemetry Trigger Properties

Select Filter

All Types

- WS - No Water
- Water Quality
- WS - Water Rising
- WS - Intermittent Supply
- WP - High Pressure
- WP - Low Pressure
- Water Supply - General
- Other Work

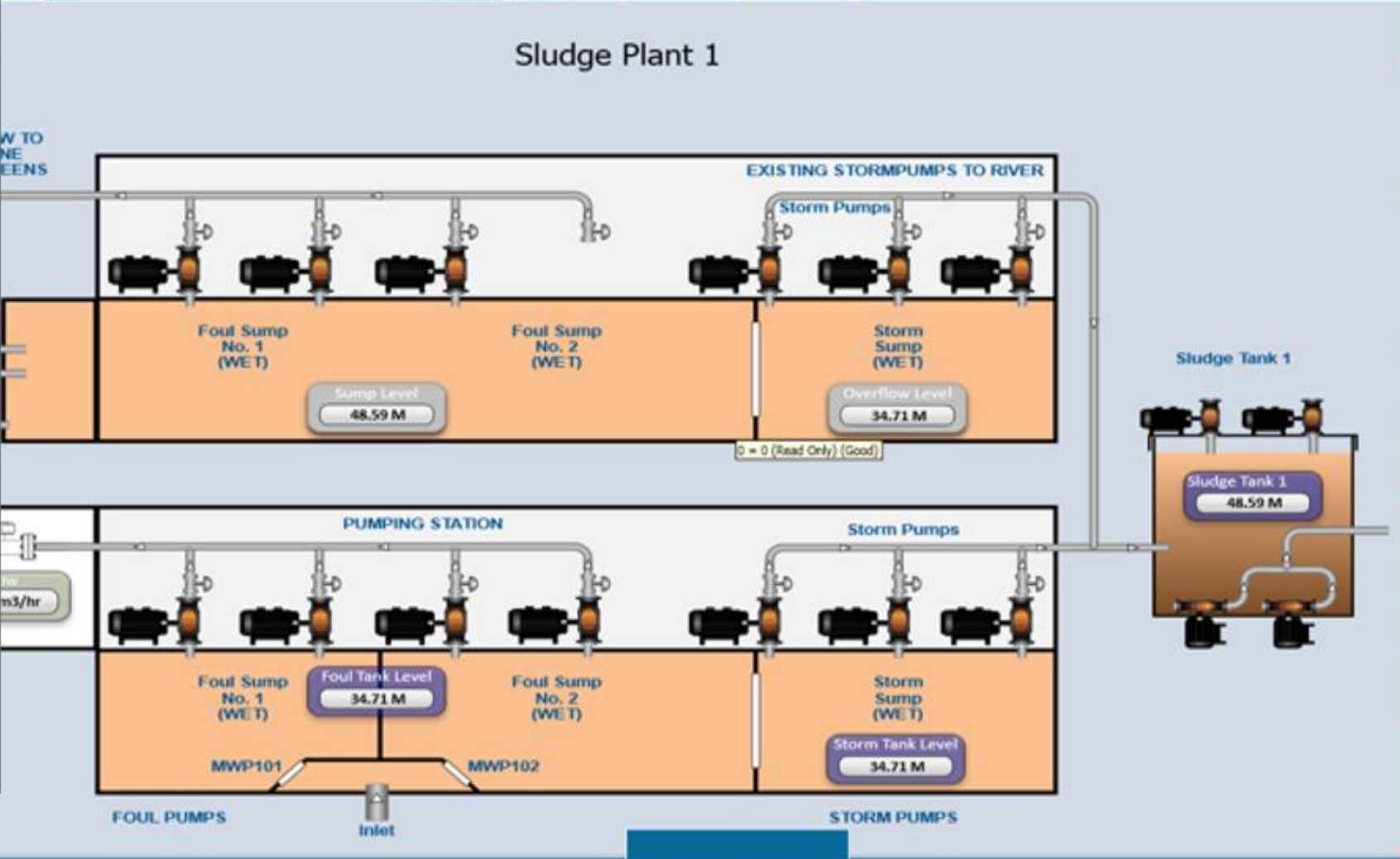
Region	Service Requests	Call Wraps	Cust. Rel. Work Orders	Telemetry Alarms*	Total
East	41	16	78	42	177
North	17	5	47	34	103
South	32	13	44	50	139
West	62	20	52	21	155
UNDEFINED	2	0	37	0	39
Total	154	54	258	147	613

showing records 1 - 5 of 5

*Filter is not applied to Telemetry Alarm counts



- Scottish Water
- Clean Water
- SCOTLAND
 - East
 - North
 - ACHARACLE WS
 - 005000062856
 - 005000335732
 - 005000565189
 - 005000584816
 - Acharacle WSZ
 - 005000231375
 - Acharacle DMA
 - Salen DMA
 - Ardtoe SR WSZ
 - ACHILTIBUIE WS
 - ACHMELVICH WS
 - ACHNASHEEN WS
 - ALLIGIN WS
 - ALTNAHARRA WS
 - APPLECROSS WS
 - ARDFERN WS
 - ARDRISHAIG WS
 - ARDVOURLIE WS
 - ARINAGOUR WS
 - ARNISDALE WS
 - ASSYNT WS
 - AULTBEA WS



SCOTLAND (Country)

0	5
Call Wraps	Service Requests
0	0
Cust. Rel. Work Orders	Telemetry Alarms

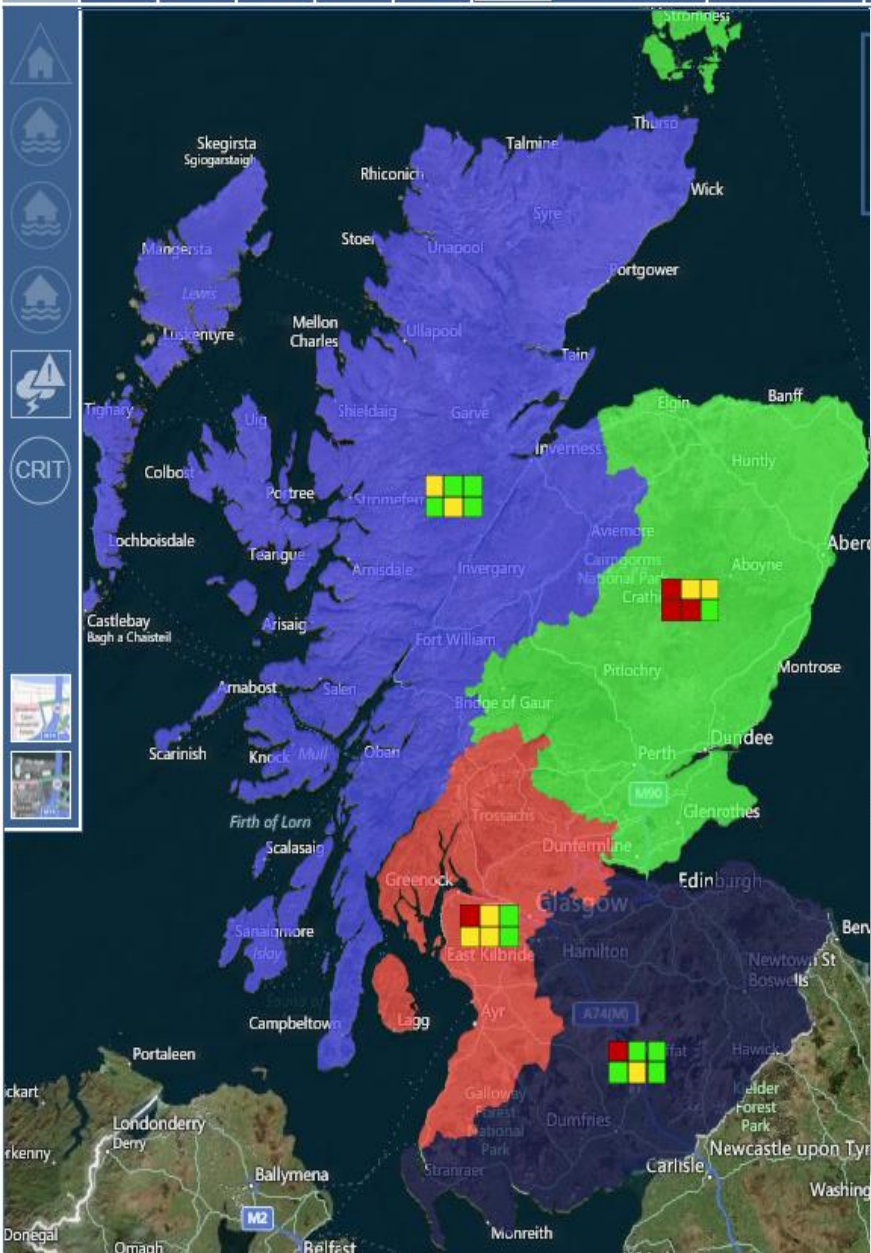
Region	Service Requests	Call Wraps	Cust. Rel. Work Orders	Telemetry Alarms
East	0	0	0	0
North	5	0	0	0
South	0	0	0	0
West	0	0	0	0
Undefined	0	0	0	0

Time / Date	Tag	Priority	Quality	Description	ACK_COMMENT
7/6/2014 7:05 PM	PIR Sensor1	600	Good	Digital Alarm	
7/6/2014 7:00 PM	Valve1	600	Good	'The pressure in Valve1 is 'normal.'	
7/6/2014 6:32 PM	Tank1	900	Good	'The level in tank1 is 'too low, Critical Level!'	

PREFIX THIS IS MESSAGE 2

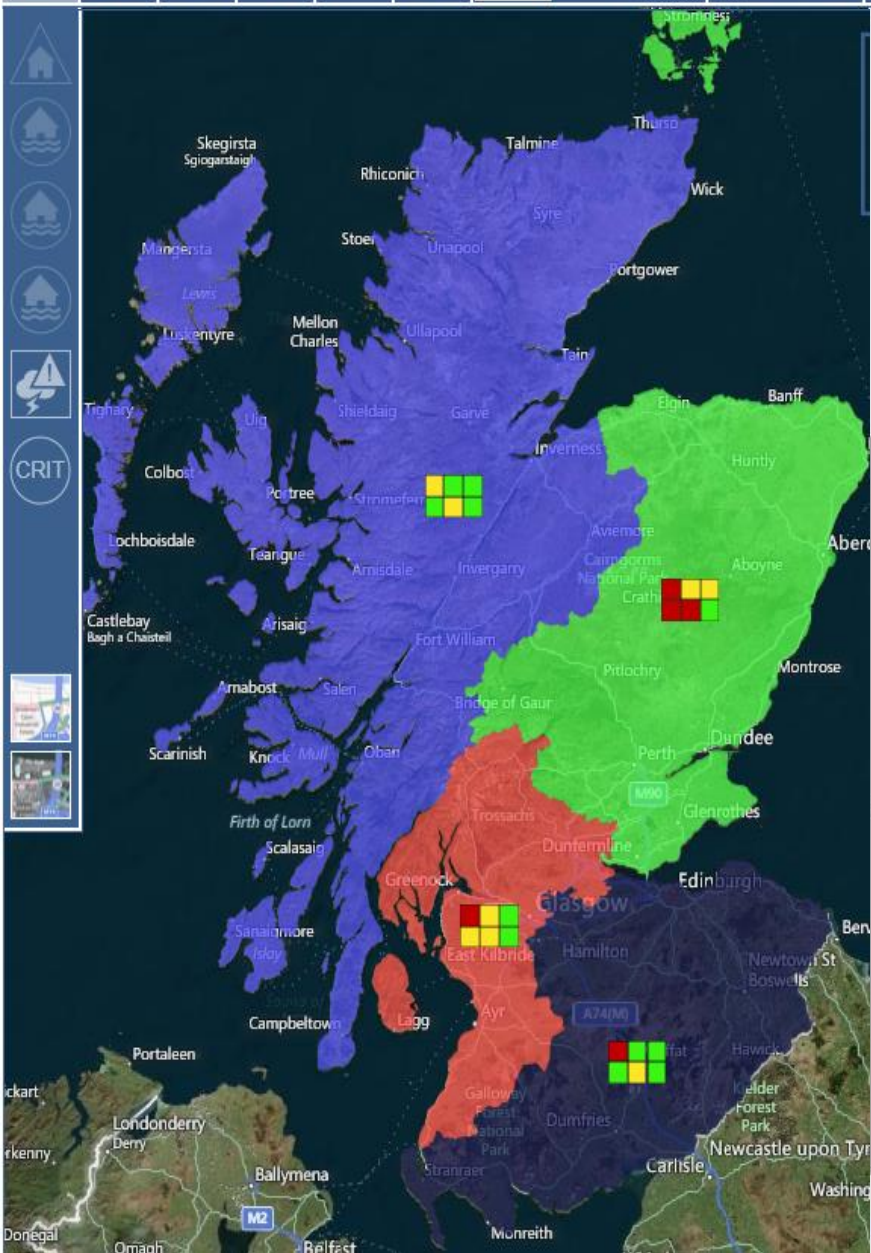
Situational
Awareness Demo





SCOTLAND (Country)		
SR 62 Service Requests	WO 411 Cust. Rel. Work Orders	TA 97 Telemetry Alarms
CW 132 Call Wraps	EM 409 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>West</u>	30	85	120	69	304
<u>East</u> ←	13	16	86	129	244
<u>South</u>	13	13	69	132	227
<u>North</u>	4	17	55	80	156

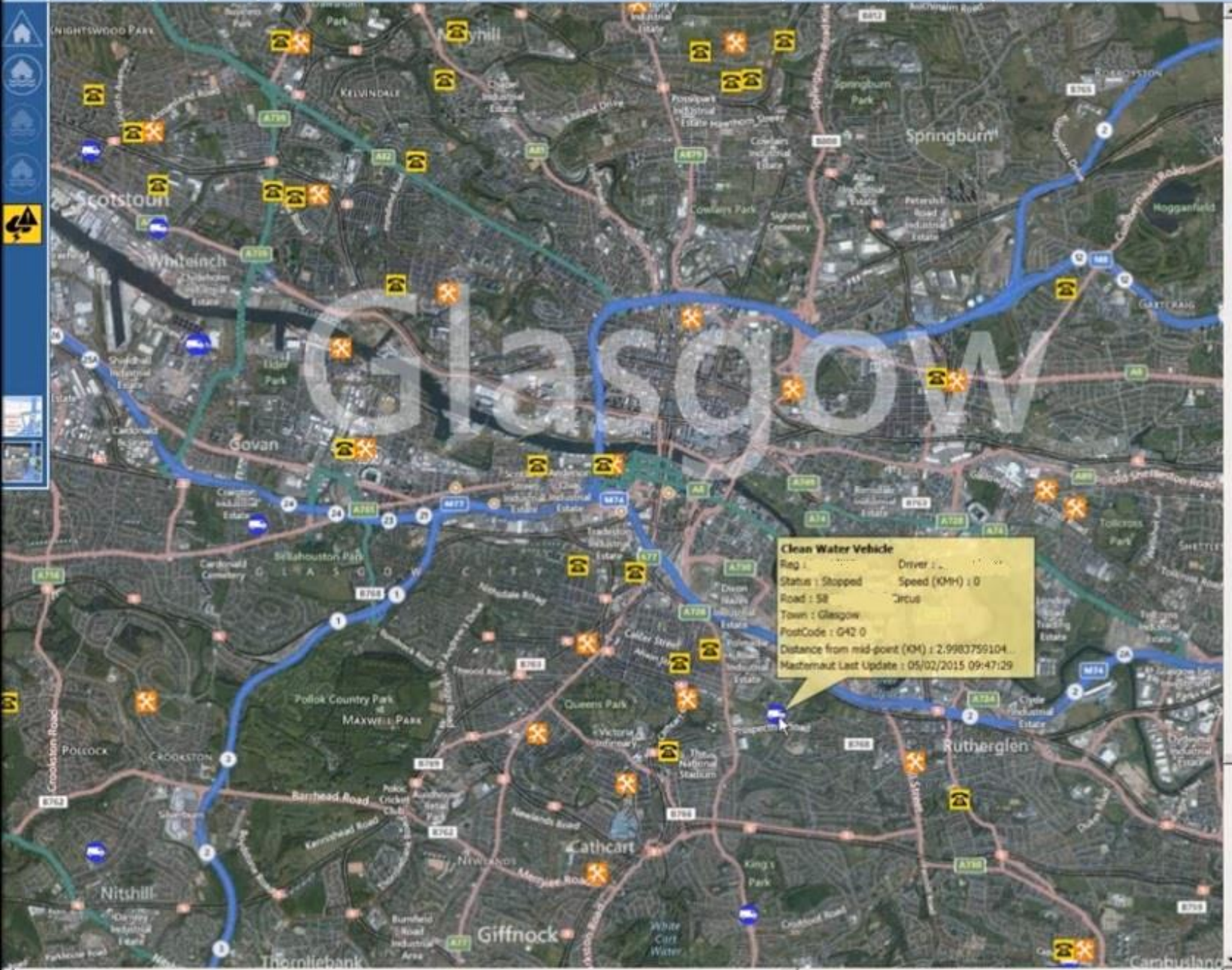


SCOTLAND (Country)		
SR 62 Service Requests	WO 411 Cust. Rel. Work Orders	TA 97 Telemetry Alarms
CW 132 Call Wraps	EM 409 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
East (Region)					
Population	Population Area		Regulation Zone		
0	0		0		

SR 14	CW 17	WO 86	EM 128	TA 42	BA 1
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Zoom To Region Close



DMA (DistrictMeteringArea)

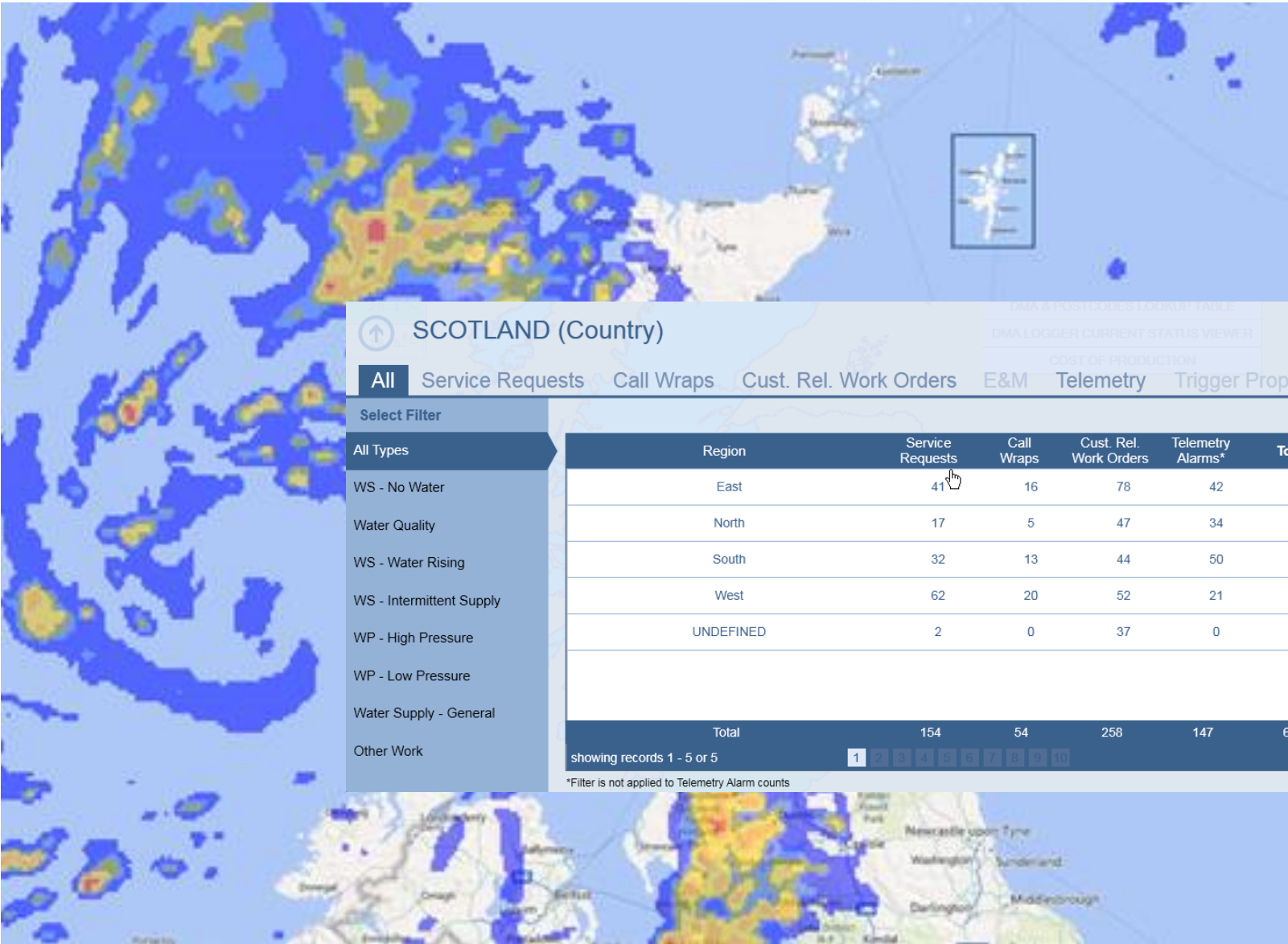
SR 1 Service Requests	WO 1 Cust. Rel. Work Orders	TA 0 Telemetry Alarms
CW 0 Call Wraps	EM 0 E&M Work Orders	BA 0 Business Alarms

SR	CW	WO	EM
----	----	----	----

SR Number	Type	Create Date & Time	Postcode
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...	WS No Water	03/02/2015 19:18	G5
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Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind

SCOTLAND (Country)

0	5
Call Wraps	Service Requests
0	0
Cust. Rel. Work Orders	Telemetry Alarms

Region	Service Requests	Call Wraps	Cust. Rel. Work Orders	Telemetry Alarms
East	0	0	0	0
North	5	0	0	0
South	0	0	0	0
West	0	0	0	0
Undefined	0	0	0	0

SCOTLAND (Country)

All Service Requests Call Wraps Cust. Rel. Work Orders E&M Telemetry Trigger Properties

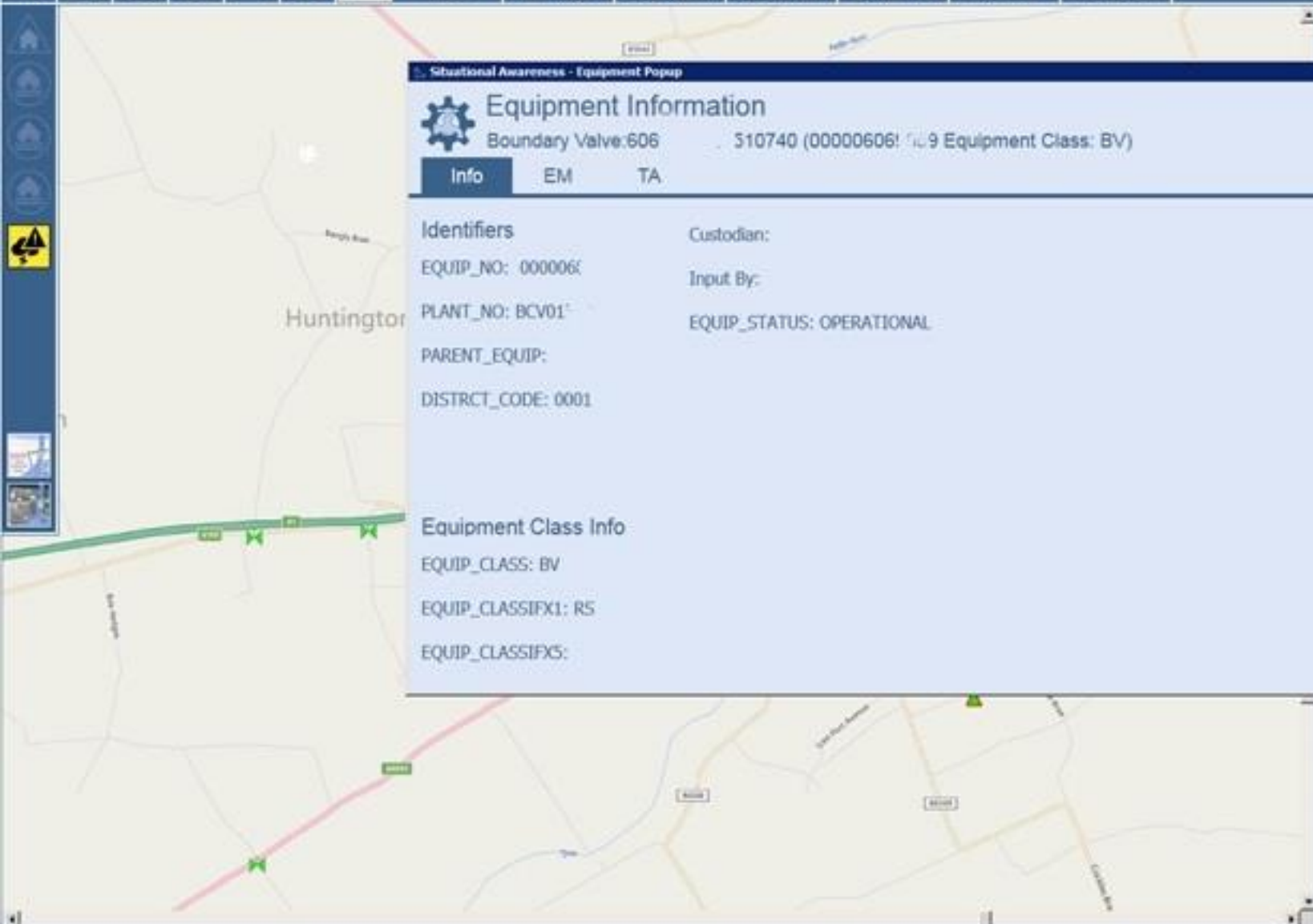
Select Filter

- All Types
- WS - No Water
- Water Quality
- WS - Water Rising
- WS - Intermittent Supply
- WP - High Pressure
- WP - Low Pressure
- Water Supply - General
- Other Work

Region	Service Requests	Call Wraps	Cust. Rel. Work Orders	Telemetry Alarms*	Total
East	41	16	78	42	177
North	17	5	47	34	103
South	32	13	44	50	139
West	62	20	52	21	155
UNDEFINED	2	0	37	0	39
Total	154	54	258	147	613

showing records 1 - 5 of 5

*Filter is not applied to Telemetry Alarm counts



Situational Awareness - Equipment Popup

Equipment Information
 Boundary Valve: 606 310740 (00000606) 9 Equipment Class: BV

Info EM TA

Identifiers
 EQUIP_NO: 000006
 PLANT_NO: BCV01
 PARENT_EQUIP:
 DISTRCT_CODE: 0001
 Custodian:
 Input By:
 EQUIP_STATUS: OPERATIONAL

Equipment Class Info
 EQUIP_CLASS: BV
 EQUIP_CLASSFX1: RS
 EQUIP_CLASSFX5:

Site Menu Network Schematic

(WaterOperationalArea)

WO	TA				
0	8				
Rel. Work Orders	Telemetry Alarms				
EM	BA				
0	0				
M Work Orders	Business Alarms				
	SR	CW	WO	EM	Total
	6	0	0	0	6
	3	0	0	0	3
	2	0	0	0	2
	1	0	0	0	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

20/04/2015 11:56:00 Clean Water [Icons: Print, Weather, Alarm, Home, Navigation, Search, Warning] 75 North 31 South 92 East 28 West 0 Sewer Flooding 0 Weather Warning [Star, Heart] User: sw-srv-icomics Profile: ICC Control Room [Settings]

[Icons: Home, Navigation, Search, Warning] 1 5 Calls 0 Alarm & Calls 1 5 Calls & Alarm 2 ITS Early Warn. 6 WSZ Event 0 Trig. Prop. Event [Help, Schematic View, Info]

NORTHUMBERLAND

Situational Awareness - Network Popup

Business Alarms (Filtered) Remove Filter

DMA (DistrictMeteringArea)

Comments **Events** Documents

SR	CW	#	SR Number	Type	Status	Severity	Create Date	Close Date	Summary	Resolution	Address 1	Town
		1		WP Low Pressure	Open	Medium	20/04/2015 08:48	01/01/0001 00:00	WP Low Pressure: SEE NOTES			DINGW
		2		WS Water Rising	Open	Medium	20/04/2015 08:19	01/01/0001 00:00	WS Water Rising: SEE NOTES			E DINGW

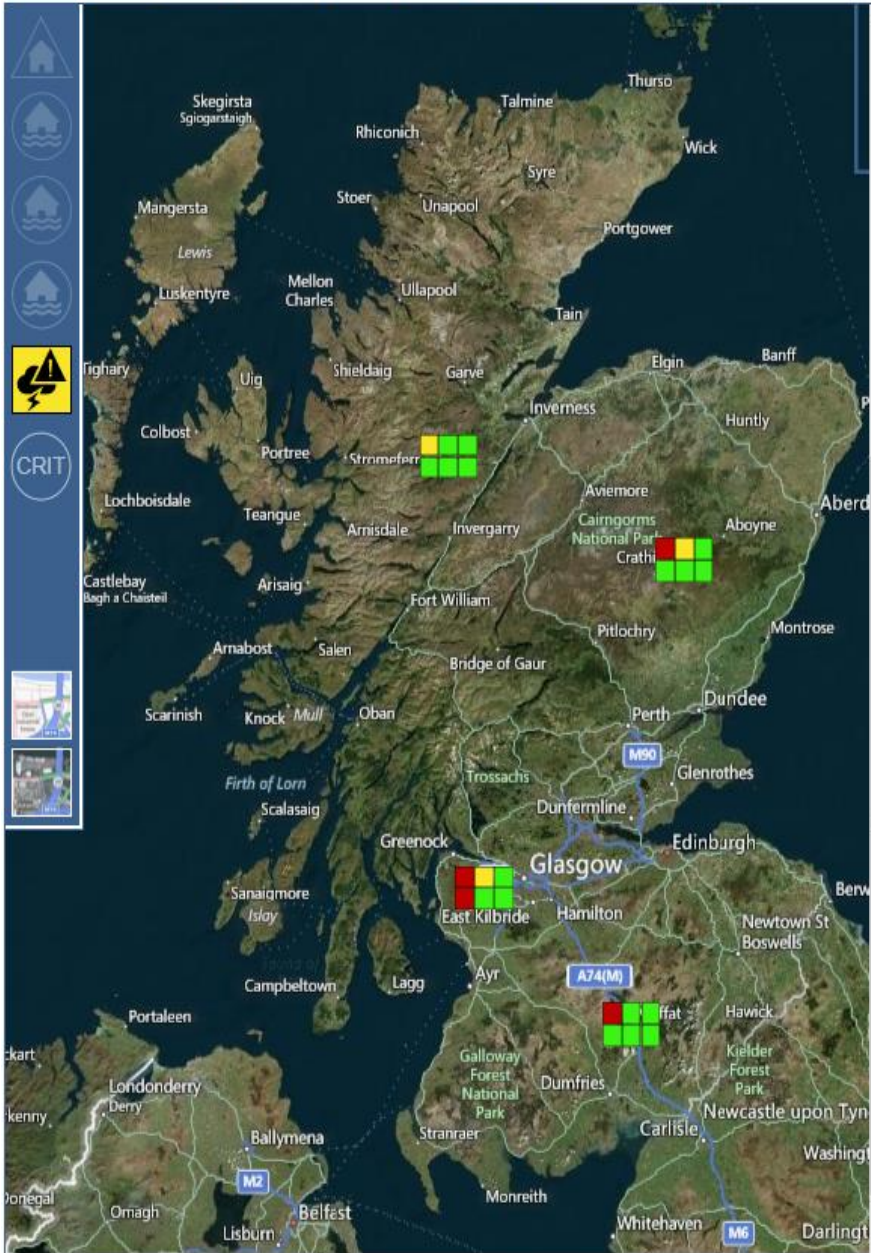
Zoom To DMA Switch To Mimic Close

WO	151	TA	226		
Rel. Work Orders		Telemetry Alarms			
EM	2449	BA	10		
M Work Orders		Business Alarms			
	SR	CW	WO	EM	Total
	23	14	41	810	888
	9	10	17	640	676
	28	14	35	490	567
	19	10	16	507	552

[Map Navigation Icons: Home, Up, Down, Left, Right, Search, Warning, CRIT]

16/04/2015 10:36:11 Clean Water 49 North 20 South 62 East 14 West 0 Sewer Flooding 2 Weather Warning User : WANGJ2 Profile: None

10 5 Calls Alarm & Calls 0 0 0 2 3 0 ? 1.2.19 Schematic View



SCOTLAND (Country)

SR 66 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 146 Call Wraps	EM 526 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>East</u>	20	38	97	171	326
<u>West</u>	24	70	95	93	282
<u>South</u>	14	30	68	144	256
<u>North</u>	6	7	54	113	180

16/04/2015 10:39:56 Clean Water 49 North 20 South 62 East 14 West 0 Sewer Flooding 2 Weather Warning User: WANGJ2 Profile: None

10 5 Calls 0 Alarm & Calls 0 5 Calls & Alarm 2 ITS Early Warn. 3 WSZ Event 0 Trig. Prop. Event

16/04/2015 04:00:00

Updated: 16/04/2015 04:00:00

Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind

SCOTLAND (Country)

SR 66 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 146 Call Wraps	EM 525 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>East</u>	20	39	98	174	331
<u>West</u>	24	70	94	95	283
<u>South</u>	13	30	64	144	251
<u>North</u>	6	7	53	113	179

16/04/2015 10:41:58

Clean Water

49 North

20 South

62 East

14 West

0 Sewer Flooding

2 Weather Warning

User: WANGJ2 Profile: None

10 5 Calls

0 Alarm & Calls

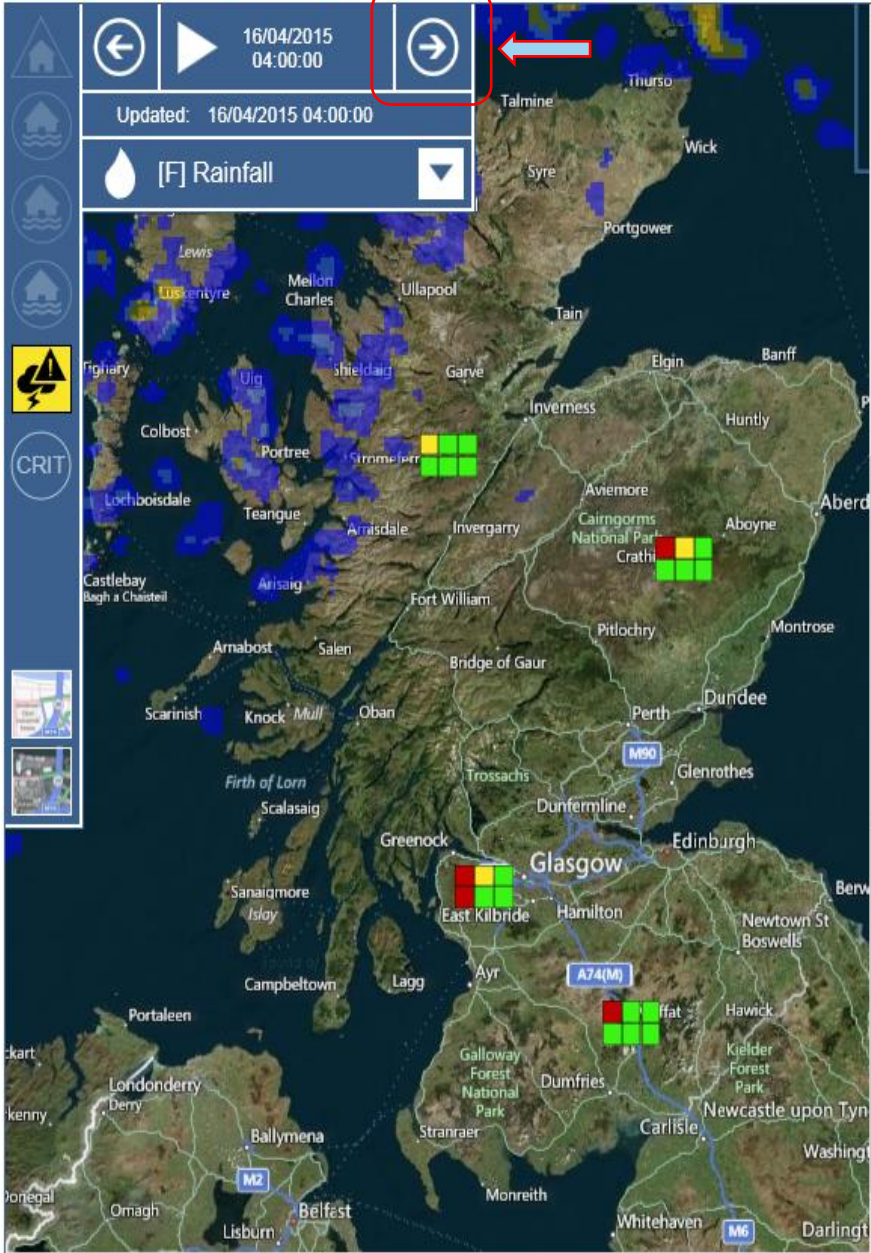
0 5 Calls & Alarm

2 ITS Early Warn.

3 WSZ Event

0 Trig. Prop. Event

Schematic View



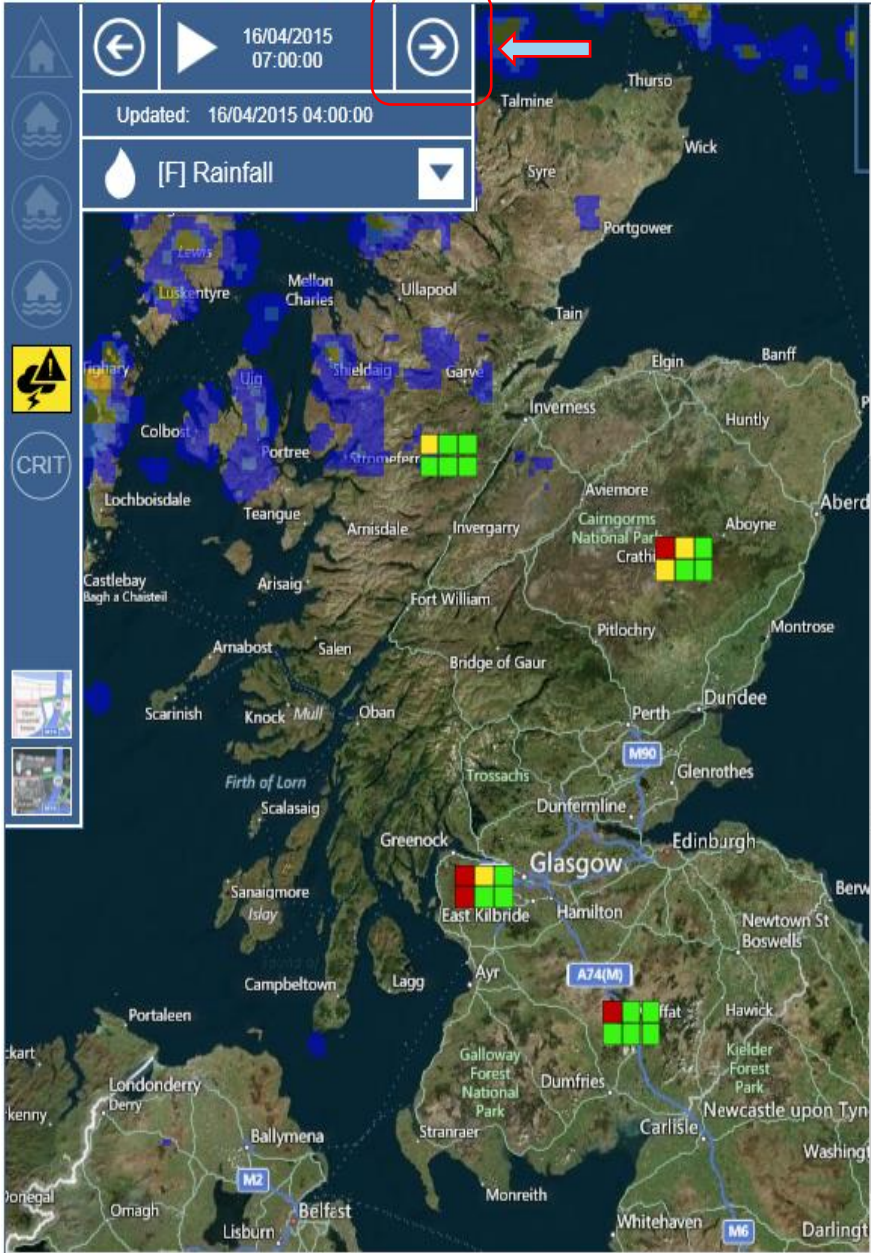
SCOTLAND (Country)

SR 66 Service Requests	WO 364 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 146 Call Wraps	EM 525 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>East</u>	20	39	98	174	331
<u>West</u>	24	70	94	95	283
<u>South</u>	13	30	64	144	251
<u>North</u>	6	7	53	113	179

16/04/2015 10:44:35 Clean Water 49 North 20 South 62 East 14 West 0 Sewer Flooding 2 Weather Warning User : WANGJ2 Profile: None

10 5 Calls 0 Alarm & Calls 0 5 Calls & Alarm 2 ITS Early Warn. 3 WSZ Event 0 Trig. Prop. Event 1.2.19

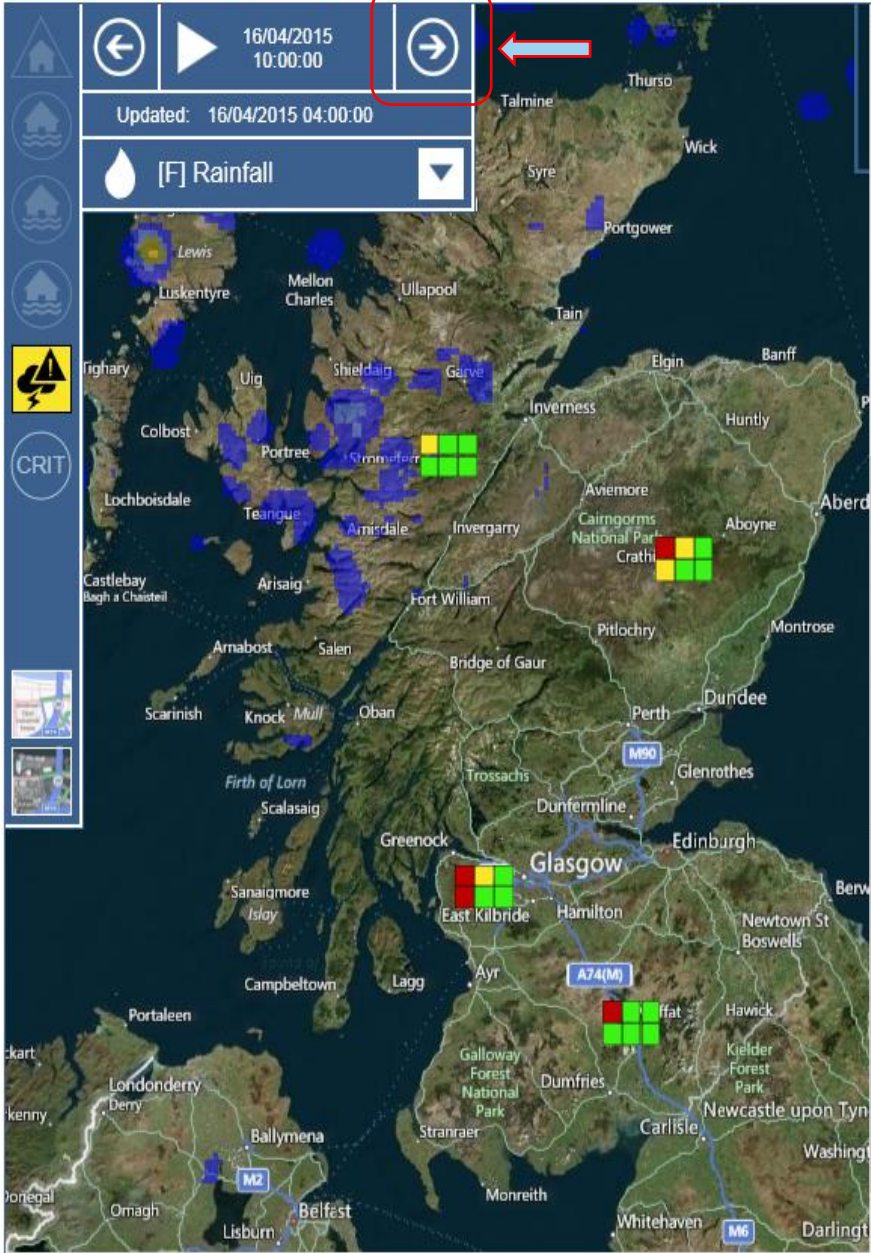


SCOTLAND (Country)		
SR 66 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 528 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
East	20	39	97	172	328
West	24	70	95	95	284
South	13	30	64	143	250
North	6	7	54	115	182

16/04/2015 10:45:29 Clean Water 49 North 20 South 62 East 14 West 0 Sewer Flooding **2 Weather Warning** User : WANGJ2 Profile: None

10 5 Calls 0 Alarm & Calls 0 5 Calls & Alarm 2 ITS Early Warn. 3 WSZ Event 0 Trig. Prop. Event 1.2.19



SCOTLAND (Country)

SR 67 Service Requests	WO 362 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 529 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>East</u>	20	39	97	172	328
<u>West</u>	24	70	95	95	284
<u>South</u>	13	30	64	143	250
<u>North</u>	6	7	54	115	182

16/04/2015 10:47:18

Clean Water

49 North

20 South

62 East

14 West

0 Sewer Flooding

2 Weather Warning

User: WANGJ2 Profile: None

10 5 Calls

0 Alarm & Calls

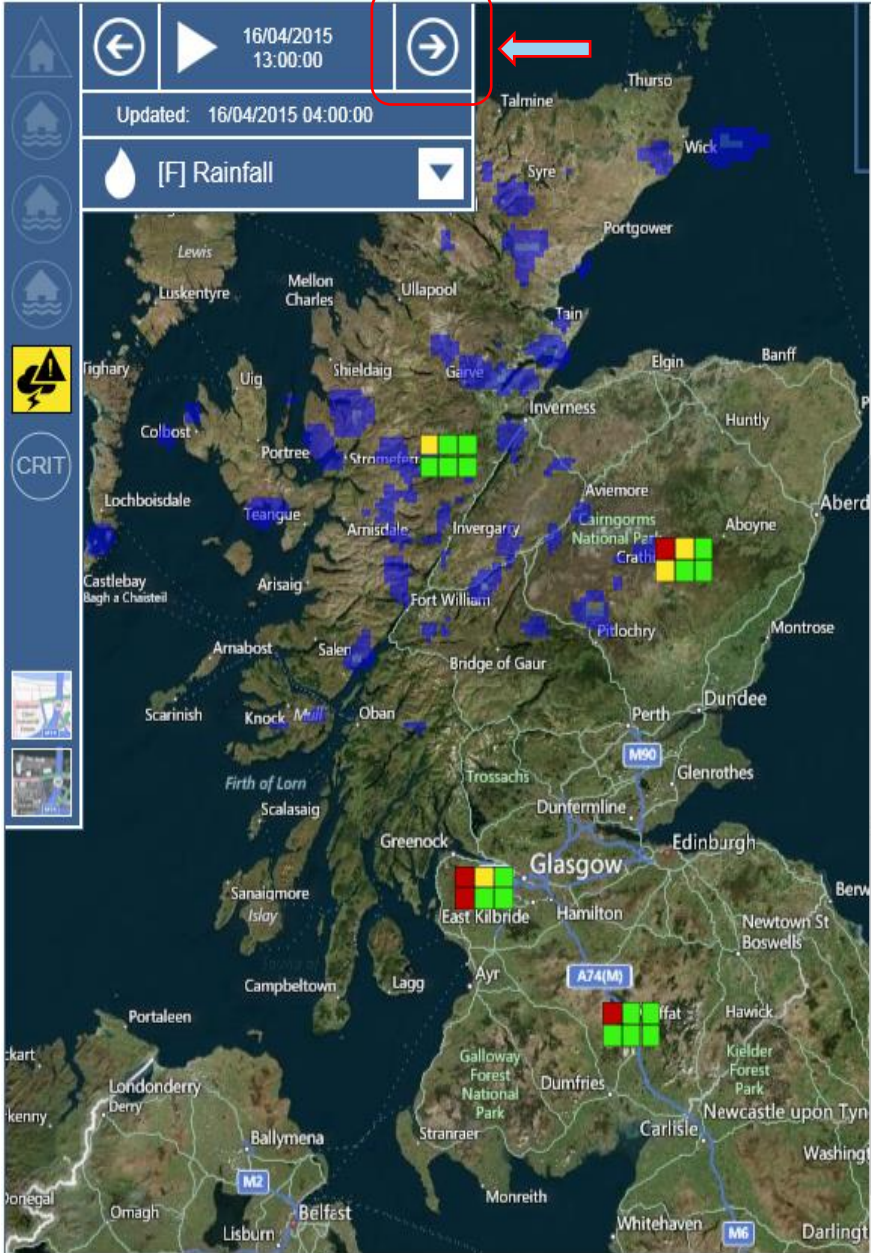
0 5 Calls & Alarm

2 ITS Early Warn.

3 WSZ Event

0 Trig. Prop. Event

Schematic View



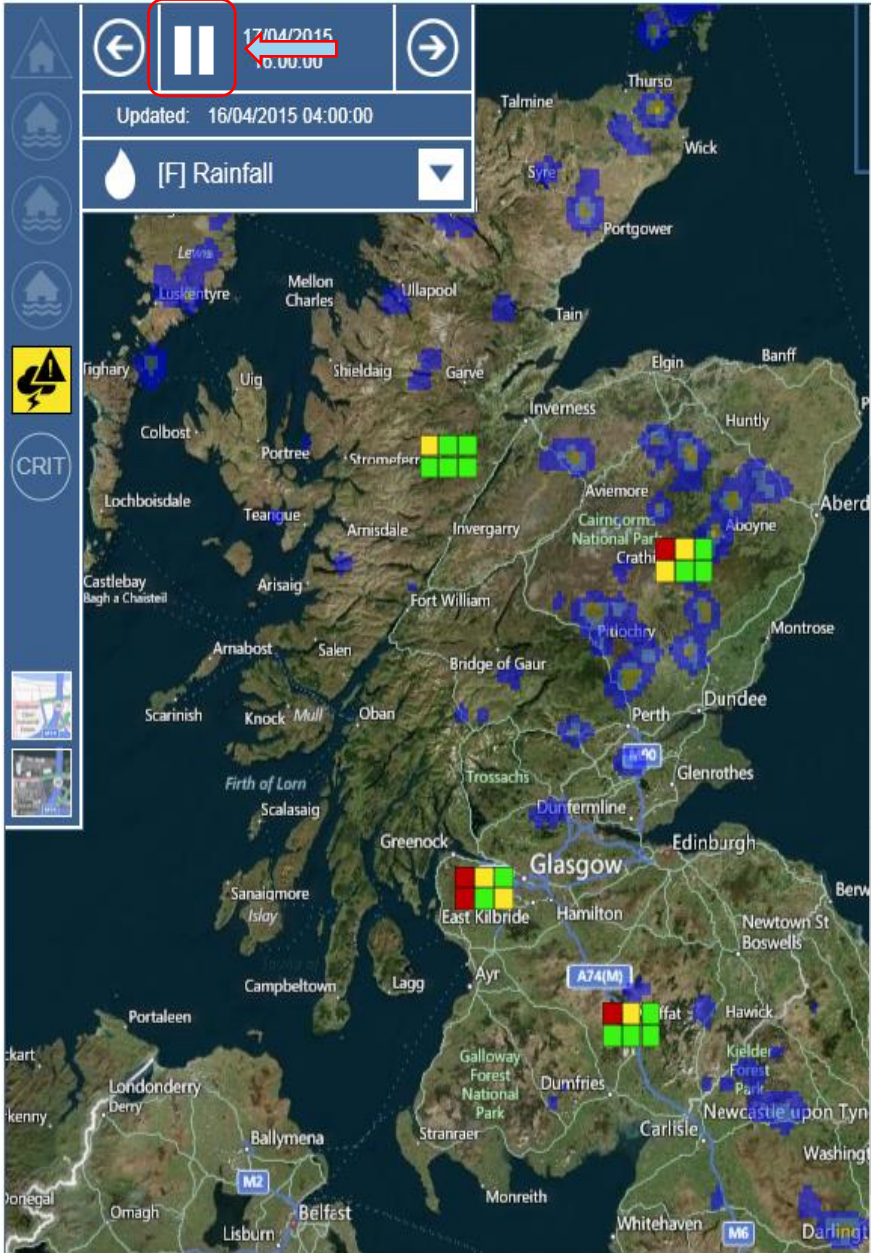
SCOTLAND (Country)

SR 67 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 530 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
<u>East</u>	21	40	96	172	329
<u>West</u>	24	70	95	95	284
<u>South</u>	13	30	64	143	250
<u>North</u>	6	7	54	119	186

16/04/2015 11:34:32 Clean Water 35 North 12 South 41 East 12 West 0 Sewer Flooding 2 Weather Warning User: WANGJ2 Profile: None

10 5 Calls 0 Alarm & Calls 0 5 Calls & Alarm 2 ITS Early Warn. 5 WSZ Event 0 Trig. Prop. Event 1.2.19 Schematic View



SCOTLAND (Country)		
SR 67 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 530 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
East	21	40	96	172	329
West	24	70	95	95	284
South	13	30	64	143	250
North	6	7	54	119	186

16/04/2015 11:34:32

Water Clean Water

35 North

12 South

41 East

12 West

0 Sewer Flooding

2 Weather Warning

User: WANGJ2 Profile: None

10 5 Calls

0 Alarm & Calls

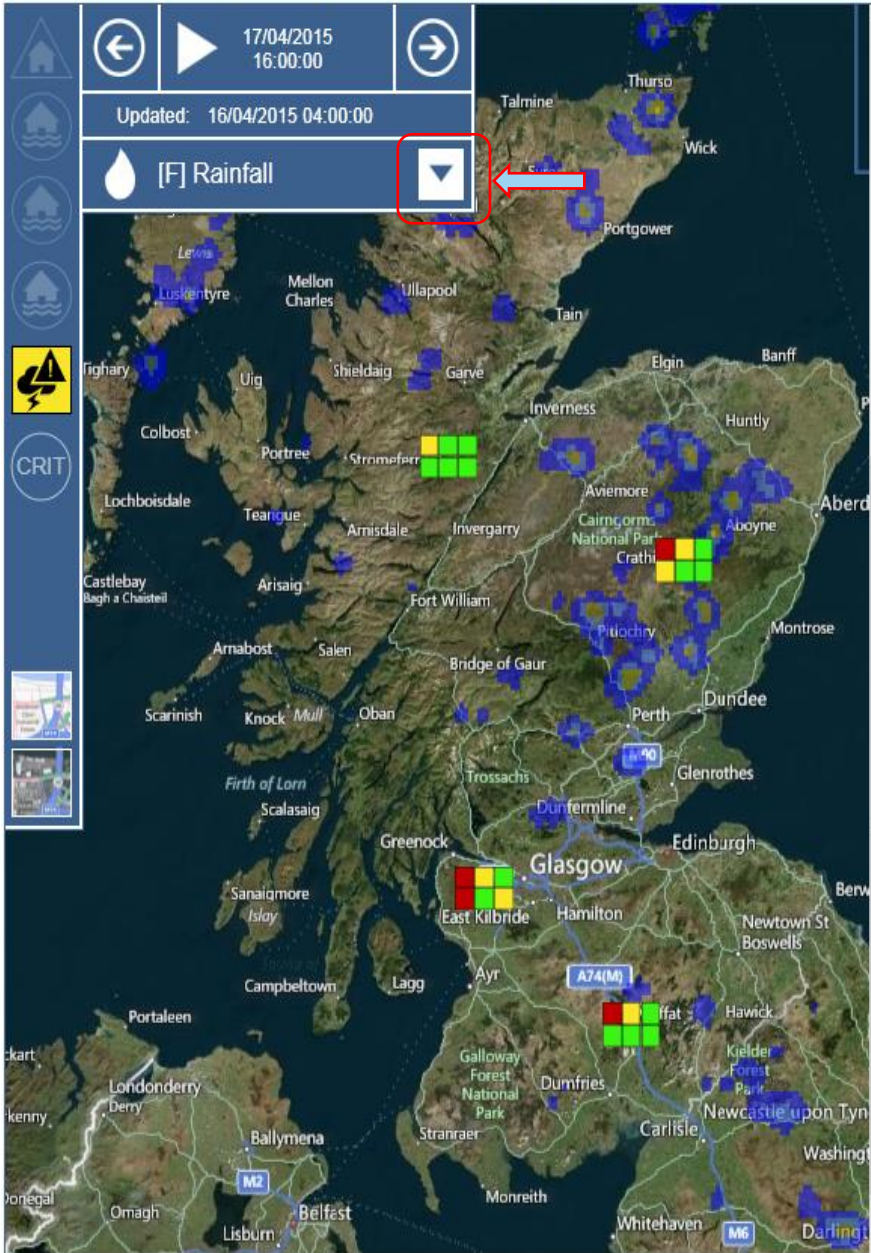
0 5 Calls & Alarm

2 ITS Early Warn.

5 WSZ Event

0 Trig. Prop. Event

Schematic View



SCOTLAND (Country)		
SR 67 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 530 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
East	21	40	96	172	329
West	24	70	95	95	284
South	13	30	64	143	250
North	6	7	54	119	186

16/04/2015 11:58:14 Clean Water 39 North 14 South 42 East 12 West 0 Sewer Flooding 2 Weather Warning User: WANGJ2 Profile: None

6 5 Calls 0 Alarm & Calls 0 5 Calls & Alarm 2 ITS Early Warn. 3 WSZ Event 0 Trig. Prop. Event 1.2.19

17/04/2015 16:00:00

Updated: 16/04/2015 04:00:00

Weather Layers

Observed Weather

- Rainfall
- Lightning

Forecast Weather

- Weather Type
- Rainfall
- Temperature
- Temperature Map
- Wind

SCOTLAND (Country)


SR 67 Service Requests	WO 363 Cust. Rel. Work Orders	TA 145 Telemetry Alarms
CW 147 Call Wraps	EM 530 E&M Work Orders	BA 15 Business Alarms

Name	SR	CW	WO	EM	Total
East	21	40	96	172	329
West	24	70	95	95	284
South	13	30	64	143	250
North	6	7	54	119	186

Severe Weather Warnings - Scotland

Publication Date	Level	Level Name	Weather Type	Warning Kind	Location	
13/04/2015 11:00:08	1	YELLOW	RAIN	WARNING	Strathclyde	More Details...
13/04/2015 11:00:08	1	YELLOW	RAIN	WARNING	Highlands and Eilean Siar	More Details...

YELLOW WARNING of RAIN for Strathclyde
Last Updated : 13/04/2015 11:00:08



Strathclyde

Yellow Warning of Rain for Strathclyde : Argyll and Bute valid from 0005 Tue 14 Apr to 0500 Wed 15 Apr

[View on MetOffice Website](#)

Weather data provided by Met Office




Severe Weather Warning Popup

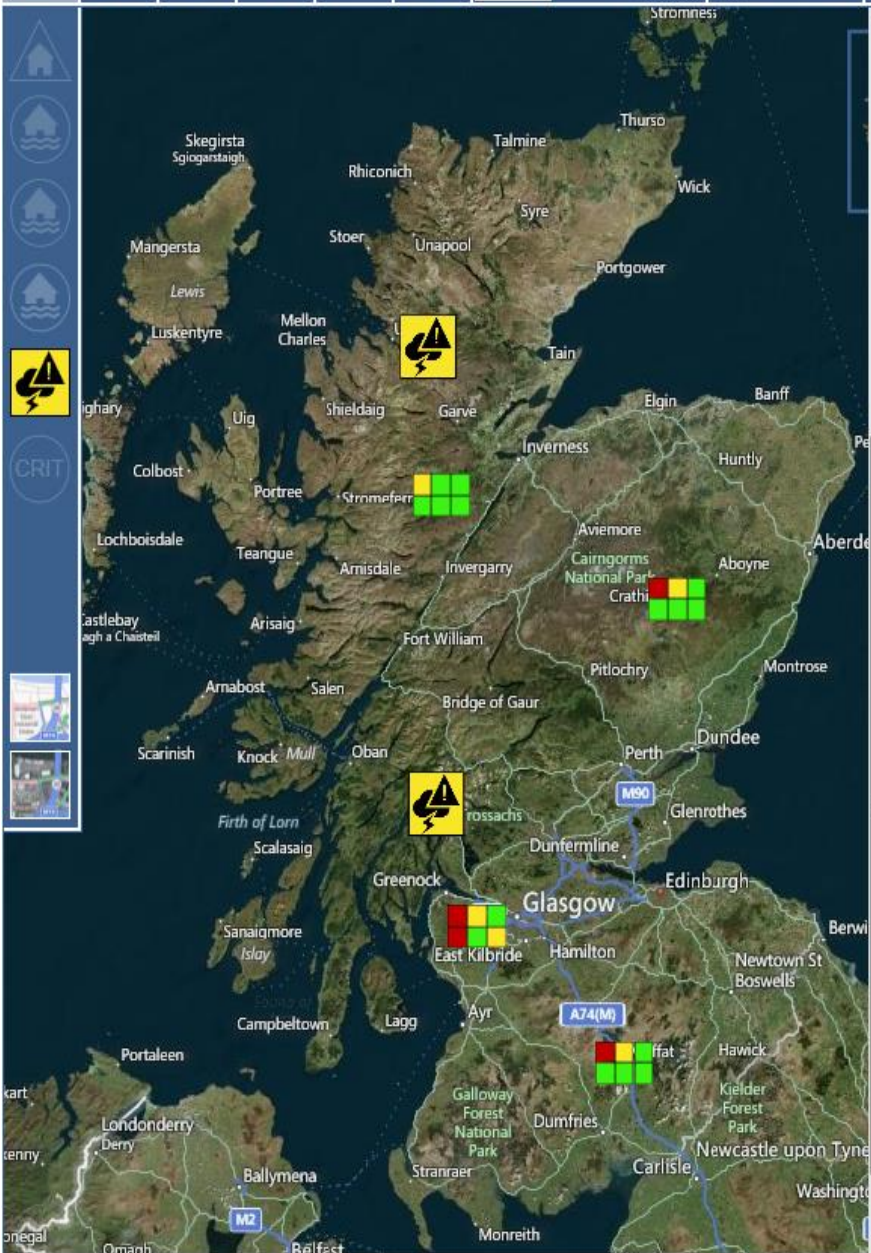
Severe Weather Warnings - Highlands and Eilean Siar

Publication Date	Level	Level Name	Weather Type	Warning Kind	Location	
13/04/2015 11:00:08	1	YELLOW	RAIN	WARNING	Highlands and Eilean Siar	More Details...

Select a weather warning to see more details.

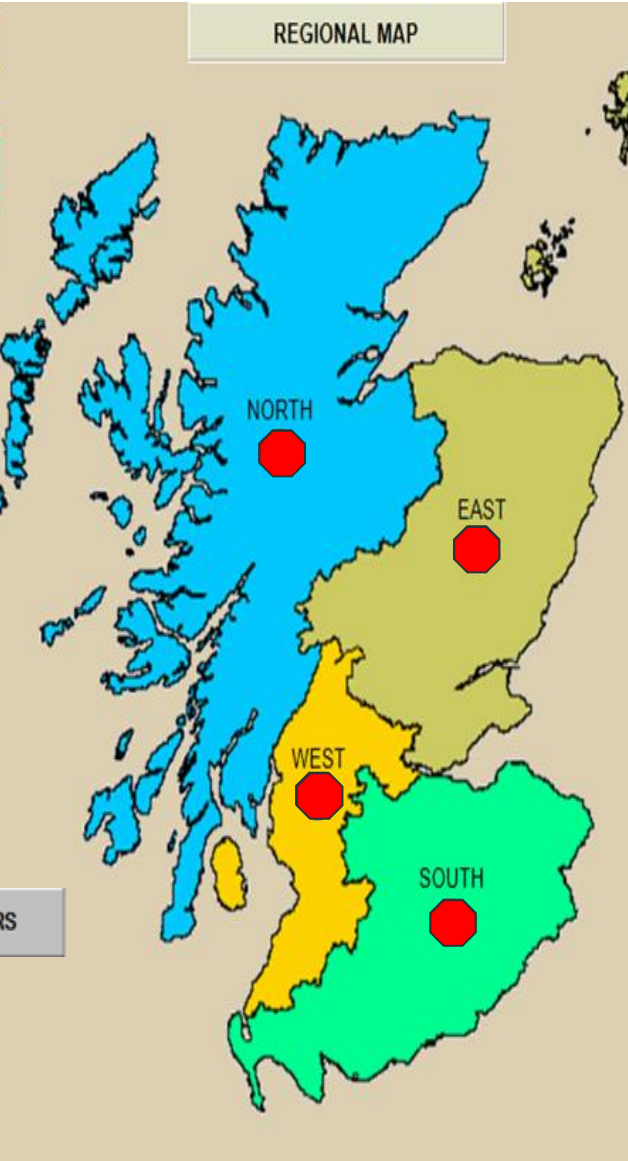
Weather data provided by  Met Office





SCOTLAND (Country)					
SR 62 Service Requests	WO 411 Cust. Rel. Work Orders	TA 97 Telemetry Alarms			
CW 132 Call Wraps	EM 409 E&M Work Orders	BA 15 Business Alarms			
Name	SR	CW	WO	EM	Total
West	30	85	120	69	304
East	13	16	86	129	244
South	13	13	69	132	227
North	4	17	55	80	156

Temperature at Lochinver WWPS (Click for update):	20.9°C
Temperature at Tyndrum WTW (Click for update):	3.92°C
Temperature at Galashiels STW (Click for update):	20.1°C
Temperature at Braemar STW (Click for update):	12.0°C



- NETWORK SCHEMATICS FAQ's
- RISK ISSUES
- ASSET LOOKUP TABLE

SCOTLAND (Country)

164 Call Wraps	98 Service Requests
346 Cust. Rel. Work Orders	111 Telemetry Alarms

Region	Service Requests	Call Wraps	CR Work Orders	Telemetry Alarms
East	36	46	90	45
North	8	9	52	40
South	16	34	63	14
West	34	75	89	12
Undefined	4	0	52	0

GLASGOW 2014 GAMES LOGGERS



ICONICS Connected Field Service Worker CFSWorX - Real-time actionable results



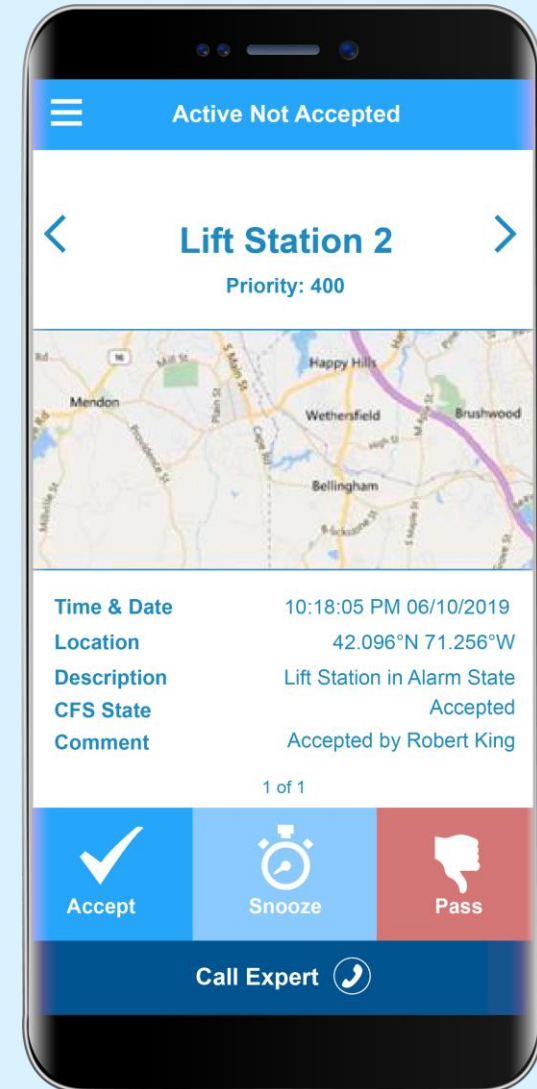
Flexible Worker Interface

Frontline Worker App

- Based on MobileHMI
- Can Collect and Report Mobile Device Health
 - Signal Strength
 - Battery Life
 - Presence (mobile activity)
 - Location (GPS)

Alarm Viewer for Alarm & Fault Details

- Direct Alarm Acknowledgement
- Facilitates Guaranteed Notifications



Automated Notification Dispatch

Connect to your Alarm Infrastructure
Connect to your ERP System

Use it to:

- Dynamically, Intelligently Dispatch Notifications
- Inform Remote Workers of Key Information
- Assist with Work Instructions and Workflows
- Track Productivity to Drive Improvements
- Audit Notifications to Guarantee Dispatch



Commerciële voordelen

- Verbeterde prestatiebeoordelingen van regelgevende instanties
- Verminderd aantal incidenten en verbeterde reactietijden
- Prioriteer taken op basis van de financiële implicaties
- Anticipeer en reageer preventief op weersomstandigheden om de impact op het bedrijf en de klant te minimaliseren
- Rationaliseerde gegevens om geïsoleerde besluitvorming te verminderen
- Vergroot de arbeidsefficiëntie en verlaag de operationele kosten
- Verleng de levensduur van activa
- Groter klantbewustzijn van incidenten + proactief informeren over mogelijke serviceonderbrekingen



Operational Benefits

- Integratie tussen incidenten en responstijden
- Minder telefoontjes van klanten
- Intelligente controle
 - grotere verbanden tussen oorzaak en gevolg (d.w.z. relatie tussen weer- en rioolalarmen of effect pompsnelheid op lekkages)
- Mogelijkheid om regels/analyses te maken
 - in een top-down 'real-time' & 'non-real-time' besluitvormingstool voor controlekamers en analisten
- Intern configureerbaar
 - (voor lokaal ontwikkelingsteam)
- Meerdere business units kunnen dezelfde gegevens bekijken via het web
 - verschillende weergaven per groep
- Integreer Geo-informatie en SCADA
 - (Schema / Mimiek / Schermen)



Vragen?



Bedankt voor uw aandacht!

arthur.blom@iconics.com

frank.vanempelen@prodek.nl



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