Resource Management Systems

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iWATER Conference 2012
www.cir-strategy.com/events/water

L2S2

Engineering solutions for changing times

L2S2 profile

L2S2 has developed an innovative framework for data collection, management, reporting and device control that can operate over real world networks

Funding received from Technology Strategy Board and EU Joint Technology Initiatives

Technology Strategy Board
Driving Innovation

New Energy World JU
fuel cells & hydrogen for sustainability

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References

Anglian Water Regional Tankering Service

HPA Emergency Department Syndromic Surveillance System – reported to Cabinet Office during Olympics

Diverse Energy – off-grid power generation units in sub-Saharan Africa monitored and controlled from UK via PAYG connections

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The real world of the organisation

- Change is a constant
- Sustainability demands high efficiency
- Rapidly adapted, accurate, current information needed to respond and plan
- Highly detailed, immediate data from and feedback to operations is essential for efficiency

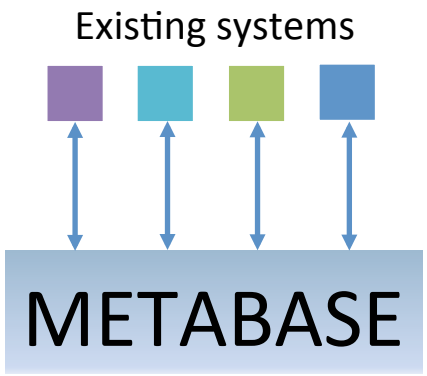
The real world of the organisation

- Rapidly adapted, low cost IT is critical
- Detail matters: users, existing systems, field use constraints

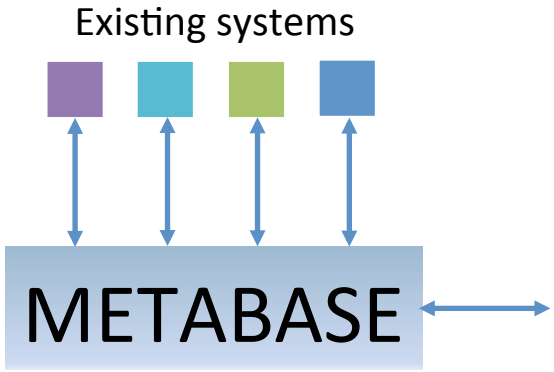
L2S2 framework

METABASE

L2S2 framework



L2S2 framework



REPORTS

GET THE INFORMATION YOU NEED, NOW

MANAGE PERFORMANCE AGAINST KPIs

RESPOND TO CHANGE

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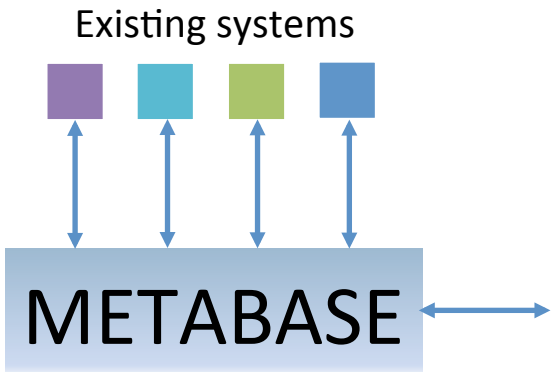

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RESPOND TO CHANGE

Users quickly create new web reports from current data

IT input needed kept to minimum

Data access subject to permissions

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L2S2 framework

NEW SYSTEMS

ALL NEW DATA TO BE REPORTED IMMEDIATELY

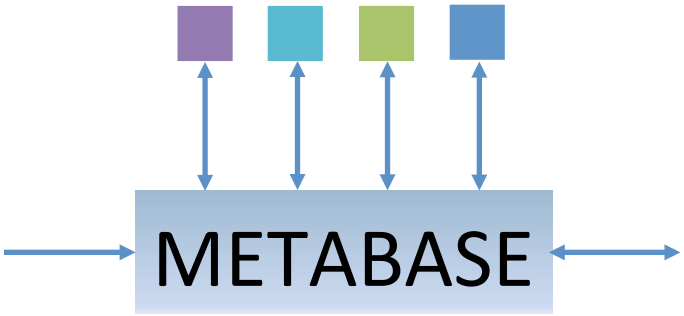
ENSURE DATA SECURITY

SYSTEMS MUST BE ACCEPTABLE TO WORKFORCE

REMOTE SYSTEMS MUST WORK WITH POOR NETWORKS

ENABLE CONTROL OF REMOTE SYSTEMS FROM THE CENTRE

EXISTING SYSTEMS



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NEW SYSTEMS

Web forms for data input quickly created by non-IT staff – no data stuck in Excel

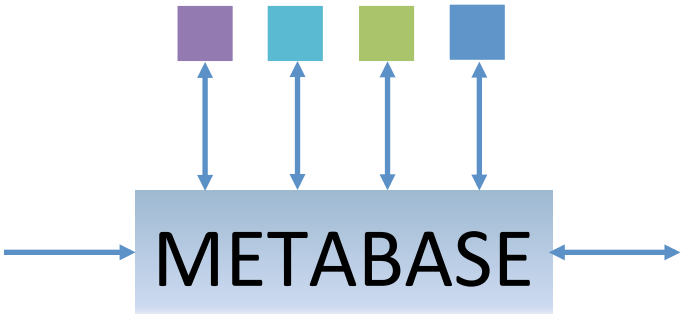
Enable triage

Secure API for stand alone devices

Manage poor connectivity issues for systems operating remotely

Data collectors for third party systems

EXISTING SYSTEMS



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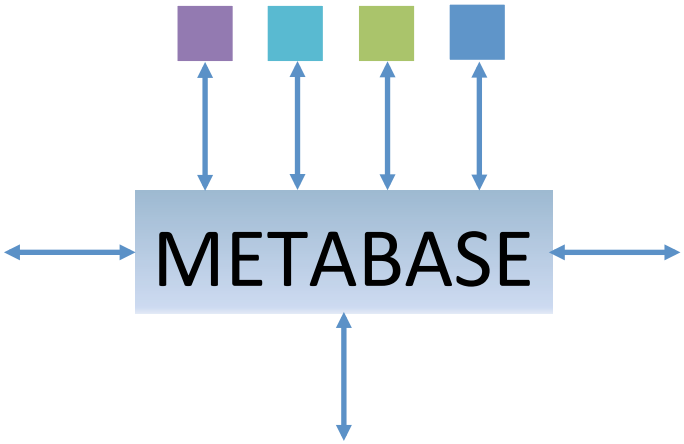

REMOTE SYSTEMS

Communicate data and status information from systems

Take control of remote systems

REPORTS

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L2S2 framework

- Over £400,000 spent to date on framework R&D
- Framework requirements and specifications driven by clear real world needs
- Rigorous intellectual approach to engineering
- Expert highly skilled and qualified team
- Implement core and create low cost development environment
- Be pragmatic about custom additions to make systems work for customers

Anglian Water Wet Well Photography

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Anglian Water Wet Well Photography

- Secure toughbook application for use in the field
- User completes forms to ensure correct procedures used
- Captures photographs using ruggedised camera interfaced to toughbook
- As soon as connectivity allows, the data and images are available online for review in the central control room.

MainWindow

RTS Wet Well

love every drop anglianwater

Checklist for High Pressure Water jetting

to be used to plan every jetting operation : every site and every time

Required PPE: Workwear; High visibility jacket/vest; Safety footwear; Hard hat; Face / eye protection (to EN 166); Gloves; Ear defenders (where necessary). Where large amounts of aerosols likely to be generated, wear Respiratory Protective Equipment (RPE)-Planning and Operation of jetting on site:

1	Can the task be carried out without the need for jetting?	Yes	No	
2	Am I authorised to carry out this activity?	Yes	No	
3	Park vehicle in safe position, no hazard to third parties?	Yes	No	Corrected
4	Are third parties likely to be at risk from the jetting operation?	Yes	No	
5	Is work area clearly defined with barrieres and warning signs?	Yes	No	Corrected
6	Is operator controlling this jetting operation trained & competent?	Yes	No	
7	Is operator familiar with this type of equipment?	Yes	No	
8	Does all those involved have the necessary PPE (see above)?	Yes	No	Corrected
9	Do all those involved have a copy of the HPWJ emergency card?	Yes	No	
10	Are all those involved aware of their role and responsibilities?	Yes	No	Corrected
11	Is jeting equipment suitable for the task, and maintained?	Yes	No	
12	Is emergency stop (or remote stop) within arms length ar all times?	Yes	No	
13	Clear line of sight or use of communication systems.	Yes	No	
14	Can cover(s) be lifted safely and void(s) protected?	Yes	No	
15	Have pre-use checks been carried out (see over)?	Yes	No	Corrected
16	Correct accessories used? (leader hose, anti-turn device and tiger tail)	Yes	No	
17	Is ice formation in hose/tank likely? (weather conditions)	Yes	No	
18	Adequate control of the jetting head? (good acess to pipe)	Yes	No	

Details of corrections made/other site/task specific controls required-complete site specific task risk assessment if necessary:

Cancel | Back | Next

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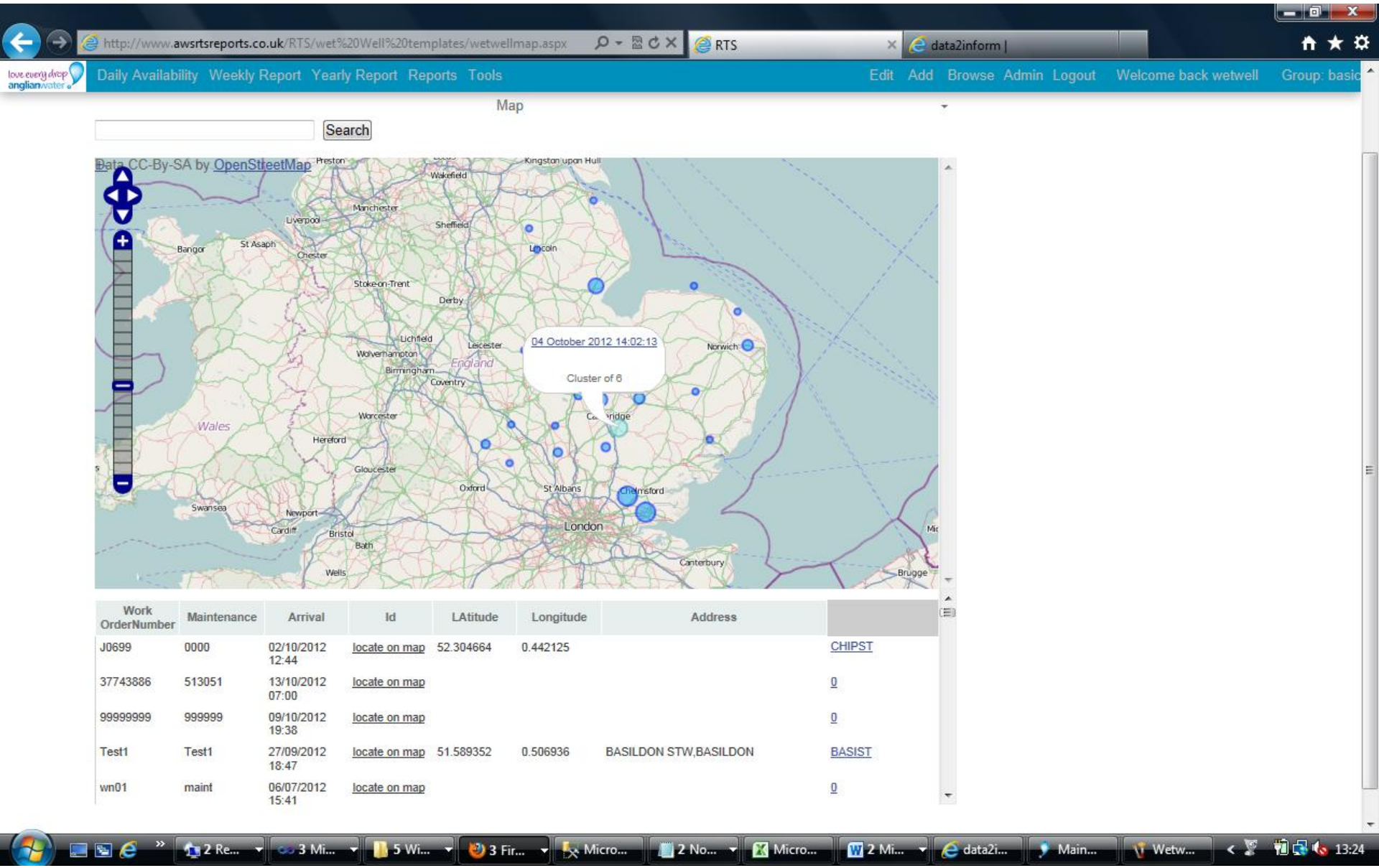

Wet well photography dashboard – map view

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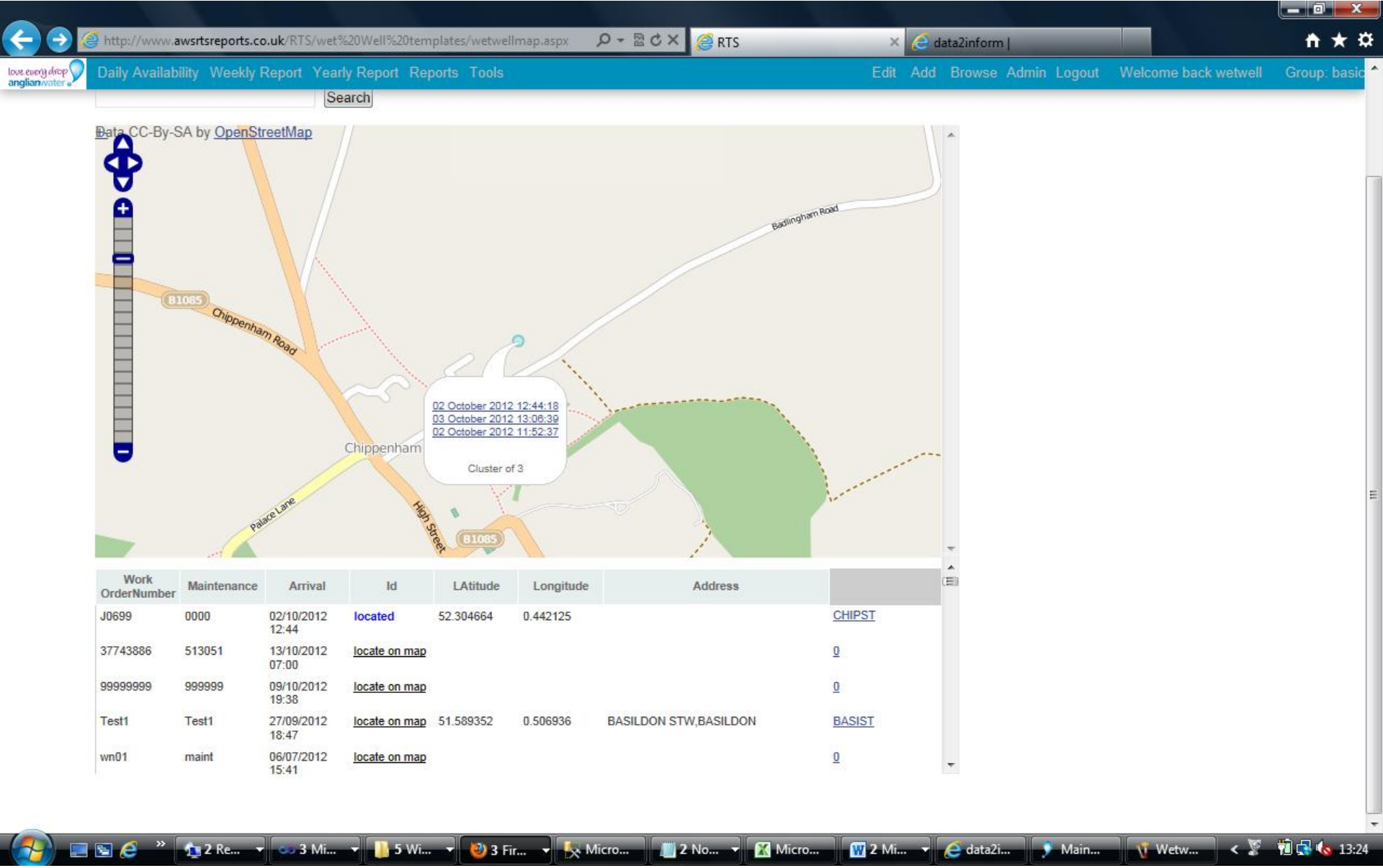

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Wet well photography dashboard – hi res map view

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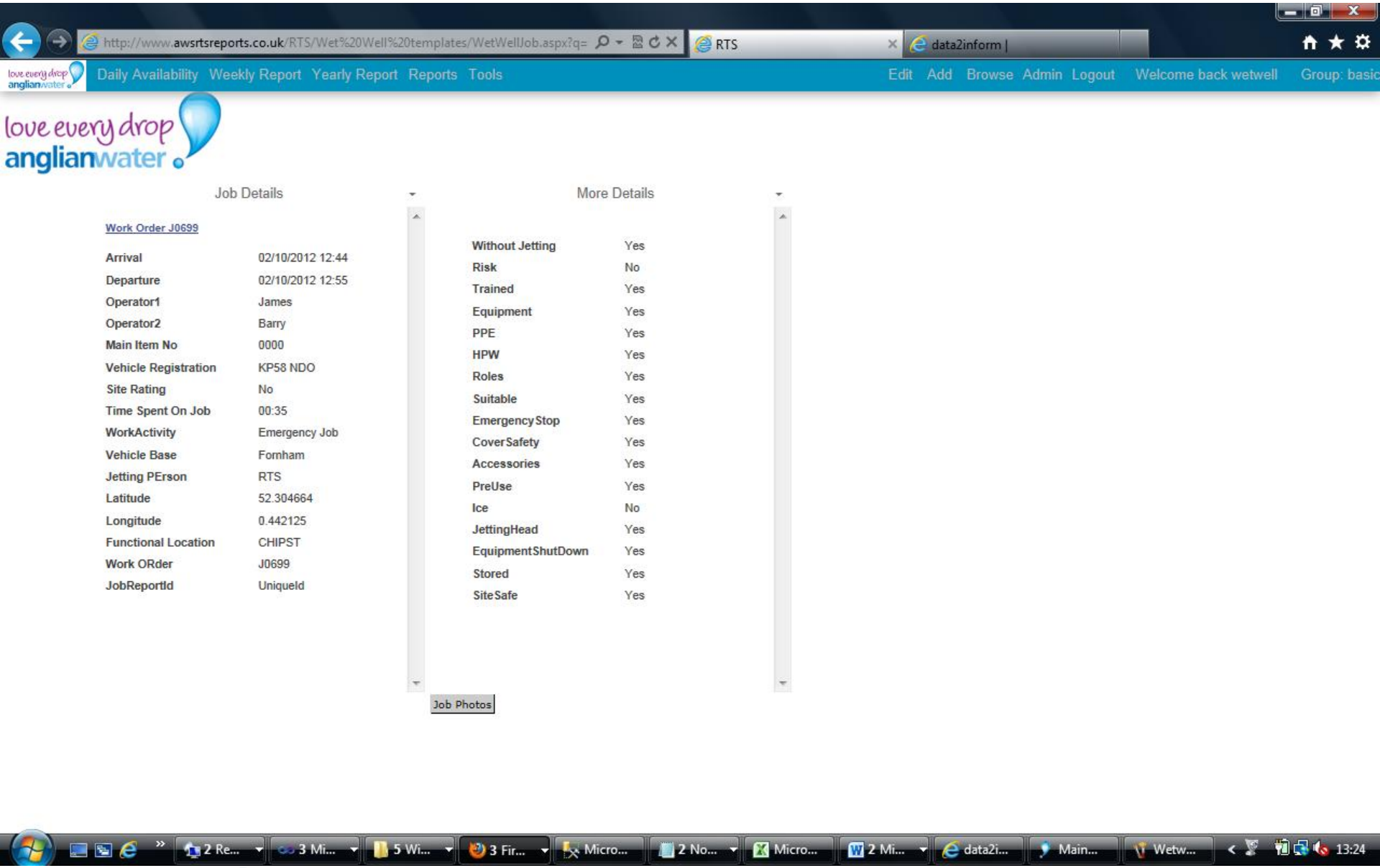

Wet well photography dashboard – drill-down data view

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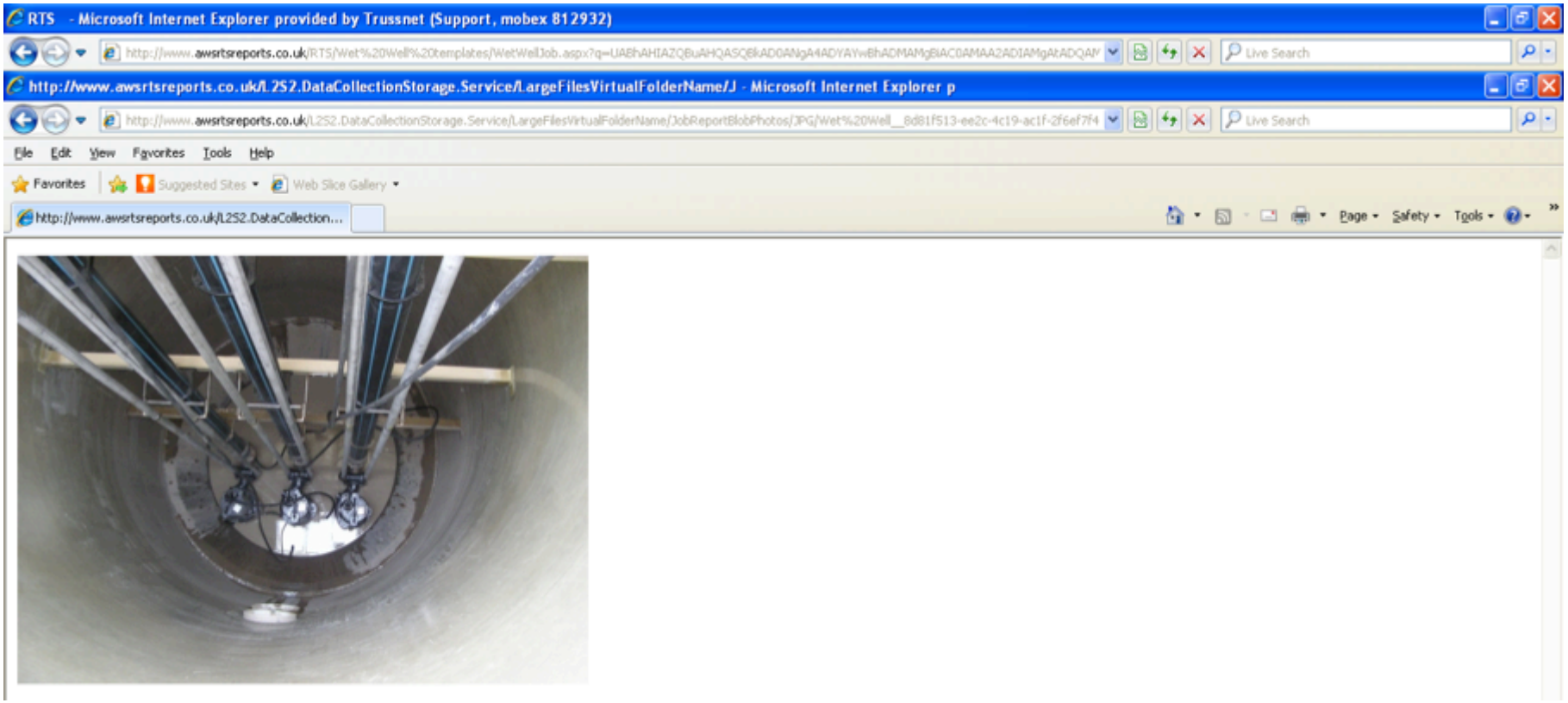
Wet well photography – drill down to images



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Emergency department syndromic surveillance

The College of Emergency Medicine

Health Protection Agency

What is it?

- A sentinel emergency department system that monitors the daily numbers of attendances in a network of emergency departments across England.

Why?

- Olympics – enhanced national surveillance requirements (Health Protection Agency)
- Monitor severe disease presentation in community e.g. SARS
- Changes in UK health care usage

EDSSS collaborative system

The College of Emergency Medicine

Health Protection Agency

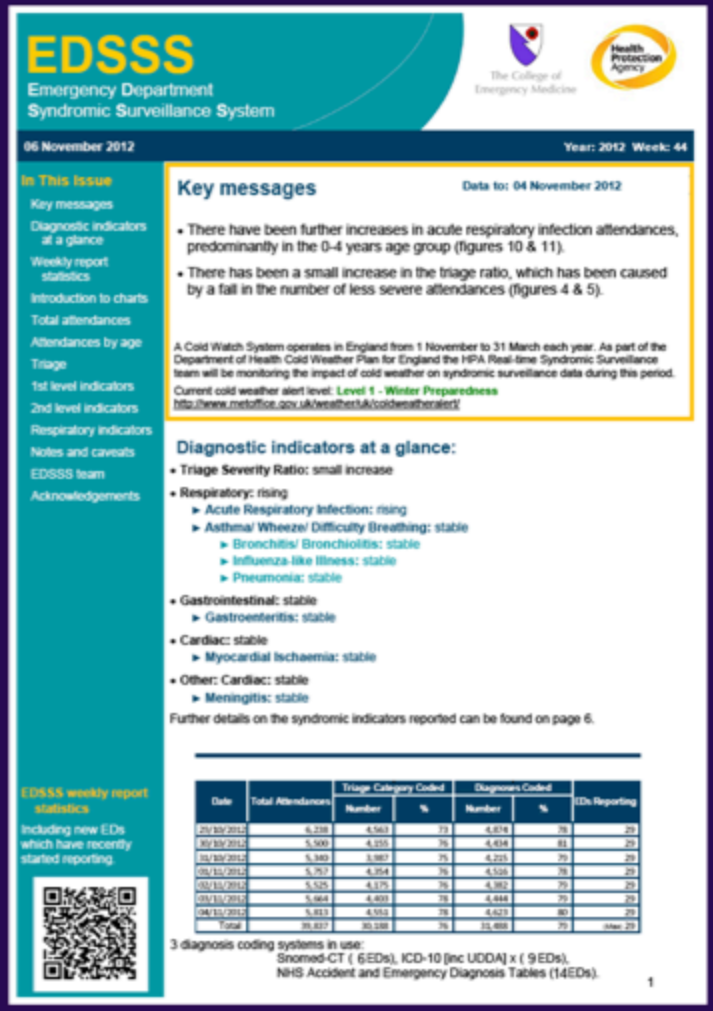
- Health Protection Agency
- College of Emergency Medicine (CEM)
- ED clinicians
- NHS Trust Information governance
- NHS Trust IT teams
- ED software providers
- Third party IT providers

EDSSS outputs

The College of Emergency Medicine

Health Protection Agency

- Routine surveillance bulletin
- Provides summary of key syndromic indicators and public health interpretation of data
- Sent to a international public health audience
- Part of HPA national syndromic surveillance service



EDSSS
Emergency Department Syndromic Surveillance System

The College of Emergency Medicine

Health Protection Agency

06 November 2012 Year: 2012 Week: 44

In This Issue

EDSSS weekly report statistics
Including new EDs which have recently started reporting.

Key messages

Data to: 04 November 2012

- There have been further increases in acute respiratory infection attendances, predominantly in the 0-4 years age group (figures 10 & 11).
- There has been a small increase in the triage ratio, which has been caused by a fall in the number of less severe attendances (figures 4 & 5).

A Cold Watch System operates in England from 1 November to 31 March each year. As part of the Department of Health Cold Weather Plan for England the HPA Real-time Syndromic Surveillance team will be monitoring the impact of cold weather on syndromic surveillance data during this period.

Current cold weather alert level: Level 1 - Winter Preparedness
http://www.metoffice.gov.uk/weather/uk/coldweatheralert/

Diagnostic indicators at a glance:

- **Triage Severity Ratio:** small increase
- **Respiratory:** rising
  - Acute Respiratory Infection: rising
  - Asthma/ Wheeze/ Difficulty Breathing: stable
    - Bronchitis/ Bronchiolitis: stable
    - Influenza-like Illness: stable
    - Pneumonia: stable
- **Gastrointestinal:** stable
  - Gastroenteritis: stable
- **Cardiac:** stable
  - Myocardial Ischaemia: stable
- **Other: Cardiac:** stable
  - Meningitis: stable

Further details on the syndromic indicators reported can be found on page 6.

Date	Total Attendances	Triage Category Coded		Diagnoses Coded		EDs Reporting
		Number	%	Number	%	
29/10/2012	6,238	4,563	73	4,474	72	29
30/10/2012	5,500	4,155	76	4,434	81	29
31/10/2012	5,340	3,987	75	4,215	79	29
01/11/2012	5,757	4,354	76	4,516	78	29
02/11/2012	5,525	4,175	76	4,382	79	29
03/11/2012	5,664	4,403	78	4,444	79	29
04/11/2012	5,813	4,551	78	4,623	80	29
Total	39,837	30,188	76	31,488	79	(Max: 29

3 diagnosis coding systems in use:
Snomed-CT (6 EDs), ICD-10 [inc UDDA] x (9 EDs),
NHS Accident and Emergency Diagnosis Tables (14 EDs).

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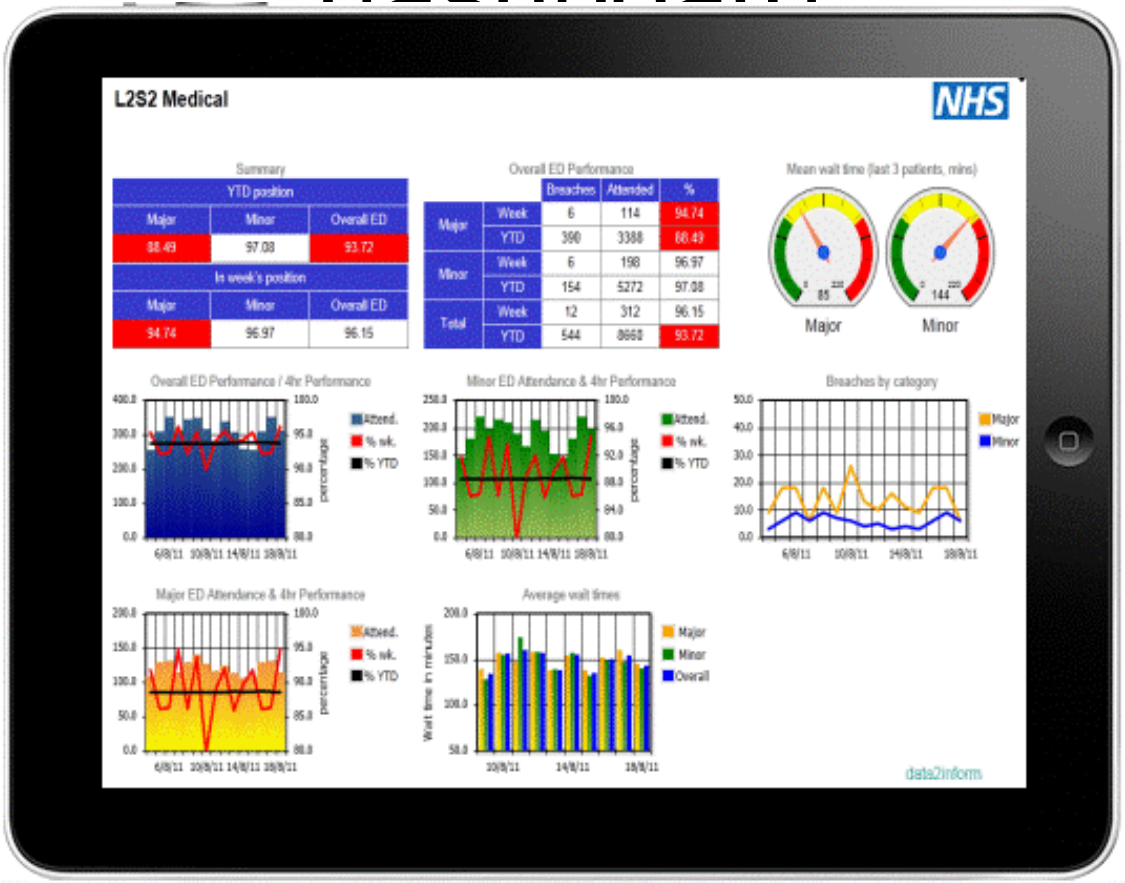
Emergency Medicine KPI dashboard



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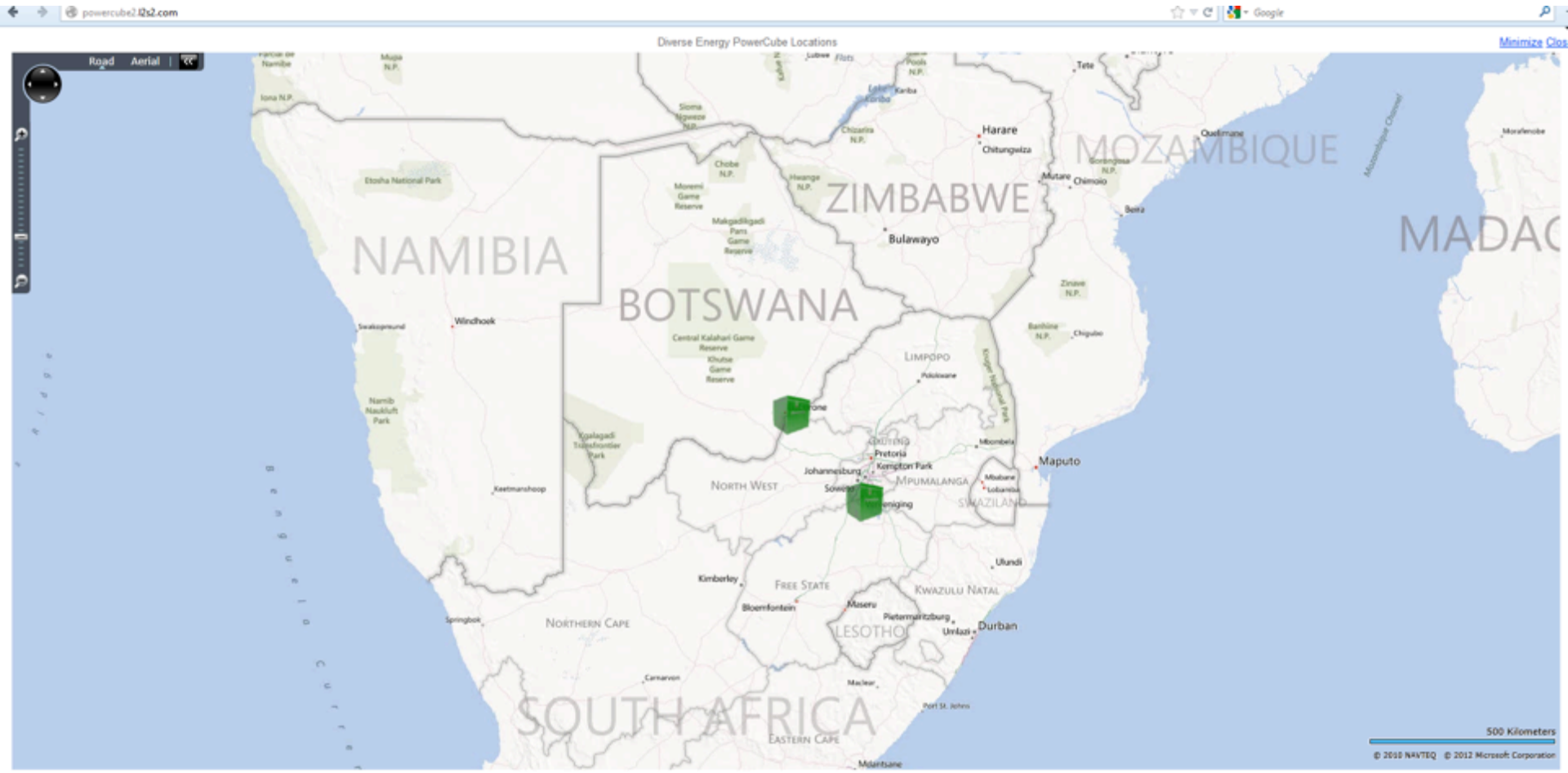
PowerCube NH3 4 PWR

- Delivering clean power for off-grid locations
- Fuelled by ammonia
- Control PowerCube remotely from UK headquarters
- VPN via low cost non-fixed IP data SIMs (PAYG SIMs used in Africa)

Map view showing PowerCube location



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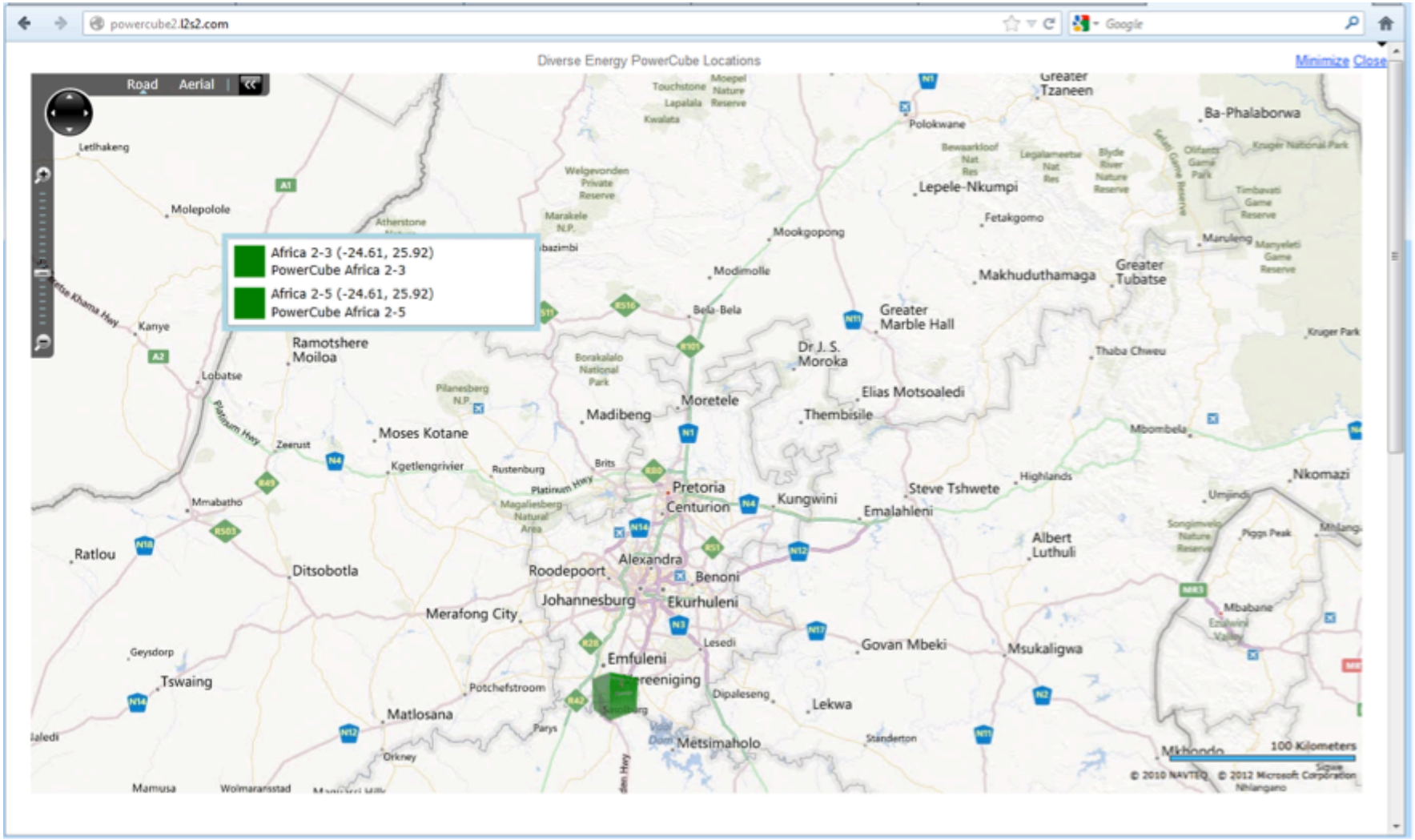
Map view drill down



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Top level PowerCube status screen

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Drill down to component view – fuel cell

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