Yorkshire Water and the Telemetry Real-time Strategy

Operating Yorkshire Water as a Production Plant

Presented by

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Agenda

- Introduction to Yorkshire Water
- The Telemetry Strategy
- Operating YW as a Production Plant
- YW and OSIsoft PI System Solutions
- Future Work
- Questions

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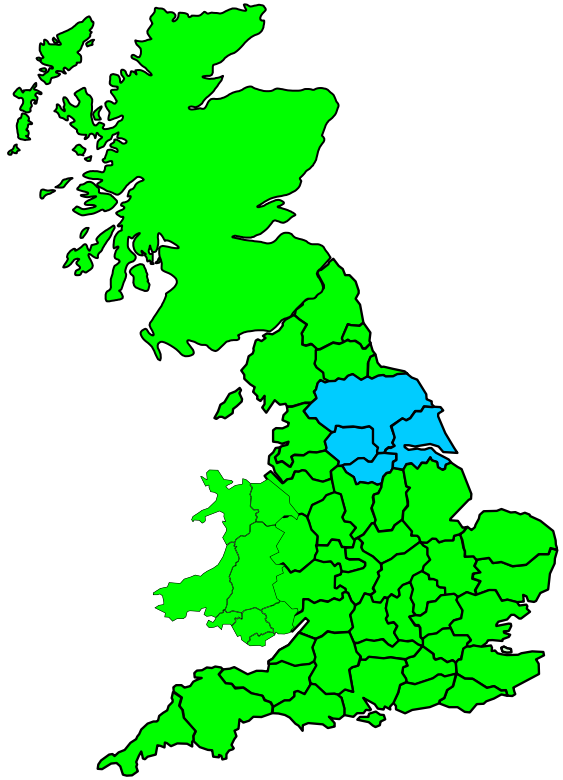
Yorkshire Water – our business

- Supply 1.24 billion litres per day
- Treat 1 billion litres of waste water per day
- Over 2 million bill paying customers
- 65,600km of clean and waste water networks
- 86 water treatment works (1.3bn l/day)
- 600 waste water treatment works
- 2,250 pumping stations, 2,200 CSOs
- 650 reservoirs and water storage
- 2,200 distribution management areas



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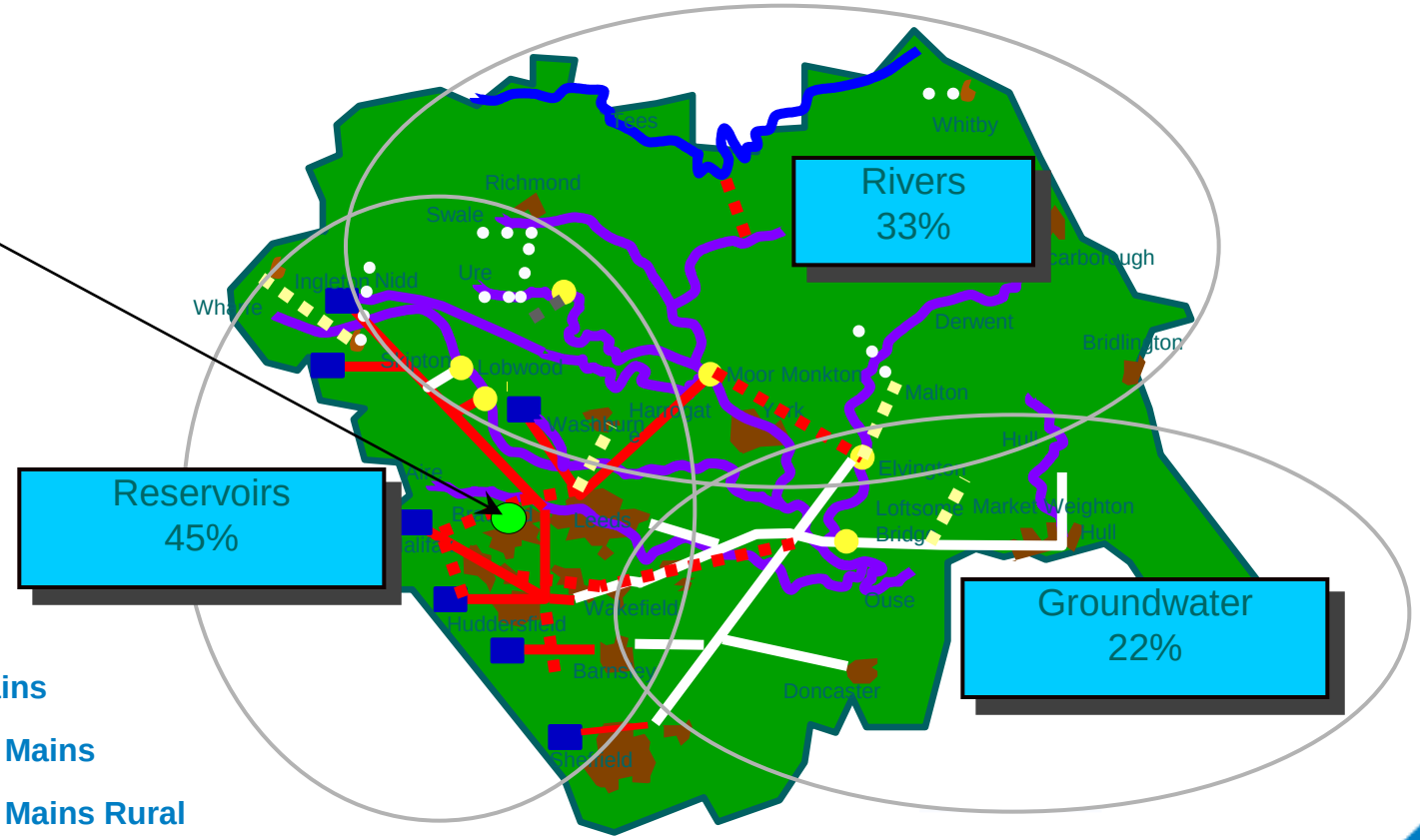
Our water supply network

Yorkshire Water
Data Centres



Reservoir Group

New Raw Water Mains

New Treated Water Mains

New Treated Water Mains Rural

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Telemetry IT – sensor to screen

YorkshireWater

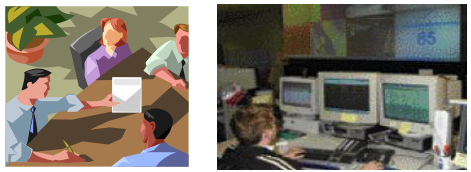
Sensors and instruments

Outstations and Regional Telemetry Units

SCADA

Control Room and Field Staff

Business and Operational Data



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The history of telemetry at Yorkshire Water

1980s: *Many different individual systems - 65 local systems, 40 suppliers*

1990s: *1,000 outstations*
A move towards a Single Supplier and a Regional view, established Regional Telemetry System (RTS)- Alarm and Event Management. Established a Regional Operations Control Centre (ROCC)

2000s: *6,000+ outstations*
Organic growth, remote intervention, regional optimisation, below ground asset monitoring.

2009: *OSIsoft PI Server, PI ACE, PI ProcessBook, Dashboard Technology*

2010: *PI-TSV Data. SCADA Site Data. PI AlarmView. PI Notifications.*

2011: *SharePoint 2010 Integration and Silverlight – Production Dashboards*

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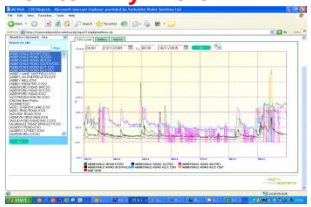
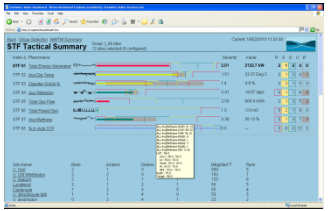
The telemetry strategy

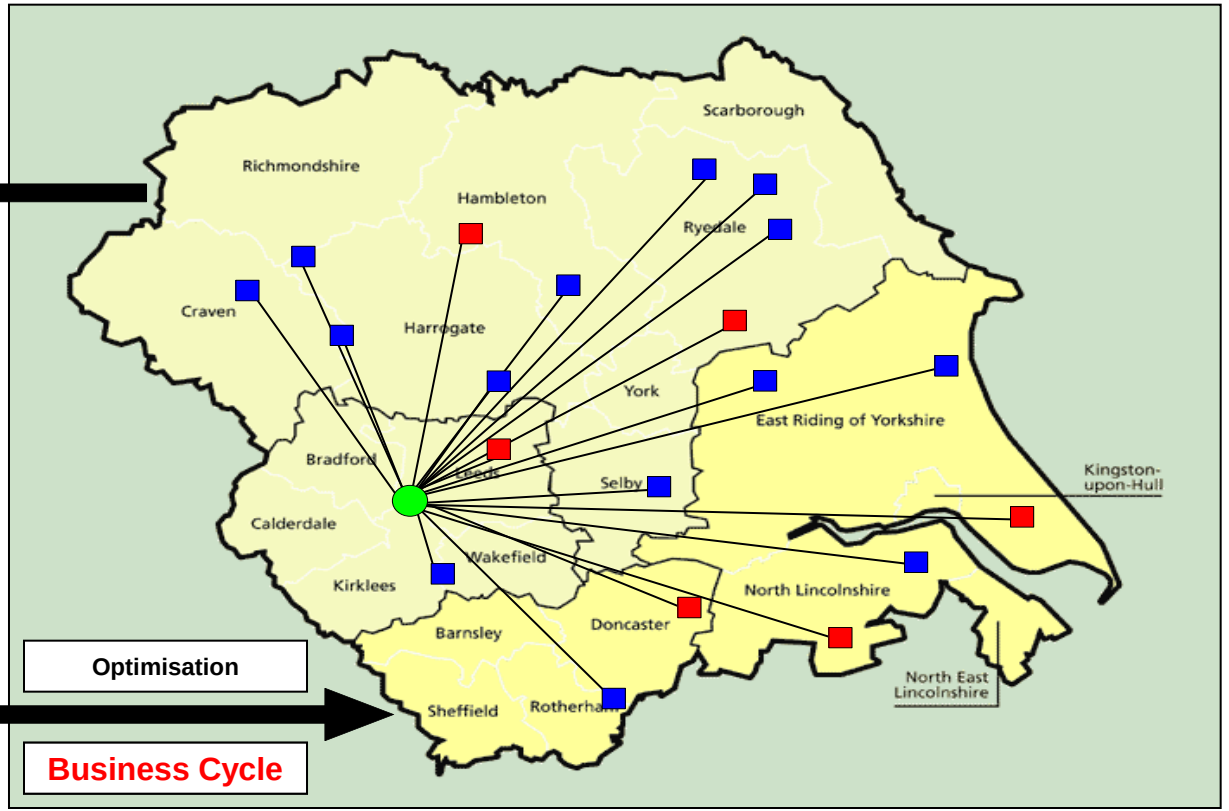
Broaden the Footprint
Monitor Anywhere



Add Intelligence
Operational Dashboards



Automate and Intervene
Safe Remote Control



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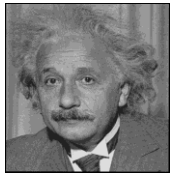
Operating as a ‘Production Plant’

We’ll be running Yorkshire Water like a production plant …..

We’ll know we are running the company in an optimal way

If something happens we’ll model the impact and remotely re-configure as appropriate



Eyes, Ears, Hands & Brains

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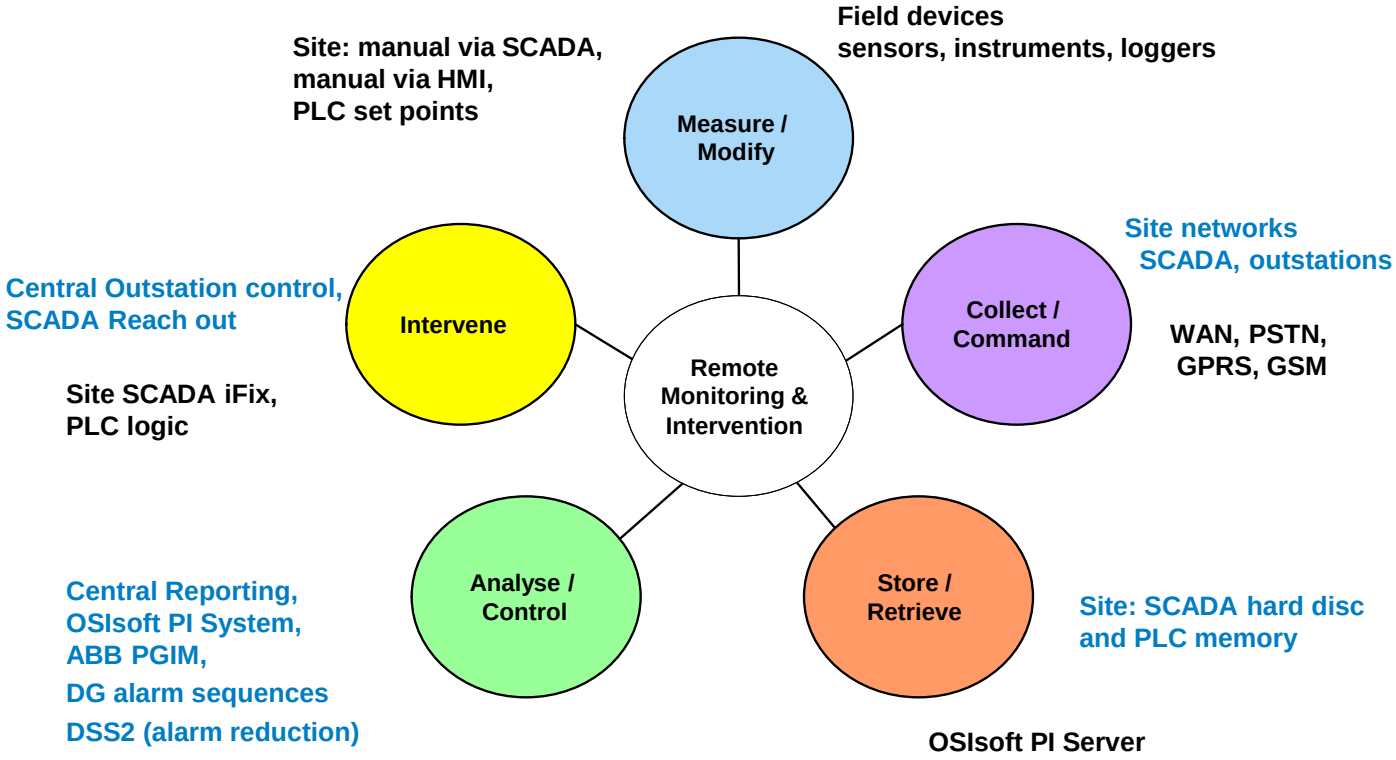
Aligning telemetry with the business need



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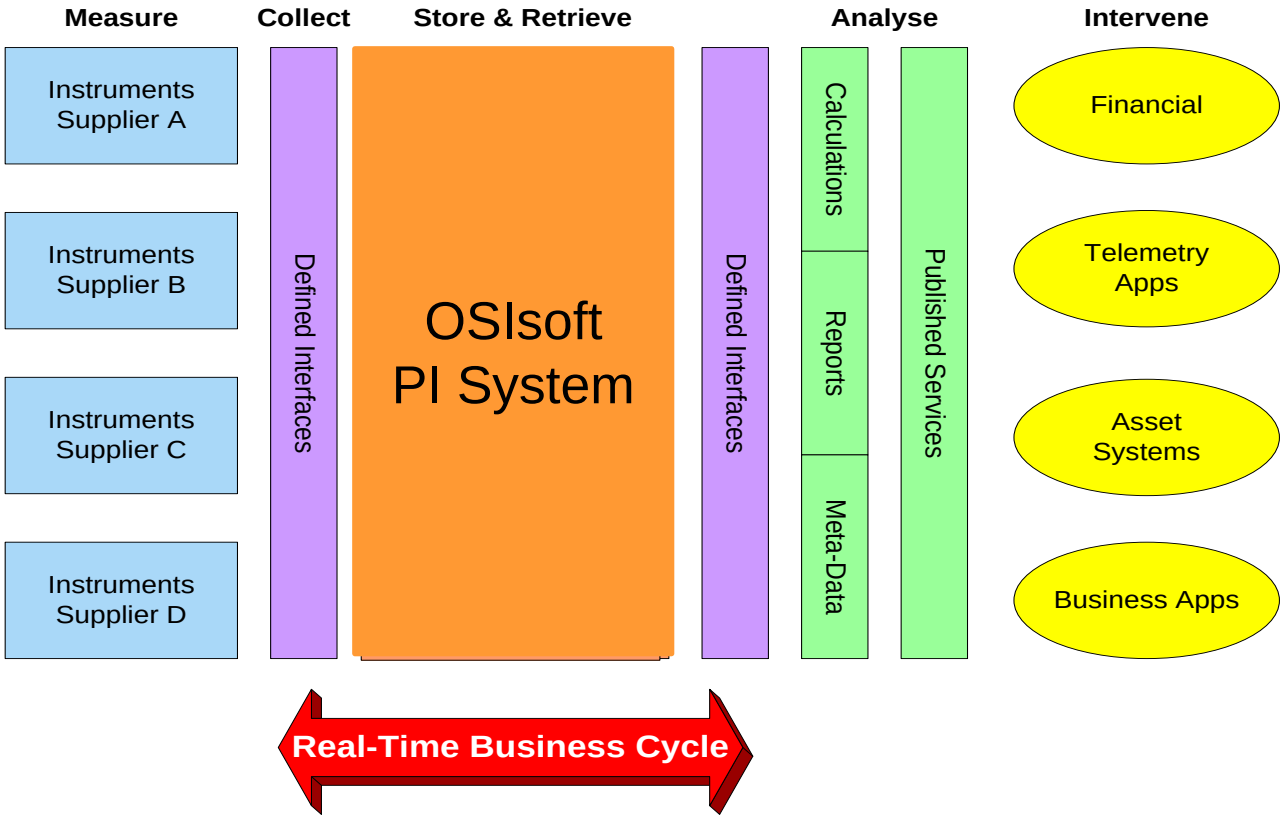
Real-time data within ‘The Business Cycle’



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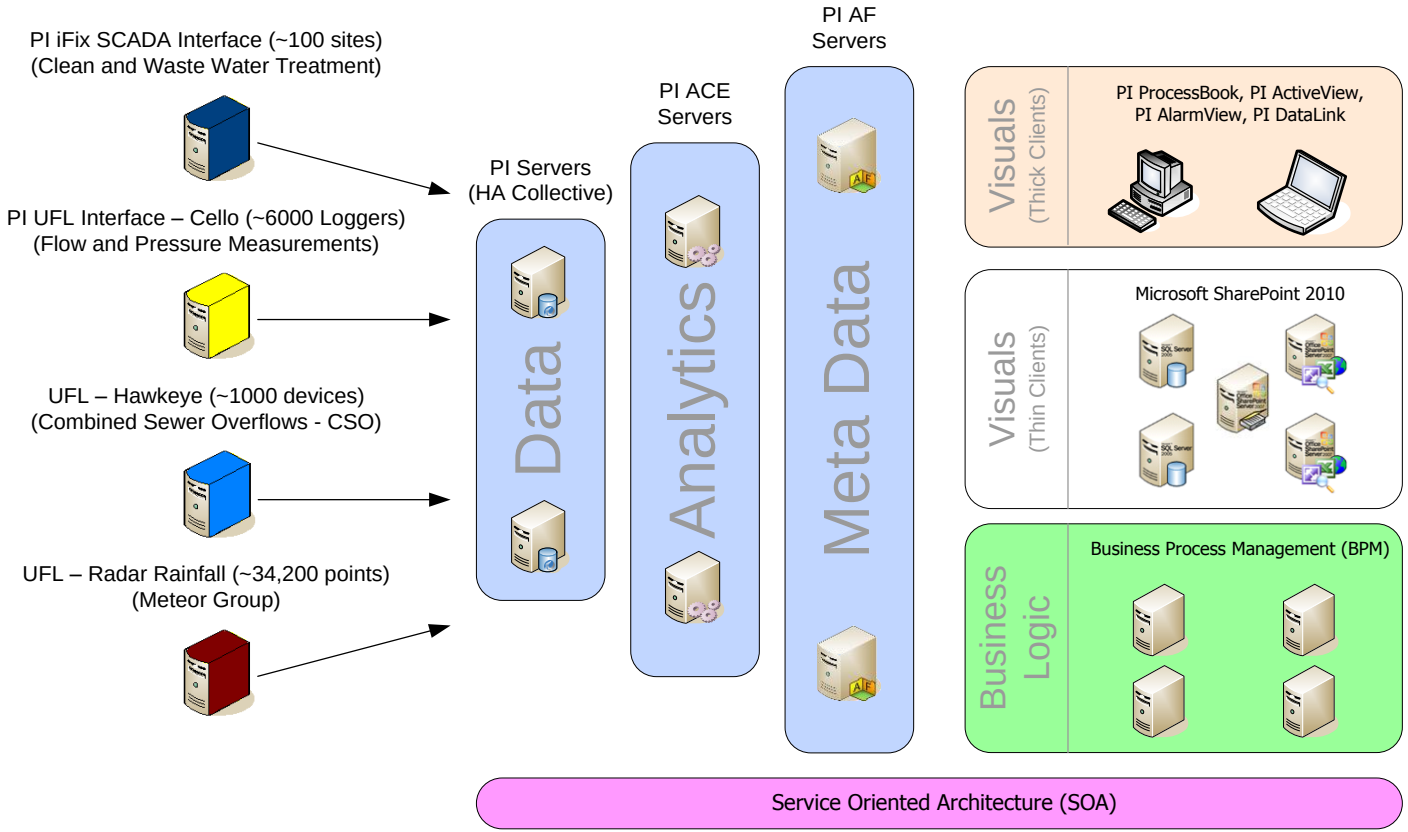
Our PI System implementation – Year 2



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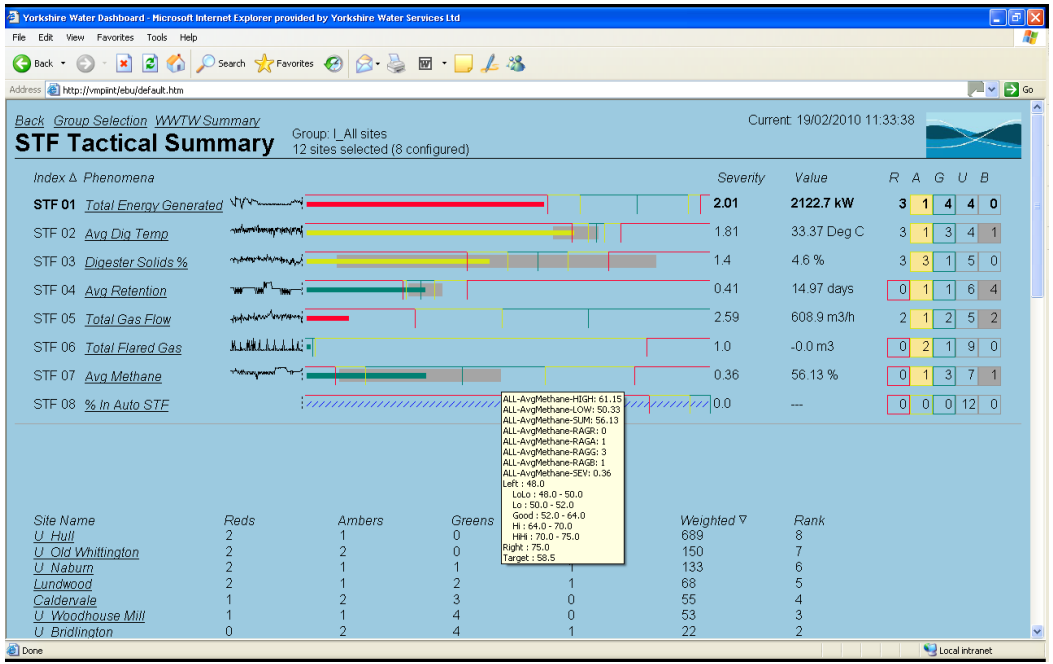
Energy dashboards – Year 1



- Energy Management Dashboards
- Strategic and Tactical Information
- 23 Shining Star Sites
- PI iFix SCADA Interface
- PI to PI Interface
- PI Module Database
- PI ACE
- PI ProcessBook
- PI ActiveView
- Integration Partners - Capula

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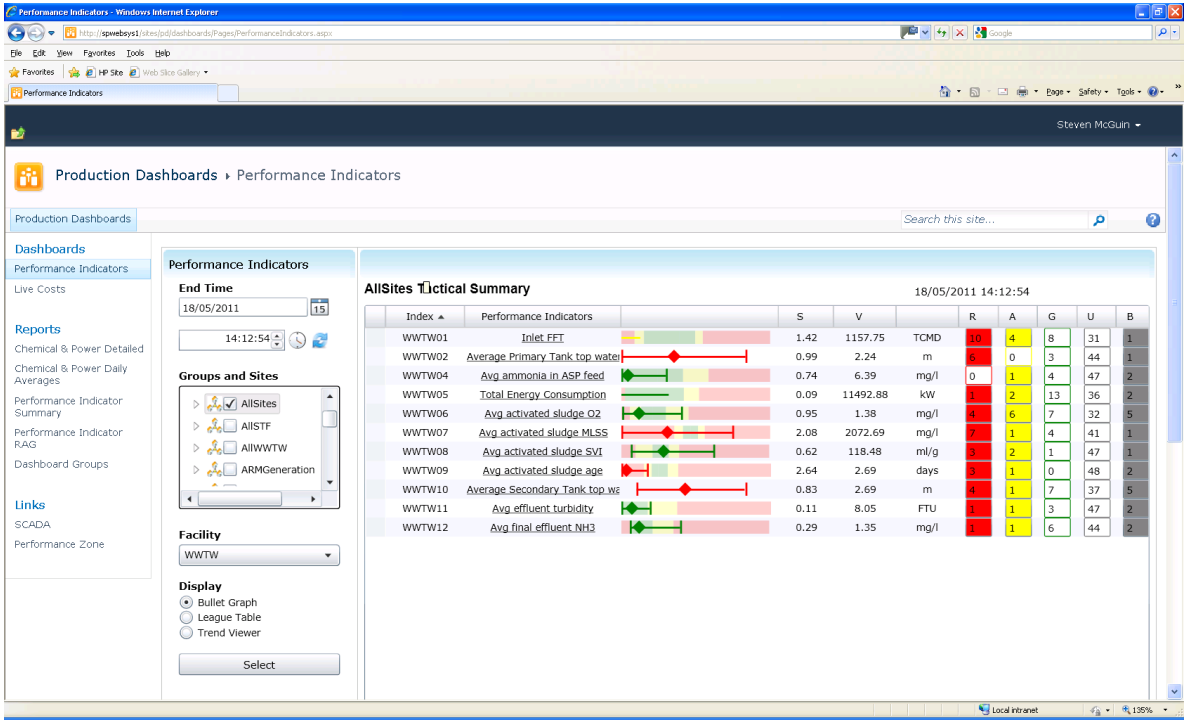
Energy dashboards – Year 2



- **Enhanced Dashboards**
- **Strategic and Tactical Information**
- **55 Strategic Sites**
- **PI iFix SCADA Interface**
- **SharePoint 2010**
- **Microsoft Silverlight**
- **Web Part Development**

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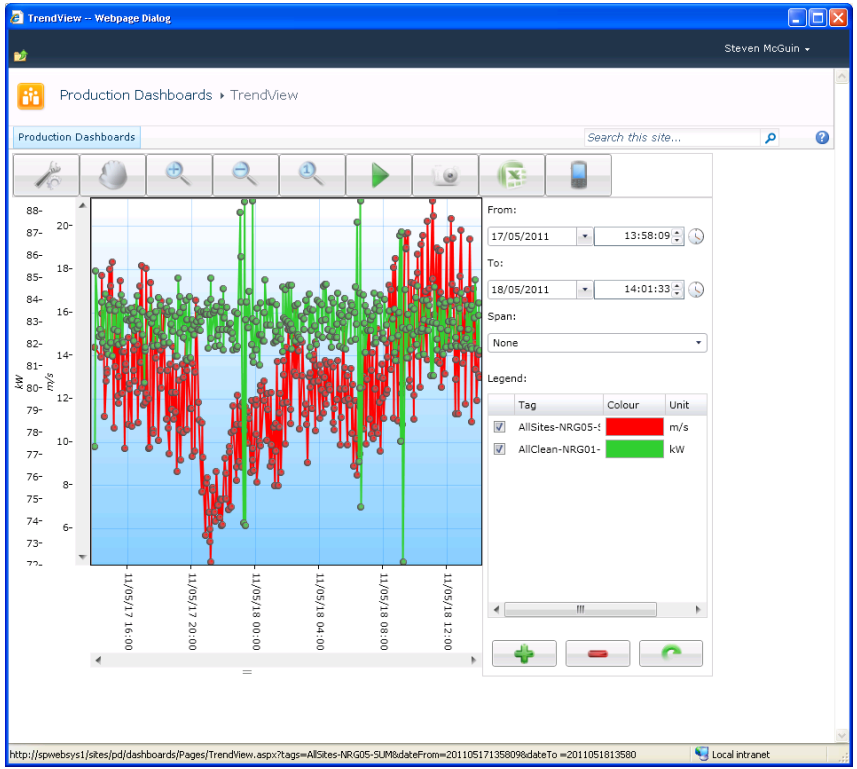
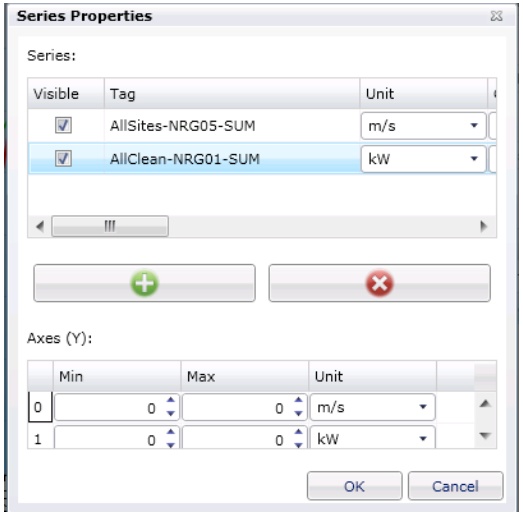
Dashboards and the trend viewer



- YW Silverlight Application
- Graphical View of real-time data
- Zoom, Span, Multiple Tags, Calling Outstation
- Export Data to CSV format
- PI Module Database / PI AF



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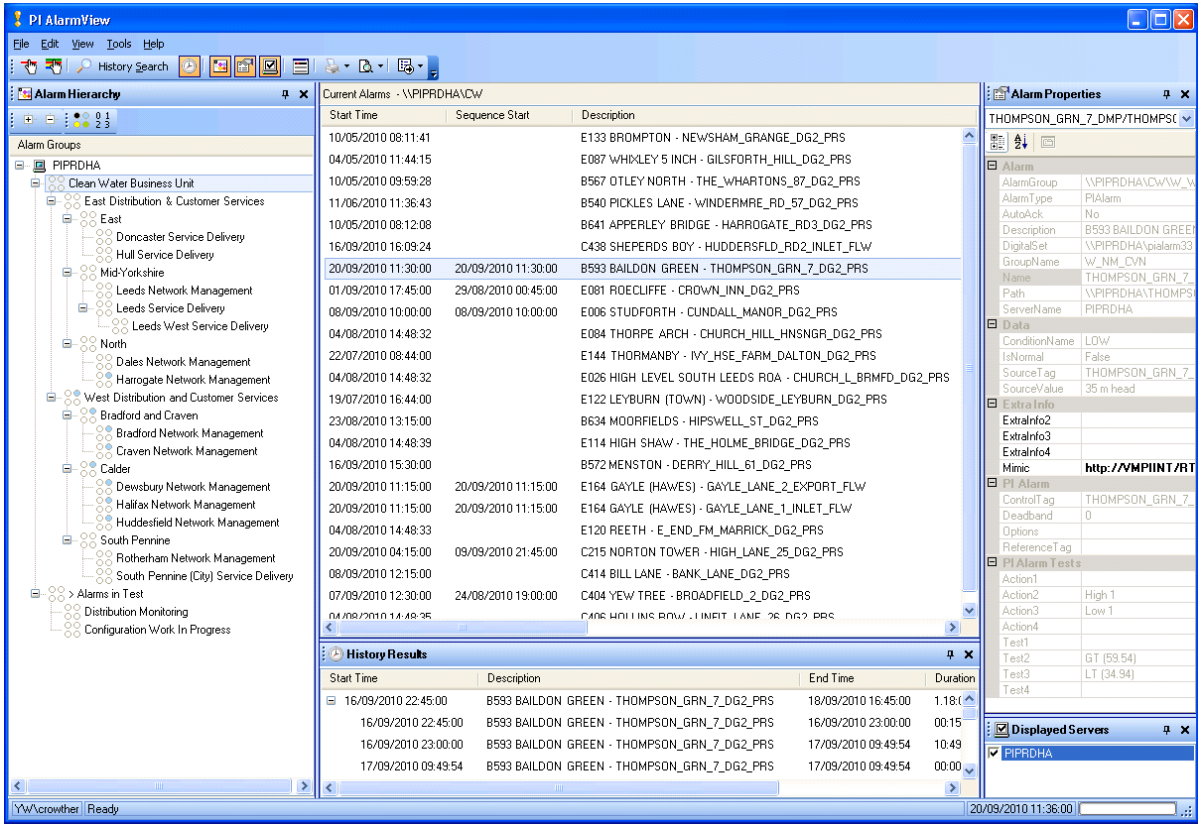
Control room alarms - Year 1



- **Migration of Telemetry Alarms**
- **Flow and Pressure Alarms**
- **PI UFL Interface**
- **PI Asset Framework**
- **PI System Explorer**
- **PI ProcessBook**
- **PI ActiveView**
- **PI AlarmView**

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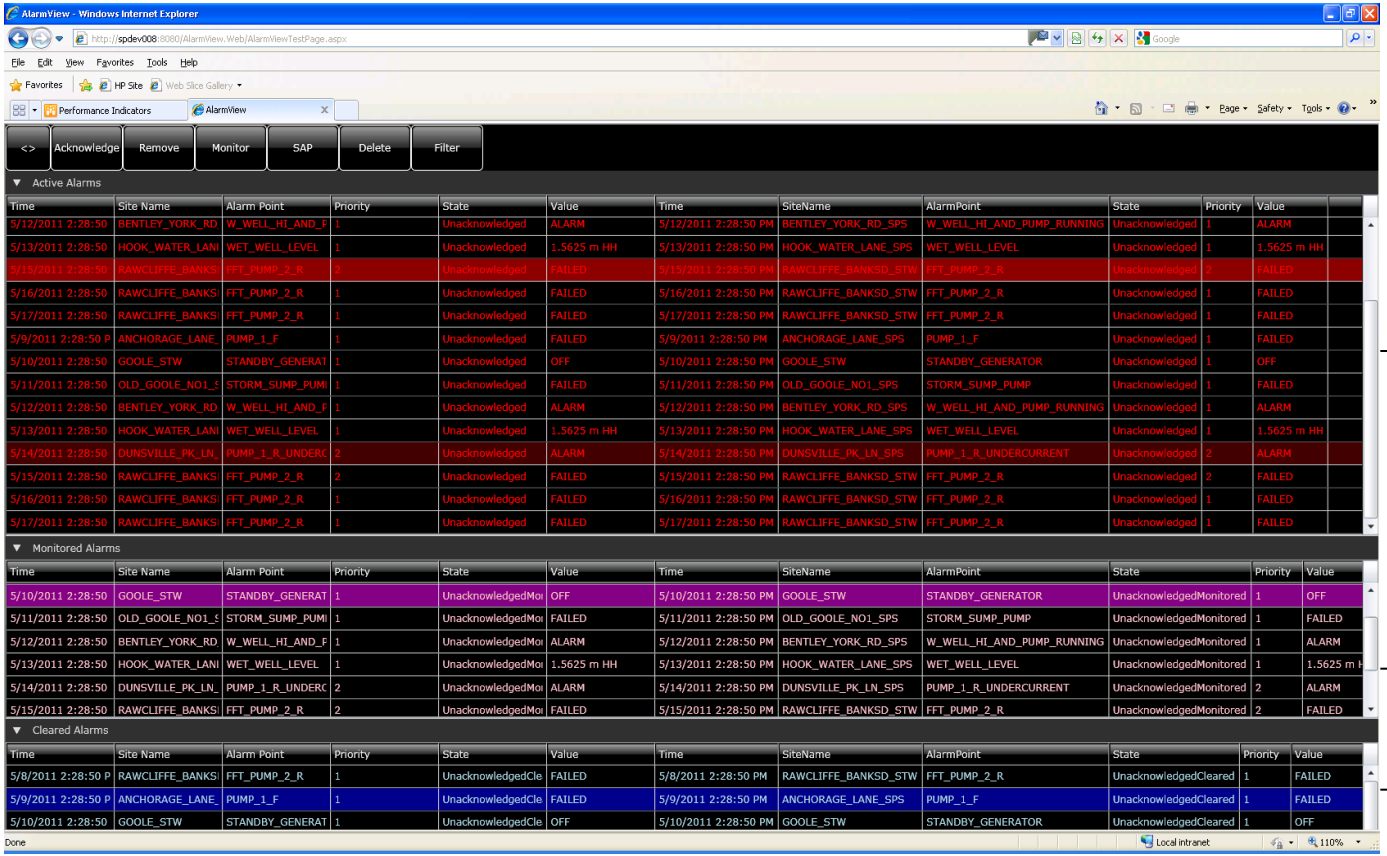
The future of telemetry



Active Alarms

Monitored Alarms

Cleared Alarms

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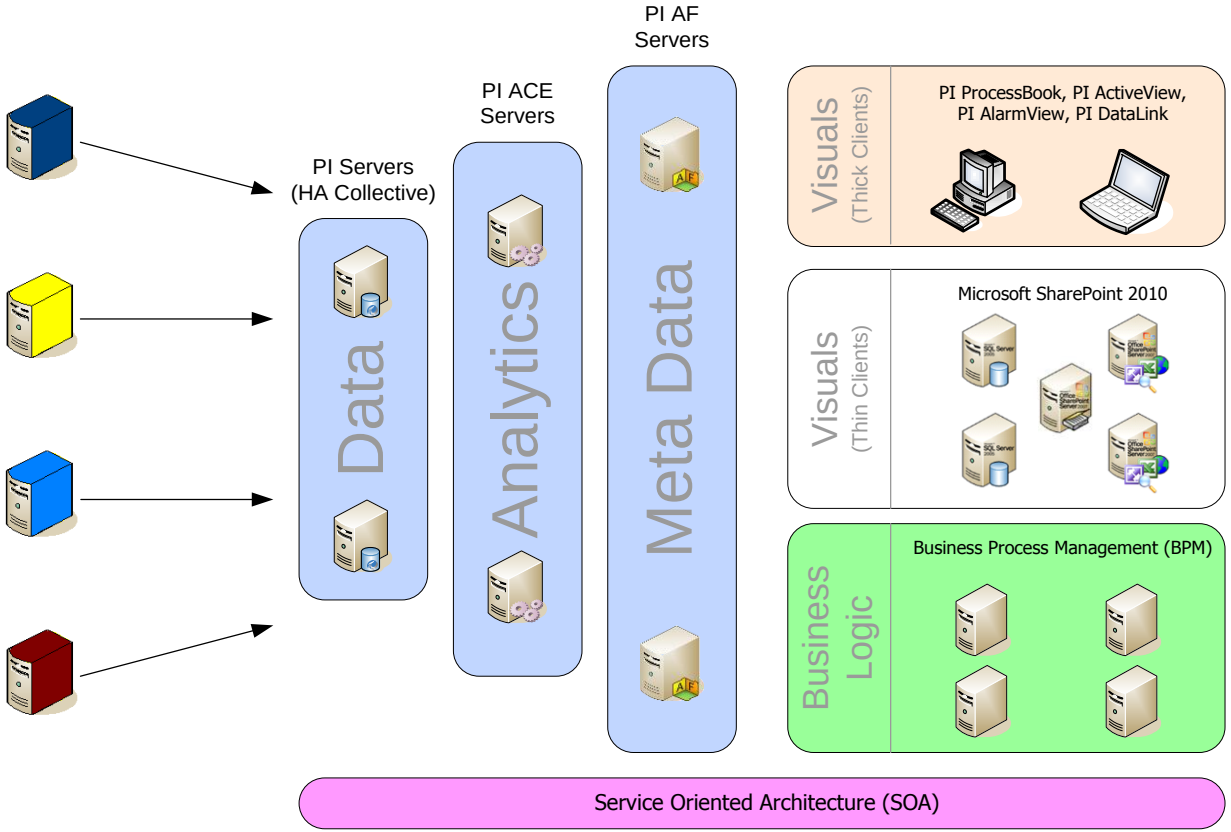
Yorkshire and the OSIsoft PI System



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Thank you

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