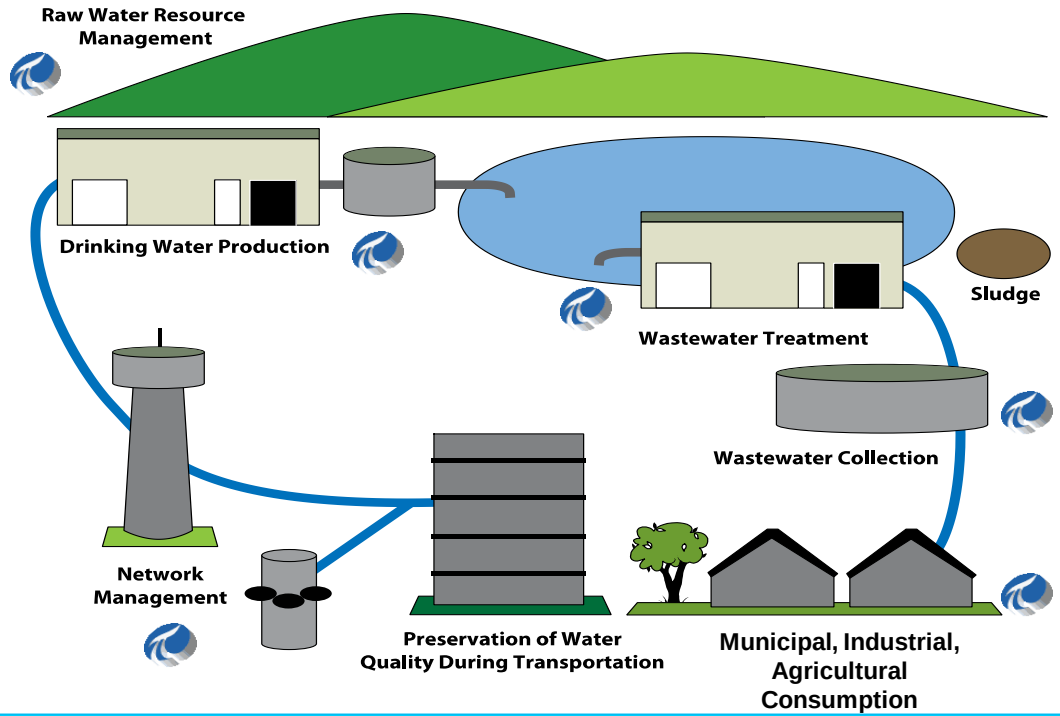
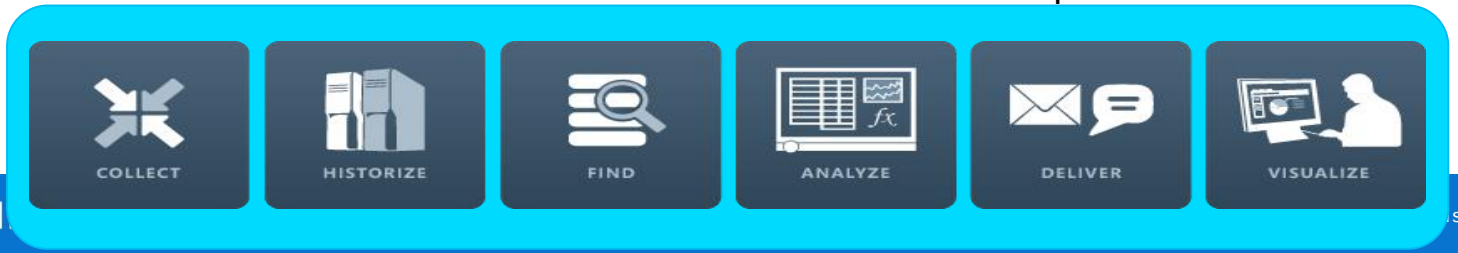
Global Water Industry Business Value

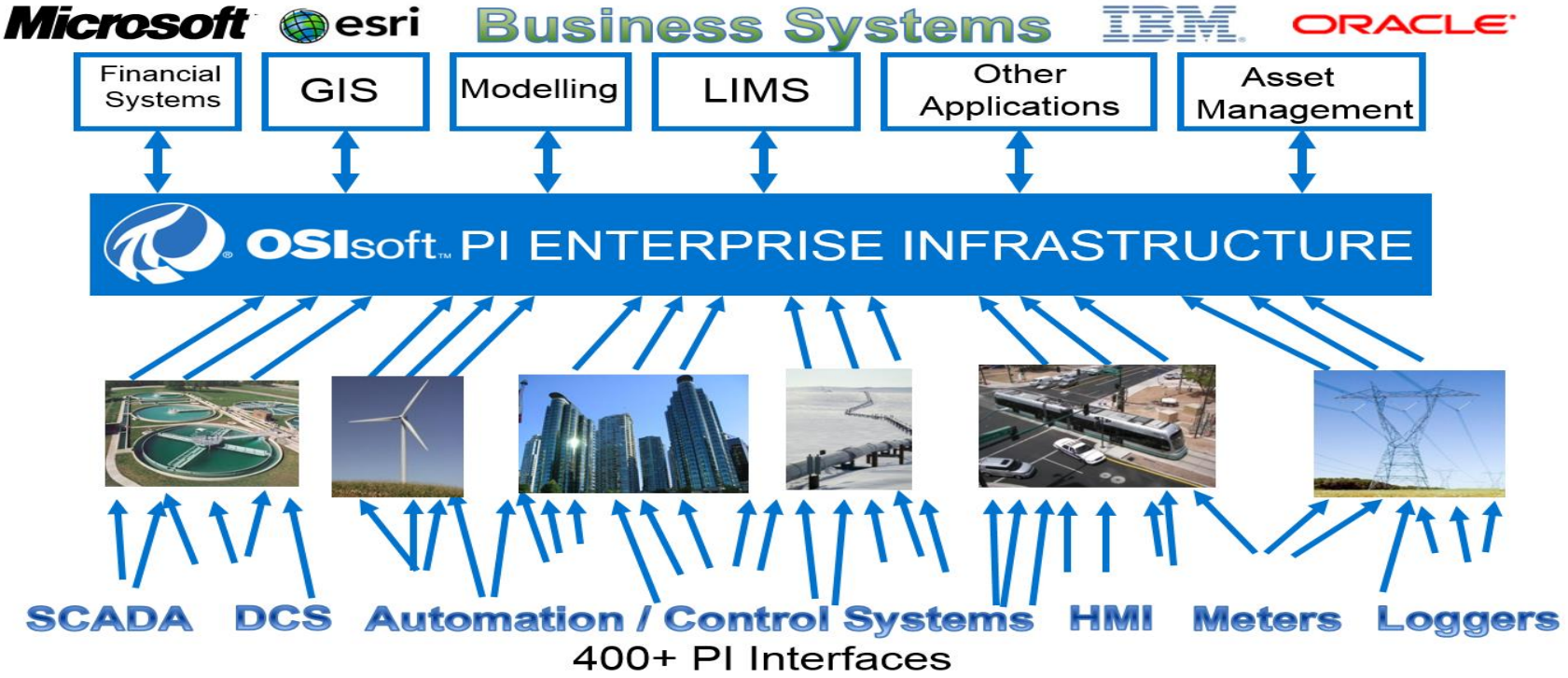
Presented by **Gary Wong ~ Principal, Global Water Industry, OSIsoft**

Integrated Smart Water Management

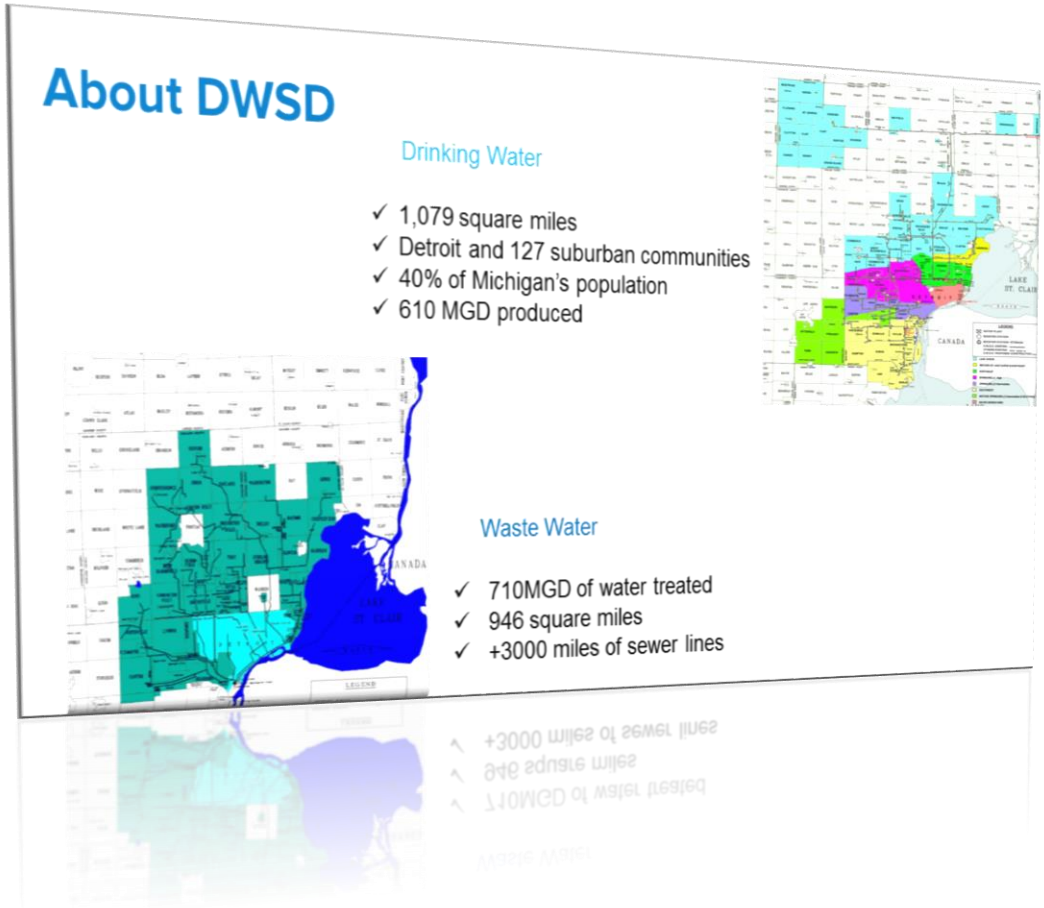




Once Source of the Truth
Common Infrastructure



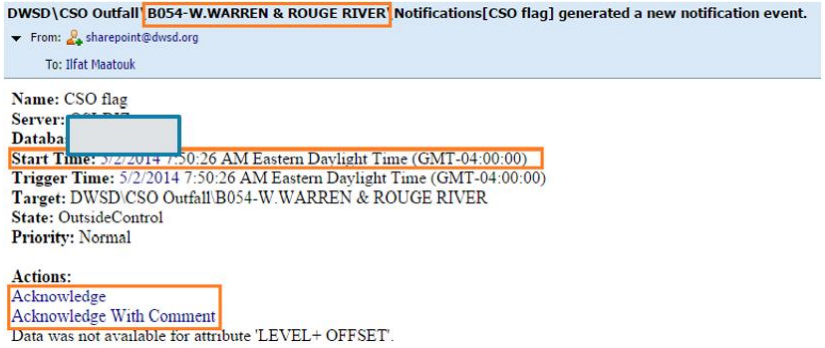
Customer Successes



Ilfat Maatouk, Betty Thomas
Detroit Water & Sewerage

Operational Intelligence in your Water Supply

- Reaching $500,000 in savings last 3 years
- Automated reporting providing quicker insight
- Real-time dashboards for better decision making



DWSD\CSO Outfall B054-W.WARREN & ROUGE RIVER Notifications[CSO flag] generated a new notification event.

From: sharepoint@dwsd.org

To: Ilfat Maatouk

Name: CSO flag
Server:
Databa
Start Time: 5/2/2014 7:50:26 AM Eastern Daylight Time (GMT-04:00:00)
Trigger Time: 5/2/2014 7:50:26 AM Eastern Daylight Time (GMT-04:00:00)
Target: DWSD\CSO Outfall\B054-W.WARREN & ROUGE RIVER
State: OutsideControl
Priority: Normal

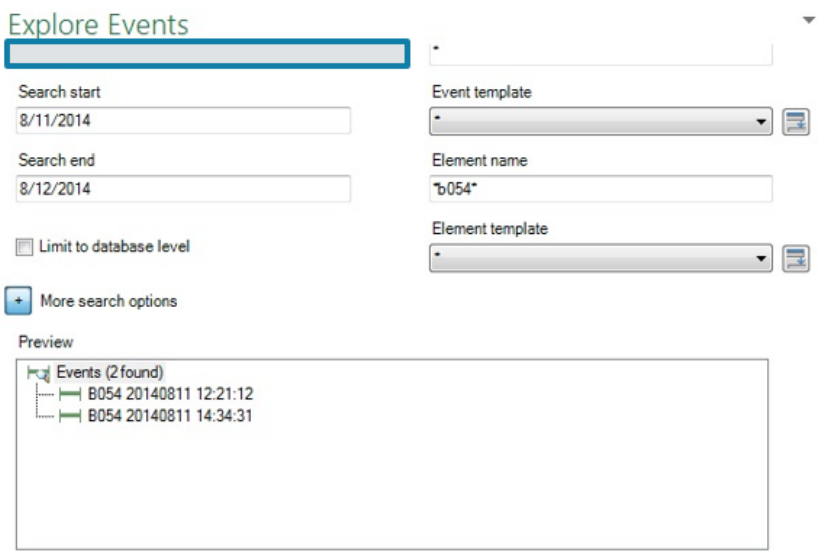
Actions:
Acknowledge
Acknowledge With Comment
Data was not available for attribute 'LEVEL+ OFFSET'.

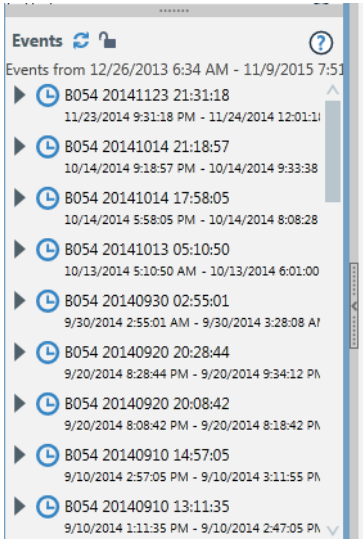
DWF SM SE-S-1 20150214 09:13:00		7667.9 Minutes	2/14/2015 9:1…	2/19/2015 5:0…			DWF
DWF SM SE-S-1 20150219 17:00:57		16714.2 Minutes	2/19/2015 5:0…	3/3/2015 7:35…			DWF
DWF SM SE-S-1 20150303 20:25:03		1804.9 Minutes	3/3/2015 8:25…	3/5/2015 2:29…			DWF
DWF SM SE-S-1 20150305 10:05:00		1822.5 Minutes	3/5/2015 10:0…	3/6/2015 4:27…			DWF
OUTFALLBASIN20150129-001		67842.7 Minutes	1/29/2015 9:5…				OUTFALLBASIN
SE-S-1 STAGNANT 20150214 17:10:32		1311.8 Minutes	2/14/2015 5:1…	2/15/2015 3:0…			SM STAGNANT
SE-S-1 STAGNANT 20150215 17:17:36		2666.2 Minutes	2/15/2015 5:1…	2/17/2015 1:4…			SM STAGNANT
SE-S-1 STAGNANT 20150217 14:26:25		1084.2 Minutes	2/17/2015 2:2…	2/18/2015 8:3…	Event frame w…		SM STAGNANT
SE-S-1 STAGNANT 20150218 08:30:29		6150.8 Minutes	2/18/2015 8:3…	2/22/2015 3:0…			SM STAGNANT
SE-S-1 STAGNANT 20150222 17:18:59		2362.1 Minutes	2/22/2015 5:1…	2/24/2015 8:4…	Event frame w…		SM STAGNANT
SE-S-1 STAGNANT 20150224 08:40:56		30475.8 Minutes	2/24/2015 8:4…				SM STAGNANT
SE-S-1 STAGNANT 20150224 08:45:06		2881.2 Minutes	2/24/2015 8:4…	2/26/2015 8:4…	Event frame w…		SM STAGNANT
SE-S-1 STAGNANT 20150226 08:46:06		27590.6 Minutes	2/26/2015 8:4…				SM STAGNANT
SE-S-1 STAGNANT 20150226 08:54:26		245.7 Minutes	2/26/2015 8:5…	2/26/2015 1:0…			SM STAGNANT
SE-S-1 STAGNANT 20150226 13:58:48		2922.7 Minutes	2/26/2015 1:5…	2/28/2015 2:4…			SM STAGNANT
SE-S-1 STAGNANT 20150228 17:02:08		1322.4 Minutes	2/28/2015 5:0…	3/1/2015 3:04…			SM STAGNANT

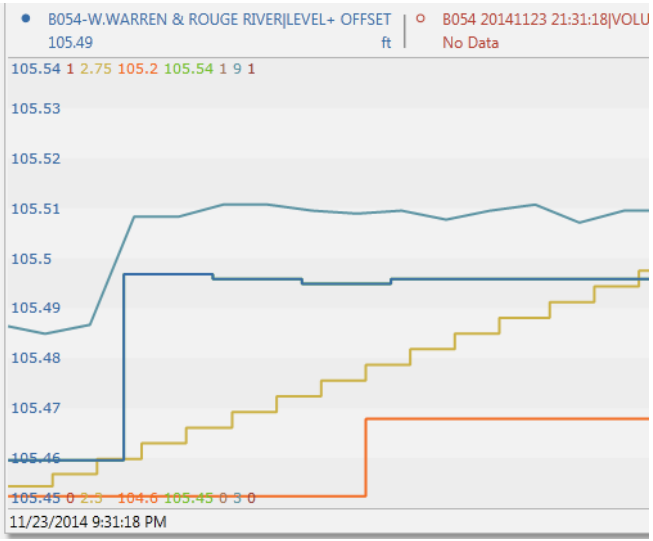
Monitoring Flows: Notifications & Event Frames

Event Frames

	A	B	C	D	E	F	G	H
1	Event name	Start time	End time	Duration	FLOWRATE	FLOWRAT	LEVEL +OFF:	RIVER LEVEL
2	B054 20140811 12:21:12	11-Aug-14 12:21:12	11-Aug-14 14:07:51	0 1:46:39	7.18	0.34	105.50	103.94
3	B054 20140811 14:34:31	11-Aug-14 14:34:31	11-Aug-14 15:17:52	0 0:43:21	9.91	0.19	105.57	104.75



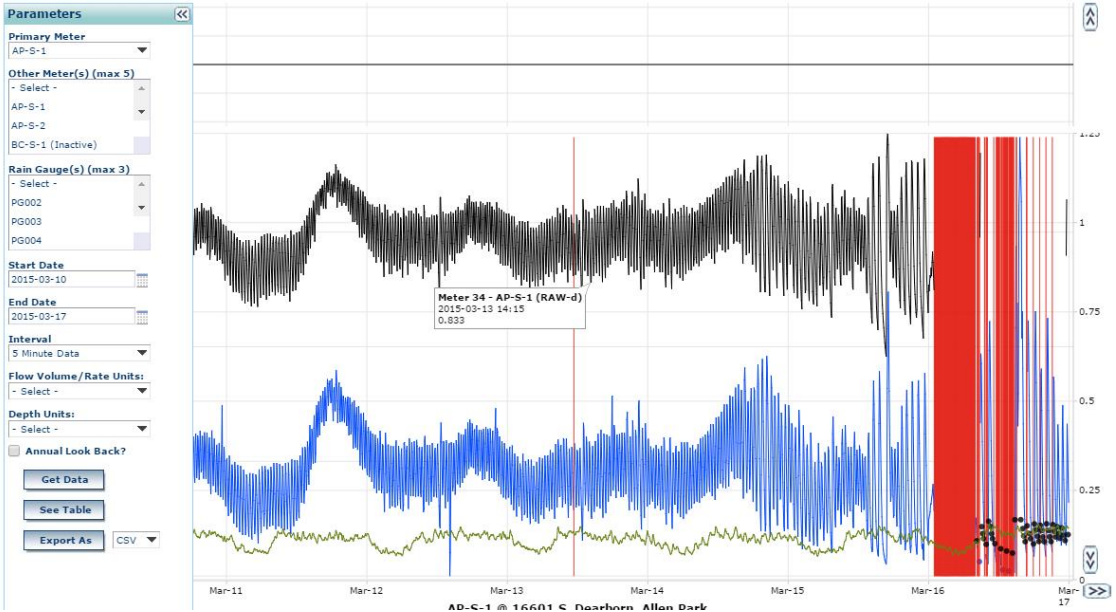




Sewer Meter Billing

PI SMT
Analyses
Notifications
Event Frames
PI Coresight
PI DataLink
Asset Framework

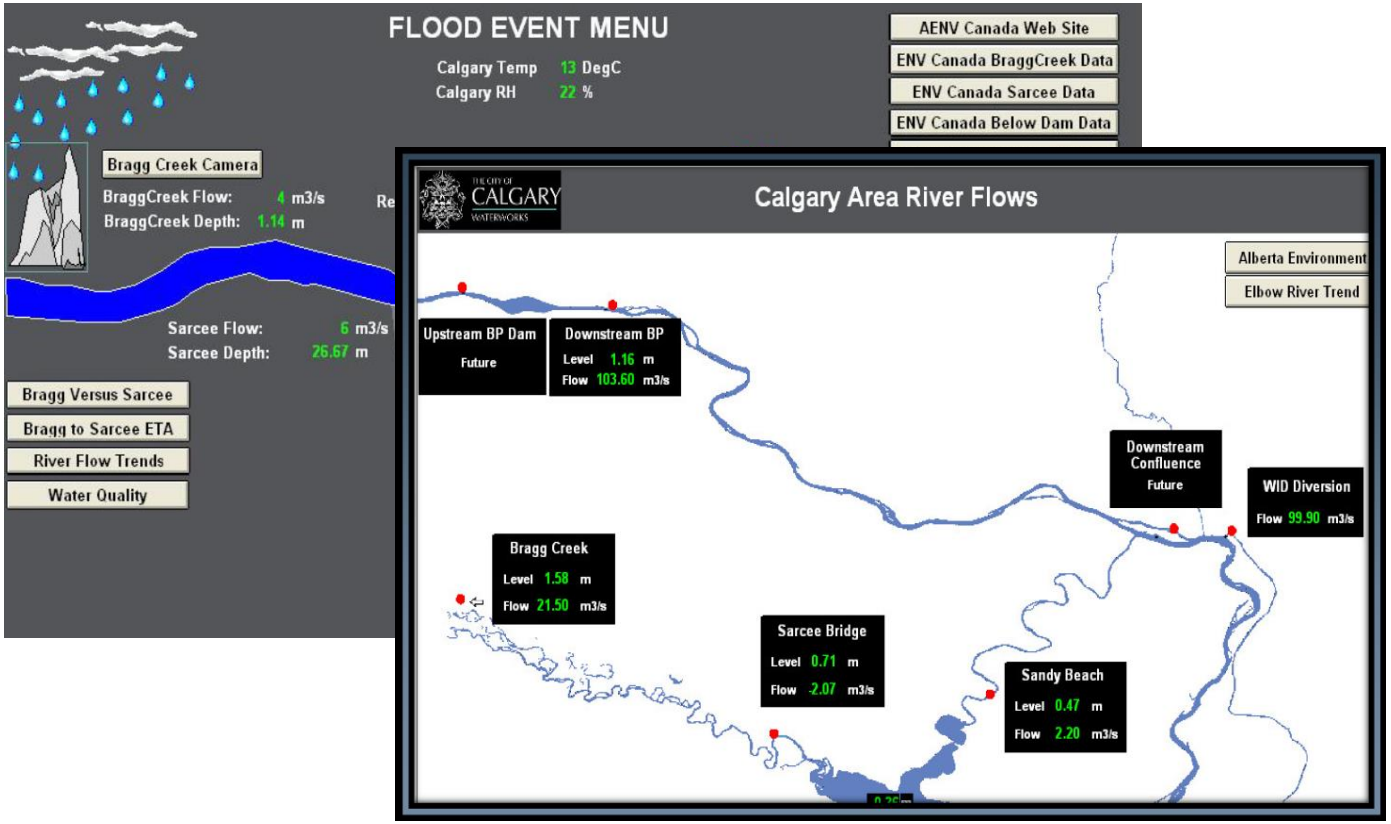
- Linear Interpolation
- Green line
- Correlations
- Flow calculations
- Notifications
- Replace data
- Peaks

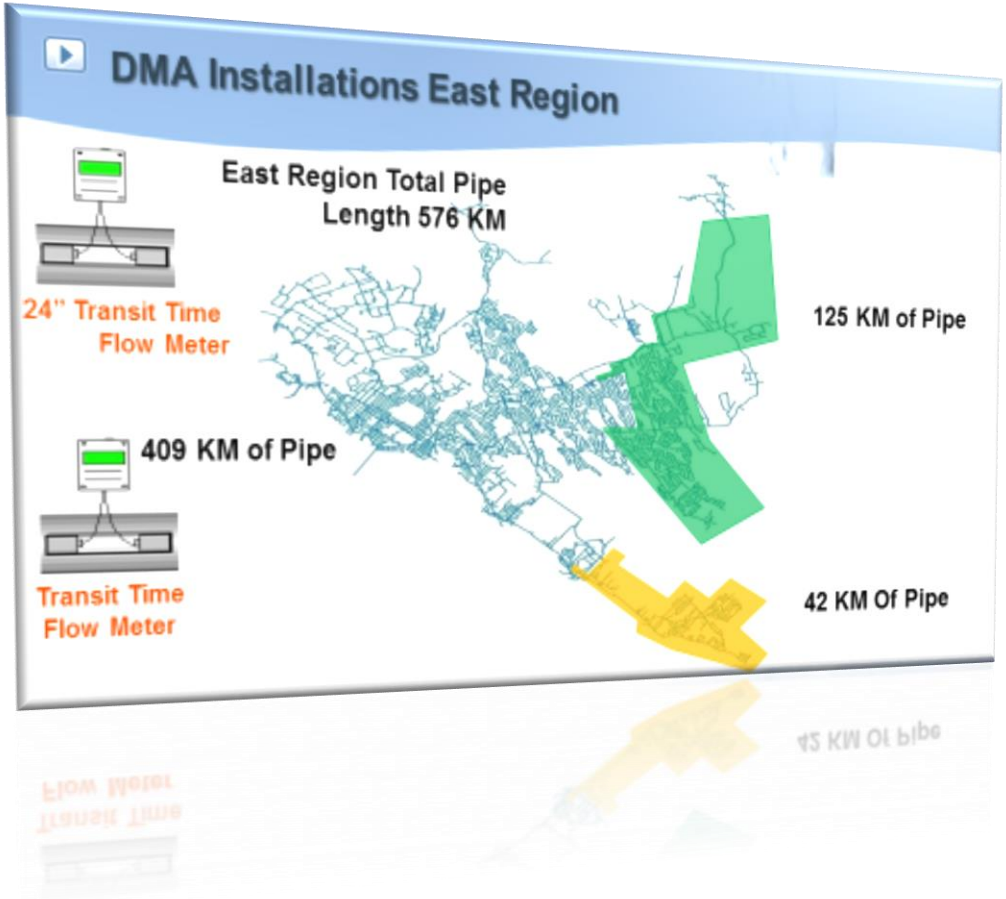


Financial Solutions

- 2012-2015: $500,000
  - ❖ Automating Reports
  - ❖ Notifications and Event Frames
  - ❖ Using the PI System as a back up
  - ❖ Replacing costly software with the PI system
- Savings and Improvements expected in the next 5 years: $2,000,000
  - ❖ Monitoring Real time data
  - ❖ Energy consumption tracking
  - ❖ Increasing pump efficiency
  - ❖ Predictive data

Calgary's Emergency Operations





HALIFAX WATER LEAKAGE REDUCTION

Carl Yates – General Manager
Halifax Water

Real-time Water Loss Control

- Serving 325,000 people
- $600,000 / year savings

Reduce Leaks & Non Revenue Water

Water service to 325,000 people.
$600,000 / yr savings reducing leakage (DMA Night Flows).

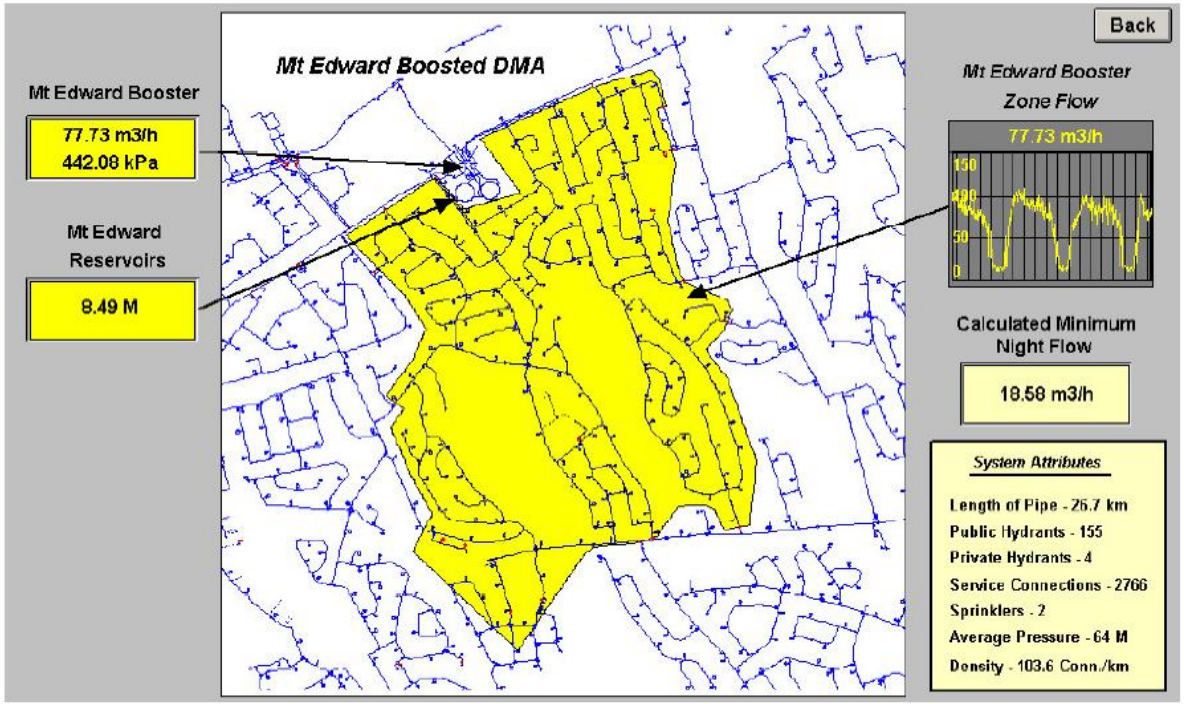
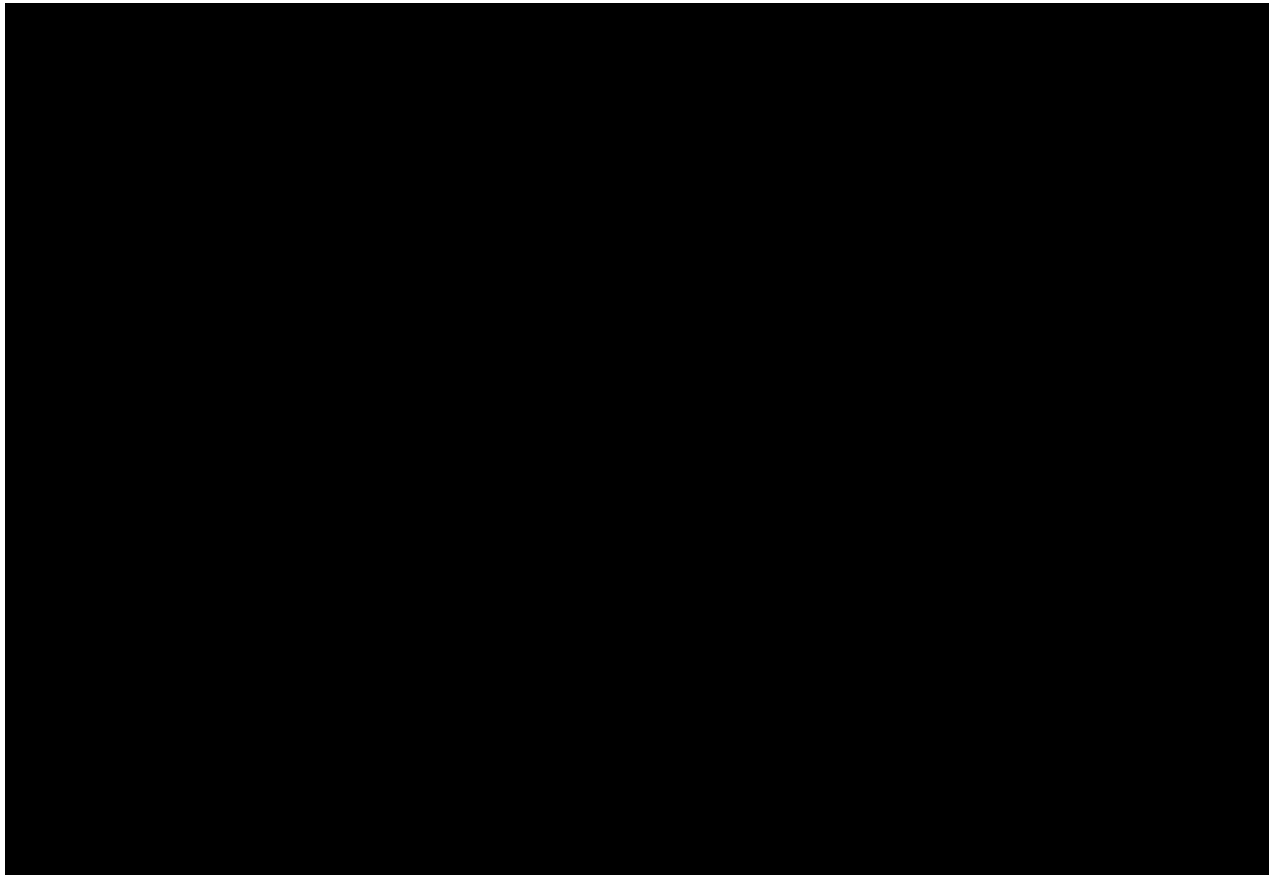


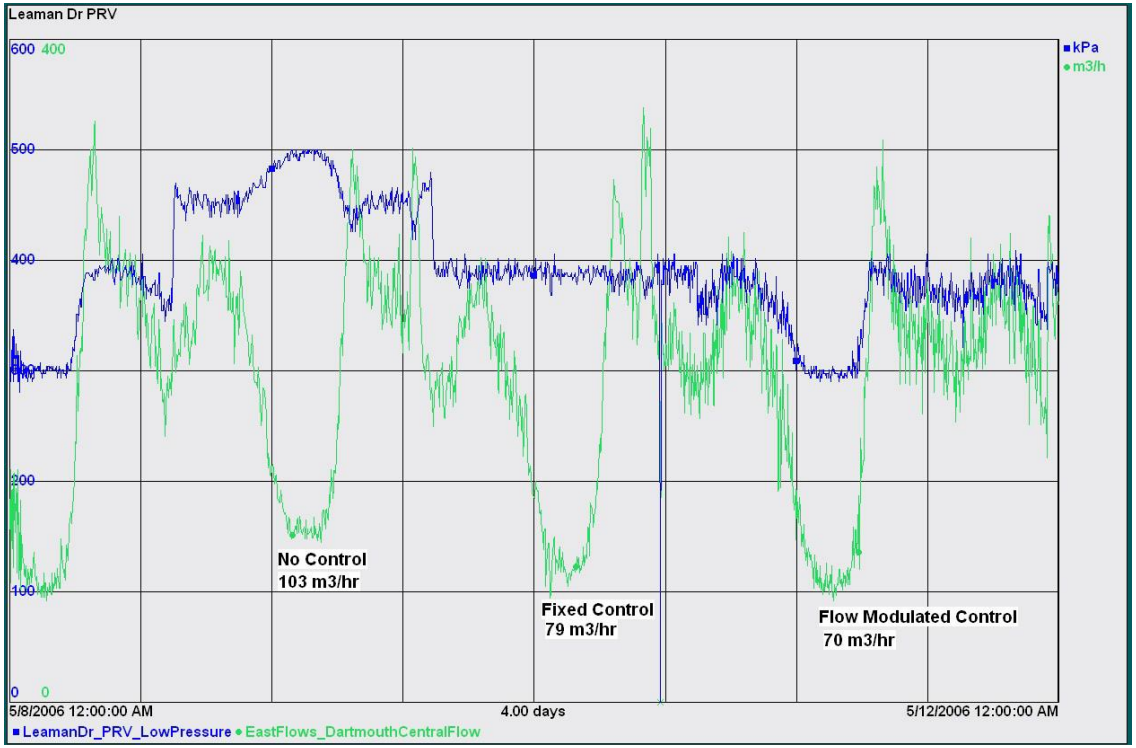
Figure 2.3 Mount Edward DMA, Dartmouth, Nova Scotia

PI to Esri ArcGIS Demo

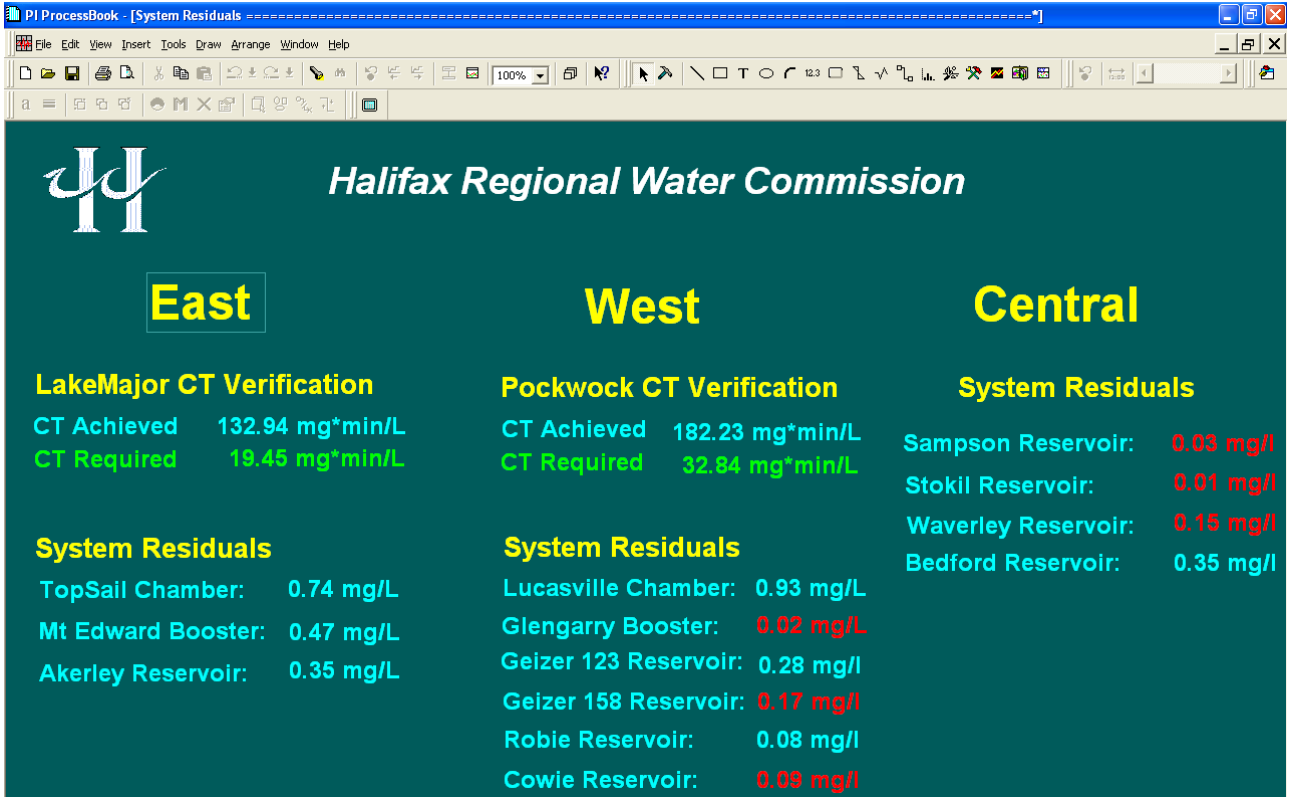


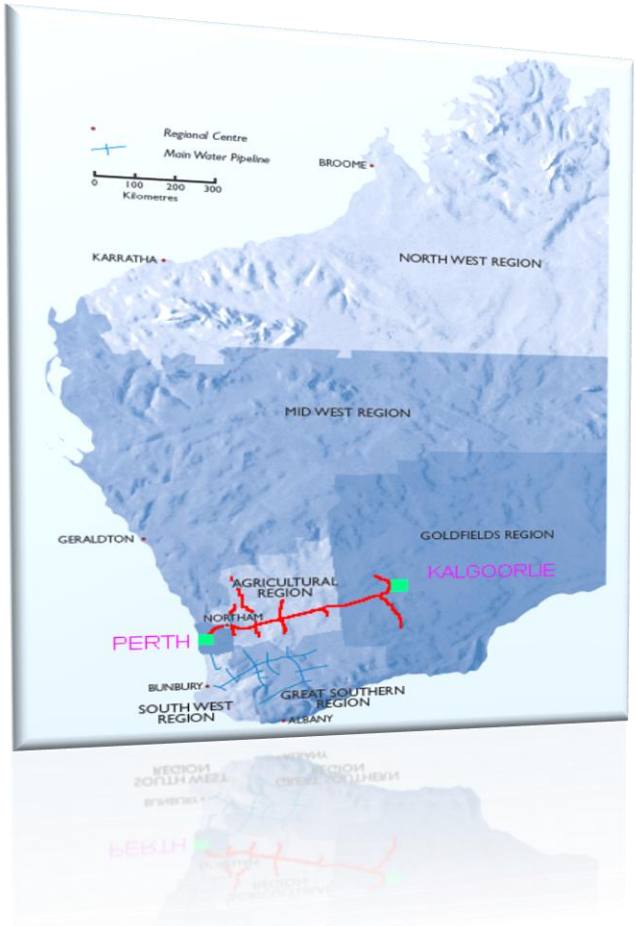
Reduce Main Breaks: Advanced Pressure Management

Average main breaks dropped from 23 / year to 12 / year (Halifax Water)



Water Quality – Chlorine Verification





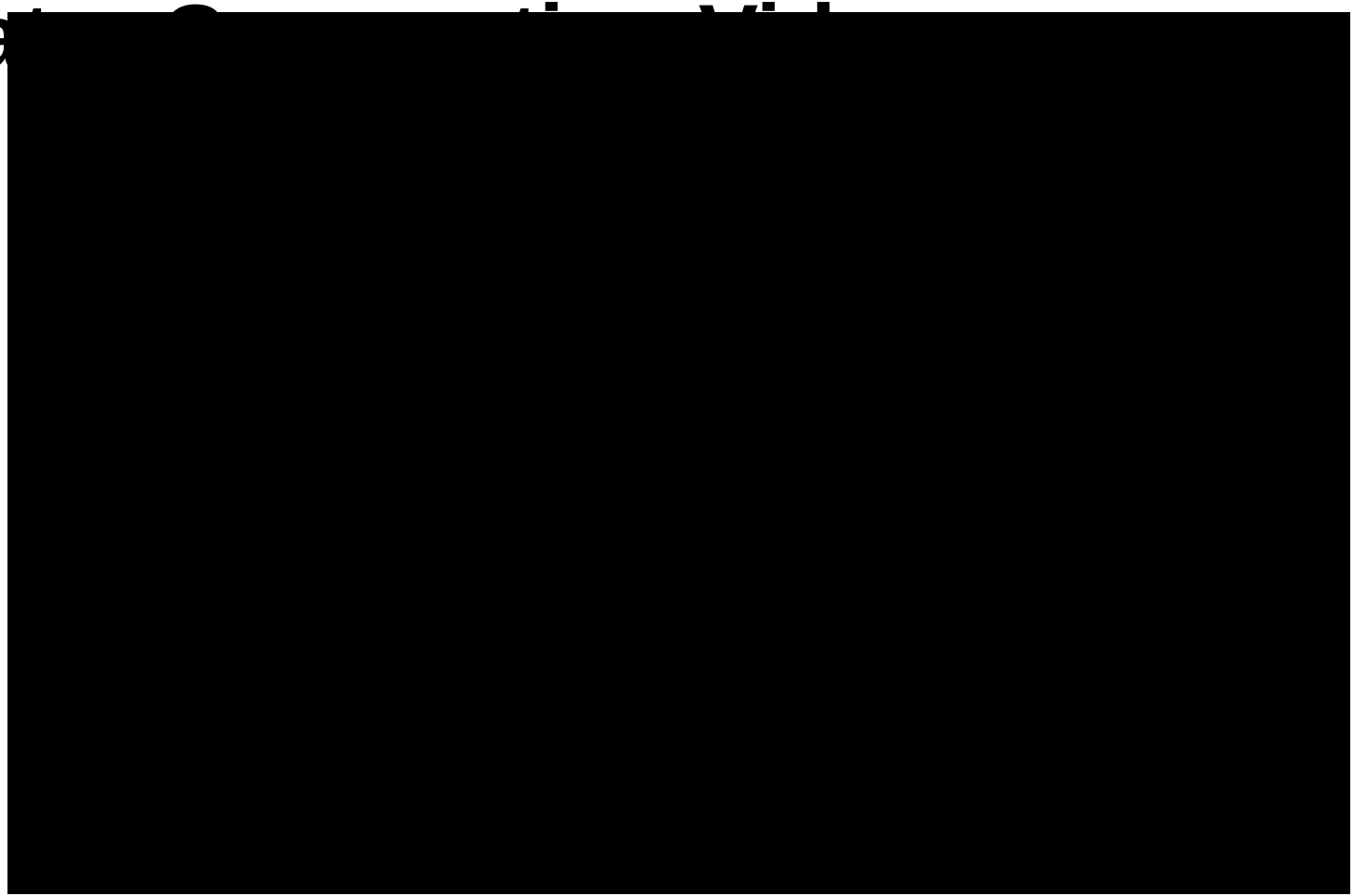
Water Corporation Transformation

Ian Scott, Asset Management
Water Corporation

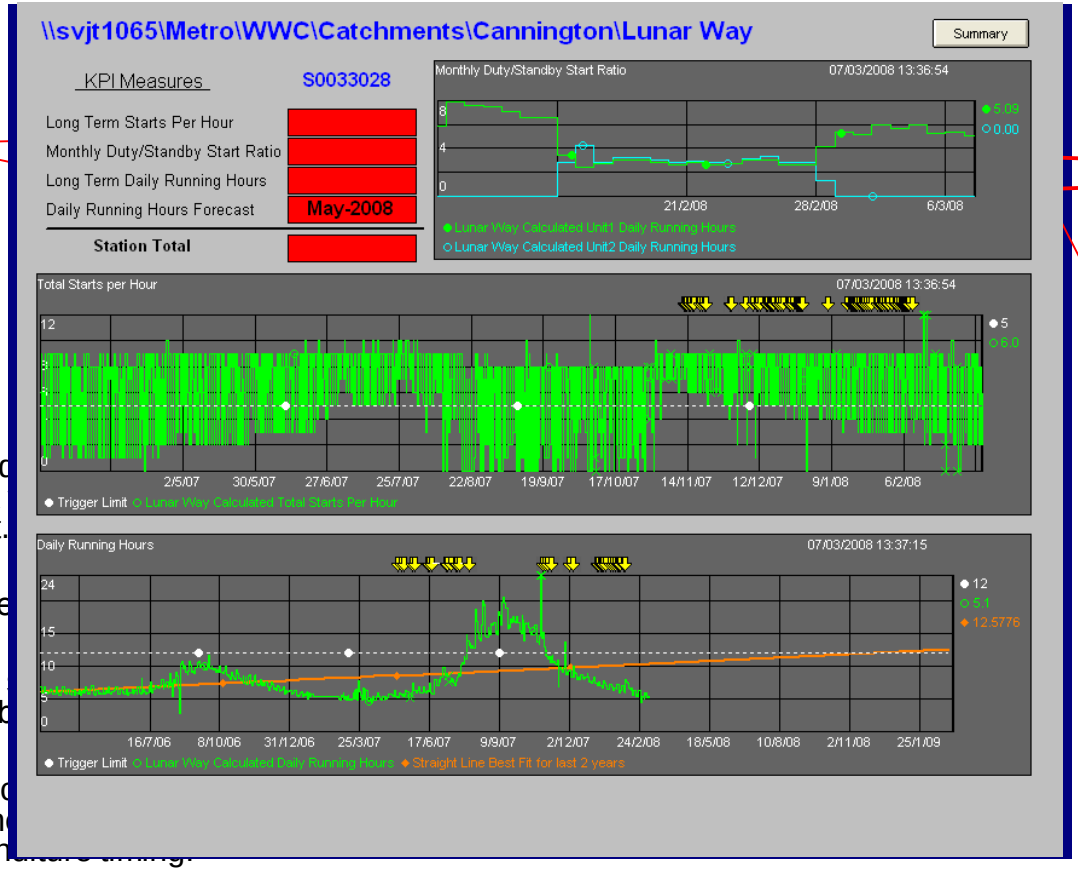
By Geography, Western Australia is almost 10 times larger than the UK

UK has 25 times the population

Wa



Assets: Pumpstation KPI Forecasting



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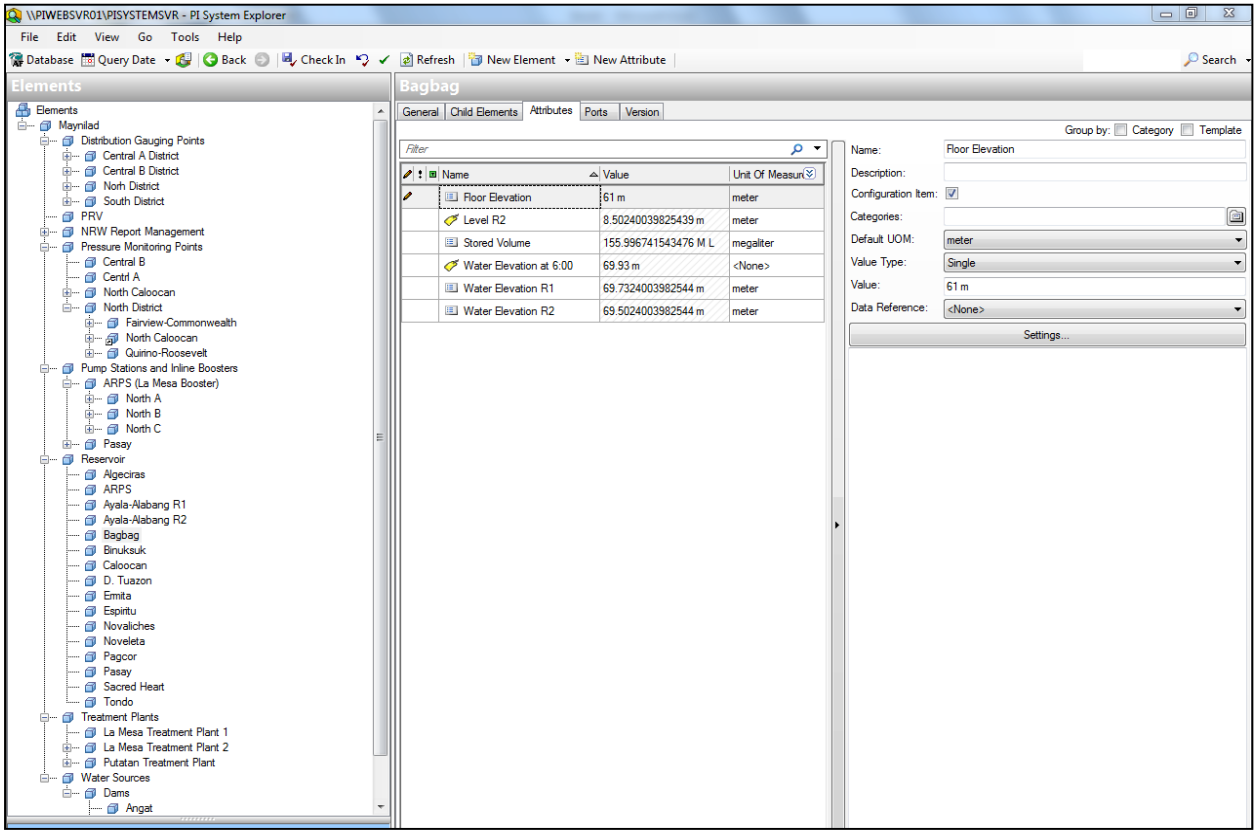
MAYNILAD WATER: A BEGINNING

Francisco Castillo – SVP-CIO
Maynilad Water

- 540 sq km
- Serving 9M people
- Meter Data Management
- Field MOUS (Monitoring User System)

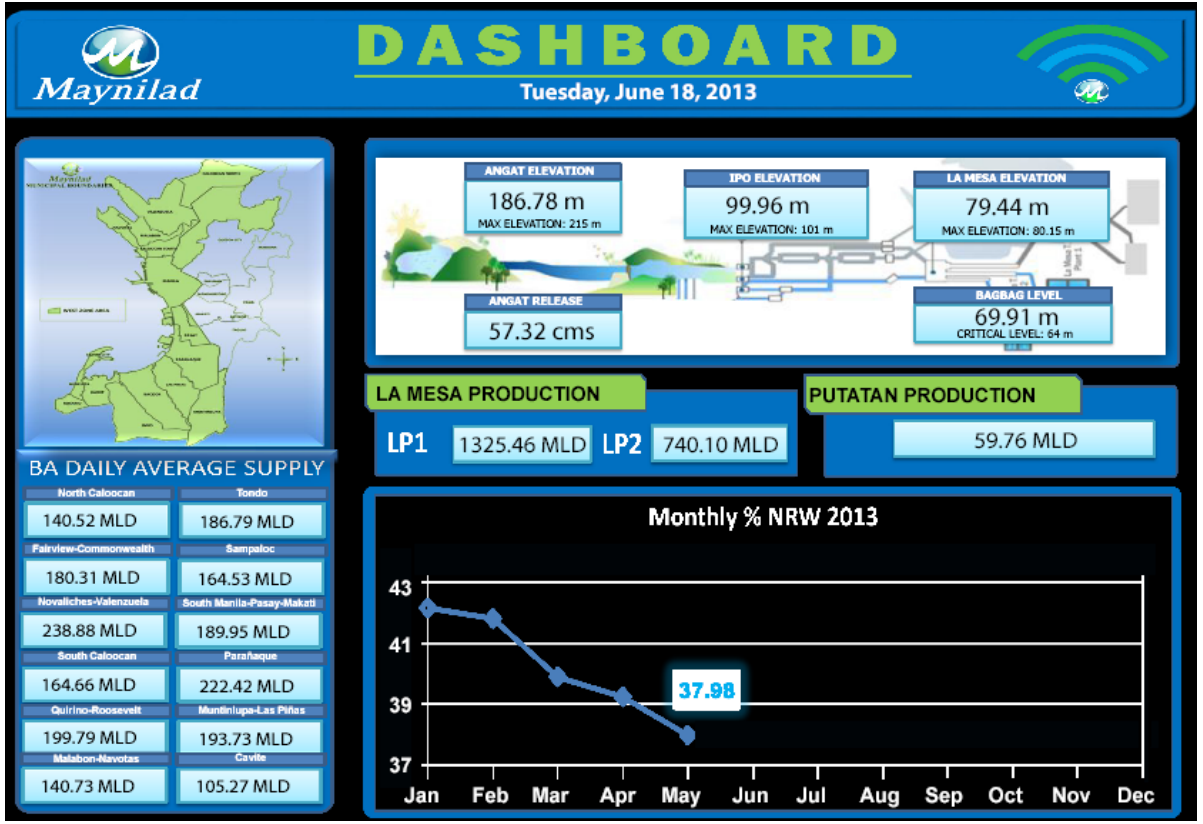
Asset Framework Hierarchy



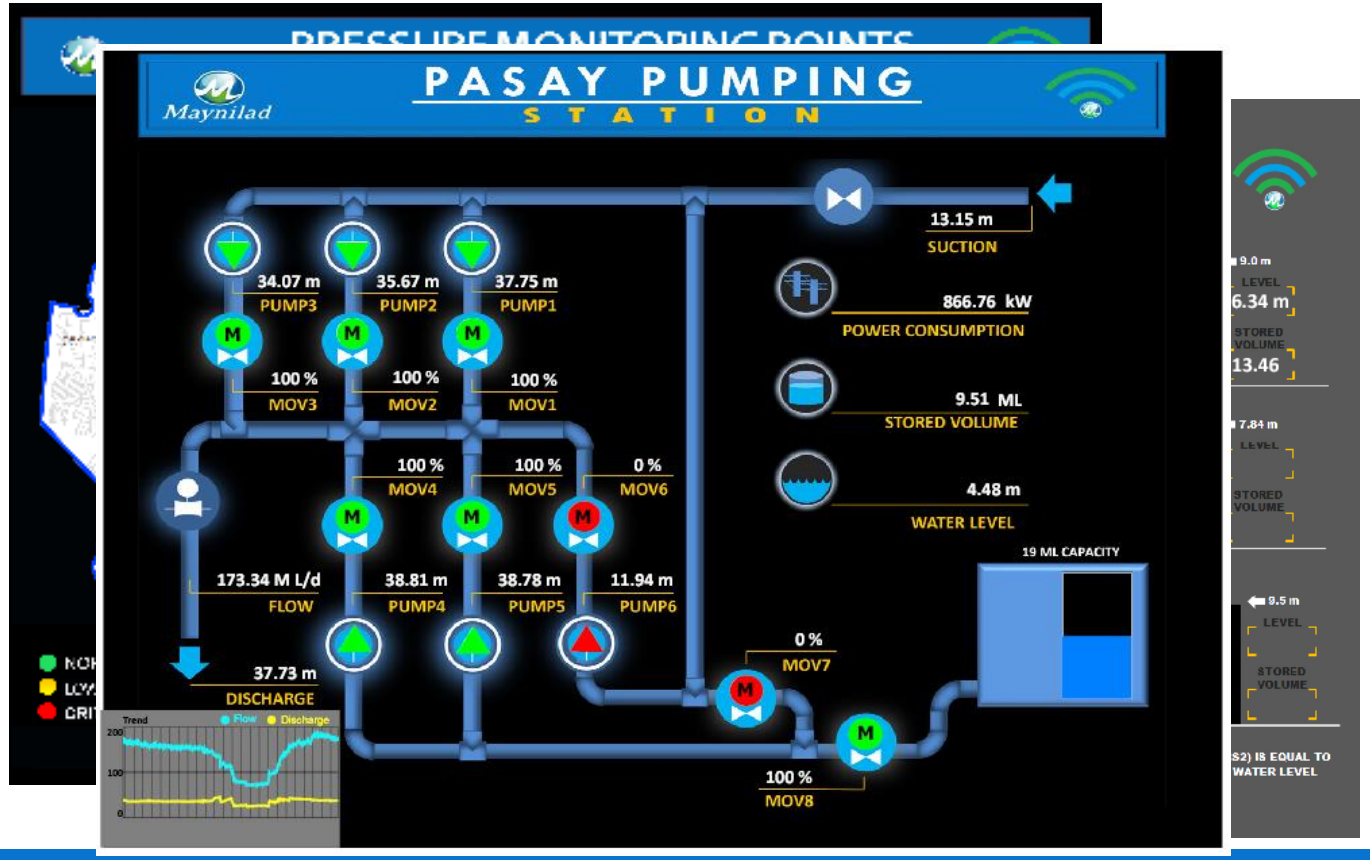
Benefits Realized (~6 months)

- ✓ Quick response to unusual distribution network changes
- ✓ Better asset condition management
- ✓ Faster assessment on operations efficiency
- ✓ Cost on Operations
  - ✓ Less outsourcing
  - ✓ Reduced downtime
  - ✓ Less manpower
- ✓ Secure, scalable and redundant data management system
- ✓ User friendly

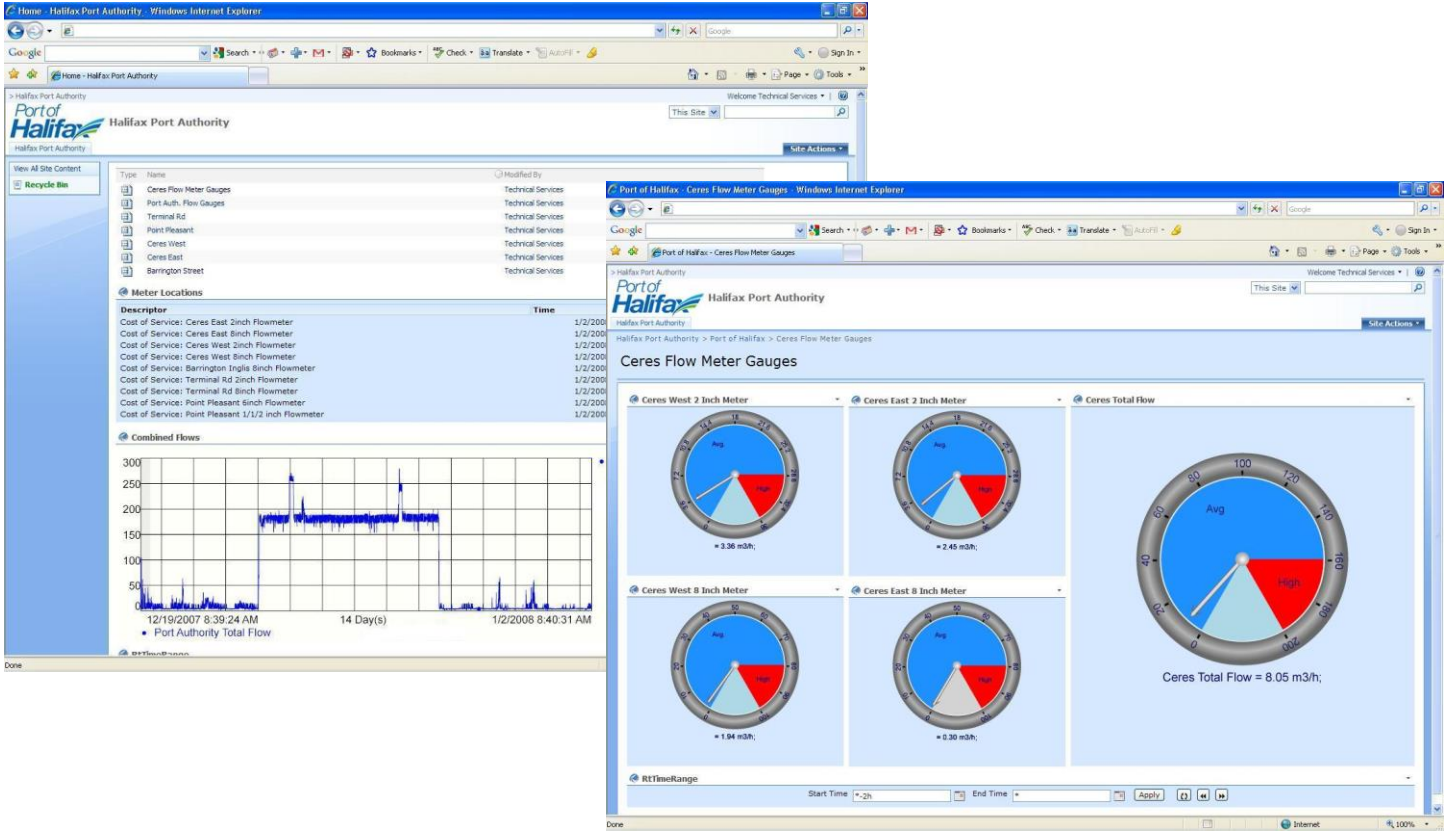
Dashboard Overview



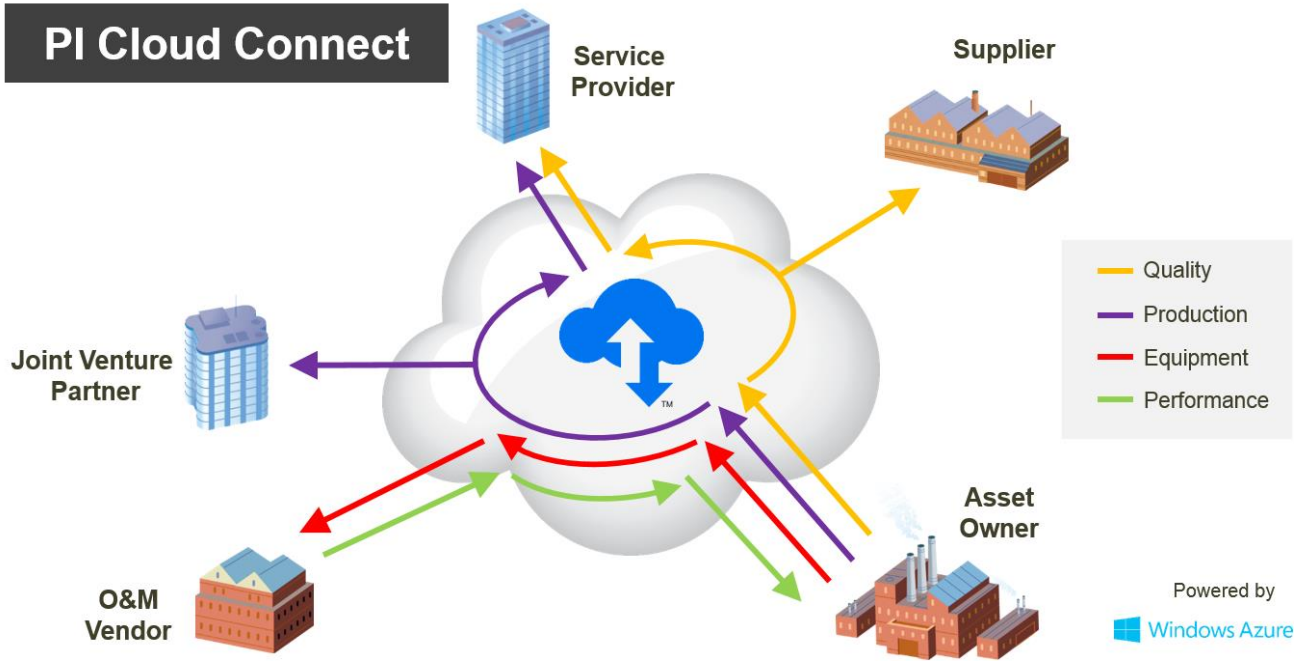
Pressure Monitoring



Consumer Transparency



Connected Services



Gary Wong

- gwong@osisoft.com
- Principal, Global Water Industry
- OSIsoft, LLC