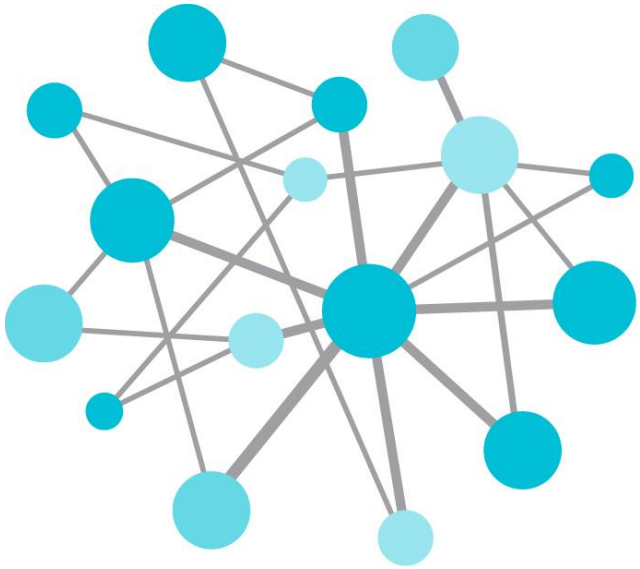


OSIsoft®

# REGIONAL SEMINAR 2014

## The Power of Data

**DECISION READY IN REAL-TIME**

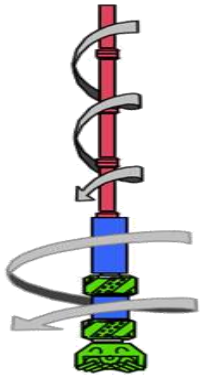
# Information on the Spot

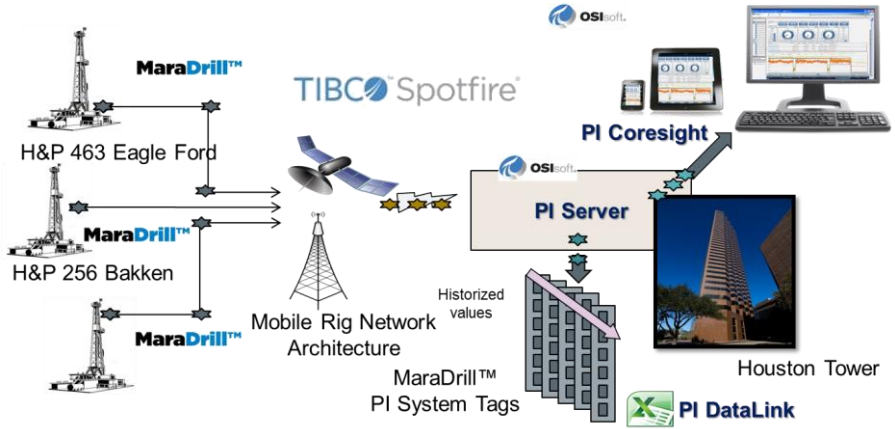
Presented by **Martin Bryant, Field Service Engineer**
MBryant@OSISoft.com

# Real-Time Drilling Optimization

Marathon Oil Corporation

From stick-slip identification to stick-slip mitigation.






## CHALLENGES

**Lack of real-time** drilling analytics and guidance capability **at the drill site**

Extended drill time and down hole **tool damage**

Increased use of **resources**

## SOLUTION

Installation of the **PI System real-time integration and applications infrastructure**

Creation of drilling process **high fidelity real-time analytics and visualization** capabilities at the drill site

## RESULTS

**Drilling time and capital well cost savings** due to reduction in resources

**Reduced vibration and damage** to downhole tools

Continuous optimization onsite and retrospective **post-well analysis**

# Update on Marathon Oil's MaraDrill™ PI-Based Optimization Solution

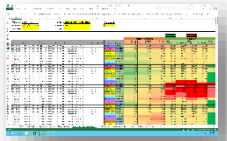

Update on Marathon Oil's MaraDrill(TM) PI-based Optimization Solution

Ken Startz
Marathon Oil

PetroLux

**I need to:**
Provide self service BI for my users

**I need to:**
Enter data from my mobile device



**I need to:**
Report against process and event data

**I need to:**
Respond to notifications and identify problems

**I need to:** Access process data anytime, anywhere

# I need to:

Enter data from my mobile device

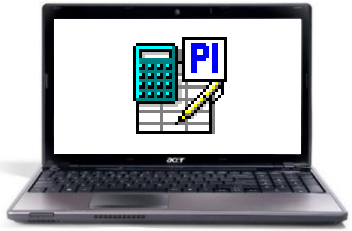
PI Manual Logger
using a smart phone

# DEMO

# PI Manual Logger 2014

**Tour-based** manual input data collection

- PI Manual Logger **PC**
  - **Configure** tours
  - Enter, review, edit, or **approve** the data

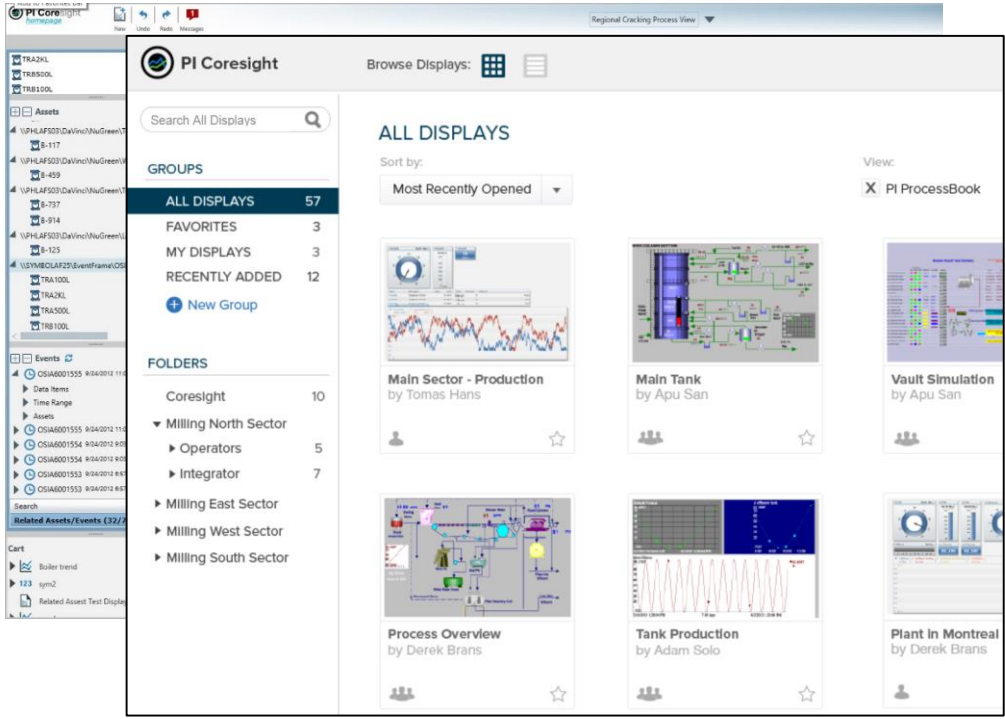



- PI Manual Logger **Web**
  - **Collect** data from equipment with a **mobile device**
  - **Barcode**/RFID to identify tags and/or enter data

# I need to:

## Respond to notifications and identify problems

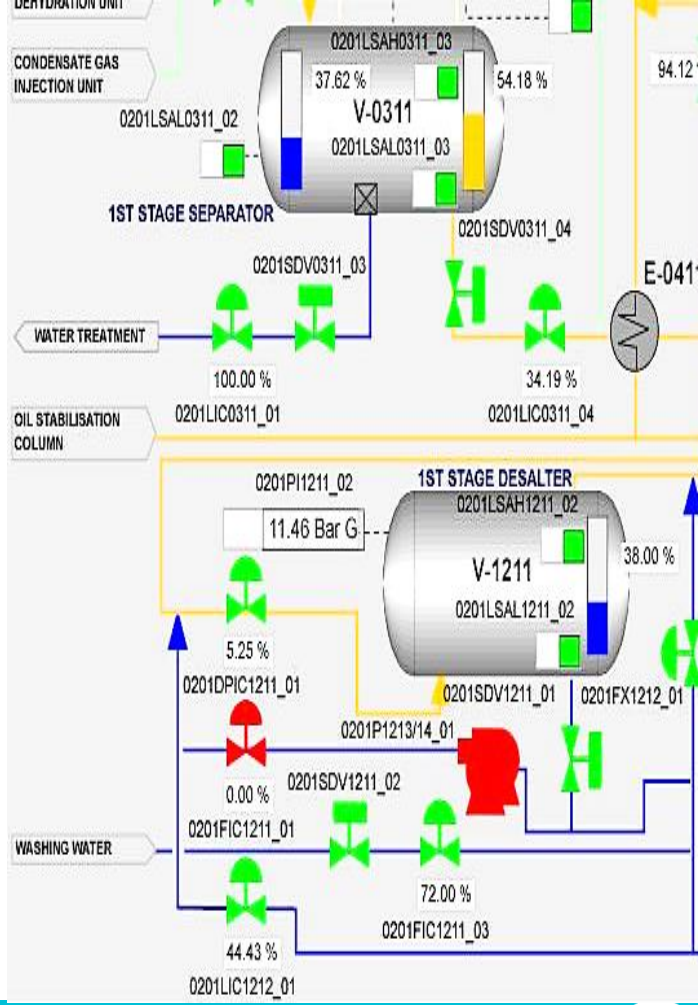
Notification-driven investigation using PI ProcessBook and PI Coresight



# DEMO

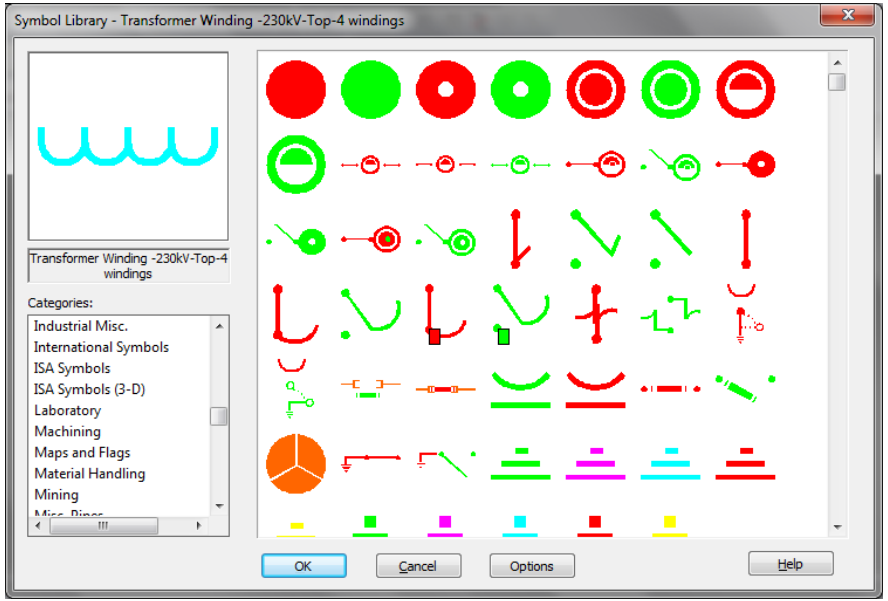
# PI ProcessBook

- Display **real-time** and **historical** data
  - Process representation
  - **Trend** with traces
  - Context management with **PI AF**
  - **Replay** problematic events
  - **Drill-down** capabilities

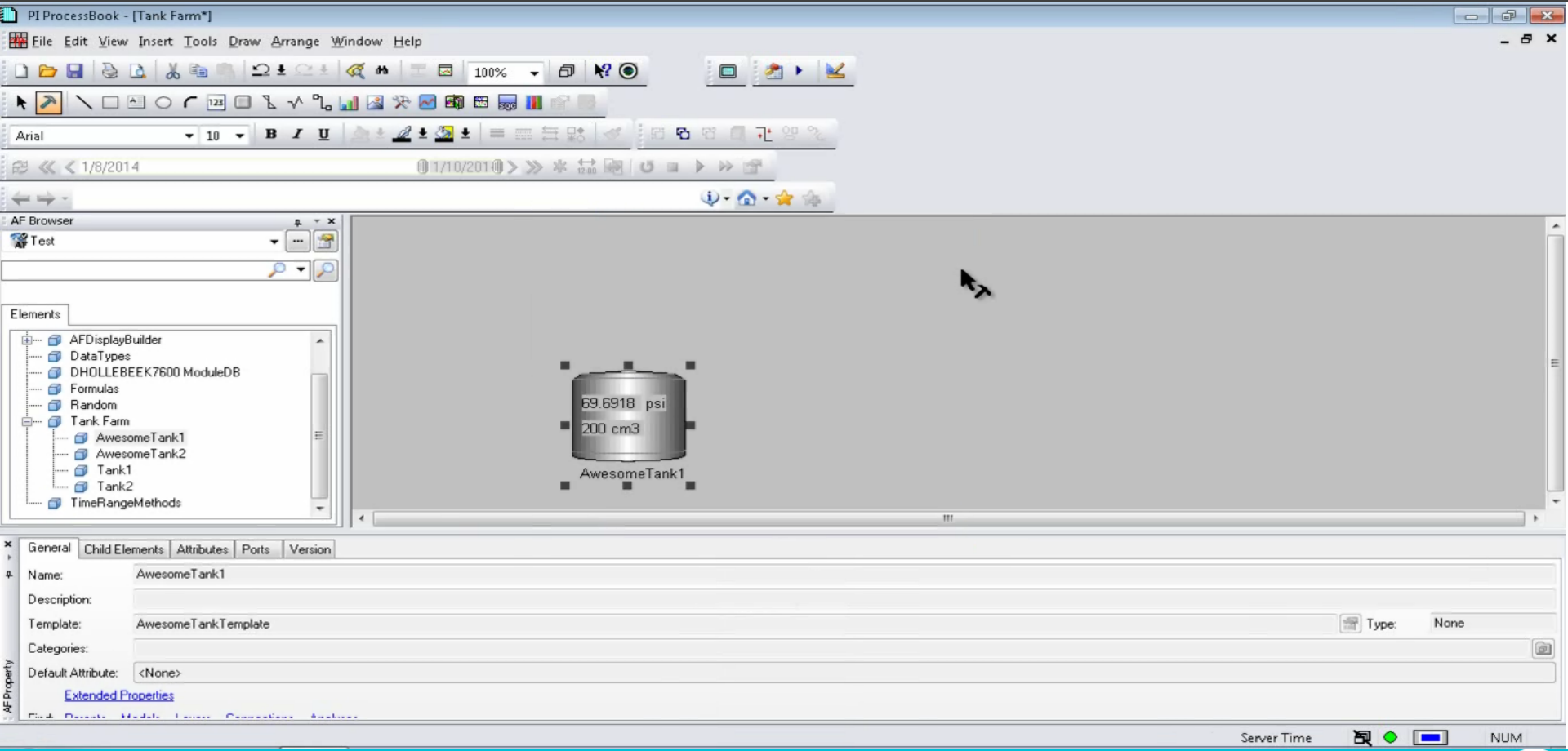


# PI ProcessBook 2014

- Launch ad hoc analysis in **PI Coresight**
- New Transmission and Distribution Symbols
- **Assign displays** to PI AF Elements and Templates

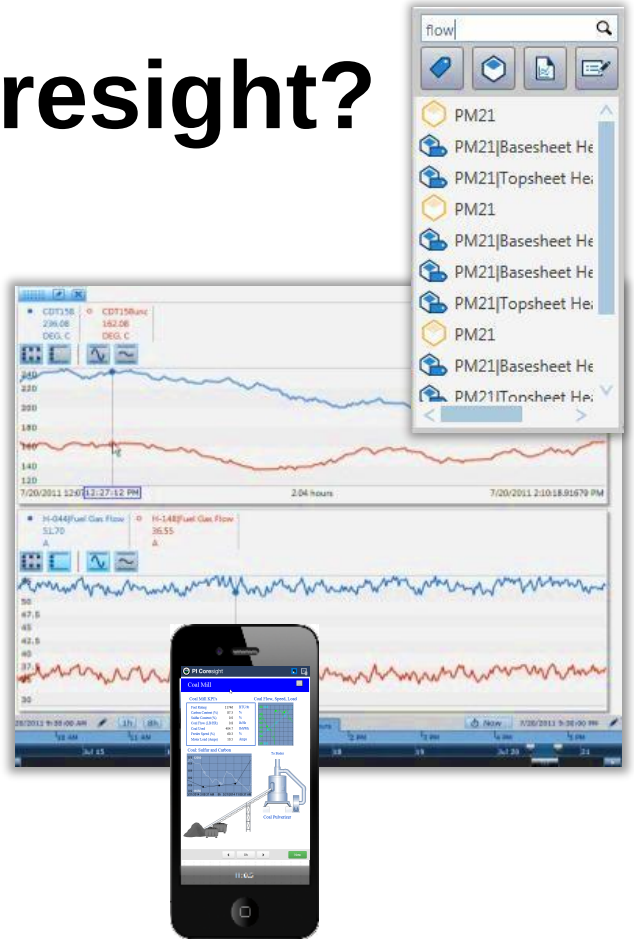


# Demo: Assign Displays to PI AF Elements



# What Can I Do with PI Coresight?

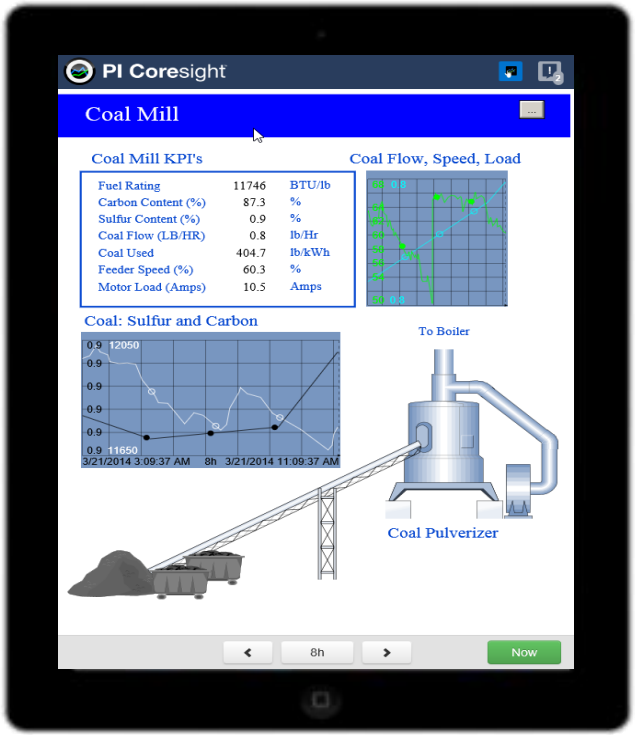
- Very easy to build **ad hoc displays**
- Easy to use integration to indexed values in **PI AF assets & events**
- Simple ways to **share insight with others**



# I need to:

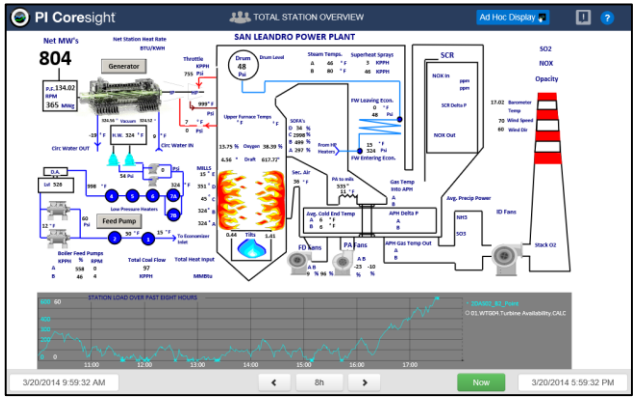
Access operational data anytime, anywhere

Real-time data on your tablet using PI Coresight



# Introducing PI Coresight 2014

- **Crafted displays** from PI Processbook not only displayed on **any device** accessible to PI Coresight – but integrated with PI coresight's **intuitive ad-hoc capabilities.**


# DEMO

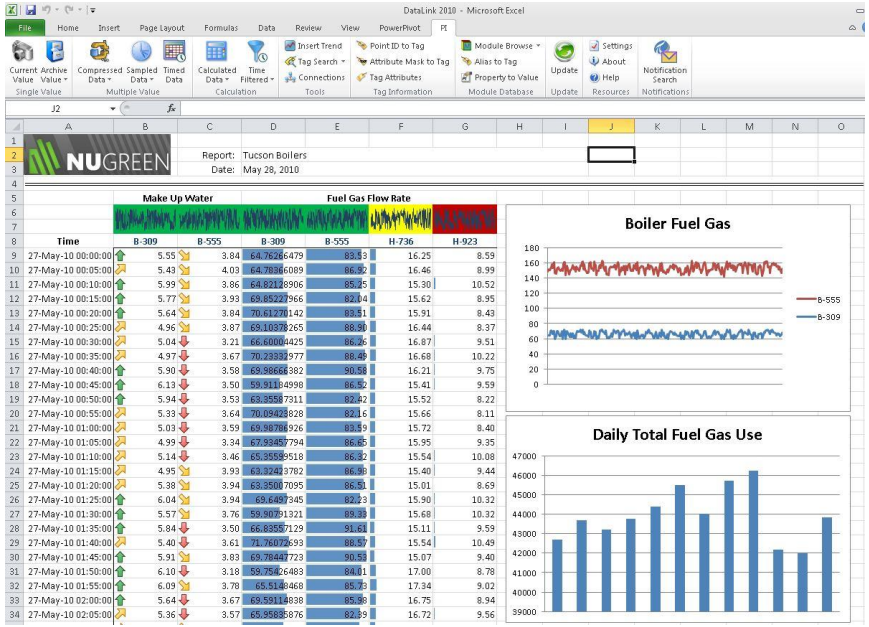
# PI Coresight on Mobile Devices

- Fast and easy access to PI System data
- View PI ProcessBook displays
- Designed for small screens
- Viewable on any device

# I need to:

Report against process and event data

Events reporting in Excel using PI DataLink

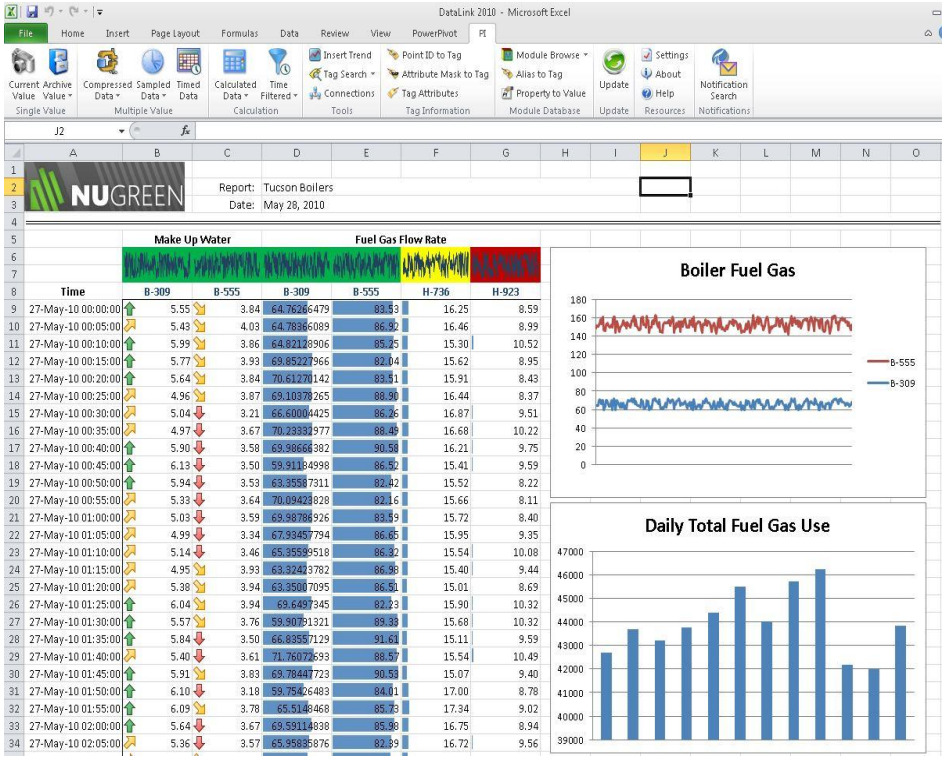


# PI DataLink

Add-in to **Microsoft Excel**

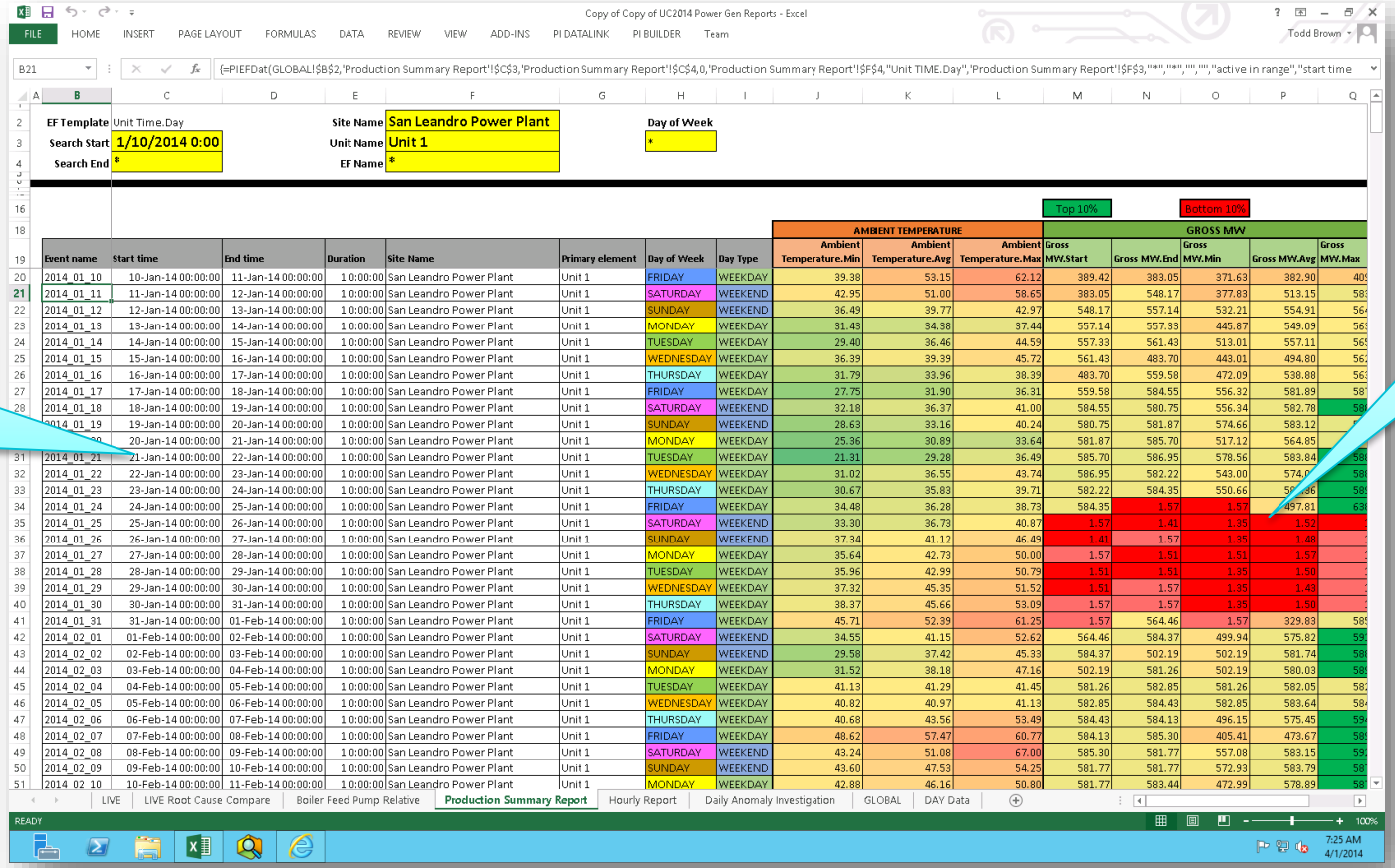
- Create reports
- Apply calculations
- Retrieve data

*OSIsoft's most popular product by installations*




| Time | B-309 | B-555 | B-309 | B-555 | H-736 | H-923 |
|---|---|---|---|---|---|---|
| 27-May-10 00:00:00 | 5.55 | 3.84 | 64.76266479 | 83.53 | 16.25 | 8.59 |
| 27-May-10 00:05:00 | 5.43 | 4.03 | 64.78365089 | 86.92 | 16.46 | 8.99 |
| 27-May-10 00:10:00 | 5.99 | 3.86 | 64.82128906 | 85.25 | 15.30 | 10.52 |
| 27-May-10 00:15:00 | 5.77 | 3.93 | 69.85227966 | 82.04 | 15.62 | 8.95 |
| 27-May-10 00:20:00 | 5.64 | 3.84 | 70.61270142 | 83.51 | 15.91 | 8.43 |
| 27-May-10 00:25:00 | 4.96 | 3.87 | 69.10378265 | 88.90 | 16.44 | 8.37 |
| 27-May-10 00:30:00 | 5.04 | 3.21 | 66.60004425 | 86.26 | 16.87 | 9.51 |
| 27-May-10 00:35:00 | 4.97 | 3.67 | 70.23331977 | 88.48 | 16.68 | 10.22 |
| 27-May-10 00:40:00 | 5.90 | 3.58 | 69.98666382 | 90.58 | 16.21 | 9.75 |
| 27-May-10 00:45:00 | 6.13 | 3.50 | 69.91184998 | 86.52 | 15.41 | 9.59 |
| 27-May-10 00:50:00 | 5.94 | 3.53 | 69.35587311 | 82.42 | 15.52 | 8.22 |
| 27-May-10 00:55:00 | 5.33 | 3.64 | 70.09423828 | 82.16 | 15.66 | 8.11 |
| 27-May-10 01:00:00 | 5.03 | 3.59 | 69.98786926 | 83.59 | 15.72 | 8.40 |
| 27-May-10 01:05:00 | 4.99 | 3.34 | 67.93457794 | 86.65 | 15.95 | 9.35 |
| 27-May-10 01:10:00 | 5.14 | 3.46 | 65.35599518 | 86.32 | 15.54 | 10.08 |
| 27-May-10 01:15:00 | 4.95 | 3.93 | 63.32423782 | 86.98 | 15.40 | 9.44 |
| 27-May-10 01:20:00 | 5.38 | 3.94 | 63.35007095 | 86.51 | 15.01 | 8.69 |
| 27-May-10 01:25:00 | 6.04 | 3.94 | 69.6497345 | 82.23 | 15.90 | 10.32 |
| 27-May-10 01:30:00 | 5.57 | 3.76 | 59.90791321 | 89.33 | 15.68 | 10.32 |
| 27-May-10 01:35:00 | 5.84 | 3.50 | 66.83557129 | 91.61 | 15.11 | 9.59 |
| 27-May-10 01:40:00 | 5.40 | 3.61 | 71.76072693 | 88.57 | 15.54 | 10.49 |
| 27-May-10 01:45:00 | 5.91 | 3.83 | 63.78447723 | 90.53 | 15.07 | 9.40 |
| 27-May-10 01:50:00 | 6.10 | 3.18 | 59.75426483 | 84.01 | 17.00 | 8.78 |
| 27-May-10 01:55:00 | 6.09 | 3.78 | 65.5148468 | 85.73 | 17.34 | 9.02 |
| 27-May-10 02:00:00 | 5.64 | 3.67 | 69.59114838 | 85.98 | 16.75 | 8.94 |
| 27-May-10 02:05:00 | 5.36 | 3.57 | 65.95885876 | 82.89 | 16.72 | 9.56 |

# PI DataLink – Events Report Example



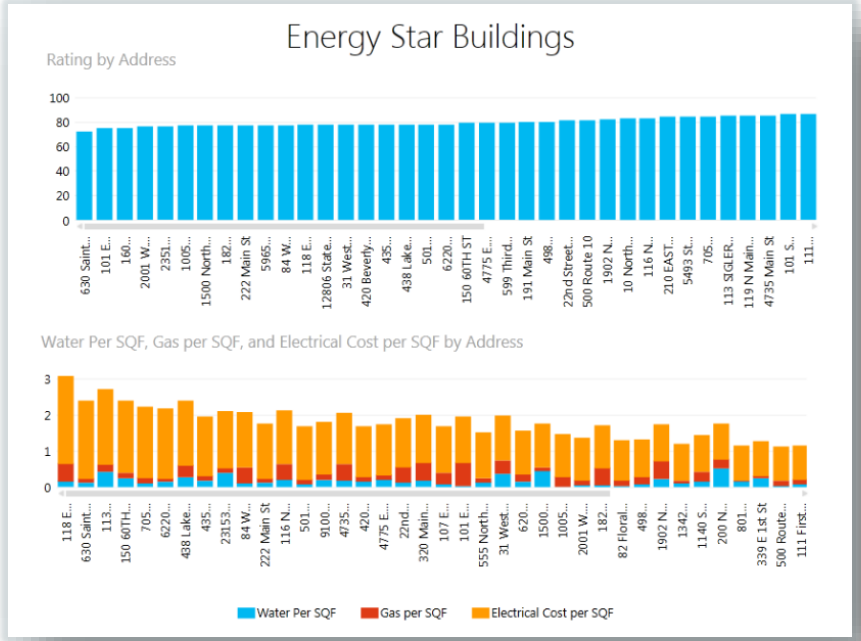

Daily Events

Unit Trip!

# I need to:

Provide self-service BI for my users

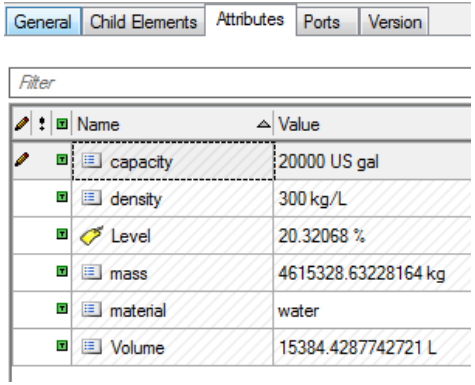
Rich reports in Microsoft Power BI

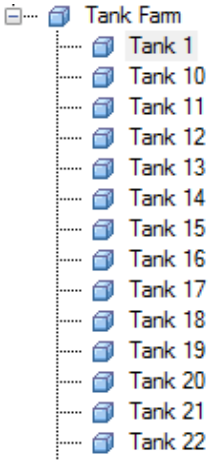


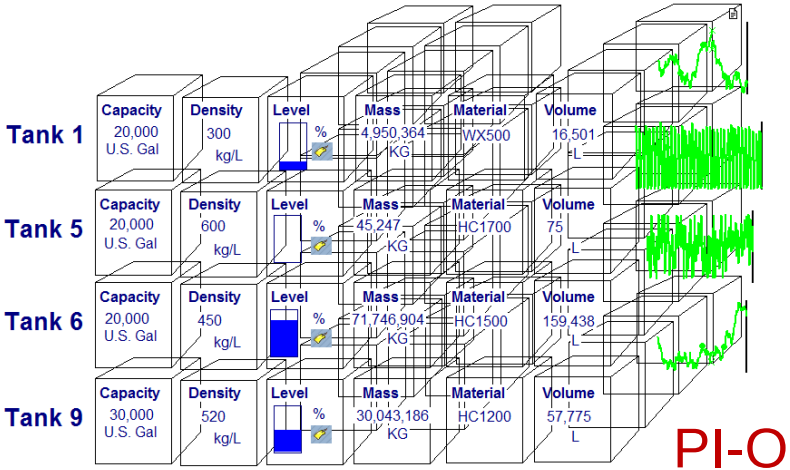
# PI & BI

PI AF templates are the schema that combined with simple asset hierarchies and the process history in your PI Data archive server

– give you structured PI Data….




## PI Data

*Deep, fast process history*

## PI AF

& Templates

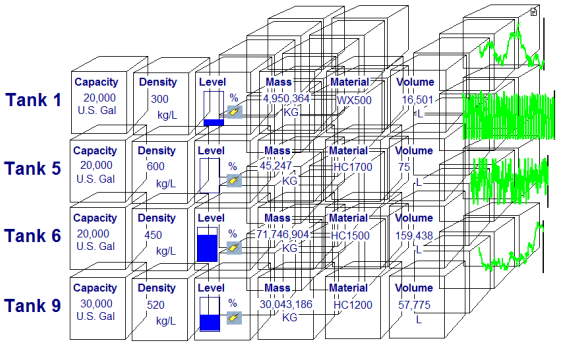
*Context & Calculations*

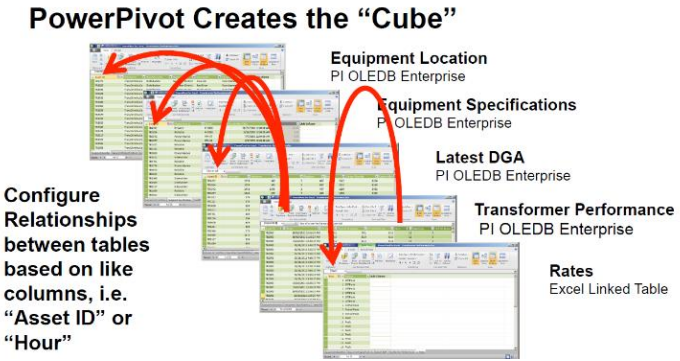
## PI-OLEDB Enterprise

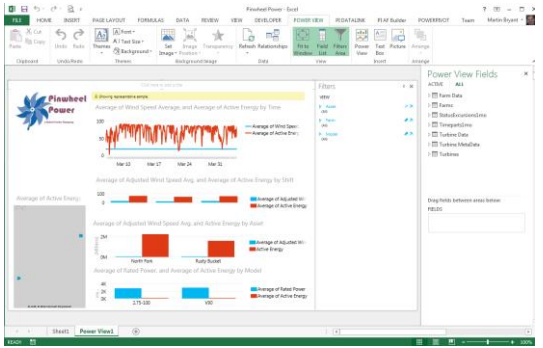
*SQL Wizards & Connectivity*

# PI & BI

PI OLEDB-Enterprise or our emerging PI Web API stack of connectivity tools connect this structured data to Microsoft's personal and shareable "BI" tools in Excel….



## PI-OLEDB Enterprise

*SQL Wizards & Connectivity*

## Power Pivot & Power View

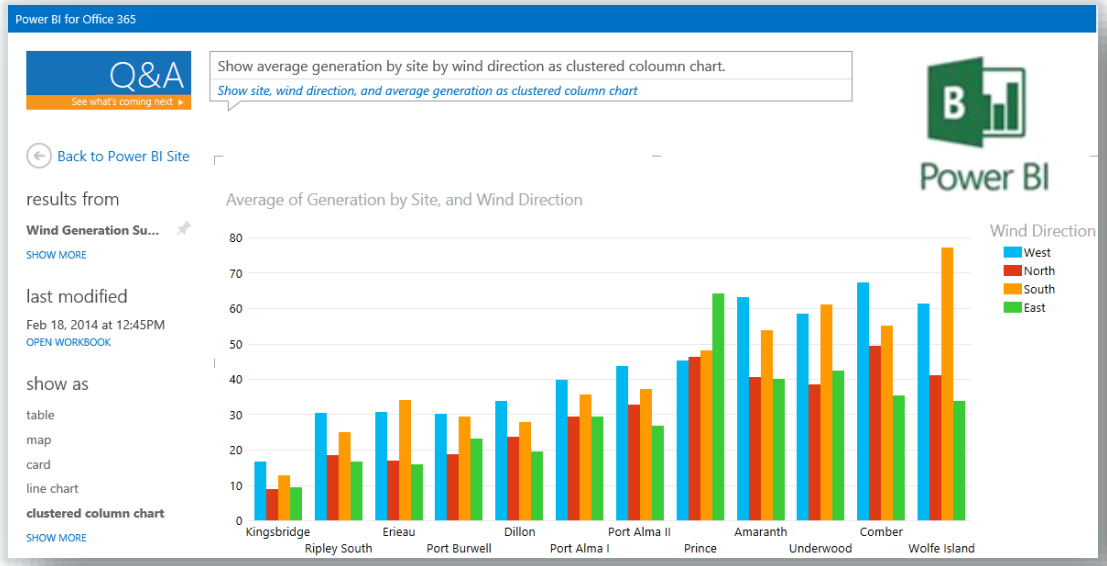
For Microsoft Excel 2013

*Powerful BI where you need it*

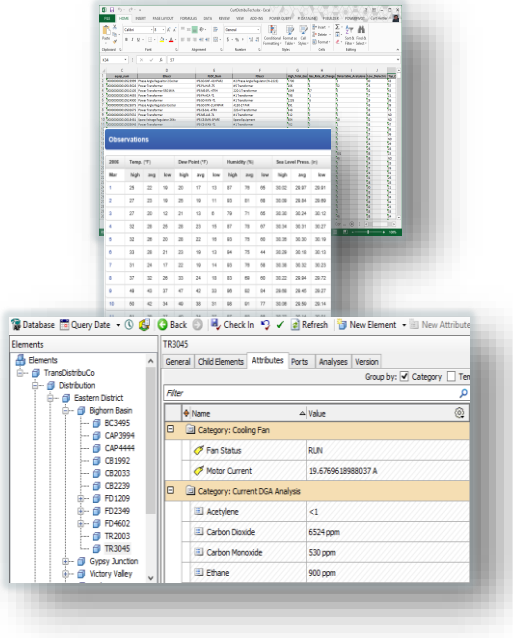
# Microsoft Power BI for Office 365

- Ask and answer with **Power Q&A**
- Analysis anywhere with **Power BI Sites** and the **Power BI App**
- Scheduled data **refresh**
- Benefit from the **latest updates**

*"Show generation by site by wind direction as column chart"*



# From Data to Decision-Ready Information




Data

Access to analytical tools

Power Query

Power Pivot

Power View

Excel

Access to data

PI Web API

OSIsoft.


“Decision Ready” Information

# Making Decision-Ready Accessible

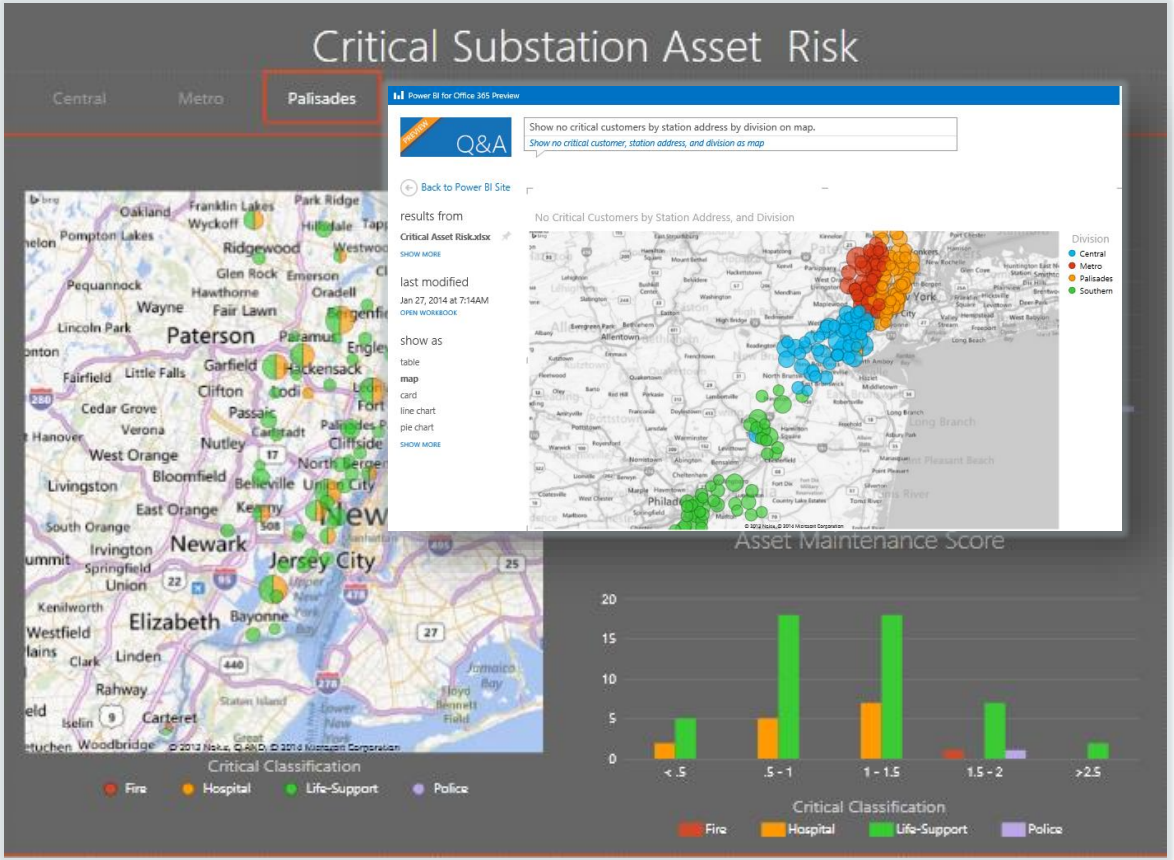
PSE&G
We make things work for you.

Objective

- Share a vision of making substation asset health **analysis available to domain experts**

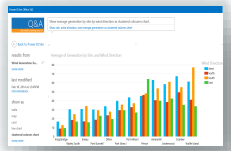
Outcome

- Provision **Office 365** users with **Power BI** and Excel

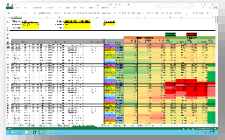


# Different People Need Different Tools at Different Times

**I need to:**
Provide self service BI for my users



**I need to:**
Enter data from my mobile device



**I need to:**
Report against process and event data

**I need to:**
Respond to notifications and identify problems

**I need to:** Access process data anytime, anywhere

PetroLux

# Unlimited Access to Your Data


- The PI Visualization Suite puts **every PI System visualization tool** at your fingertips
- Allows **everyone** to **collaborate** with data to **drive innovation** and for **data-driven decision making**
- The **PI Visualization Suite** unlocks PI System **data sharing** across your business to **empower your enterprise**

# Optimize Client License Management

The **PI Visualization Suite and PI System Access** optimize the management of your client licenses

One license providing access to all PI System visualization tools across the organization


OSIsoft. REGIONAL SEMINAR 2014
The Power of Data
DECISION READY IN REAL-TIME

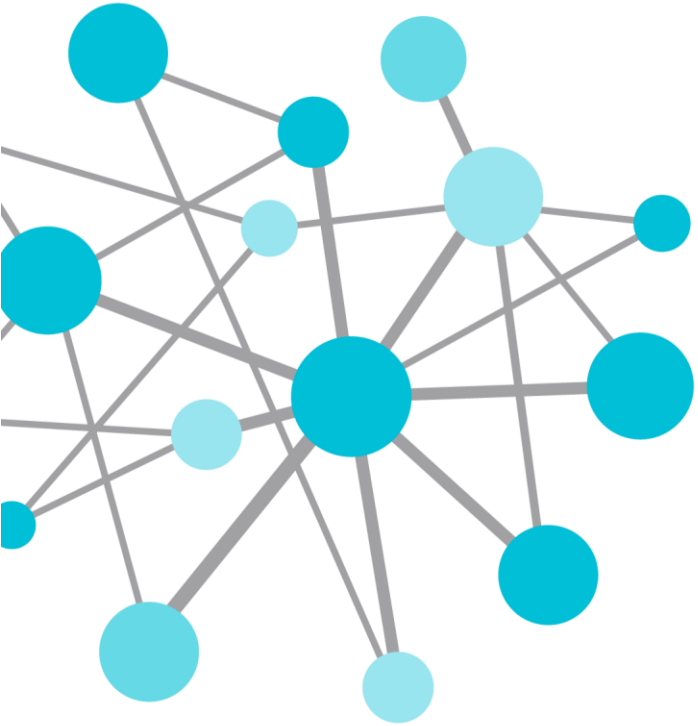
# Key Points to Take Home

- Assure access to your PI System(s)
- The right tool at the right time for every user.
- Process information anywhere from any device
- Simplifies compliance and license management

# Questions

**Please wait for the microphone** before asking your question

**Please state your name** and your company



# THANK YOU


**Martin Bryant**

- MBryant@osisoft.com
- Field Service Engineer
- OSIsoft, LLC


Brought to you by OSIsoft.