

The background of the image is a dark blue gradient with a faint, stylized map of the San Francisco Bay Area. The Golden Gate Bridge is visible on the left side, and the San Francisco skyline, including the Transamerica Pyramid, is on the right. The text is overlaid on this background.

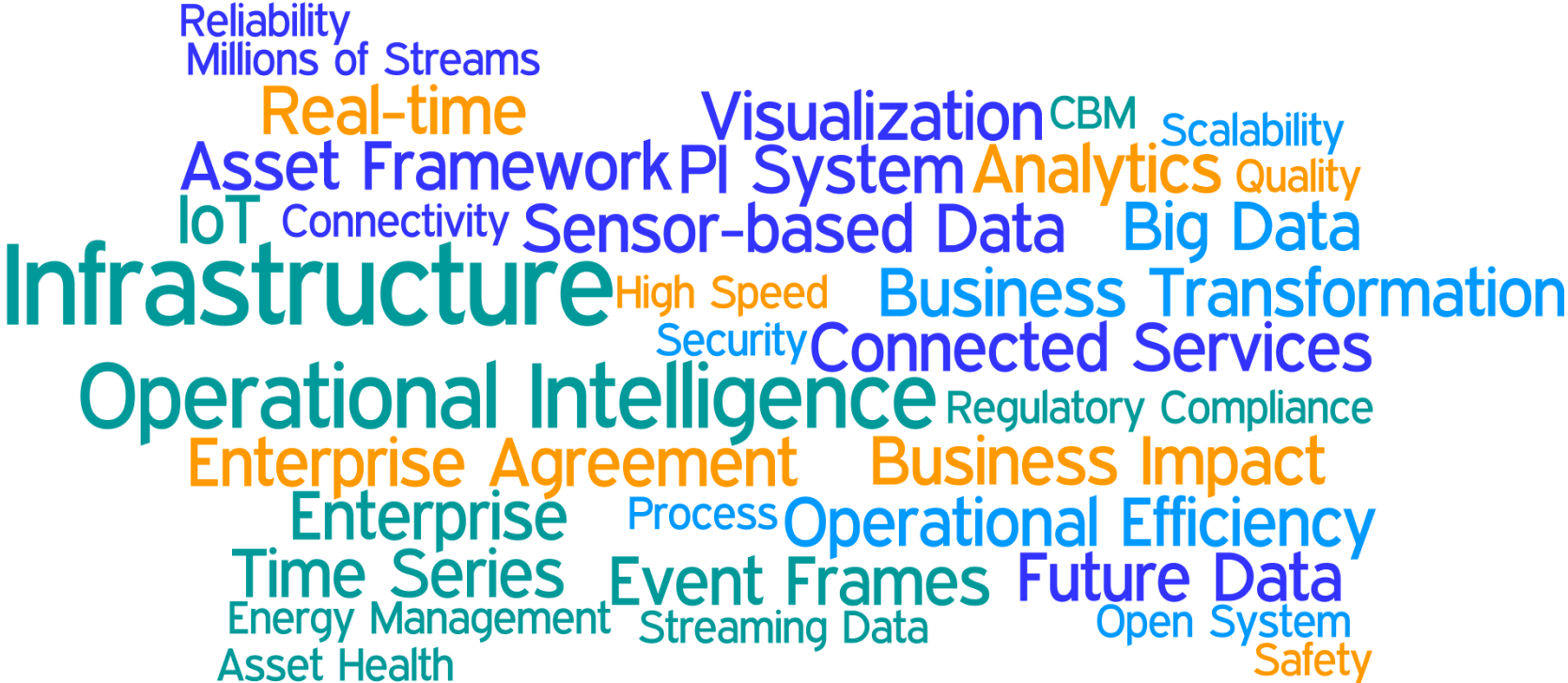
OSIsoft®

USERS CONFERENCE 2016

April 4-8, 2016 | San Francisco

TRANSFORM
YOURWORLD

Conference Theme and Keywords





PI Integrator for Esri ArcGIS

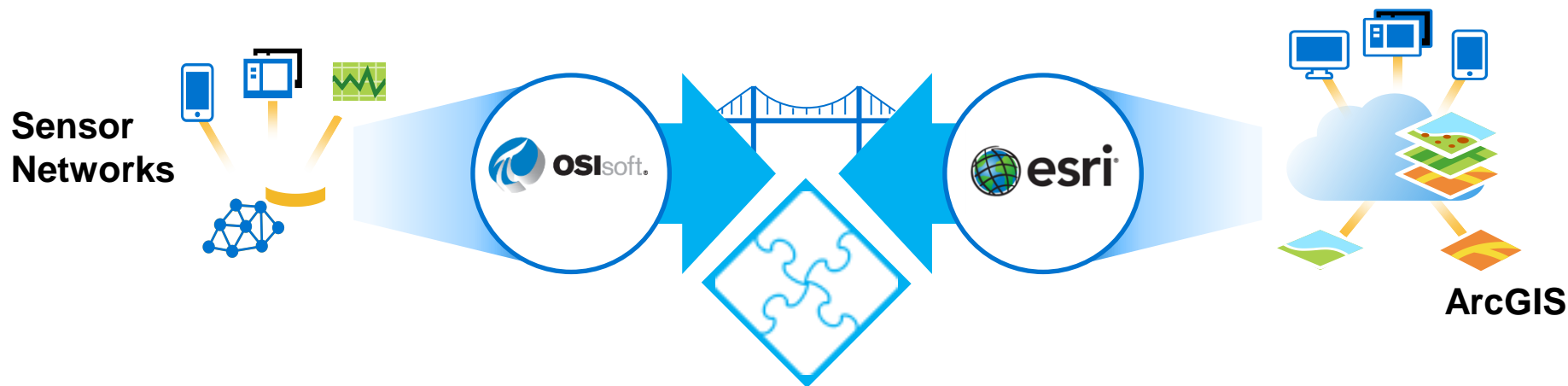
Sparkling Maps are just the beginning

Presented by **Michelle Kuiee, OSIsoft**

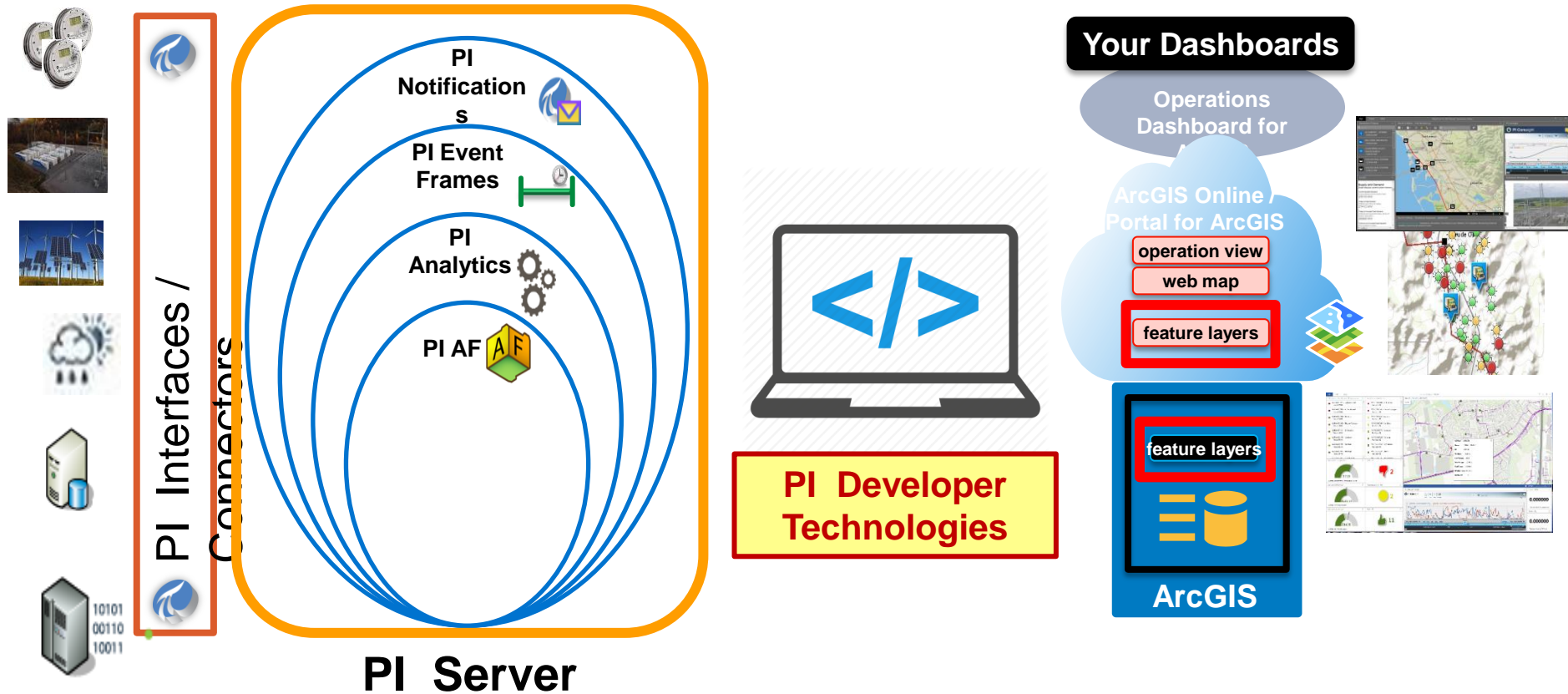


Two companies One Vision

We believe data in the hands of smart people can create amazing insights, business improvements, and value



Before the Integrator - How did data get to ArcGIS?



How does data get to the map?



PI Notifications



PI Event Frames



Analytics



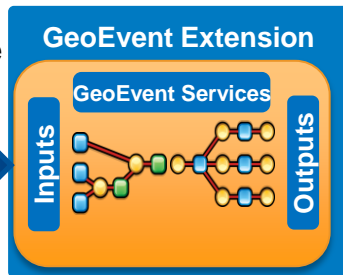
PI AF



PI Data Archive



PI Integrator for Esri
ArcGIS



Your Dashboards

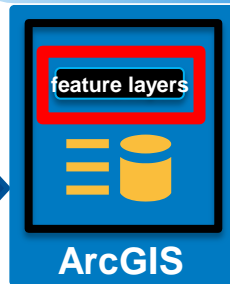
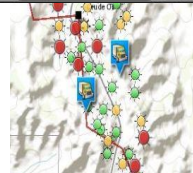
Operations
Dashboard for

ArcGIS Online /
Portal for ArcGIS

operation view

web map

feature layers



How easy is it?

https://portaltest01.osisoft.int/pigeoportal/configuration#/service

PI Integrator for Esri ArcGIS ...

File Edit View Favorites Tools Help

Share Browser WebEx

01 Introduction and Ge... LiveLab - Stations Esri Files on SkyDrive ELT ProjMgmt TFS Esri TFS RLink TFS WideData TFS Suggested Sites Web Slice Gallery

Page Safety Tools

PI Integrator for Esri ArcGIS Services Administration Tools Help OSImkuiee

home / services / CatCanyonWells

Service CatCanyonWells

View in services directory

O&G wells in the Cat Canyon field

Created on 03/22/2016 02:15:39 (13 minutes ago)

Layers (2)

Layers allow you to select data from the PI System to connect to the ArcGIS Platform. Layer data can be exposed in different ways. You can configure these capabilities after you have created a layer.

Create Layer Tile view

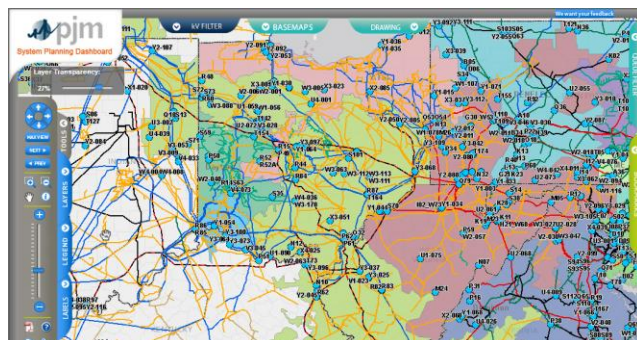
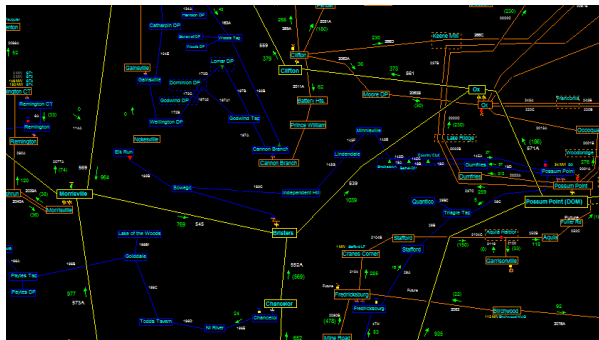
Name	Description	Created	Modified	Active connections
Blockman	Wells operated by Blockman	03/22/2016 02:17:15	03/22/2016 02:17:15	1
Dominion	Wells operated by Dominion	03/22/2016 02:20:20	03/22/2016 02:20:20	1

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Customer Use Cases

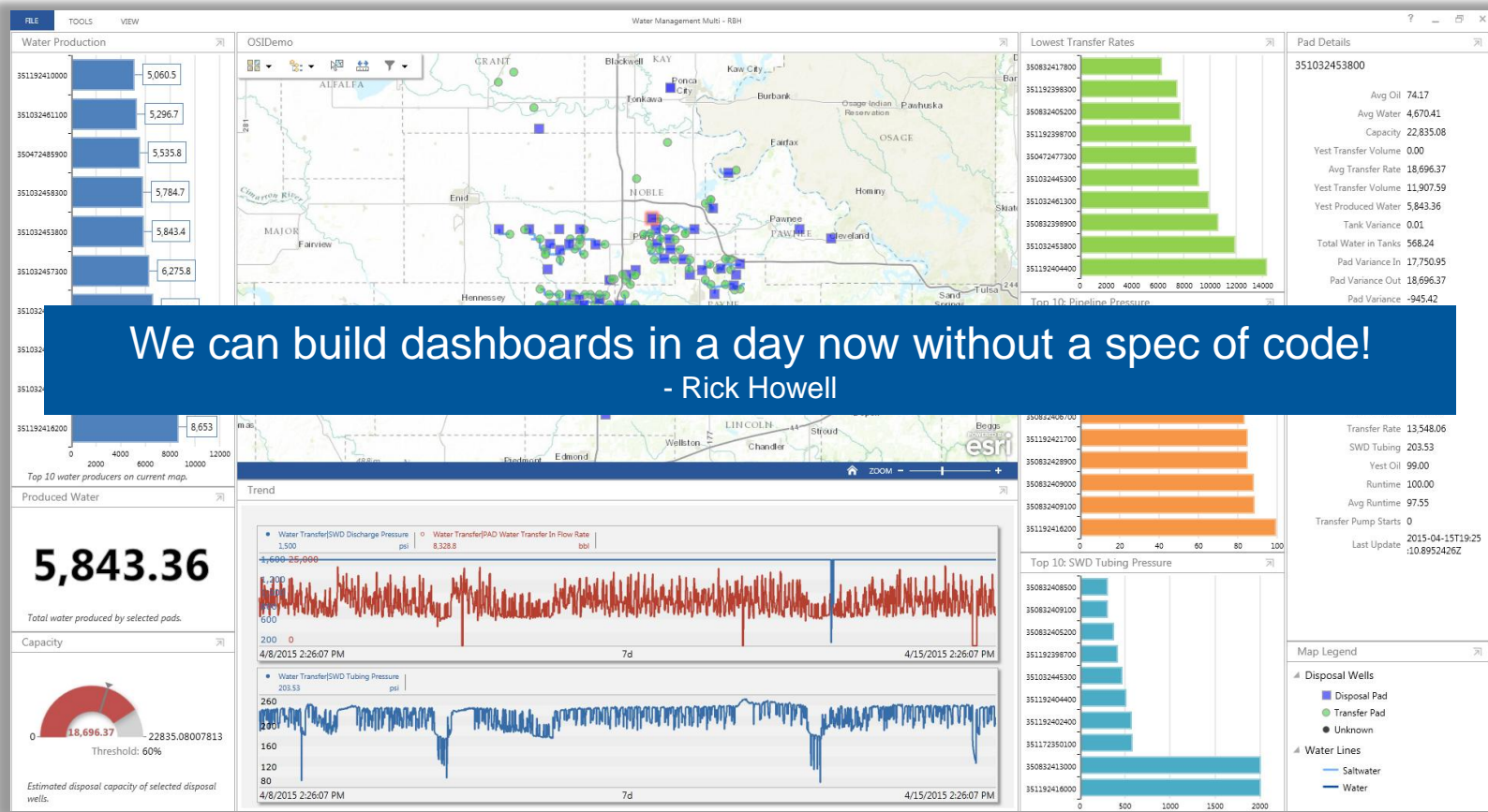
PJM – Multiple data source to manage the grid



PJM Dispatch Interactive Map Application (DIMA)



Devon Energy – E&P Water Management Application

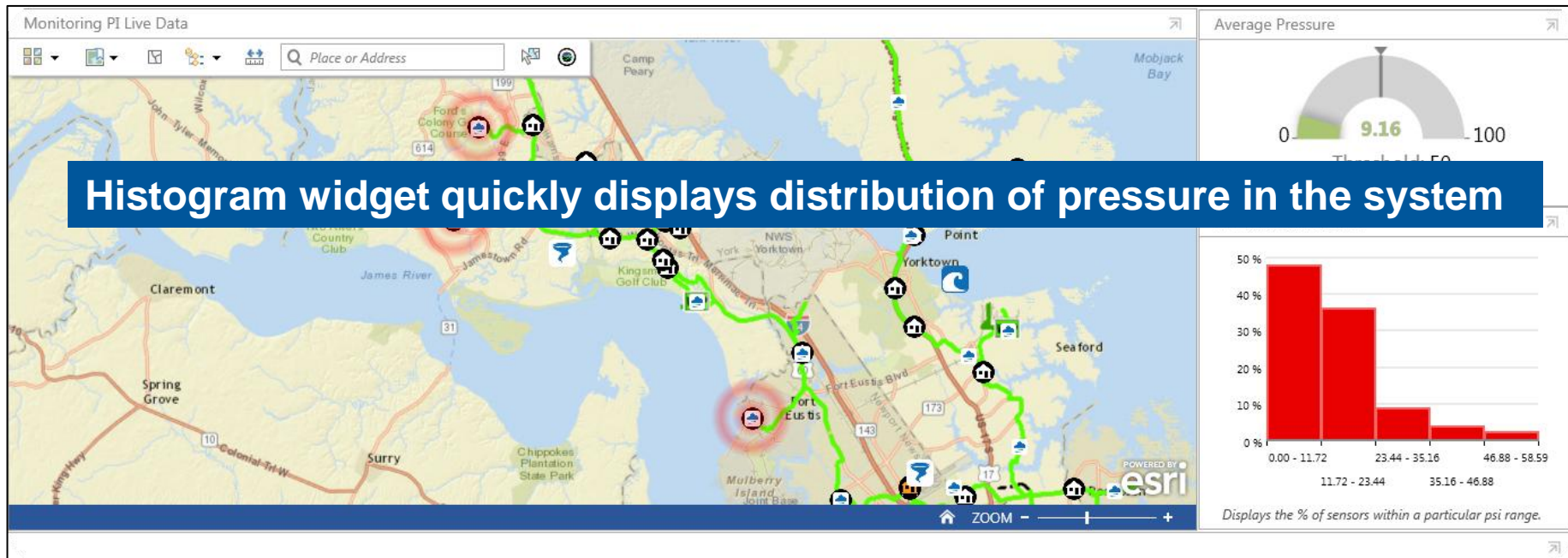


We can build dashboards in a day now without a spec of code!

- Rick Howell

Hampton Roads Sanitation District

ArcGIS built in geo spatial analysis adds value to real time data





PI ProcessBook - [DISTWATCHLIST.PDF]

File Edit View Insert Tools Draw Arrange Window Help Show Details and Annotations

Select a Substation **Circuit** **Bank** **All**

Circuit **MRM**

D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH
D-MRM_CIR_ MW_3PH

Bank

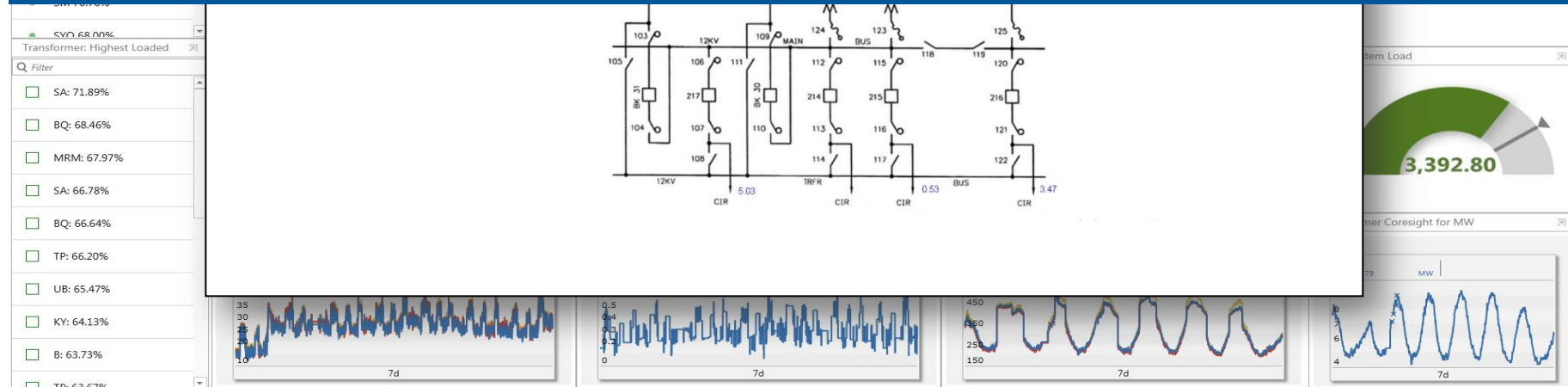
D-MRM_ BK30-MW_3PH
D-MRM_ BK31-MW_3PH
D-MRM_ BK32-MW_3PH
D-MRM_ BK33-MW_3PH

Watch List

3421 8/17/2015 10:55:27.651 AM

	CIR/BK	MW	A Phase (Amps)	B Phase (Amps)	C Phase (Amps)	Rating (Amps/MW)	Forecast (Amps/MW)	% of Rating Max(A,B,C) Or MW
ADD	BD CIR	10.94	514.80	515.40	517.80	600	586	87
CLR								
ADD	TP CIR	10.58	514.20	521.40	516.00	600	512	87
CLR								
ADD	TP _BK32	21.50						
CLR								
ADD	MRM CIR _	9.46	491.20	492.00	491.60	600	471	82
CLR								
ADD								
CLR								
ADD								
CLR								
ADD								
CLR								
ADD								
CLR								

Ready Server Time

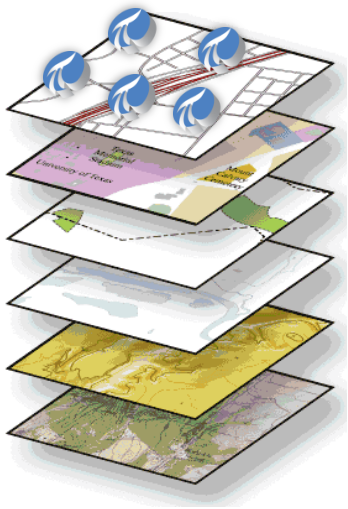




PI Integrator for Esri ArcGIS				
Services Administration Tools Help				
home / services				
Services				
Services allow you to group map layers that share a common theme or use. You can create a service first, and add map layers to it later. You can find more on creating services here.				
Name	Description	Created	Modified	Capabilities
AlohaHawaiiEnergy	Providing Power to O'ahu	05/01/2014 06:41:59	05/01/2014 06:41:59	Stream Display
ClancyEnergy	Clancy Energy wells and vehicle feeds for the Cat Canyon field	01/01/2000 12:00:00	03/02/2014 04:19:54	Stream Display
CLSTrucks	This is a sample feature service for maintenance vehicles	06/06/2014 06:14:00	06/06/2014 06:14:00	Stream Display
ElectricalUtilitiesDemo	Sample for the 2014 Esri UC	06/24/2014 11:00:29	06/24/2014 11:00:29	Stream Display
EricTestService	EricTestService	07/09/2014 09:16:50	07/09/2014 09:16:50	Stream Display
Esri for Water ...	LP helping Andrew Hargreaves from Esri	01/13/2015 07:32:43	01/13/2015 07:32:43	Stream Display
Esri PS Demo Service	Esri PS Demo Service - Test	06/24/2014 06:37:26	06/24/2014 06:37:26	Stream Display
EsriEnergyTeam	Esri Energy Team Service	02/24/2013 10:09:41	02/24/2013 10:09:41	Stream Display
EsriTM	EsriTM	10/31/2014 04:15:57	10/31/2014 04:15:57	Stream Display

PI Integrator for Esri ArcGIS

Features of the ArcGIS Integration



- Any PI System data can update new or preexisting Esri Feature Layers
 - Data is selected through a graphical wizard with no coding required
 - Esri software configuration is done automatically (no custom Esri objects are created)
 - PI AF databases can be jump-started using preexisting Esri Feature Layers
- Esri Feature Layers are visualized using standard Esri clients
- Esri client tools can easily integrate with PI Coresight
 - Historical trends of real-time data are automatically generated for selected map feature
 - Element relative displays are updated for selected map feature
- ArcGIS Asset Extractor
 - Reads Feature Layer data to build AF Template and extracts features from the layer to create AF Elements from the Template



Recap and Coming Attractions

Delivered in Esri Integrator 2015 (4Q15)

- ArcGIS 10.3.1 support
- Native Operations Dashboard widgets
 - Ad-Hoc Trends
 - Coresight Displays – including Processbook
- Performance Counters
 - NOC Monitoring/Management
 - Application Server
 - Data Relay

Native Coresight Widgets for ArcGIS Operations Dashboard

The screenshot displays the ArcGIS Operations Dashboard interface with three widget panels and a configuration dialog box.

Widget Panels:

- Dominion Wells:** Shows a line chart with multiple colored lines representing data over time. The time bar at the bottom indicates a range from Dec 7 to Dec 9, 2015, with a selected time of 12/10/2015 1:00 AM.
- Bell Wells:** Shows a line chart with a single green line. The time bar at the bottom indicates a range from 12/9/2015 9:25:27 PM to 12/10/2015 8:55:07 PM, with a selected time of 12/9/2015 9:25:27 PM.
- Blockman Wells:** Shows a line chart with multiple colored lines. The time bar at the bottom indicates a range from Dec 7 to Dec 10, 2015, with a selected time of 12/9/2015 9:25:26 PM.

Configuration Dialog Box:

Configure your PI Custom Widget

PI Integrator Configuration

Integrator:

Service: ArcGIS1022

Layer: BellWells

Map Widget Configuration

Data Source:

Title:

Start time:

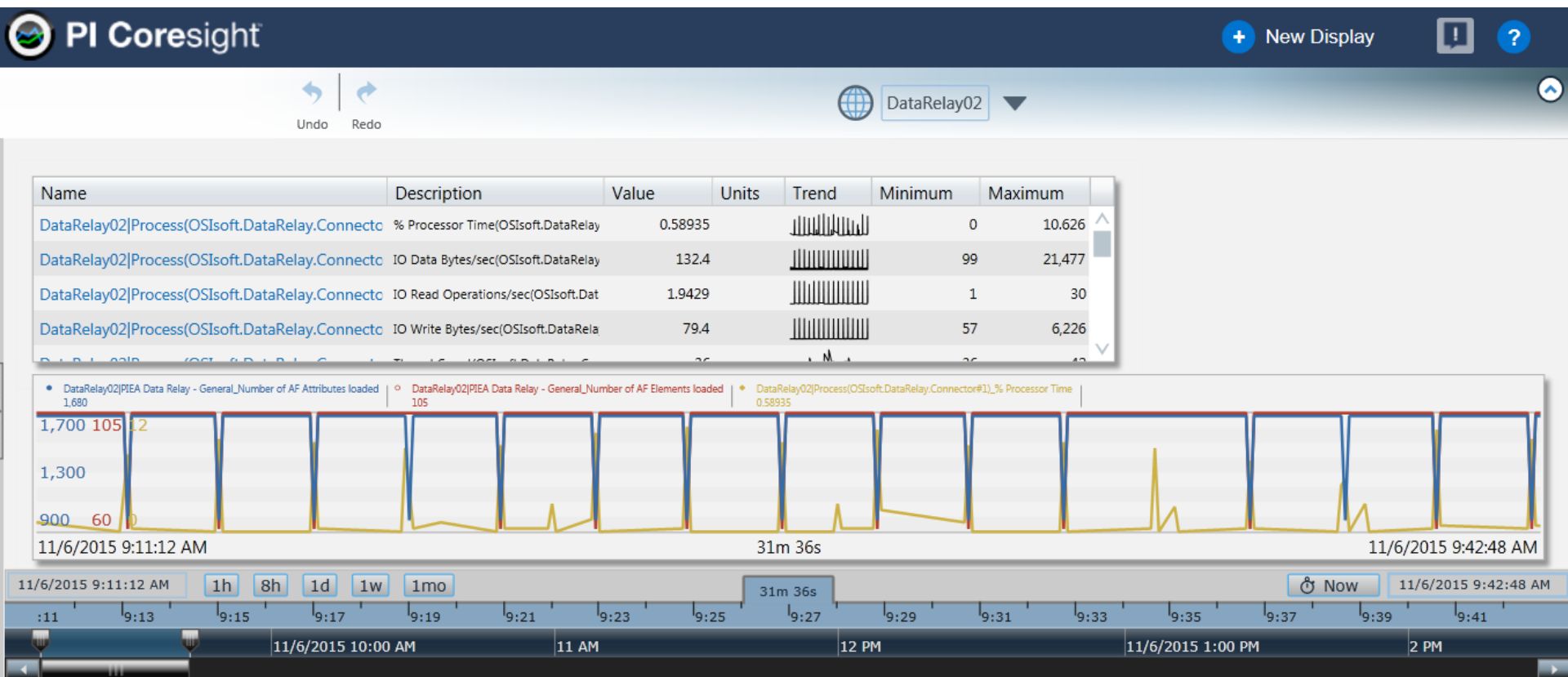
End time:

☐ Hide Time Bar ☒ Quick Select

[PI Coresight User Guide](#)

IE Version: 11

Data Relay Performance Counters



What's next for the PI Integrator for Esri ArcGIS

Manageability

- Enhanced publication identification for troubleshooting
- ArcGIS environment clean up when Integrator objects are deleted

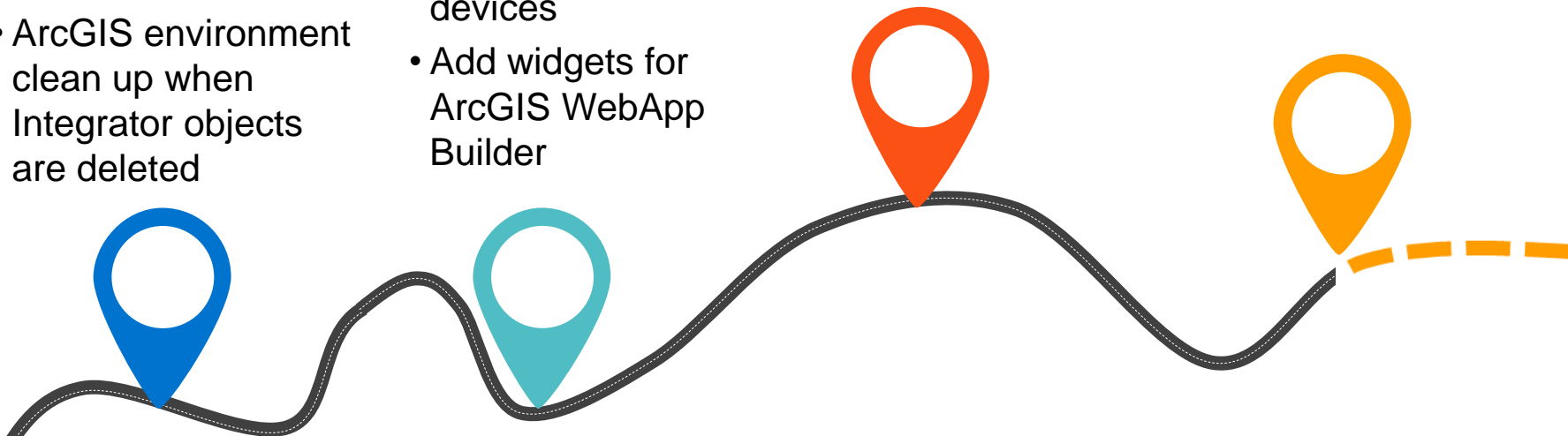
More Widgets

- Support mobile devices
- Add widgets for ArcGIS WebApp Builder

Event Frames in ArcGIS

RESEARCH:

Rewindable Maps
Asset Sync
Asset



PI Connector for Esri ArcGIS

PI Connector for ESRI

CatCanyonWells Configuration

Data source description (optional)

Please provide the link to the feature service layer:

Please specify AF asset update interval in the unit of hours:

Please specify the offset to the update interval in the unit of hours:


Click on the button above and select a unique field from below to name your element

All Fields		Unique Field
APINumber	>>	AssetName
ActiveWell	>	
CountyName	<	
FieldName	<<	
LeaseName		
OBJECTID		
OperatorNa		

Please specify template name for this feature service layer, if not, the default value is

PROTOTYPE

Asset Enhancer

 PI Asset Enricher

System

QUINGA

Database

NuGreen

Template

Compressor

New Attribute

Speed

③ Choose an example Element to provide context as you work

K-728

Asset Name
(null)
Feedrate Tag
SINUSOID
Installation Date
1985-05-15T23:00:00-05:00
Latitude
(null)
Longitude
(null)
Manufacturer
Gas Force
Model
GF-450

K-304

Asset Name
Recycle
Feedrate Tag
SINUSOID
Installation Date
1975-07-06T23:00:00-05:00
Latitude
(null)
Longitude
(null)
Manufacturer
Universal Compression
Model
U-112

K-616

Asset Name
(null)
Feedrate Tag
SINUSOID
Installation Date
1956-03-11T22:00:00-06:00
Latitude
(null)
Longitude

PROTOTYPE

Related Feature Service

ESRI Integrator for Esri ArcGIS Services Administration Tools Help

home / services / productionbystate / new

✓ Your Data Policy is running on mode "WITH-TQDS/VIS/POK/empire.us"

Creating new layer (*productionbystate*) in service productionbystate

Basic Information edit

Data source edit

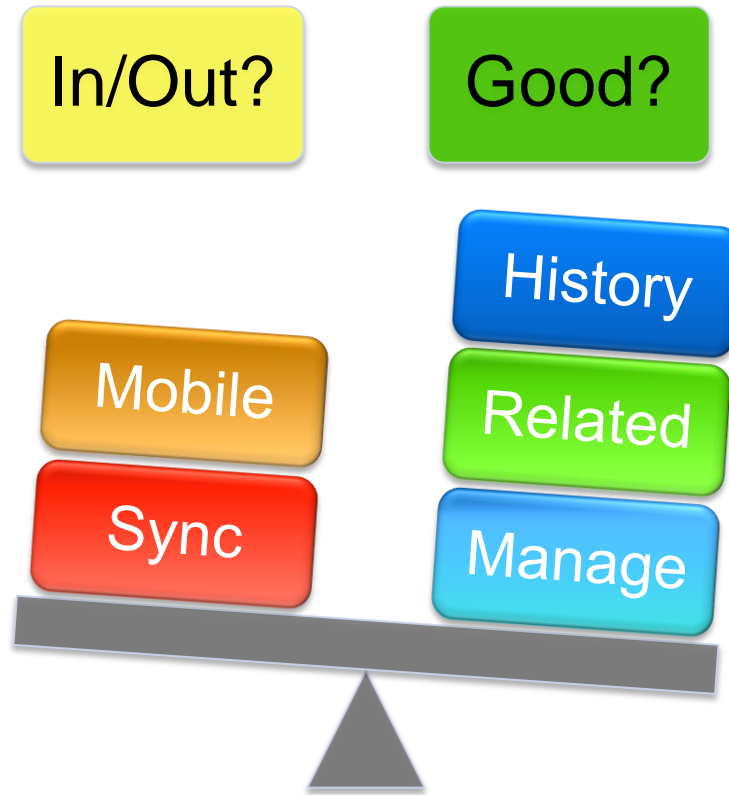
Fields edit

Geometry Step 4 (Final)

Geometry Feature Service Url

Feature Service Join Field

PROTOTYPE



BetaIntegratorforEsri@OSIsoft.com

Esri Integrator Team Needs you!

- We need feedback!
 - PI Connector for Esri ArcGIS
 - Delete WizardStream Layers
 - Replay History
- Please drop a line to:

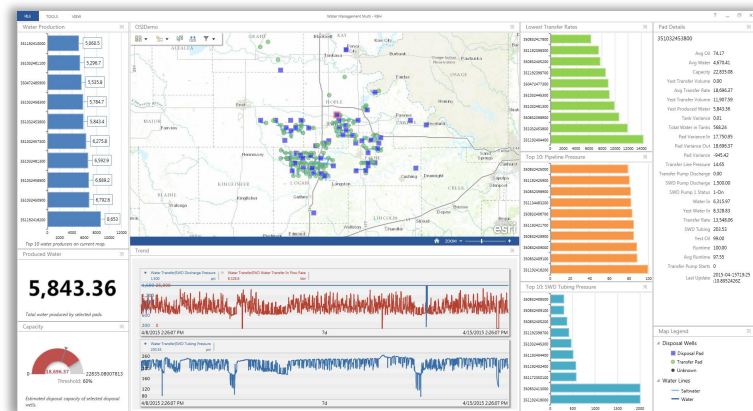
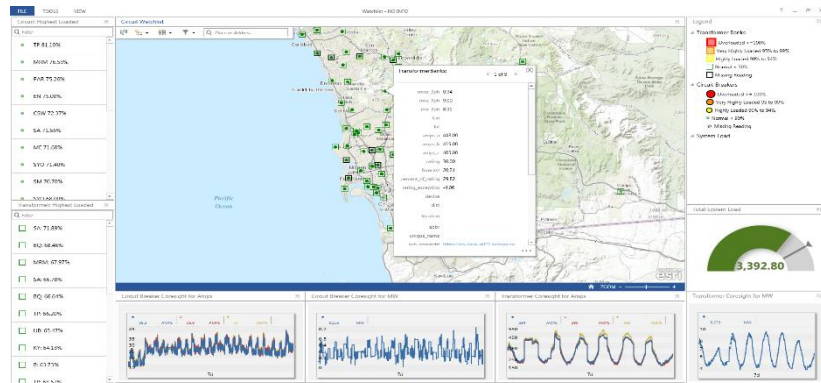
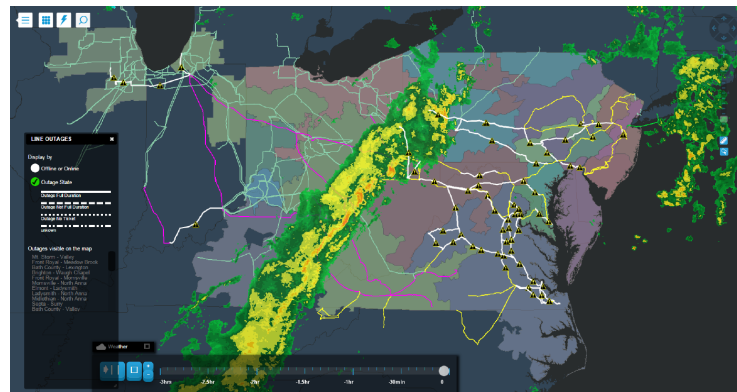


WE WANT YOU

BetaIntegratorforEsri@OSIsoft.com



Beyond the Sparkle



Spatial Analysis

- Exploit real time data in a spatial context
- Explore geographical relationships
 - Ask questions
 - Explore the data
 - Analyze and model
 - Interpret results
 - Make decisions



Customer Presentations at UC 2016

- **The Making of a PI System Data/Esri ArcGIS Operational Dashboard - Hampton Roads Sanitation District**
- **Using Operational Real-time Data to Improve Dispatchers Situational Awareness – PJM**
- **Use Cases of the PI Integrator for Esri ArcGIS in Distribution – SDG&E**
- **"Equipment" Failure is Not an Option – PowerStream**
- **Commercial/Residential Solar Programs – Arizona Public Service**

감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado

Contact Information

Michelle Kuiee
Product Manager
OSIsoft LLC
michelle@osisoft.com



Esri Integrator Beta Mailbox
OSIsoft LLC
BetaIntegratorForEsri@osisoft.com



Questions

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

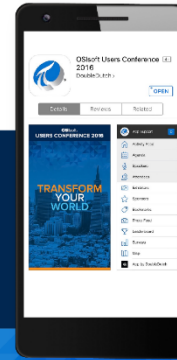


State your **name & company**

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<http://ddut.ch/osisoft>

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