



OSIsoft.
REGIONAL 2012
SEMINAR
A P A C
The **Power** of **Data**
MALAYSIA



PI Event Frames and PI Clients Updates

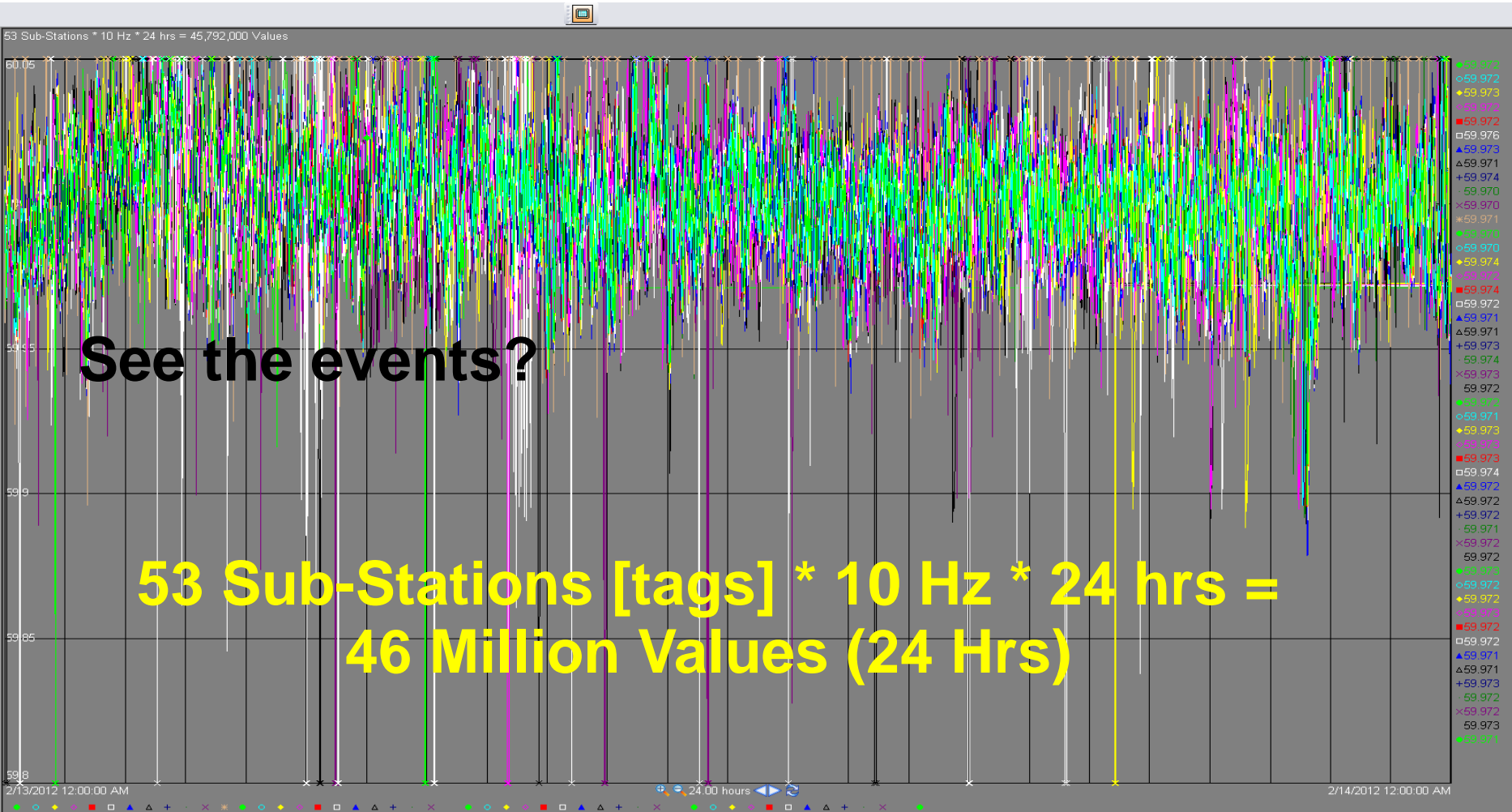
Presented by **Willy Seah**, Customer Support Engineer

Natsumi Watanabe, Customer Support Engineer

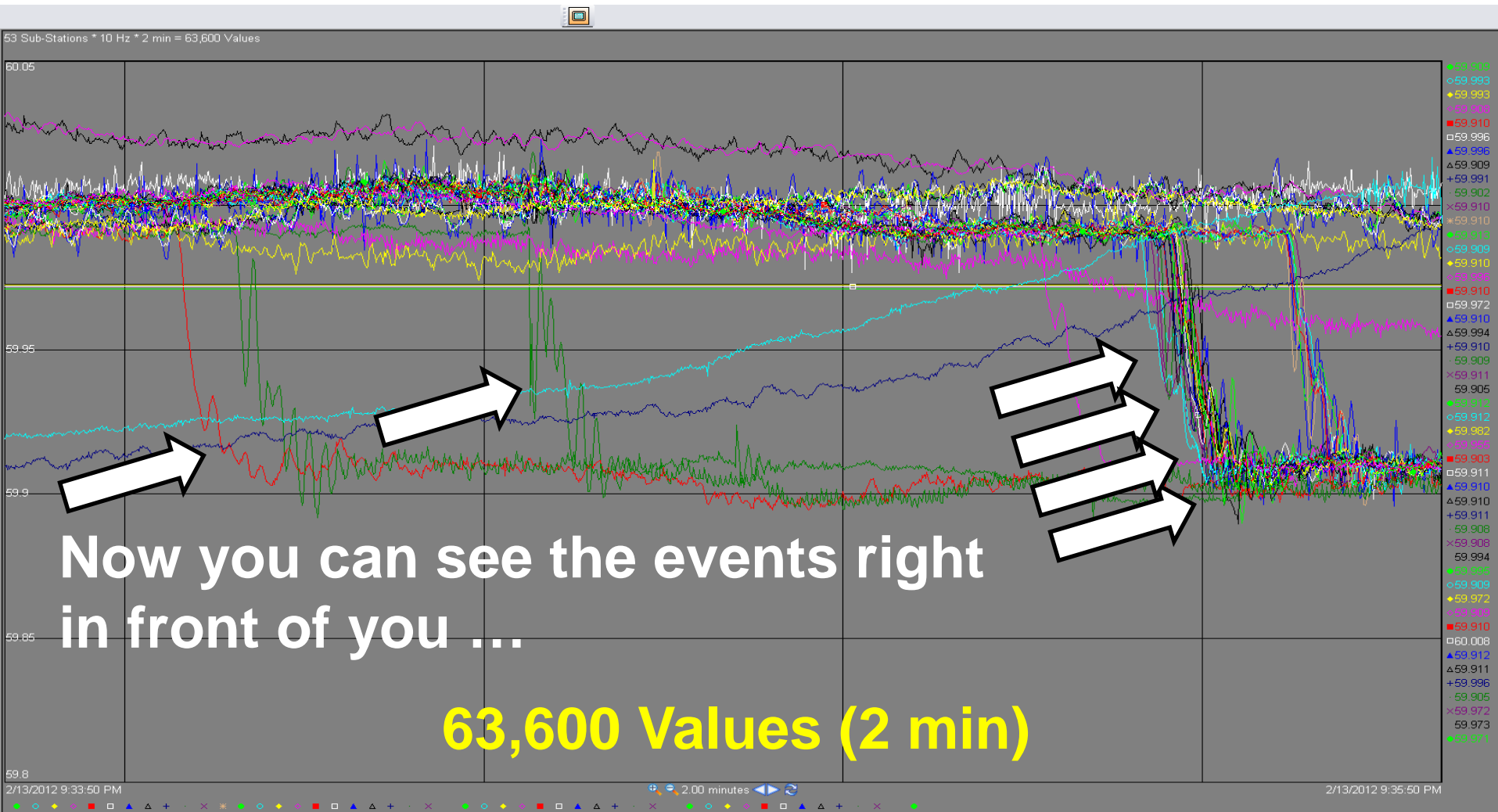


PI Event Frames

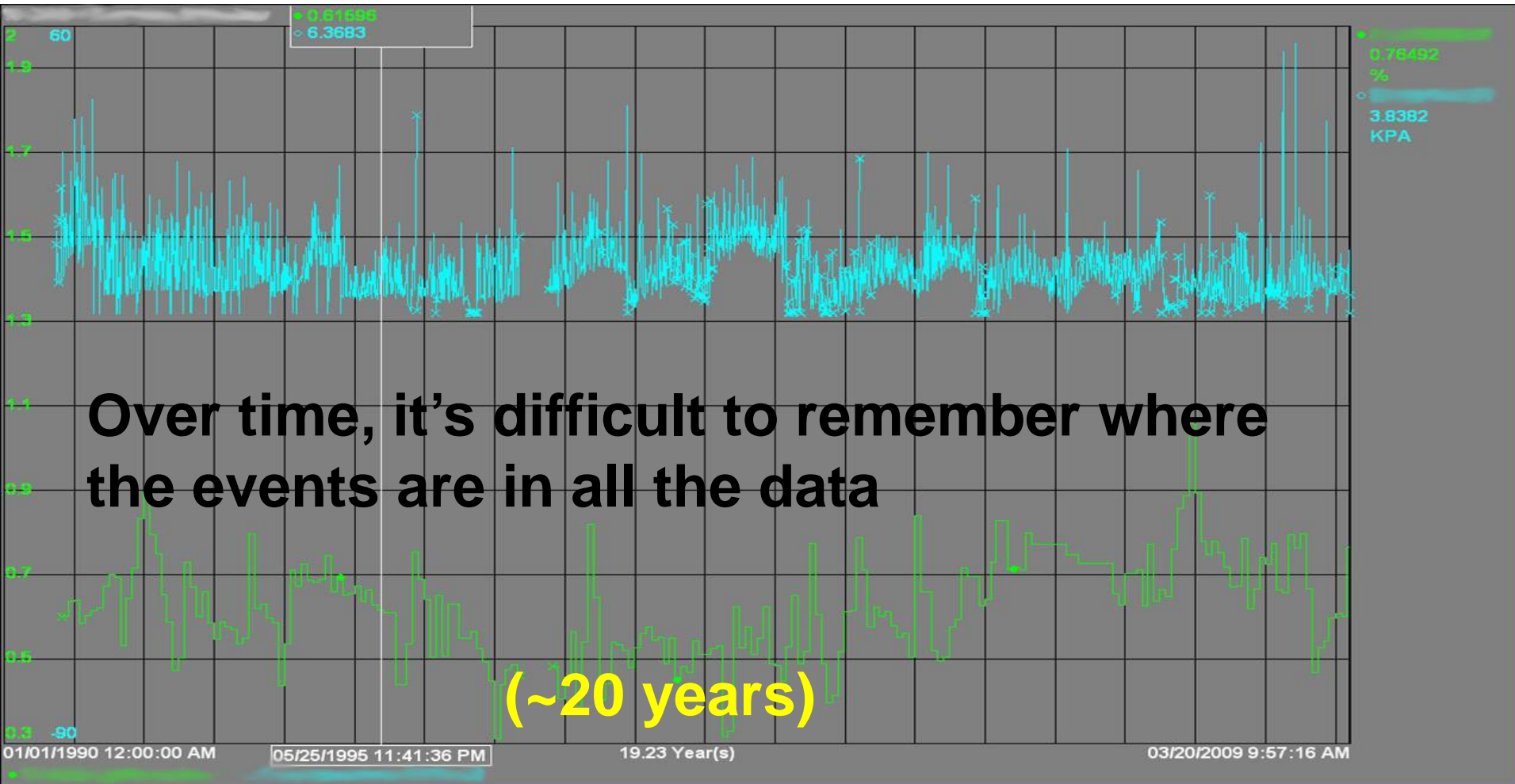
PMU Frequency Data – Electrical Grid



PMU Frequency Data – Electrical Grid



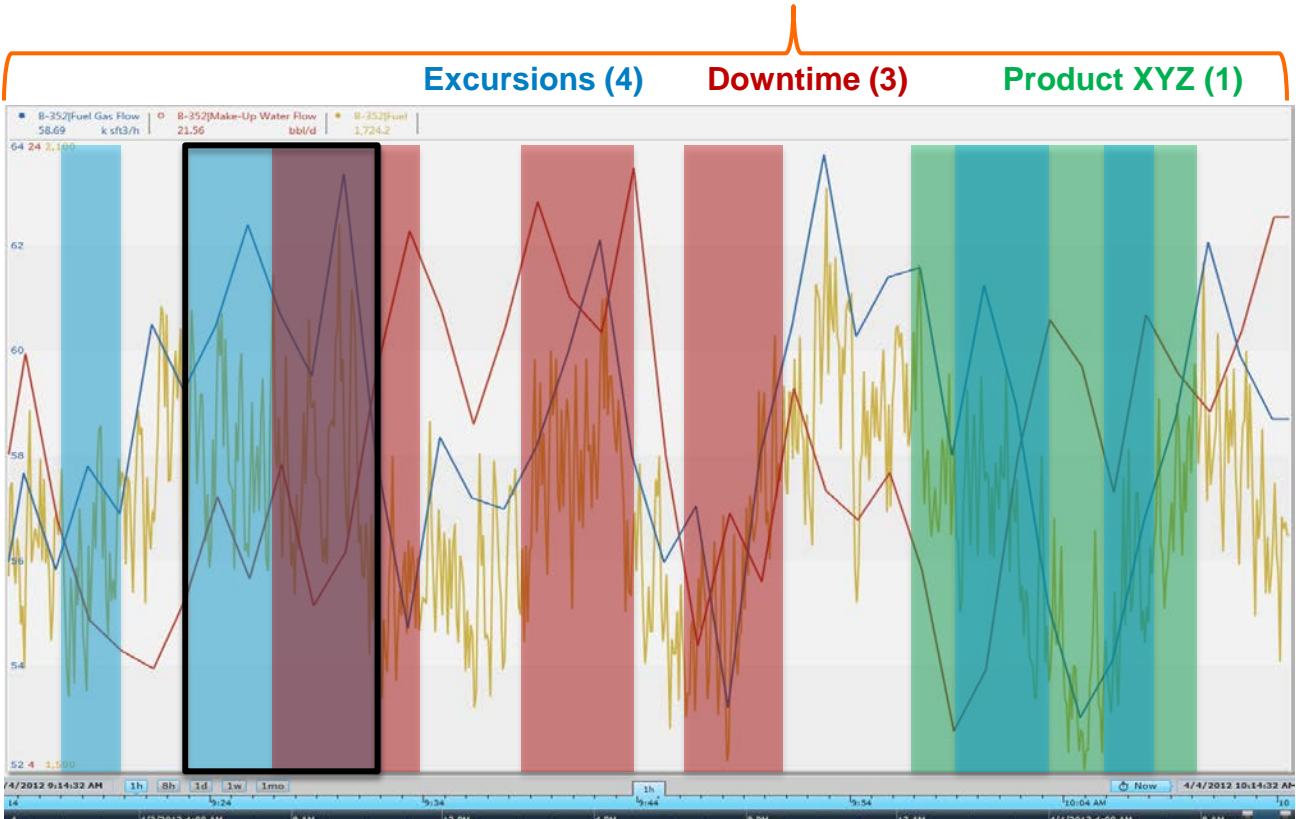
PMU Frequency Data – Electrical Grid





When was the last time a downtime event occurred?

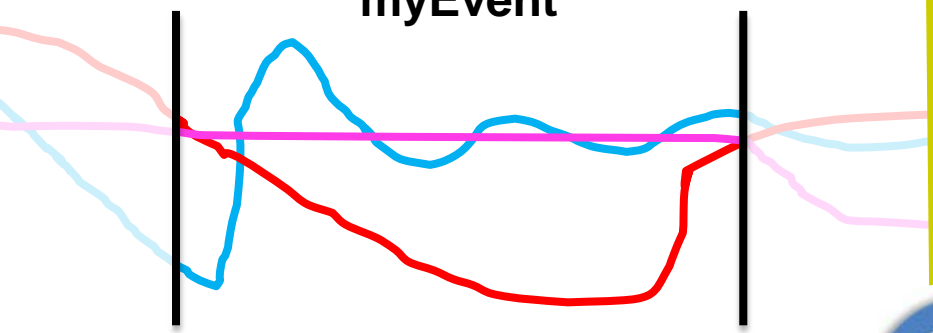
PI Event Frames is a core capability of the PI Server to record important process or business events and help you find the *related data*.



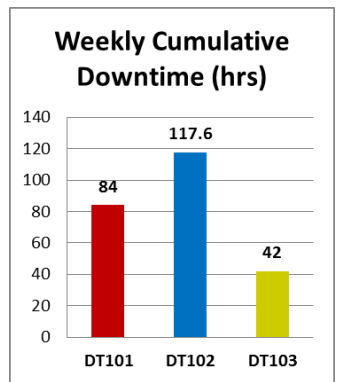
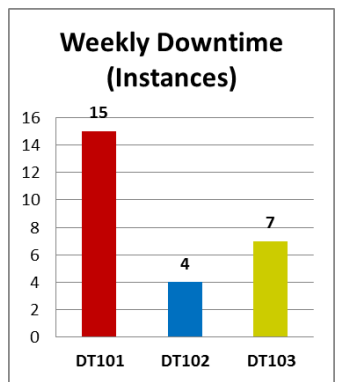
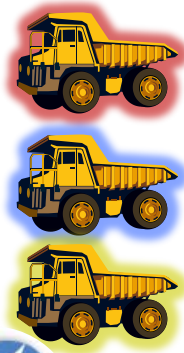
Event Attribute	Value
Name	Ex 20121215-0002
Start	15-Dec-2012 10:35:02
End	15-Dec-2012 10:47:26
Duration	12 min, 24 sec
Asset	Boiler-352
Excursion Type	High Violation
Fuel Gas Flow.Avg	37.12 k sft3/h
Fuel.Start	823.48 k sft3/ton
myPIKPI.Max	47.19 bbl/d

Simplify Data Analysis

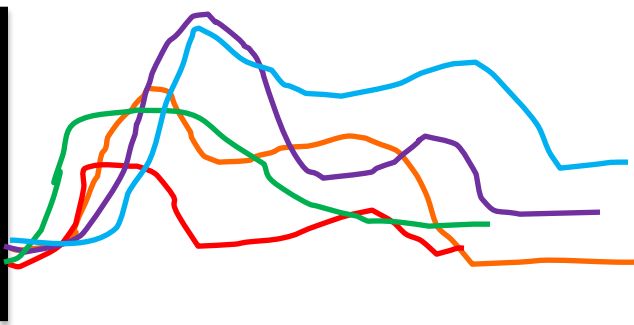
myEvent



Perform Asset Comparisons

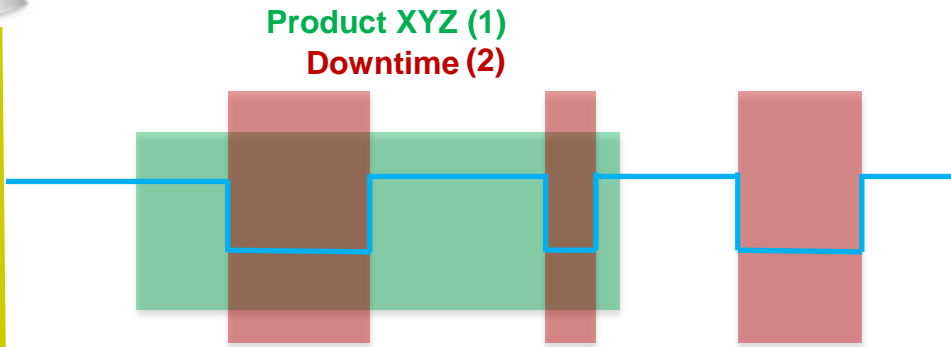


Event Overlay Trend (Temp)



Name	Temp.Max
EF1	122.47
EF2	109.34
EF3	112.73
EF4	98.61
EF5	125.24

Downtime Events for Product XYZ



Perform Event Comparisons

Discover Event Interrelationships



Utilities

Startups & Shutdowns
Peak vs. Off-peak Power
Environmental Excursions



Metals & Mining

Downtime / Reason Codes
Anode Tracking
Material Transfers



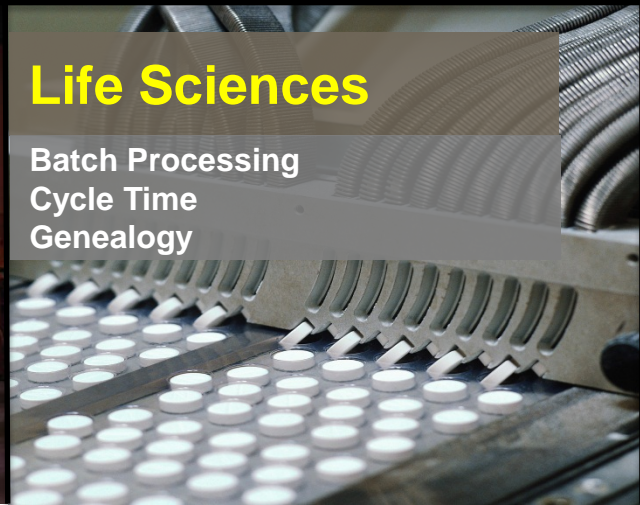
Oil & Gas

Specific Crude Runs
Catalyst Change Outs
Well Testing



Chemicals

Downtime / OEE / TEEP
Safety Events
Process Excursions



Life Sciences

Batch Processing
Cycle Time
Genealogy



Pulp & Paper

Grade Runs / Grade Changes
Pulp Cooking
Startups of Major Equipment



PI Event Frames Roadmap

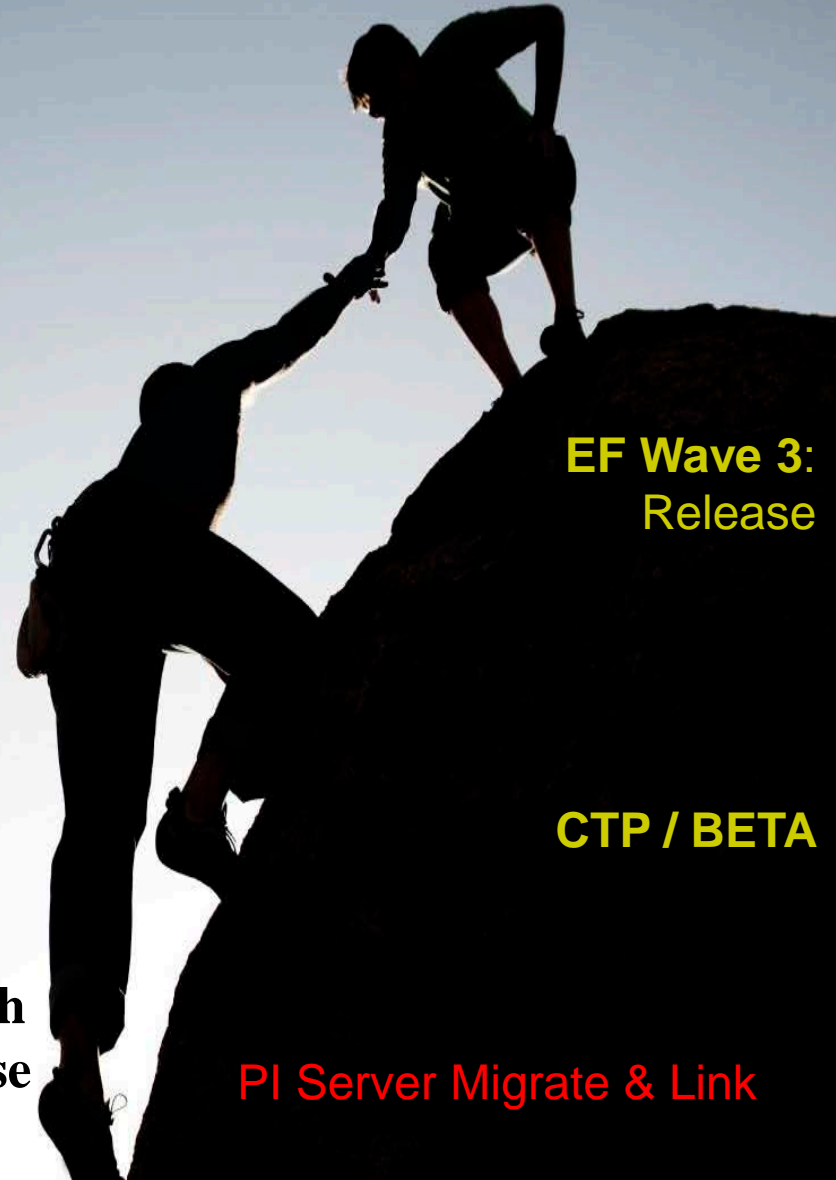
**Wave 1: PI Server 2010 R3
PI Event Frames Released!!!**

When is the next wave?



PI Event Frames

We will help you get to the top.



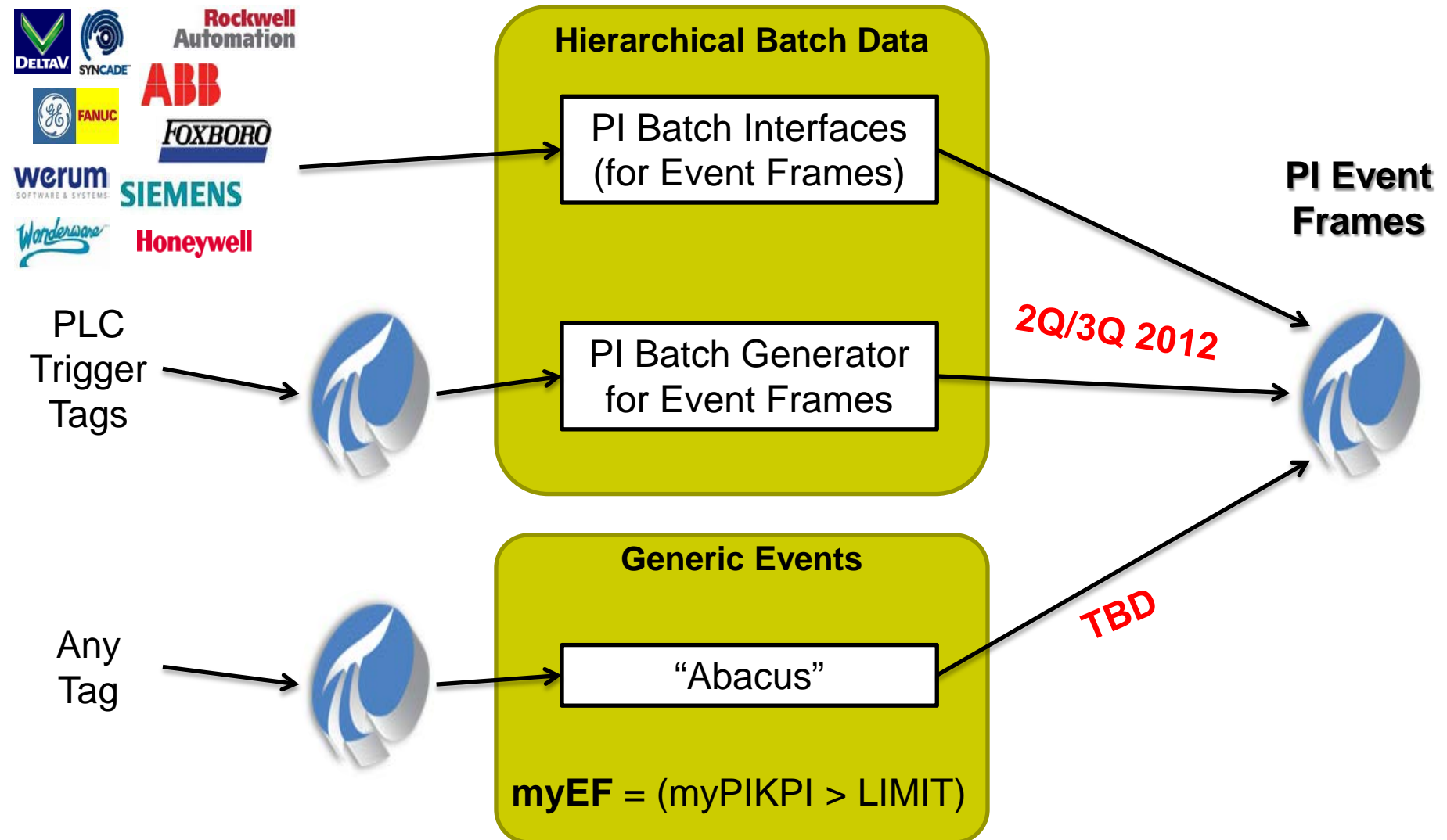
**EF Wave 3:
Release**

CTP / BETA

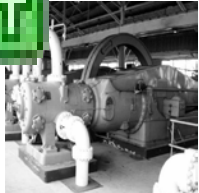
**PI Batch
Database**

PI Server Migrate & Link

Event Generation – What will I use?



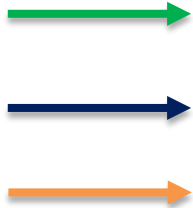
Event Generation (“Abacus”):



|myPIKPI

|Fuel Flow Rate

|Flow Out



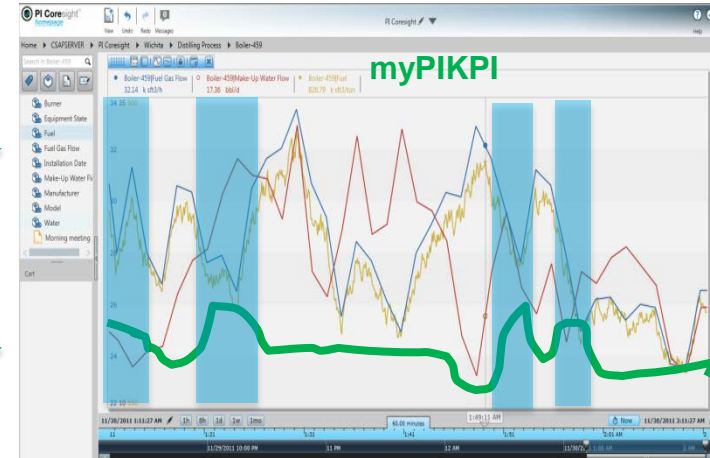
“Abacus”



myEF



|myPIKPI



$$\text{myPIKPI} = (\text{Flow Out} / \text{Fuel Flow Rate} * 3.14)$$

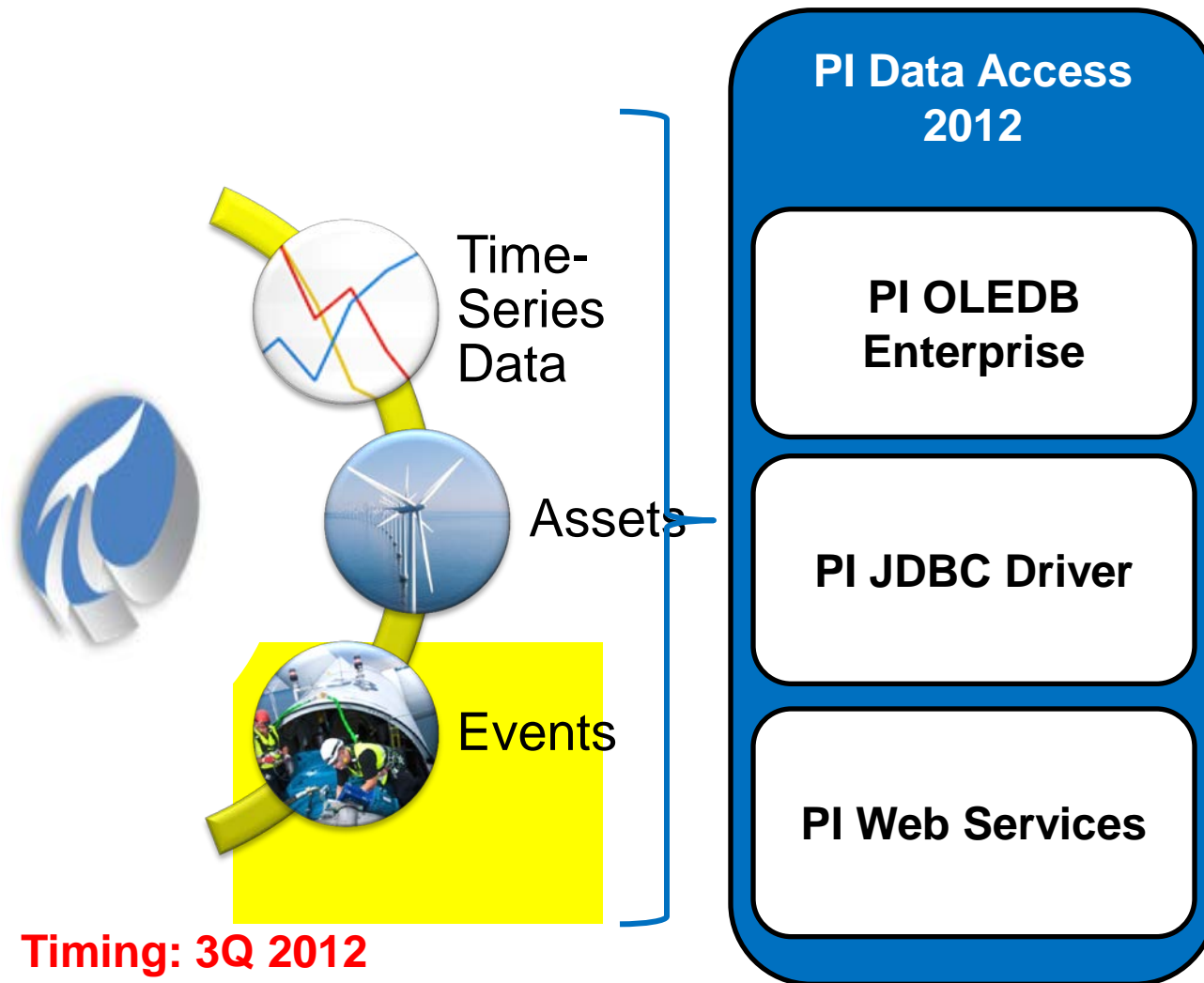


$$\text{myEF.Start} = (\text{myPIKPI} > \text{LIMIT})$$

$$\text{myEF.End} = (\text{myPIKPI} < \text{LIMIT}) \text{ AND } (\text{Fuel Flow Rate} > 80)$$

Timing: TBD

Event Integration with PI Data Access 2012



Timing: 3Q 2012



PI Coresight™

- B-235
- WPHLAFS03\DaVinci\NuGreen
 - Little Rock\Extruding Process\Equipment
 - B-045
 - Tucson\Cracking Process\Equipment
 - B-309
 - B-555
 - Wichita\Extruding Process\Equipment
 - B-334
 - Tucson\Milling Process\Equipment
 - B-737
 - B-914
 - Tucson\Distilling Process\Equipment
 - B-117
 - Houston\Cracking Process\Equipment
 - B-210
 - B-235
 - Houston\Milling Process\Equipment
 - B-209
 - B-499
 - Little Rock\Distilling Process\Equipment
 - B-125
 - Houston\Extruding Process\Equipment
 - B-765
 - Wichita\Cracking Process\Equipment
 - B-352
 - B-481
 - Wichita\Distilling Process\Equipment
 - B-459



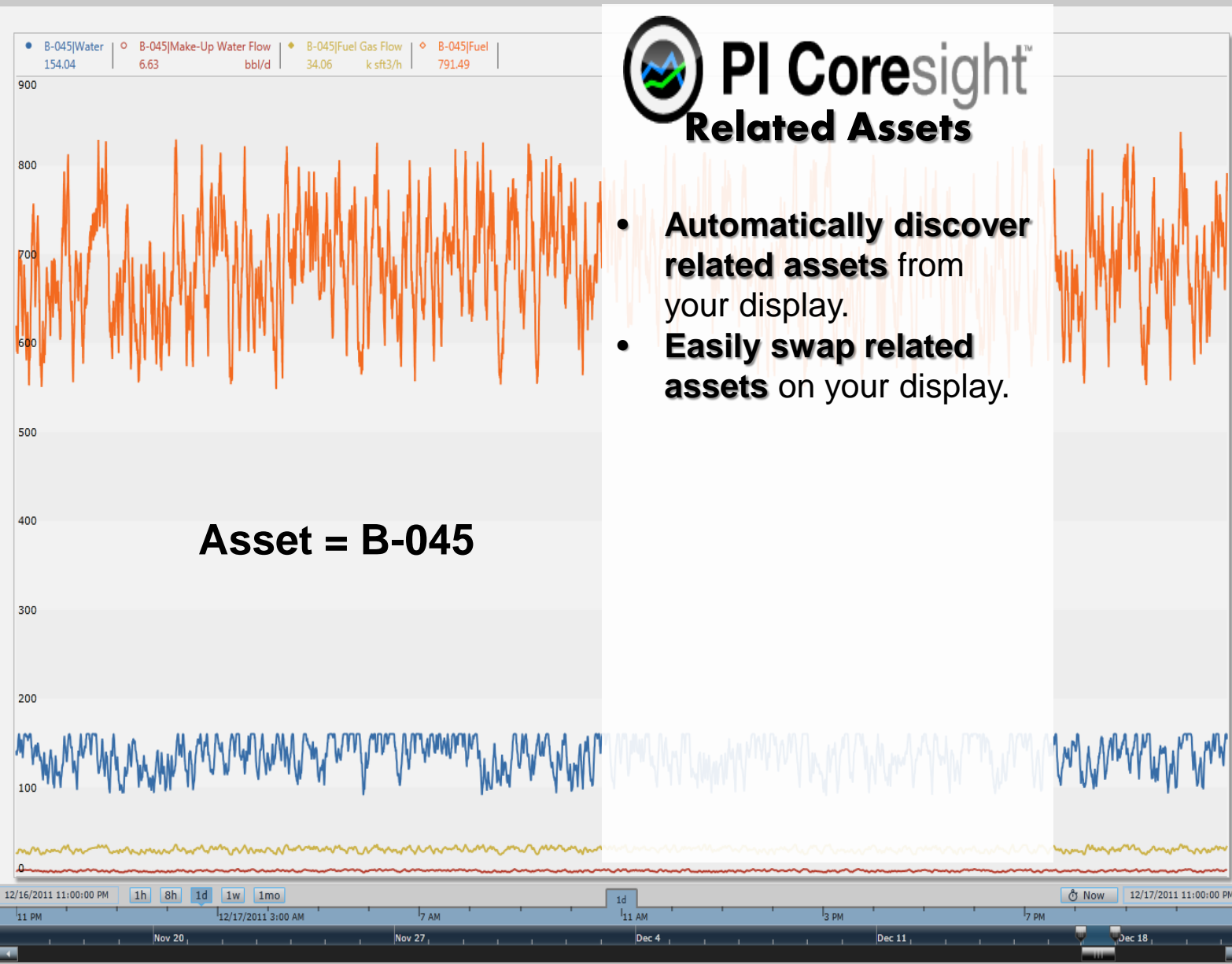
Related Boilers

**Asset = B-235
(Boiler)**

PI Coresight[™] Related Assets

- Automatically discover related assets** from your display.

- B-045
- B-235
-
- \\PHLAFS03\DaVinci\NuGreen
- + -
- [-] \Little Rock\Extruding Process\Equipment
 - B-045
- [-] \Tucson\Cracking Process\Equipment
 - B-309
 - B-555
- [-] \Wichita\Extruding Process\Equipment
 - B-334
- [-] \Tucson\Milling Process\Equipment
 - B-737
 - B-914
- [-] \Tucson\Distilling Process\Equipment
 - B-117
- [-] \Houston\Cracking Process\Equipment
 - B-210
 - B-235
- [-] \Houston\Milling Process\Equipment
 - B-209
 - B-499
- [-] \Little Rock\Distilling Process\Equipment
 - B-125
- [-] \Houston\Extruding Process\Equipment
 - B-765
- [-] \Wichita\Cracking Process\Equipment
 - B-352
 - B-481
- [-] \Wichita\Distilling Process\Equipment
 - B-459

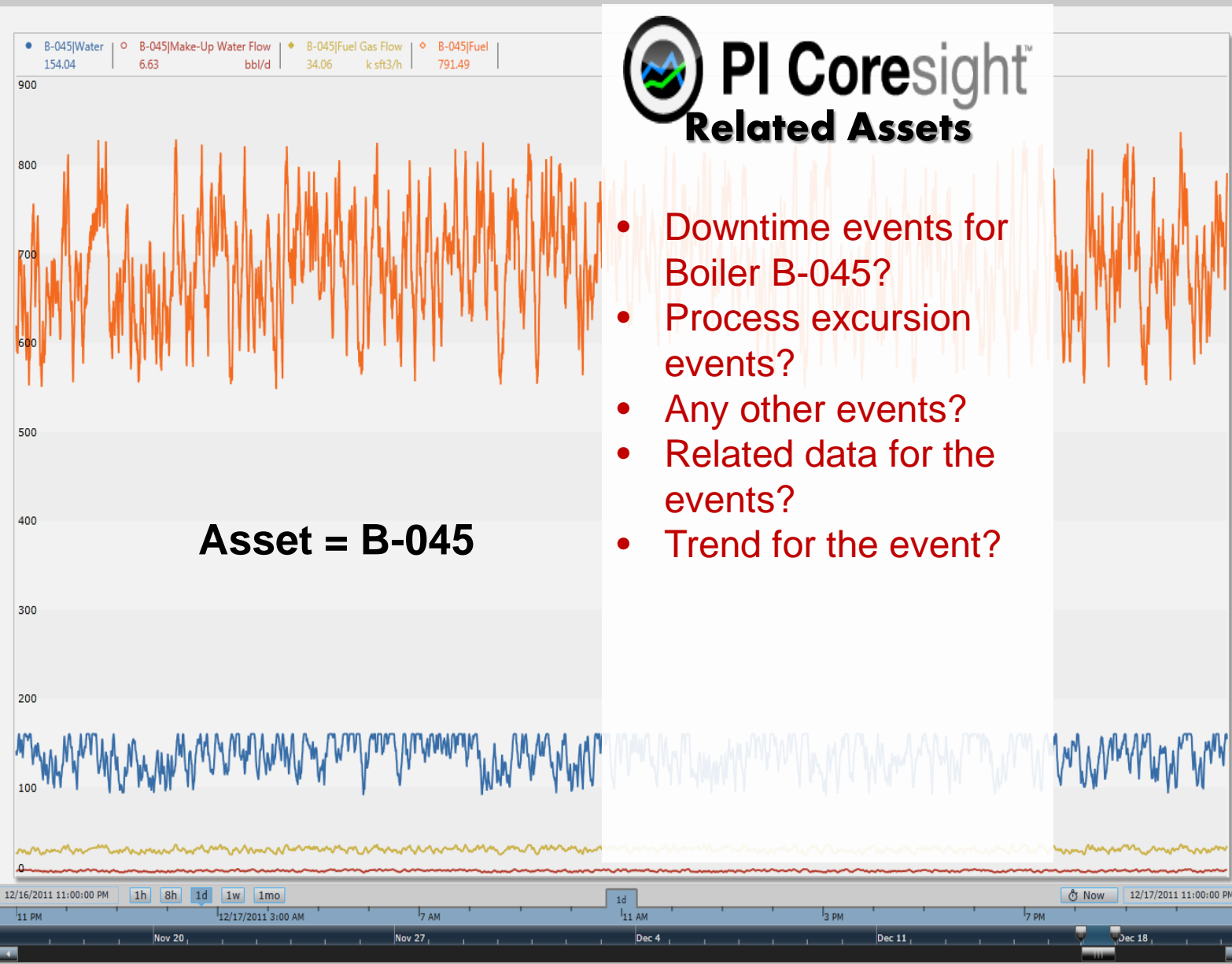


PI Coresight[™] Related Assets

- **Automatically discover related assets** from your display.
- **Easily swap related assets** on your display.

Asset = B-045

- B-045
- B-235
-
- \\PHLAFS03\DaVinci\NuGreen
- + -
- [-] \Little Rock\Extruding Process\Equipment
 - B-045
- [-] \Tucson\Cracking Process\Equipment
 - B-309
 - B-555
- [-] \Wichita\Extruding Process\Equipment
 - B-334
- [-] \Tucson\Milling Process\Equipment
 - B-737
 - B-914
- [-] \Tucson\Distilling Process\Equipment
 - B-117
- [-] \Houston\Cracking Process\Equipment
 - B-210
 - B-235
- [-] \Houston\Milling Process\Equipment
 - B-209
 - B-499
- [-] \Little Rock\Distilling Process\Equipment
 - B-125
- [-] \Houston\Extruding Process\Equipment
 - B-765
- [-] \Wichita\Cracking Process\Equipment
 - B-352
 - B-481
- [-] \Wichita\Distilling Process\Equipment
 - B-459



PI Coresight[™] Related Assets

- Downtime events for Boiler B-045?
- Process excursion events?
- Any other events?
- Related data for the events?
- Trend for the event?

B-045
B-235

Ex01
Ex02
DT45

Data Items

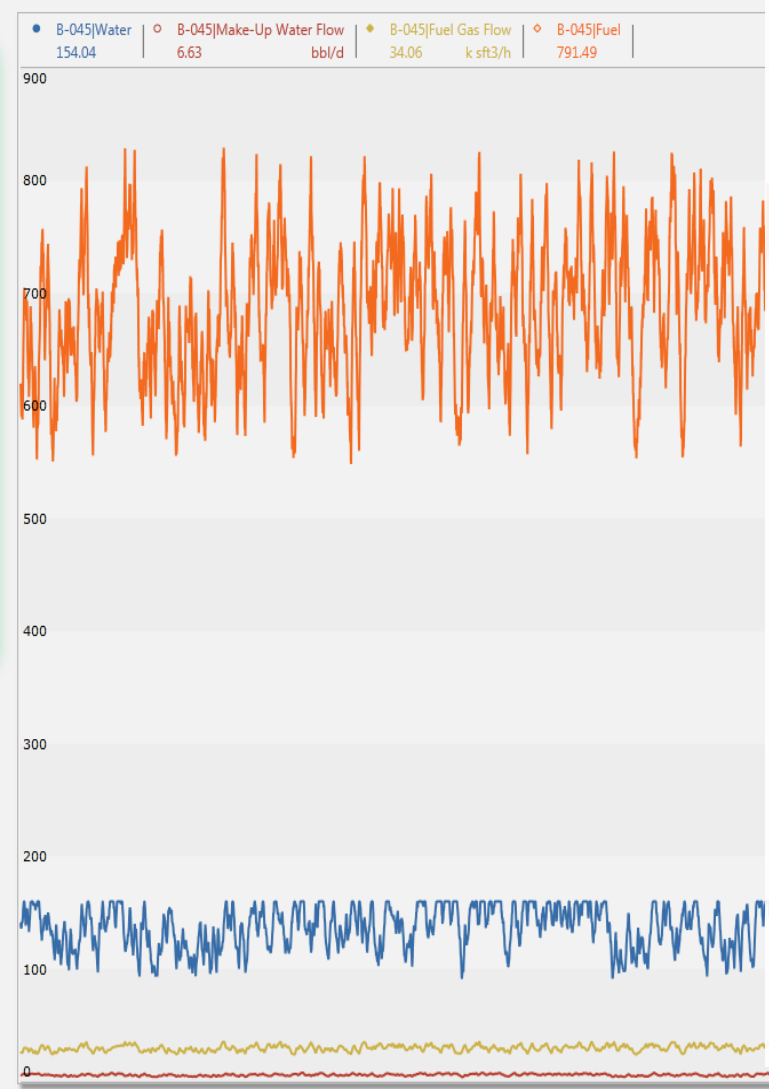
- DT45|Event Frame Name
- DT45|Asset Name
- DT45|Duration
- DT45|Template
- DT45|myPIKPI.max
- DT45|Temp.avg

Time Range

Start Time: 12/20/2011 11:22:07 AM

End Time: 12/20/2011 12:12:57 PM

DT46
DT47
XYZ146
Ex03
Ex04



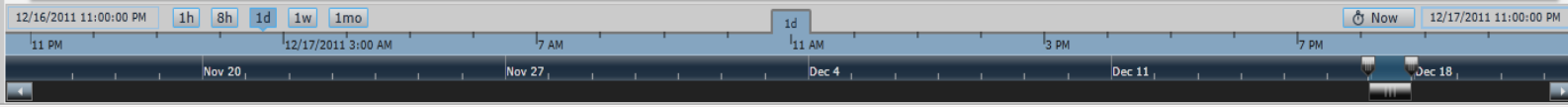
PI Coresight™ Related Events

- Discover related events on your asset.

Search

Related Assets (16)

Related Events (8)



B-045
B-235

Ex01
Ex02
DT45

Data Items

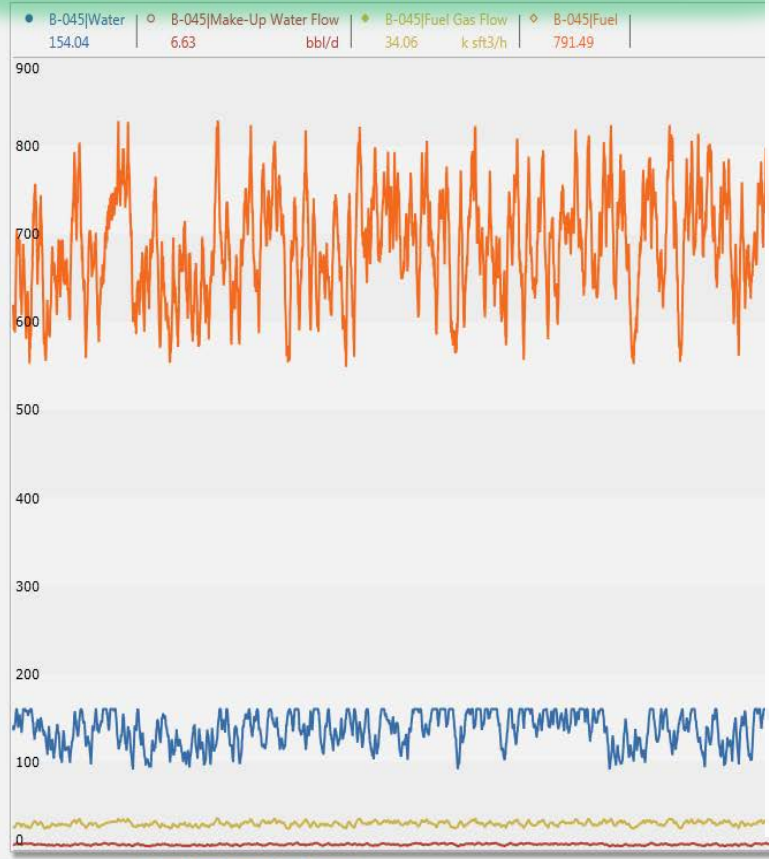
- DT45|Event Frame Name
- DT45|Asset Name
- DT45|Duration
- DT45|Template
- DT45|myPIKPI.max
- DT45|Temp.avg

Time Range

Start Time: 12/20/2011 11:22:07 AM
End Time: 12/20/2011 12:12:57 PM

DT46
DT47
XYZ146
Ex03
Ex04

Name	Description	Value	Minimum	Maximum
DT45 Event Frame Name	DT45		n/a	n/a
DT45 Asset Name	B-235		n/a	n/a
DT45 Duration	00:50:49		n/a	n/a
DT45 Template	Boiler Downtime		n/a	n/a
DT45 myPIKPI.max	73.99	68.00	62.04	73.99
DT45 Temp.avg	6.97	6.97	1.01	12.92



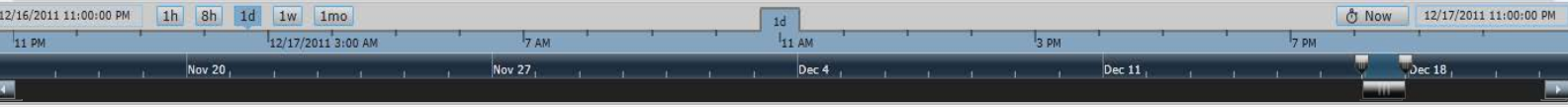
PI Coresight™ Related Events

- Discover related events on your asset.
- View the event's related data in a table.

Search

Related Assets (16)

Related Events (8)



B-045
B-235

Ex01
Ex02
DT45

Data Items

- DT45|Event Frame Name
- DT45|Asset Name
- DT45|Duration
- DT45|Template
- DT45|myPIKPI.max
- DT45|Temp.avg

Time Range

Start Time: 12/20/2011 11:22:07 AM
End Time: 12/20/2011 12:12:57 PM

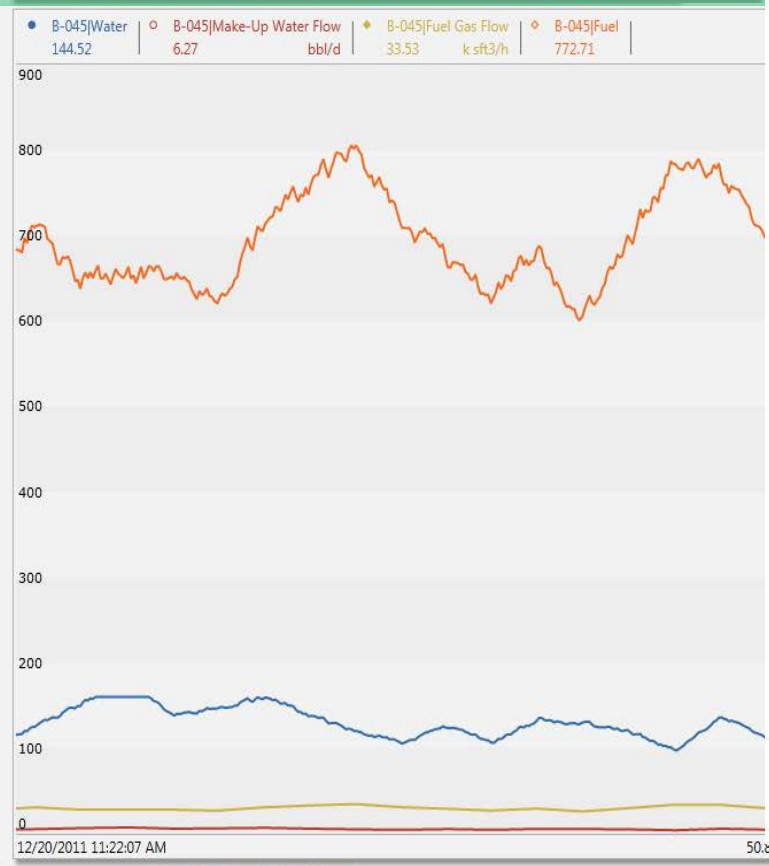
DT46
DT47
XYZ146
Ex03
Ex04

Search

Related Assets (16)

Related Events (8)

Name	Description	Value	Trend	Average	Minimum	Maximum
DT45 Event Frame Name	DT45			n/a	n/a	n/a
DT45 Asset Name	B-235			n/a	n/a	n/a
DT45 Duration	00:50:49			n/a	n/a	n/a
DT45 Template	Boiler Downtime			n/a	n/a	n/a
DT45 myPIKPI.max	73.99	■■■■■■■■		68.09	62.04	73.99
DT45 Temp.avg	6.97	■■■■■■■■		6.97	1.01	12.92



PI Coresight™ Related Events

- **Discover related events** on your asset.
- **View the event's related data** in a table.
- **Analyze your event** on a trend with the related process data of your asset.

Coming soon in 2012!



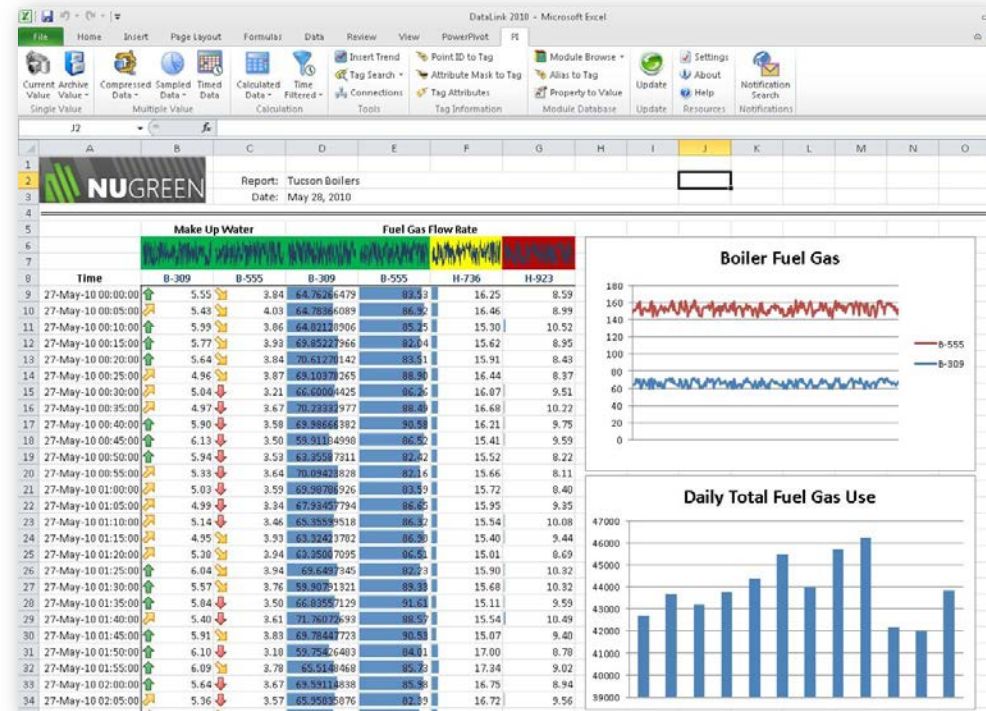
PI Client Updates



PI DataLink

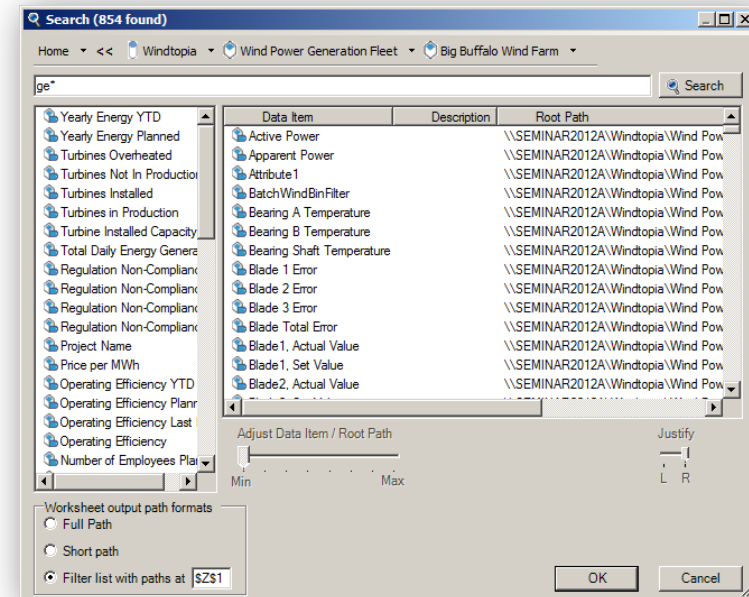
PI DataLink

- Add-in to Microsoft Excel
- Create reports, perform calculations, and do analysis in a familiar environment
- OSIssoft's most popular product by installations.

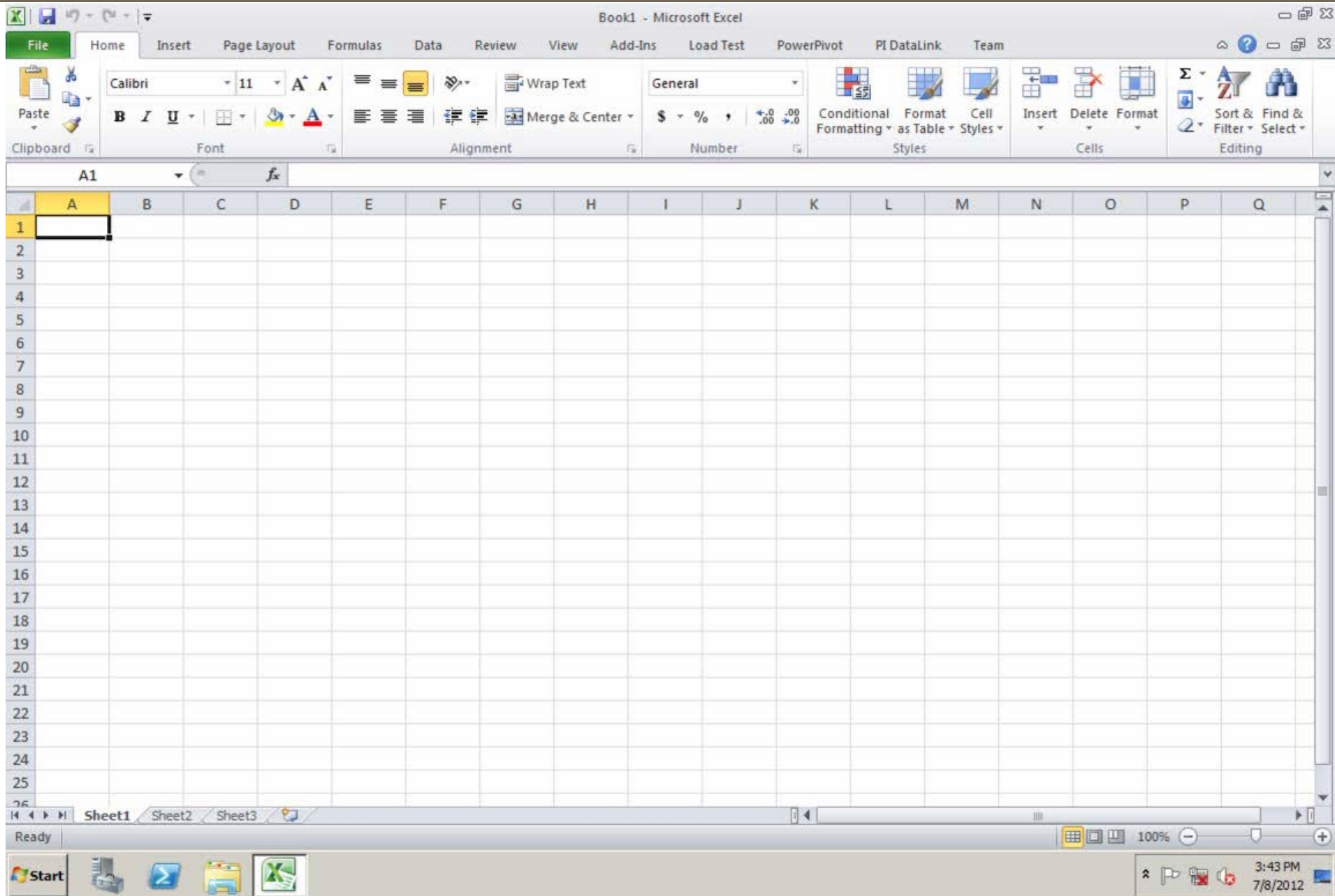


New Features in 2012

- Integration with PI Asset Framework
Easier to find data, re-use work with asset relative displays
- Search
Browse or search the entire PI System
- Excel 2010 64-bit support
32-bit or 64-bit. PI DataLink will work



How to create an element relative report

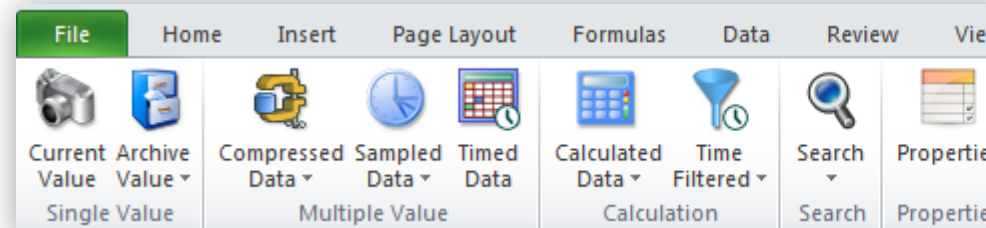


Backwards Compatibility

- Continue to utilize existing workbooks
- AF Server NOT required.
- Use Attributes and/or PI Tags. Your choice.

Supported Platforms

- Office Versions... with Ribbon Only
 - Excel 2007
 - Excel 2010 (32-bit)
 - Excel 2010 (64-bit)



- No longer supports Excel 2003 (or earlier)
 - Ending MS support for 2003
 - Mainstream Ended: April 14, 2009
 - Extended Support Ends: April 8, 2014

Caveats

- Trend Control
 - 32-bit: Display & Update Existing Displays.
 - 64-bit: Not Available. Trends display as static images and do not update.
- Legacy Functions - MDB and Tag-only Functions
 - Refresh and Recalculate.
 - Ribbon items moved to legacy add-in

Other Notables

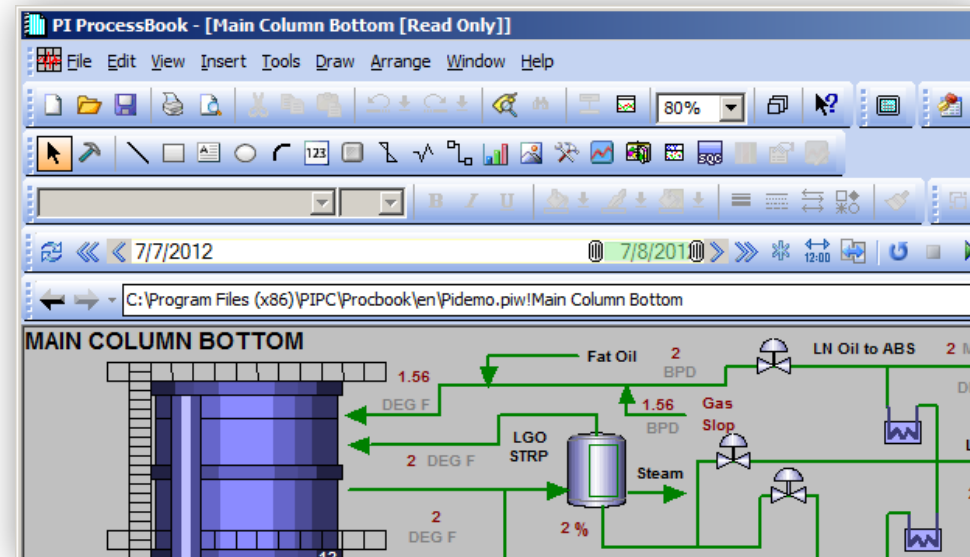
- Improved Install Experience
 - Single 32/64-bit install kit
 - All pre-requisites are included
- Recent Highlights
 - Internationalization and Local Language support



PI ProcessBook

PI ProcessBook 2012

- Enhanced support for PI Asset Framework (PI AF)
- Better time handling for navigating displays
- Improved the Bar symbol
- New Language Selection tool and improved international support



New Features

PI ProcessBook - [Wind turbine overview_detail]

File Edit View Insert Tools Draw Arrange Window Help

100%

Arial 12

10:28:26 AM 11:18:26 AM

C:\Users\ldieffenbach\Desktop\ProcessBook displays\Windtopia\Wind turbine overview_detail.pdi

Element Relative Display

Search

GE*

Elements of Interest

Group by: Template

Filter

Name
GE06
GE07
GE08
GE09
GE10
GE01
GE02
GE03
GE04
GE01
GE02
GE03
GE04
GE01

Turbine Overview

WDFPIAFWindtopiaWind Power Generation Fleet\Black Mesa Wind Farm\GE06

Capacity: 0 20 40 60 80 100

General Unit Information

Unit Name: WTG06
 Unit Model: 1.5 csCWE
 Unit Status: Load Operation

Availability Information

Energy (Daily): 23061.54 kWh
 Capacity Factor (Daily): 63.35 %
 Availability Factor (Daily): 88.43 %

Unit Power Curve (Last 2 Hours)

Generation vs. WindSpeed

Generation Information

Active Power: 1498.84 kW

Reactive Power: 53.18 kVA

Apparent Power: 1506.71 kVA

Power Factor: 0.98

Line Frequency: 60.01 Hz

Active and Reactive Power Output

Active Power: 1499 kW
 Reactive Power: 53.177 kVA

Turbine Wind Speed

Wind Speed: 14.85 m/s
 Frequency: 60.0118 Hz

グローバル 風力発電フリート



全発電量

6620 MW



本日の
収益

1.54 M\$



現在までの
収益

176 M\$



ブラジル

設備容量:

1092 MW



ヨーロッパ

設備容量:

2198 MW

2170 MW

PI Language Settings Tool

Display Language

About Language Settings

Set a user interface language for PI desktop applications:

- Use the default language specified at installation time [English]
- Match the current Windows display language set for your operating system [English]
- Select a different language for your Windows user account

English

- English
- Deutsch
- español
- français
- Português
- русский
- 한국어
- 中文(简体)
- 日本語

Support for multinational organizations

利用率:

98 %

稼働タービン:

823

利用率:

98 %

稼働タービン:

1473

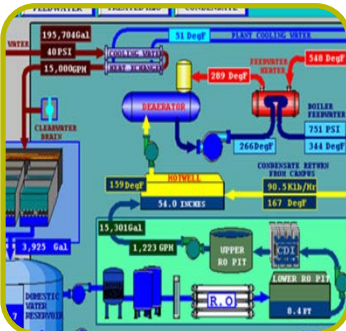
PI Event Frames with PI DataLink & PI ProcessBook

PI DataLink



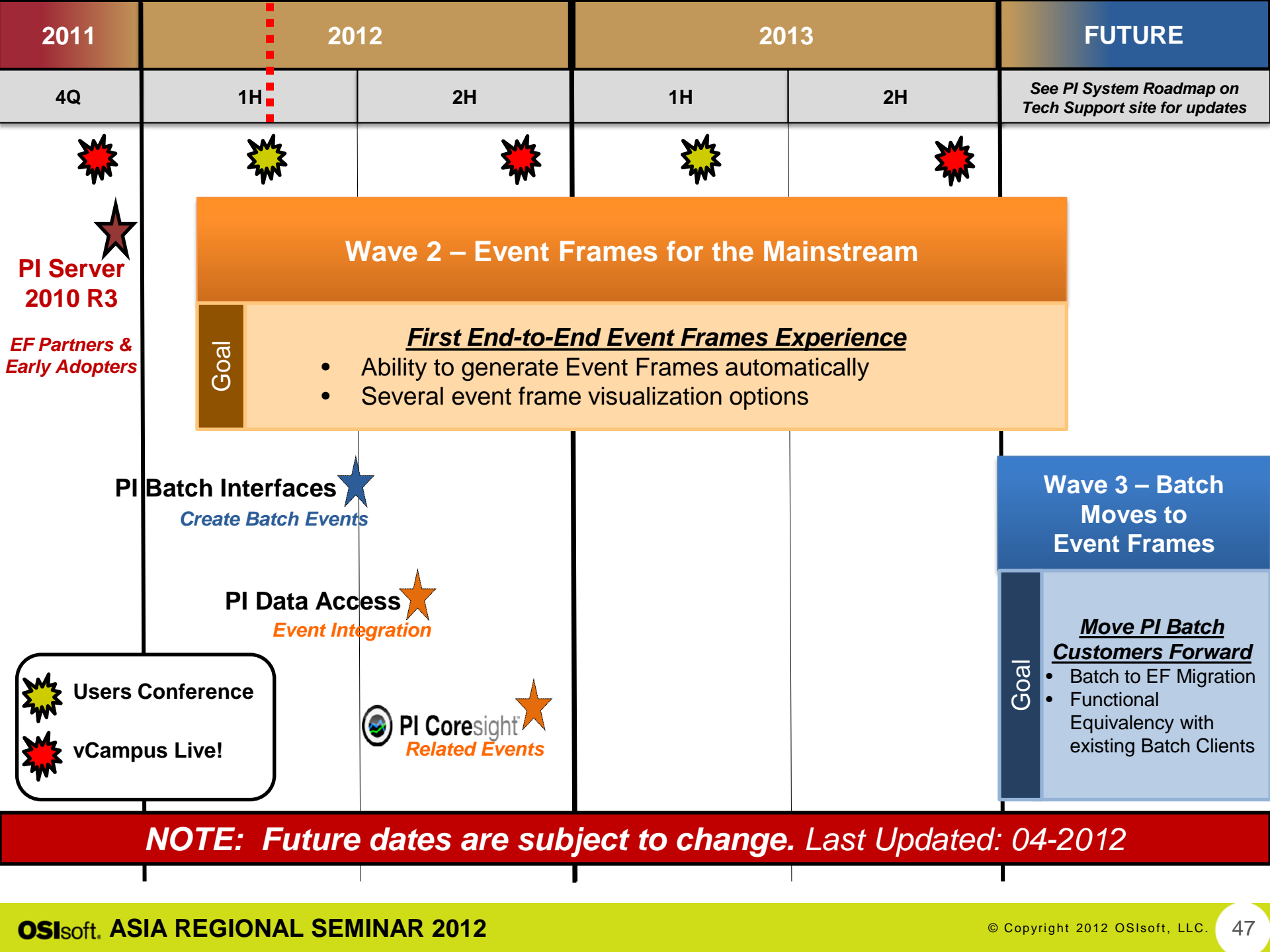
- *Reporting & Table Based Analytics in Excel*
- Existing DL functions with an event frame context
- Digging into an event frame
- Rollups across event frames

PI ProcessBook



- *Display Authoring & Process Monitoring*
- Focus on real-time views of event frame data & historical event references
- Element relative displays driving event frame queries
- Table of current event frames
- Event frames driving trend context

Next releases (v2012 + 1) will include support for PI Event Frames; Timing: TBD





Wave 2 is coming!

Willy Seah

wseah@osisoft.com

Customer Support
Engineer

OSIsoft Asia Pte. Ltd.

Natsumi Watanabe

nwatanabe@osisoft.com

Customer Support
Engineer

OSIsoft Japan K.K.

THANK YOU



Diamond Sponsor

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