



# PI Vision 2017

## Unified Visualization Infrastructure

Presented by  
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October 5th, 2017



# PI Vision

We are embarking on a **unified visualization infrastructure** to deliver a seamless, powerful, extensible experience.



**Your window into operational intelligence**

# Our commitment to YOUR needs

You told us...

**Where** Control center, Desktop, Mobile

**When** Real-time: Past, Present, Future

**How** Operational Intelligence  
Advanced Analytics  
Business Intelligence  
Enterprise Reporting



## Requirements

### SEAMLESS

Unified experience

### UBIQUITOUS

Empower all Operations users

### ON – DEMAND

Intuitive, self-service, off the shelf

# Visualization Execution Strategy – Focus & Goals

## Modern architecture

Leverage latest technology to stay relevant



## Value-add features

Enable customers to solve new problems and derive more value



## Process Graphics

Provide PI ProcessBook customers a path forward



## Partner enablement

Actively support partners to develop solutions on our platform



## Extensibility

Enable the community-at-large to build customizations & extensions



## Superior data access

Ensure PI Web API is focused to meet the service layer needs

# Major Changes Have Been Underway

2016

- ✓ HTML 5: View on any phone/tablet
- ✓ **New Display Editor**
- ✓ **PI ProcessBook Viewer**
- ✓ **Event Comparison (Gantt chart + overlay trend)**

2016 R2

- ✓ **Event Search**
- ✓ **Trend Configuration**
- ✓ Event Comparison Displays
- ✓ **Event Details and Acknowledgement**

2017

- ✓ Collections
- ✓ Graphics Library
- ✓ Pinned Events
- ✓ Drill-in Navigation



New Display Editor



PI ProcessBook Viewer



Overlays & Gantt charts

# Major Changes Have Been Underway

2016

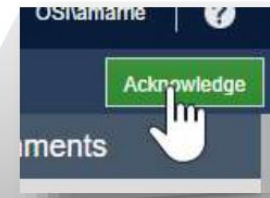
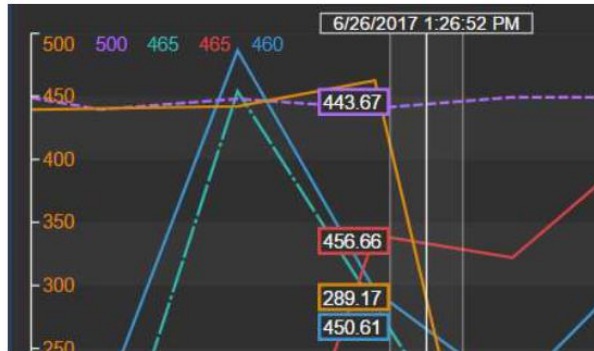
- ✓ HTML 5: View on any phone/tablet
- ✓ **New Display Editor**
- ✓ **PI ProcessBook Viewer**
- ✓ **Event Comparison (Gantt chart + overlay trend)**

2016 R2

- ✓ **Trend Configuration**
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2017

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- ✓ Drill-in Navigation



# PI Vision 2017

## Drill-in Navigation

Mine Truck Landing Page

Mine\_Truck\_1 Mine\_Truck\_2 Mine\_Truck\_3 Mine\_Truck\_4  
 Mine\_Truck\_5 Mine\_Truck\_6

Mine\_Truck\_2 Overview

Brake Display Frame Display Frame Roll Analysis

Manufacturer	Type	Driver	Ground Speed
Volvo	V940	Tommy TooFast	0 mph
Route	Status	Operation State	Load
Route B	Running	Loading	0 ton

## Collections

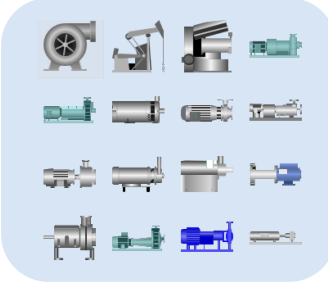
Model PizzaStar Speed  
 Model PizzaStar Speed  
 Model Jcar SuperVan Speed  
 Model Jcar SuperVan Speed  
 Model StoreRunner Speed  
 Model StoreRunner Speed

## Pinned Events

Search Results

- OSisoft\_201581181621 (CLEANING)
- OSisoft\_2015810231135 (CLEANING)
- OSisoft\_201581202655 (CLEANING)
- OSisoft\_2015810232451 (CLEANING)
- OSisoft\_20158519028 (CLEANING)
- OSisoft\_201585185135 (CLEANING)
- OSisoft\_2015853150 (CLEANING)
- OSisoft\_201584104839 (CLEANING)
- OSisoft\_201584103941 (CLEANING)

## Graphic Library



## Events Table

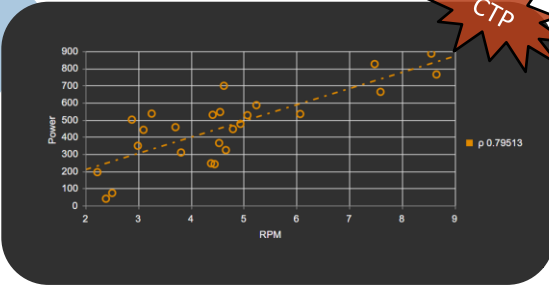
CTP

Start Time	End Time	Acknowledgement
High 2017-01-26 08:21:43.000	SP4 1/26/2017 6:21:43 AM - 1/26/2017 7:57:43 AM	Acknowledge
Engine Temperature High 2017-01-26 07:14:43.000	SP6 1/26/2017 7:14:43 AM - 1/26/2017 8:22:43 AM	Acknowledge
Gas Tank Level Low 2017-01-26 07:23:43.000	SP8 1/26/2017 7:23:43 AM - 1/26/2017 7:32:13 AM	Acknowledged
Gas Tank Level Low 2017-01-26 07:34:13.000	SP8 1/26/2017 7:34:13 AM - 1/26/2017 7:36:13 AM	Acknowledged
Engine Temperature High 2017-01-26 08:25:13.000	SP6 1/26/2017 8:25:13 AM - 1/26/2017 8:25:43 AM	Acknowledged
Engine Temperature High 2017-01-26 08:29:43.000	SP6 1/26/2017 8:29:13 AM - 1/26/2017 8:57:13 AM	Acknowledge

## Asset Comparison Table

Asset	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 1	Caterpillar	Jason Rice	0	0	Running
Mine Truck 2	Volvo	Tommy TooFast	0	0	Running
Mine Truck 3	Komatsu	Edna Thompson	1,682.6	159.87	Running
Mine Truck 4	Caterpillar	Revill Swivel	0	0	Running
Mine Truck 5	Volvo	John Sintias	0	0	Running
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 7	Volvo	Brian Bostwick	0	0	Running
Mine Truck 8	Caterpillar	Steve Kia	0	0	Running
Mine Truck 9	Caterpillar	Justin Brown	0	0	Running
Mine Truck 10	Volvo	Bob Bonkers	1,719.7	157.74	Running

## XY Plot





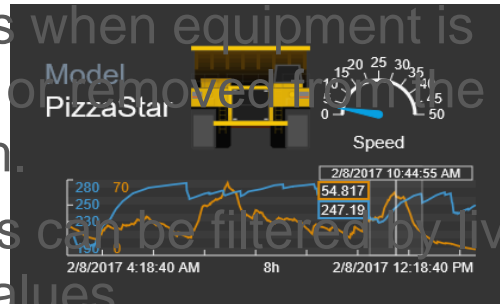


# Collection – Spend less time manually updating displays



Group one or more symbols as a “collection” then add a context filter so the display reflects the assets you are interested in

- The collection automatically reflects when equipment is added or removed from the system.
- Results can be filtered by live data values



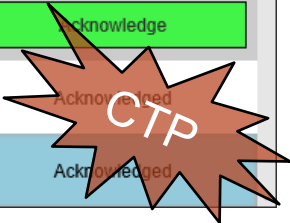


# Event Table and Asset Table

Event Table- Always see the most important and relevant events.

- Use search criteria to show events based on asset type, severity, hierarchy, and more.

Event Name	Asset	Start Time	End Time	Acknowledgement
Engine Temperature High 2017-01-07 03:56:21.000	Sp6	1/7/2017 3:56:21 AM	In Progress	<span style="background-color: green; color: white; padding: 2px;">Acknowledge</span>
Engine Temperature High 2017-01-07 10:45:51.000	Sp5	1/7/2017 10:45:51 AM	In Progress	<span style="background-color: green; color: white; padding: 2px;">Acknowledge</span>
Gas Tank Level Low 2017- 03-09 06:49:13.000	Sp4	3/9/2017 6:49:13 AM	3/9/2017 9:24:13 AM	Acknowledged
Gas Tank Level Low 2017- 03-09 06:49:13.000	Sp4	3/9/2017 6:49:13 AM	3/9/2017 9:24:13 AM	Acknowledged



Asset Table- Easily view and compare asset performance in a table format.

- Add dynamic search criteria to have the assets on the table update automatically

Asset	CIP Acid Tank Level	CIP Caustic Tank Level	CIP Supply Tank Level	recirculation EPWash State
CIP_123_SKID	31.82	63.221	0	non recirc
CIP_124_SKID	88.382	36.977	0.013409	non recirc
CIP_422_SKID	39.44	22.573	-0.0062218	non recirc
CIP_432_SKID	No Data	No Data	-0.0081825	non recirc



# Asset Table- Easily view and compare asset performance

Asset	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 3	Komatsu	Luca Thompson	1,682.6	159.87	Running
Mine Truck 8	Volvo	Bob Bonkers	1,719.7	157.74	Running
Mine Truck 4	Caterpillar	Reville Swivel	0	0	Stopped
Mine Truck 5	Volvo	John Sintilas	0	0	Stopped
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 7	Volvo	Brian Bostwick	0	0	Running
Mine Truck 8	Caterpillar	Steve Kwan	0	0	Running
Mine Truck 9	Caterpillar	Justin Brown	0	0	Running
Mine Truck 10	Volvo	Bob Bonkers	1,719.7	157.74	Running

Add search and filter options to make the content of the table dynamic

Asset Type  
Mining\_Mine Truck

Asset Attribute  
Status = Running  
Load > 100

Now the table shows only the mine trucks that are running and have a load.



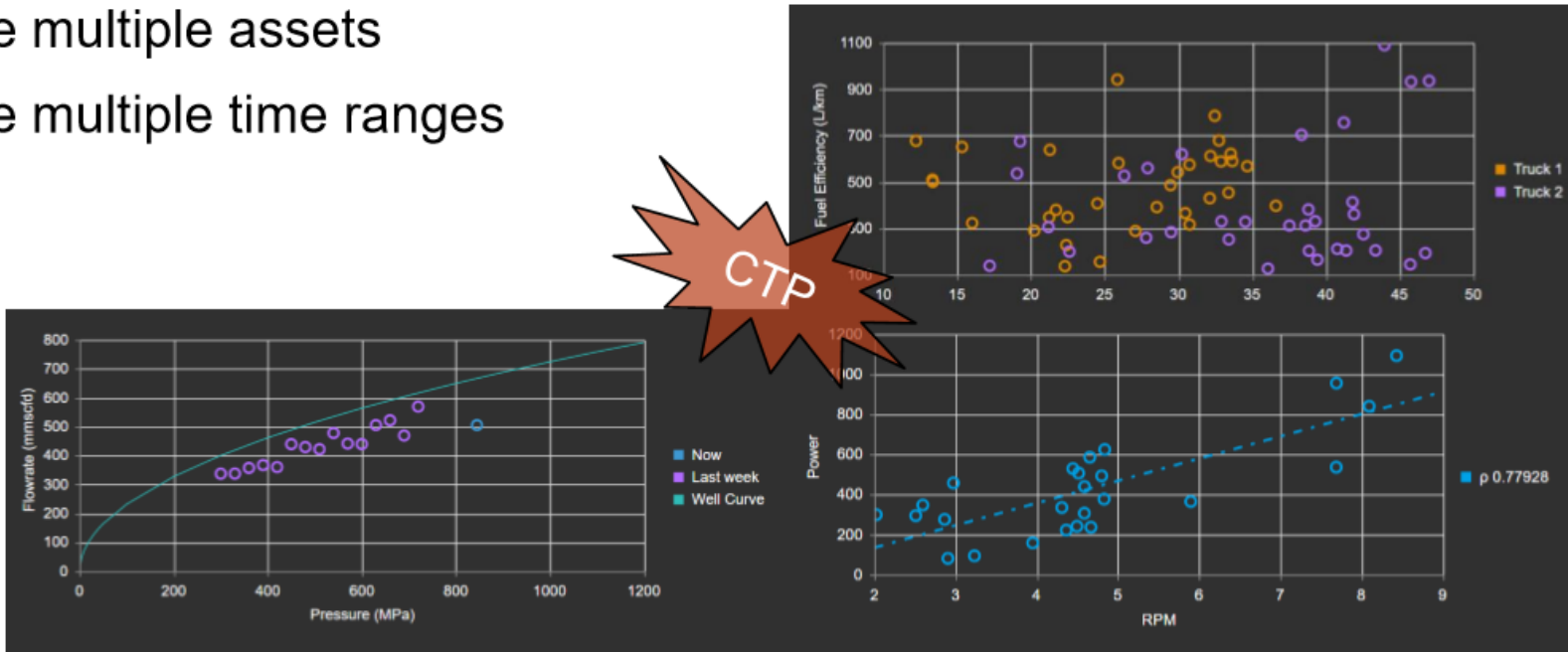
# User Types

- **Publisher**
  - Targeted for content creators who need the ability to create and save new dashboards and analysis views.
  - The Publisher user type is equivalent to the traditional PI Coresight user that has existed in all previous versions of the product.
- **Explorer**
  - The Explorer user type can not save any new displays or changes to existing displays.
  - An Explorer can use the full power of existing displays to switch context, adjust time and investigate events. Explorers can even create ad-hoc displays but they do not have the ability to save any of this work.

# XY Plot – Correlated data



- Correlations between attributes
- Compare multiple assets
- Compare multiple time ranges





# Pinned Events

- Identify batch process deviation by comparing to a reference
  - “Pin” one or more events, to be used as a reference
  - Pinned events are saved with the display

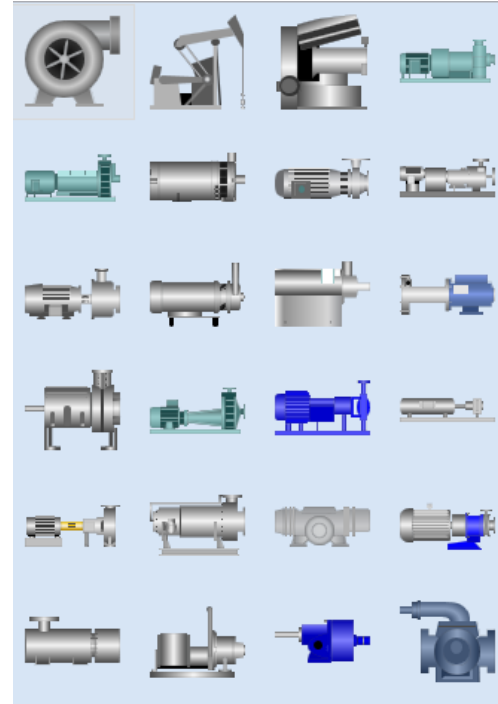
The screenshot shows the 'Events' interface with a list of events. A context menu is open over the event 'OSIsoft\_201581202655 (CLEANING)'. The menu options are: Hide Event, Event Details, Compare Similar Events by Name, Compare Similar Events by Type, and Pin Event. The 'Pin Event' option is highlighted.

Event ID	Event Name	Start Time	End Time
OSIsoft_201581181621	(CLEANING)	8/11/2015 4:16:21 AM	8/11/2015 6:46:49 AM
OSIsoft_201585185135	(CLEANING)		
OSIsoft_201581202655	(CLEANING)	8/11/2015 8:26:55 AM	
OSIsoft_201581202655	(CLEANING)		
OSIsoft_201581202655	(CLEANING)		
OSIsoft_201581202655	(CLEANING)		
OSIsoft_201581202655	(CLEANING)		
OSIsoft_201584104839	(CLEANING)		
OSIsoft_201584103941	(CLEANING)		



# Graphics Library

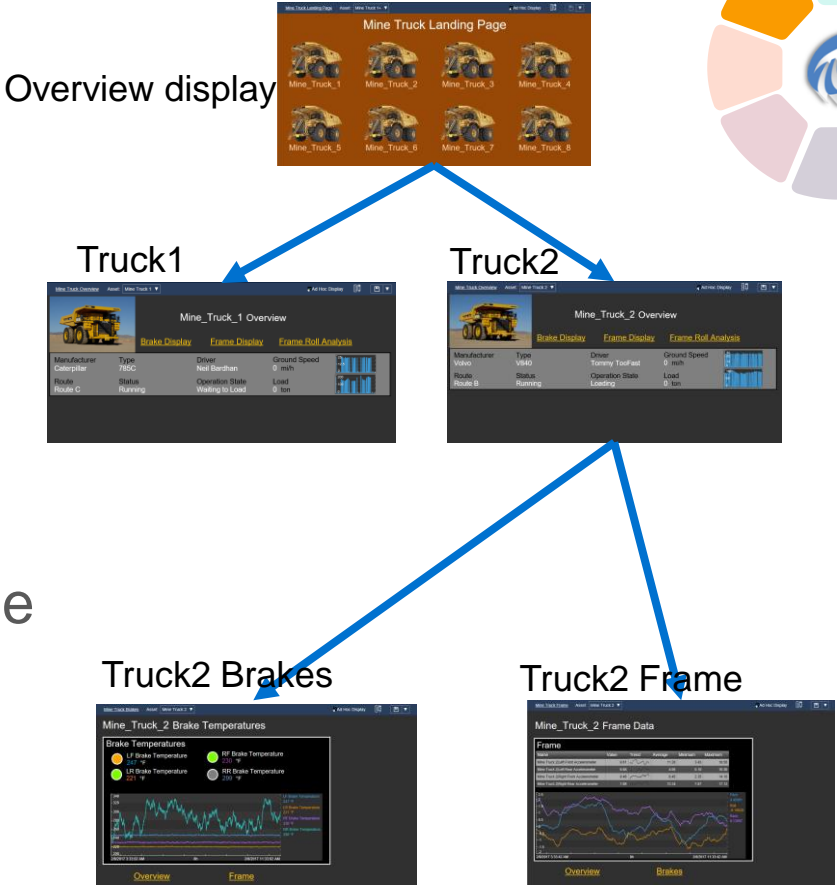
- Use an extensive library of graphic symbols to enhance a display



# Drill-down Navigation



- Configure a URL link on any symbol
  - Link to another display or another website.
  - When connecting to another display the context (time and/or selected asset) can be passed as part of the link





# What's coming next...

- Refinements for XY Plot and Events Table
- Server side enhancements for PI Web API
  - Performance and Scalability
  - Groundwork for client side data access
- Editor improvements
  - Snap to Grid
  - Display printing
  - Improved font size control
  - Display level number format



# Contact Information

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OSIsoft



# Questions

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



State your **name & company**

# Please remember to...

Complete the Survey for this session

**OSIsoft. REGIONAL SEMINAR**  
Safeco Field – Seattle, WA – September 20, 2016

**Evaluation Form**

Name: \_\_\_\_\_ Company: \_\_\_\_\_  
Email: \_\_\_\_\_

**Quality of presentations**

	Poor	Good	Excellent	N/A
1. Digital Transformation with Today's PI System – OSIsoft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. PI Coresight 2016: New Vision, New Display Editor, New Look and Feel – OSIsoft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Monitoring Health and Performance of Grid-Scale Energy Storage Systems – UniEnergy Technologies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Using PI Integrators to Improve the Value of your PI Data – OSIsoft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. PI Asset Framework Ties Together Enterprise OEE for Clearwater Paper – Clearwater Paper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Solving Business Initiatives with the PI System – OSIsoft	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. PI Analytics and Coresight for Business Process Improvement – Arista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Seq helps customers get even more value from their OSIsoft PI System – Seq Inc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. What's Really Going on with your Beer's Fermentation? – Deschutes Brewery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Quality of seminar**

	Poor	Good	Excellent	N/A
1. Presentation topics meeting your needs or interests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Time allowed for lunch/breaks/discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Pace and time allocated to the presentations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>