

PI Vision

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Agenda

- Product Vision and Roadmap
- New features this year
- Product Demo

Driven by Customer Research

+190 interviews averaging +90 minutes each to understand

- How are your visualization needs changing?
- What will help you be more successful in your role?

What You Said About Visualization

“People want their data **where they are**, not where the system is”

“We’re **constantly developing** and **adding** things like 6 steam generators in one field in the next few months, which means we need to **update all those screens.**

...

I’m just **one person**”

“... that ability for an **end user** to be able to go in and configure it and get an **integrated experience** has **not been there**”

PI Vision

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

Create
Beautiful
Information
Displays &
Dashboards

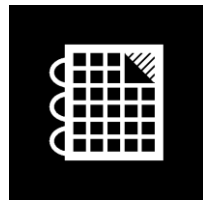
Monitor and
Optimize
Complex
Processes

Analyze and
Compare
Important
Events

Input Critical
Data in
Context

Your window into operational intelligence

PI Vision: A Critical Piece of the Infrastructure



PI ProcessBook
Process Monitoring



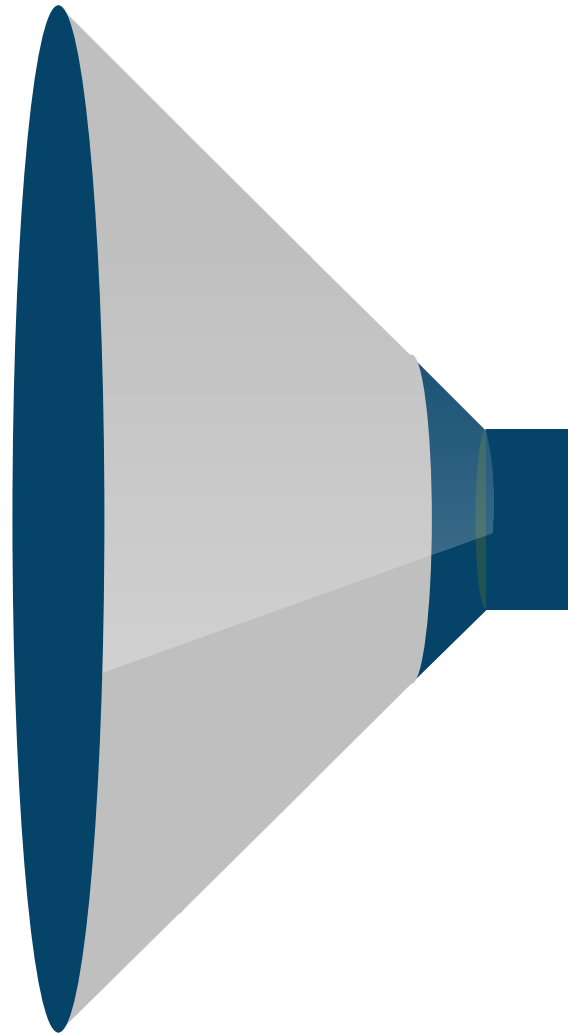
PI Coresight
Ad Hoc Analysis



PI WebParts
Dashboards



PI Manual Logger
Manual Data Entry



PI Vision Journey

2016

Display Editing

- ✓ New Display Editor
- ✓ HTML5: Desktop or Mobile
- ✓ PB Viewer
- ✓ Event Comparison

2016 R2

Event Analysis

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

2017

Asset Dashboards

- ✓ Collections
- ✓ Drill-in Navigation
- ✓ Graphics Library
- ✓ Pinned Events
- ✓ Asset Comparison Table

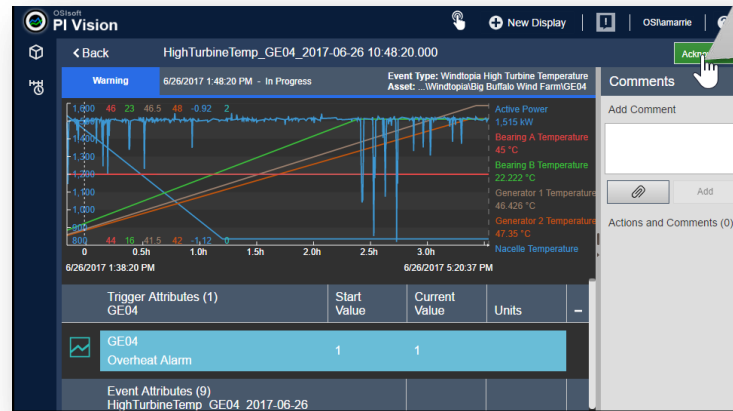
2017 R2

Display Organization

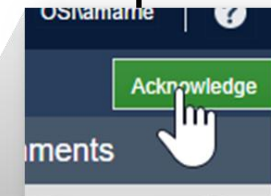
- ✓ Display Folders
- ✓ Related Assets
- ✓ XY Plot
- ✓ Events Table
- ✓ Sizing and Formatting



New Display Editor

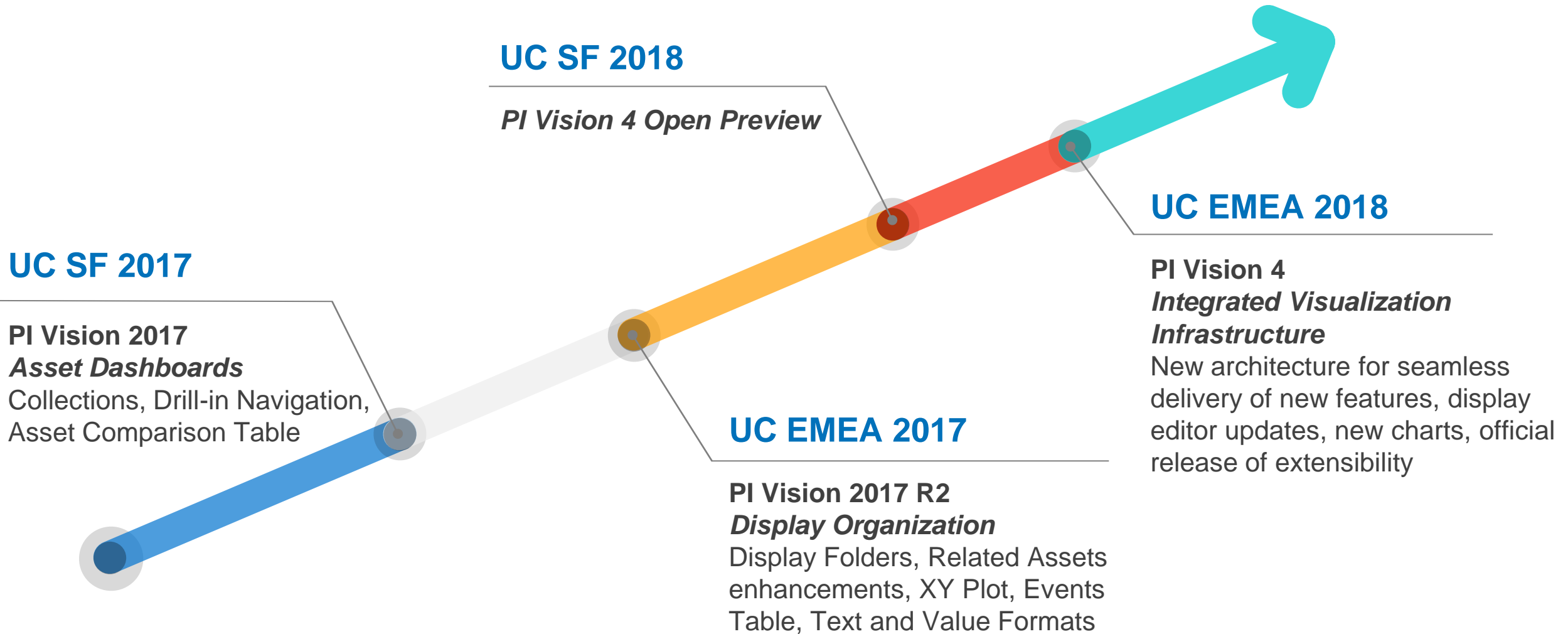


Events Details and Acknowledgement



Collections and Drill-in Navigation

PI Vision Roadmap



PI Vision: What's new this year?

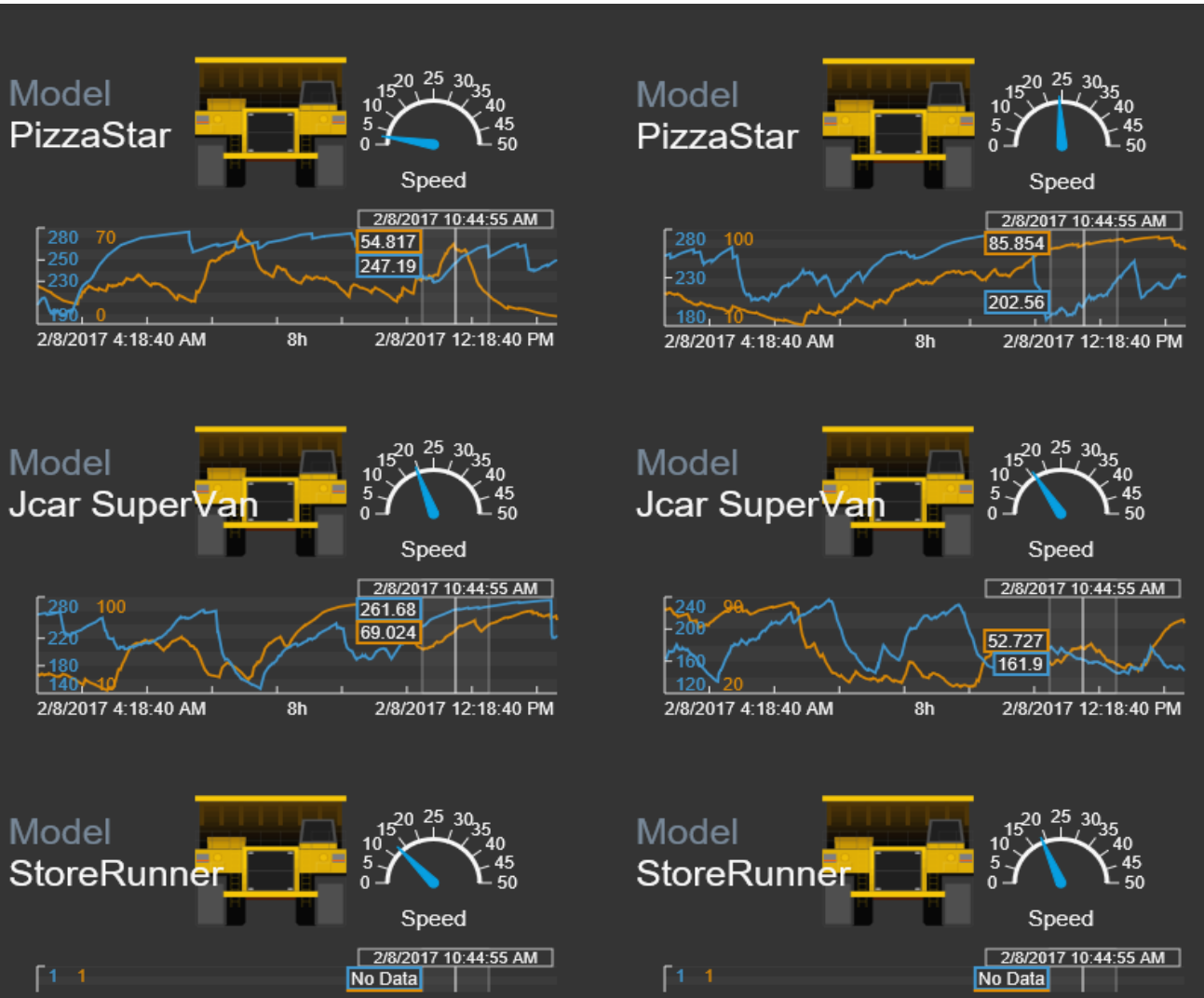
2017

- Collections
- Drill-in Navigation
- Graphics Library
- Asset Comparison Table
- User Types

2017 R2

- Display Organization
- Related Assets
- Sizing and Alignment
- XY Plot
- Events Table

Collections



Group one or more symbols as a “collection”

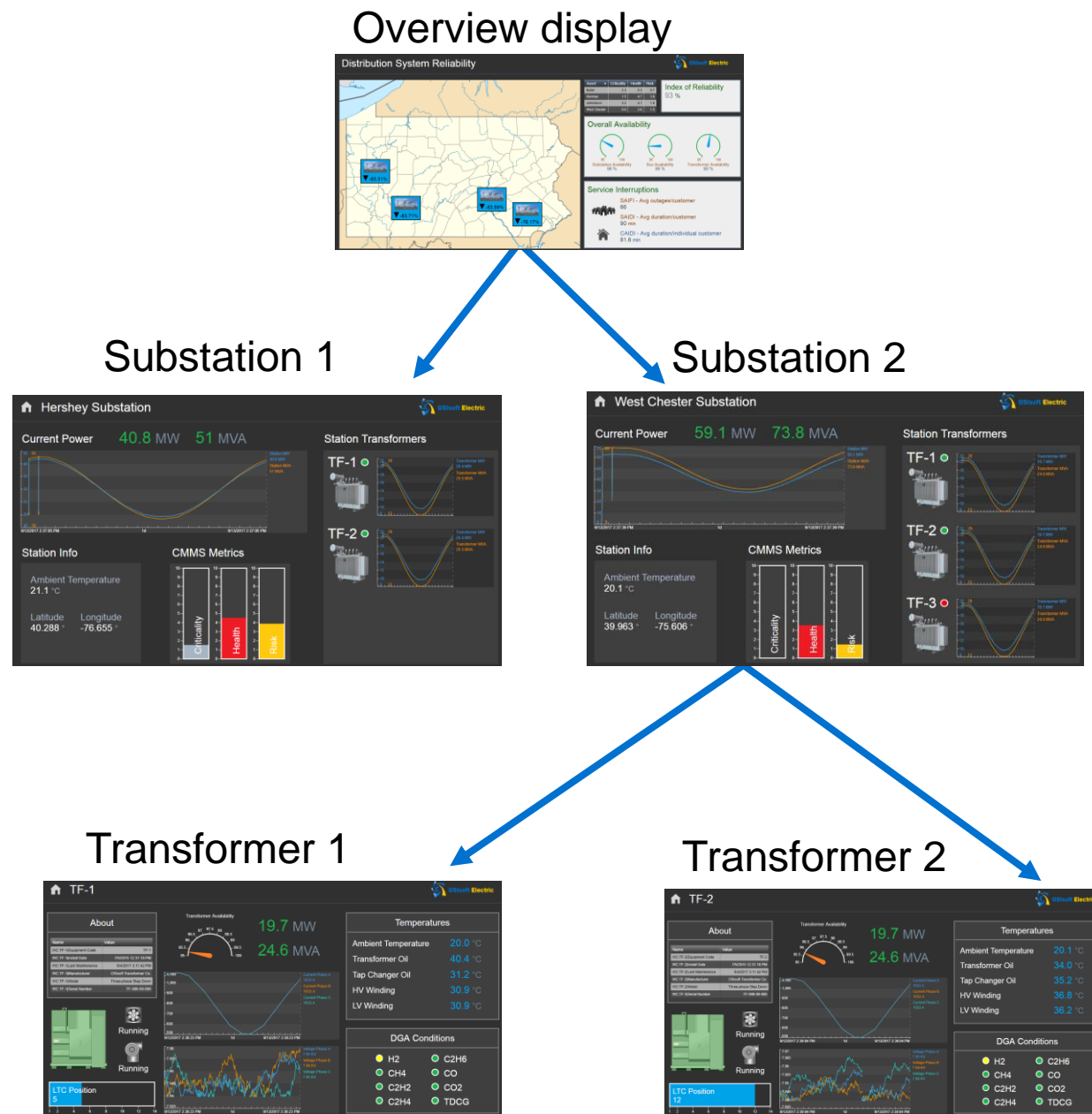


Screen auto-populates that same grouping for **all assets**

- New assets are added **automatically**
- Add **filter criteria** to quickly see troubled assets

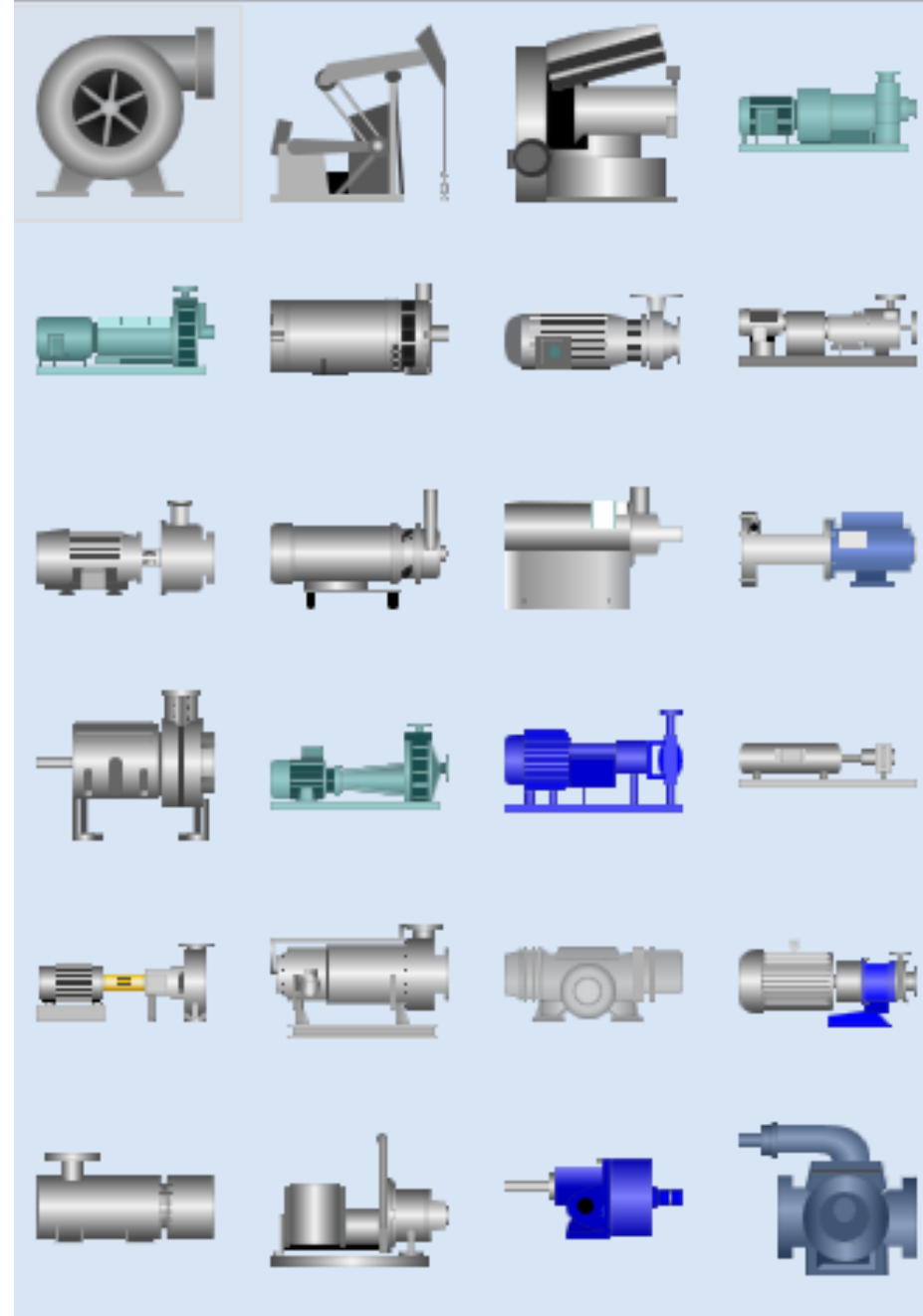
Drill-in Navigation

- Configure a URL link on any symbol
 - Link to another display or another website
 - Pass context (time/asset) when linking to another display



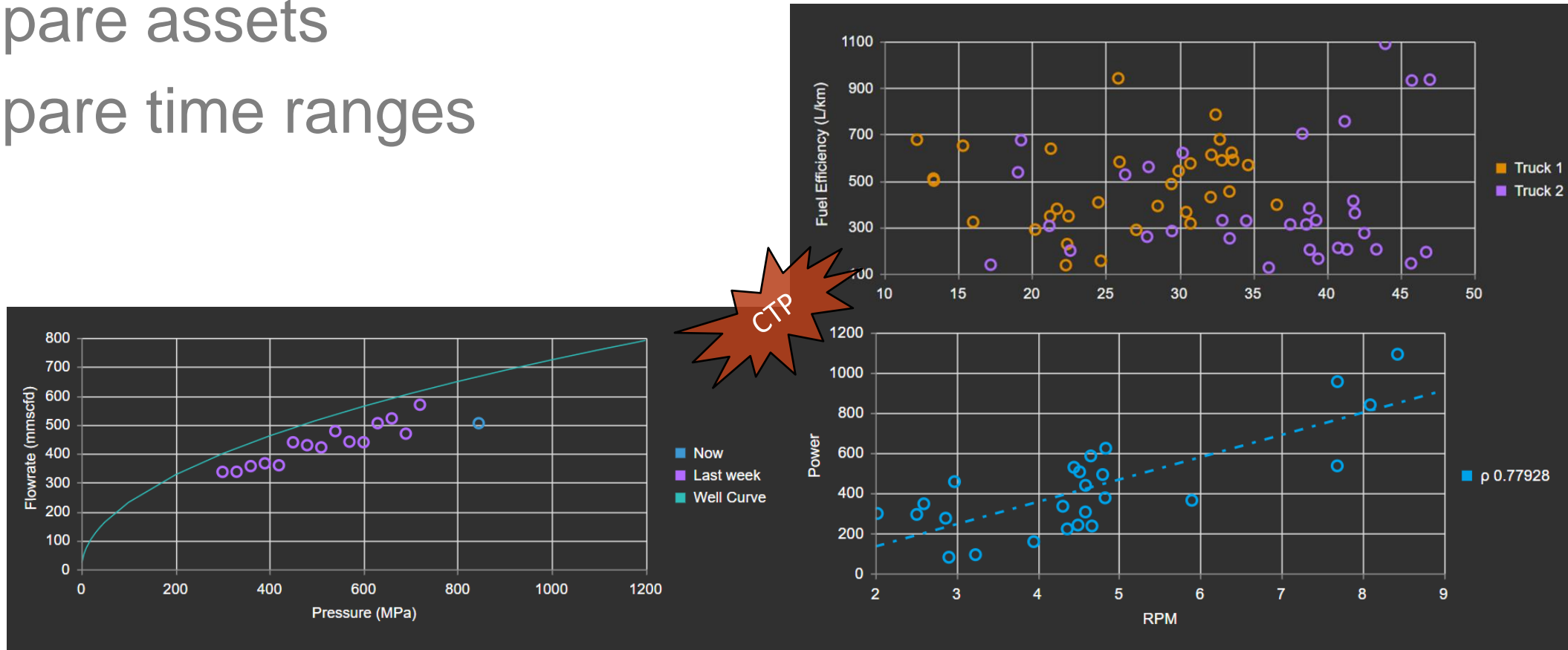
Graphics Library

- Easily create **standard views** by using an extensive library of graphics symbols
- Same symbols as available from PI ProcessBook



XY Plot

- Correlations between attributes
- Compare assets
- Compare time ranges




Assets and Events Tables – View and compare asset and event data

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

Asset	LF Brake Temperature	LR Brake Temperature	RF Brake Temperature	RR Brake Temperature
Mine Truck 1	232.2 °F	222 °F	228 °F	222 °F
Mine Truck 2	245 °F	220 °F	230 °F	265 °F
Mine Truck 3	324 °F	203 °F	240 °F	230 °F
Mine Truck 4	237 °F	246 °F	227 °F	233 °F
Mine Truck 5	225 °F	197 °F	223 °F	230 °F

Event Table - See the most important and relevant events.



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	Acknowledge
Engine Temperature High 2017-01-07 10:45:51.000	Sp5	1/7/2017 10:45:51 AM	In Progress	Acknowledge
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

User Types – Assign varying levels of capabilities



User Type	Target	Switch Context	Adjust Time	Investigate Events	Create Ad-hoc Displays	Save New Displays	Save Changes to Displays
Publisher	Content Creator	✓	✓	✓	✓	✓	✓
Explorer	Content Consumer	✓	✓	✓	✓	✗	✗

Display Organization: What we heard

Administrator

I want to maintain an **organized repository** for **standard displays**

I want to allow users who **publish standard displays** to **organize displays**



Display Author

I want to **organize** the **standard displays** I build for my organization



User

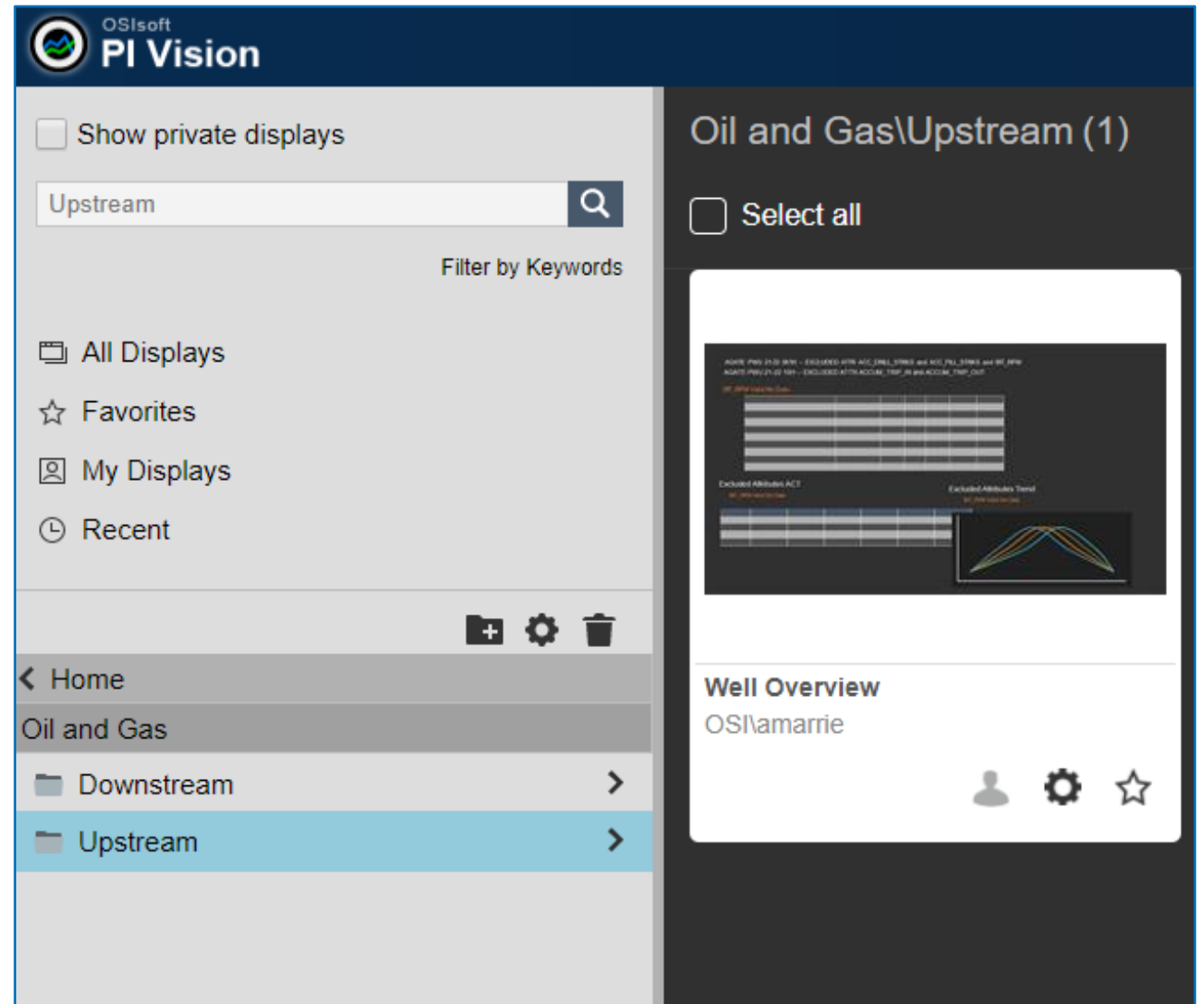
I want to see a **consistent view** of displays on the PI Vision home page

I want to **navigate** to the **standard displays** that I use frequently



Display Organization: What we built

- **Display Users**
 - Can navigate to important displays
- **Display Authors**
 - Organize production displays into folders
 - Move displays right from the PI Vision Displays page
- **Administrators**
 - Control read and write access to folders
 - Can view private displays



Related Assets: What we heard

Display Author

I want more control over **which Related Assets are displayed to the User**. I want to **configure a dynamic search** to drive the Related Assets list

For some displays, I want to **disable the Related Assets** feature



Display User

Sometimes the number of Related Assets can be large and I want to **intuitively search the list**.

When switching between Related Assets I want the display to **hide the Excluded Attributes** on that Asset



Related Assets: What we built

- **Display Authors**
 - Specify asset criteria to define context switching for a display
 - Choose to swap a single asset or the asset path for parent-child asset relationships
 - Disable asset context switching
- **Display Users**
 - Filter related assets by name

The screenshot displays the OSIsoft PI Vision interface. The main window shows 'Boiler Details' for asset B-045. A line chart plots data from 9/13/2017 12:24:47 AM to 8h. Below the chart, a table lists asset details:

Name	Description
B-045 Asset Name	Asset Process Name
B-045 Installation Date	Installation Date
B-045 Plant	Plant Name
B-045 Process	Process Name

To the right, the 'Switch Asset' panel shows a list of assets to switch to, including B-045, B-117, B-125, B-209, B-210, B-235, B-309, B-334, B-352, B-459, B-481, B-499, B-555, B-737, B-765, and B-914.

The 'Configure Context Switching' panel on the right includes options for 'Show assets of the same type', 'Show search results', and 'Do not show'. It also has an 'Action' section with 'Use current asset' and 'Use current asset as root'. The 'Search Criteria' section shows 'Database: Davinci', 'Search Root: NuGreen', and 'Asset Type: Selected'. A 'Refresh' button is at the bottom.

Event Reason Entry

Event Table

Event Name	Asset	Start Time	End Time	Reason	Acknowledgement
Mine Truck 1 Payload 2017-10-15 20:16:50	MINE TRUCK 1	10/16/2017 1:16:50 AM	10/16/2017 1:20:20 AM		
Mine Truck 1 Engine RPM 2017-10-15 20:18:20	MINE TRUCK 1	10/16/2017 1:18:20 AM	10/16/2017 1:19:20 AM		Acknowledge
Mine Truck 1 Payload 2017-10-15 20:20:50	MINE TRUCK 1	10/16/2017 1:20:50 AM	10/16/2017 1:23:50 AM		
Mine Truck 1 Payload 2017-10-15 20:24:20	MINE TRUCK 1	10/16/2017 1:24:20 AM	10/16/2017 1:47:50 AM		
Mine Truck 1 Engine RPM 2017-10-15 20:41:50	MINE TRUCK 1	10/16/2017 1:41:50 AM	10/16/2017 1:42:50 AM		Acknowledge
Mine Truck 1 Payload 2017-10-15 20:48:20	MINE TRUCK 1	10/16/2017 1:48:20 AM	10/16/2017 2:04:50 AM		

Reason Code Editor
Mine Truck 1 Payload 2017-10-15 20:20:50

- Reason
 - Ok
 - Slow Down
 - Shutdown Safely
 - Shutdown Safely - LF Brake Temperature Exceeded Limit**
 - Shutdown Safely - LR Brake Temperature Exceeded Limit
 - Shutdown Safely - RF Brake Temperature Exceeded Limit
 - Shutdown Safely - RR Brake Temperature Exceeded Limit

Event Details

Event Type: Truck Payload Excursion
Asset: ...OSIsoft Mining\Trucks\Mine Truck 1

Load: 0 ton
Load/Payload Capacity: 210 ton

10/16/2017 1:23:50 AM

1m 2m

Comments

Add Comment

Actions and Comments (0)

Reason

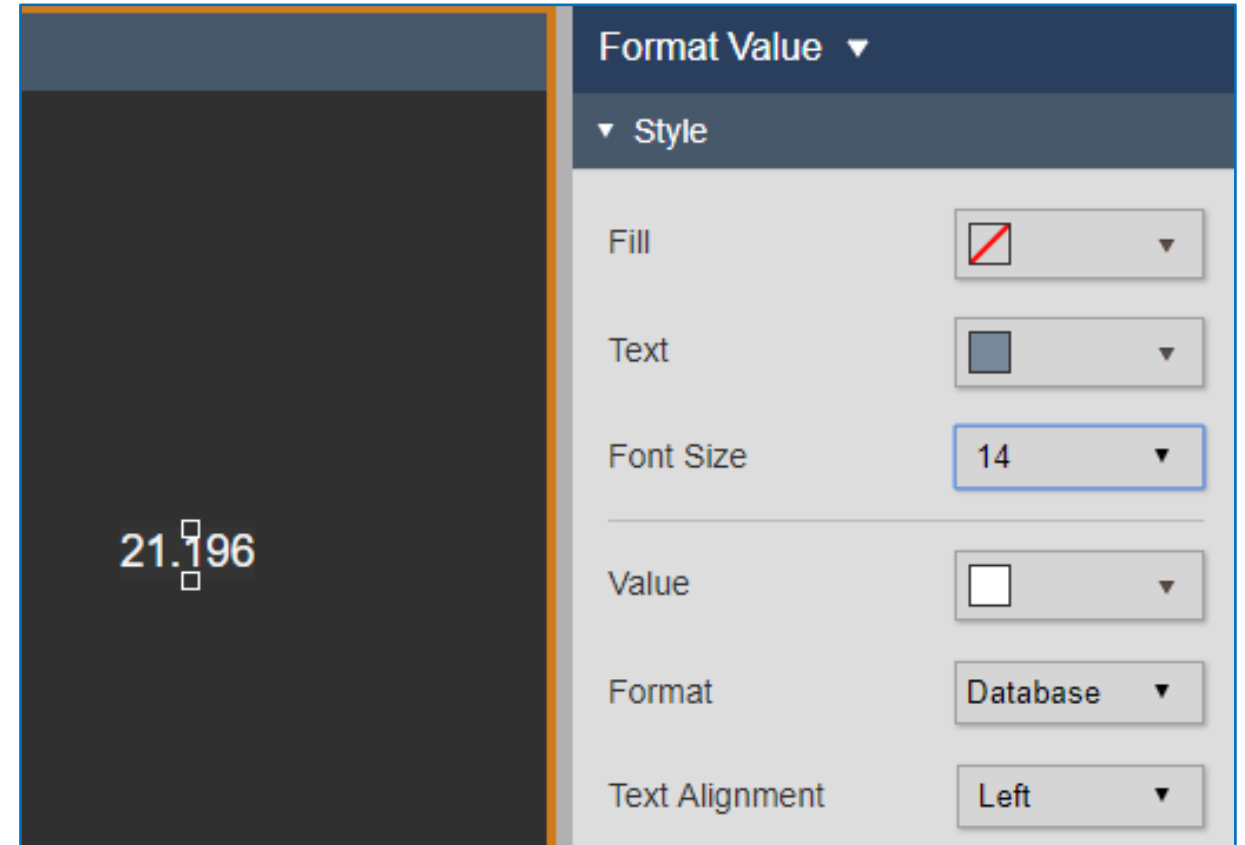
- Reason
 - Ok
 - Slow Down
 - Shutdown Safely
 - Shutdown Safely - LF Brake Temperature Exceeded Limit**
 - Shutdown Safely - LR Brake Temperature Exceeded Limit
 - Shutdown Safely - RF Brake Temperature Exceeded Limit
 - Shutdown Safely - RR Brake Temperature Exceeded Limit

Apply Cancel

End Value	Units
0	ton
210	ton





Display Authoring: Sizing and Alignment

- Precisely configure the size of text and values on a display
- Configure value alignment
- Format multiple symbols at once



Display Authoring: Attribute Value Hyperlinks

Links to external pages can now be element relative: attribute values containing a URL act as hyperlinks on a display

Name	Description	Value
Mine Truck 5 User Manual	Link to PDF of truck's operating instructions	
Mine Truck 5 Log Sheet	Link to Excel workbook containing truck log	
Mine Truck 5 Route Map	Map showing typical routes	
Mine Truck 5 Manufacturer Website	URI for Truck manufacturer's website	

Log Sheet

User Manual

Route Map

Manufacturer Website

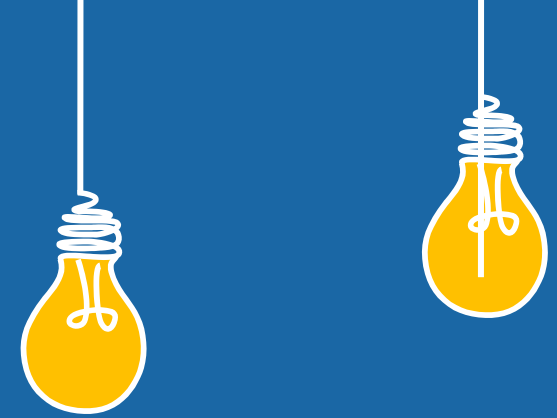
\\CSAFBUILD\EF_MiningSim\OSIsoft Mining\Trucks\Mine Truck 5|Log Sheet
Time: 9/19/2017 11:14:29 AM
Value: https://osisoft1980.sharepoint.com/teams/Engineering/pivision/_layouts/15/WopiFrame.aspx?sourcedoc=%7BC9E34B6B-2EC0-412C-BE6B-8A75F3A7AA4D%7D&file=Truck%205%20Log%20Sheet.xlsx&action=default

Demo

Q&A



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improve our
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