PI Notifications and PI Asset Framework

Presented by

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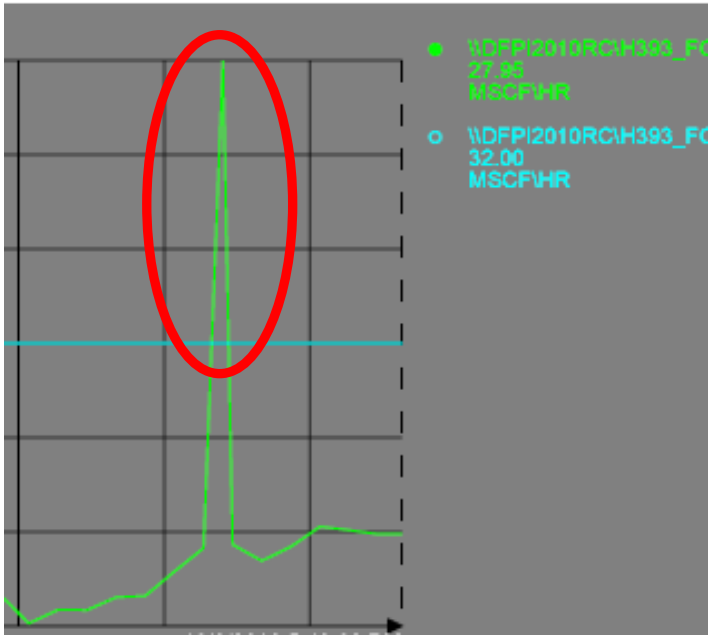
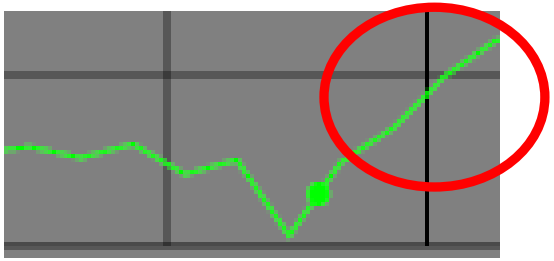
PI Notifications

Not Always Watching Your Data





Receive Information about Key Events

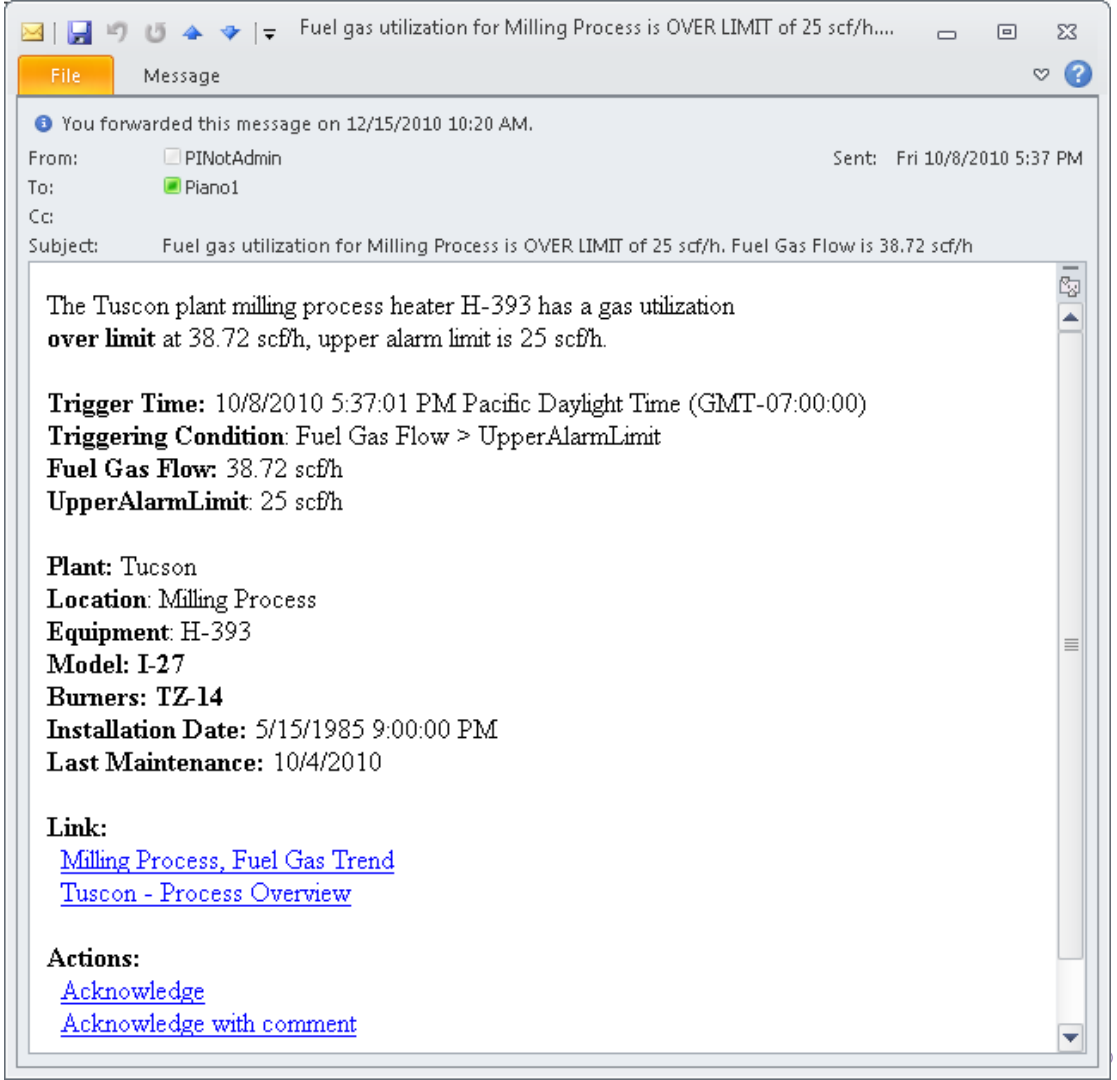
Microsoft Office Communicator 2007

Web Services

Other Applications

PI Notifications – identify insight that requires action

- Configure trigger condition(s)
  - Comparisons, Performance Equations, Statistical Quality Control
- Specify information to be delivered
  - Customized for the recipient


Fuel gas utilization for Milling Process is OVER LIMIT of 25 scf/h....

File Message

You forwarded this message on 12/15/2010 10:20 AM.

From: PINotAdmin Sent: Fri 10/8/2010 5:37 PM
To: Piano1
Cc:
Subject: Fuel gas utilization for Milling Process is OVER LIMIT of 25 scf/h. Fuel Gas Flow is 38.72 scf/h

The Tuscon plant milling process heater H-393 has a gas utilization
over limit at 38.72 scf/h, upper alarm limit is 25 scf/h.

Trigger Time: 10/8/2010 5:37:01 PM Pacific Daylight Time (GMT-07:00:00)
Triggering Condition: Fuel Gas Flow > UpperAlarmLimit
Fuel Gas Flow: 38.72 scf/h
UpperAlarmLimit: 25 scf/h

Plant: Tucson
Location: Milling Process
Equipment: H-393
Model: I-27
Burners: TZ-14
Installation Date: 5/15/1985 9:00:00 PM
Last Maintenance: 10/4/2010

Link:
Milling Process, Fuel Gas Trend
Tuscon - Process Overview

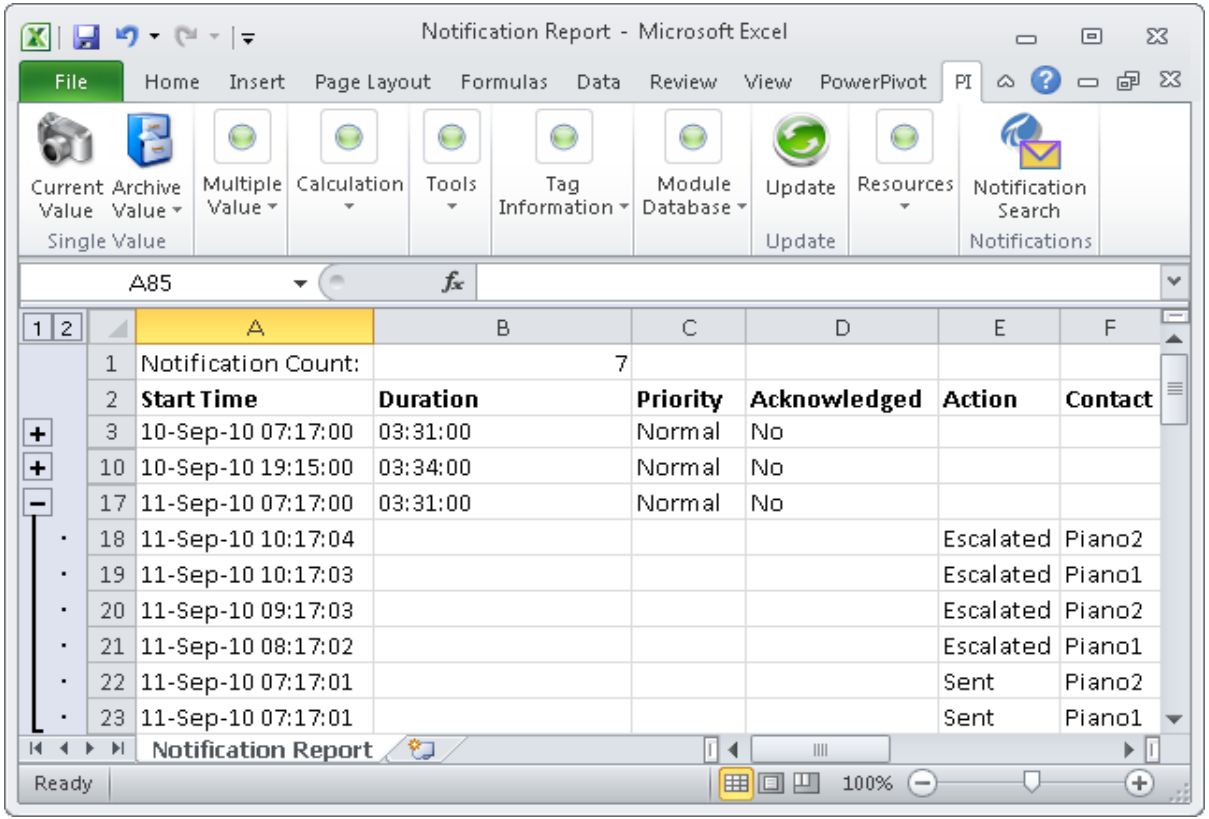
Actions:
Acknowledge
Acknowledge with comment

PI Notifications – identify insight that requires action

- Configure trigger condition(s)
  - Comparisons, Performance Equations, Statistical Quality Control
- Specify information to be delivered
  - Customized for the recipient
- Deliver to recipients, applications or systems when key events occur
  - Contacts or Windows users – Escalate if necessary
  - Email, web service, Office Communicator

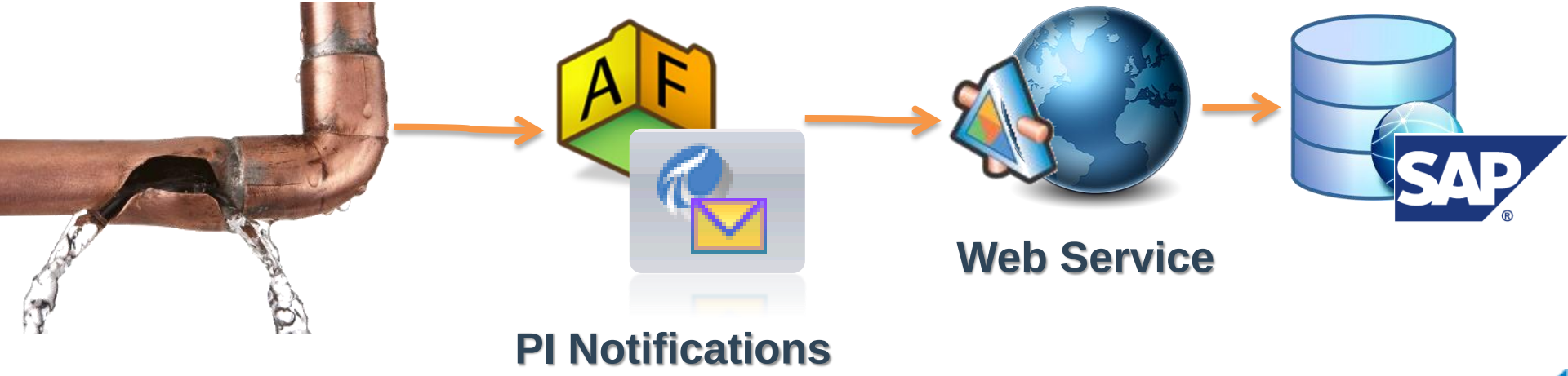
PI Notifications – Investigate notification history

- Clients for
  PI ProcessBook
  PI DataLink
  Desktop App
- Investigate problem assets



User scenario – PI Notifications to SAP

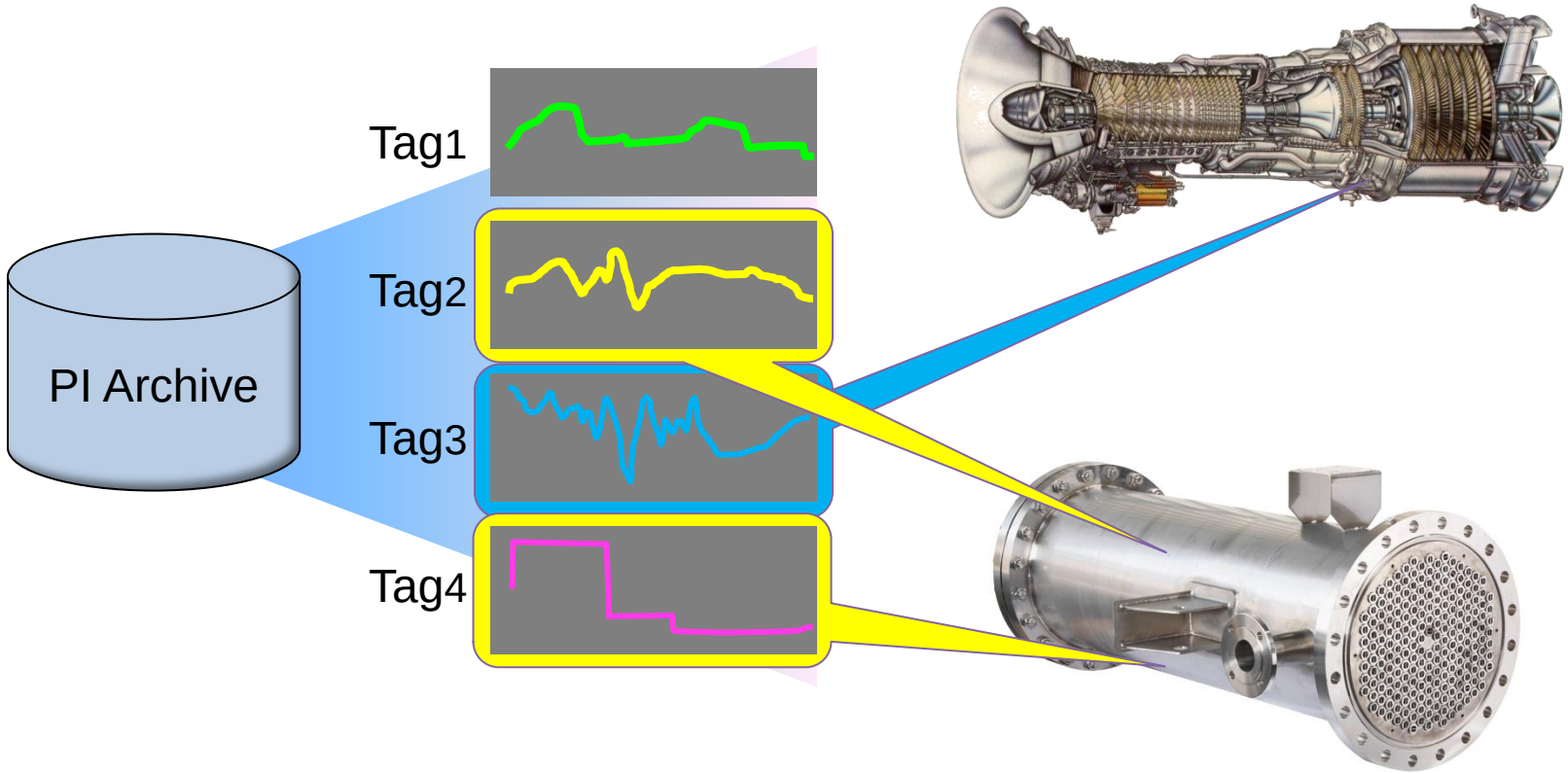
- Automatically feed a measurement point to SAP PM using PI Notifications for plant maintenance



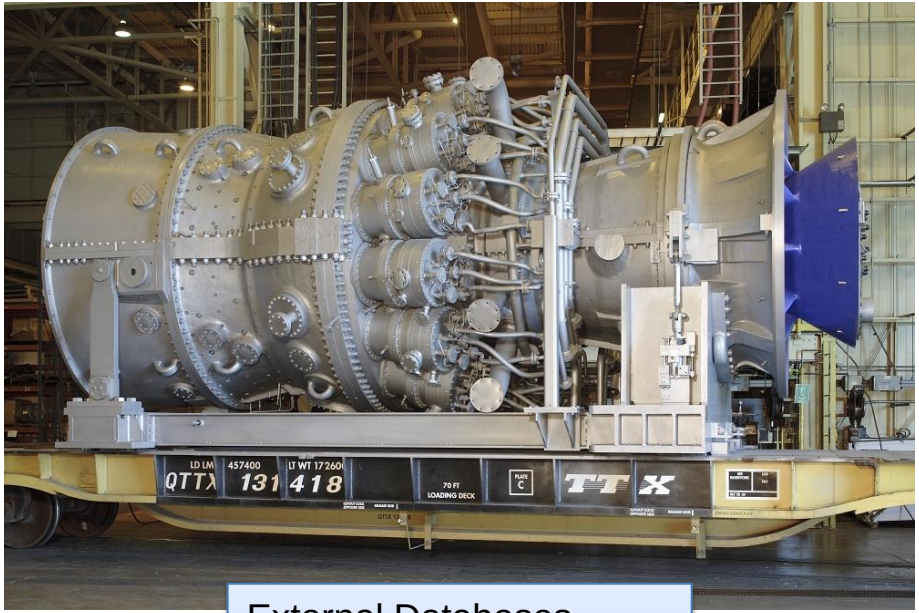
PI Asset Framework

PI Data Archive - Time series data and Tags

PI tags generally are part of an asset



Asset information



Monitored values
- Inlet pressure
- Inlet flow
- Ambient temperature

Event Frames
- Downtime
- Excursions

Monitored values
- Exhaust temperature
- Exhaust flow
- Measured MW output

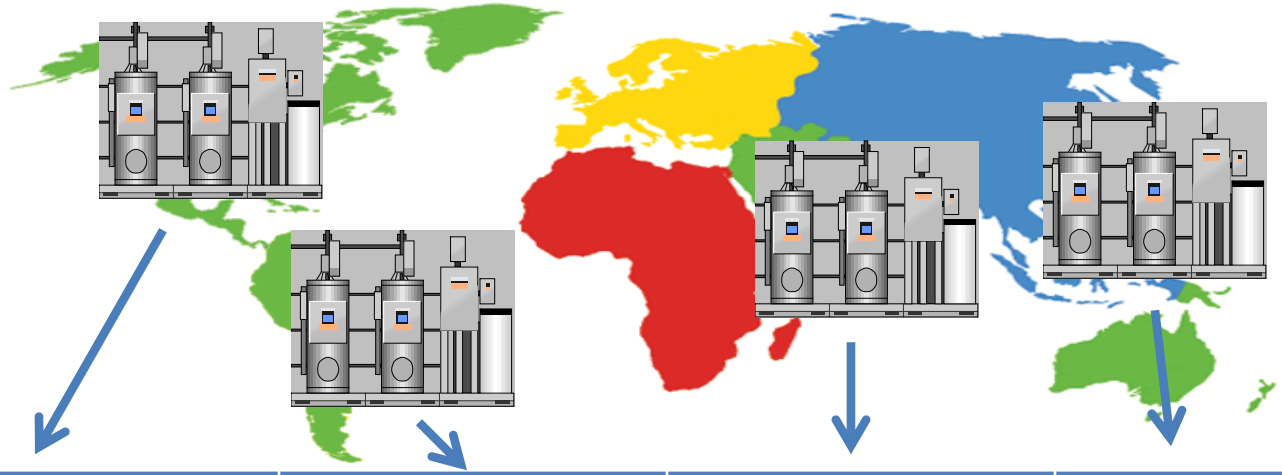
Notifications
- High temperature

Asset details
- Name
- Make
- Model

External Databases
- Performance curves
- Last service date
- Design documents
- Inspection best practice

Calculations
- Performance calculations
- KPI's

Standards and naming between sites are not always the same

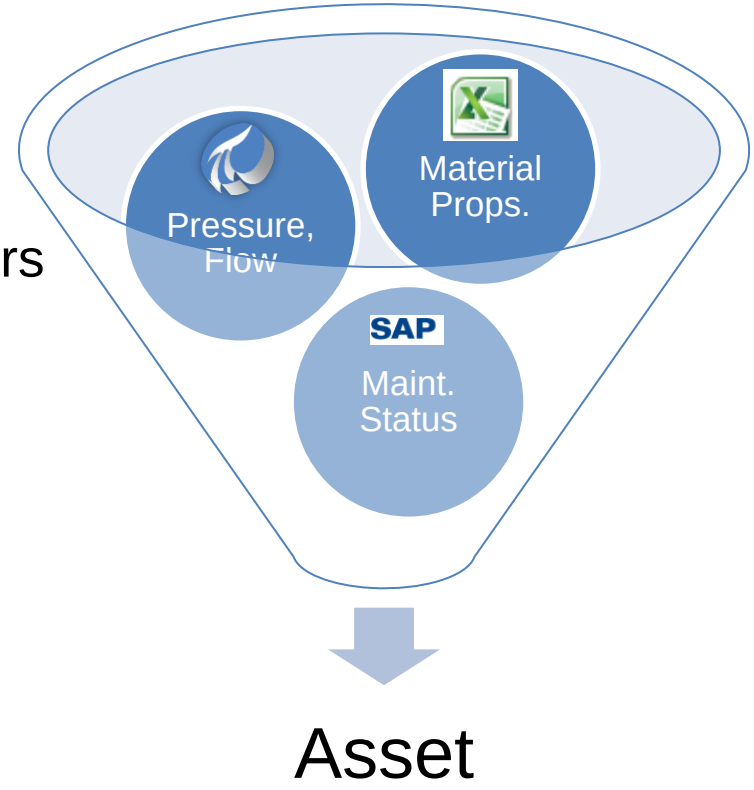


B1:TI333A.pV	\\CalderaA\temp	TE-BLR-996-R	\\BLR_N\MTR47
622 DegF	314 Deg C	611 K	288 Deg C

- Difficult to find the same data at different sites
- Tag names may change
- Differences in units of measure

PI Asset Framework – View asset information together

- Static values
  - Name of asset
- Reference PI Tags from multiple PI Servers
- Static or external database references
  - Asset information
- Custom data references to other data sources
  - Web Services
- Configure formulas on an asset

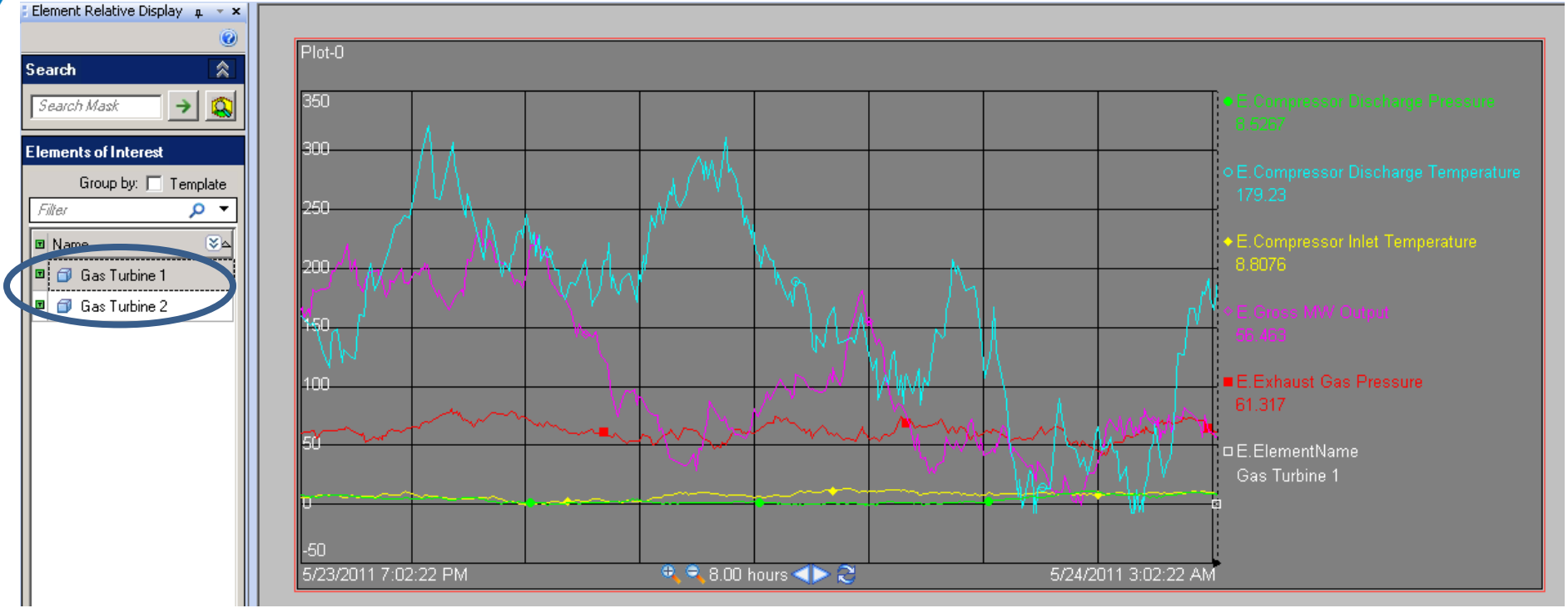


PI Asset Framework – Standardize naming

- Users reference generic names
- *Gas Turbine Speed* references PI Tag B1:TI333A.pV
- *Last Service Date* references remote asset database

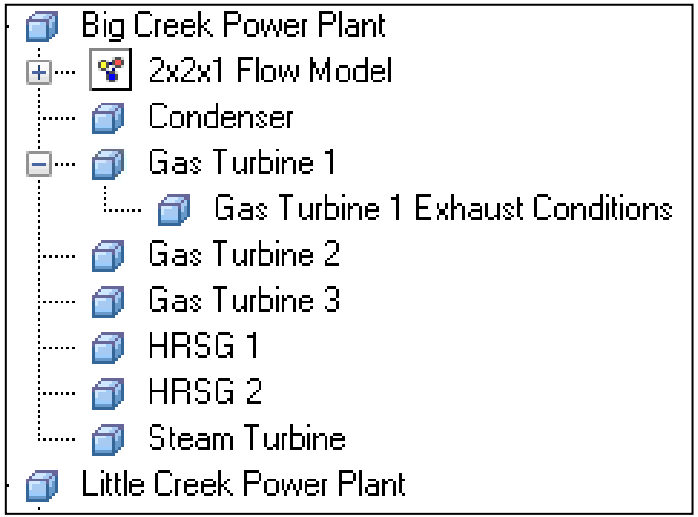
Gas Turbine Speed	3006.95288085938 rpm
Gross MW Output	260.528656005859 hp
In Service Date	2/25/2009 12:00:00 AM
Inlet Guide Vane Angle	95.78909 %
Inlet Pressure Loss	1.71932423114777 mbar(g)
Last Service Date	2/25/2011 12:00:00 AM
Manufacturer	Acme GT
Rated Power	270 MW

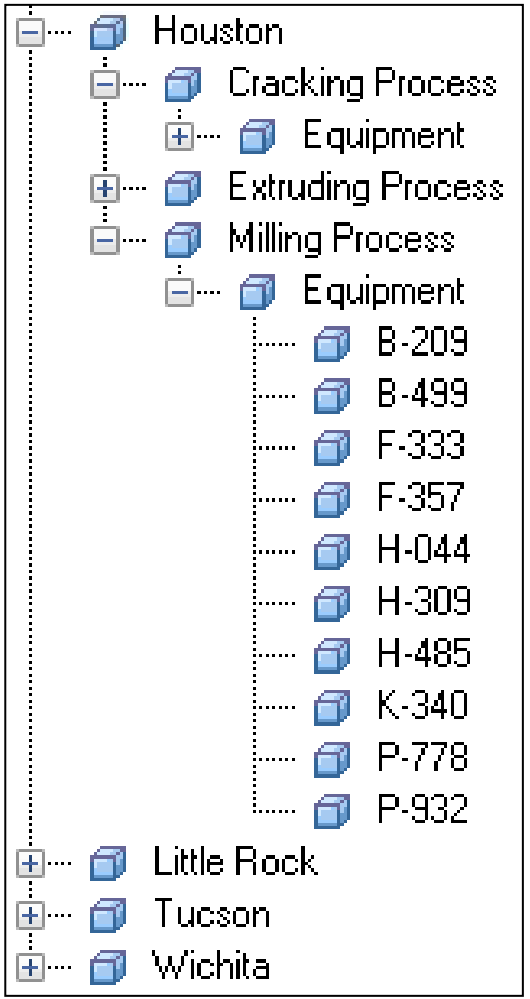
Build Once and Reuse for Similar Assets



PI Asset Framework – Organize

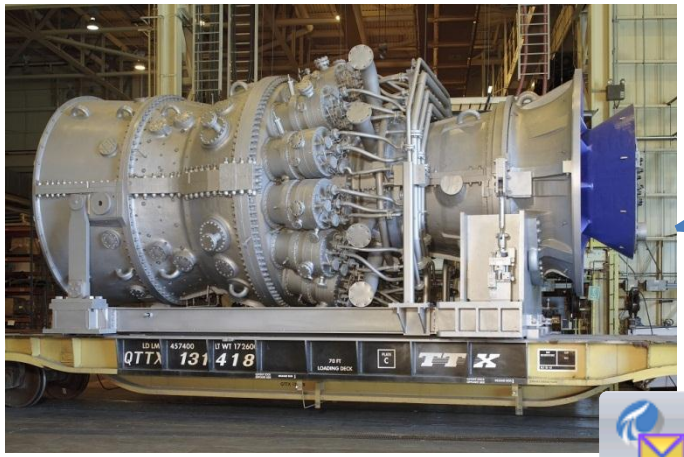
- Establish structure and relationships between your assets and data
- Capture domain expertise and share

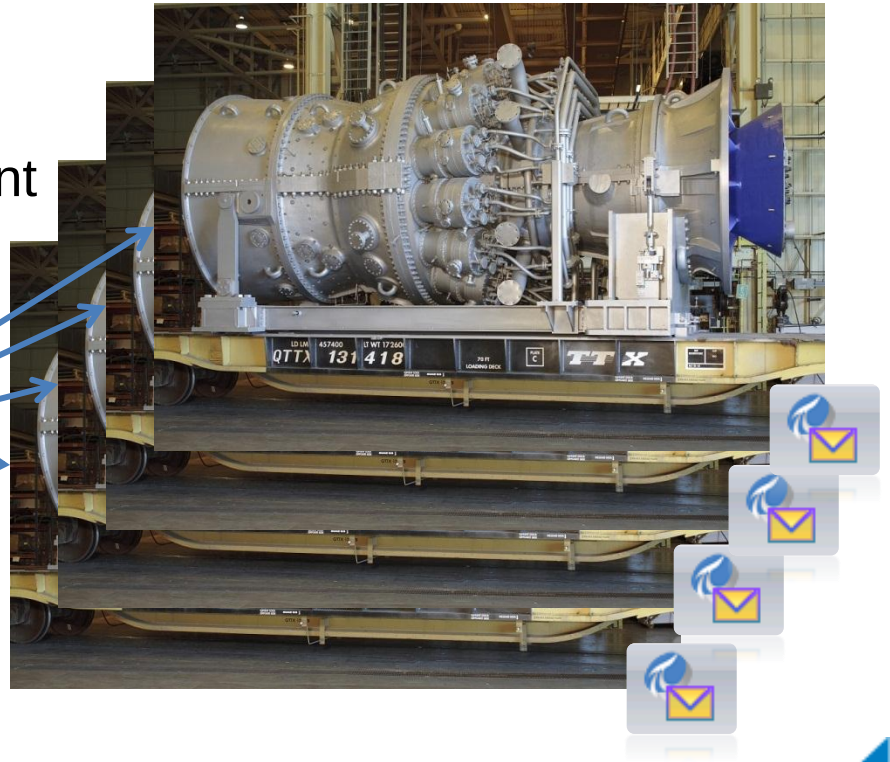




Templates - Common View for Similar Assets

- Configure an asset type once
- Apply for new assets
- Standardize and Simplify deployment





Benefits of an Asset Centric PI System

- **Common asset models and relationships**
  - Standardization across your entire enterprise
  - Deploy from configured templates
- **Work with your assets and not points/tags**
  - No need to memorize point/tag names
- **Quickly and efficiently find the data you need**
  - Reference asset properties to different data sources
  - Search and find information across all your data sources

Benefits of an Asset Centric PI System

- **Combine disparate data in analyses and reports**
  - Calculate KPI
  - Compare actual versus estimate
- **Build your solution once and reuse on all similar assets**
  - Element Relative Display in PI ProcessBook and PI WebParts
- **Empower other PI System components**
  - PI Notifications
  - Event Frames

Add value to your PI System

- PI Notifications
  - identify insight that requires action
- PI Asset Framework
  - information model to organize and structure all your data with context

Thank you