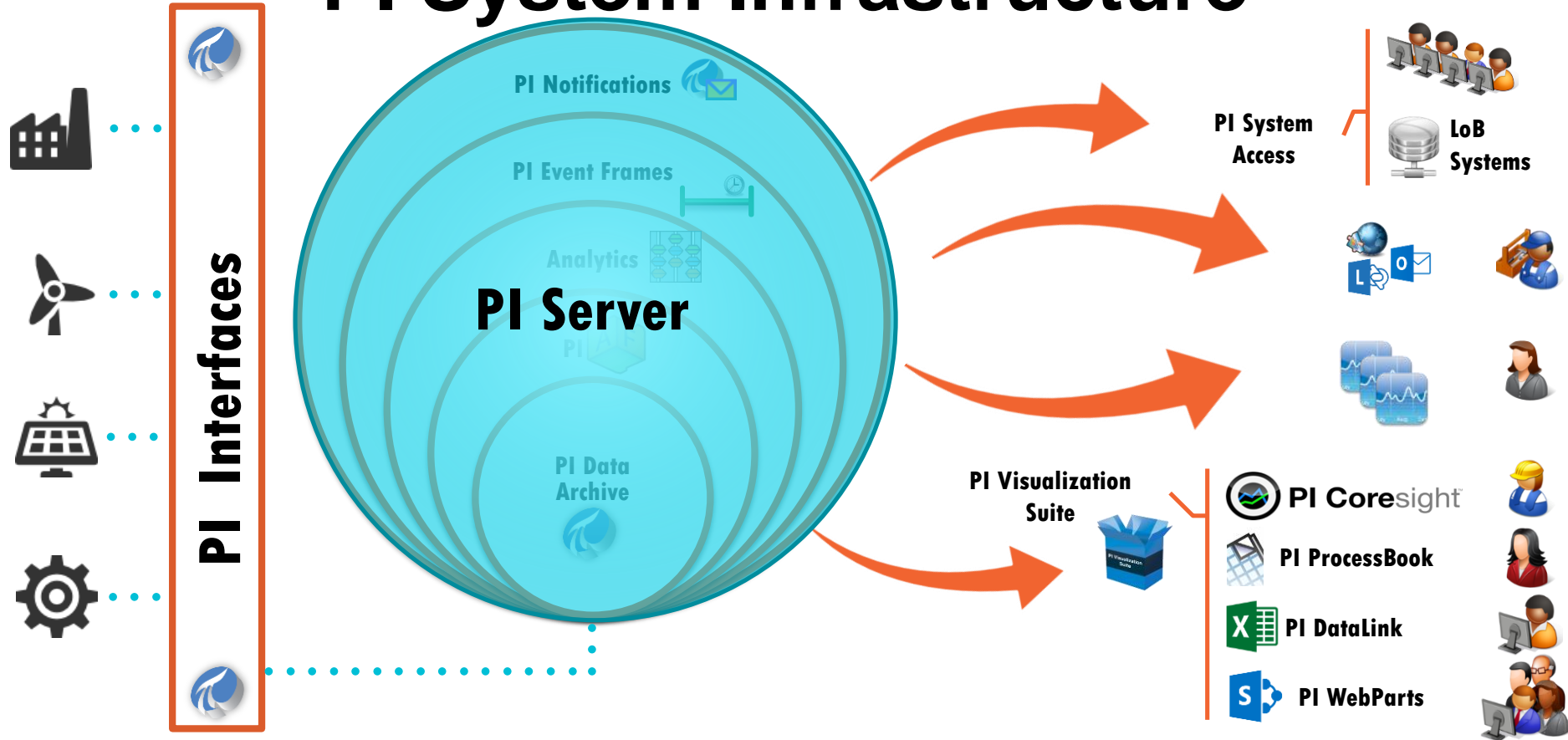


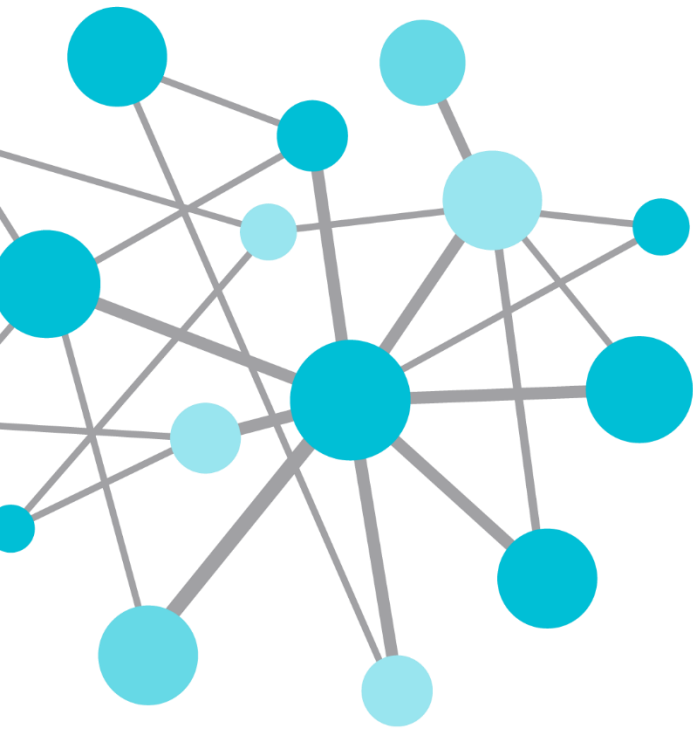
Asset centric real-time situational awareness

Presented by **Frank Batke**

Hans Otto Weinhold

PI System Infrastructure



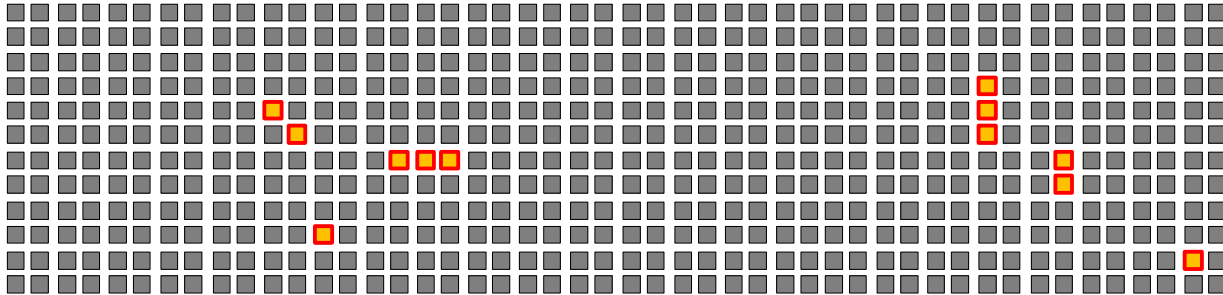


Think Assets instead of PI Points!

(Slides from Accenture)

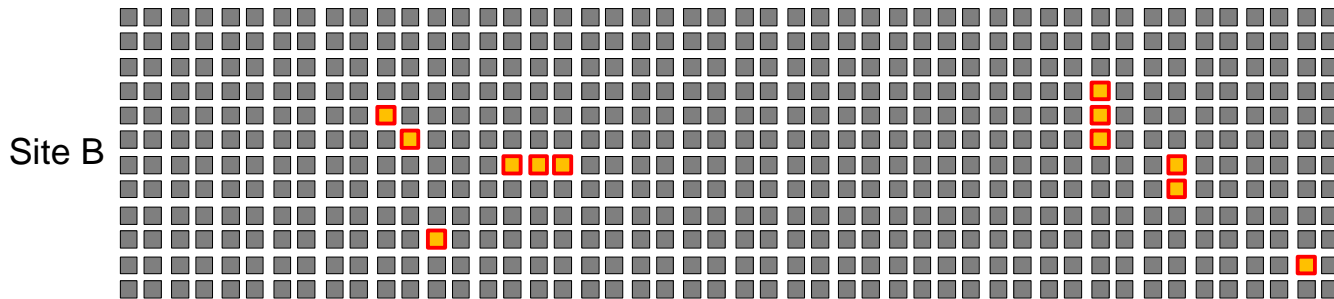
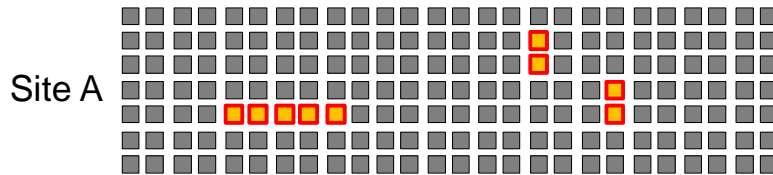
Think Assets instead of PI Points!

- PI Points are extremely good at what they do and for years have been the primary focus of users. Scale of PI Points is growing, consolidation of hardware is cost effective.
 - You have 10 million PI Points on your PI Server, how do you sift through quickly to find the PI Points for those 3 boilers that you're interested in right now?
 - How does an application naturally find those PI Points efficiently?

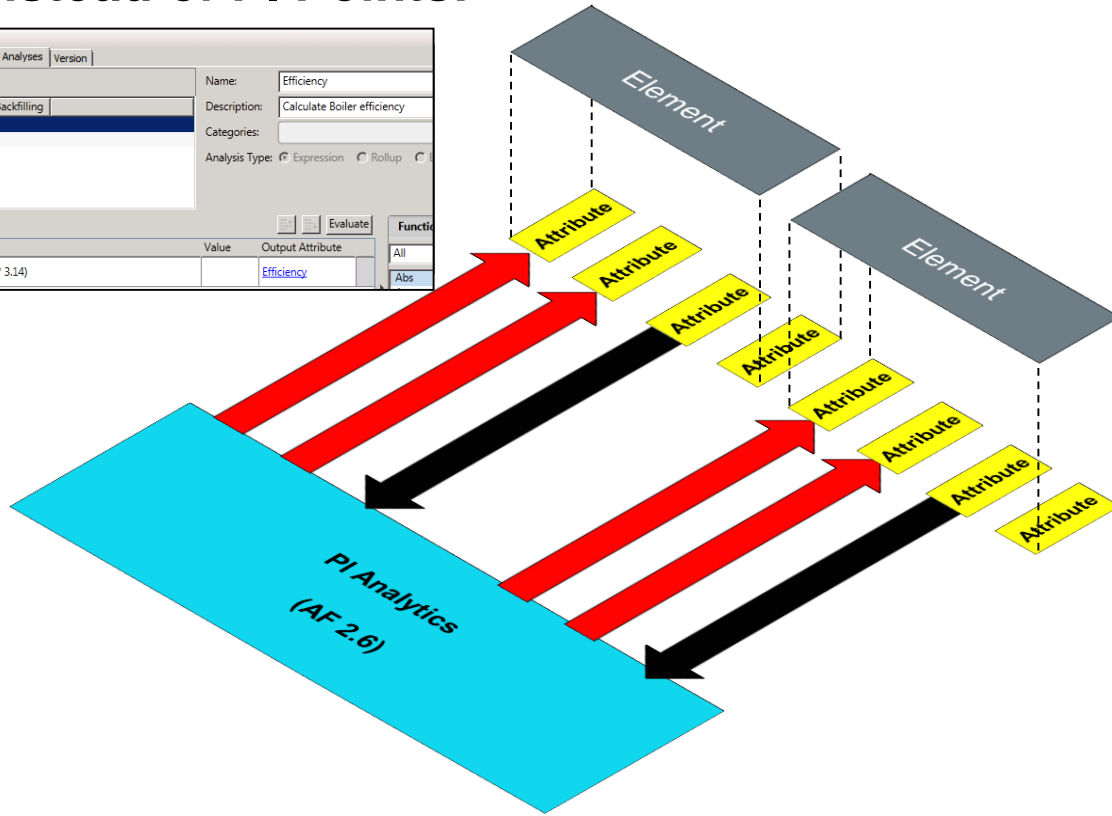
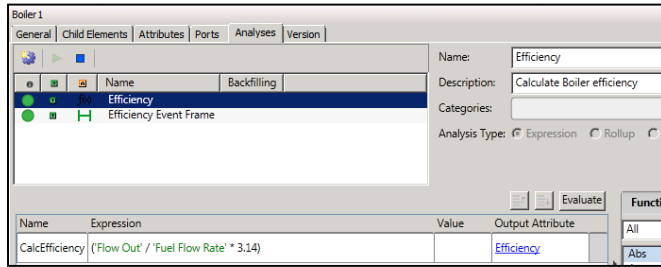


Think Assets instead of PI Points!

- Now let's say you've found those PI Points for the 3 boilers.
 - How can you quickly compare those 3 boilers with one of your other site's boilers? You suspect you're experiencing a similar issue that they've experienced.

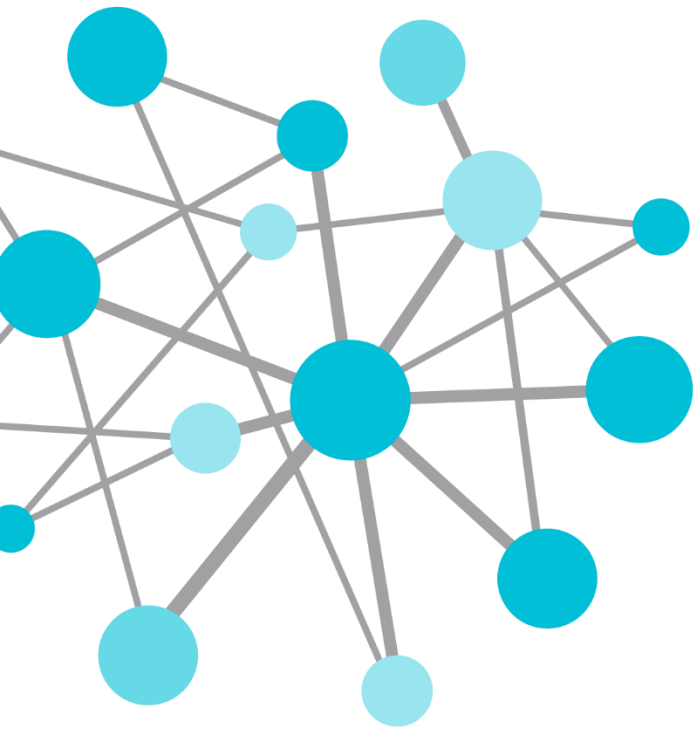


Think Assets instead of PI Points!



Demo 3: Assets and Templates

Availability of Data from various Sources	Database AF Demo Element P661_1 Pipe_template Datareferences: <ul style="list-style-type: none">• PI point• PI point aggregated• Table
Naming rules versus Template	Element to Template Change Template
Apply knowledge	Add attribute to Template (KPI11 Formula)



Analyse Assets instead of PI Points!

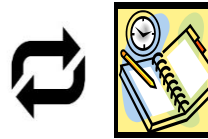
Asset Based Analytics (backed in AF 2.6)

Extruding Process

Boiler Efficiency = $AVG(B1..Bn)$

Boiler1

Flow Out
Fuel Flow Rate



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



Boiler
Template



Boiler2

Flow Out
Fuel Flow Rate

Or **myProgrammedCalc** (Flow Out, Fuel Flow Rate) [in a planned release]

Efficiency

Boiler3

Flow Out
Fuel Flow Rate
Efficiency



Automatic Event Generation

 Trigger PI Tags



PI Event Frames Generator

Trigger Hierarchical Events



 PI AF Attributes

Category: Process Parameters	
Agitation	41.379638671875 rpm
Concentration	44.1733856201172 kg/L
Level	39.4587707519531 L
Temperature	52.3757171630859 deg C
Weight	1743.02749652183 kg

AF Asset Based Analytics
[Temperature >= 180]

Detect Events



External Systems

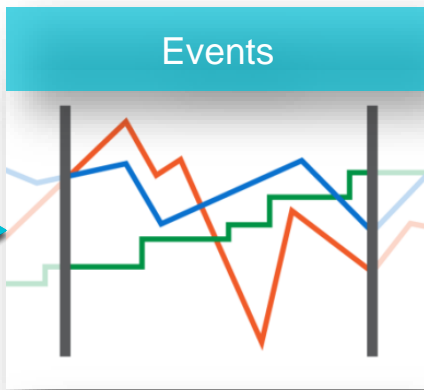


PI Interfaces for BES / MES

Batch Events

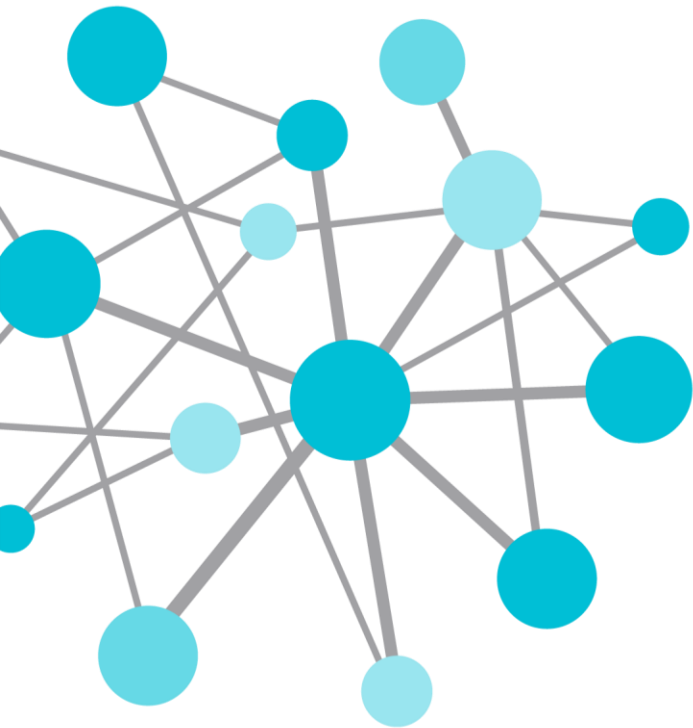


Auto-create Assets & Attributes



Demo 4: Assets based Analytics

Apply knowledge	Analysis in template DB: NuGreen add to Boiler Template Backfill
Use Structure	Sum up Backfill
Keep an eye on events	Create Template Backfill



THANK
YOU

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