OSIsoft® UC 2010

Real Time Information — Currency of the New Decade

Hilton San Francisco Union Square | San Francisco, CA

April 26-28, 2010

OSIsoft Product Roadmap

Outline

2009 Year in Review - Ray Hall

PI System 2010 - John Baier

Roadmap for Infrastructure - Ray Verhoeff

Roadmap for Clients - Brian Bostwick

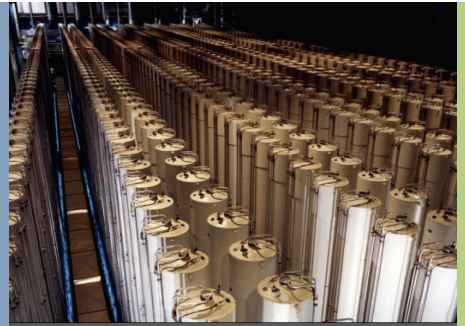
The Past: Accomplishments since 2009 User's Conference

2009 Themes

What did OSIsoft accomplish in 2009 to help you?

Security

Critical Facilities are Safe



Asset Centric PI

Define Once Use Over and Over

Localization

Use Worldwide

Scaling, 64 bit

Use PI for more data

Security

- PI AF 2.x uses Windows Security since the first release
- The PI Server 3.4.380 can leverage Windows authentication mechanism
- PI Notifications leverages PI AF and PI Server Security



Security Value Proposition

- True Single Sign-On (SSO)
- Easier to Manage
  - User Accounts in Windows/AD Only
  - Leverage AD Tools and Security Policies
- Upgrade Experience
  - Backward Compatibility
  - Simply Requires PI SDK 1.3.6

Security Value Proposition

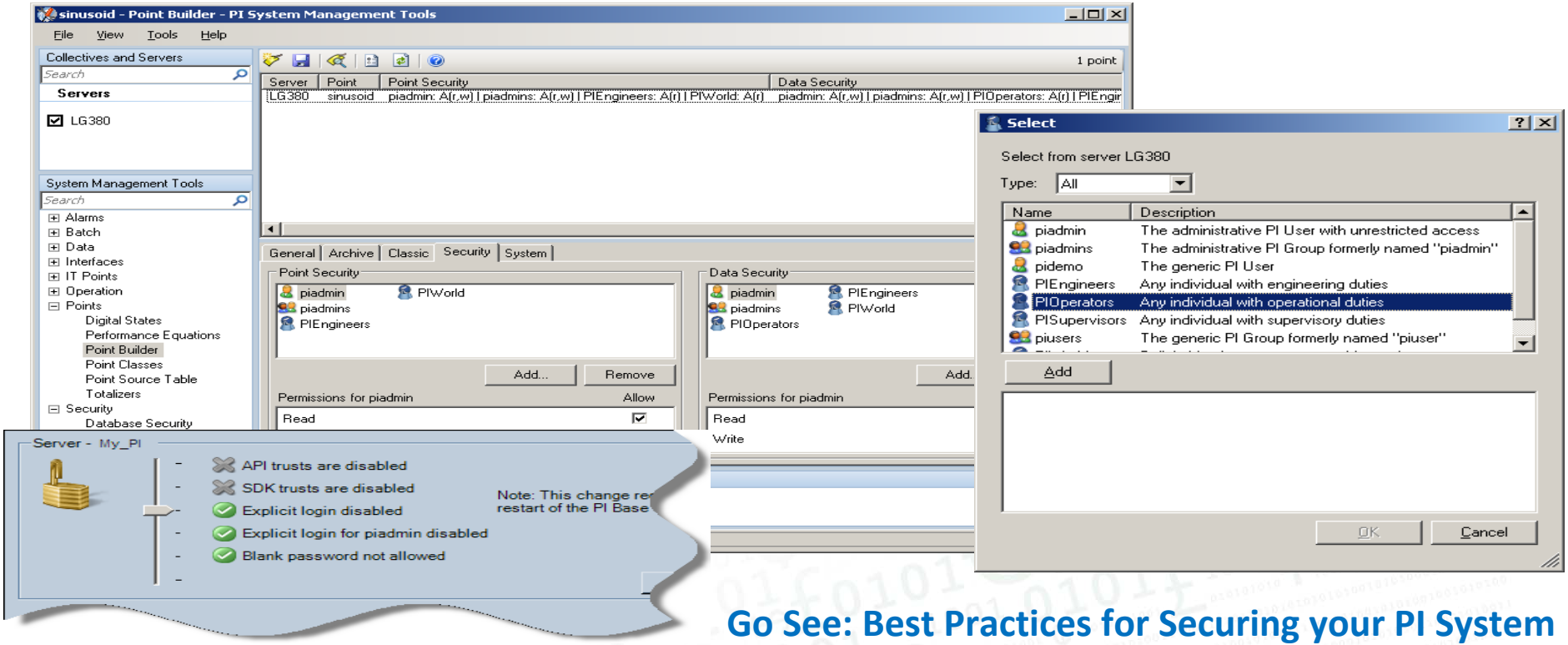
- More Secure
  - SSPI*-based Kerberos or NTLM**
  - Server-Side Authentication Control
- More Flexible
  - Unlimited Access Control Lists (ACLs)

Point	Point Security	Data Security
SINUSOID	Asia-Pacific: A(r) | Antarctica: A(r,w) | Americas: A(r) | Europe: A(r)	Green: A(r)

*Security Support Provider Interface

** NT LAN Manager

New with the PI Server 3.4.380 Release



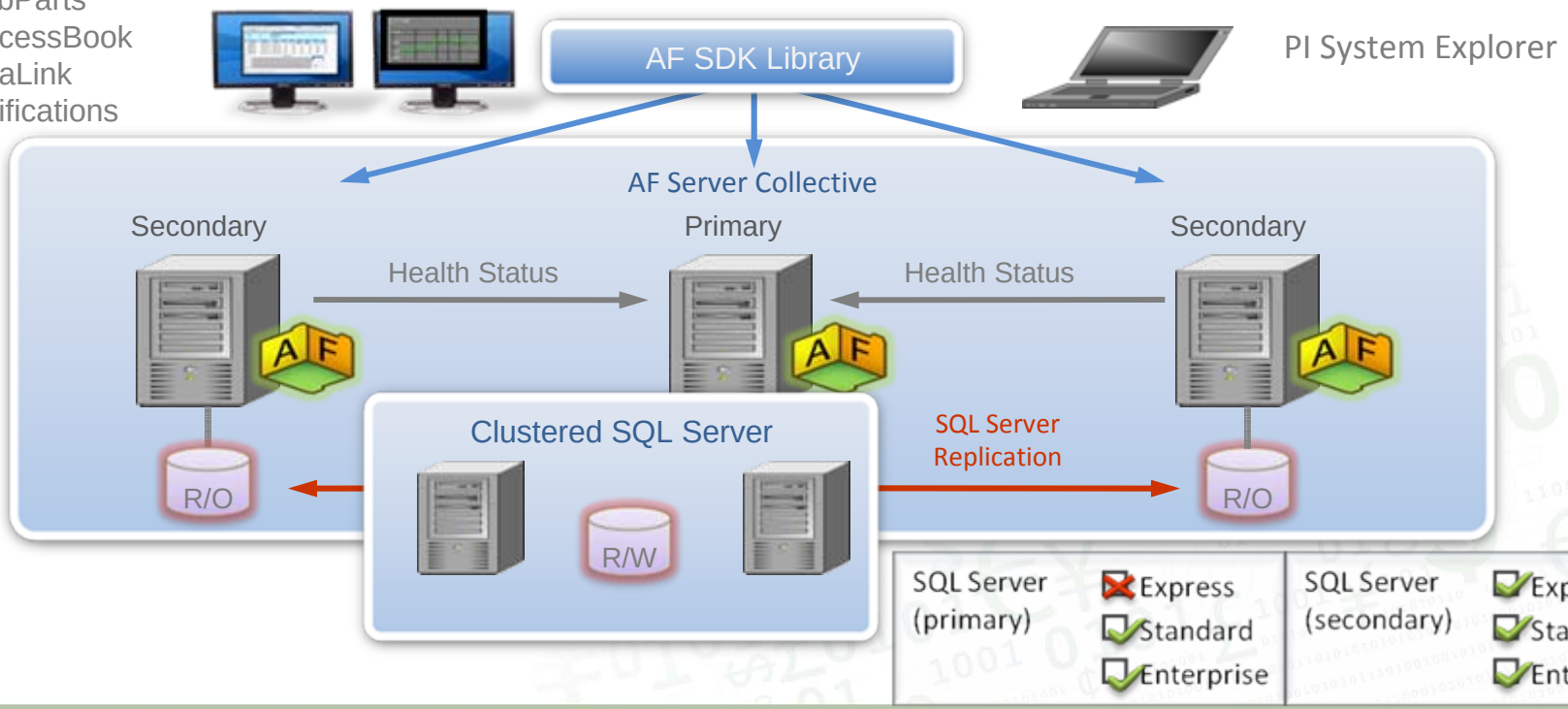
Go See: Best Practices for Securing your PI System

Critical Infrastructure Protection

- OSIsoft Values
  - Provide reliable data for your business
  - Minimize cyber risk
  - Ease compliance burden
- Proactive Actions
  - Security Development Lifecycle
  - Enable Built-In Defenses
  - Managed PI and First Responders
  - Dedicated Security Manager
- Verification
  - 2009 US Army NETCOM - Certificate of Noteworthiness (CoN)
  - 2008 Windows Logo Certification – Server ‘Core’
  - 2006 National SCADA Test Bed - Cyber Assessment
  - 2004 EPRI and Utility Partner – Cyber Assessment

Asset Centric PI: AF HA

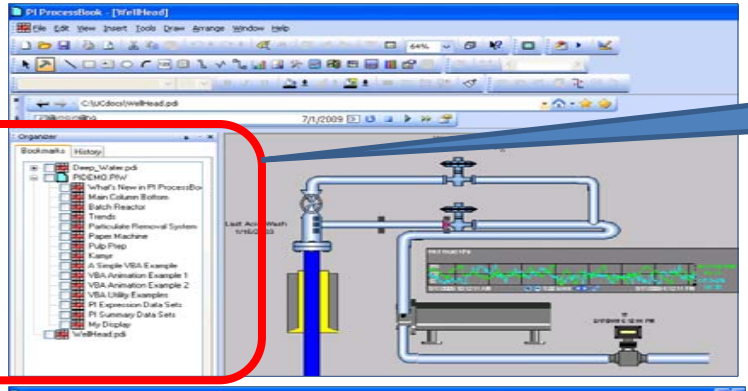
AF-based PI Clients
- WebParts
- ProcessBook
- DataLink
- Notifications

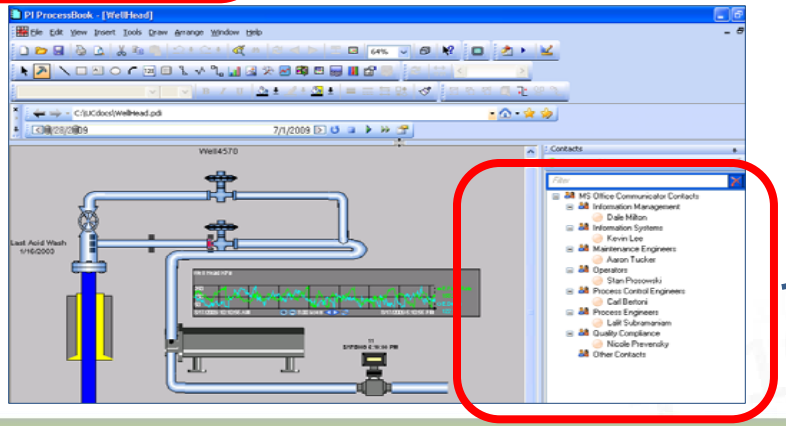


ProcessBook 3.2: Element Relative Displays

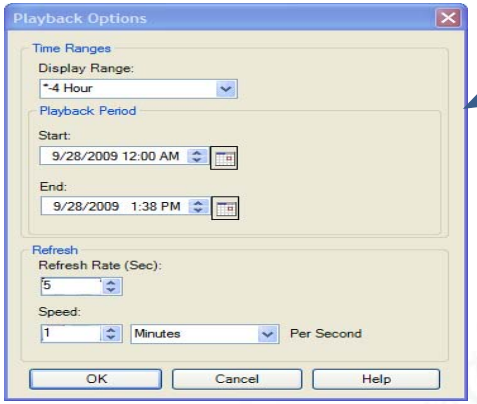
Go See: Recent Productivity Enhancements to PI ProcessBook

ProcessBook 3.2: Productivity Enhancements





Browsing forward and backwards
Permanent books mark of favorites



Playback

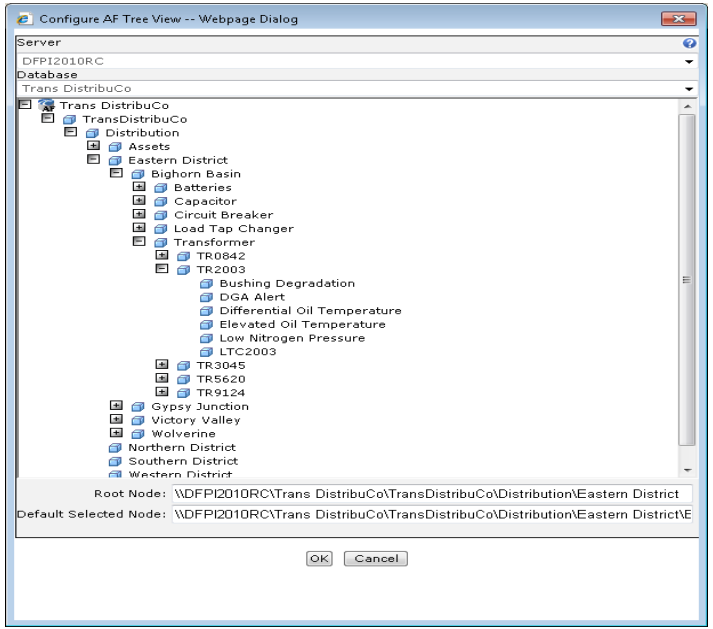
Troubleshoot problems by re-playing a display

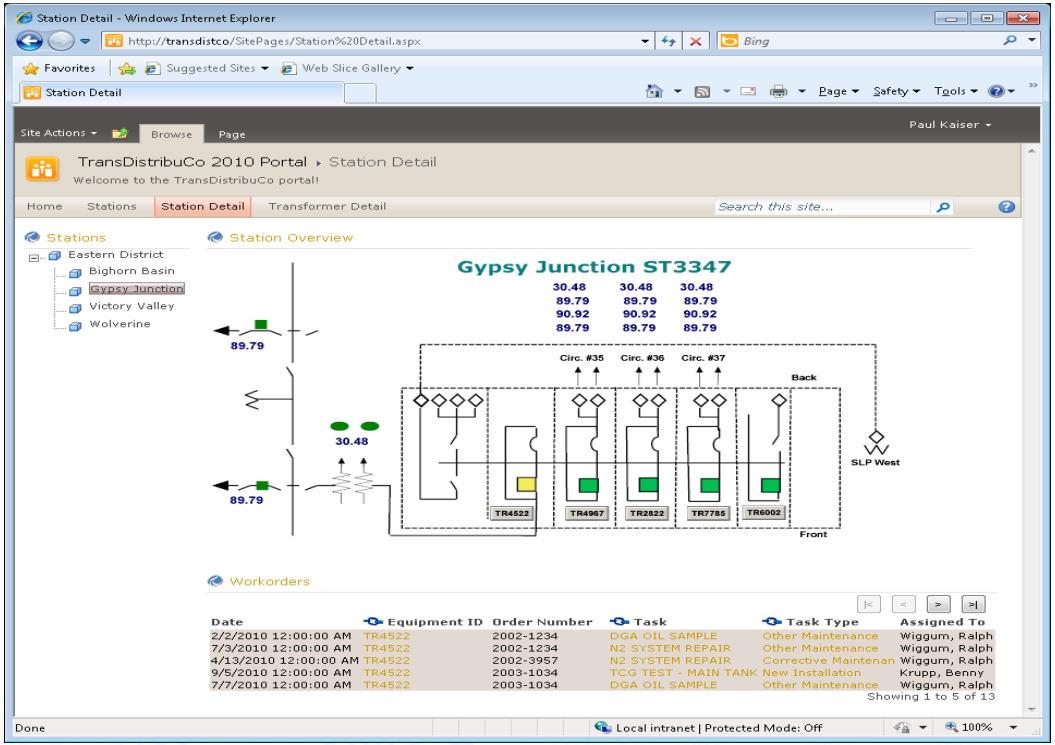
Communicator

IM, Email Contacts
Easily send a PB screenshot

Go See: Recent Productivity Enhancements to PI ProcessBook

PI WebParts

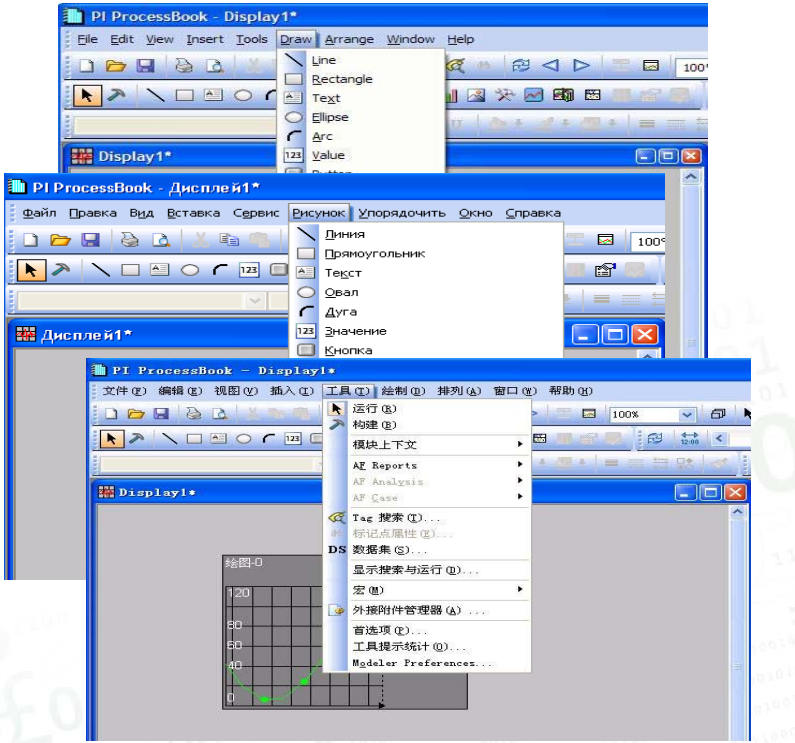




Go See: Configuring Integrated Visualizations with PI WebParts

Product Localization: Three Scenarios

Application	OS
English	Localized
Localized	Localized
Localized	English



Product Localization: Eight Languages

- Available now
  - PI ProcessBook
  - PI ActiveView
  - PI WebParts
  - PI SDK
- In development
  - PI DataLink
- In plan
  - PI System Explorer
  - PI Notifications
  - PI Manual Logger

- French
- German
- Russian
- Spanish
- Korean
- Japanese
- Brazilian Portuguese
- Simplified Chinese

Go See: Internationalization And Localization at OSIsoft

Scalability and Manageability

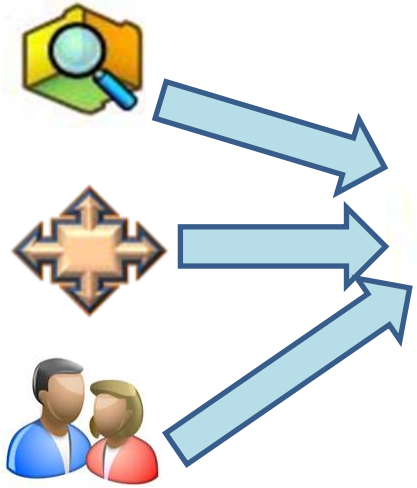
- Making PI work well on a large scale
  - Performance, scalability and throughput for the PI AF and PI Notifications
  - New PI SMT 3 plug-ins to manage the new security model
  - 64 bit support for scale and performance

PI Notifications: The Power of Templates…

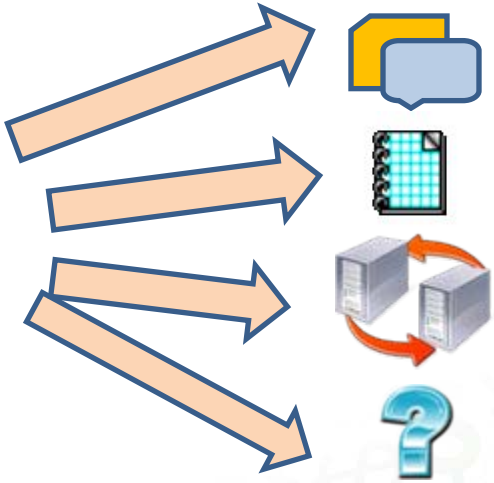
Configured from AF Elements

Filtered with sophisticated rules

Active Directory



Trigger



E-mail or I-M

Processbook
MyPI Desktop
Webparts

Web Service
XML

Extensible

Define information once
- Fewer errors
- Automatically in sync
- Maintenance can scale

Override where necessary
- Change time rule
- Define specific content
- Add/modify subscribers

Go See: Using Templates to Speed Up Configuration of Your PI System

64 bit Support

- Most server hardware today is 64 bits
- Microsoft aggressively moving to 64 bits
  - Windows 2008 R2, SharePoint 2010 are 64 bit only
- Allows full utilization of hardware and cache
- Mostly relevant to OSIsoft servers and customer applications
  - Programmatic interfaces are used by servers

PI 64-Bit Products

- Servers:
  - PI Server 3.4.380
  - PI AF 2.1
  - PI Notifications tested as a 32bits running on 64bit
  - PI Utilities Gateway
- Data Access
  - PI SDK
  - PI OLEDB
  - PI OLEDB Enterprise
  - PI Web Services
- Clients
  - PI Web Parts 3.0
  - PI DataLink for Excel Services 4.1

Interfaces: Accomplishments

- 78 Interface releases since last year's UC!
- Interface products, ICU, and APS conform to PI3 380 security model
- All released interfaces released for Vista, 2008 Server, 2008 R2 Server, and Windows 7
- New Product Development
  - Rewrite of Modus Serial and Ethernet Interfaces
  - ABB 800xA Batch Interface
  - Wonderware InBatch Interface
  - Honeywell TotalPlant Batch Interface
  - GE iBatch Interface
  - Siemens Spectrum Power TG Interface
  - ESC Corp StackVision Interface

Go See: New Advances in Batch - Integrating with Batch Execution Systems

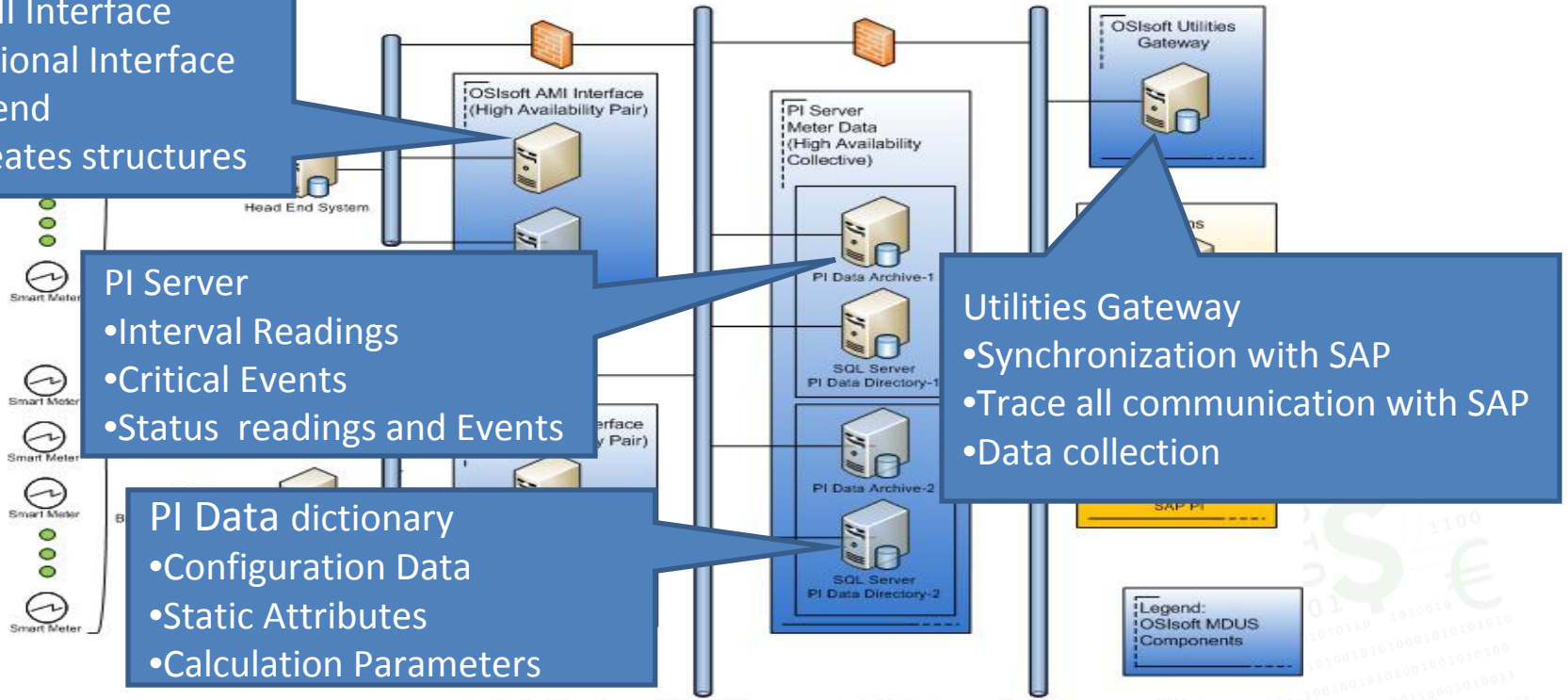
OSIsoft MDUS Overview

AMI Interface
- Bi-directional Interface to Head-end
- Auto-creates structures

PI Server
- Interval Readings
- Critical Events
- Status readings and Events

PI Data dictionary
- Configuration Data
- Static Attributes
- Calculation Parameters

Utilities Gateway
- Synchronization with SAP
- Trace all communication with SAP
- Data collection



Year in Review – Major Releases

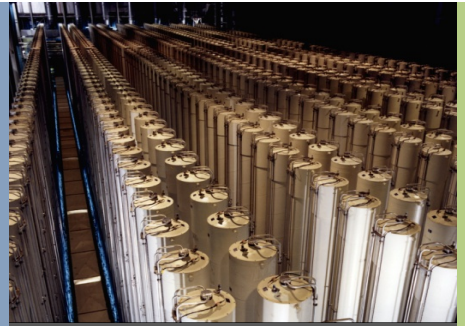
- Interfaces – 78 releases
- Servers
  - PI Server 3.4.380
  - PI SMT 3.3.1.3
  - AF 2.1
  - PI Notifications 1.1
  - PI Notifications OCS Delivery Channel
  - MCN Health Monitor 1.3.5.2
- Data Access
  - PI SDK – 64 Bit 1.3.8.385
  - PI JDBC 1.0.0
  - PI Data Services 3.0.0
  - PI System OLEDB 1.0.0.11
- Clients
  - ProcessBook 3.2.0
  - Active View 3.2.0
  - PI Web Parts 3.0.0
  - DataLink 4.0.3
  - DataLink for Excel Service 4.0.3
  - Data Link for Excel Services 4.1.1.0
  - RtReports 3.3.0.0
  - PI Manual Logger 2.3.0.160
- Additionally
  - 31 Minor Releases
  - 7 Language Packs

2009 Themes

What did OSIsoft accomplish in 2009 to help you?

Security

- ✓PI 380
- ✓Deployment



Asset Centric PI

- ✓ProcessBook
- ✓WebParts
- ✓Notifications
- ✓AF HA

Localization

- ✓8 languages
- ✓5 products
- ✓3 planned

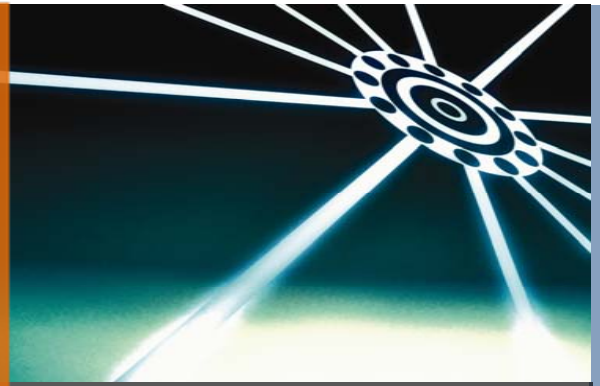
Scaling, 64 bit

- ✓ Servers
- ✓ Data Access
- ✓ Web Clients

The Present: PI System 2010

PI System 2010

What are the benefits of PI System 2010?



Simple
Easy to get started, system grows with you

Relevant
Deliver important data to the right people, right time

Collaborative
Everyone has access to the data, easy to share

PI System 2010 – 2Q 2010

PI Clients

- PI WebParts 2010
- PI DataLink 2010
- PI for Office 2010

PI Data Access

- PI OLEDB Enterprise 2010
- PI Web Services 2010
- PI JDBC 2010

PI Server

- PI Server 2010
- Assets and Tags
- PI Analytics for StreamInsight

Business User Experience

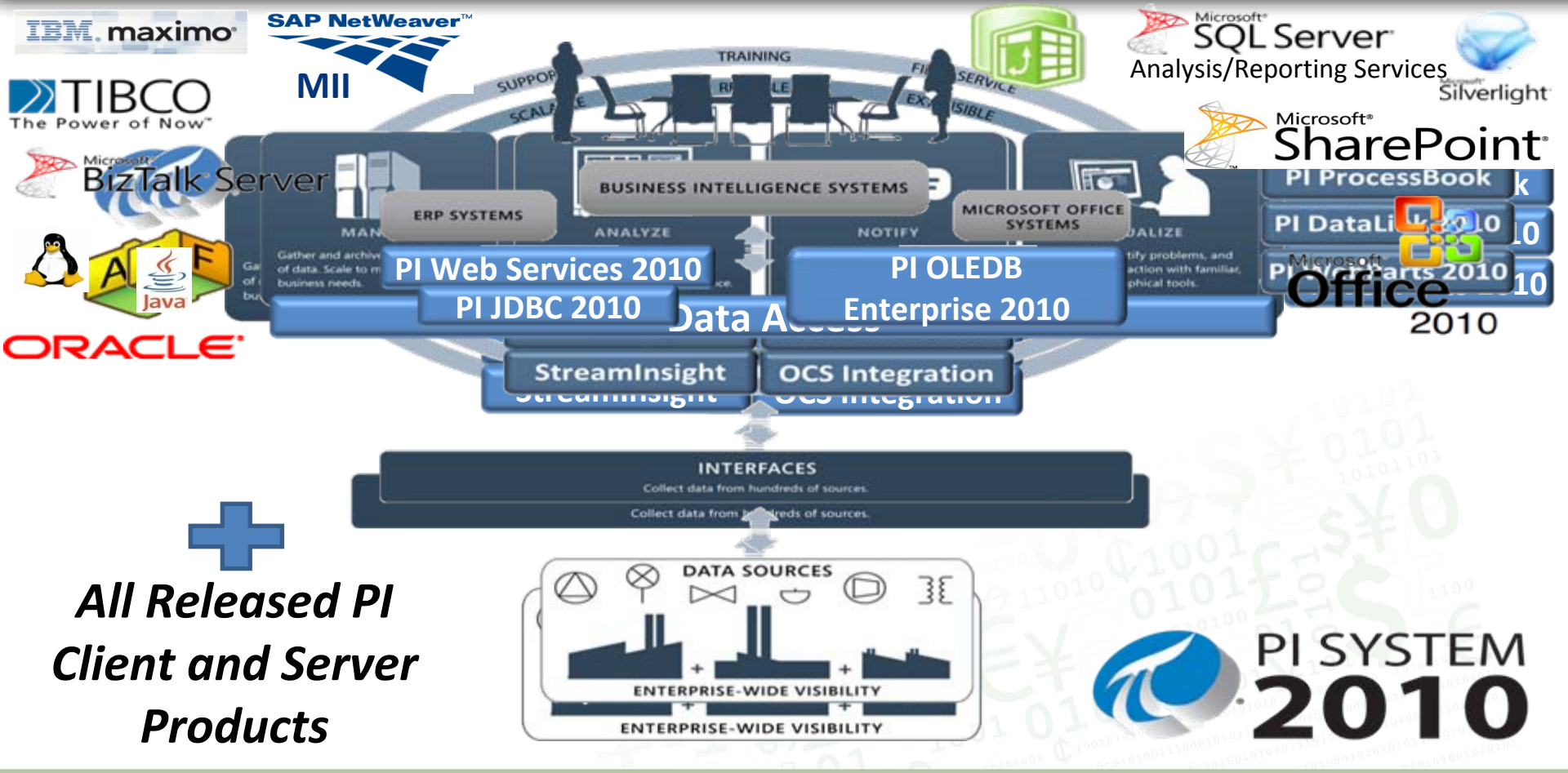
Microsoft® Office 2010

Business Collaboration Platform

Microsoft® SharePoint® 2010

Data Infrastructure and BI Platform

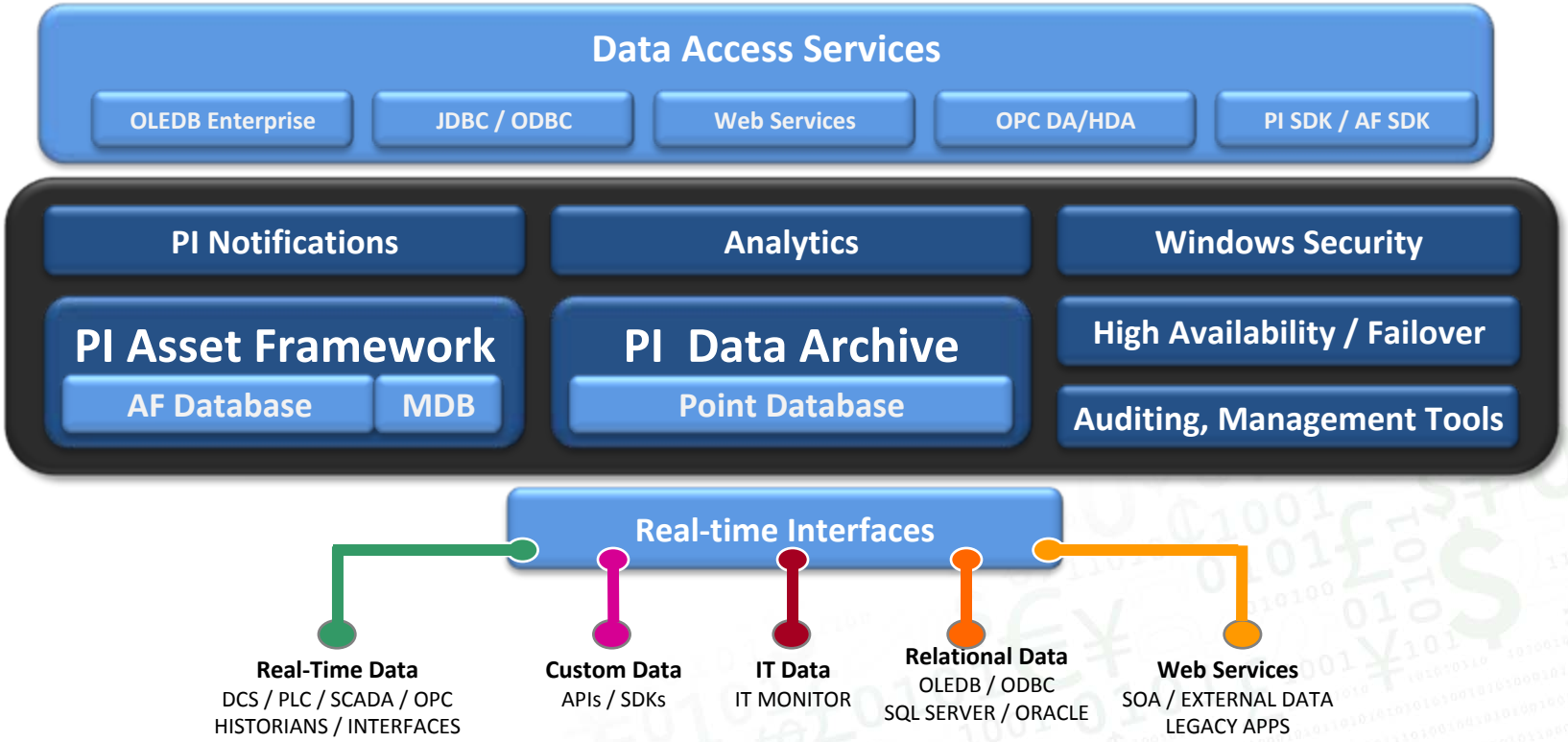
Microsoft® SQL Server® 2008 R2



All Released PI Client and Server Products

PI SYSTEM 2010

PI Server 2010



PI Asset Framework

Migrating Module DB to Asset Framework (AF)

MDB based Applications

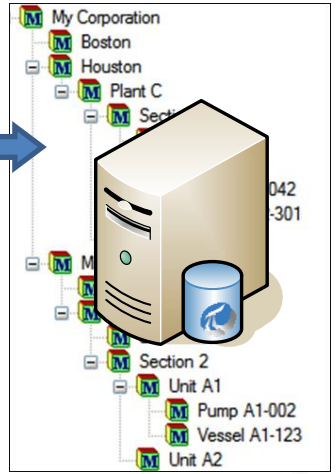
PI DataLink

IT Monitor

BatchView

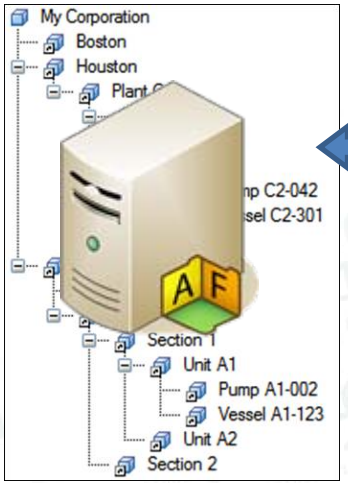
PI ACE

Module Database



PI Asset Link Subsystem

AF Element Database



AF based Applications

PI WebParts

PI ProcessBook

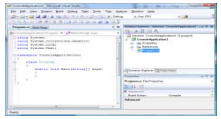
Custom via Data Access

PI Server 2010 and AF Product Theatre Sessions

- PI Server 2010: AF Inside
- Best Practices for Securing your PI System
- Using Templates to Speed Up Configuration of Your PI System

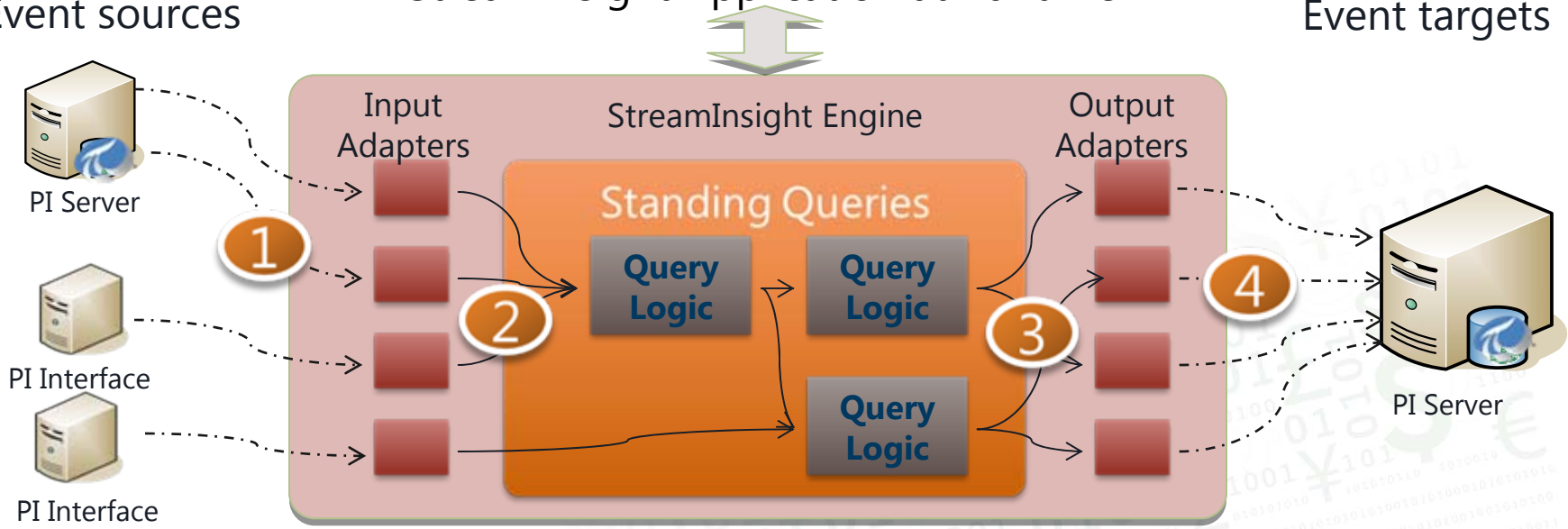
PI & StreamInsight Platform

StreamInsight Application Development



.NET
C#
LINQ

StreamInsight Application at Runtime



PI Analytics
Product Theatre Sessions

- What's New in PI Analytics and Notifications
- Using Templates to Speed Up Configuration of Your PI System

PI Data Access: The 2010 Wave

PI JDBC 2010

PI Web Services 2010

PI OLEDB Enterprise 2010

PI OPC DA/HDA Server 2010

OSIsoft SDKs

Asset Information / Metadata

Notifications

Analytics

Relational / Non Time Series Data

PI Server

PI Server Collective

Time Series Data

PI Data Access
Product Theatre Sessions

- What's New with PI Data Access 2010
  PI Web Services, PI JDBC, PI OLEDB and PI OPC UA
- PI Data Access and Enterprise Integration
- OSIsoft vCampus: A Collaborative Journey

Innovations Launching In H1 2010

Business User Experience

Business Collaboration Platform

Data Infrastructure and BI Platform

Familiar User Experience

1. Self-service Business Insight
2. Data Exploration and Analysis
3. Data and Contextual Visualization

Integrated Content and Collaboration

1. Dashboards and Composites
2. Enterprise Search
3. Content Management

Data Infrastructure and BI Platform

1. Analyze, Integrate, Manage
2. Master Data
3. Data Mining and Data Warehousing

PI for Office 2010

Release H1 2010

PI DataLink for Excel 2010

PI WebParts for SharePoint 2010

PI DataLink Server 2010

PI and PowerPivot for 2010

PI OLEDB Enterprise 2010

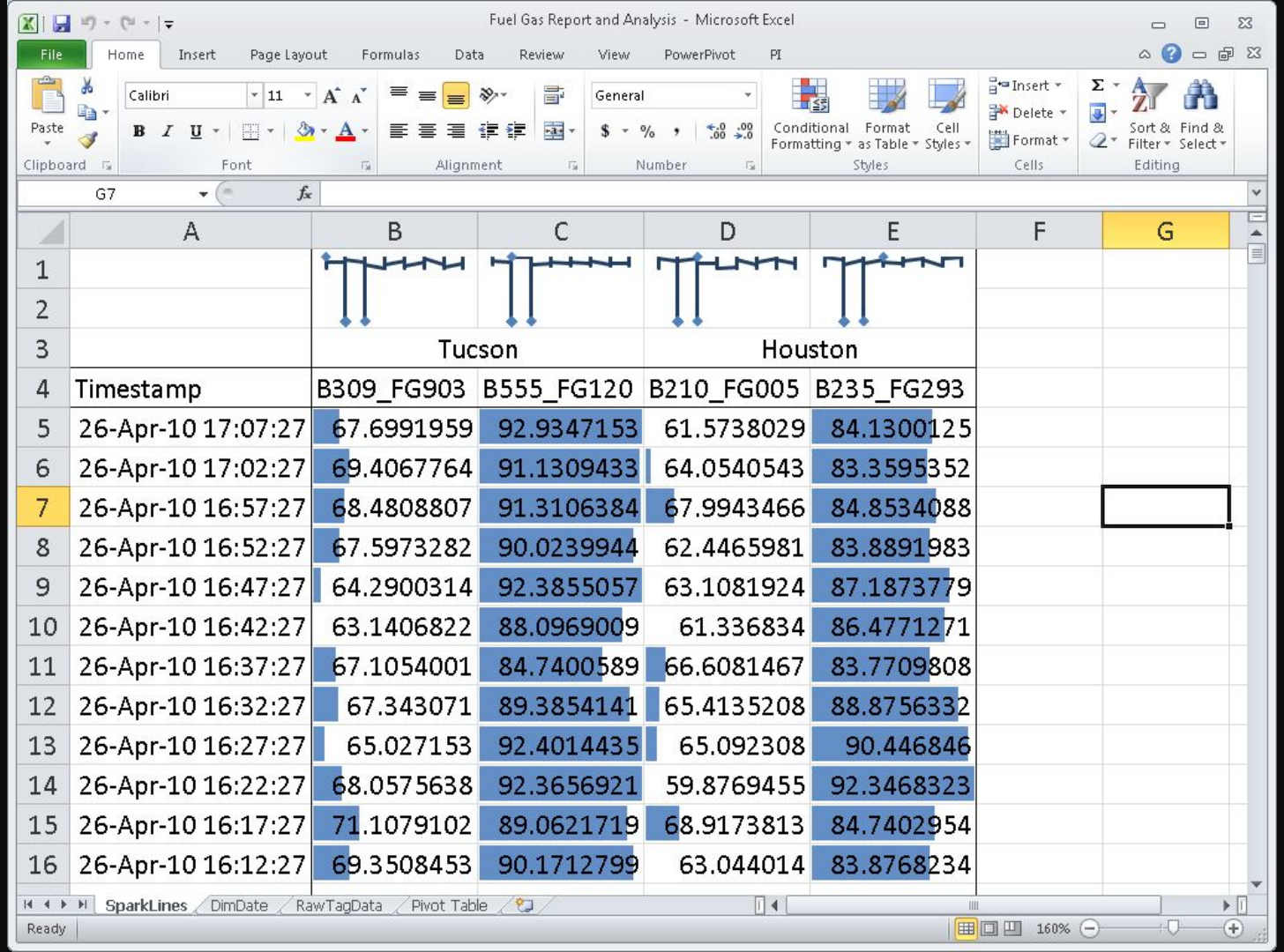
PI Web Services 2010

PI Data Access Technologies

PI System Access License

PI for Office 2010

PI DataLink 2010 for Excel 2010


Fuel Gas Report and Analysis - Microsoft Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
PowerPivot
PI
Paste
Clipboard
Calibri
11
Font
Alignment
General
Number
Conditional Formatting
Format as Table
Cell Styles
Styles
Insert
Delete
Format
Cells
Sort & Filter
Find & Select
Editing
G7
Tucson
Houston
Timestamp
B309_FG903
B555_FG120
B210_FG005
B235_FG293
26-Apr-10 17:07:27 67.6991959 92.9347153 61.5738029 84.1300125
26-Apr-10 17:02:27 69.4067764 91.1309433 64.0540543 83.3595352
26-Apr-10 16:57:27 68.4808807 91.3106384 67.9943466 84.8534088
26-Apr-10 16:52:27 67.5973282 90.0239944 62.4465981 83.8891983
26-Apr-10 16:47:27 64.2900314 92.3855057 63.1081924 87.1873779
26-Apr-10 16:42:27 63.1406822 88.0969009 61.336834 86.4771271
26-Apr-10 16:37:27 67.1054001 84.7400589 66.6081467 83.7709808
26-Apr-10 16:32:27 67.343071 89.3854141 65.4135208 88.8756332
26-Apr-10 16:27:27 65.027153 92.4014435 65.092308 90.446846
26-Apr-10 16:22:27 68.0575638 92.3656921 59.8769455 92.3468323
26-Apr-10 16:17:27 71.1079102 89.0621719 68.9173813 84.7402954
26-Apr-10 16:12:27 69.3508453 90.1712799 63.044014 83.8768234
SparkLines
DimDate
RawTagData
Pivot Table
Ready
160%

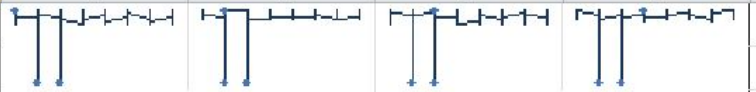
Fuel Gas Report and Analysis.xlsx - Windows Internet Explorer

http://dfpiweb2010/NuGreen/Reports/_layouts/xlviewer.aspx?id=http%3a%2f%2fdfpiweb2010%2fN

Favorites | Fuel Gas Report and Analysis.xlsx

Reports ▸ PowerPivot Cubes ▸ Fuel Gas Report and Ana | Matt Ziegler

File | Open in Excel | Data | Find



	A	B	C	D	E	F	G
1							
2							
3		Tucson		Houston			
4	Timestamp	B309_FG903	B555_FG120	B210_FG005	B235_FG293		
5	26-Apr-10 17:07:27	67.69919586	92.93471527	61.57380295	84.13001251		
6	26-Apr-10 17:02:27	69.40677643	91.1309433	64.05405426	83.35953522		
7	26-Apr-10 16:57:27	68.48088074	91.31063843	67.99434662	84.85340881		
8	26-Apr-10 16:52:27	67.59732819	90.02399445	62.44659805	83.8891983		
9	26-Apr-10 16:47:27	64.29003143	92.38550568	63.10819244	87.18737793		
10	26-Apr-10 16:42:27	63.14068222	88.09690094	61.33683395	86.47712708		
11	26-Apr-10 16:37:27	67.10540009	84.7400589	66.60814667	83.77098083		
12	26-Apr-10 16:32:27	67.34307098	89.38541412	65.41352081	88.87563324		
13	26-Apr-10 16:27:27	65.02715302	92.40144348	65.09230804	90.44684601		
14	26-Apr-10 16:22:27	68.05756378	92.36569214	59.8769455	92.34683228		

SparkLines | DimDate | RawTagData | Pivot Table

Local intranet | Protected Mode: Off | 160%

PI for Office 2010
PI WebParts 2010 for SharePoint 2010

Milling Process - Windows Internet Explorer

http://dfpiweb2010/NuGreen/Engineering/Process%20Pages/Milling%20Process.aspx

Favorites

Milling Process

Site Actions | Browse | Page | Laurie Dieffenbach

Engineering ▷ Milling Process

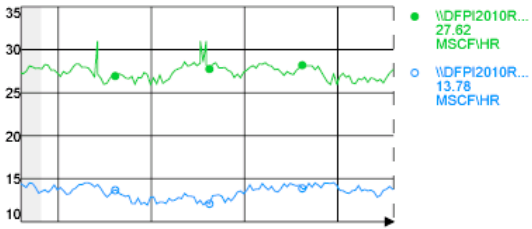
NUGREEN

NuGreen | Operations | Manufacturing | Engineering | Reports | Marketing | Sales | Accounting | Search this site...

Milling Assets

- Milling Process
  - Equipment
    - B-737
    - B-914
    - F-200
    - F-770
    - H-148
    - H-393
    - H-395
    - K-384
    - P-009
    - P-509

PI Trend



Equipment Documents

Type	Name
	Equipment Benchmarking Report
	Fuel Gas Ratio
	Fuel Gas Utilization Report

Add document

Production Schedule

Milling Production Schedule

	Production			Inventories				Today's Performance		
	Rate (Tons\Hr)	Target (Tons\Hr)	Capacity (Tons\Hr)	Raw Material Available Tons	Raw Material Available Days	Product Sales (Tons/Day)	Product Available Tons	Product Available Days	Energy 2%	Reliability 95%	Quality 98%
Houston	32.9	35.0	50	30,128	35.9	1,200	10,638	8.9	86206%	9557%	9847%

Done | Trusted sites | Protected Mode: Off | 100%

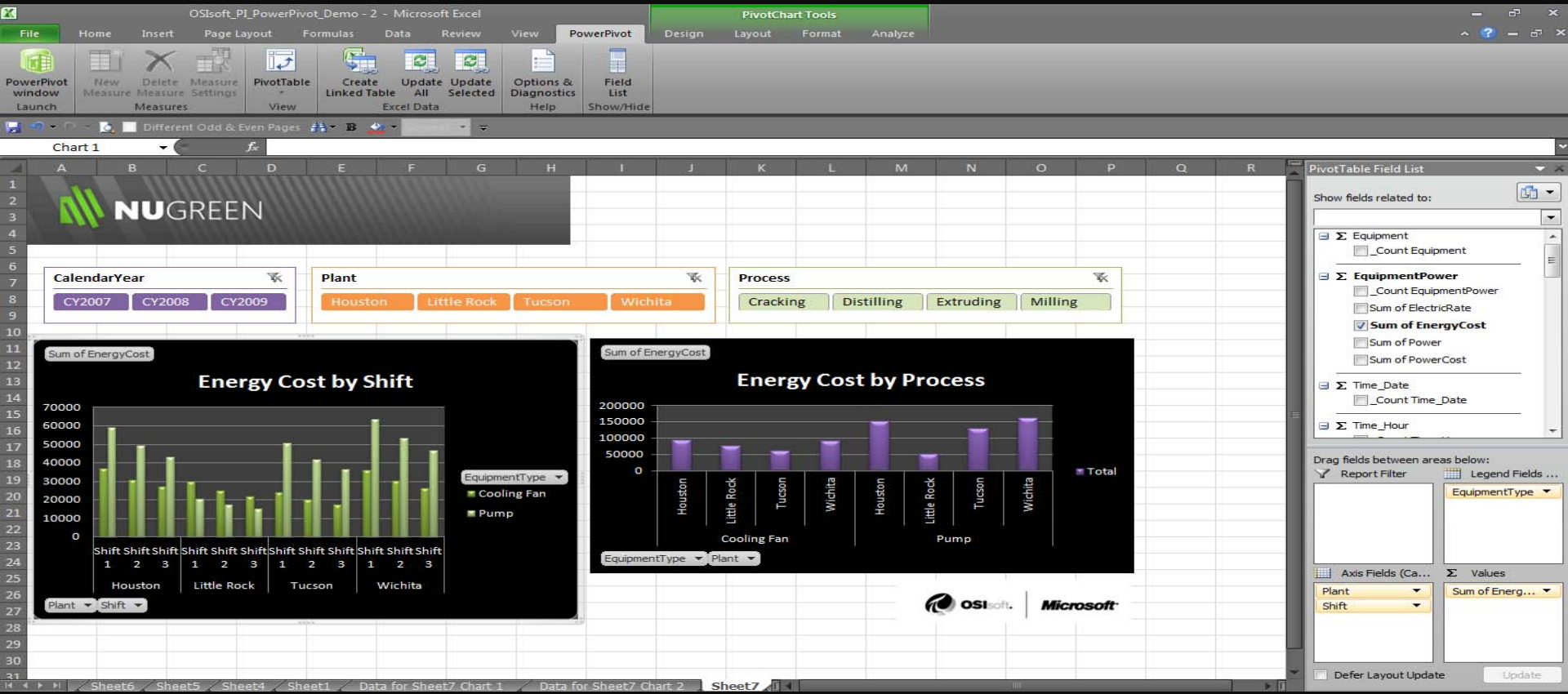
Empowering the End User

Introducing PowerPivot for Excel

Microsoft® Excel® 2010

- Enable users to perform self-service analysis and intuitively build their own BI solutions
- Allow users to interactively explore and perform calculations on large data sets
- Integrate data from multiple sources
- Minimize dependence on IT support

PI for Office 2010
PI and PowerPivot for Excel 2010



NuGreen - OSIsoft PowerPivot Demonstration.xlsx - Windows Internet Explorer

http://prabalt400wsr2/_layouts/xlviewer.aspx?id=http://prabalt400wsr2/PowerPivot%20Gallery/NuGreen%20-%20OSIsoft

File Edit View Favorites Tools Help

Favorites | NuGreen - OSIsoft PowerPivot Demonstration.xlsx | Page | Safety | Tools

PowerPivot NuGreen Demonstration ▸ PowerPivot Gallery ▸ NuGreen - OSIsoft PowerPivot Demonstration.xlsx | System Account

File | Open in Excel | Data | Find

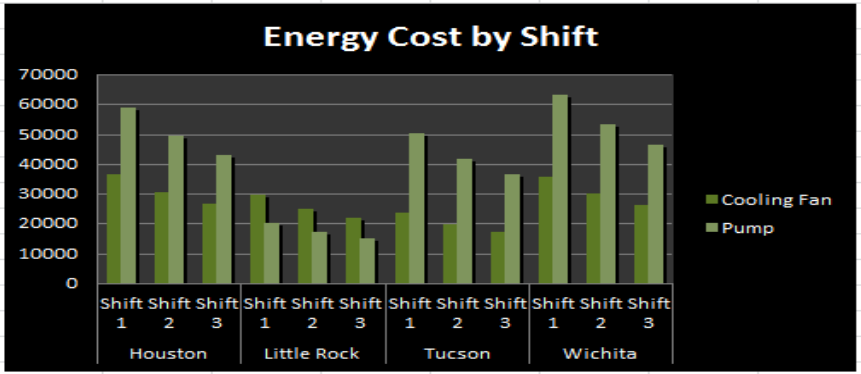
Unsupported Features This workbook may not display as intended. Details... X

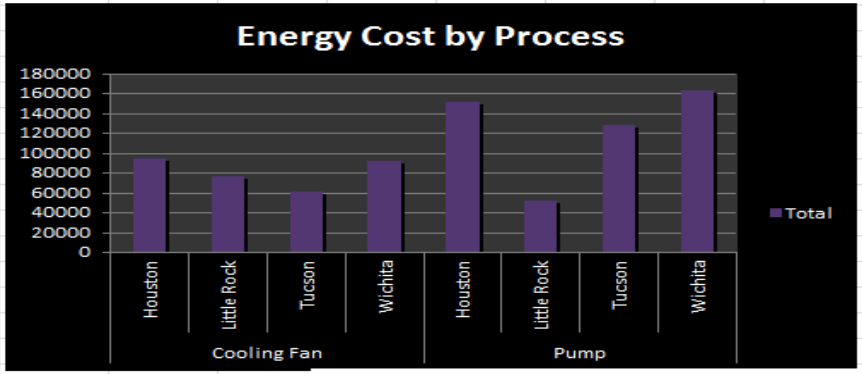
NUGREEN

CalendarYear: CY2007 | CY2008 | CY2009

Plant: Houston | Little Rock | Tucson | Wichita

Process: Cracking | Distilling | Extruding | Milling





Data for Sheet4 Chart 1 | Data for Sheet5 Chart 1 | Data for Sheet5 Chart 2 | Data for Sheet6 Chart 1 | Sheet6 | Sheet5 | Sheet4 | Sheet1 | Data for Sheet7 Chart 1

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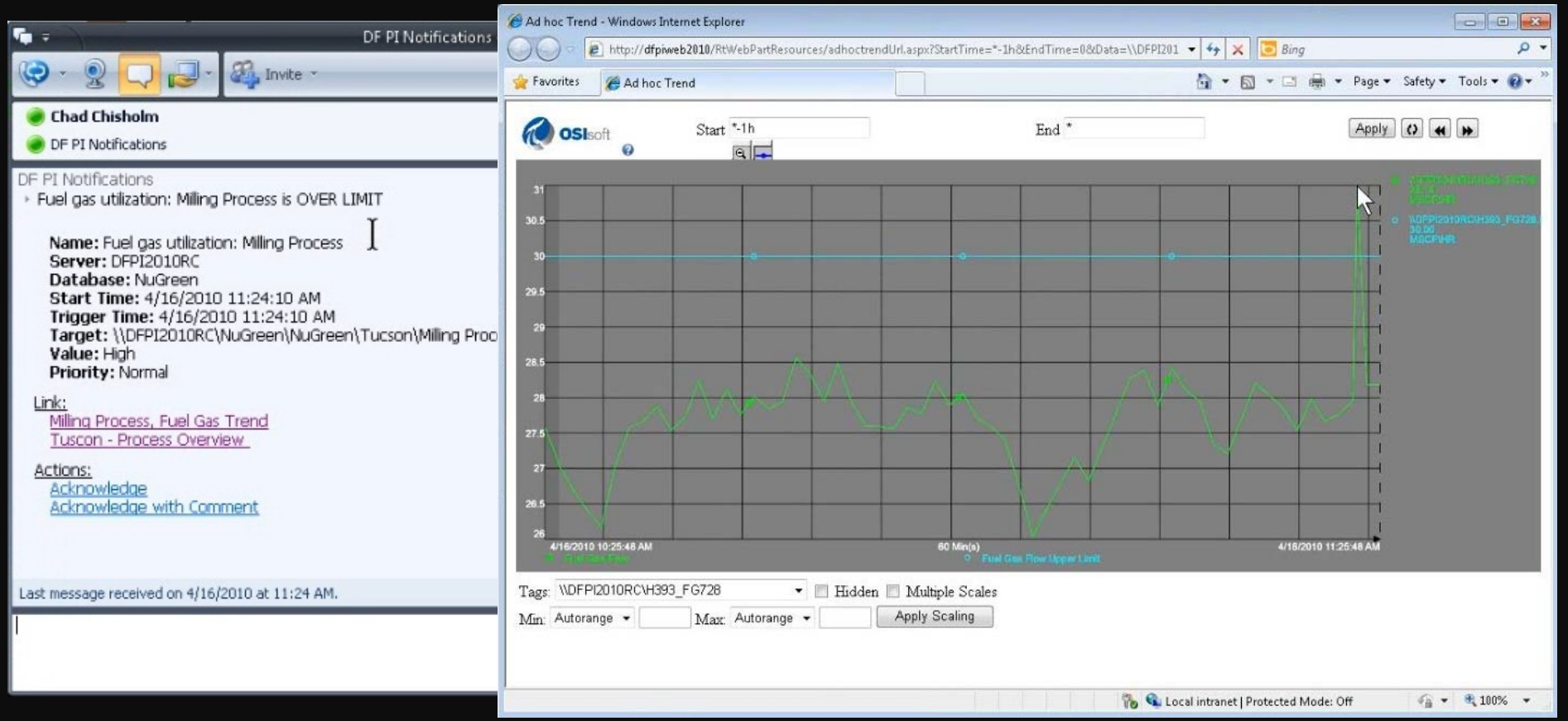
PI for Office 2010
PI Notifications and
Office Communication Server



PI for Office 2010

- Productivity through familiar and intuitive tools
- End users to create their own BI solutions
- Improve sharing and discovery of insights

- Organizational productivity through dashboards
- Visibility into key team and organizational metrics
- Business user efficiency and collaboration

- Cut costs by leveraging existing IT investments
- Scale-out to support BI for all users
- Familiar and intuitive management tools

PI for Office 2010
Product Theatre Sessions

- Building Great Dashboards with OSIsoft and Microsoft Components
- Configuring Integrated Visualizations with PI WebParts
- Visualizing Data with PI DataLink 2010, Microsoft Excel 2010 and Excel Services
- Introducing Multidimensional Data and PI

Simple, Relevant, Collaborative

Simple

- Simple naming and versioning
- Single PI Server package
- Aligned release schedule

Relevant

- Organize PI data around assets
- Migration of existing asset definitions
- Integration of PI with business systems
- New ways to analyze data

Collaborative

- Use the tools you already know
- Business Intelligence for the masses
- Easily share insights with others

2010 Value Themes

- **Scalability/Manageability/Performance**
- **User Experience**
- **Analytics**

2010 Value Themes

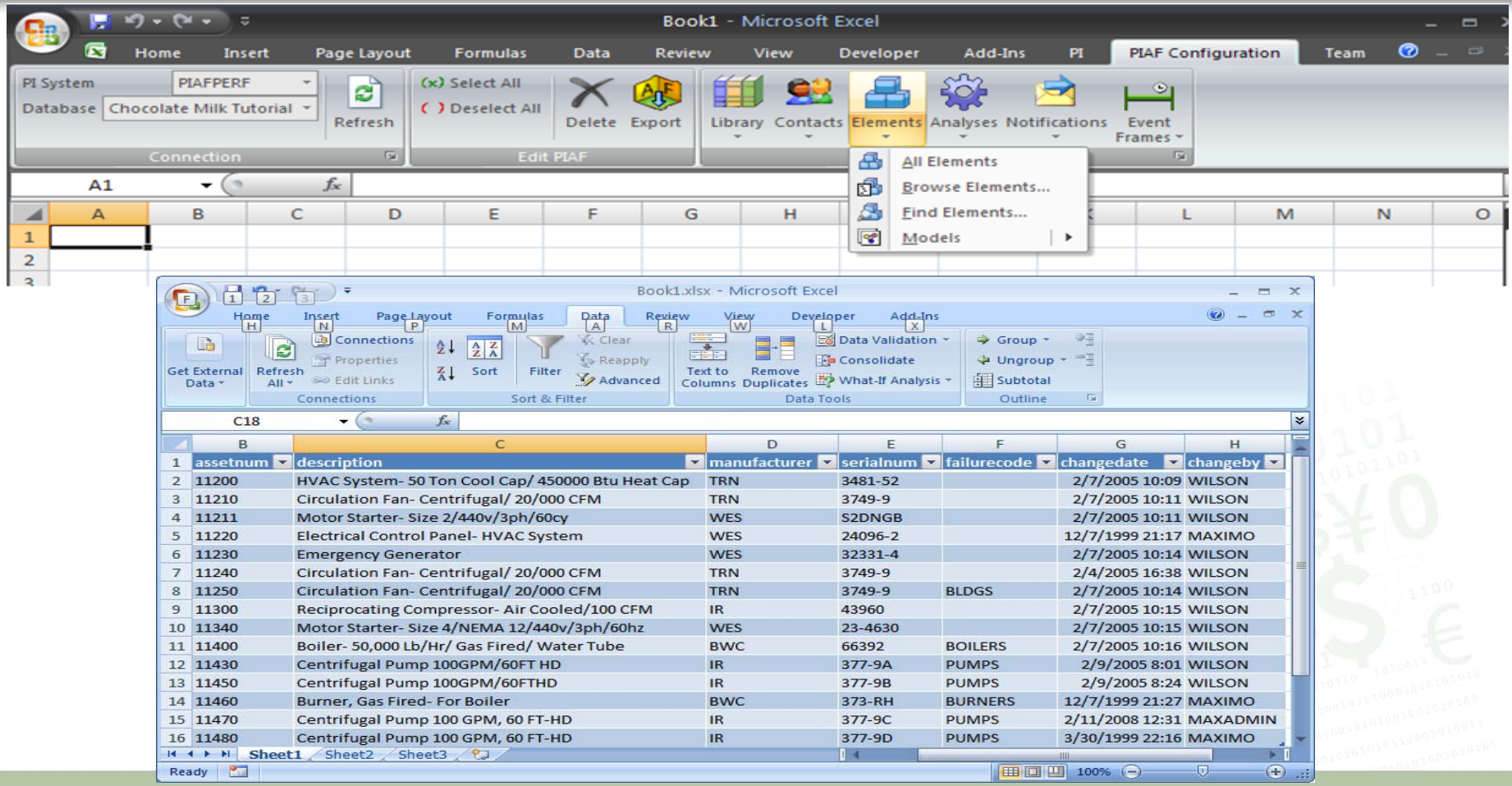
- **Scalability/Manageability/Performance**
  - PI Server
  - PI Notifications
  - PI AF
- **User Experience**
  - PI System Search
- **Analytics**
  - PI ACE Performance
  - AF Analytics
  - Edge Processing

Scalability

- PI Server point database
  - Faster point creation and editing
  - Faster startup time
  - Even larger point counts
- PI Update Manager
  - More concurrent users
  - More sign-ups
  - Faster sign-ups
- AF 2.2
  - Faster insert speed
  - Ability to traverse huge hierarchies

Manageability

- AF Builder
  - Excel add-in to view or modify all structures:
    - Elements
    - Templates
    - Categories
    - Enumeration Sets
    - Notifications
    - Analyses
    - Event Frames



	B	C	D	E	F	G	H
1	assetnum	description	manufacturer	serialnum	failurecode	changedate	changeby
2	11200	HVAC System- 50 Ton Cool Cap/ 450000 Btu Heat Cap	TRN	3481-52		2/7/2005 10:09	WILSON
3	11210	Circulation Fan- Centrifugal/ 20/000 CFM	TRN	3749-9		2/7/2005 10:11	WILSON
4	11211	Motor Starter- Size 2/440v/3ph/60cy	WES	S2DNGB		2/7/2005 10:11	WILSON
5	11220	Electrical Control Panel- HVAC System	WES	24096-2		12/7/1999 21:17	MAXIMO
6	11230	Emergency Generator	WES	32331-4		2/7/2005 10:14	WILSON
7	11240	Circulation Fan- Centrifugal/ 20/000 CFM	TRN	3749-9		2/4/2005 16:38	WILSON
8	11250	Circulation Fan- Centrifugal/ 20/000 CFM	TRN	3749-9	BLDGS	2/7/2005 10:14	WILSON
9	11300	Reciprocating Compressor- Air Cooled/100 CFM	IR	43960		2/7/2005 10:15	WILSON
10	11340	Motor Starter- Size 4/NEMA 12/440v/3ph/60hz	WES	23-4630		2/7/2005 10:15	WILSON
11	11400	Boiler- 50,000 Lb/Hr/ Gas Fired/ Water Tube	BWC	66392	BOILERS	2/7/2005 10:16	WILSON
12	11430	Centrifugal Pump 100GPM/60FT HD	IR	377-9A	PUMPS	2/9/2005 8:01	WILSON
13	11450	Centrifugal Pump 100GPM/60FTHD	IR	377-9B	PUMPS	2/9/2005 8:24	WILSON
14	11460	Burner, Gas Fired- For Boiler	BWC	373-RH	BURNERS	12/7/1999 21:27	MAXIMO
15	11470	Centrifugal Pump 100 GPM, 60 FT-HD	IR	377-9C	PUMPS	2/11/2008 12:31	MAXADMIN
16	11480	Centrifugal Pump 100 GPM, 60 FT-HD	IR	377-9D	PUMPS	3/30/1999 22:16	MAXIMO

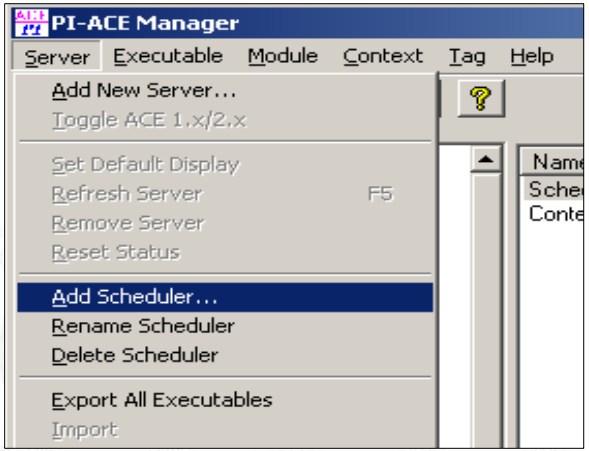
Analytics

- PI ACE Performance
- AF Analytics
- Edge Processing

PI ACE Performance

- Native support for 64-bit Windows
- Upgrade to .NET code base
- Support for Visual Studio 2010
- Startup optimization
- Cache enhancements
- PI ACE Schedulers on multiple machines against a single PI Server

Go See: What's new in PI Analytics and PI Notifications



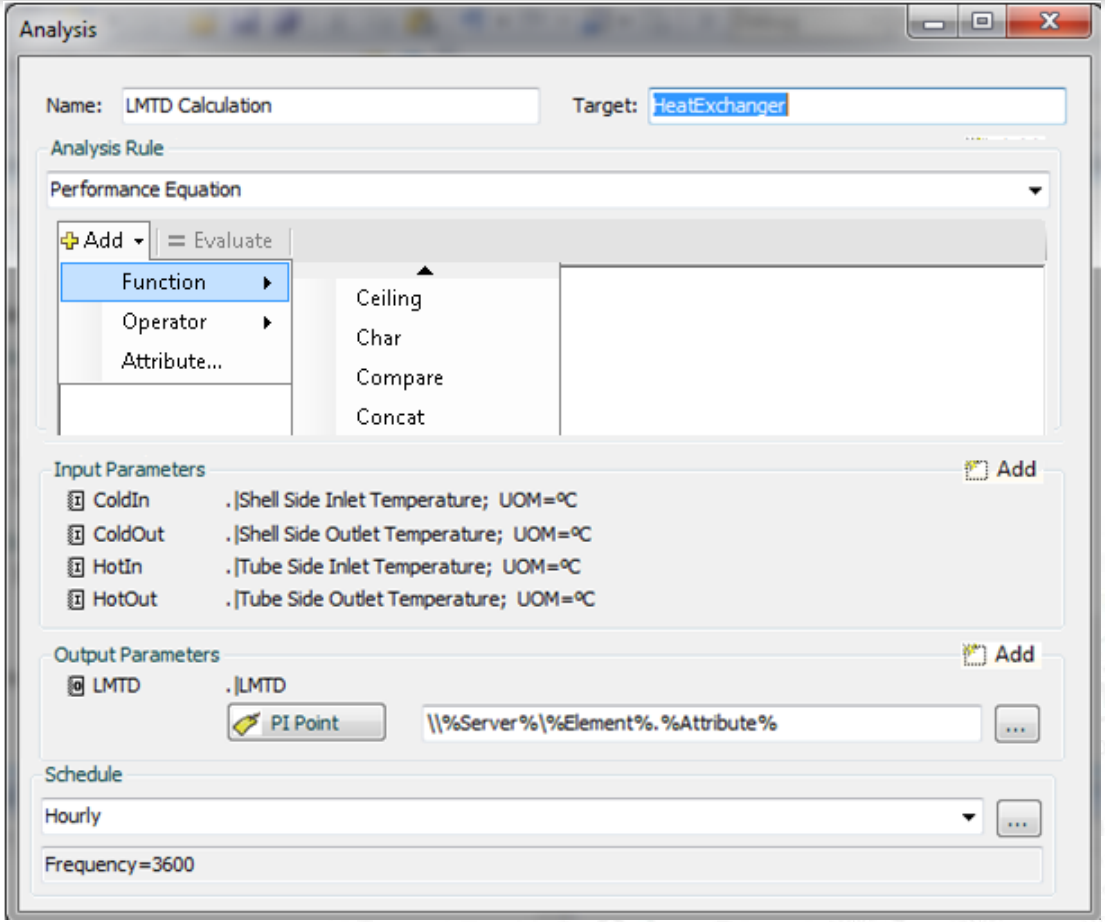
The Analytics Landscape

		Configuration	Programming
Tag Context	PI Tags	PI PE, PI Totalizers, PI Alarms, PI RT SQC	PI ACE, PI SDK (Custom applications)
Asset Context	PI MDB	None	PI ACE, PI SDK (Custom applications)
	PI AF	AF Analytics • PE syntax, AF formula DR syntax • Additional ARs (roll-up etc.) Clock & Event based scheduling Export results to PI tags	Custom AF Data References Custom AF Analysis Rules Custom applications (AF SDK)

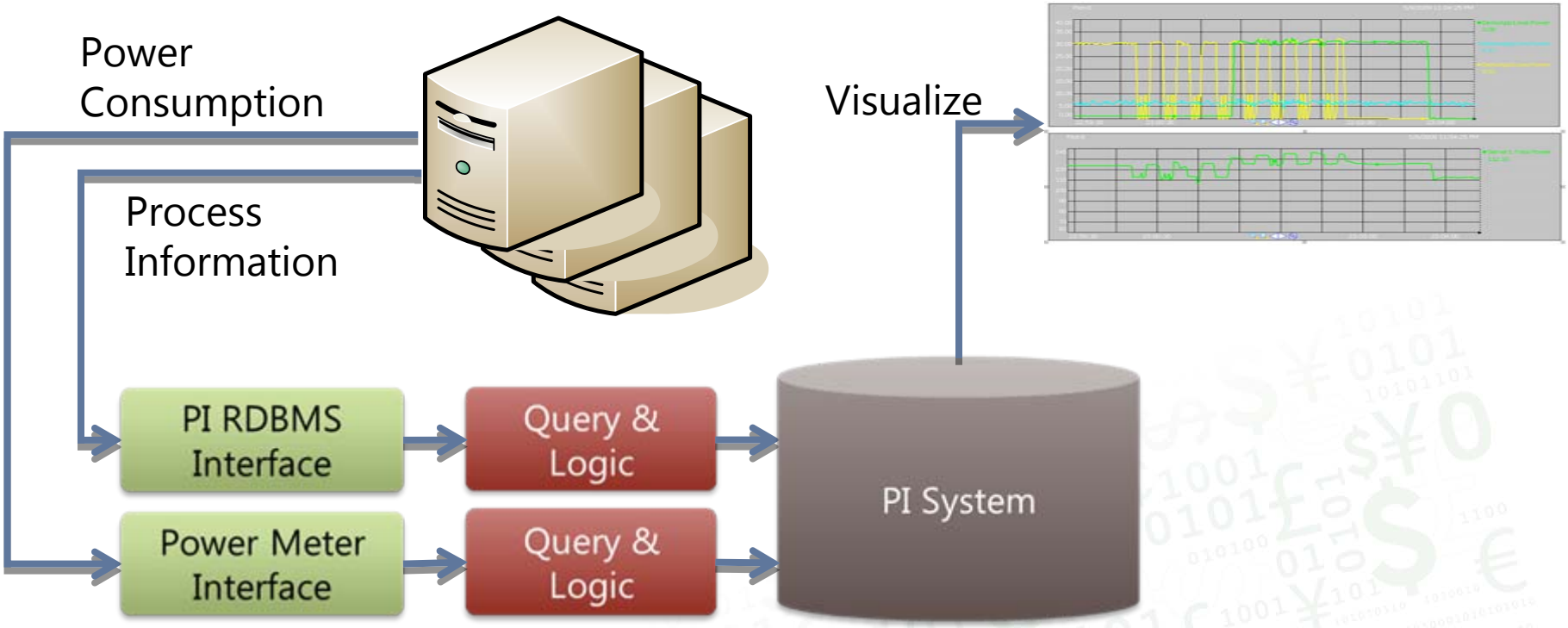
Focus for 2010

AF Analytics

- Leverage AF Elements and AF Element Templates
- GUI configuration experience
- Outputs written back to PI
- Same PE Library as in PI Notifications
- No change to existing AF Data References



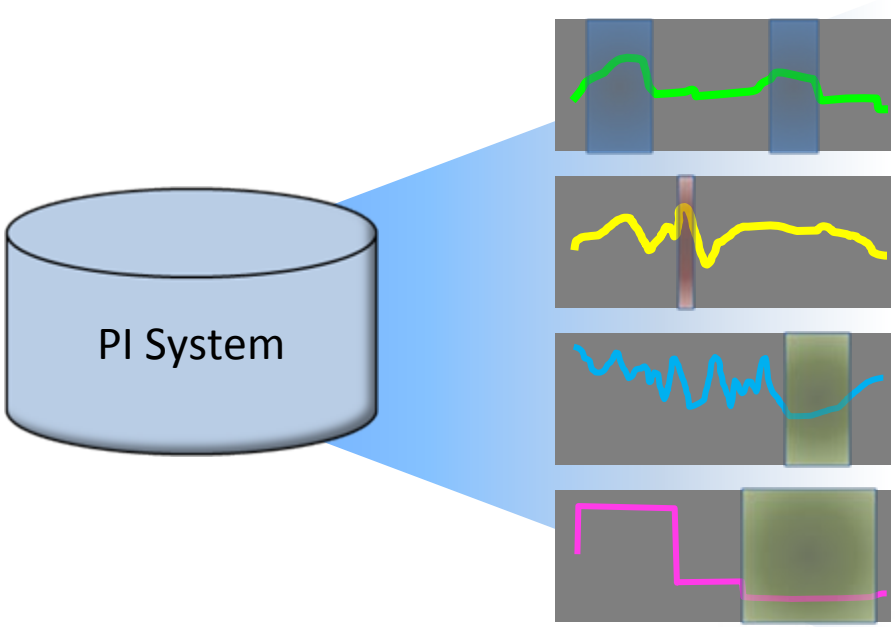
Edge Processing

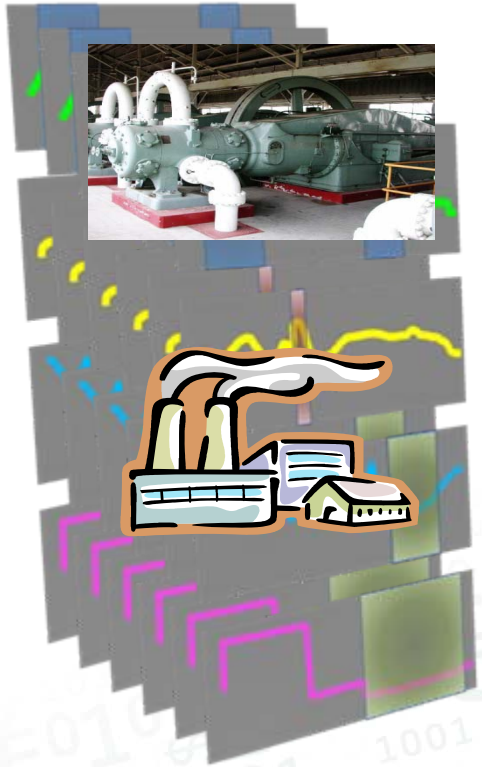


PI System Search

More to search than ever…

Visualization	• Displays, captions, text • PI Points, AF Elements & Attributes
Data Access	• Frequently accessed Data Streams • Related Data Streams • Workstation data sources
Analysis	• Performance Equations / Totalizers / Alarms • ACE Calculations / Notifications / Event Frames
Directory	• AF Element Attributes / AF Elements • AF Element templates
Server	• Data Streams, PI Properties, By Value (> 75)
Interfaces	• Data sources • Non-PI data





How often down?
For how long?
Any better since repair?
How often run out of specs?

When was last excursion?
How many last month?
Did new scrubber pay off?
Is summertime worse?

- Event Frames Database & SDK available
  - CTP (Community Technology Preview)
- Significant partner and customer interest
- Partners now developing
  - Downtime tracking
  - OEE (overall equipment effectiveness)

PI Web Services Roadmap

- Data-by-Exception
- Non-timeseries data
- PI System Search
- Bring AF forward
  - Full Manipulations on AF
    - **C**reate
    - **R**ead
    - **U**pdate
    - **D**elete

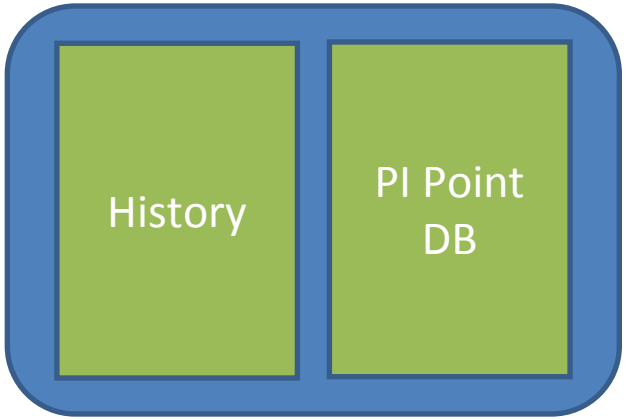
Go See: What's New with PI Data Access 2010 - PI Web Services, PI JDBC, PI OLEDB, and PI OPC UA

PI SDK Roadmap

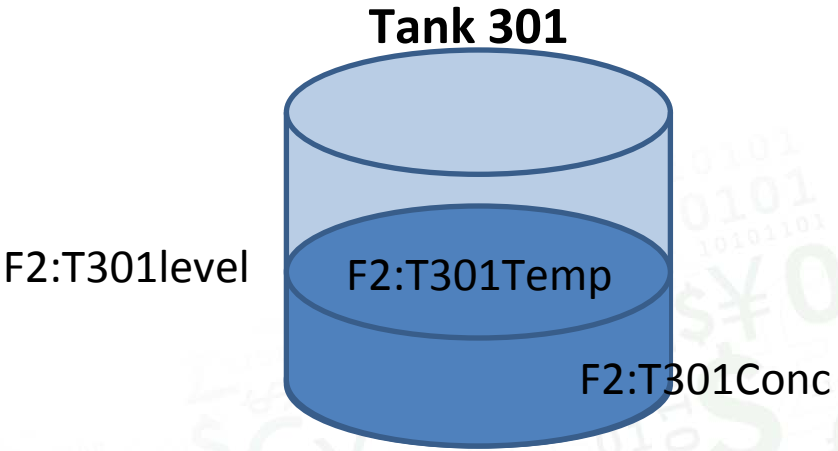
- Data Buffering
  - Important Use Cases
    - Custom Interfaces
    - Applications that write data to PI
    - SQL Applications, writing data to PI OLEDB
  - Support for HA
    - Buffering in case of disconnection
    - “Fanning” to a Collective

PI Server

Search by Point Attributes

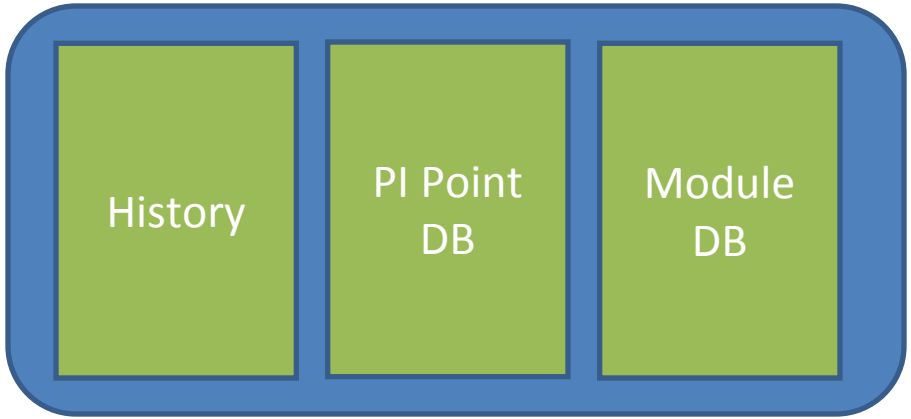


Search by attribute mask, value

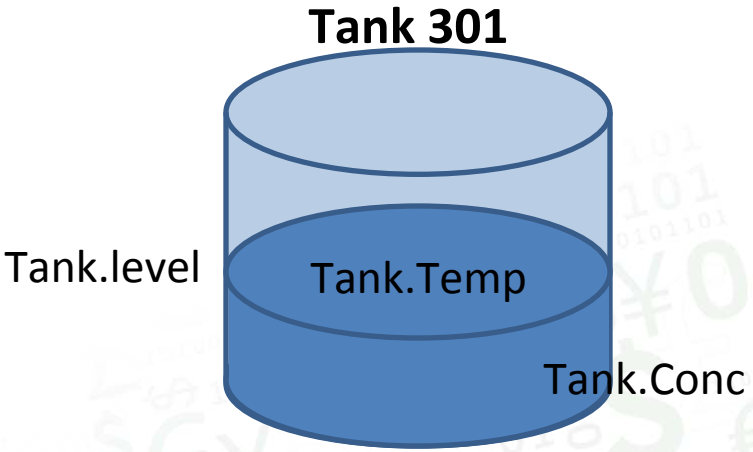


PI Server

Modules and Aliases

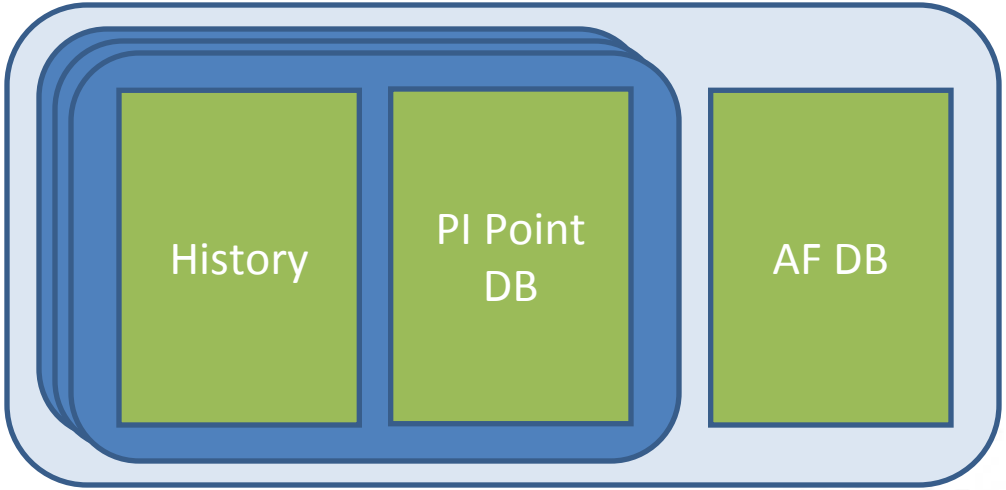


Search by tree navigation

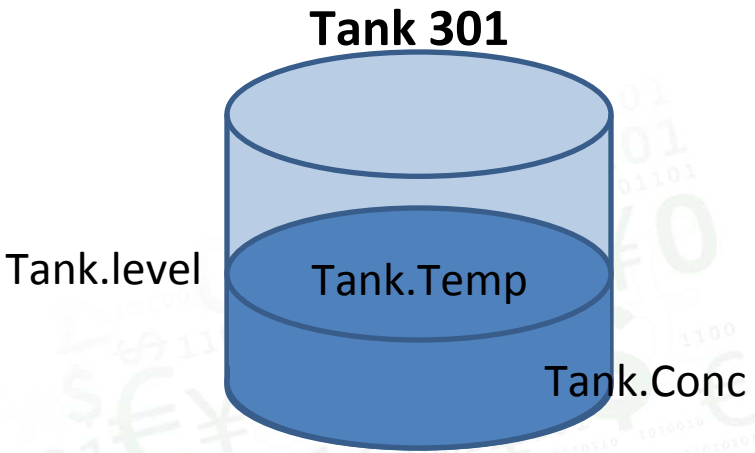


Asset Framework

Elements and Attributes



Search by mask, type, value



PI System Clients

Find

Search the system to find information

Analyze

Dig, diagnose and conclude

Build and Share

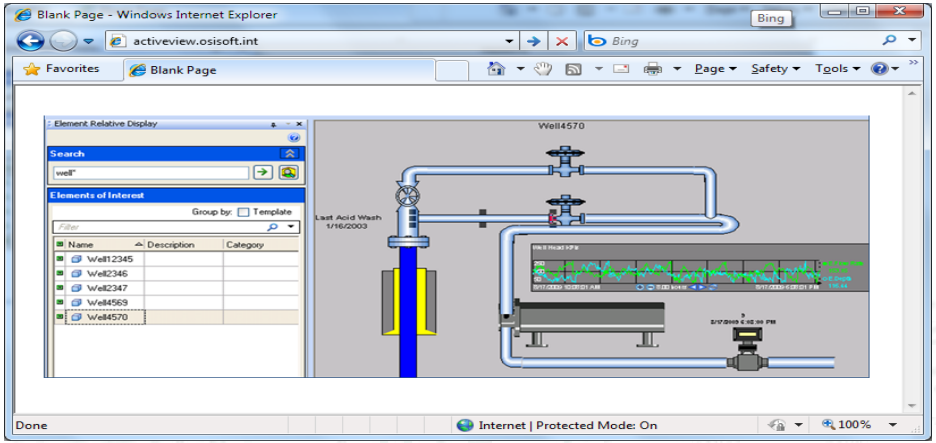
Simply build and share results

PI DataLink

- Asset view of data
- PI System Search
- Better analysis via PowerPivot and BI tools
- Report building
- Publishing for others using Excel Services

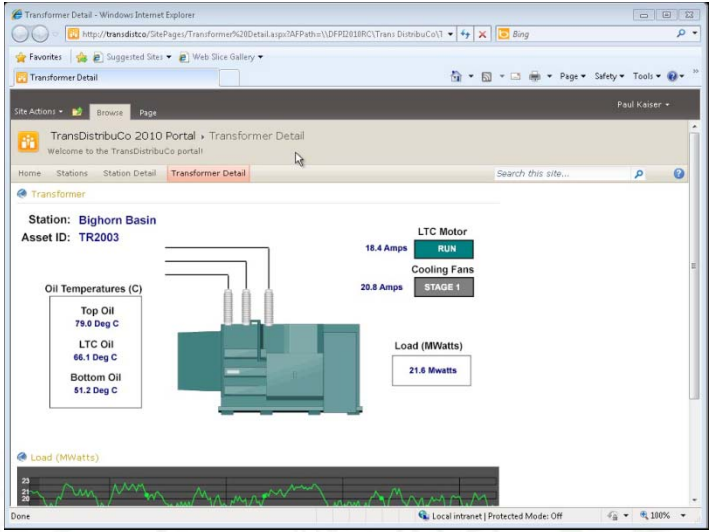
ProcessBook and ActiveView

- PI System search
- Docking Windows in ActiveView
- Time Management
- Multi-Language improvements
- Performance

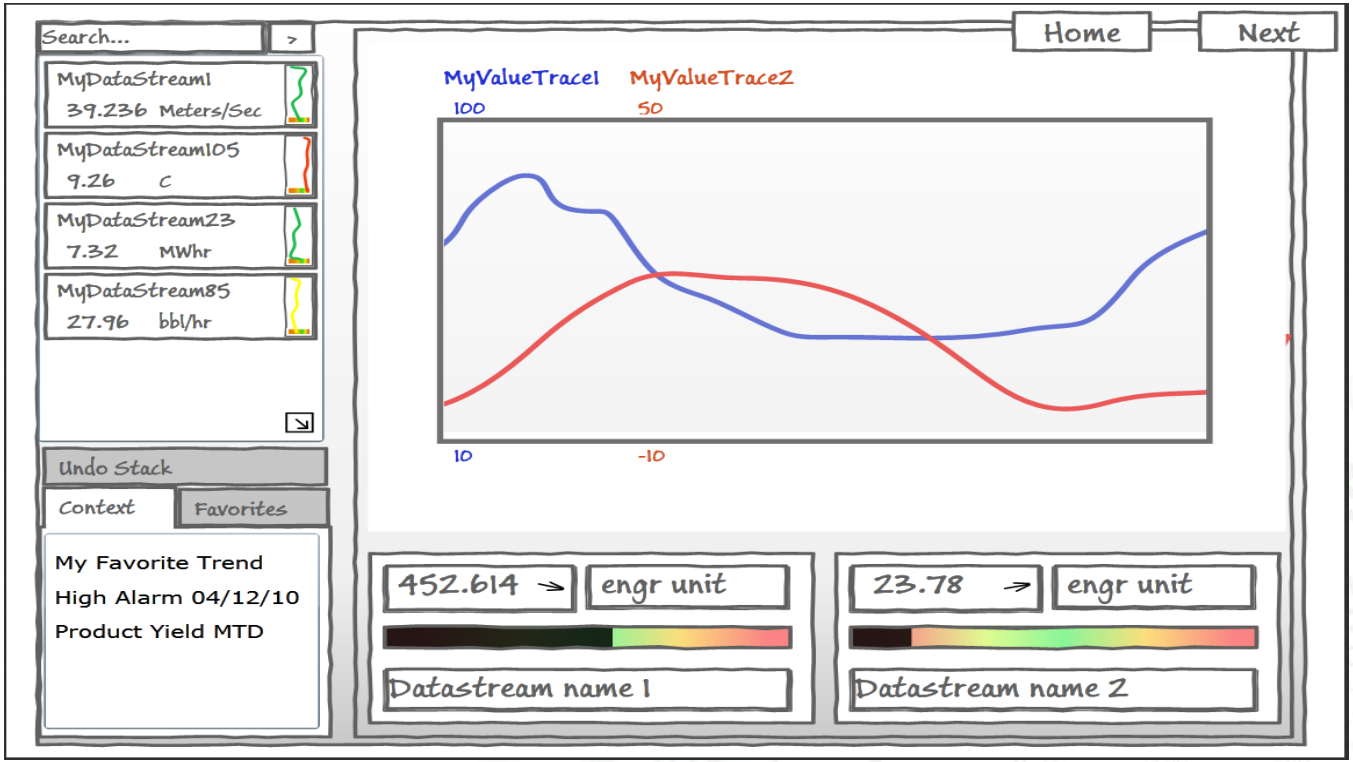


PI WebParts

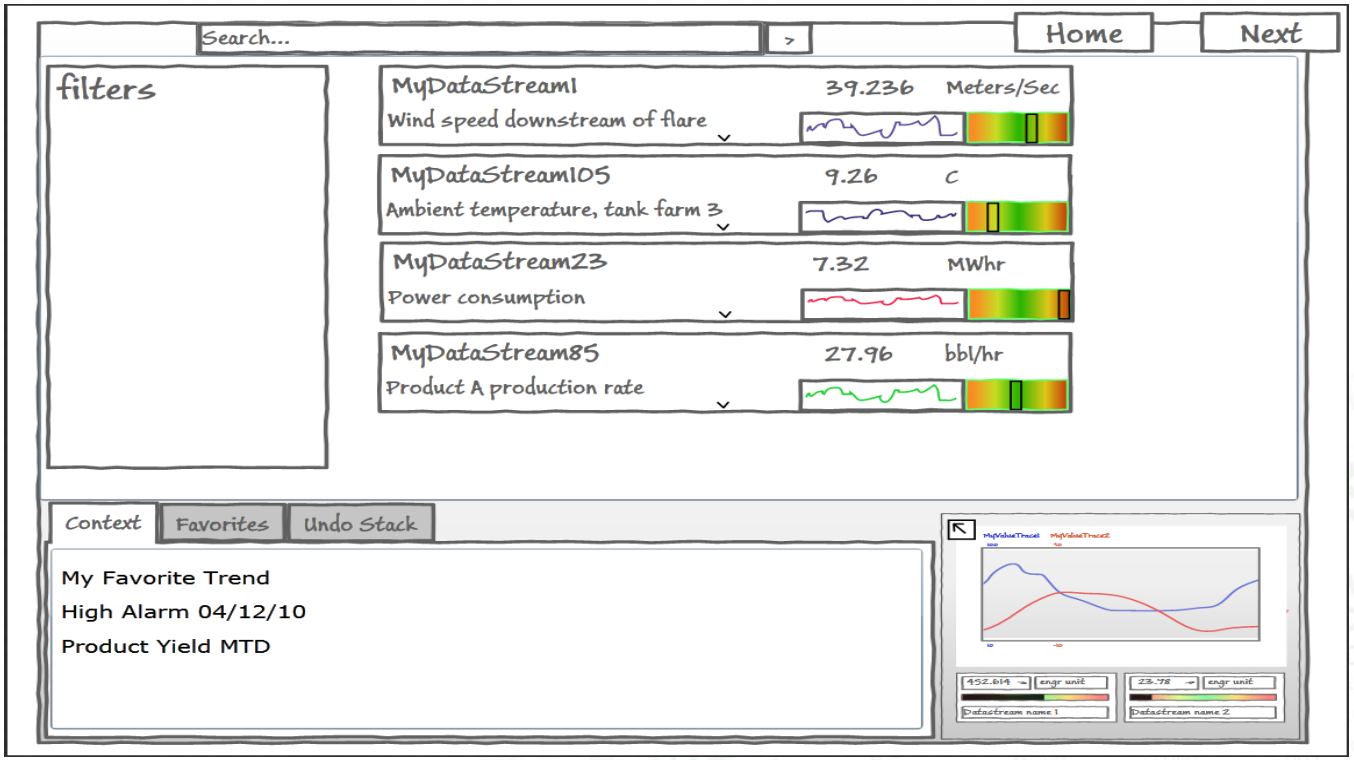
- Improved access to asset data
- PI System Search
- Deployment architecture
  - Performance, Scale, Manageability
- Improve User Interaction
- Social SharePoint System



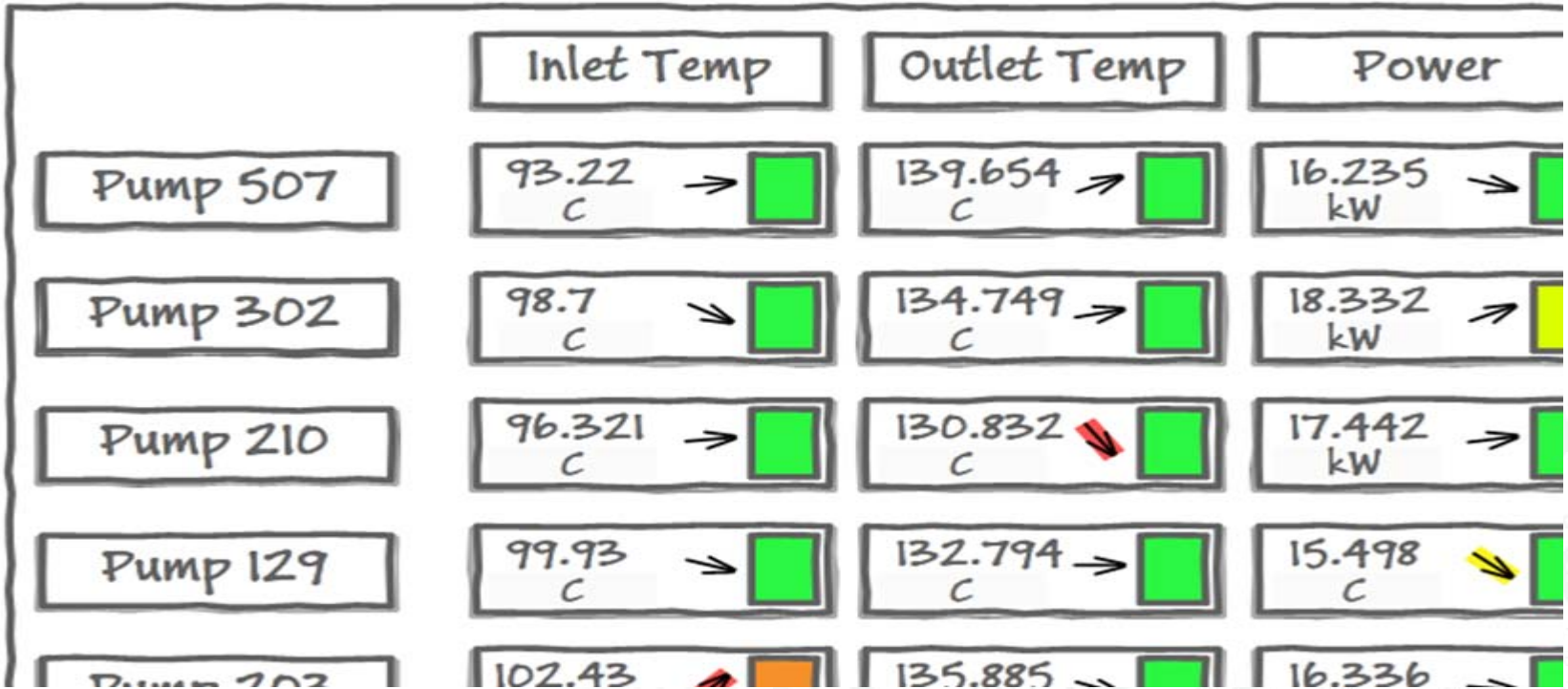
More With One Click



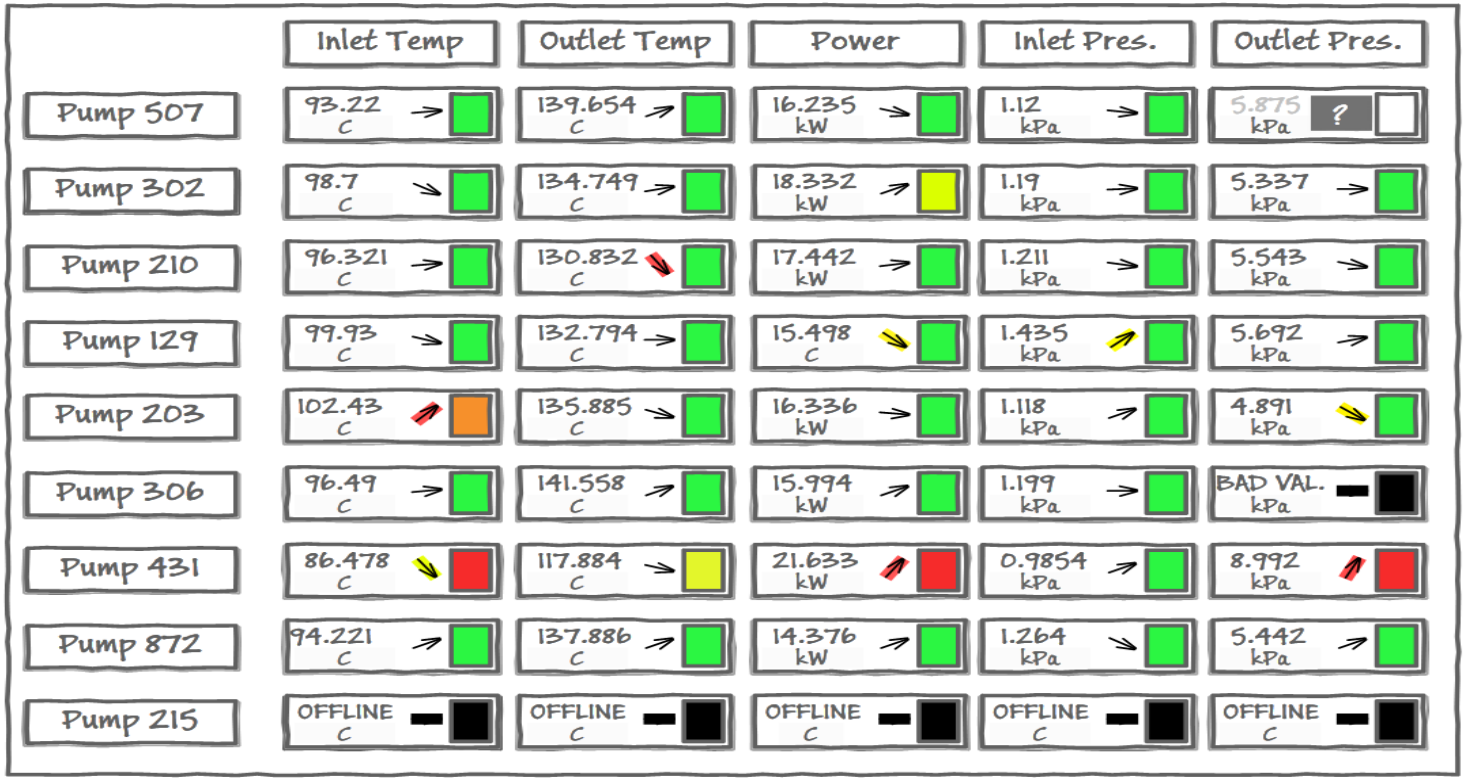
Finding Information



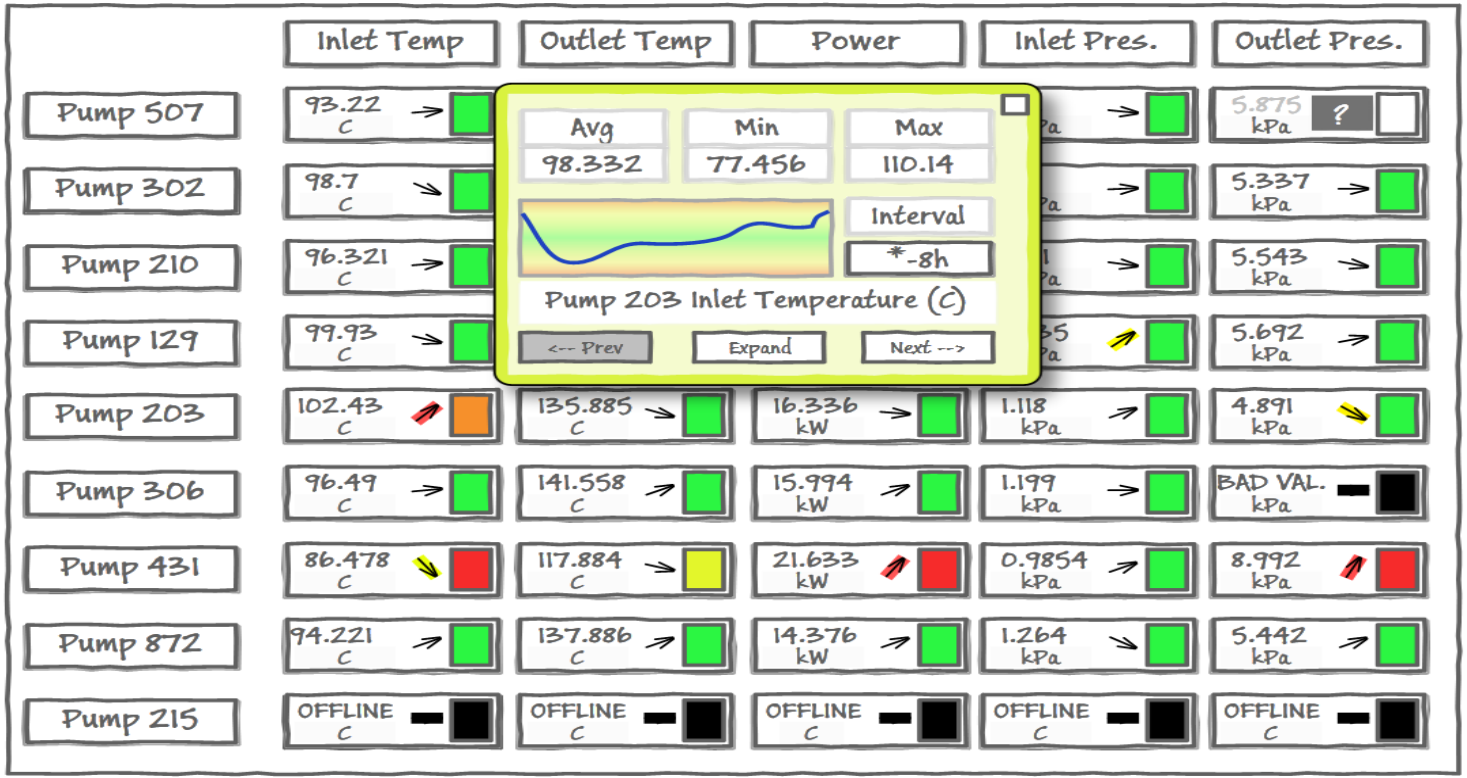
Information Richness



Value Table



Value Table



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Enjoy the Product Expo

- Product Expo: Grand Ballroom
  - Tonight 3:30 PM - ?
  - Tomorrow 8:00 - 10:00 AM
- Product Theater talks

Product and Support Teams

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Thank you