



OSIsoft®

UC2010

Real Time Information — Currency of the New Decade

Hilton San Francisco Union Square | San Francisco, CA

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PI Notifications Making a Difference

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APPLETON

What Ideas Can Do™

APPLETON

- **Founded in 1907 in Appleton, Wisconsin**
- **Focused on production of Technical Papers, Performance Packaging and Encapsulation**
- **7 manufacturing sites**
- **2,100 employees**
- **Customers in over 70 countries**
- **\$862 million annual sales (2009)**
- **100% employee owned company**

APPLETON
What Ideas Can Do™

Technical Papers Segments



Carbonless – *The world's largest producer*

- Over 285,000 tons of carbonless paper
- Application examples - business forms and receipts,



Direct Thermal – *Largest North American producer*

- Over 120,000 tons of thermal paper
- Application examples - POS receipts, baggage tags, lottery and airline tickets, ATM receipts

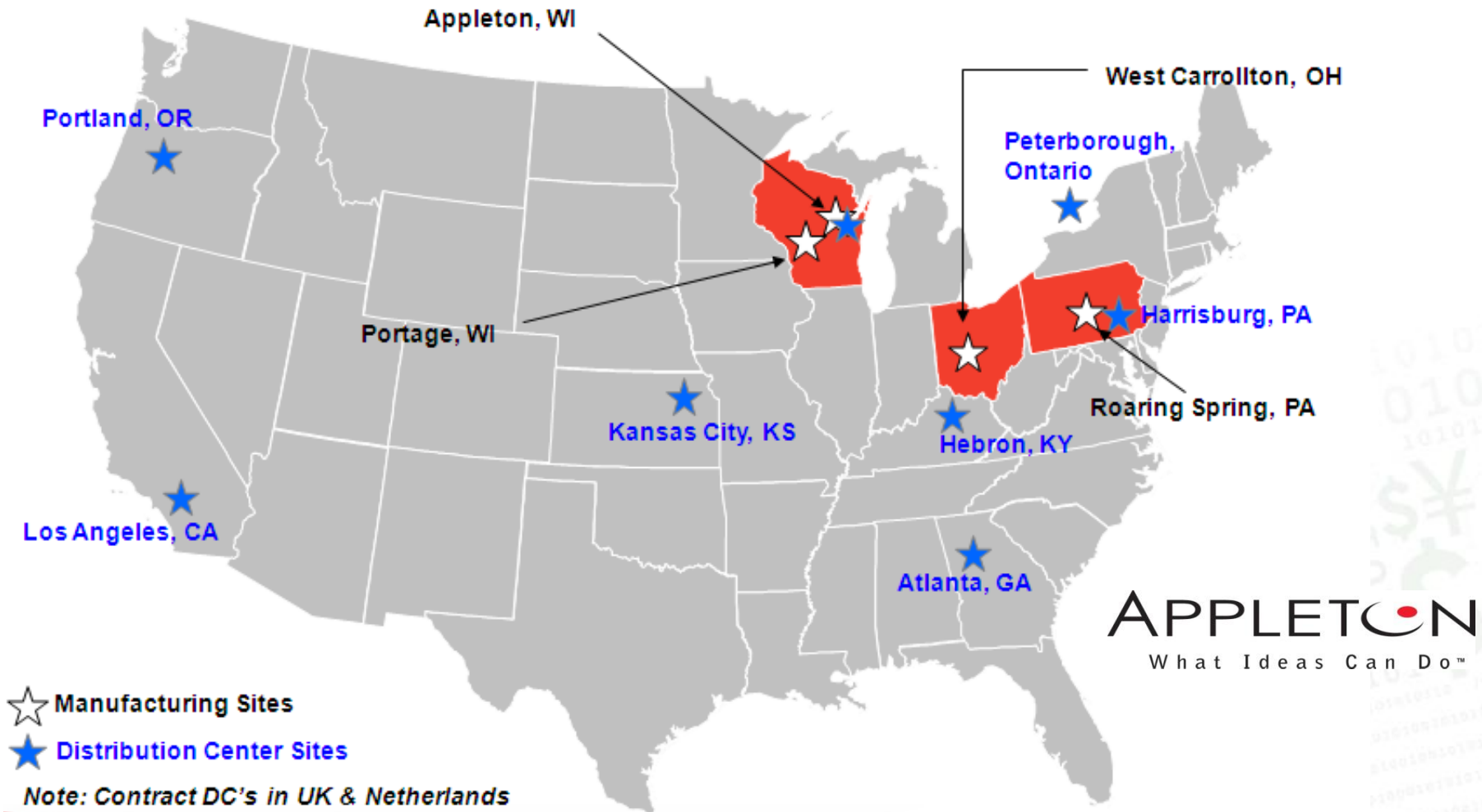


Security – *Innovative Solutions*

- Ensure the authenticity of documents, packages and products
- Everything you'd see in government currency, plus more
 - Watermarks, taggants, threads, chemically reactive products, to fully integrated solutions
 - Overt and covert features



Manufacturing and Distribution Center Sites



Performance Packaging Segments



Total Film Sales

- Third largest supplier of converter films in North America



Mono Film Sales

- General purpose sealants
- Wide variety of applications
- Printed and laminated by converter customers



Coex and Barrier Film Sales

- Three to nine layer structures engineered for the most demanding requirements
- Oxygen and moisture barrier, peel-ability, toughness, process-ability



Encapsys®

We collaborate with companies to create commercial solutions tailored to fit customer needs

- Control release through microencapsulation
- Improve yield, productivity and throughput
- Enhances products with new benefits

Collaborative Approach to Smart Chemistry Solutions



APPLETON
What Ideas Can Do™

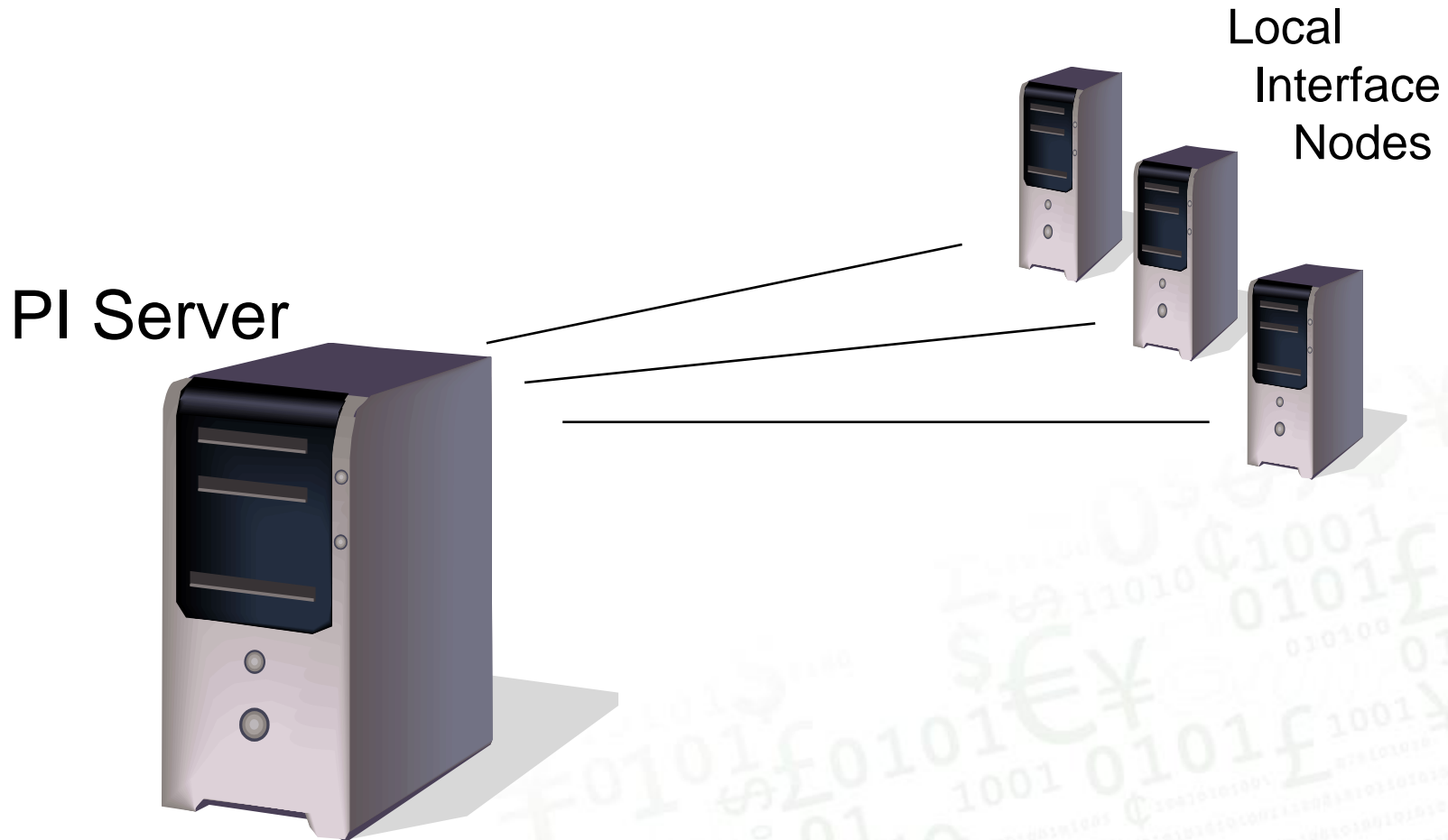
BUSINESS CHALLENGE

- Implement PI AF, Notifications and ACE within Appleton.
- Develop PI Power User Groups.
- Own our systems, Increase Value.

PI @ APPLETON

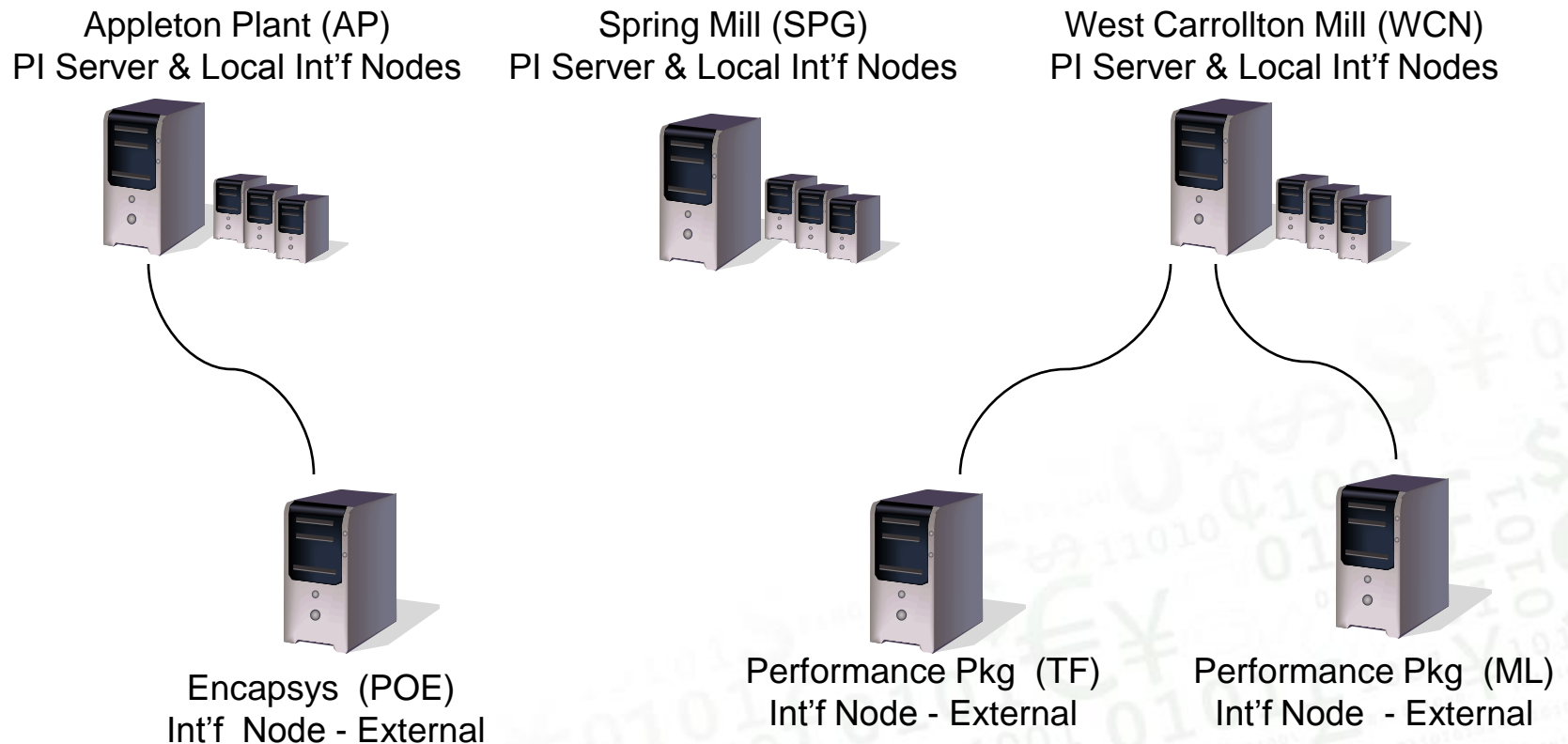
- 3 PI systems
 - Appleton Plant, Appleton, WI
 - West Carrollton Mill, West Carrollton, OH
 - Spring Mill, Roaring Spring, PA
- Serving all Technical Papers, Performance Packaging and Encapsys business

TYPICAL PI SYSTEM ARCHITECTURE (pre-project)



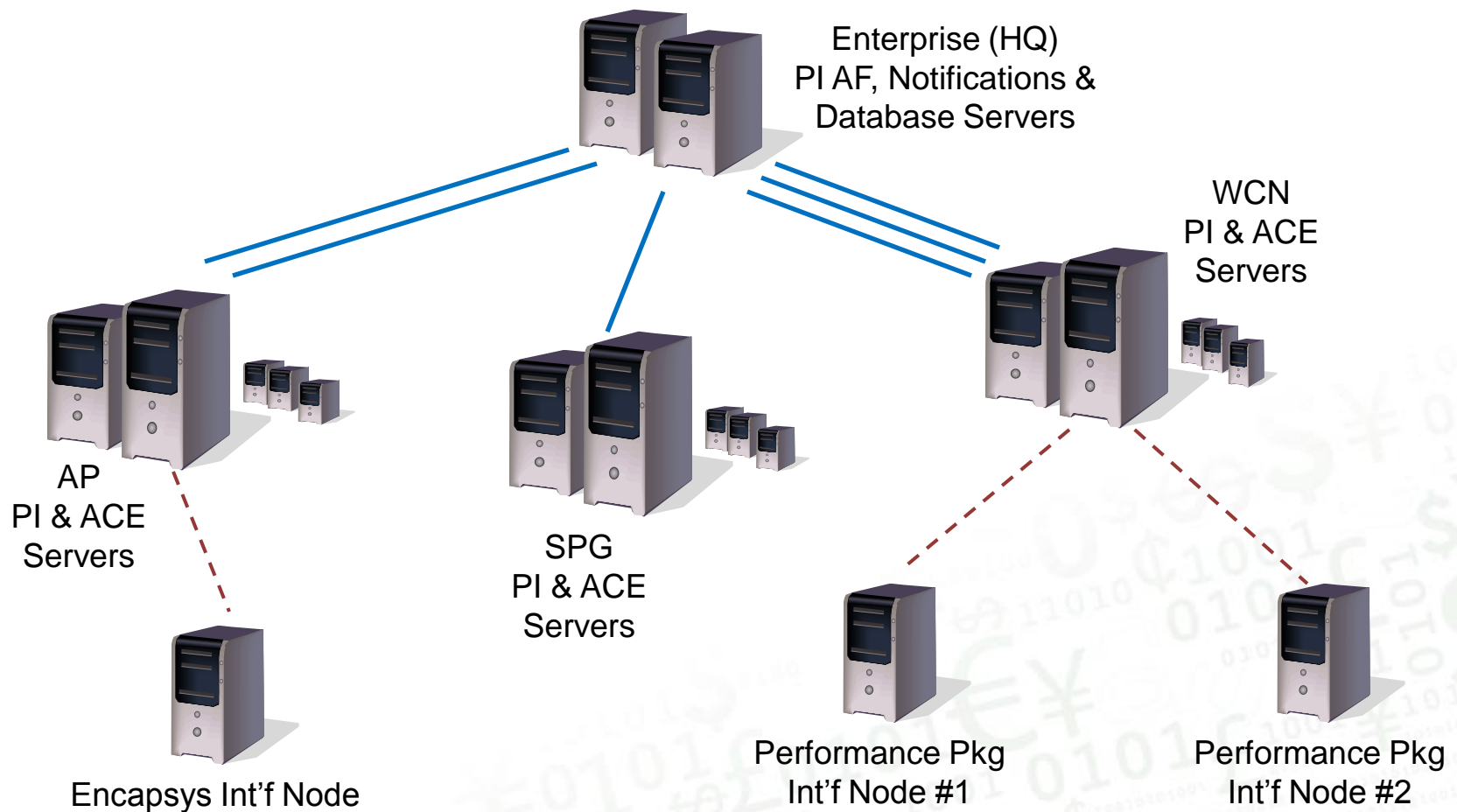
PI SYSTEM ARCHITECTURE

(pre-project architecture and data flow)



PI SYSTEM ARCHITECTURE

AF/Notification/ACE Flow - Post Installation



Central AF Notification Server

APIProd - PI System Explorer

File Edit View Go Tools Help

Database Query Date Back Check In New Element Search

Elements

- Elements
 - Appleton Plant
 - AP CVS
 - AP Design # 1
 - AP Design # 2
 - AP Design # 3
 - AP Design # 6
 - AP TVS
 - AP Utilities Area
 - z AP Elements (admin use only)
 - C & H Packaing
 - Corporate Organization
 - Performance Packaging
 - Technical Papers
 - Merrill Plant
 - Milton Plant
 - Performance Packaging
 - Portage Plant
 - Spring Mill
 - Spring Mill Broke System Model
 - Technical Papers
 - Turners Falls

Elements

Group by: ☐ Category ☐ Template

Search

Name	Description	Category	Type	Template
Appleton Plant	Appleton, WI - Coating and Converting...	Converting Plant	Node	Facility
C & H Packaing	Rhineland, WI packaging production...	Packaging Plant	Node	Facility
Corporate Organization			None	
Merrill Plant	Merrill, WI film extrusion plant	Extrusion Plant	Node	Facility
Milton Plant	Milton, WI film extrusion plant	Extrusion Plant	Node	Facility
Performance Packaging	Plastic Film and Packaging Manufactur...		Node	Division
Portage Plant	Portage, WI - CapsulePplant	Capsule Plant	Node	Facility
Spring Mill	Roaring Spring, PA pulp and paper mill	Paper Mill	Node	Facility
Spring Mill Broke System Model		Tank	Node	Tank
Technical Papers	Plants and Other Facilities related to pa...		Node	Division
Turners Falls	Turners Falls, MA film extrusion plant	Extrusion Plant	Node	Facility
West Carrollton Mill	West Carrollton, OH paper mill	Paper Mill	Node	Facility

Appleton Plant Modified:6/26/2009 7:06:52 AM. Version: 1/1/1970 12:00:00 AM, Revision 1

Elements

Event Frames

Library

Unit of Measure

MyPI

Notifications

Contacts

Project Goals & Team

- Common enterprise approach and structure
- Reusability – Share and Replicate successes...
- Leverage business knowledge
- Expand PI system knowledge & develop experts
- Maximize current investments – Drive Value
- Reach the Next Level → Make a Difference!

PI Notifications

Question

- Operational Excellence
- Lean Manufacturing
- Kaizen Events
- Six Sigma

How do these relate to

- PI Notifications ?

Answer

Opportunities !

to make a difference.

PI Notifications

Six Sigma

“Types of Waste”

- Transportation
- Inventory
- Motion
- Human Potential
- Waiting
- Over Production
- Over Processing
- Defects

PI Notifications

Practical Business Approach

- **Process Awareness**
- **Diagnostic Notifications**
- **Intelligent Manufacturing**
- **Manage Operational Demands**

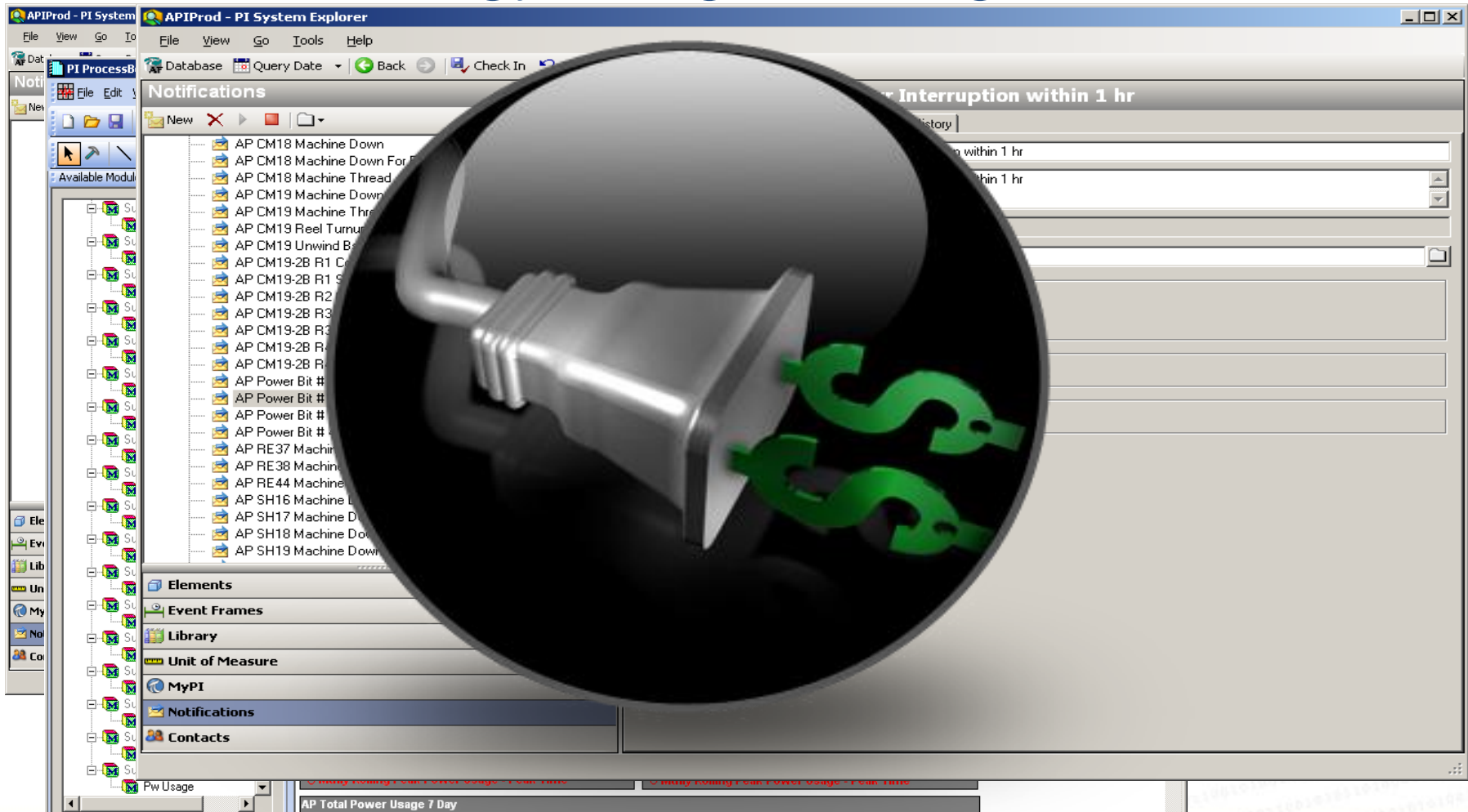
PI Notifications

Process Awareness

- Startup Management
- Key run conditions
- Safety
- Environmental
- Energy Usage Management

Process Awareness

Energy Usage Management



PI Notifications

Diagnostic Notifications

- Quality Alerts
- SQC Monitor (unattended rule based process monitor based on Statistical standards)
- Process and Instrumentation Monitoring

PI Notifications

Intelligent Manufacturing

- The PI system monitors the process, notifying operations when key events occur then communicates results.
 - Employees focus attention in key areas resulting in efficiencies in time management and resources.
 - Information flows to the correct people when it is needed.
- Based on user defined business rules, the PI system calculates and notifies user on key measures or events.

PI Notifications

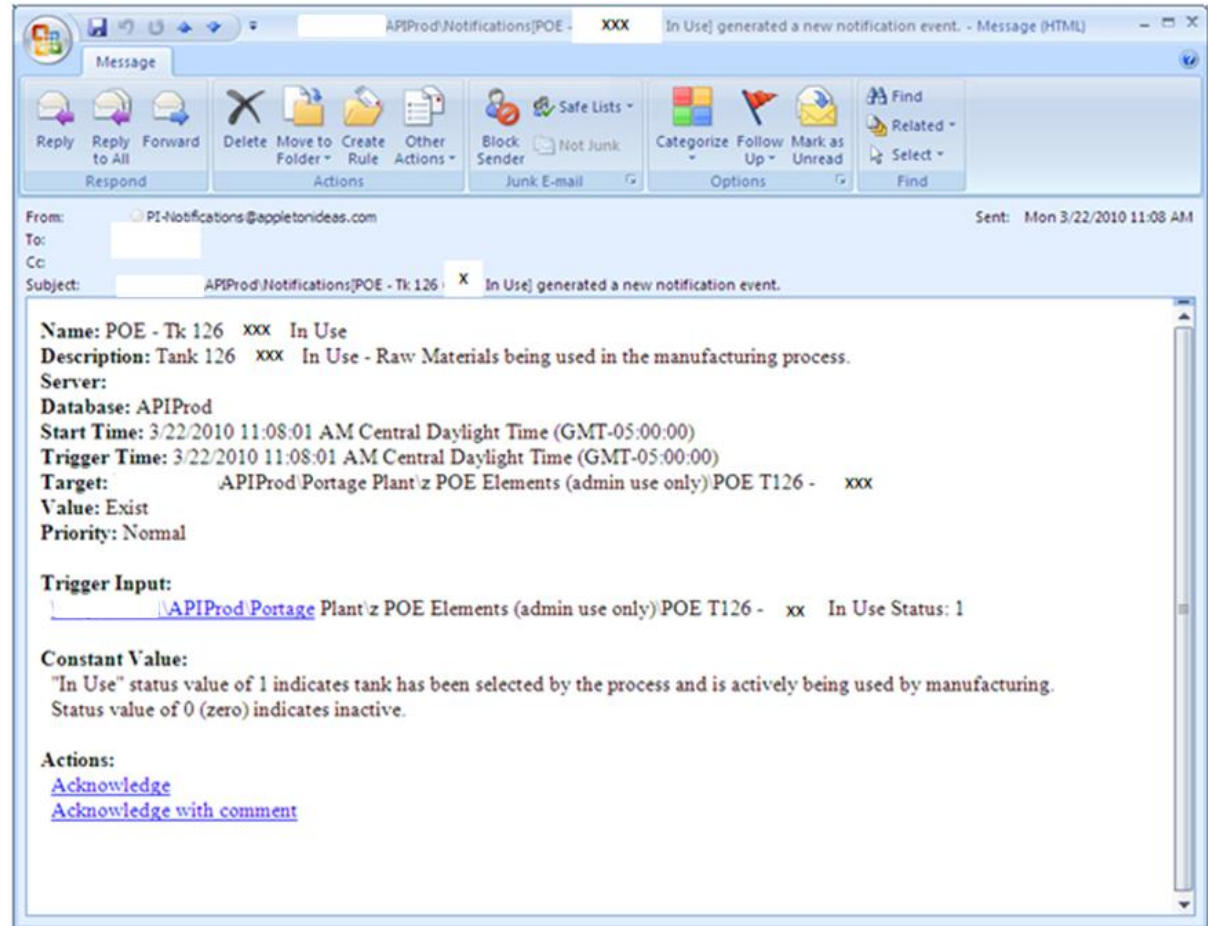
Intelligent Manufacturing

- Optimization Opportunities
- Material Usage
- Significant Operational Changes
- Multi Process Aware

“Real time, exception based process management.”

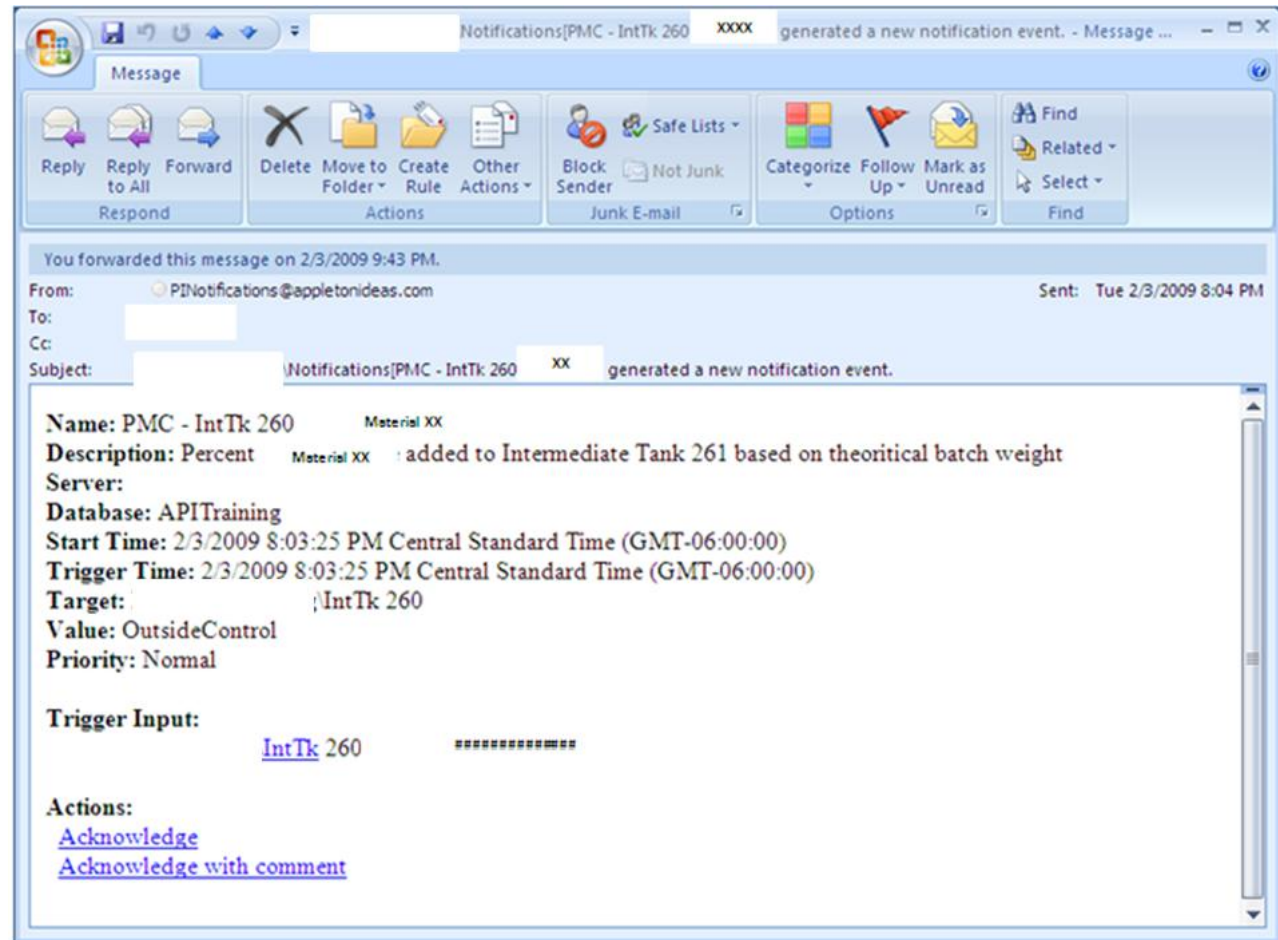
Intelligent Manufacturing

- PI Monitors raw material tank inventories, Then notifies operations upon raw material switch.



Intelligent Manufacturing

- PI Monitors complex, staggered manufacturing operations – Notifies upon key events.
- PI Notifies operations when process can be optimized without sacrificing quality.



PI Notifications

Manage Operational Demands

- The PI Notification system oversees the operation permitting staff to focus on strategic and value added.
Not so much on the tactical.
- Time or event rules; based on user driven logic . Simple to complex based on business opportunity.
- Campus Aware

Manage Operational Demands

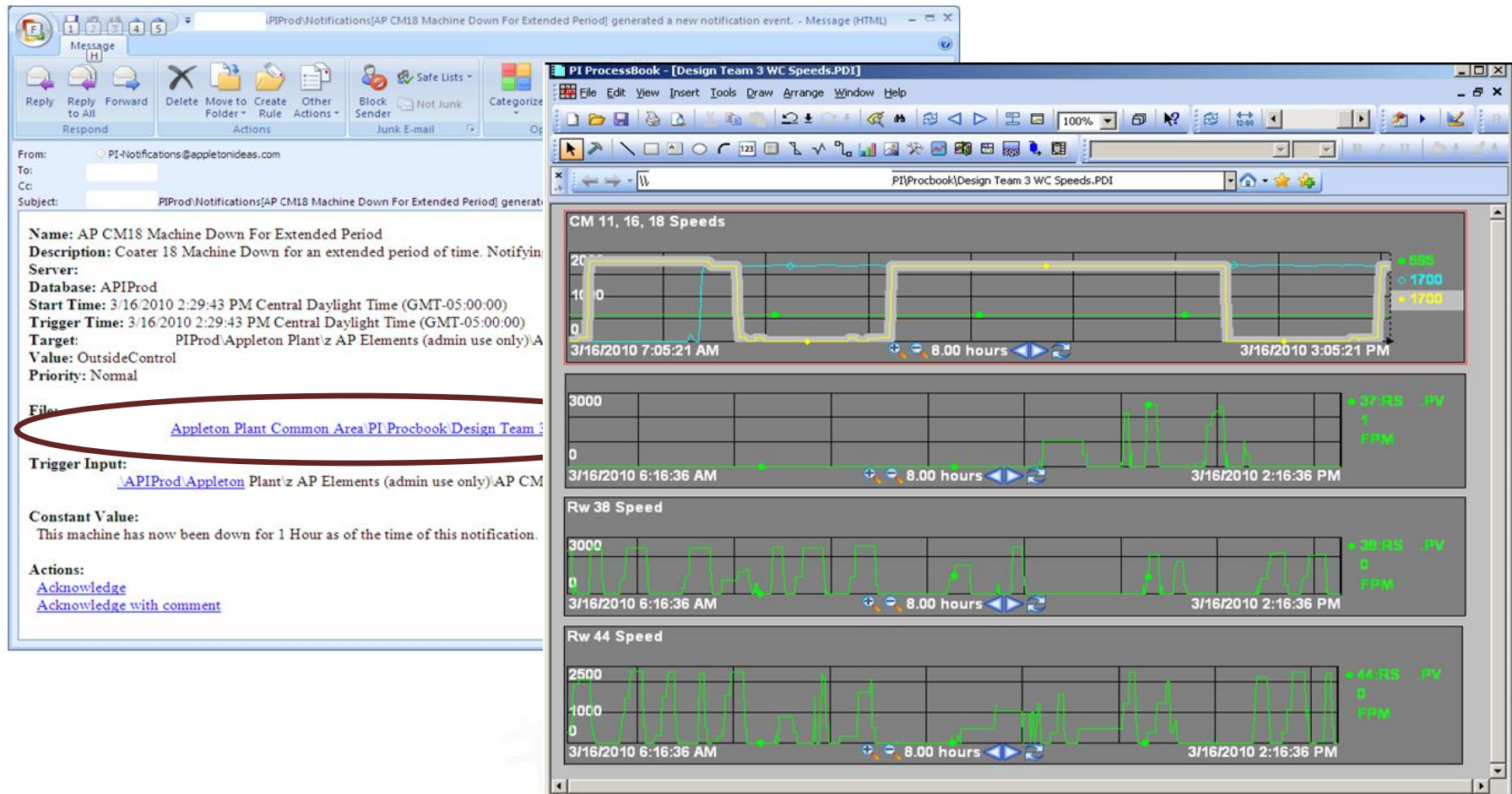
Scheduling Awareness, Responsiveness, Flexibility, Communication, Optimization, Service

- Kaizen Event – “Scheduling Harmony” – Dec 2009
 - Manual System & Control Measures
- January 20 – Follow-up & Challenges Identified
- Process Engineer (Kirk Lesser)
 - Suggests PI Notification solution to PIC Coordinator (Bob Schemm)
 - Discussions with Scheduling and PI Admin (details finalized 1/28)
- February 3 – PI Notification Solution Implemented
- February 8 – Success communicated by user to plant staff

“Quick! Nimble! Adaptive!
Successful and User Driven

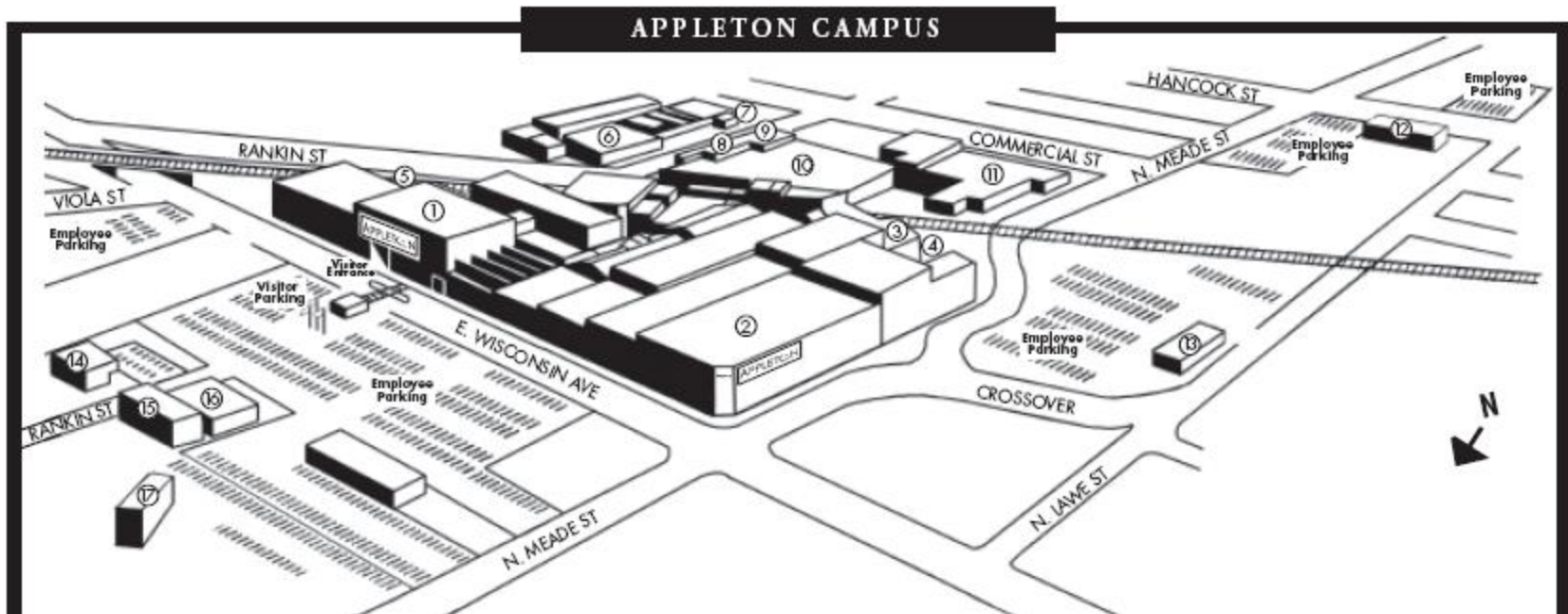
Manage Operational Demands

Scheduling Notification & PI Display



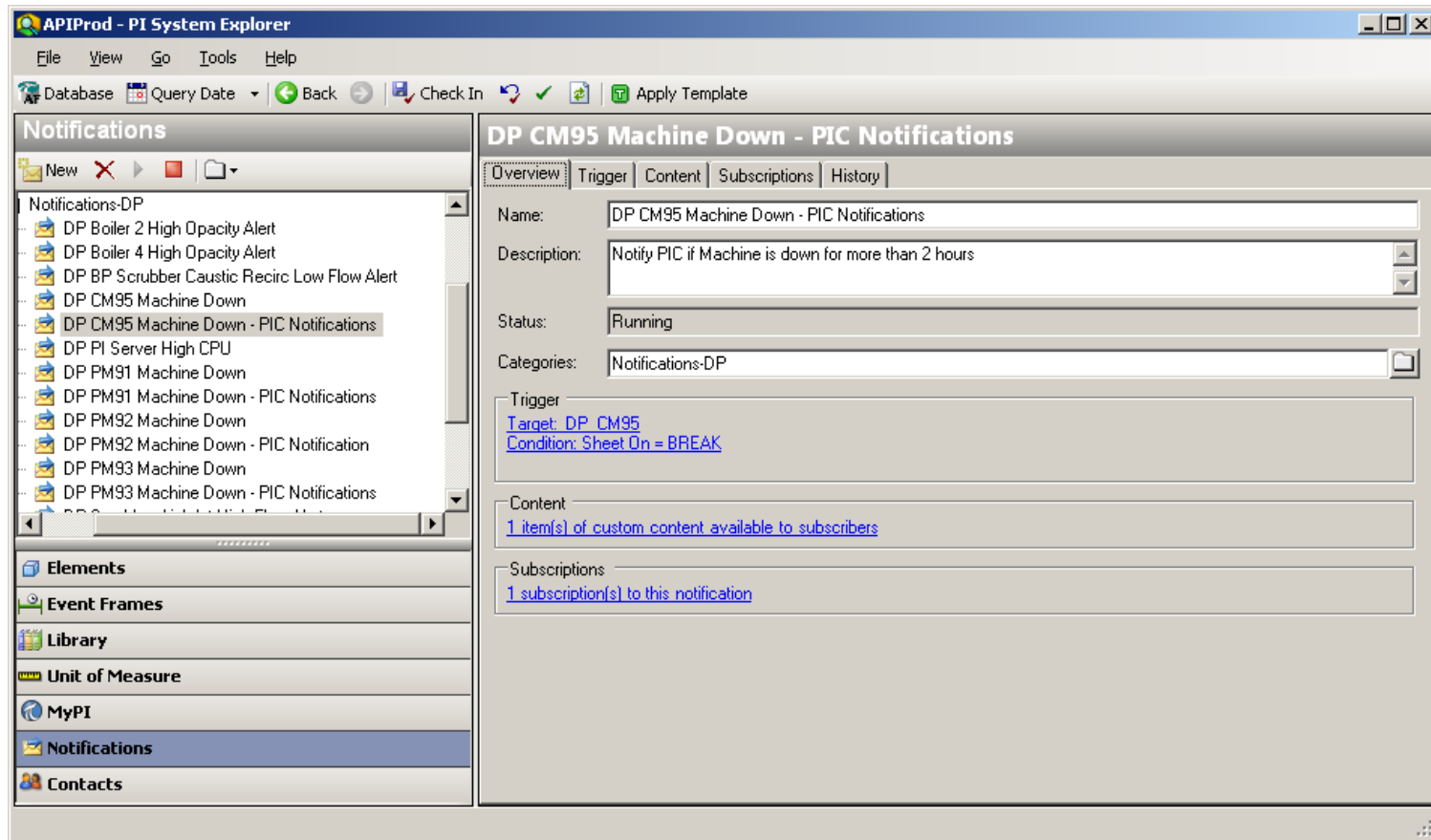
Manage Operational Demands

Campus Aware



Manage Operational Demands

- Reusability – Share and Replicate successes...



PI Notifications

“Manage the Tactical”
so you can
“Focus on the Strategic”

FUTURE PLANS / NEXT STEPS

- Continue with the development of local power users group
 - *develop our experts, leverage their business knowledge*
- Cross location power user group quarterly meetings
 - *share and replicate successes*
- Upgrade to AF 2.1.1 & PI Notifications 1.1
- Conditional Based Maintenance Notifications
- Incorporate Quality and MES SQL Attributes into AF
 - *add value, grow, integrate systems, information synergy*
 - AF - The whole becomes greater than the sum of its parts.
- Expand the Value of PI Batch (Event Framing)
- Implement PI WebParts

Results

- PI Notifications enabled employees to be in the position of greatest potential to:
 - Optimize Startup and Operations
 - Improve Scheduling, Inventory, Service
 - Reduce Waste
 - Operational Creativeness
 - Process Visibility and Management
 - Apply Their Knowledge

Results

- **WE Interruptible Program**
 - **Benefits of PI Notifications**

“Allows for immediate plant wide notification to prepare for pending outage. This gives production, engineering and maintenance personnel additional time to coordinate production and prepare machines shut-downs to avoid: equipment failures, loss of coating, and loss of saleable product.”

- Bill Haag, Appleton Plant Associate Electrical Engineer

Summary

- Improvement
- Ownership
- Creativeness
- Value
- Sharing
- Operation Awareness
- Communication

Questions

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Thank you

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