OSIsoft

Regional Seminar Series

Seeing Clearly in the New Reality

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Empowering Business in Real Time.

One Year ago – Lehman Brothers collapse

- Yesterday (9/14/08) is 1yr anniversary of Lehman Brothers collapse
- Biggest bankruptcy in US history
- Sale of Bear Stearns to JPMorgan Chase and Merrill Lynch to Bank of America transformed Wall Street and started wave of problems in all industries
- All businesses struggled with the new reality

Crisis = Opportunity

- Lehman reminded us that crisis creates opportunity
- Baron Rothschild – The time to invest is when the streets are “red with blood”
- Carnegie built first Steel Mill during Panic of 1791 (French Revolution)
- Bill Gates started Microsoft in 1978 Recession
- One result of financial crisis is $787 billion stimulus program, including $4.5M for AMI pilot projects

Need Data Infrastructure

- Many of our customers were impacted by the financial crisis
  - Mandate to cut costs and “do more with less”
  - Innovation needs information and collaboration
  - Plus existing pressures of regulatory compliance, competition, globalization, etc
- Need ability to improve situational awareness and correct the direction when we are wrong or when external influences change
- Goal: respond faster and to adapt as industry changes based on having flexible infrastructure

International Paper

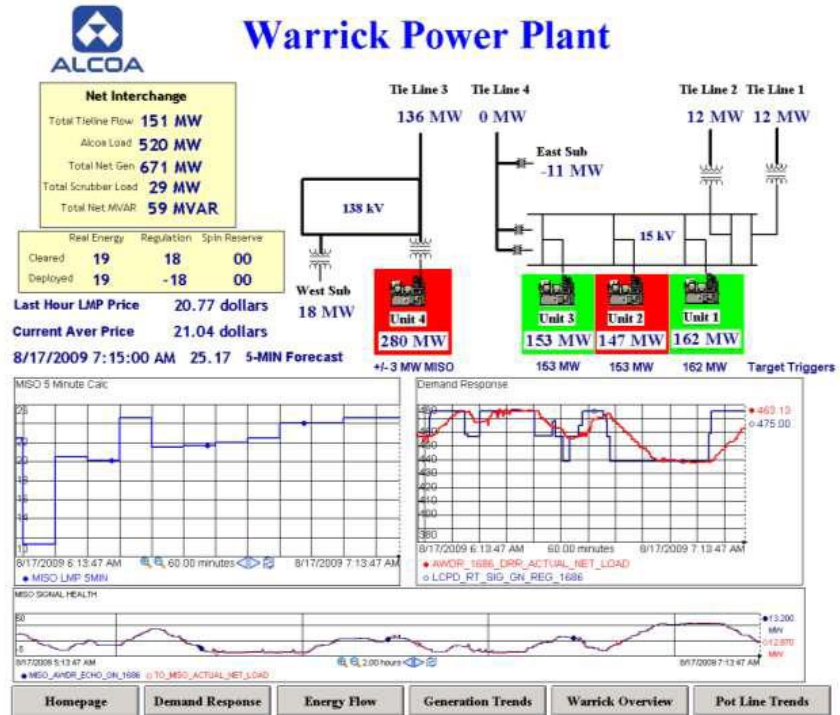
- One key benefit of common infrastructure is “unplanned” value
- International Paper
  - Greatest benefit was Environmental Monitoring
  - This requirement wasn’t on radar screen when PI purchased
  - Came up very immediately after deployment
  - Able to quickly respond to this operational challenge because common infrastructure to integrate with
  - Disguised many disparate systems under a common real-time layer, so programs had enterprise applicability
- That’s PI helping very large paper company, let’s see about smaller one

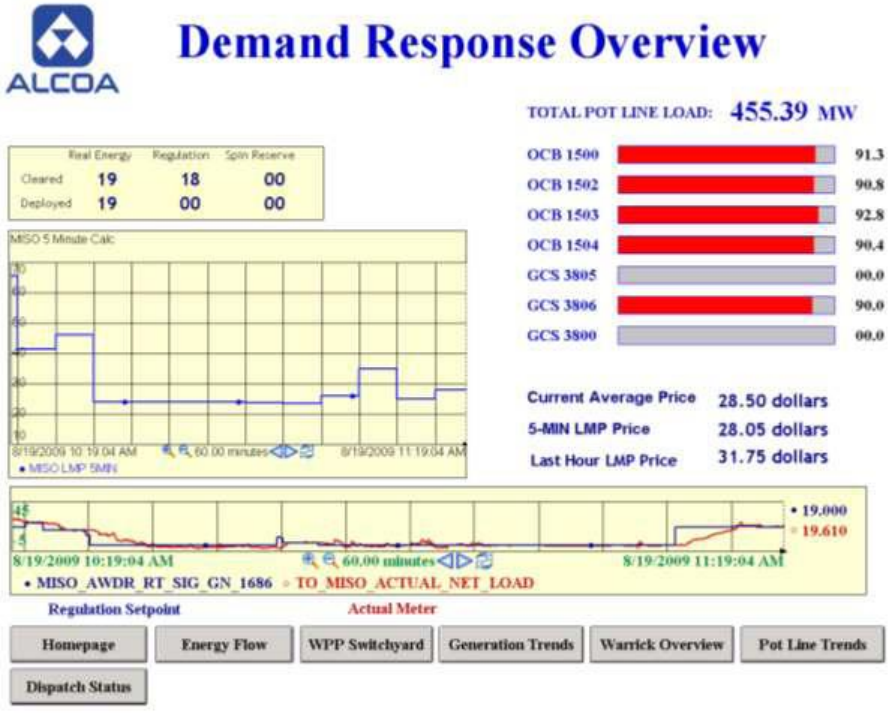
Smart Papers – Hamilton, Ohio

- 116-year-old paper company
- Decided to actively market electricity produced by cogen plant
  - Can produce 37 MW, including 20 MW it can sell
  - Established itself as a CRES (competitive retail electric supplier) in Ohio
- Monitoring price swings looking for opportunities to produce more electricity
- Close to having their first tenant/customer for the "micro grid"
  - Company will build their plant in one of the buildings on site, Smart will sell power and water and handle water treatment
- PI enables this business model

Alcoa – Warrick, Indiana

- Fully integrated power plant (800MW), smelter (1960s) and rolling mill
- Warrick is Alcoa's largest US smelter, energy is 30-40% cost of aluminum mfg
- MISO controls top 30MW of load – saved $1 million/yr





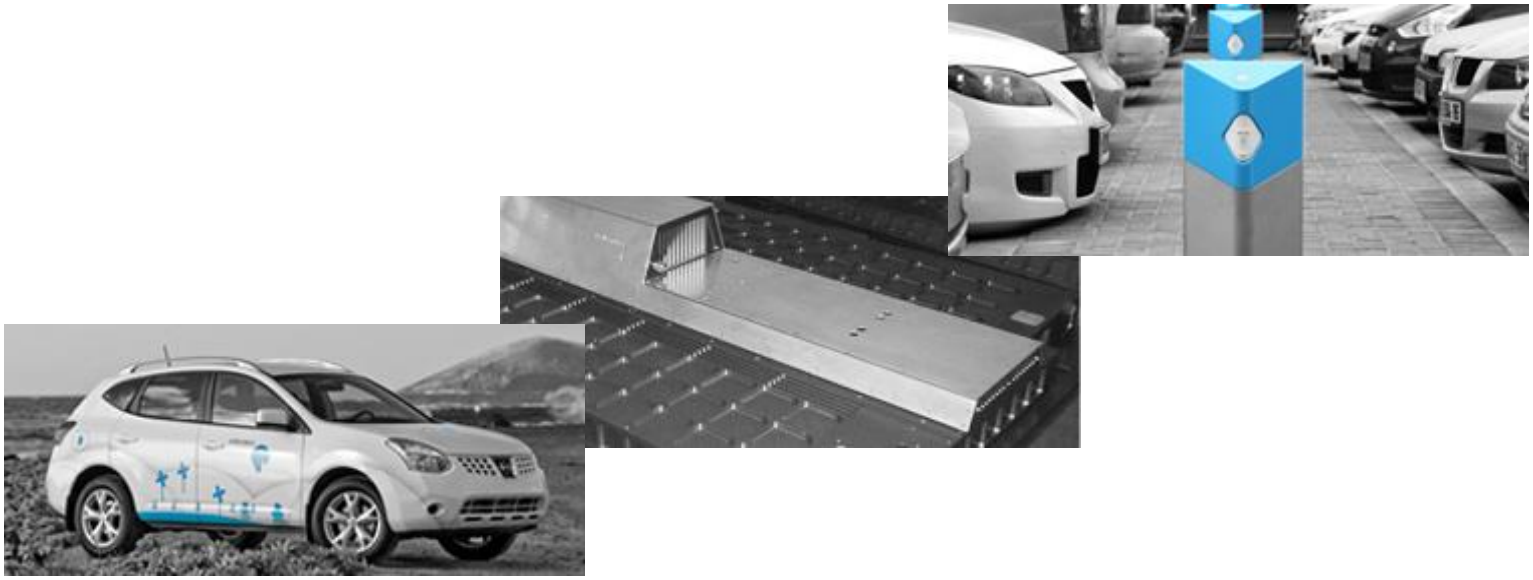
Manufacturing Changes

- Those are some PI examples of having data infrastructure to respond to market/industry changes
- Other types of changes are coming

Manufacturing Changes

New Business Models : Shai Agassi company “Better Place”

- Distributed manufacturing of vehicle
- New infrastructure for operation, infrastructure owns battery
- Environment driving force in new business model



Sensors Everywhere

Something Old Something New: Minnesota Bridge

Bridge Performance - Sensors for bridge movements, expansion, contraction, corrosion, icing

Bridge Operation - sensors and cameras for traffic flow, speed, disruptions, accidents, stalls and other disruptions, security

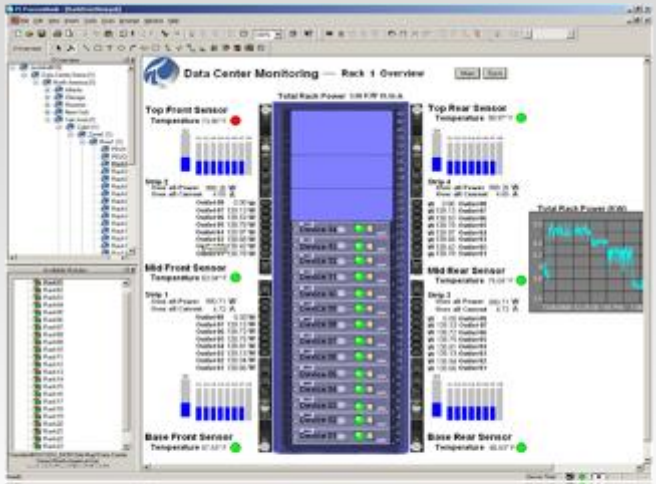
Real Time Needed – Summary of Accidents not useful for Operation – like getting Summary of House Fires at end of Month

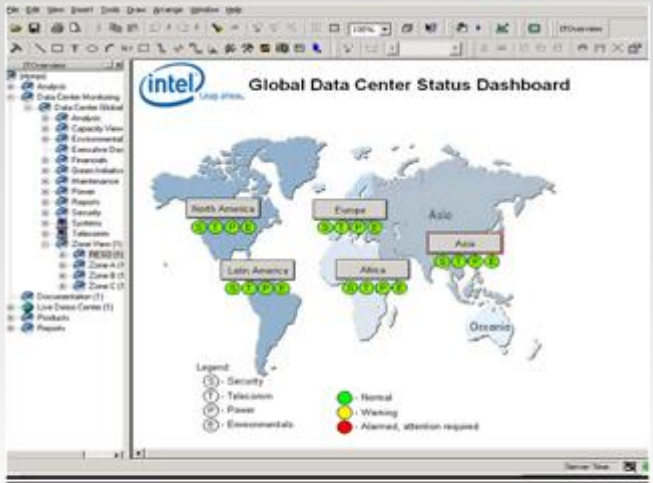
Sensors Everywhere

New Business – e.g. Data Center

- Consume more energy annually than Sweden
- New NC Facilities – Google for Search, Apple for iPhone Apps
- Expansion of Existing – Bing Search of Twitter, Messaging
- Cloud based Storage – Flikr, Data Storage
- Business – Amazon, E-Bay, Craig's List
- Web 2.0 Sites – Facebook

Industry – Data Centers, IT & Telecom





OSIsoft has a role in this space – the DC is like plant

Microsoft was our first customer

Sensors Everywhere

New Business – e.g. Facilities

- 5 million commercial buildings in USA
- Recent Texas A&M study: buildings degrade up to 25% after 2 years from commission date (or re-commission date)
- Less than 0.05% of existing commercial buildings and 5% percent of new ones undergo commissioning for energy efficiency

Smart Grid - Enabler

Largest Distributed Plant: Smart Grid

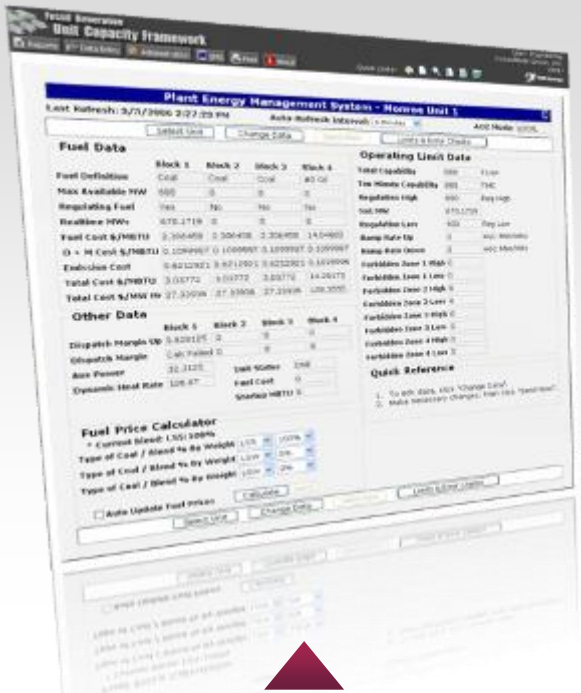
- Plant: Power Generation, Distribution and Transmission, Consumption
- Technology: Smart Equipment, Storage of renewable energy, AMI (Demand response pricing), Energy improvements
- Environment: Conservation, Renewables, Carbon Foot Print
- Techniques: Reliability, Energy Monitoring, Efficiency Studies

Manufacturing and the Smart Grid

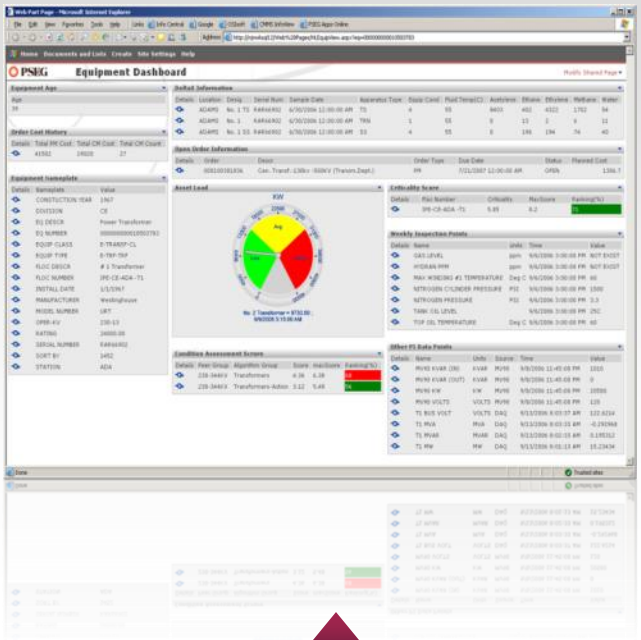
Evolving Shift from Industrial Age to Information Age

- Telcom industry change – cell phones, VOIP, SMS, Web 2.0, SaaS, DaaS
- Smart Grid is an Enabling Technology
- Rise of Microgrid – knowledge of applying power to manufacturing process - MaaS
- Convergence of Information and Energy
- Learn from deregulation of telecom
- Like Dot.com, will see 100's of failures and a few game changing winners

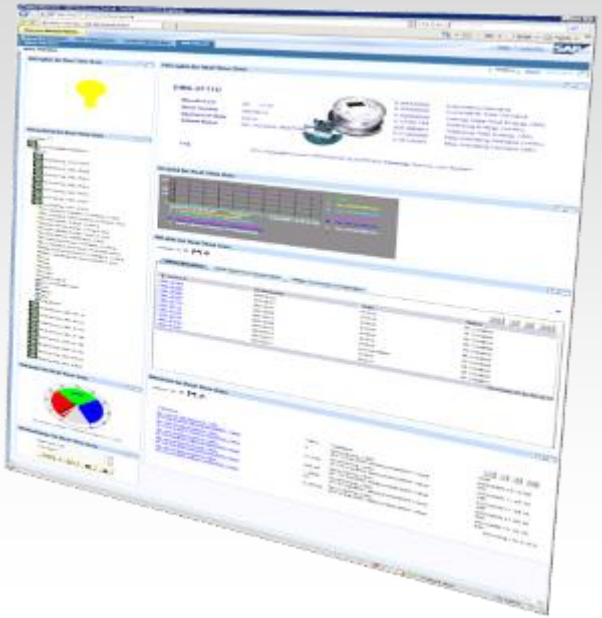
Smart Grid



Power Generation Energy Management Support



Transmission & Distribution Dashboard



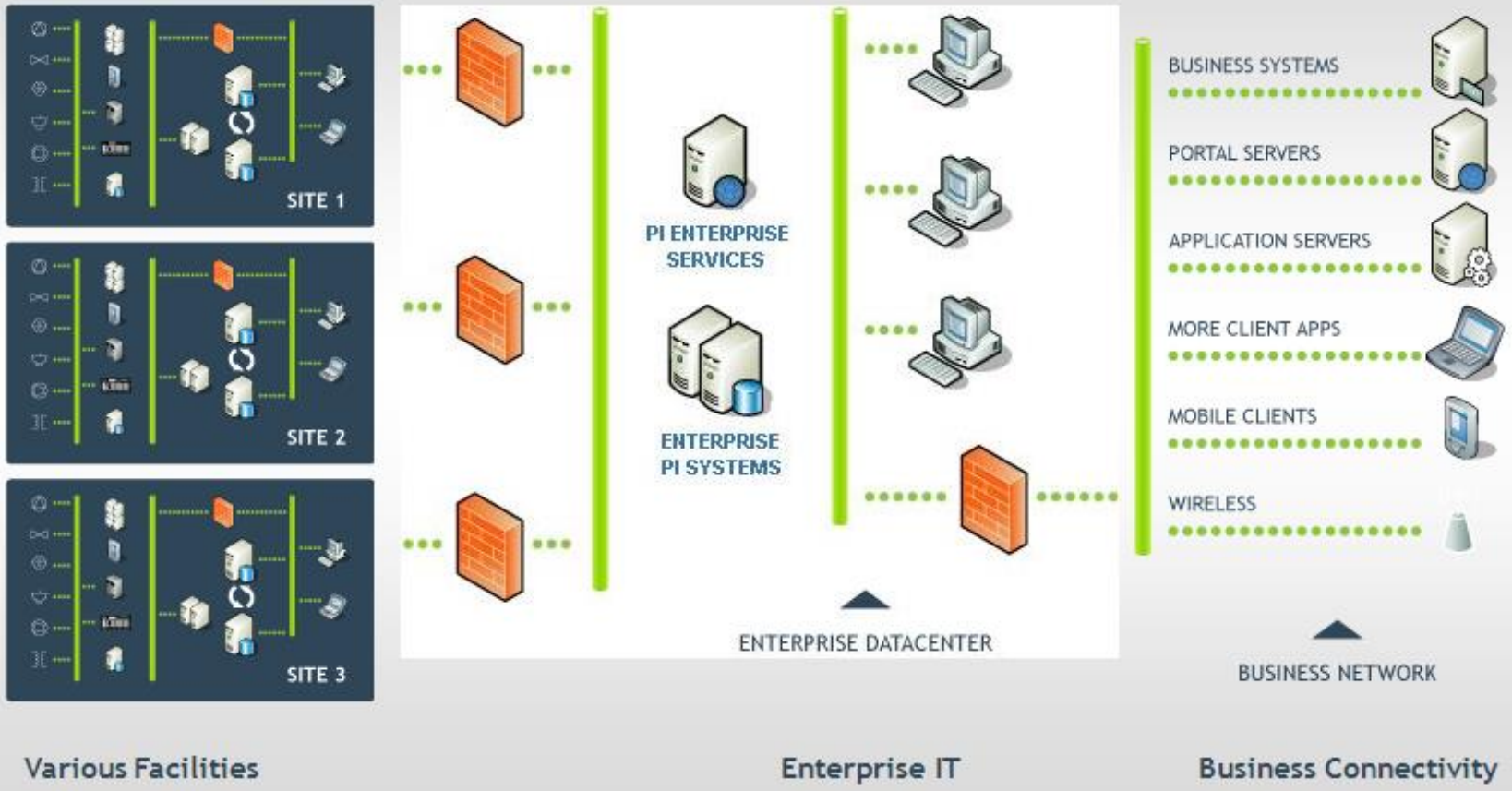
AMI

Empowering Business in Real Time.

Role of the PI System:

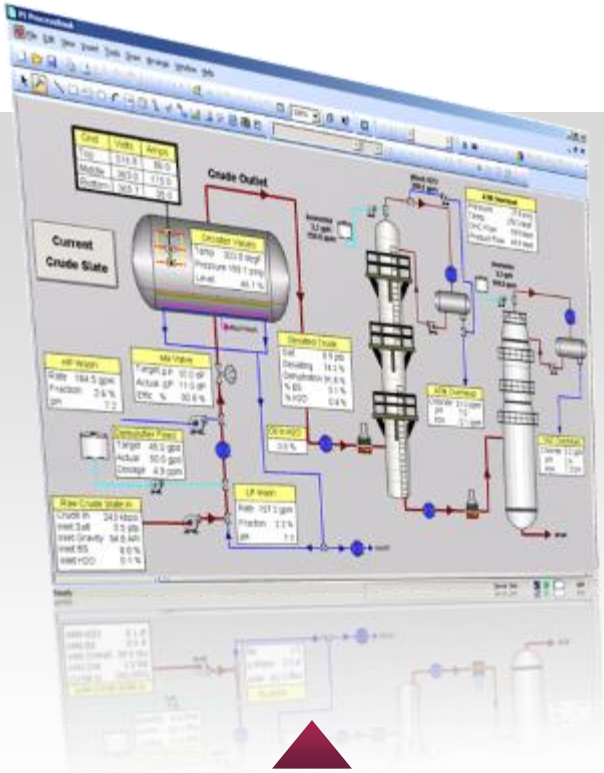
- Data Capture and Storage
- Distribute to Virtual Collaborative environment
- Event, exception based alerts – work by exception
- Aggregation and Communication of Info to Business
- Goal: rapid deployment & zero maintenance

PI Systems across the Enterprise

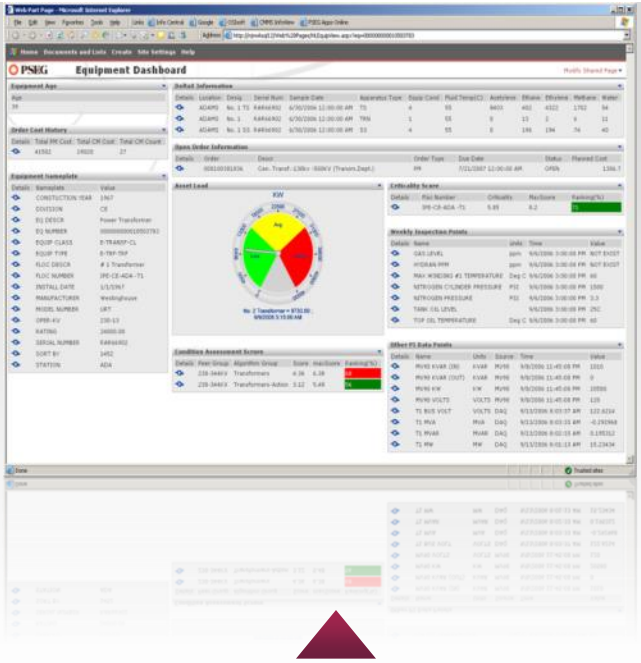


Empowering Business in Real Time.

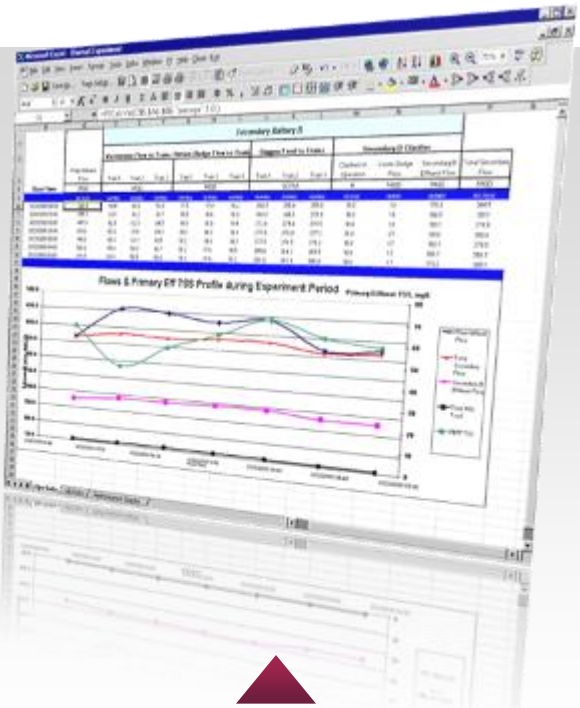
Clarity in Visualization and Collaboration



PI ProcessBook



Web



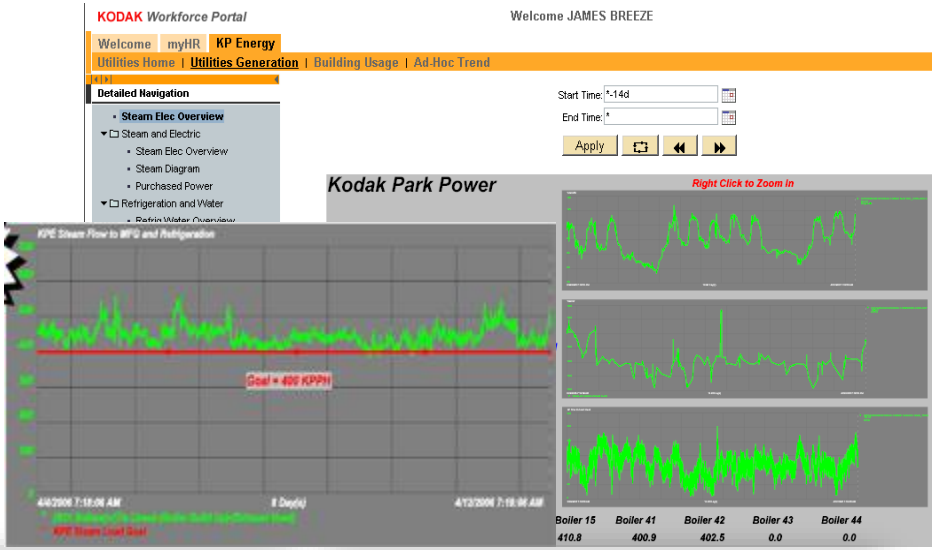
Excel

Empowering Business in Real Time.

Kodak: Collaboration enables optimized energy consumption

"There was no 'Big Bang.' Rather, there were 1,000 little bangs. Collectively these efforts have yielded savings into the millions of dollars and established a culture of continuous process improvement."

James Breeze | Energy Engineer / Project Leader Worldwide



Customer Business Challenge

- Conservation, optimization of resources, and cost control
- Merge real-time energy management data with business processes.
- Film finish bldg 1M sq ft and need % outside air for ventilation - < 500 people there but enough air to support 10,000 – must heat/cool air

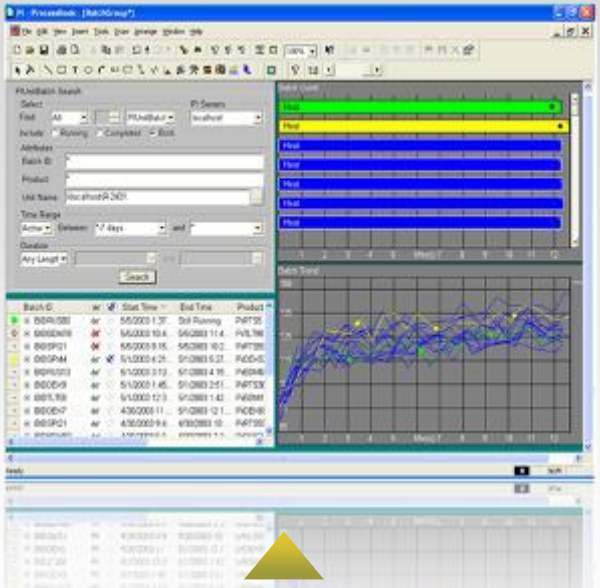
Solution

- Implemented a new Energy Information System without buying a new application
- Used OSIsoft Business Package for SAP Portal with the PI System
- View and manage their Enterprise energy demand across the enterprise with standard OSIsoft interfaces.

Customer Results / Benefits

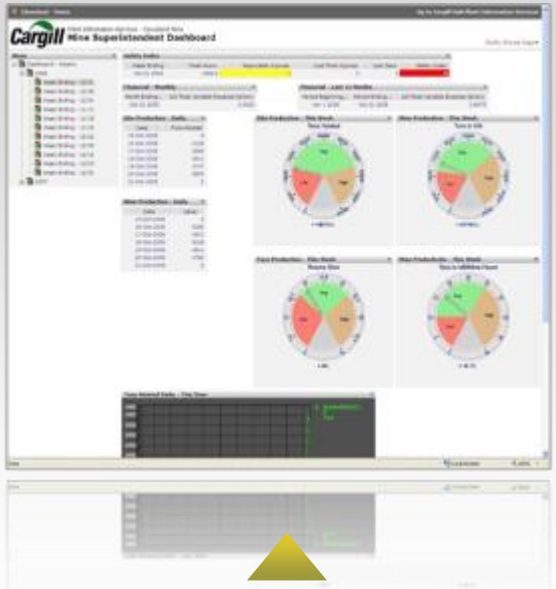
- Increased ROI on improved demand side management and optimization of power generation assets, saving millions of Dollars, annually
- Opportunities in manufacturing to implement an energy conservation mode between product runs.

Event Management



Improve yields from existing assets
(cycle time reduction)

Increase energy efficiency
(company wide energy program)



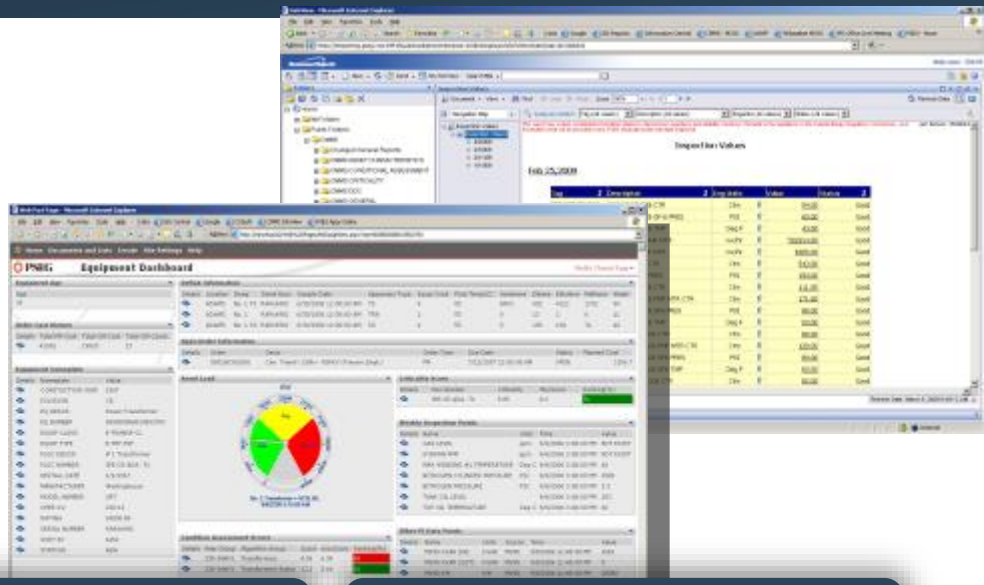
Executive
Dashboard

Empowering Business in Real Time.

PSE&G: Condition Based Maintenance

"We get a detailed breakdown on equipment costs and man/hours to service that gives us important business benefits. Without the use of the PI System, it would have taken us several months to gather and analyze the information."

Angela Rothweiler, Principal Engineer



Customer Business Challenge

- Providing the highest reliability Power Distribution is requirement
- Minimize Maintenance Costs

Solution

- Implemented automatic data collection & notifications to SAP PM
- Setup standard business rules for condition based maintenance using PI – ACE
- Provided focused view into equipment using SAP Portal

Customer Results / Benefits

- Holds Reliability award for Mid Atlantic States for last 7 years
- Focused maintenance expenditures on needed targets
- Last month: LTC stationary & moving contacts burned, next PM due 2015, LTC & transformer would have failed, saved $2M transformer

Value Now Across Industries

POWER & UTILITIES

- OSIsoft is ranked 1st in the power industry
- DTE Energy, PSE&G, Entergy, British Energy, Iberdrola

OIL & GAS

- 100% of the global Top 10 producers use the PI System
- BP, Shell, Chevron, ExxonMobil, Pemex, Total, Petrobras

CHEMICALS & PETROCHEMICALS

- 40 of top 50 Chemical Companies rely on the PI System
- Dow Corning, Eastman Kodak, Cytec, Rhodia

PHARMACEUTICALS, FOOD & LIFE SCIENCES

- Nine of the Top 10 pharmaceuticals use the PI System
- Amgen, Bayer, PDL, Allergen, Johnson & Johnson, Roche

MATERIALS, MINES, METALS & METALLURGY

- The PI System is installed in the world's largest mining companies.
- Cemex, Cargill, BHP Billiton Yabulu, Codelco

PULP & PAPER

- 400 sites from worldwide leaders use OSIsoft to manage their mills
- Abitibi, Cascades, International Paper, MeadWestvaco

CRITICAL FACILITIES, DATA CENTERS & IT

- Innovative use of PI System to monitor complex IT environments
- Microsoft, US Army, Cisco Systems

Empowering Business in Real Time.

Value Now with OSIsoft

- Understand the Importance of the infrastructure
- Develop plan to build strategically but act tactically, measure results
- Understand the nature of pressure, take clear action to address, innovate and find new opportunities

"It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change."

Charles Darwin

Thank you

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