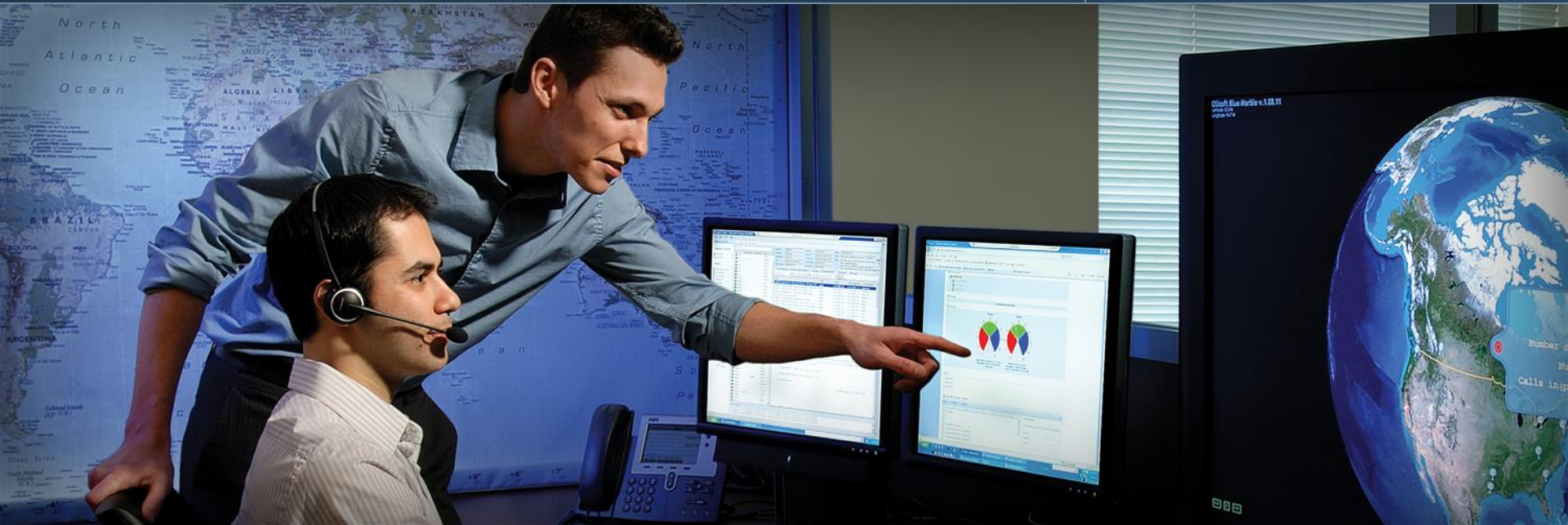




Regional Seminar Series
Kirkland, WA



Seeing Clearly in the New Reality

Dr. J. Patrick Kennedy
CEO & Founder
OSIsoft, LLC.

November 10, 2009

Empowering Business in Real Time.

© Copyright 2009, OSIsoft LLC. All rights Reserved.

Value Now with OSIsoft



“There is nothing permanent except
change”

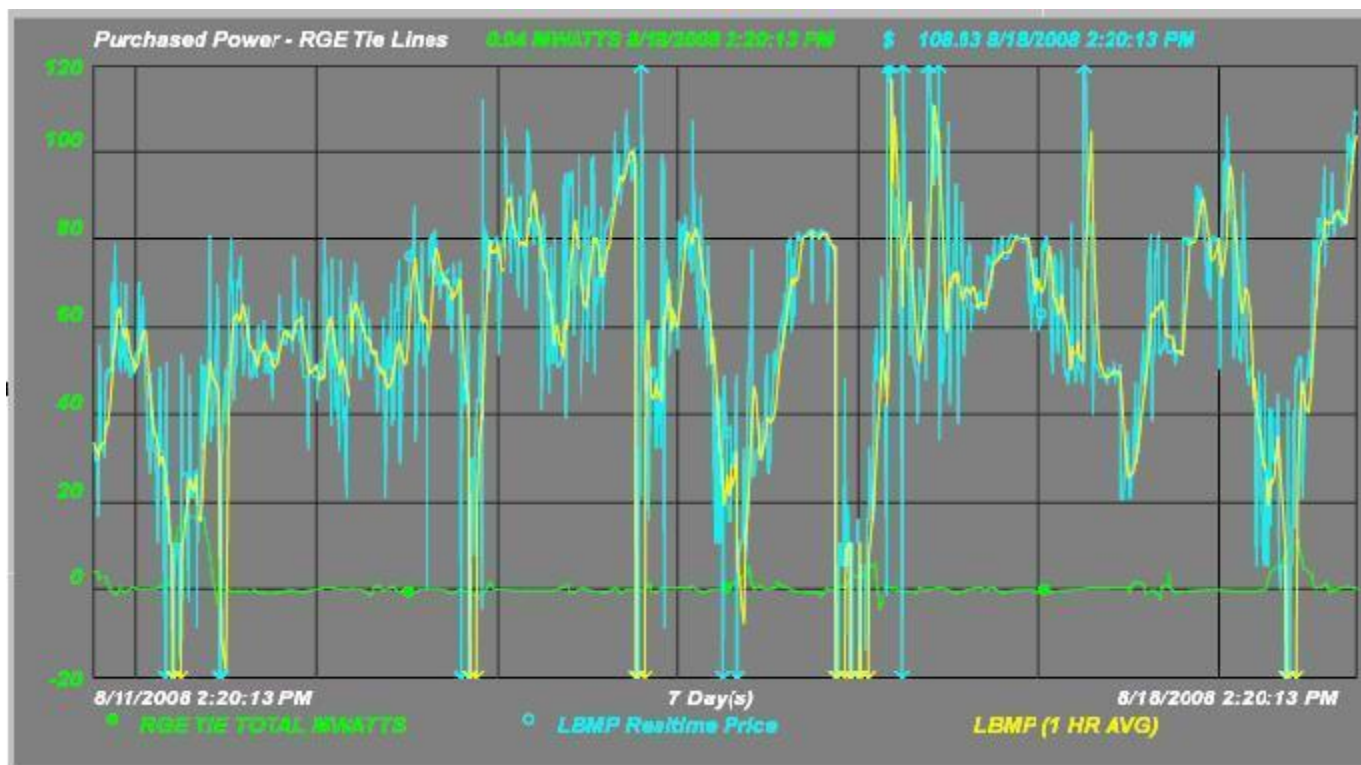
Heraclitus 6th Century BC.

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
- New Ideas

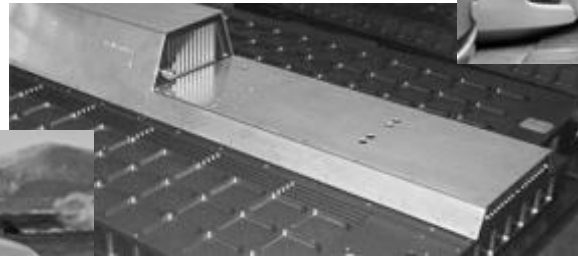


RGE Power Prices for Kodak Park



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



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

Renewables - Wind

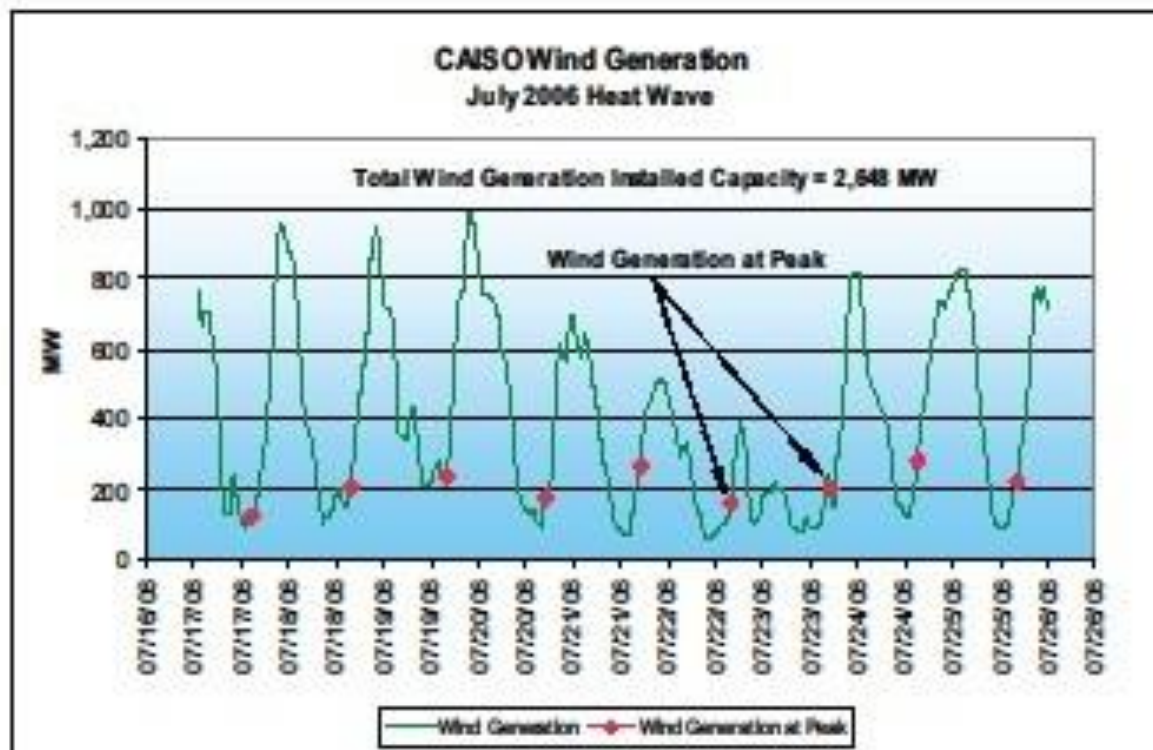


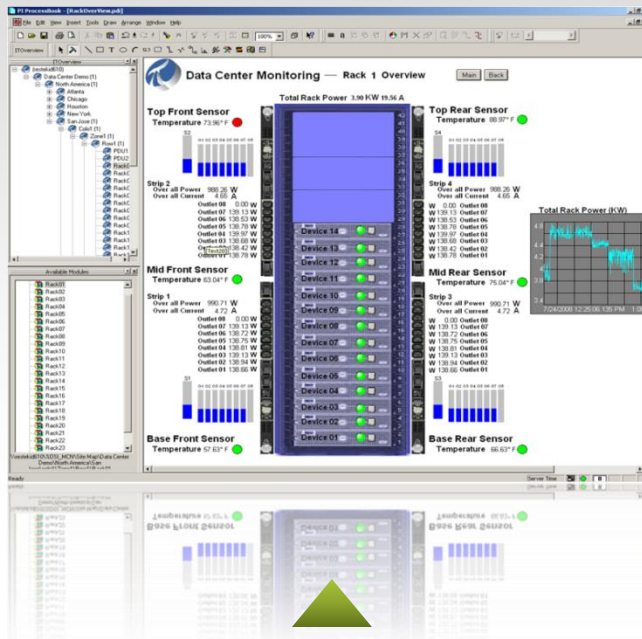
Figure 5-2: California ISO Wind Generation during the 2006 Heat Wave

New Business - e.g. Data Center

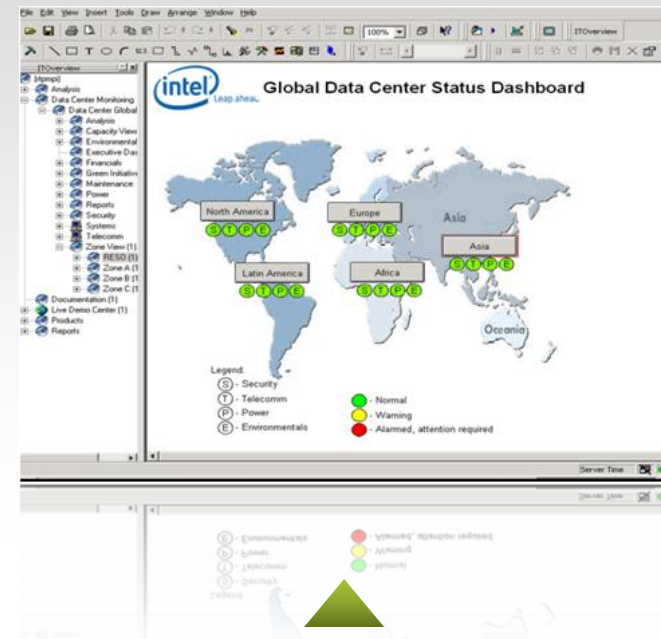
- Consume more energy annually than Sweden
- New NC Facilities - Google for Search, Apple for iPhone App
- Expansion of Existing - Bing Search of Twitter, Messaging
- Cloud based Storage - Flickr, Data Storage
- Business - Amazon, E-Bay, Craig's List
- Web 2.0 Sites - Facebook



Industry - Data Centers, IT & Telecom



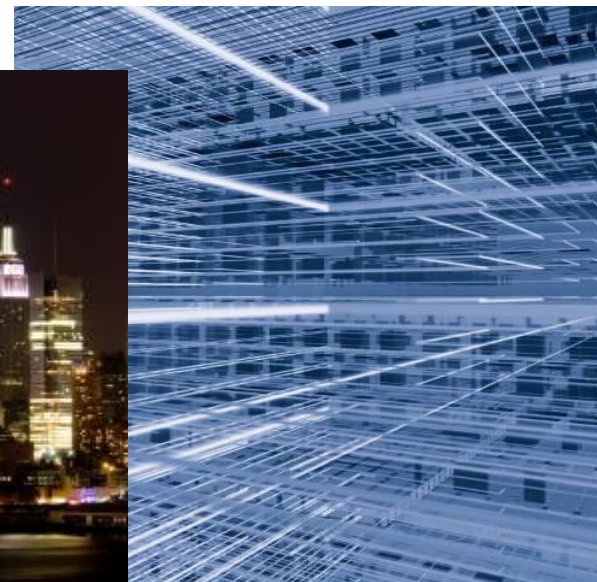
IT Equipment Monitoring



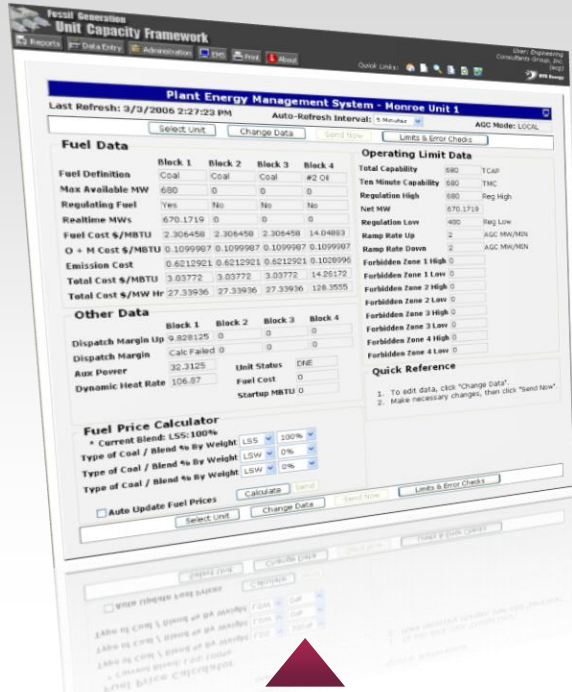
Data Center Dashboard

Largest Distributed Plant: Smart Grid

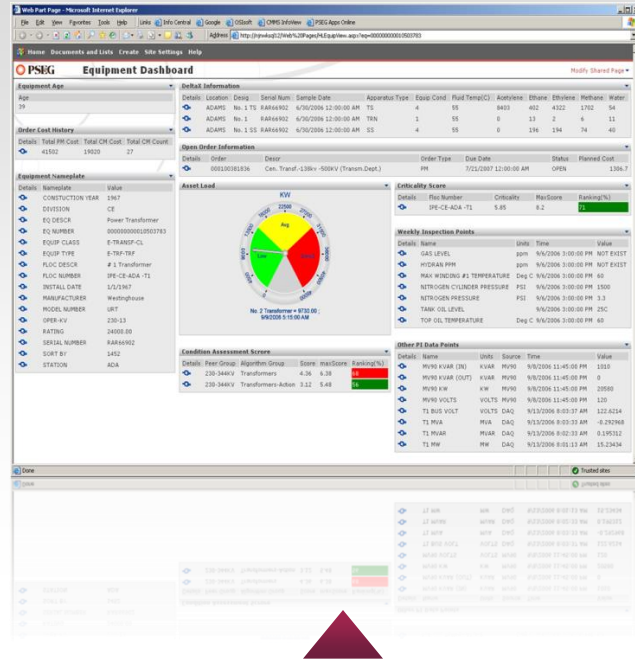
- Plant: Power Generation, Distribution and Transmission, Consumption
- Technology: Smart Equipment, Storage of renewable energy, AMI (Demand response pricing), Energy improvements
- Environment: Conservation, Renewables, Carbon Foot Print
- Techniques: Reliability, Energy Monitoring, Efficiency Studies



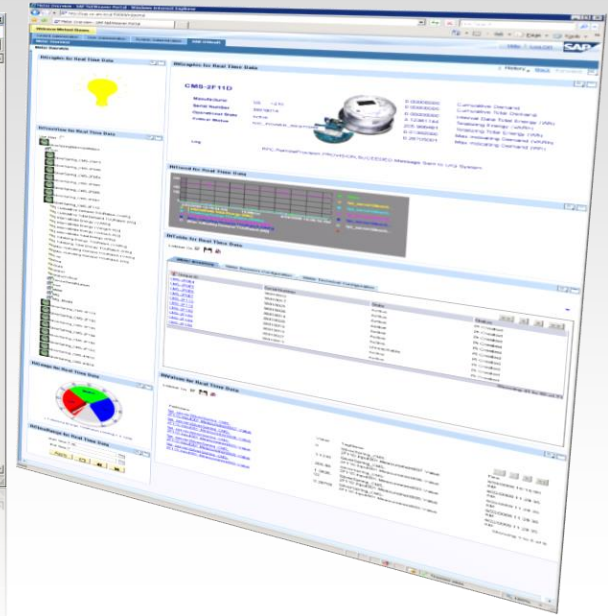
Smart Grid



Power Generation Energy Management Support



Transmission & Distribution Dashboard



AMI

Drivers



- We are BROKE, CA - \$21B deficit (Stimulus will be much more)
- Healthcare 18% GMP Today, 40% by 2050
- Manufacturing Steep Decline
- Business w/Try, Fail, Succeed, not just small companies
- Increase Speed of Execution/Continuous Improvement

Surviving the new reality: Takes Brains not Brawn



- Innovation needs Information
- Virtual and Actual Collaboration
- Big Companies Hunker and Slash
- Small Companies Cannot
- Example - DaaS, Remote Support,

Role of the PI System:



Data Capture and Storage

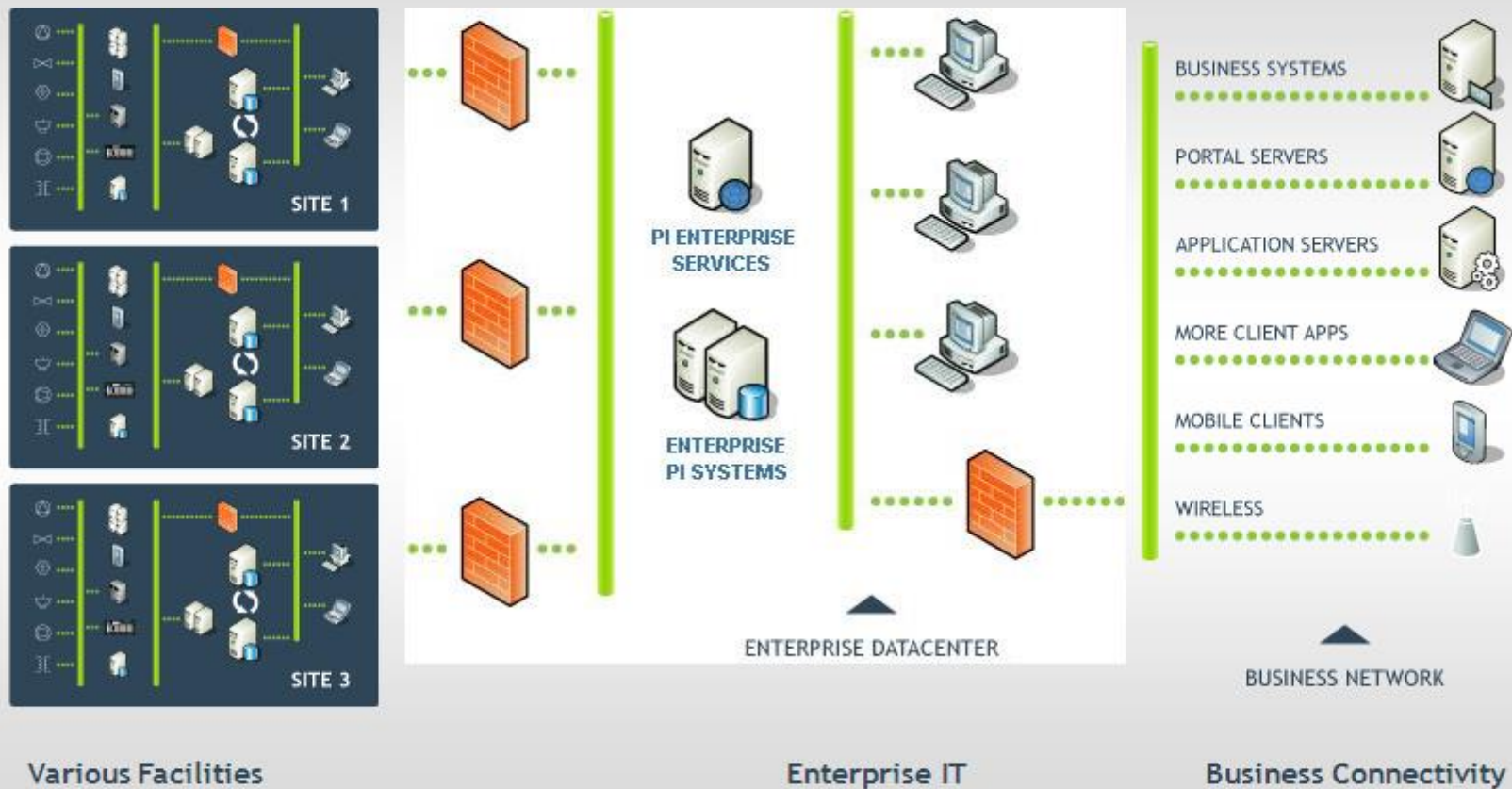
Distribute to Virtual Collaborative environment

Event, exception based alerts - work by exception

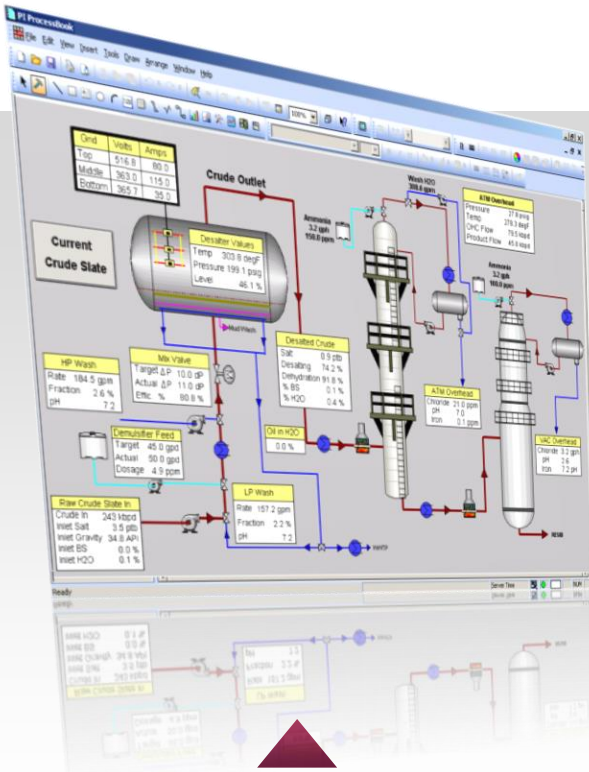
Aggregation and Communication of Info to Business

Goal Zero Maintenance, Rapid Deployment

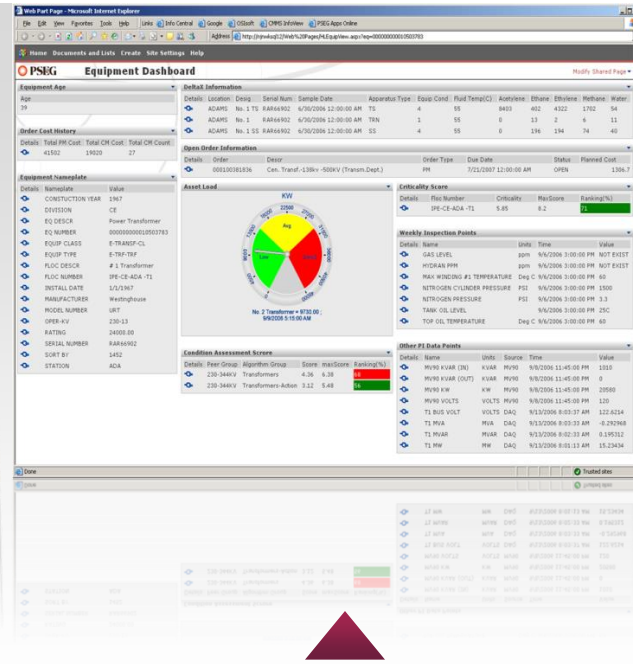
PI Systems across the Enterprise



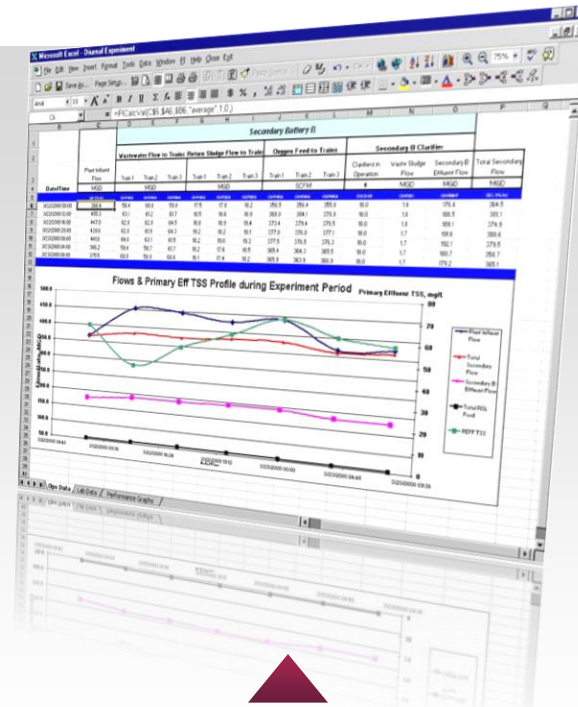
Clarity in Visualization and Collaboration



PI ProcessBook



Web

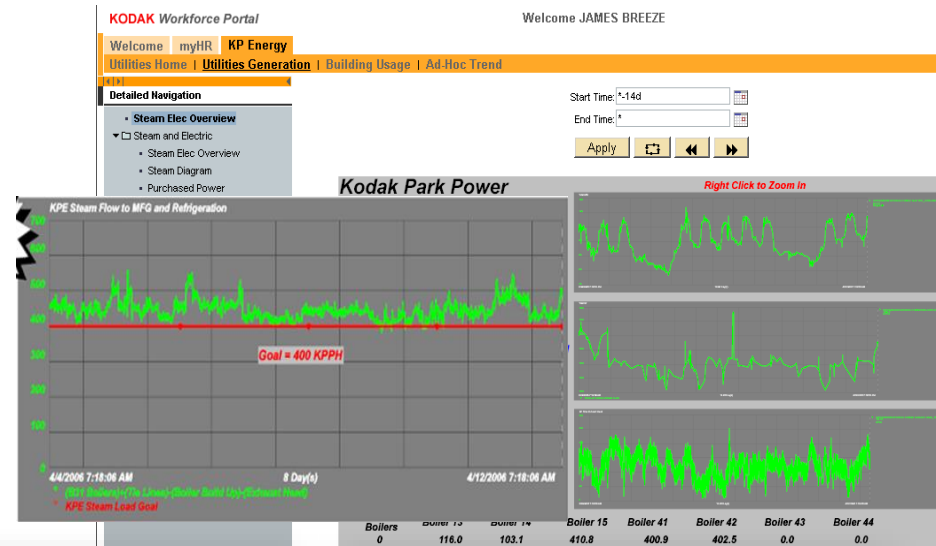


Excel

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 is imperative
- Merge real-time energy management data with business processes.

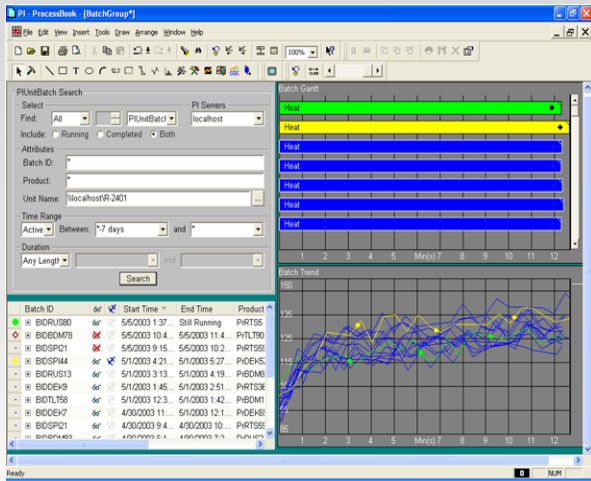
Solution

- 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.

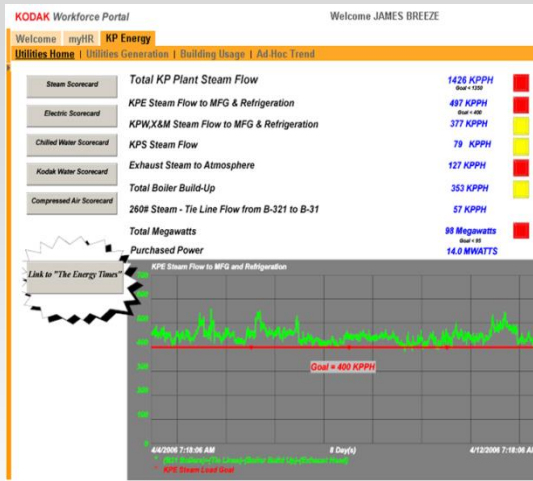
Customer Results / Benefits

- 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.

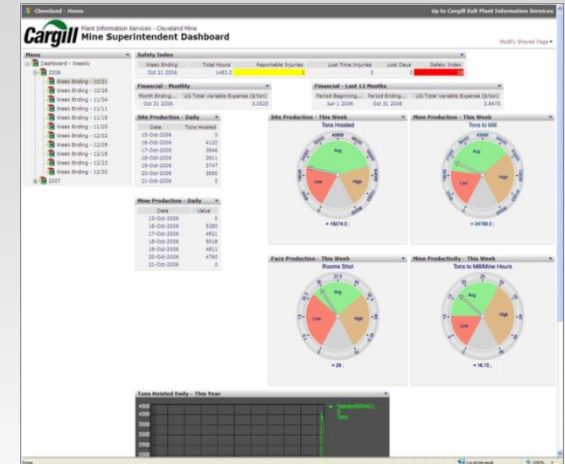
Event Management



Improve yields from existing assets
(cycle time reduction)



Increase energy efficiency
(company wide energy program)



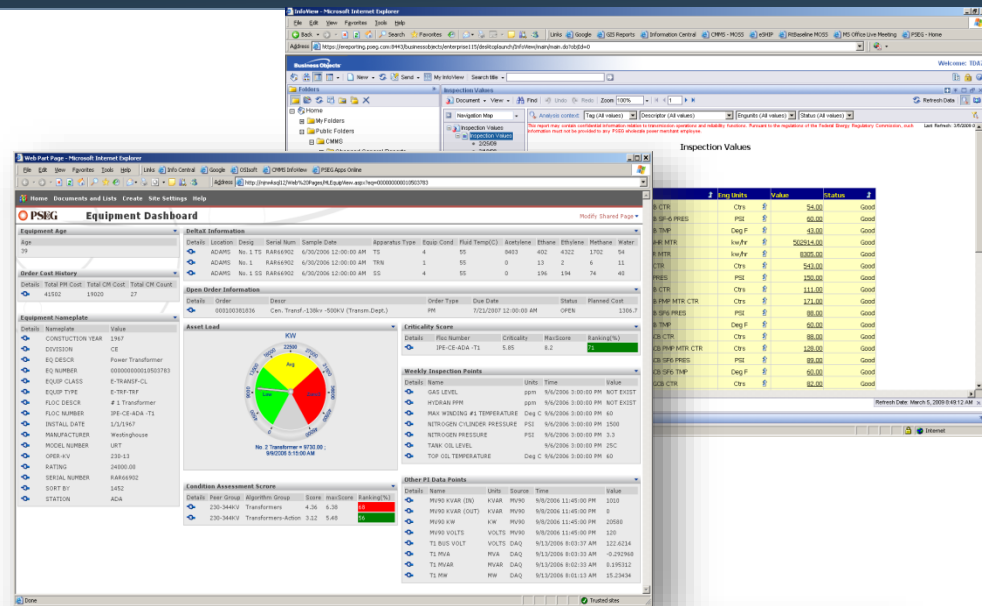
Executive Dashboard

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 and notifications to SAP PM
- Set up standard business rules for condition based maintenance using PI - Analytics
- Provided focused view into equipment using Portal.
- Provides Financial access to data by Business Objects query

Customer Results / Benefits

- Holds Reliability award for Mid Atlantic States for last 7 years
- Named most reliable Power Company in America
- Focused maintenance expenditures on needed targets

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

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, Allergan, 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, Inc., International Paper, MeadWestvaco



DATACENTERS, IT & TELECOM

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



Thank you

© Copyright 2009 OSIsoft, LLC.

777 Davis St., Suite 250 San Leandro, CA 94577