



## Regional Seminar Series Atlanta



## Seeing Clearly in the New Reality

Robert Wheatley  
Regional Sales Manager  
OSIsoft, LLC.

October 22, 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.

## Drivers



- We are BROKE, CA - \$21B deficit (Model for the US and the Stimulus package)
- Healthcare 18% GDP Today, 40% by 2050
- Manufacturing Steep Decline

- Baron Rothschild - The time to invest is when the streets are “red with blood”
- Thomas Edison founded GE during the Panic of 1873
- Bill Gates started Microsoft in 1978 Recession
- One result of financial crisis is \$787 billion stimulus program, including \$4.5B for AMI pilot projects

- 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

- 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

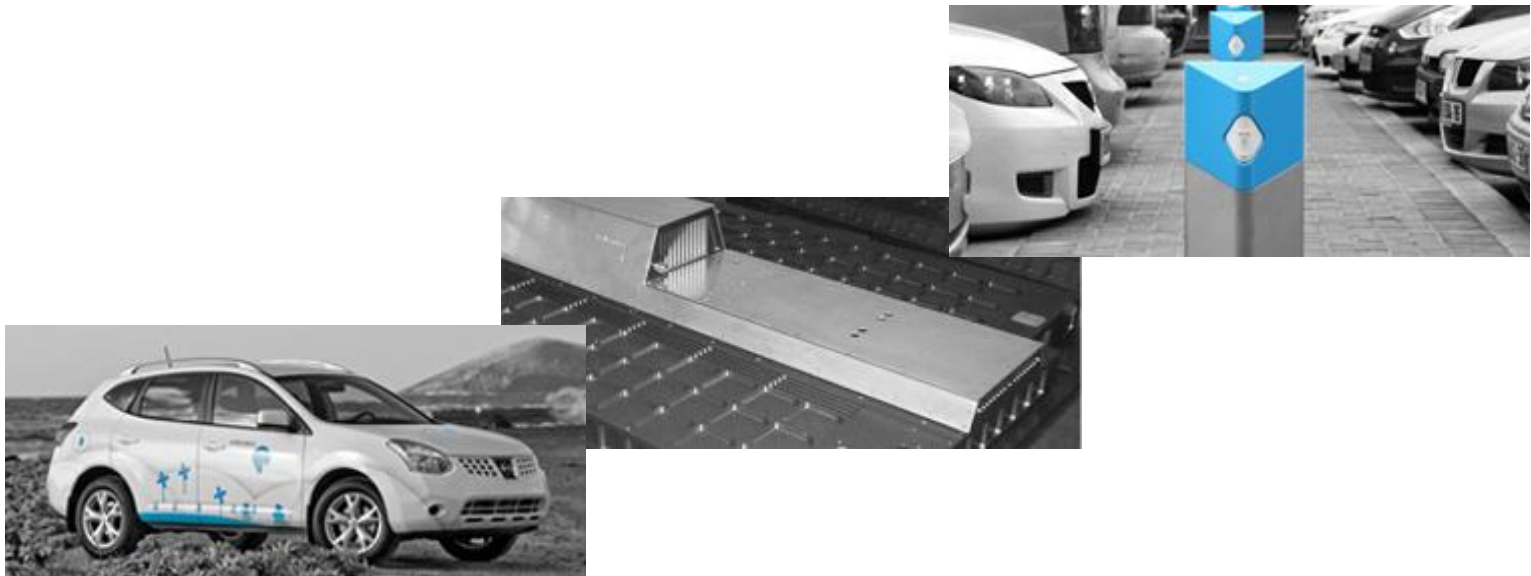
- 116-year-old paper company
- Decided to actively market electricity produced by cogen plant
  - Can produce 37 MW, including 20 MW it can sell
  - Established itself as a CRES (competitive retail electric supplier) in Ohio
- Monitoring price swings looking for opportunities to produce more electricity
- 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

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



## 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

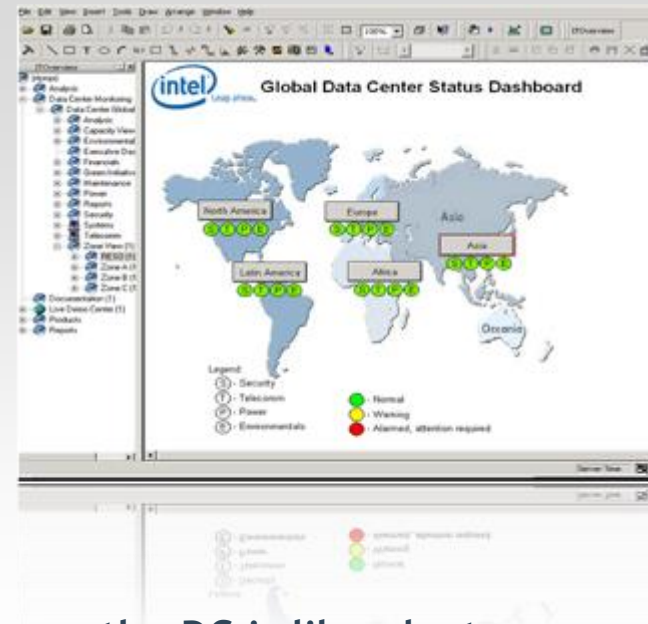
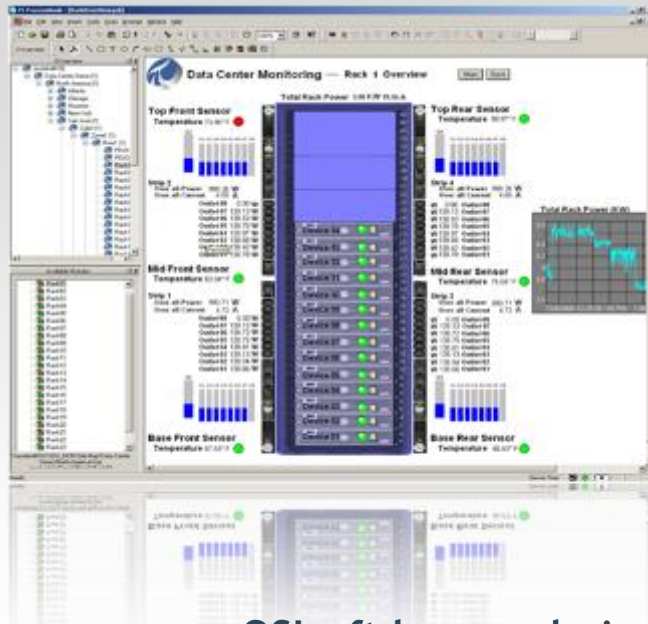
Real Time Needed - Summary of Accidents not useful for Operation - like getting Summary of House Fires at end of Month

## 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 - Flickr, 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



## 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



## 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

## Shift from Industrial Age to Information Age

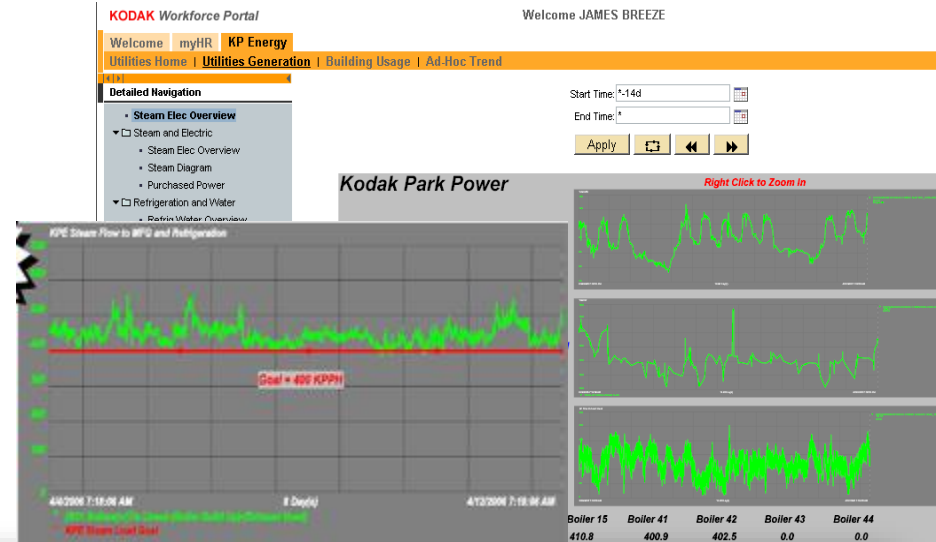




## Kodak: Collaboration enables optimized energy consumption

“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.

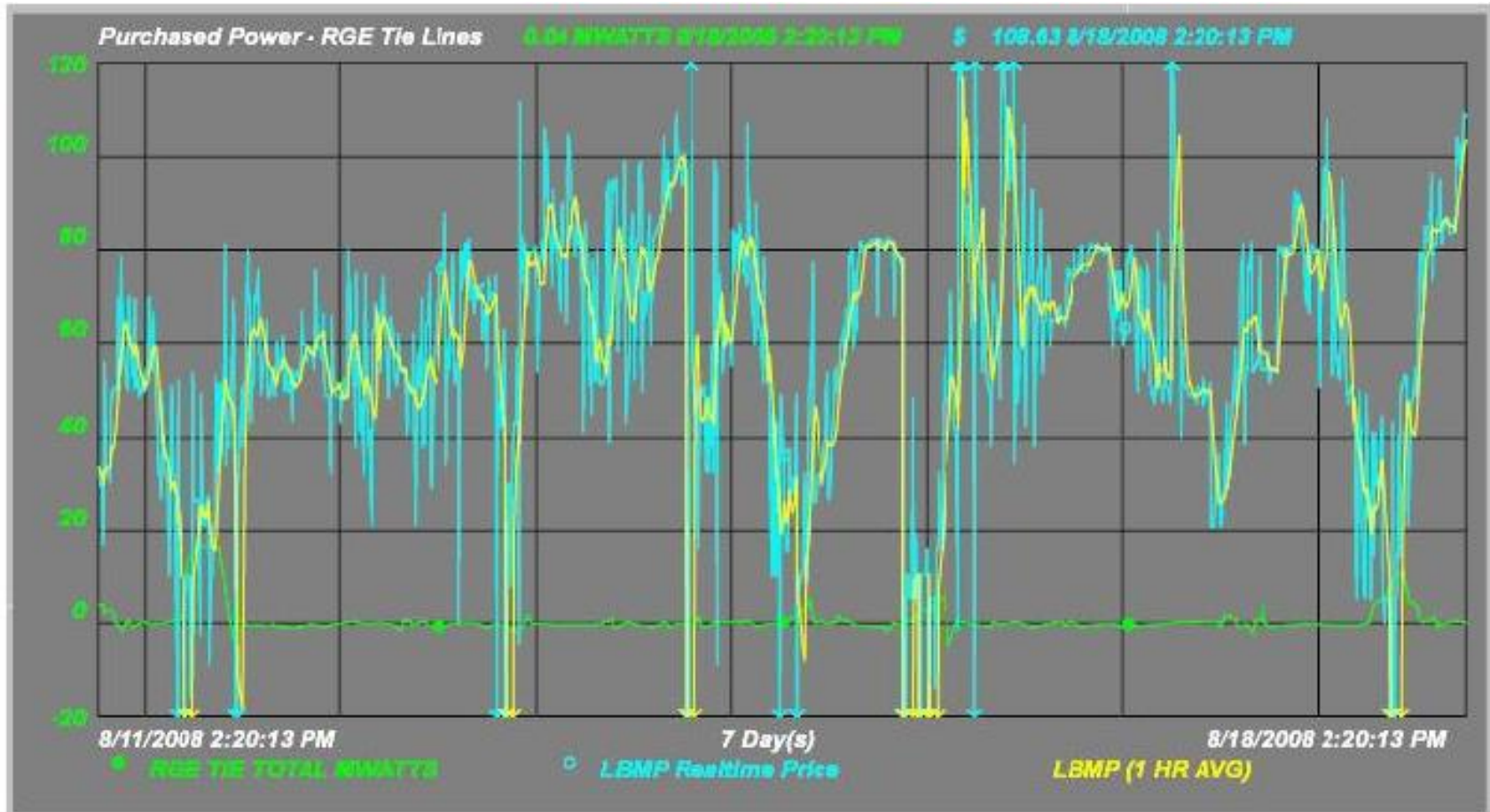
### Solution

- 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.

# Purchased Power RGE Tie Lines - Kodak Park



## Eastman Business Park

<http://www.eastmanbusinesspark.com/index.php>

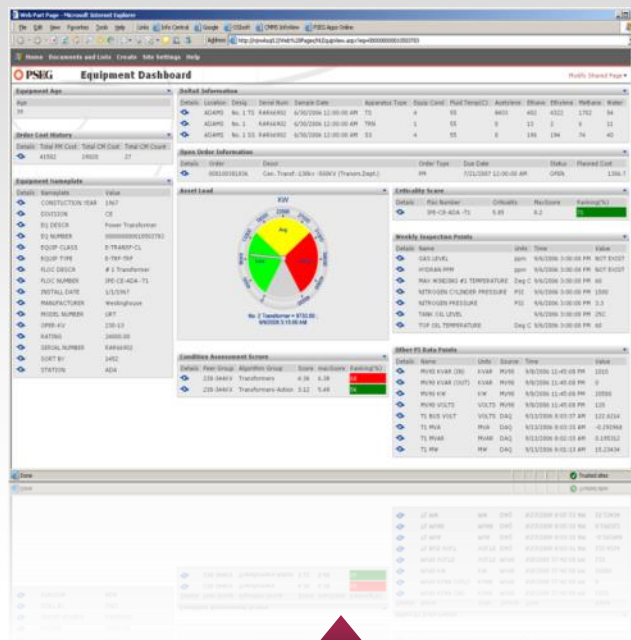
## New York Office Park & Industrial Complex

Eastman Business Park (a 900-acre office park & industrial complex located near Lake Ontario in [Rochester, New York](#)) is currently home to more than [25 companies](#) and on-site [suppliers](#). Eastman Business Park offers more than 3 million square feet of [existing office space](#), [manufacturing space](#), [laboratories](#), and [warehouse space](#) for immediate occupancy. In addition to the existing space the industrial complex offers over 300 acres of prime industrial (M1) [developable land](#). Often referred to as "A City within a City," Eastman Business Park is a self-sufficient manufacturing facility with highly efficient and highly reliable infrastructure.

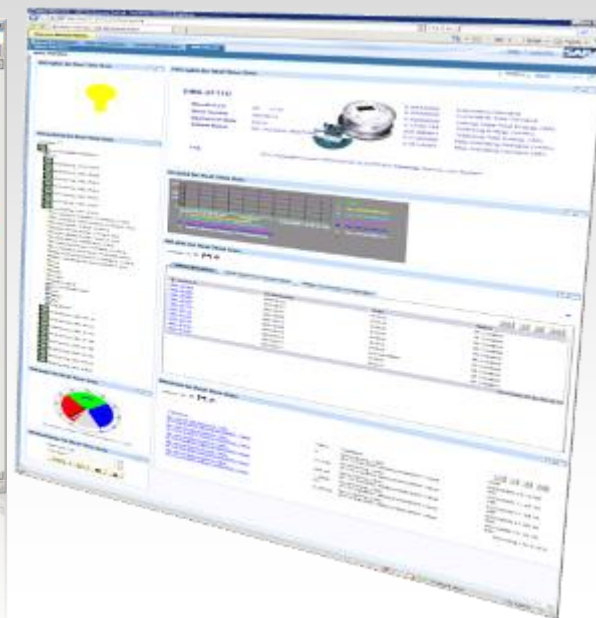
# Smart Grid



Power Generation Energy  
Management Support



Transmission & Distribution  
Dashboard



AMI

## Largest Distributed Plant: Smart Grid

- Utility: Power Generation, Distribution and Transmission, Metering
- Technology: Smart Equipment, Storage of renewable energy, AMI (Demand response pricing), Energy improvements
- Issues: Security, Intermittent Resources
- Techniques: Reliability, Energy Monitoring, Efficiency Studies
- Result - Microgrid



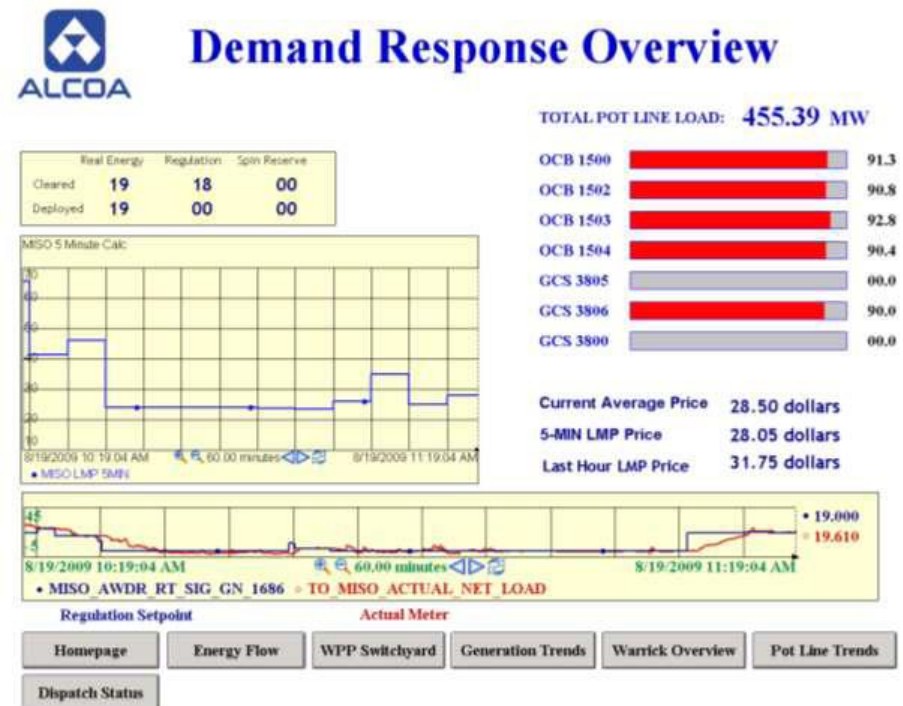
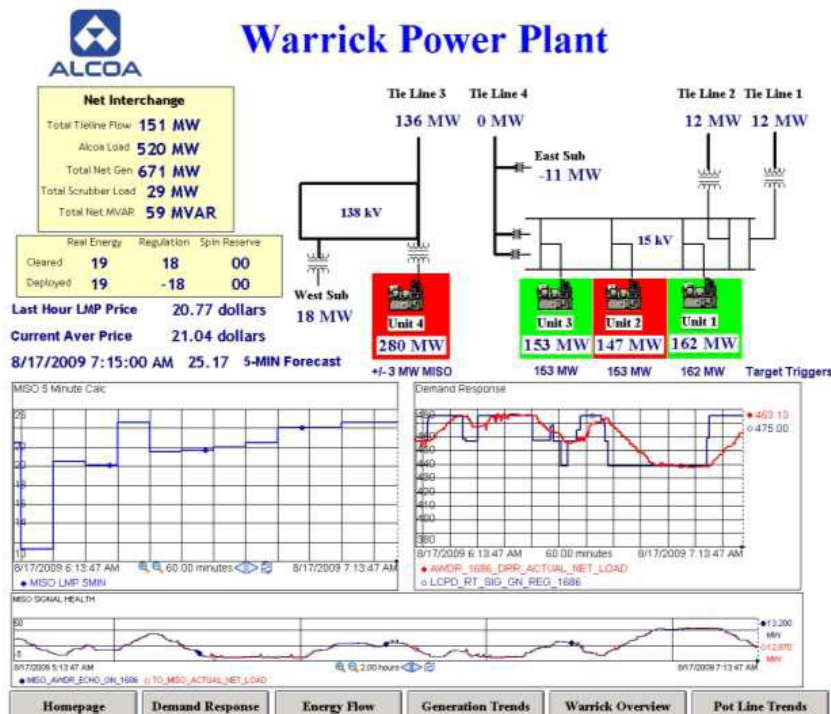


- Customer Driven
- Owner of the Heat Load
- Able to Island
- Manage Demand
- Provide Ancillary Services
- Manage Intermittent Power
- Access to Wholesale Prices
- Potentially Highly Efficient/New Reliability Products
- Provide “Storage”

# 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



# 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



## CRITICAL FACILITIES, DATA CENTERS & IT

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



## 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

© Copyright 2009 OSIsoft, LLC.

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