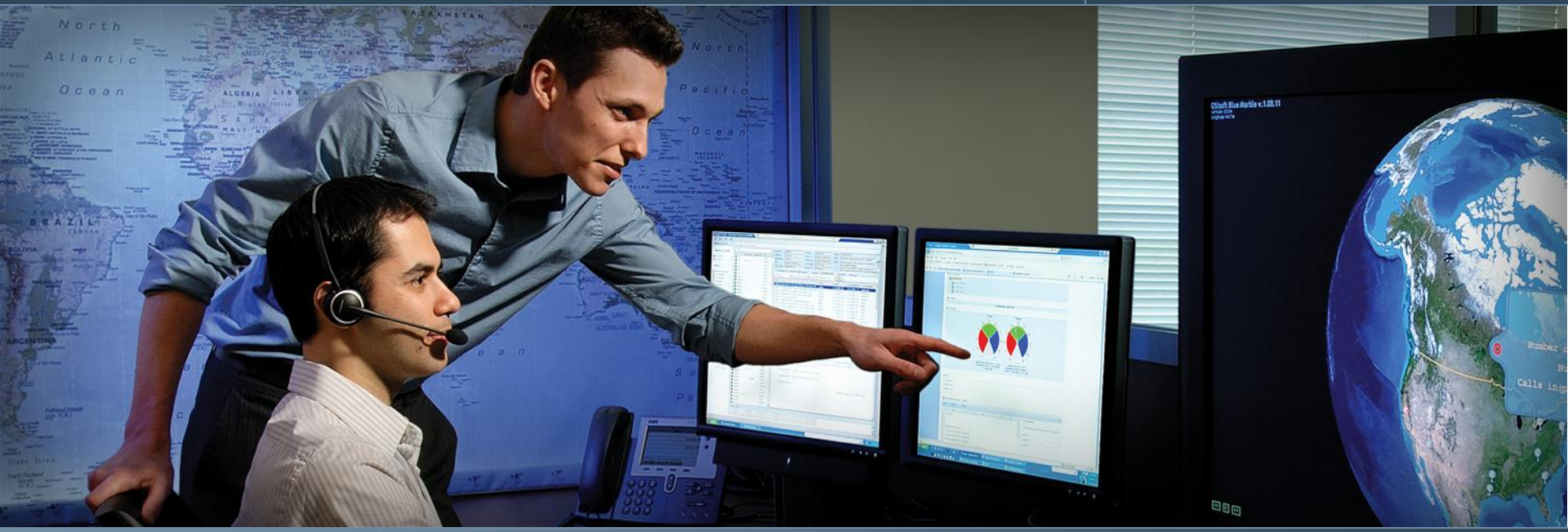
2010 Regional Seminar Series



Sustainability – "It Is Just Good Business"

Martin Otterson,
Managing Director & VP Sales EMEA

OSIsoft Overview
EMEA- Europe Middle East Africa

About OSIsoft

- Established in 1980
- Founder - J. Patrick Kennedy
- Private
- Headquarters - San Leandro, CA
- 720 + employees
- 200 + employees in product development
- PI System Installed base
  - 14,000 + systems (excluding OEMs)
  - 110 + countries
- Footprint in:
  - 40% of Fortune 1 000 process & manufacturing companies
  - 65% of Global 500 process & manufacturing companies

OSIsoft – A Sustainable Business for 30 Years

- Core competencies
  - Strategic Focus
    - Customer Value
    - One product - The PI System
  - Expanding Infrastructure
    - Customer Support
    - Increased Local Presence.
  - Continuous Improvement
    - Agile Product Development
    - Standards Adoption (DEC/VMS/Unix -> Windows, 64bit)
- OSIsoft's energy and resource efficiency efforts
  - Significant move to remote installs—on site is rare today
  - Less shipment of products—downloads are preferred by many customers
  - Electronic books, CBT
- OSIsoft is an Enabler of Sustainability Initiatives

Where is OSIsoft in the world?

Empowering Business in Real Time

Sustainable Growth

Core markets

Power & Utilities

40 %

Electricity, Water, Fuels, Heating

Generation, Transmission, Distribution, Consumption

Process Industries

50 %

Primary & Secondary processing of raw materials

Extraction, Conditioning, Refining, Finishing

Developing markets

Discrete Manufacturing

5 % ↑

CPG
Automotive
Semi Conductors

RA Partnership
OSIsoft Sales

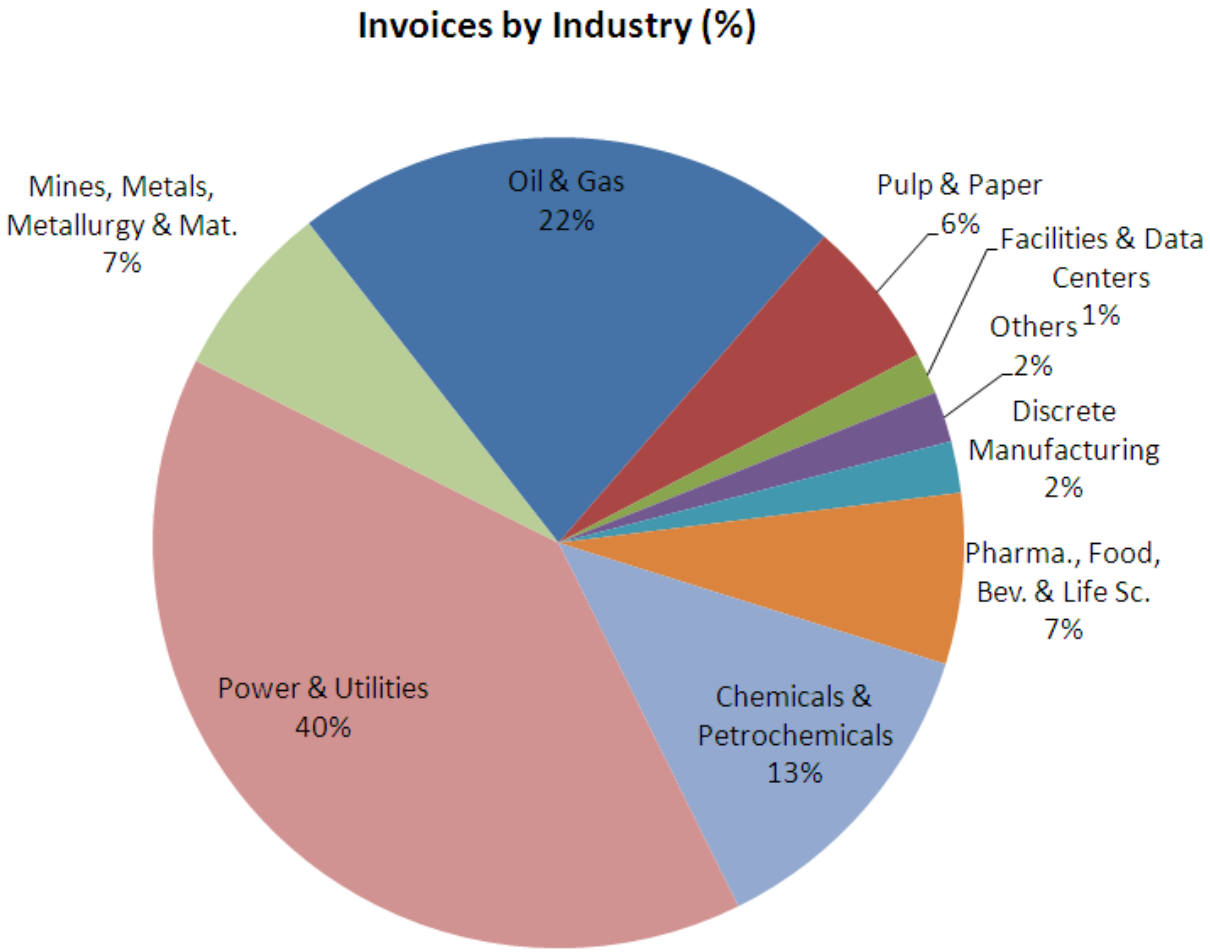
All Industries

5 % ↑

Financial, Software, Retail, On line businesses, Telecom

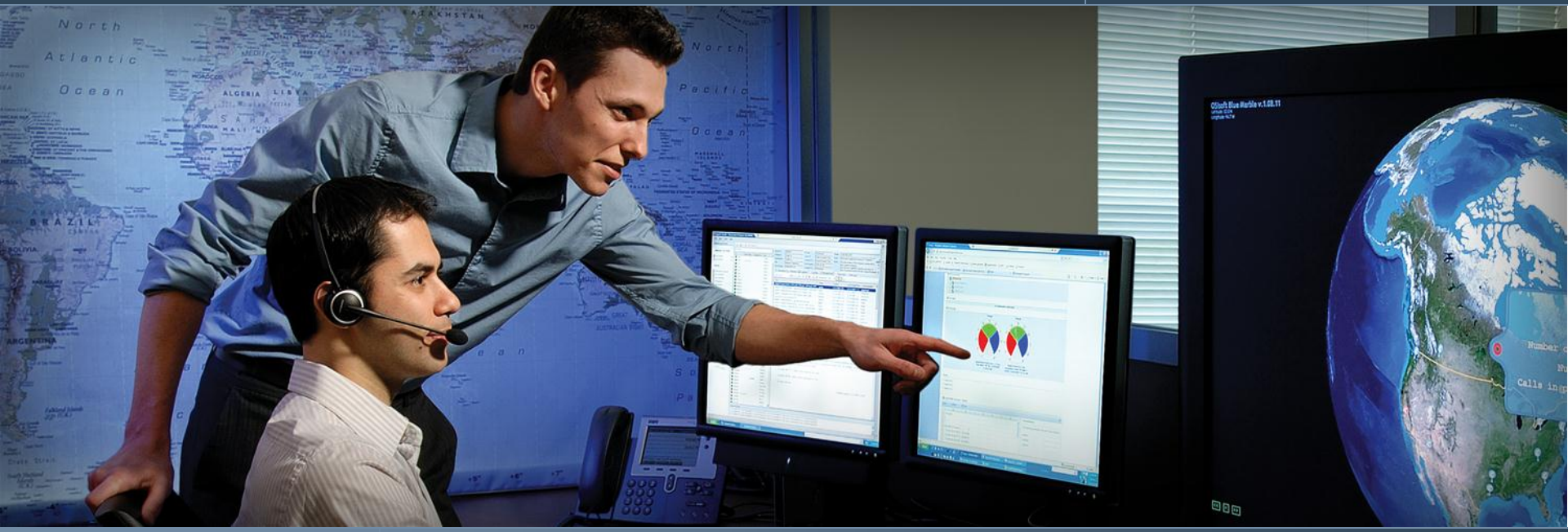
Energy, Asset Mgt Real-time monitoring

Sales by Industry - Why Power and Utilities?



Diverse Customer Base Across Industries

Empowering Business in Real Time



Sustainability – “It’s Just Good Business”

Empowering Business in Real Time

An Infrastructure for the grid of California

PI System at Cal ISO

Culture- Break down barriers

Agreed upon success for organizational unity

Technology- Unlock Silos

Look to other industries that have solved technology challenge

What is Sustainability?

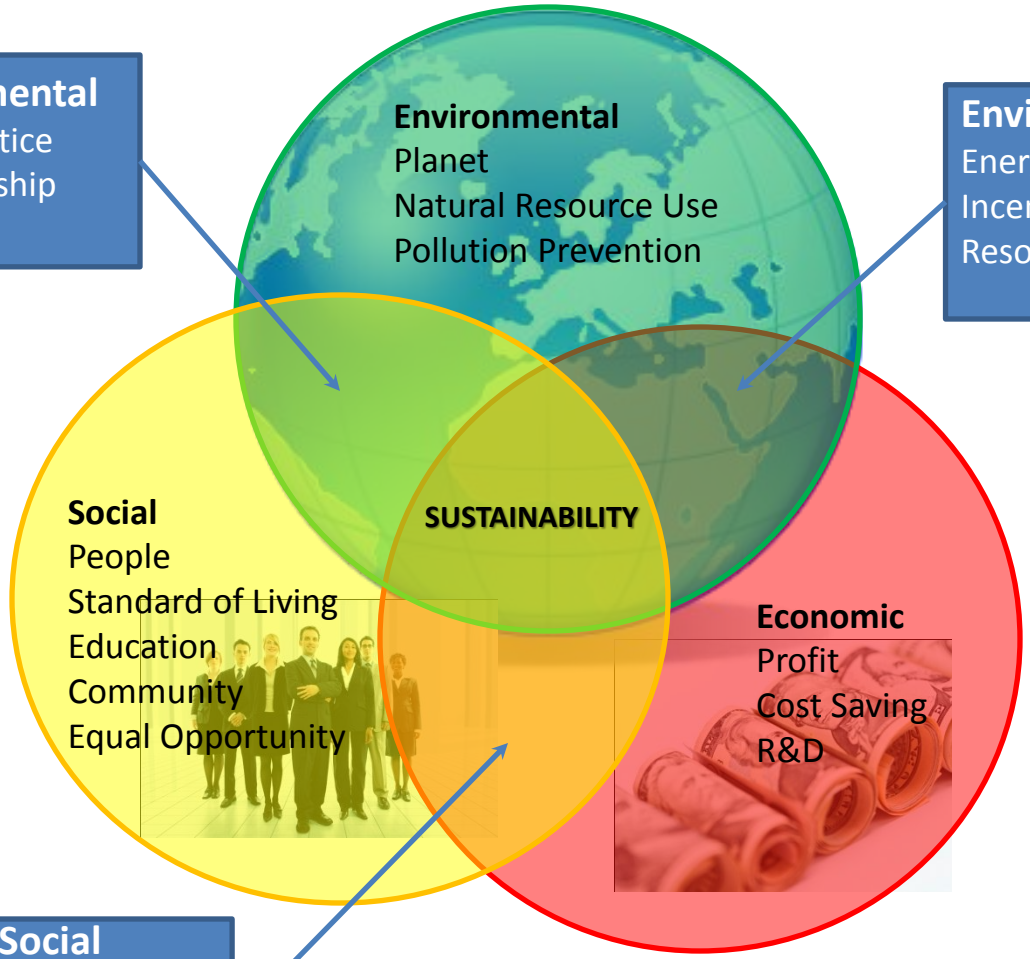
The United Nations' "World Commission on Environment and Development" definition of *sustainable development*: "...meet the needs of the present without compromising the ability of future generations to meet their own needs."

Our Common Future (aka Brundtland Report) (Oxford: Oxford University Press, 1987), p. 43.

(23 years old, still heavily referenced in UN documents)

Sustainability – "It's Just Good Business"

Social-Environmental
Environmental Justice
Resource Stewardship



Environment-Economic
Energy Efficiency
Incentives for use of Natural Resources

Economic-Social
Business Ethics
Fair Trade
Workers Rights

Adapted from University of Michigan 2002 Sustainability Assessment

Industry Roles in Sustainability

Utilities supply the electrical energy and water infrastructure society cannot function without

Oil and Gas supply the energy source for many uses

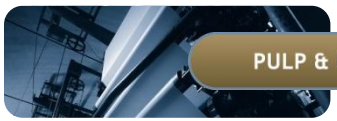
Very important in transportation

Strong light-weight polymers and fibers required for efficient transportation, renewable generation and many other structures

Extremely important for quality of life

Natural resources saved through disease prevention and cure

Fundamental to the modern infrastructure. Mechanical structures, electrical conductors, catalysts.



True renewable resource. Very important to packaging and communication.

Data and transactions for the information driven economy

What is Sustainability - Investor Perspective

Abatement Leaders						
Sector	Name	Ticker	Return on capital (CROCI)		Climate change score	
			Percentile rel to sector	09-11E ave	Percentile rel to sector	% of max
Utilities	Exelon Corp.	EXC	92%	12%	100%	85%
	Centrica	CNA.L	98%	16%	94%	75%
	Fortum	FUM1V.HE	75%	8%	92%	73%
	Verbund	VERB.VI	59%	8%	88%	68%
	Entergy Corp.	ETR	61%	8%	75%	65%
Non-power utilities	National Grid	NG.L	54%	7%	81%	68%
Steel & aluminium	POSCO	005490.KS	50%	7%	95%	82%
Airlines	Deutsche Post	DPWGn.DE	66%	9%	100%	75%
Chemicals	Syngenta	SYNN.VX	75%	11%	93%	85%
	Givaudan	GIVN.VX	96%	9%	90%	83%
	Praxair Inc.	PX	71%	10%	84%	77%
	PPG Industries, Inc.	PPG	53%	9%	78%	71%
	Sigma-Aldrich Corp.	SIAL	84%	14%	81%	75%
Mining	Vale	VALE	89%	18%	100%	86%
	BHP Billiton	BLT.L	73%	17%	85%	82%
	Sterlite Industries	STRL.BO	94%	21%	80%	74%
Oil & Gas	EnCana Corp.	ECA	68%	13%	100%	83%
	Chevron Corp.	CVX	55%	12%	98%	80%
	Suncor Energy Inc.	SU	72%	14%	90%	74%
	BG Group	BG.L	88%	17%	90%	74%
	Exxon Mobil Corp.	XOM	87%	16%	83%	72%
	Hess Corp.	HES	77%	14%	79%	70%
	PTTEP	PTTE.BK	94%	18%	75%	68%
Road & rail	Burlington Northern Santa Fe	BNI	90%	11%	100%	70%

"GS SUSTAIN"

An emerging investment theme

Population growth and economic development are resulting in increasing pressure on the environment and climate. We are approaching a tipping point at which the issue's importance to business performance and investors will escalate. The equity market is only just beginning to reflect the magnitude of change that lies ahead.

Goldman Sachs, 2009

What is Sustainability – O&G Perspective

Shell 2009 Annual Report

"Making the world's energy supply secure, affordable and sustainable is not just a worthy goal; it is a global imperative. It will take time, and it will take a lot of effort. But with our far-sightedness and technical prowess, we can contribute to the endeavour even as we deliver the results that our shareholders expect in the long term."

Jorma Ollila

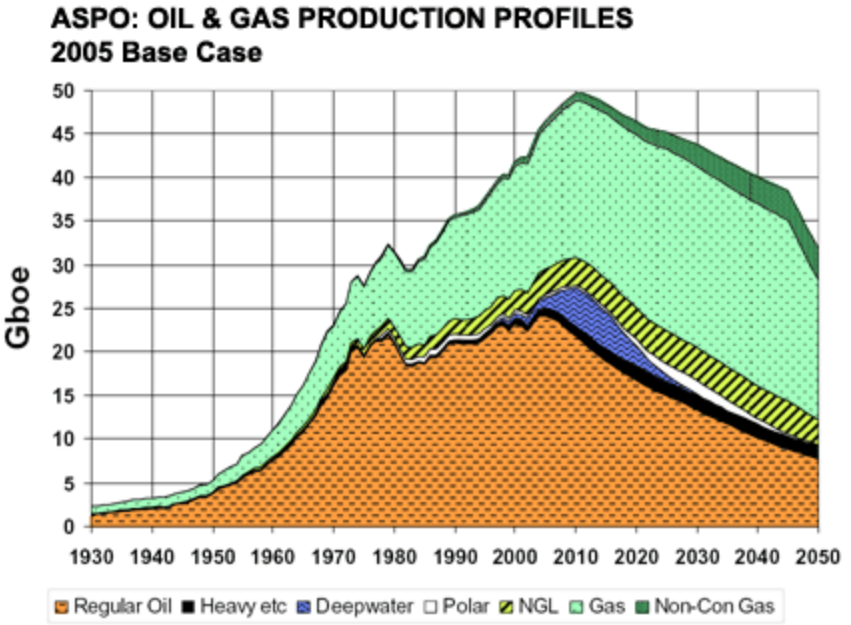
Chairman

BP 2009 Annual Report

"We are looking to build a future energy industry that provides energy that is available, sustainable, secure and affordable".

Tony Hayward

Former Group Chief Executive



What is Sustainability – an OSIsoft Perspective

Sustainability in its simplest terms is about an enterprise's enduring success.

- It's about conducting business in a way that protects and preserves economic and environmental resources while also upholding social responsibilities.
- It requires a comprehensive enterprise wide approach.

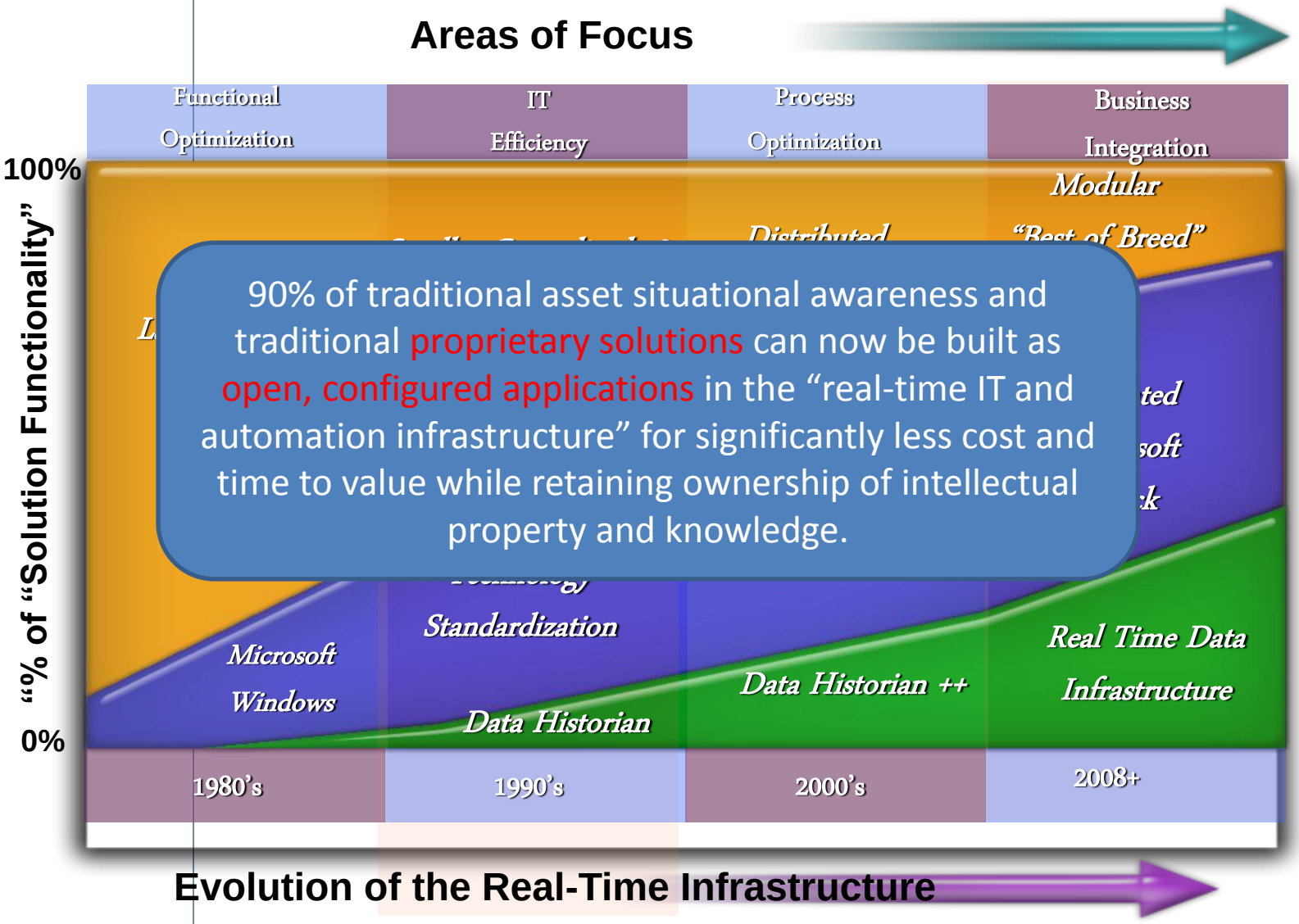
Organizations that tackle sustainability driving innovation and capitalizing on a culture of continuous improvement can simultaneously address profitability, pre-compliance, and public mandate.

OSIsoft as the maker of the PI System has been helping its customers better manage existing resources and empower data-driven decision-making for nearly 30 years.

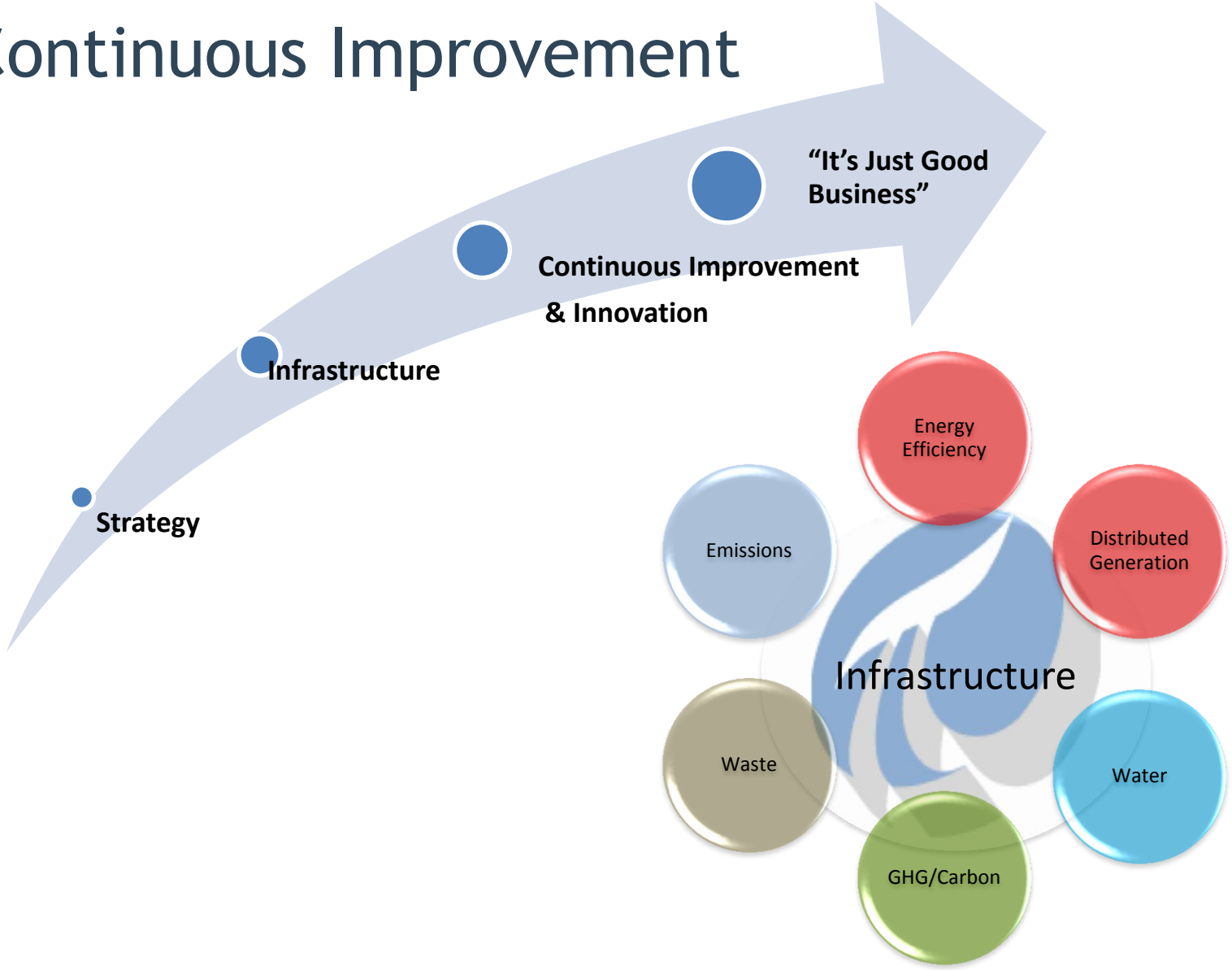
- The PI System helps drive Sustainability efforts by creating an infrastructure for innovation and continuous improvement resulting in positive business impact with ongoing payback.

The PI System provides answers to today's business problems and an infrastructure for tomorrow's opportunities.

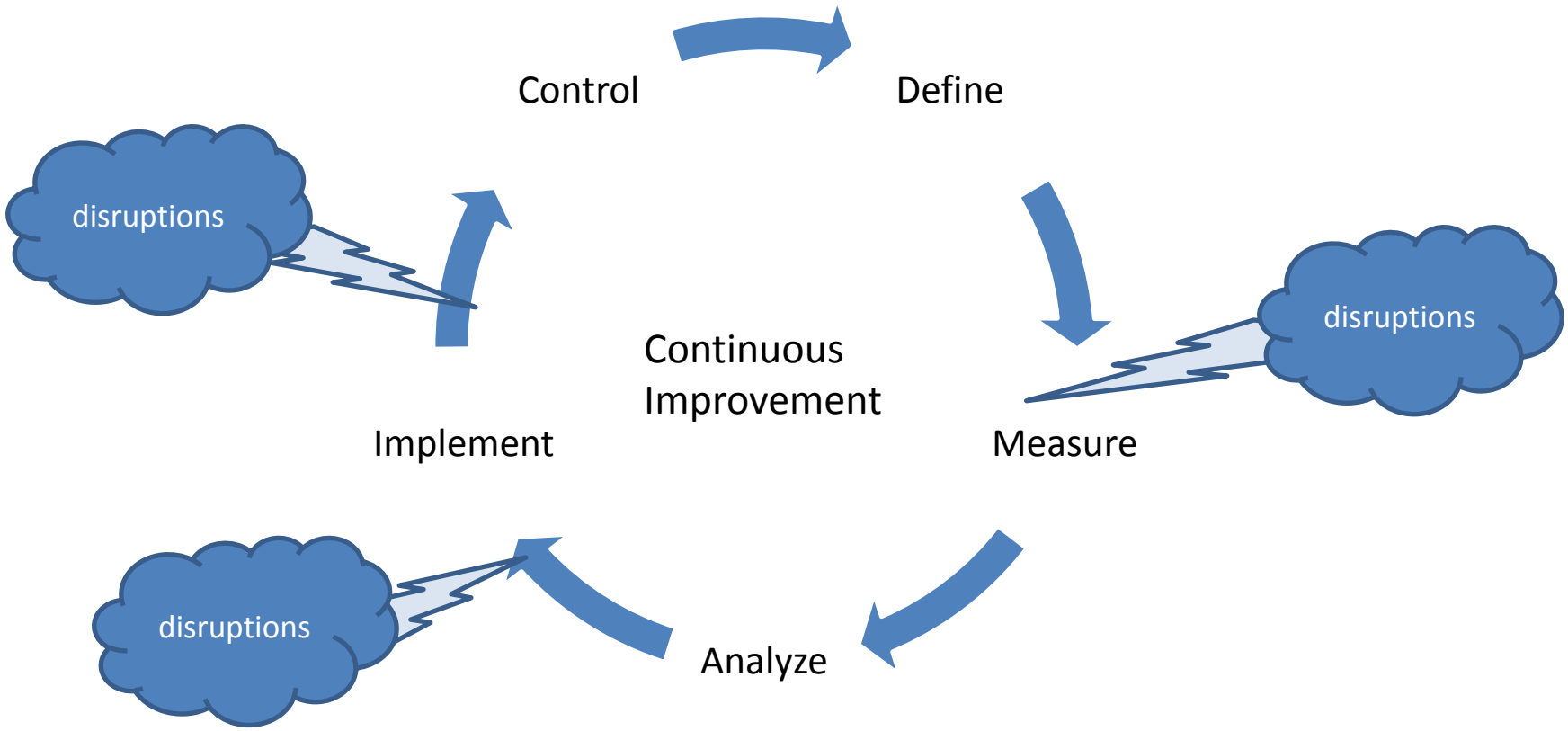
The Evolving Capability & Role of IT Infrastructure



Continuous Improvement

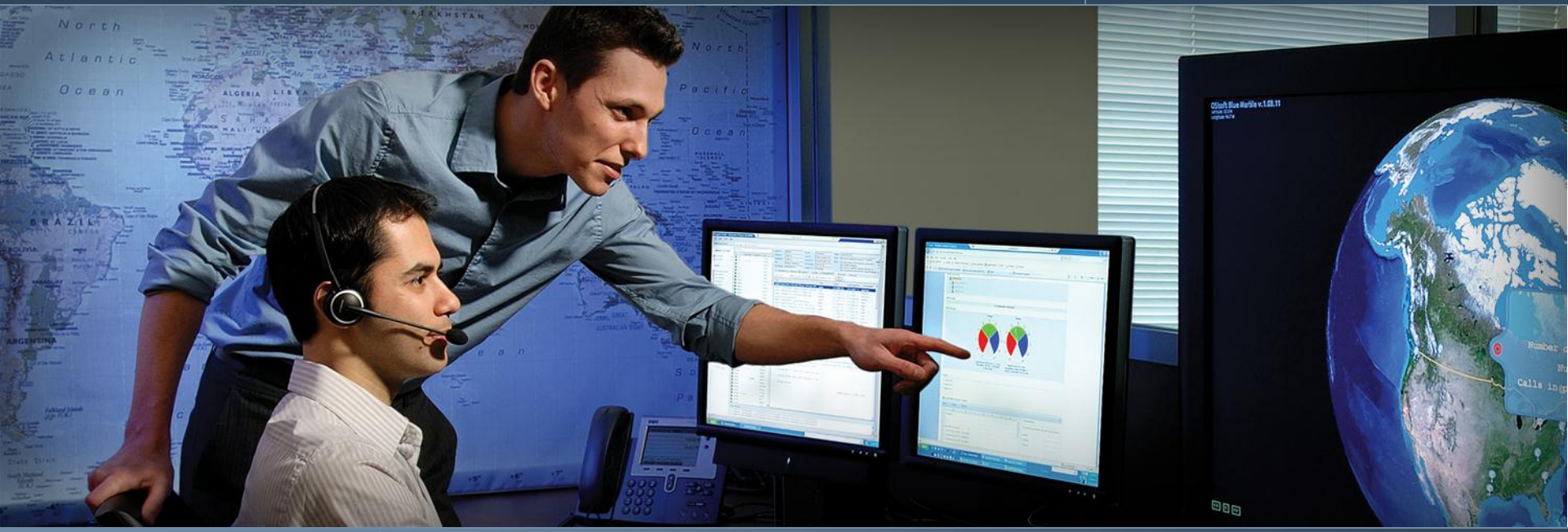


Sustainability - A Continuous Improvement Process



"By far, the greatest benefit to IP was Environmental Monitoring, and *this requirement wasn't even on the radar screen when we justified the Enterprise roll-out*. This came up very immediately after the deployment, and we were able to quickly respond to this operational challenge because we had a common infrastructure to integrate with. We had disguised many disparate systems under a common real-time layer, so our programs had enterprise applicability."

International Paper Company



Sustainability – “It’s Just Good Business”
Customer Examples

Empowering Business in Real Time

A PI System Infrastructure – Enabling Real-Time Sustainability

OSIsoft.

Operations Monitoring | Energy Management | Maintenance Management (CBM) | Asset Optimization

SAP | maximo | Meridian SYSTEMS | Microsoft



'Sustainability' applications

Individual/Organizational Analytics & Visualization With Microsoft Tools

- Real-Time Data
- Batch Data
- Relational Data
- Quality Data
- Manual Data
- Structure/Asset Data
- Web Data
- Applications Data
- Maintenance Data
- ERP Data

- ENTERPRISE
- REGION
- Territory
- PLANT
- UNIT
- MACHINE

Across the Value Chain

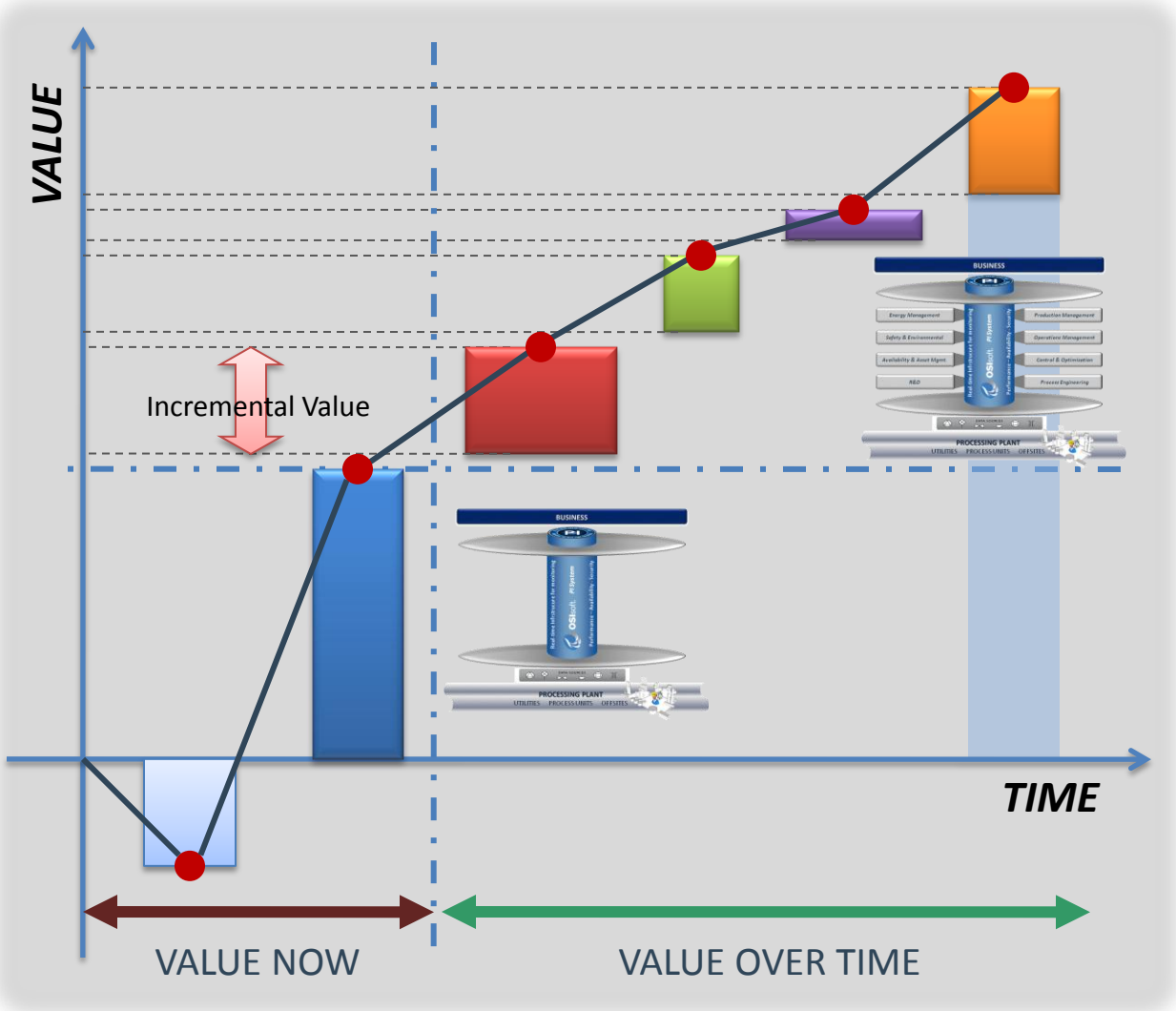
Across the Infrastructure

1000's of different real-time data sources and associated interfaces that propagate through the automation space

Delta V | Rosemount Analytical | GE Fanuc | Fisher | ABB | Rockwell Automation RSView | Honeywell Plantscape | Invensys Foxboro | Rockwell Software | Tecnomatix FactoryLink 7.5 | Emerson | Bailey

Empowering Business in Real Time

Innovative Infrastructure for Continuous Improvement
Value Now, Value Overtime



Application Benefits

- *Operations Management*
- *Environmental Reporting*
- *Equipment Health Mgmt.*
- *Performance Management*

Infrastructure Value

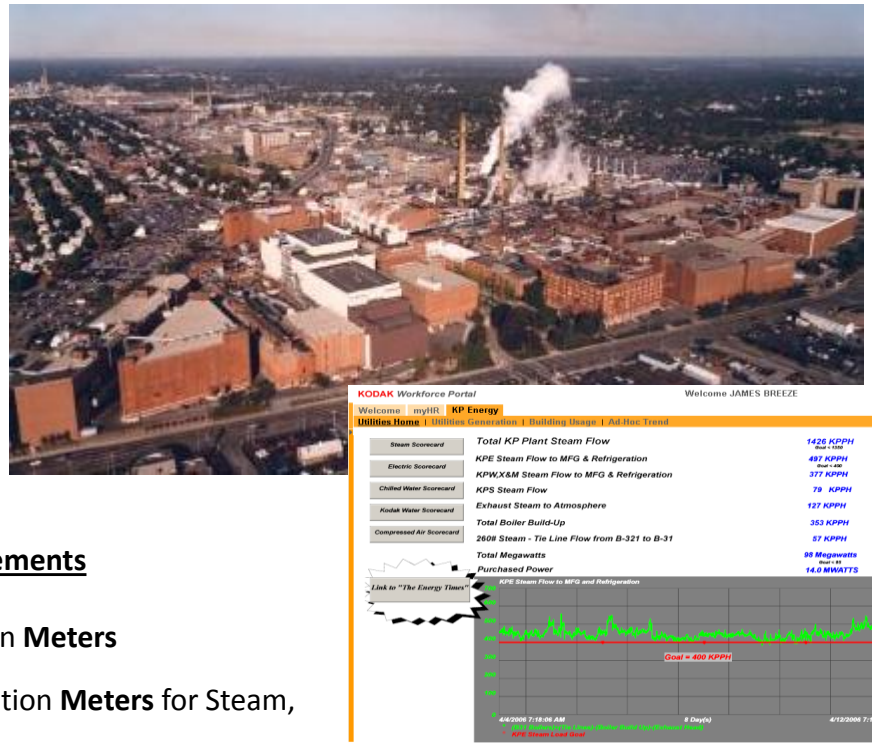
Initial Investment

Eastman Kodak - Rochester N.Y.

BUSINESS SITUATION
Kodak Park wanted to find a way to present real-time energy data on their portal lowering the cost of curiosity and significantly reduce their energy utilization.

BENEFITS
Significant ROI –
Millions of dollars in savings Improved demand side management optimization of generation assets.

Continuous Process Improvement –
Identified opportunities in manufacturing to implement an energy conservation mode between product runs



Kodak Park facts

- Area>20,000,000 Square Feet
- 11,000 Employees
- Operates its own fire department
- Operates its own rail road
- Performs its own water and waste water treatment
- Operated 2 power plants

Measurements

- 600 **Electric** Distribution **Meters**
- 600 Additional Distribution **Meters** for Steam, Chilled water, Brine, Compressed air, Process water, Nitrogen, Natural gas etc.
- Significant **Metering** Used within the Power Houses to Manage the **Generation** Side

Over $27+$30 Million In Savings

Kodak Case Study - Energy

- Reduced utility costs with improved
  "
- S
  t

Kodak

Summary of Results

Generation side findings

- Plant loading optimization
- Boiler fan optimization
- Exhaust head improvements
- Better management of self generation vs. purchased power

The Energy Information System (EIS) has been an essential tool to help us reach our Goal of:

"One Powerhouse for Eastman Business Park"

(10:41:53 March 28, 2007)

- Collectively the "annual" savings rate in 2007 was $27 Million
- Today the "annual" savings has grown to more than $30 Million
- The cumulative savings is now in excess of $100 Million

(>50% Savings From Ongoing Operations)

Kodak

ized water

Kodak Case Study - Water

- Kaizen and Gemba applied to water conservation
-
-

Water Reduction Results

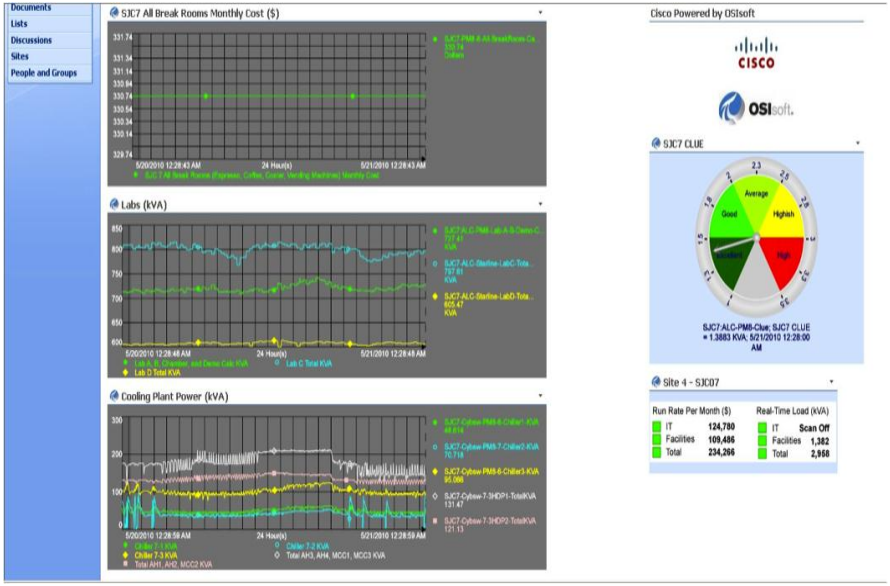
- 2009 Kodak Water Reduction was 16.5%
- 1,087,000,000 Gallons (or 1,087,000 K Gallons) saved in 2009
- 1st Quarter of 2010 – an additional savings of 450 Million gallons from the 2008 Baseline
- Roughly 1.5 Billion Gallons saved in the last 15 Months
- This is enough water to fill approximately 250 average backyard swimming pools each and every day !!!
- $0.00 In Capital Spent
- These Water Savings are calculated for only the last 15 months and are totally independent of the site's energy reductions

Kodak

CISCO Systems

BUSINESS SITUATION

- July 2008, Publicly Announced 25% Absolute Reduction 2007-2012
- Global, Enterprise Wide Effort across Owned & Leased Properties
- $150M USD Paid for Energy in FY 2006 ~80% Labs & Data Centers

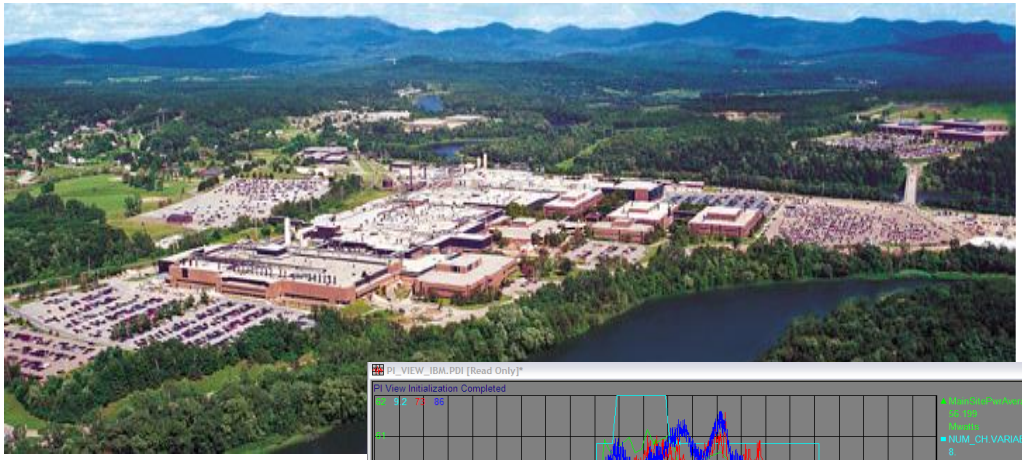


BENEFITS

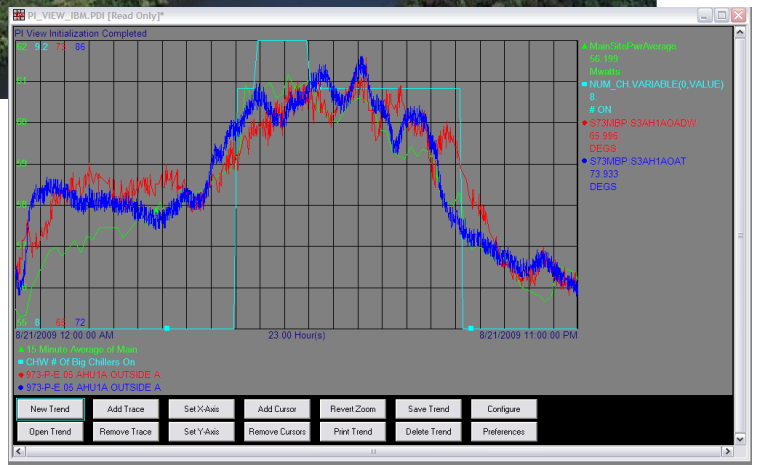
- **Faster Decision Making** – Data that took a month to access available in real time. Information manually distributed to 80 cost centers now available electronically.
- **Continuous Process Improvement** – Facilities and financial analysts collaborating to make profitable decisions.
- **Reduced Costs** – Adverted transformer overload/ outage saving hundreds of thousands of dollars in single event

IBM - Burlington Facility

IBM Burlington is a large semiconductor manufacturing site which consumes 3.2 million gallons per day of water and 446 million kilowatt hrs. of electricity annually.



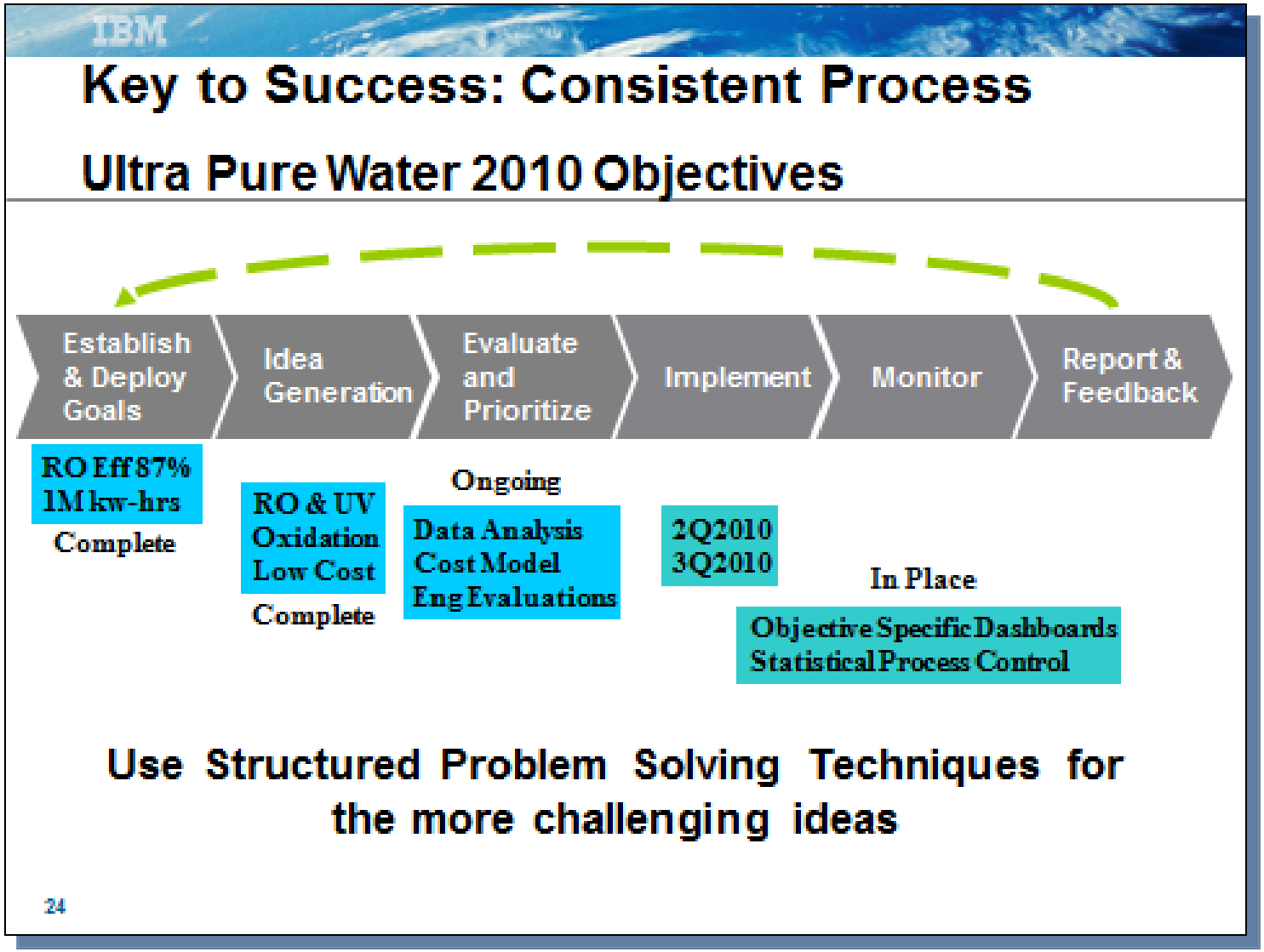
The management goals are quality, reliability, cost control and environmental stewardship.



IBM's Advanced Data Management techniques have supported nearly a decade of sustained improvements in energy and water management.

Data management techniques employed by IBM allow for a continuous stream of improvement projects.

Advanced Industrial Water & Energy Management Saves $10 M Annually



Harvard Medical School

KEY FACTS

Harvard University
- Founded 1636

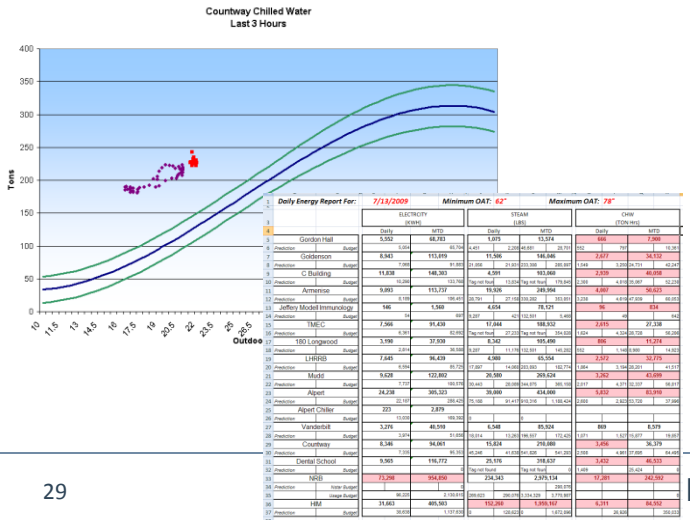
10 Academic Units
- Colleges, Schools, Institutes

18,000 Maintainable Assets, 24/7 Call Center, 200 Node BMS

Energy Usage
- 15 Mw Electric, 70K lbs/hr Steam, 10k+ Tons Chilled Water

Research Support
- Research Trending, Infrastructure Changes, Alarm Monitoring

17 Buildings
- Approx. 60 Primary Meters
- Approx. 112 Tenant and Sub-meters
- 172 Total CHW / Steam/ Electric /Air

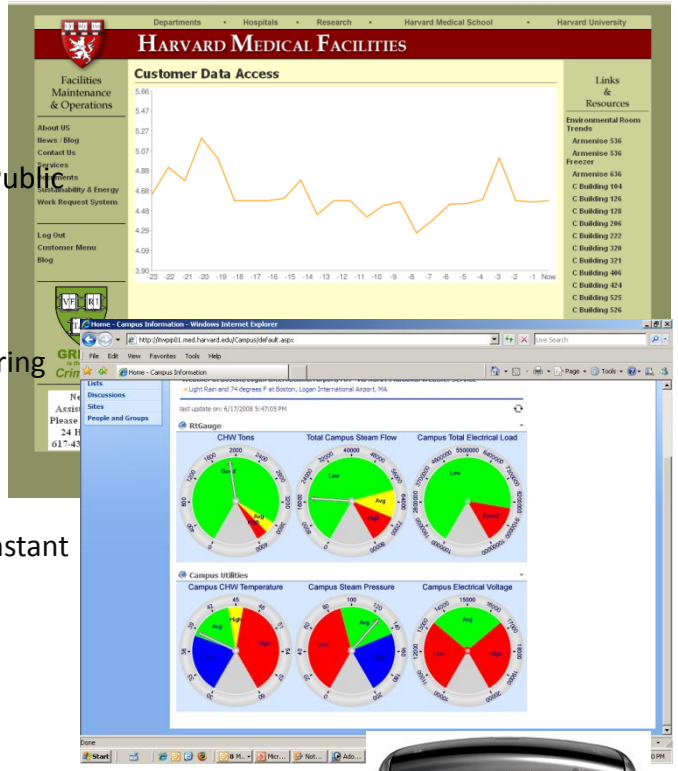


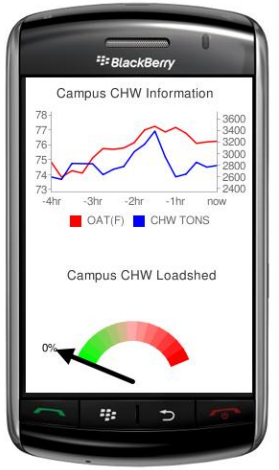
VALUE

Sustainability and GHG's
- 30 % GHG Reduction
- Automated Load Shedding
- Real Time Energy Use on Web for Public
- Analyze Energy Usage
- Model Building Performance
- Trend 'Creep'
- Live Data on Blackberry for monitoring critical situations

Research support
- Science Trending
- Reliable Long-term Historical Datanstant Reports
- Certification Data
- Trending for Compliance
- Vivarium Staff Use
- Custom Trending
- Gas Monitoring

Operations and Maintenance
- Increased O&M efficiency by providing key operational data effectively to managers and technicians
- Reliable science trending helps researchers reach their goals
- PI system foundation HMS energy management process





Real Time

Alcoa

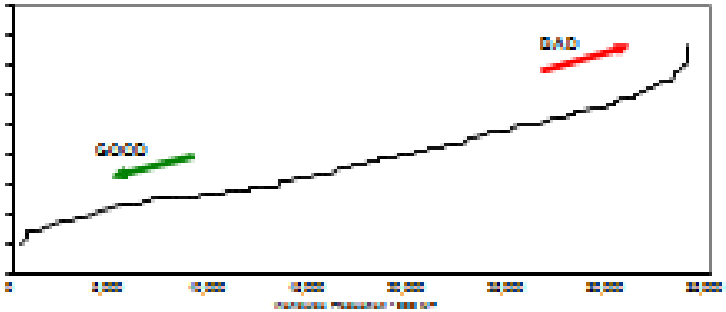
- Aggressive, transparent Sustainability Program
- Some key concepts
  - Life cycle assessment
  - Product design
  - Economic value of products
- Industrial Demand Response
  - Provide reliability to the grid
  - Reduce energy costs

Alcoa

- Commodity business
- Competitive advantage comes from production efficiency

Aluminum Smelting Economics

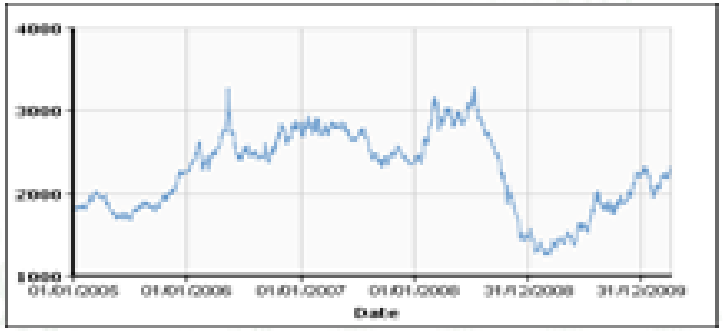
Energy is 30-40% of Aluminum Production Costs….



Worldwide Smelter Cash Production Costs

Warrick Operations is
Alcoa's Largest Operating U.S. Smelter

- **330,000 MT capacity/year**



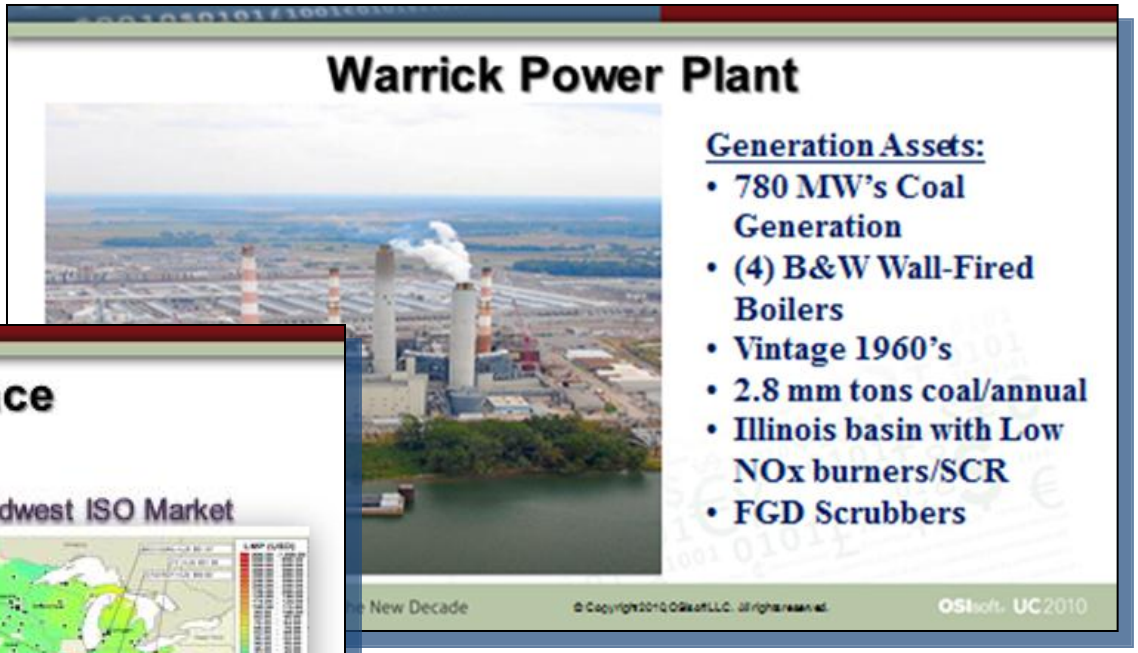
Competition in a Worldwide Commodities Market….

Real Time Information — Currency of the New Decade

OSIsoft. UC 2010

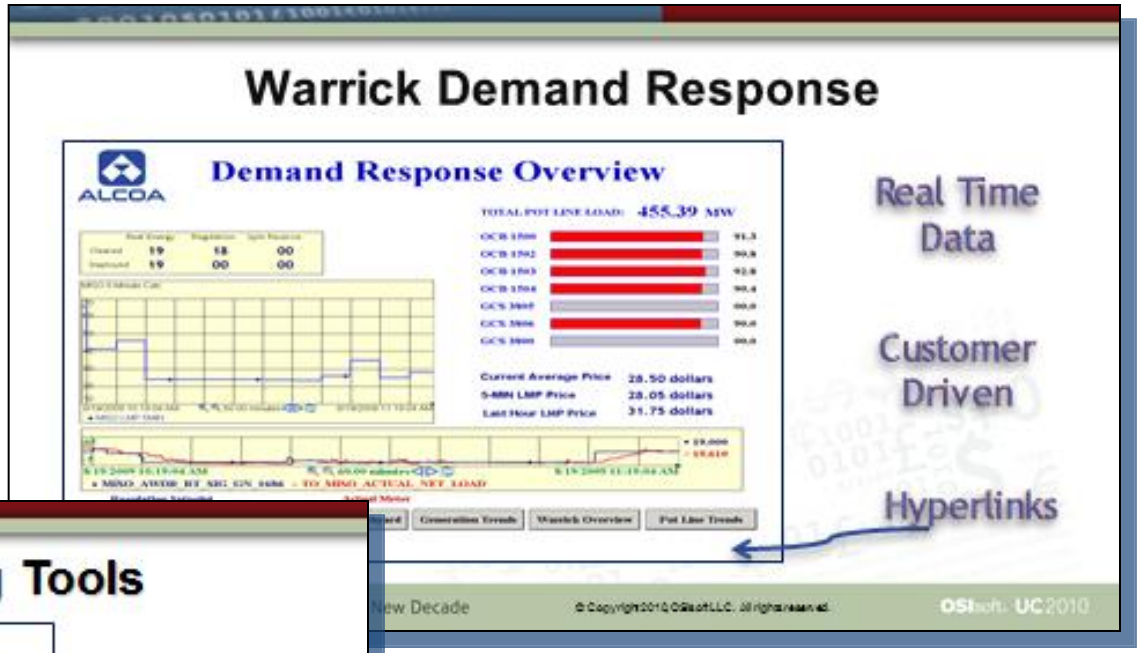
Alcoa

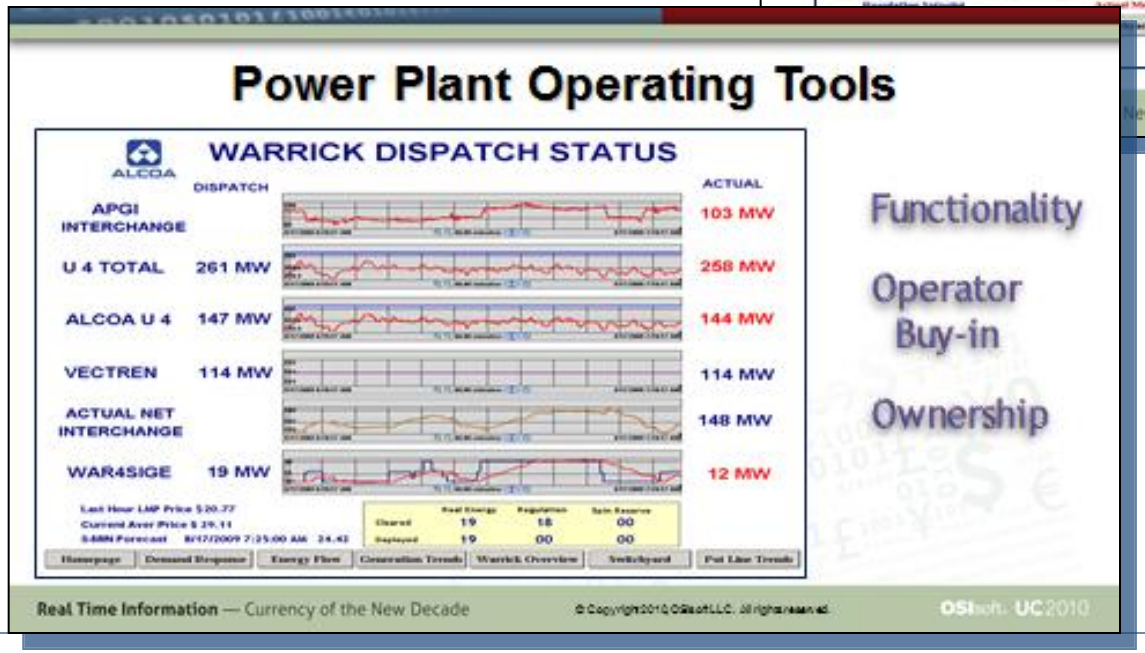
- 780 MW Generation
- FERC License—participate in markets as a generator



Alcoa

- MISO (Grid operator)
  - Reliability
  - Generation capacity
  - Congestion mitigation
- Alcoa
  - Sell power
  - Purchase

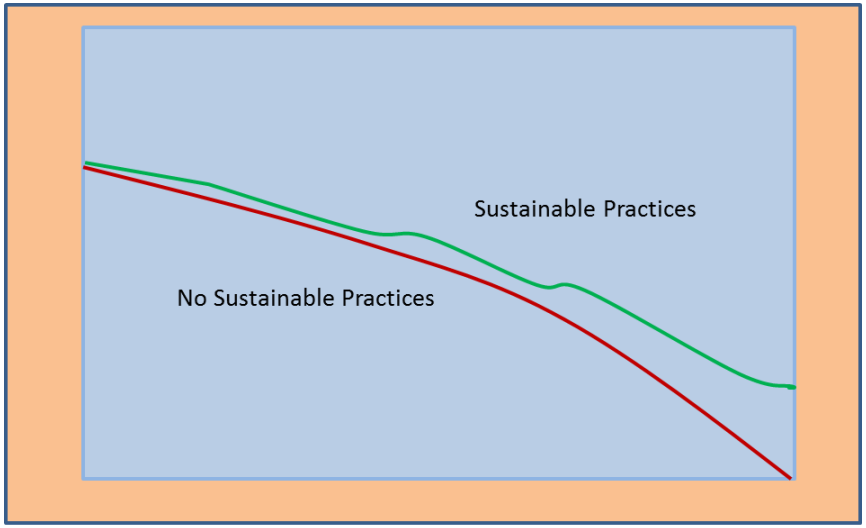




A.T. Kearney Study

- **They studied the performance of sustainability-focused companies during financial crisis of 2008/2009**
  - Some continued to focus on long-term health vs. just short term survival
  - Difficult to have this discipline

- **Results**
  - Stock market performance was 15% higher for these companies vs. their peers



"Create value for shareholders and society"

Conclusion: Sustainability - "It's Just Good Business"

- Sustainability is about your company's long term survival
  - Not just carbon, Green House Gas (GHG) or other "green" initiatives
- Corporate initiatives
  - engage in a culture of continuous improvement
  - improve compliance, public perception, and profitability
- Increase profits
  - Manage economic, social and environmental risks and opportunities
- Gain and Sustain the Trust of the general public
- Sustainability needs your company to sustain, to thrive
- **This is just good business**

Thank you

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