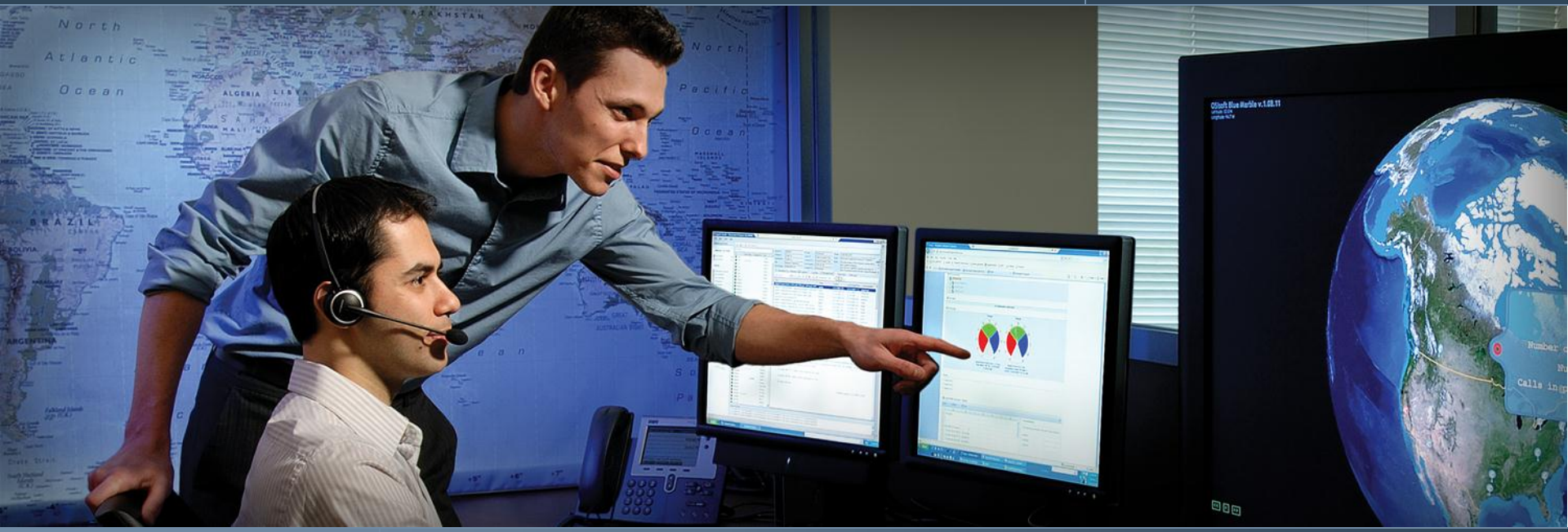
Boston - November 3, 2010
Regional Seminar Series



Sustainability - Just Good Business

Ted Gorrie - VP Sales, Americas

Empowering Business in Real Time

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OSIsoft Overview

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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

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Mission

"We are rewarded when we deliver superior value. This means delivering and implementing an infrastructure through which our customers can continuously improve their business performance"

***Dr. J. Patrick Kennedy** CEO & Founder*

"OSIsoft has released continuous upgrades for over 20 years and we have never had to repurchase PI software. Even though we have a 20 year old system, we currently run our PI System at its most updated version. I know of no other software company that has this kind of commitment to its products and its customers."

WEYERHAEUSER CORPORATION

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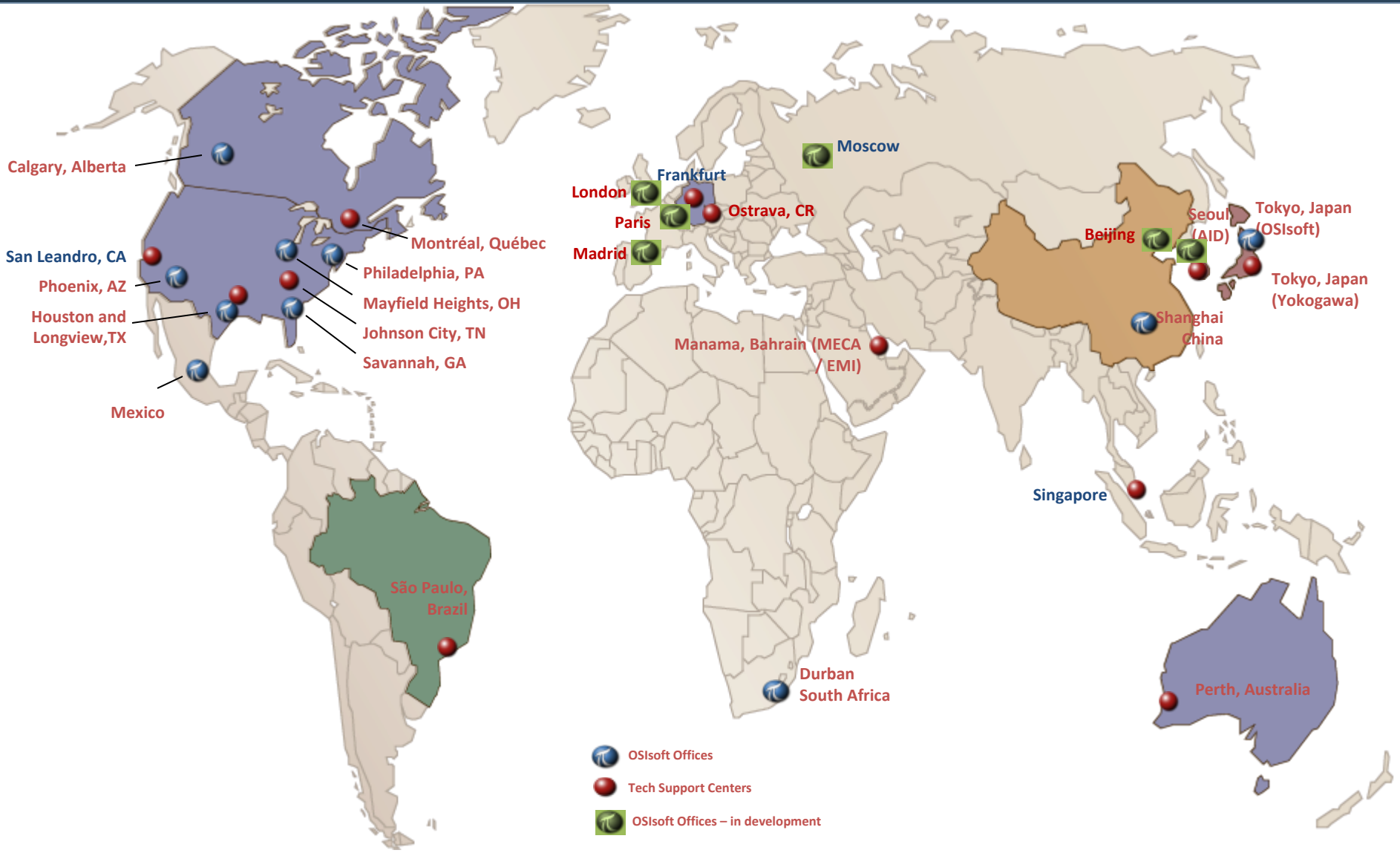
2010 - Global Presence



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Diverse Customer Base Across Industries

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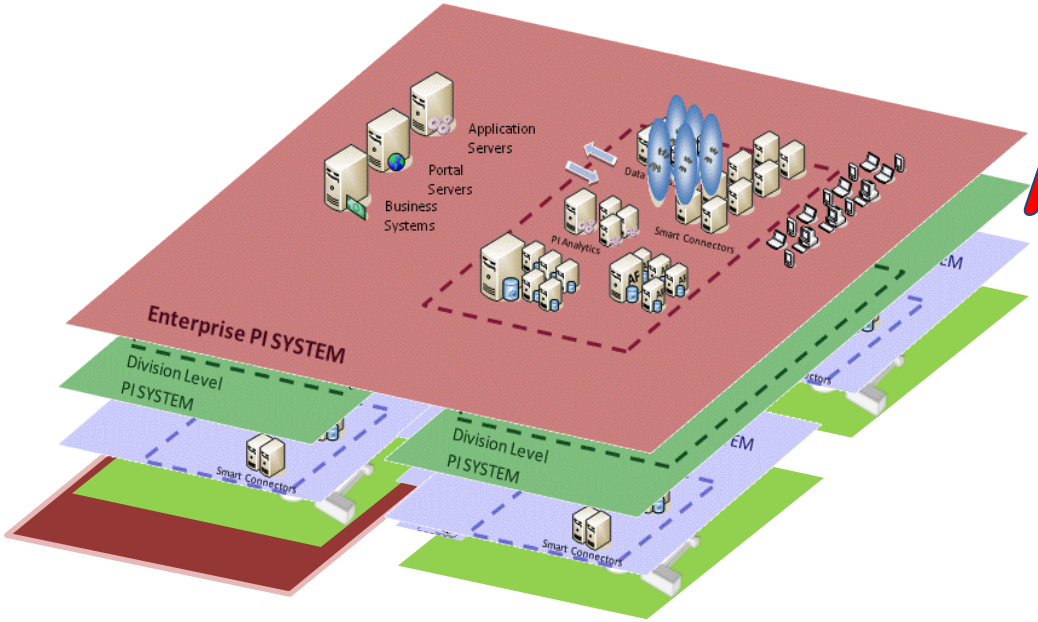
What is the PI System?



Real Time Infrastructure for the Enterprise!

The OSIsoft PI System is the highly scalable and secure real-time and event infrastructure that connects people with the right operational and manufacturing information at the right time to analyze, collaborate, and act.

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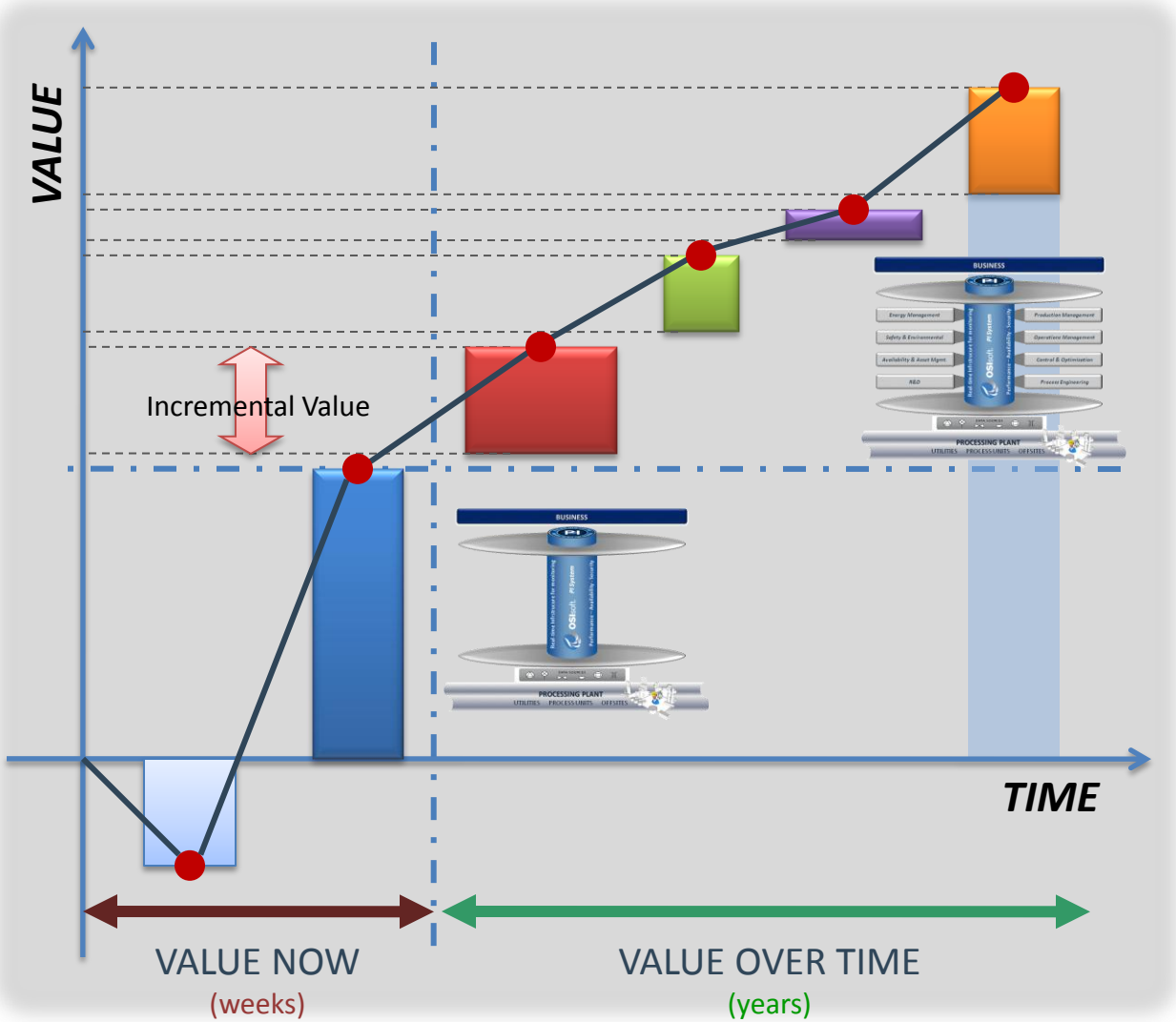
Infrastructure for Continuous Improvement
Value Now, Value Over Time



Example Application Benefits

- *Availability & Asset Mgmt*
- *Safety/Regulatory Compliance*
- *Operations Management*
- *Energy & Water Mgmt*

Infrastructure Value

People ⟷ Assets
Eliminate Detachment & Latency
Shared Immediate Experience
Curiosity ≈ Free

Initial Investment

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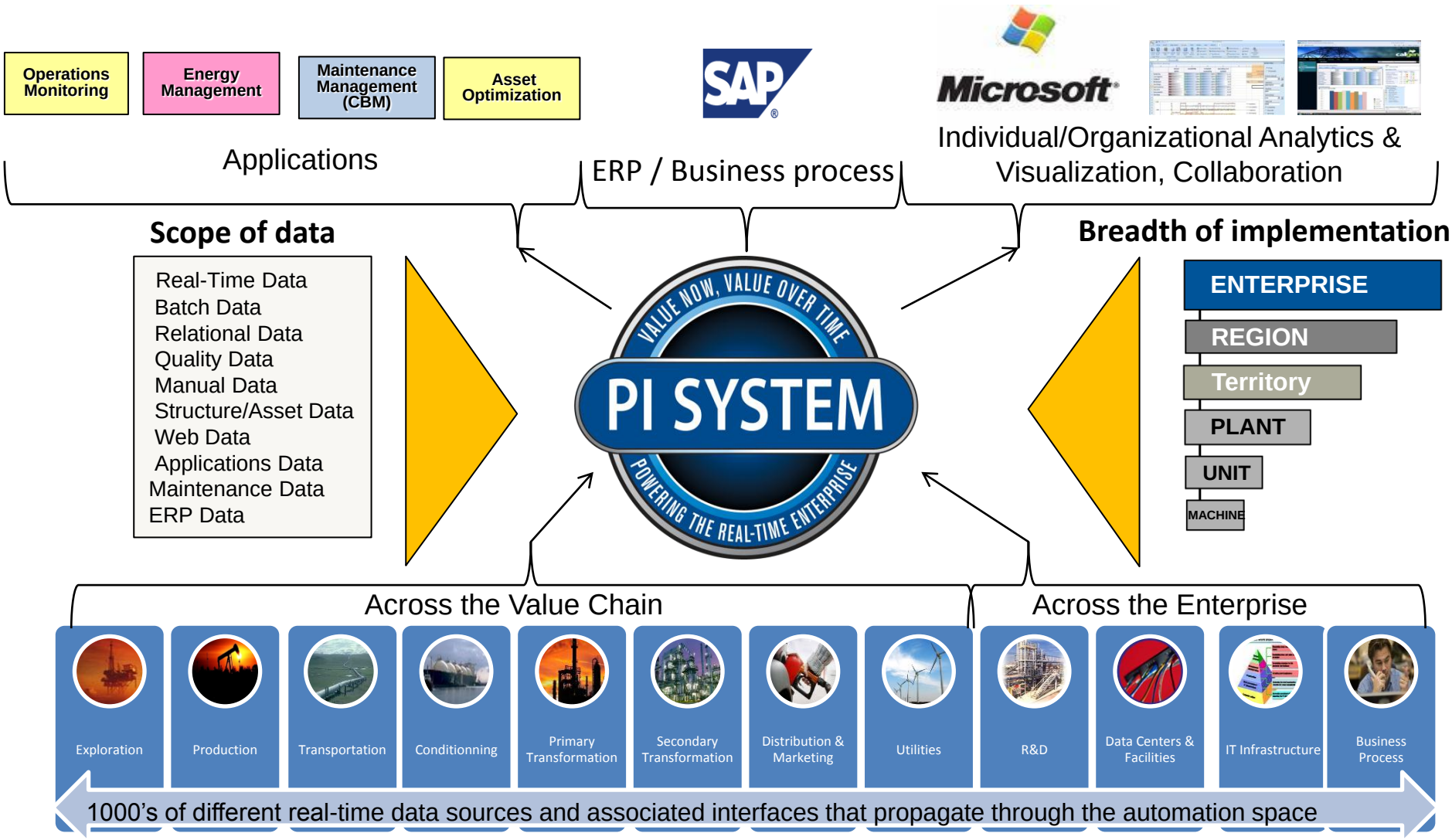
The PI System of the 2010 decade



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What is Sustainability?

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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)

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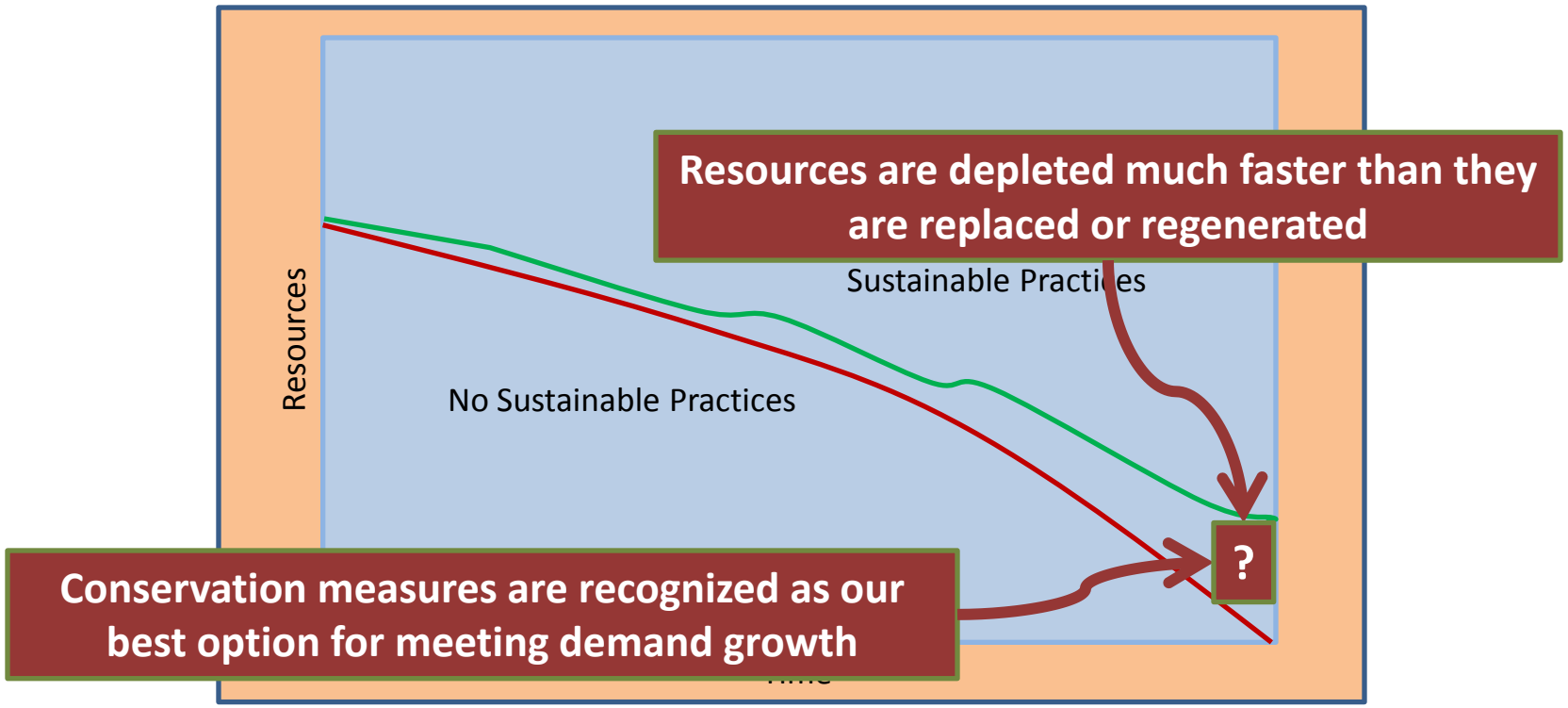
What is Sustainability?

- Meet current needs…
- While growing the Economy…
- Without compromising the future

- Sustainability cannot exist without a strong, efficient industrial base



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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

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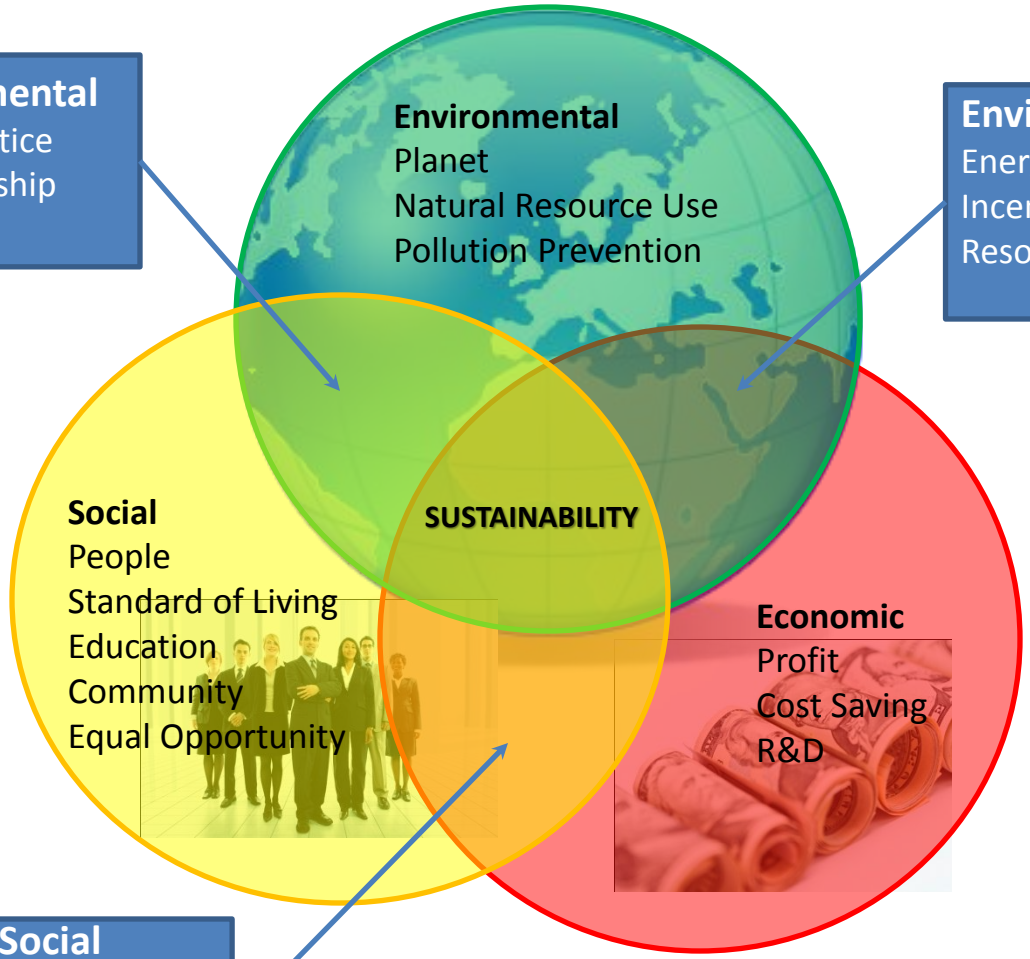
Sustainability – "It's Just Good Business"

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

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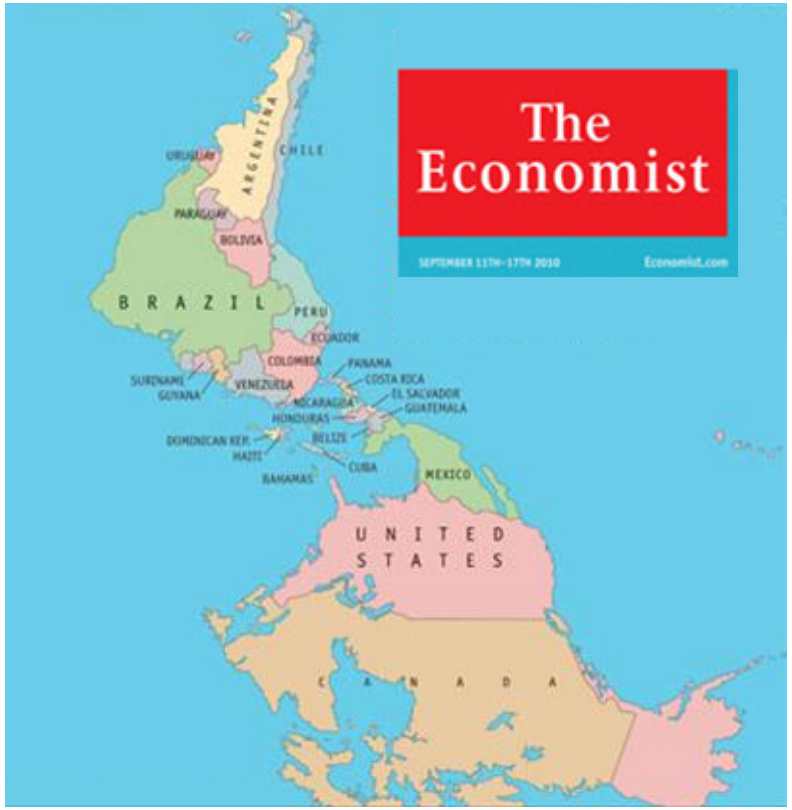
1990 vs. 2010

- Emerging Economies
  - Size and rate of growth
- Distribution of resources
  - Security of supply
  - Impact of harnessing resources
- Fragility of enterprises/volatilities of the economies
  - Less than 1/3 of Fortune 500 companies in 1994 are active – healthy - today
- Rate of communication exchange
  - Impact of phenomenon like Twitter
- Trans national investments & businesses
  - Capital sees no frontiers
  - Major transnational companies
- Human capital and intellectual property more fluid
  - Movement of human capital
  - Knowledge retention and use as competitive advantage
- Shifting fundamentals
  - OPEX vs. CAPEX
- Speed of technological development
  - As much developing in this decade as in the last century
  - "Information" era to "Communication" era



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"Sustainability is just good business"

Customer Examples

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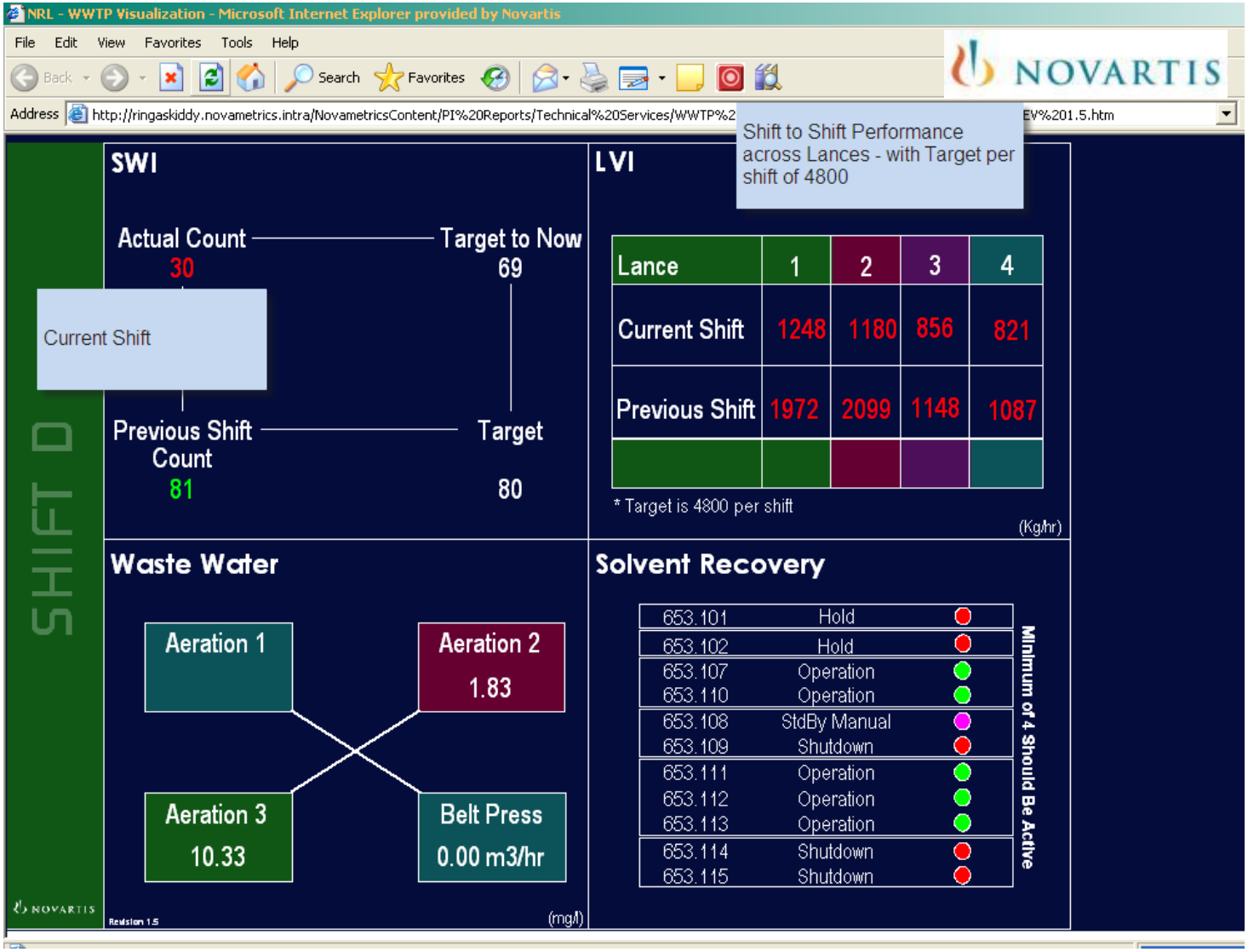
Novartis Case Study - Shared Vision Feedback



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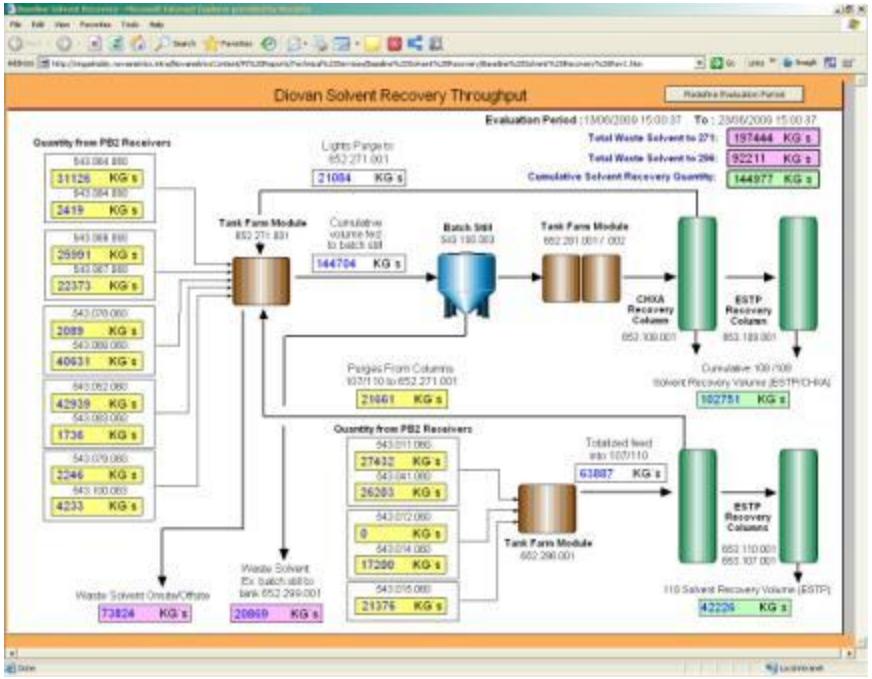
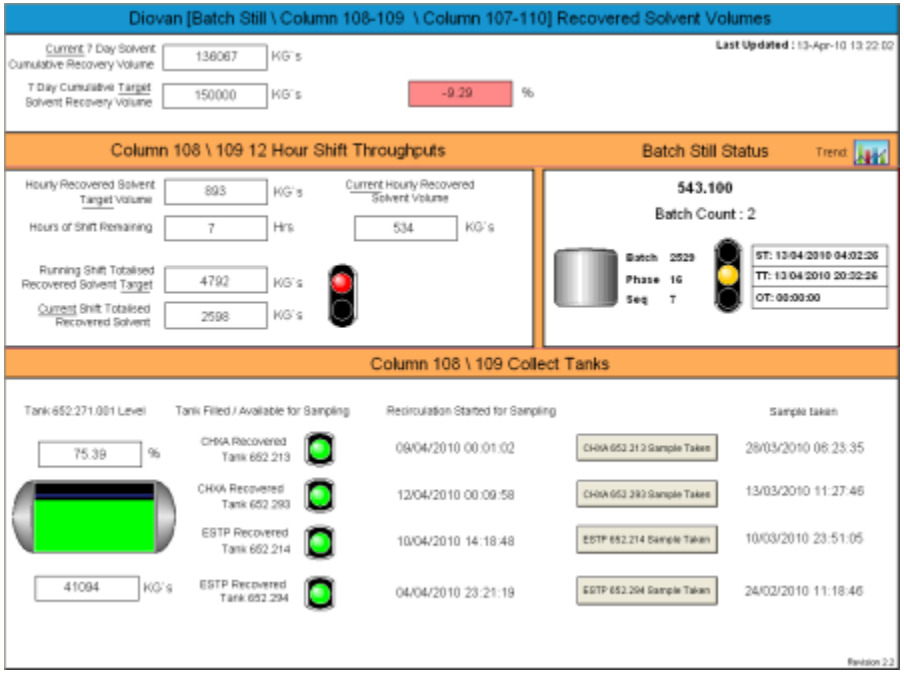
Novartis Case Study - Solvent Recovery Tools





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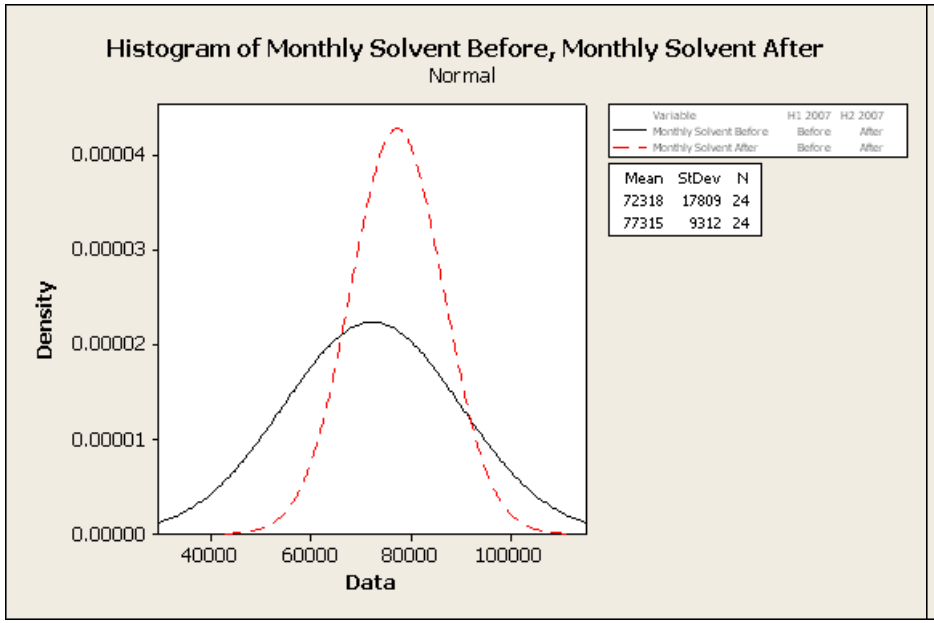
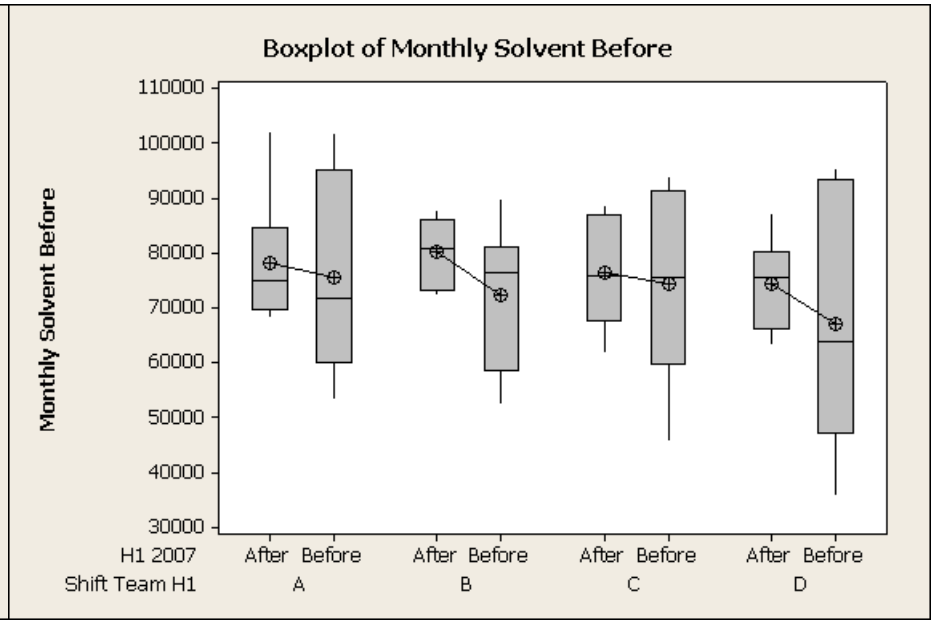
Novartis Case Study - Shared Vision Results

- Improvement by highlighting a target and sharing performance results
- Liquid and Vapour Incinerator performance varied widely across shifts
- 17% capacity lost in performance across the shifts
  - All Equipment and Procedures the same for the shifts
- Before and After Histogram shows the slight change in the mean and the reduction in the variation





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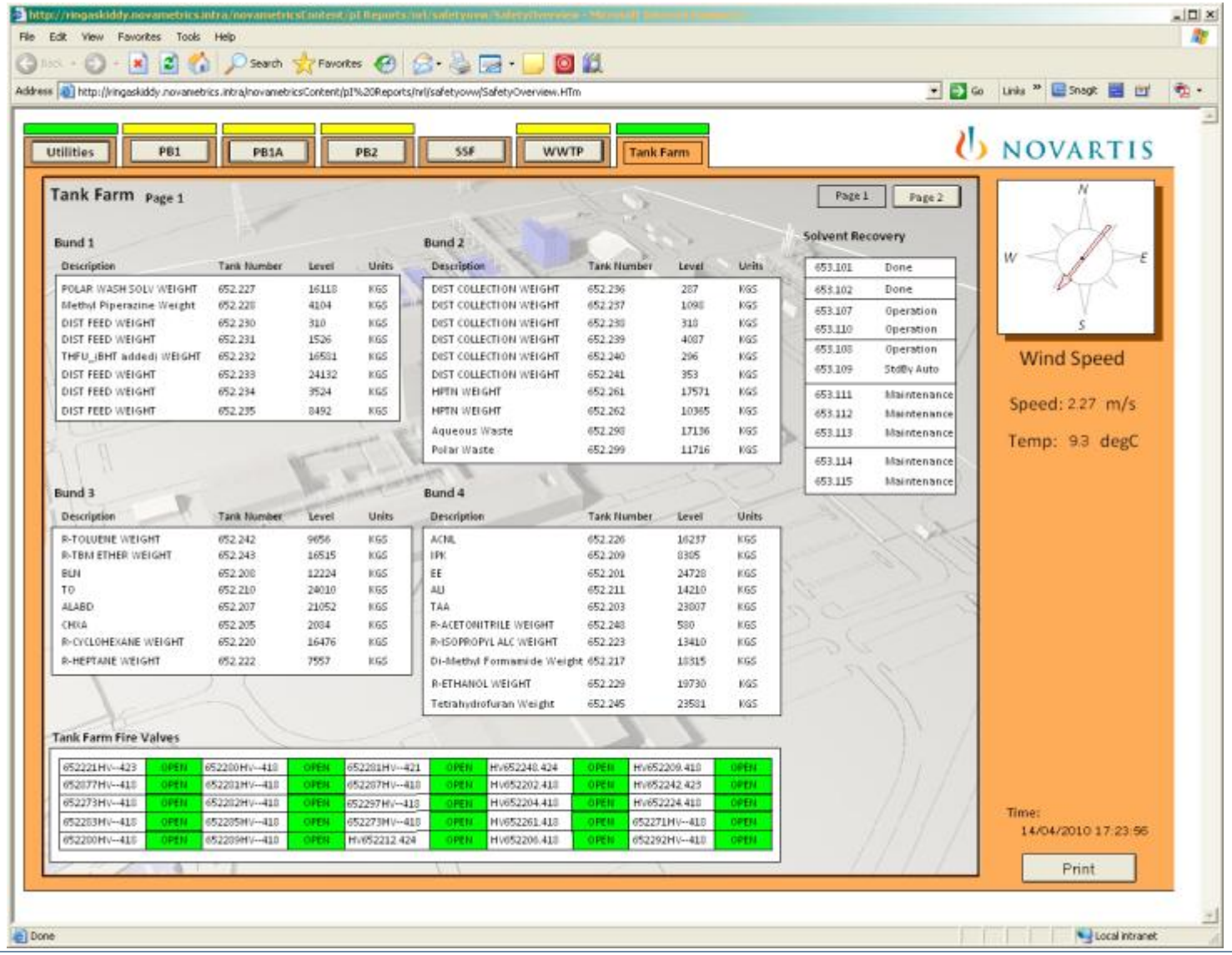
Novartis Case Study - Site Safety Visualization



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Kodak Case Study - Energy

- Fuel and purchased power are significant cost at Kodak Park (Rochester, NY, USA)
  - Engaged everyone in conservation efforts
  - PI system: 100K tags, 150 Webpart users, 250+ SAP iView pages, 30 interfaces
  - Now correlate production volume to energy
- "There was no 'Big Bang." Rather, there were 1,000 little bangs
  - Established a culture of continuous process improvement
  - Everyone can see the data via browser

http://videostar.osisoft.com/uc2010/Sustainable_Seminar/video/SSS_UC2010_Opening_Kodak_Breeze.wmv

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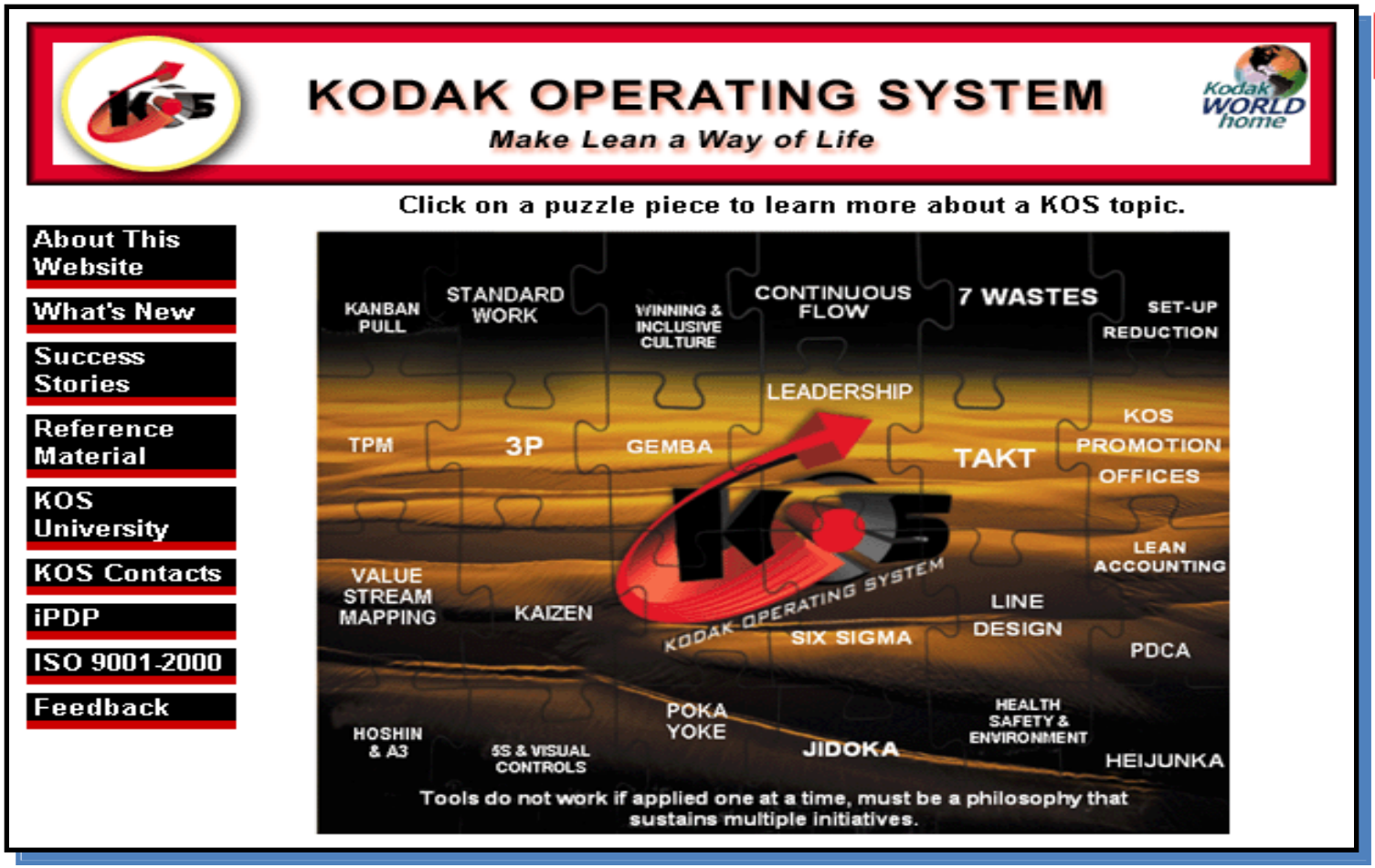
Kodak Case Study - Kodak Operating System



Kodak

Energy Kaizen: 3-5 days, 6-8 people, action rather than analysis

Energy Gemba: shorter focused Kaizen; observe abnormality take immediate action

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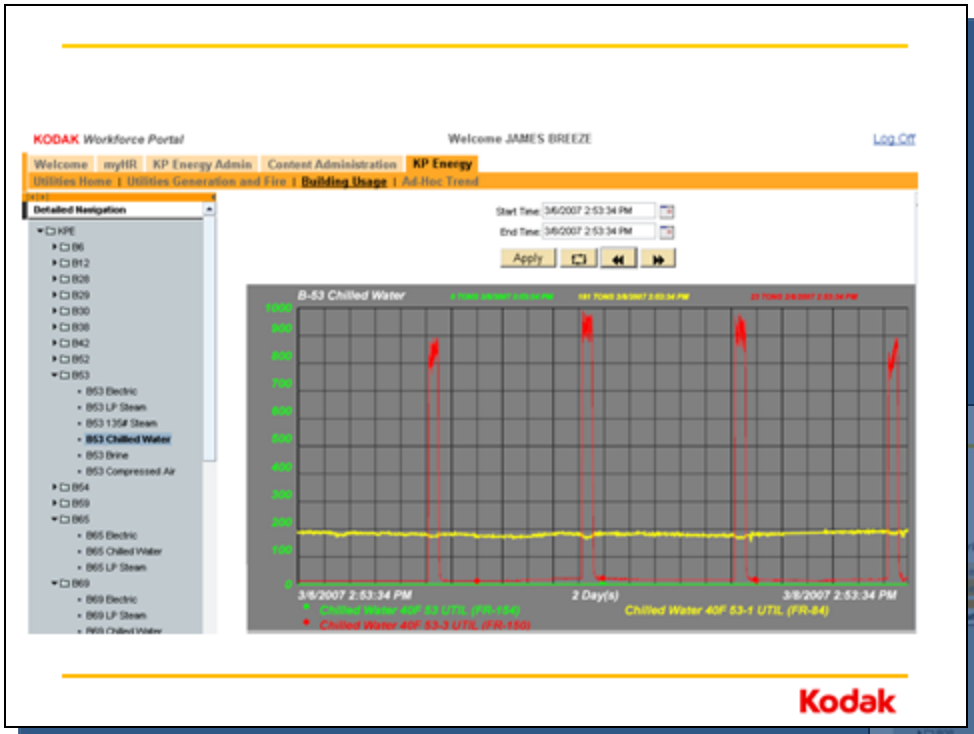
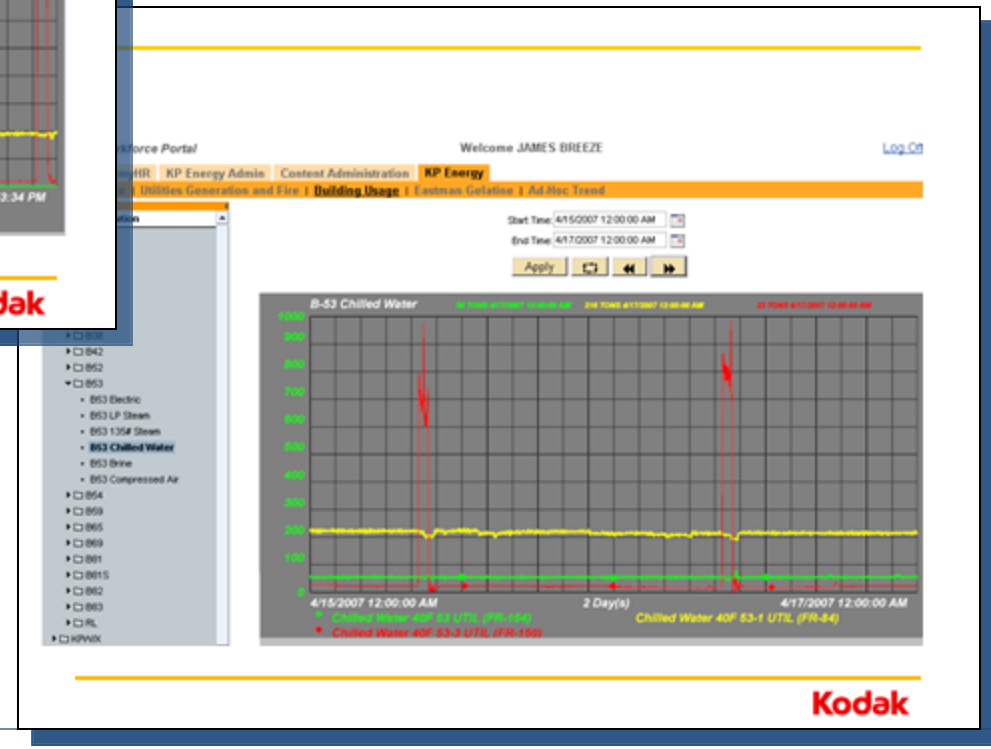
Kodak Case Study - Energy





Carbon recovery regeneration

- Load on steam and chilled water system
- Awareness allowed optimization and move to off peak times

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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

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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

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- **Problem - Faced recent hardships**
  - Price collapse
  - Demand destruction
  - Credit crunch
- **Counter - Aggressive, transparent Sustainability Program**
- **Key concepts**
  - Life cycle assessment
  - Product design
  - Economic value of products
- **Innovation**
  - Industrial Demand Response
  - Provide reliability to the grid
  - Reduce energy costs

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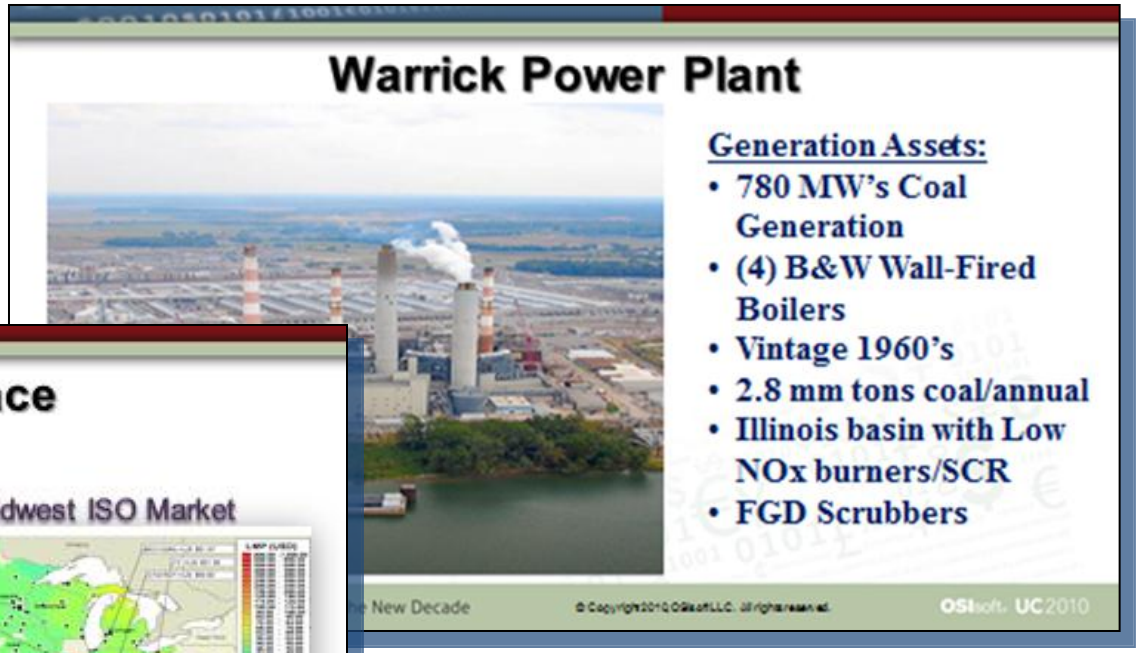
- 780 MW Generation
- FERC License—participate in markets as a generator



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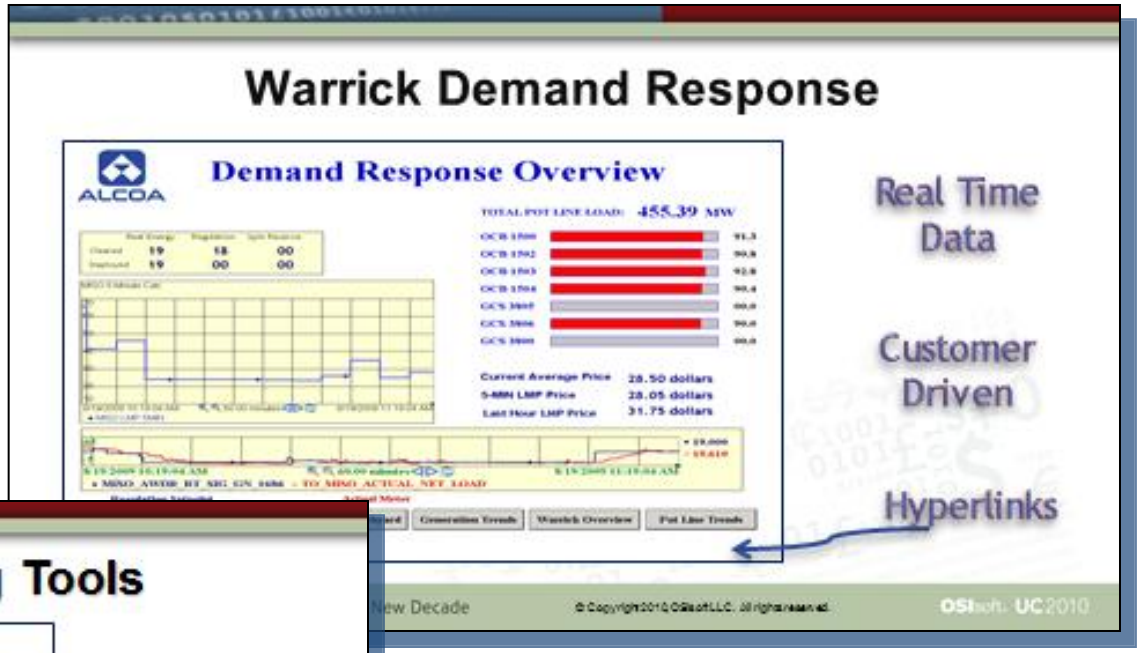
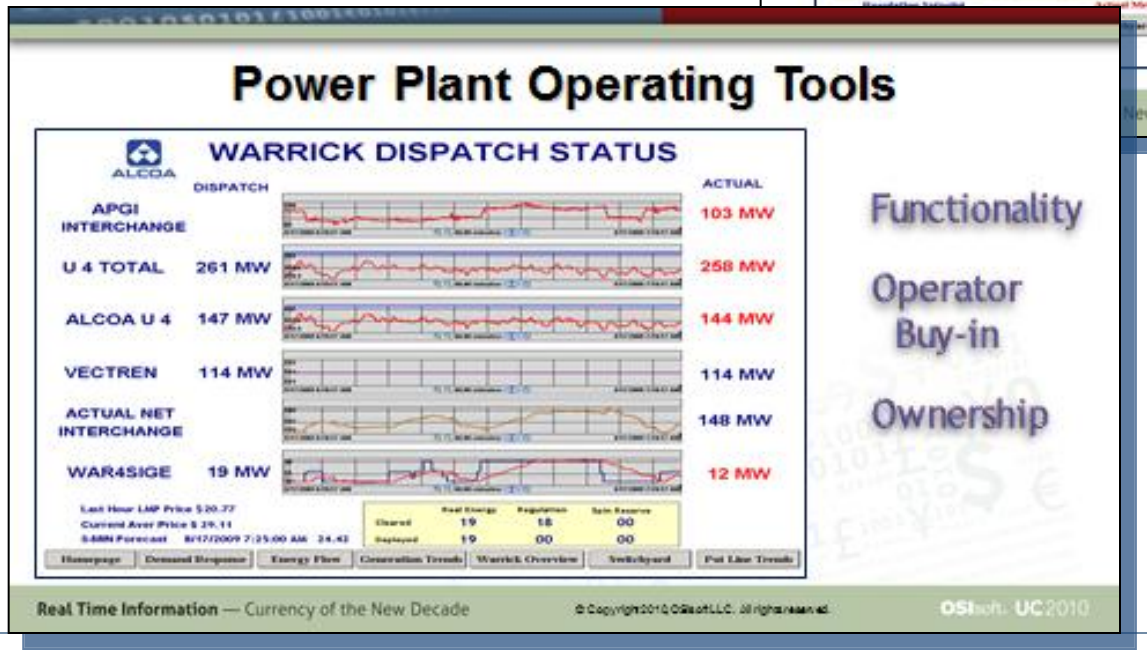
- MISO (Grid operator)
  - Reliability
  - Generation capacity
  - Congestion mitigation
- Alcoa
  - Sell power / Purchase
  - Make Al or Make Power





http://osisoft.fullviewmedia.com/uc2010/40-alcoa.html

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Where do we go from here?

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The Applicability of OSIsoft's Real-Time Infrastructure

How

Intrinsic Values(Aspects)

- Availability
- Security
- Scalability
- Extensibility
- Interoperability
- Manageability
- Searchability
- Update & Patch
- Etc.

What

Capabilities

- Connect
- Acquire
- Archive
- Trend
- Analyze
- Visualize
- Alert & Notify
- Frame Events
- Report

Why

Mandates

- Sustainability
- Innovation
- Operational Excellence
- Compliance
- Knowledge Retention
- Asset Optimization
- Debottlenecking

Scenarios, Business Use Cases – translate mandates of customers into Strategic initiatives
- Smart Grid, Debottlenecking, Emissions Management, Manufacturing Execution, etc.

Conclusion

- **Sustainability – It is good business…**
  - Longevity
  - Financial health
  - Innovation
- **PI**
  - "Value Now, Value over time" theme of sustainability
  - Scale to the enterprise & trans enterprise
    - Enable next level of collaboration
  - Maintain "Situational Awareness"
- **OSIsoft today**
  - Leverages 30 years of sustained & focus efforts
  - Heightened awareness of strategic mandates of customers
  - We will continue to travel this road together

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Thank you

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