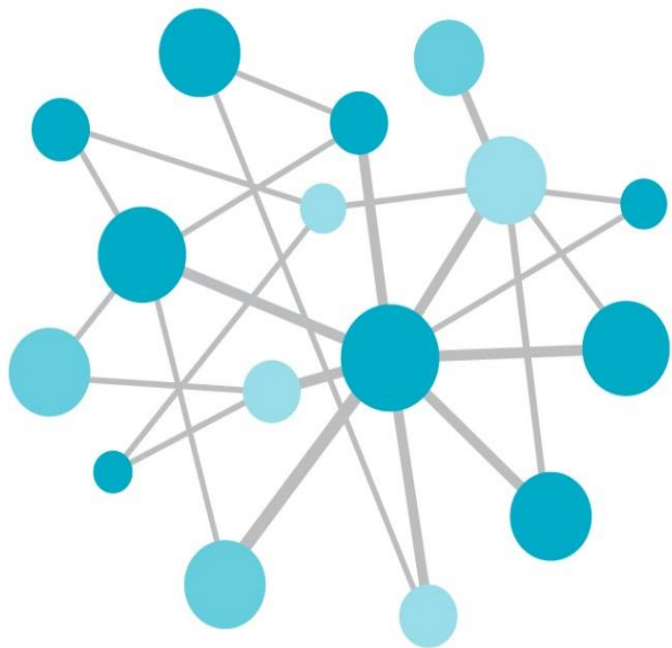




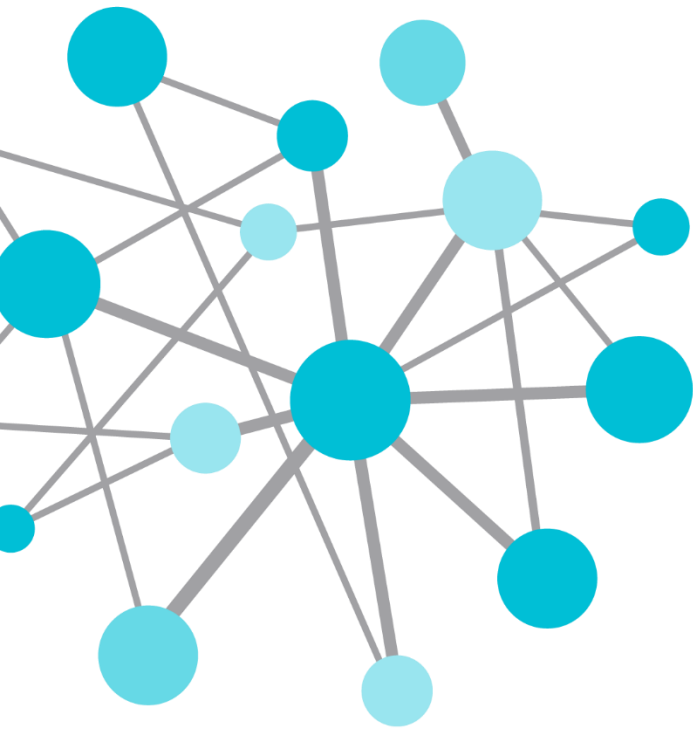
OSIsoft®

FEDERAL WORKSHOP 2014

The **Power** of **Data**

DECISION READY IN REAL-TIME

June 19 Huntsville, Alabama



OSIsoft & The PI System

Presented by Steve Sarnecki
VP, Federal and Public Sector

OSIsoft - Company Profile



1980

OSIsoft Founded

Privately
Held

Full Time
Employees
>1,000
Worldwide

Dr. Pat Kennedy
Founder, CEO, Majority Shareholder

OSIsoft - Sales Profile



Global
Presence
110
Countries

14,000
Installed Sites
Worldwide

2011
Federal Sales
Team
Established

Direct Sales
Model

> 65%
of Global 500

> 20%
Revenue
Invested in
R&D

2012 Presidential "E" Award for Exports by U.S. Department of Commerce

OSIsoft - Industry Verticals



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 The Top 50 Chemical Companies Rely On PI
- Dow Corning, Eastman Kodak, Cytec, Rhodia, BASF



Pharmaceuticals

- Nine Of The Top 10 Pharmaceuticals Use The PI System
- Amgen, Bayer, PDL, Allergan, Johnson & Johnson, Roche



Metals & Mining

- PI Is Used In The World's Largest Mining Companies.
- CEMEX, Cargill, BHP Billiton Yabulu, Codelco, Alcoa



Pulp & Paper

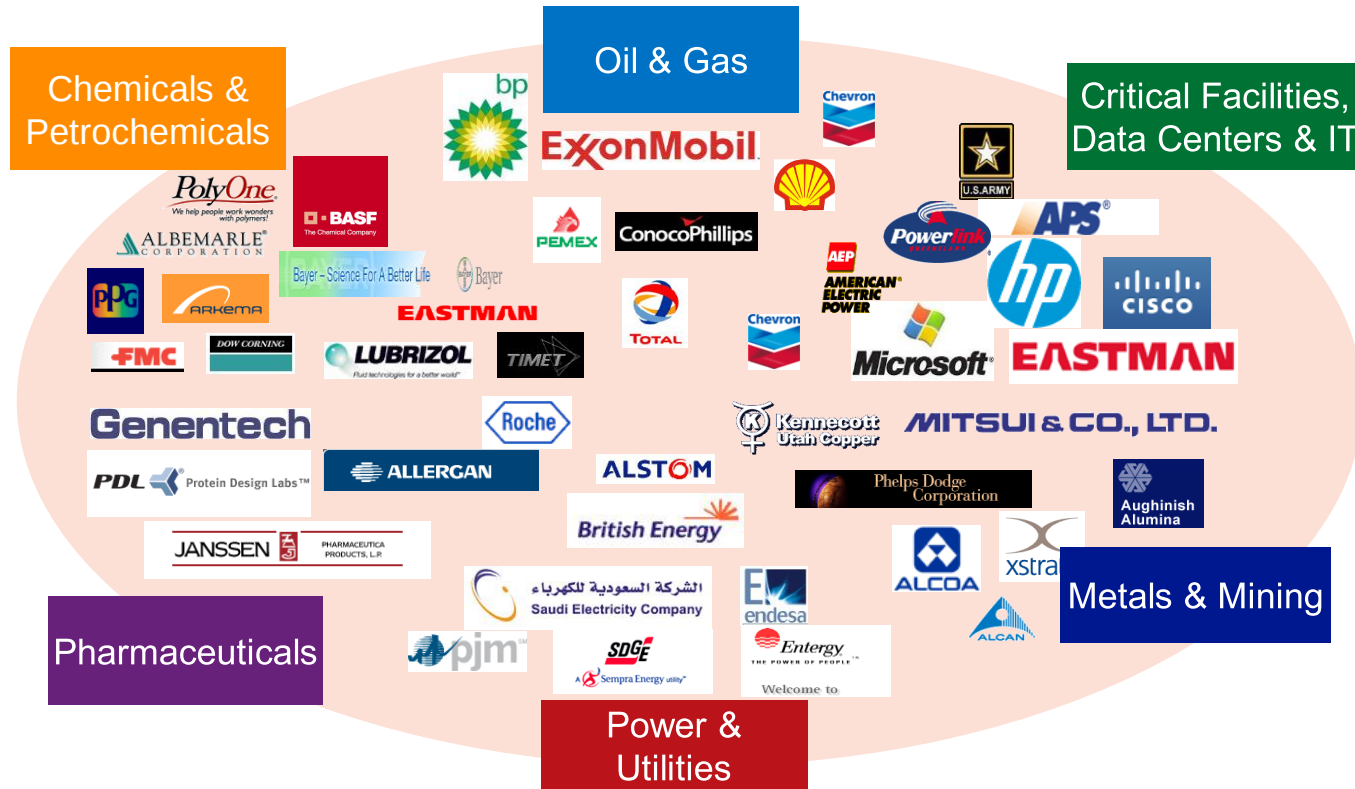
- 400 Sites Worldwide Use PI To Manage Their Mills
- Abitibi, Cascades, Inc., Int'l. Paper, MeadWestvaco



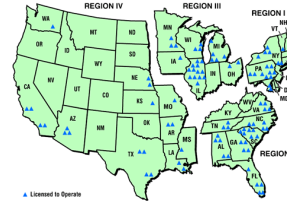
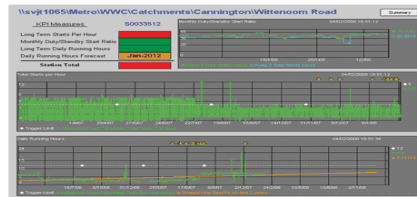
Critical Facilities, Data Centers & IT

- Innovative Use Of PI To Monitor Complex IT Environments
- Microsoft, HP, eBay, Thomson Reuters, RBC

OSIsoft - Customer Base



SUPPORTING ASSET & INCIDENT INVESTIGATIONS



▲ Licensed to Operate
Note: There are no commercial reactors in Alaska or Hawaii.

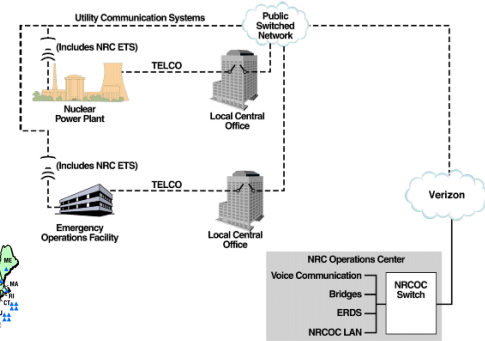


Figure 2: Proposed NRC Emergency Telecommunications System



SUPPORTING OPERATOR & MAINTENANCE ROUNDS



PI Manual Logger Mobile

DEMO TOUR

Instructions

CV101 TAIL END - IS THE V-PLOW SITTING PROPERLY ON THE CONVEYOR BELT. ENSURE FRONT AND BACK ARE DOWN AND SCRAPING BELT AS DESIGN.

Low: High: Delta:
LoLo: HiHi:

Data Comment Group History Log Audit

Tag Go Value Time View Help

PI Manual Logger Mobile

DEMO TOUR

ML TEST POINT 3 BAD / GOOD

3/4

OK

Bad

OK

Low: High: Delta:
LoLo: HiHi:

Data Comment Group History Log Audit

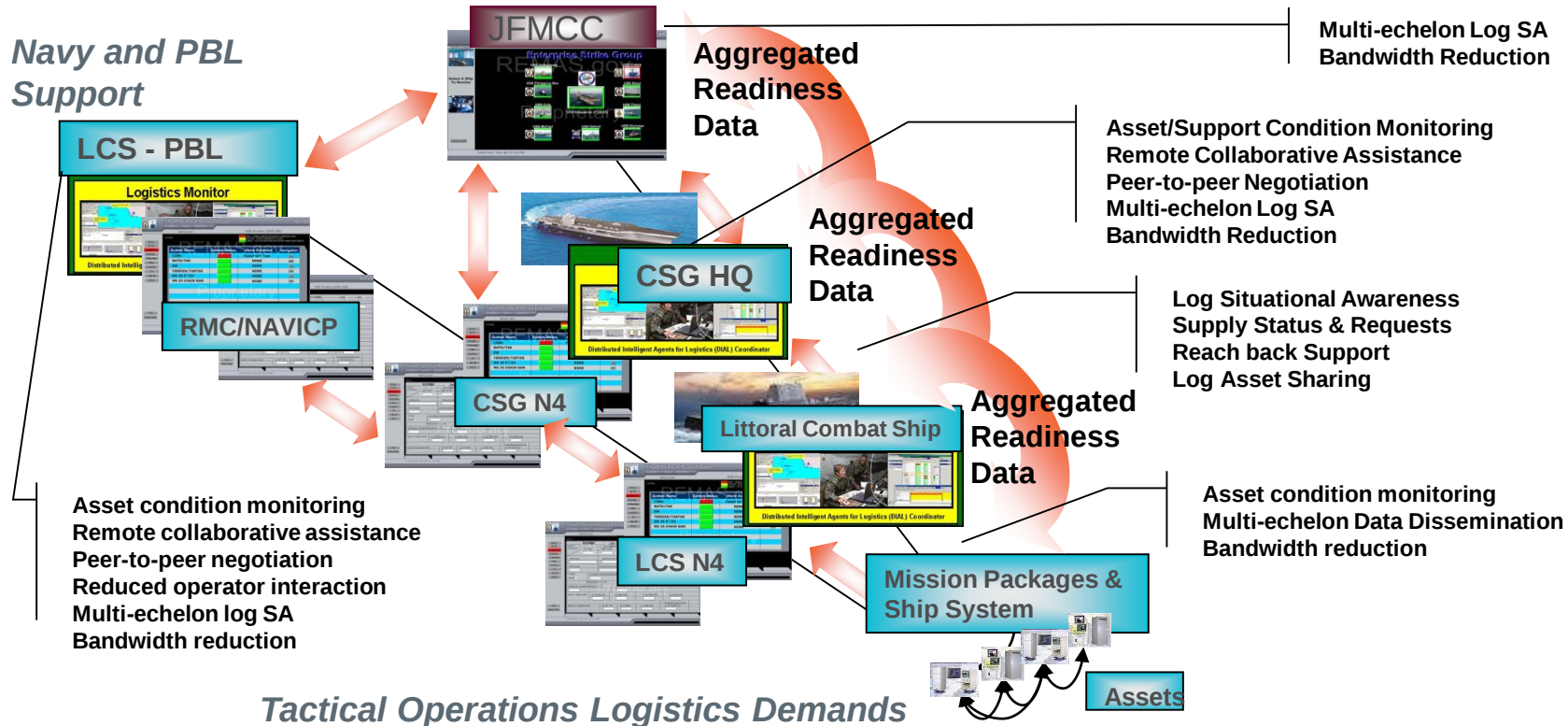
Tag Go Value Time View Help

Evaluating & Capturing
Equipment Inspection Status

SUPPORTING CONDITION BASED ASSET MAINTENANCE

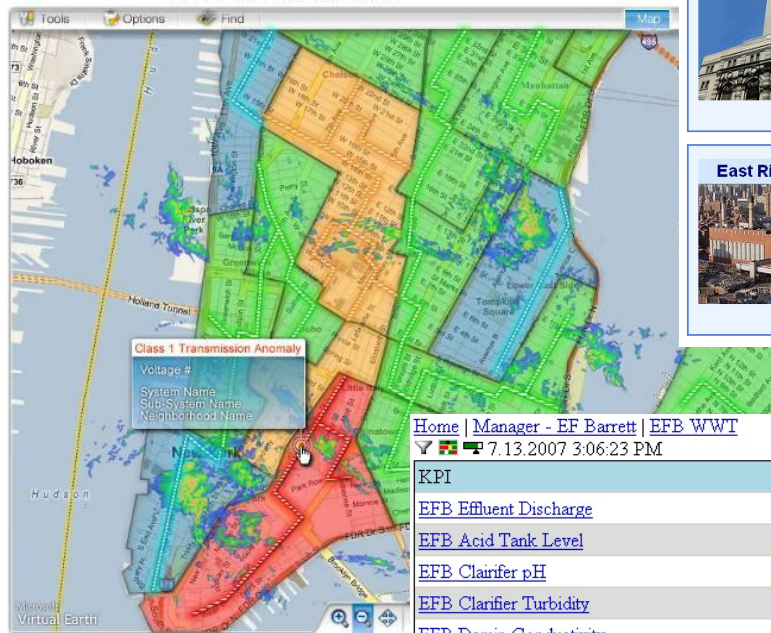
Strategic / Tactical / Operational Logistics Demands

Navy and PBL Support



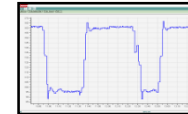
Tactical Operations Logistics Demands

Providing Situational Awareness



Home | Manager - EF Barrett | EFB WWT
7.13.2007 3:06:23 PM

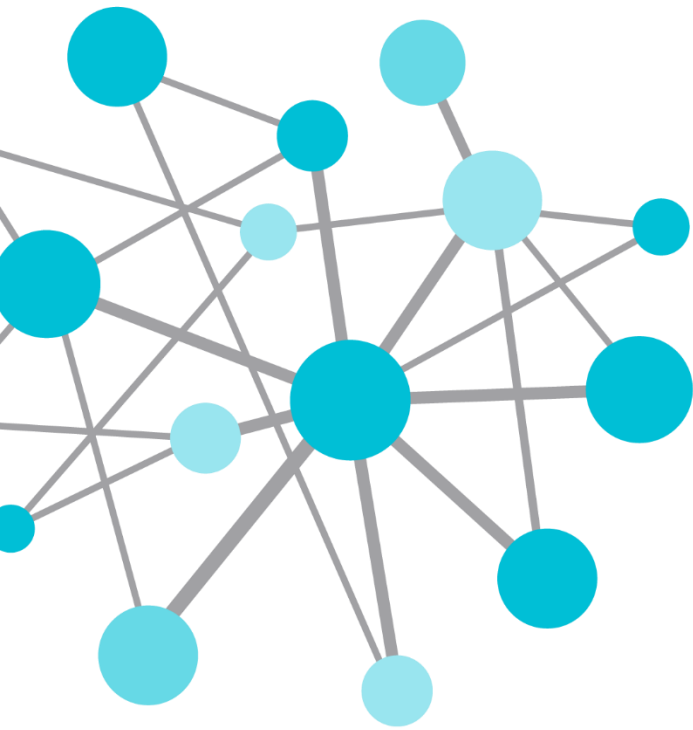
KPI		Actual
EFB Effluent Discharge	↓	.18
EFB Acid Tank Level	●	11.43
EFB Clairifier pH	●	9.015
EFB Clairifier Turbidity	●	67.3
EFB Demin Conductivity	●	258.5
EFB Holding Pond Level	●	4.325
EFB Neutralization Tank Level	●	6.823
EFB Reactor Tank pH	●	10.54
EFB Surge Pond Level	●	4.057



GLOBAL INFRASTRUCTURES / CRITICAL INFORMATION







The PI System

Presented by Mark McCoy
Federal Solutions Architect, OSIsoft

Value of an Infrastructure

Power



Water



Transportation



Data



Characteristics of an Infrastructure



SCALABLE



HIGH PERFORMANCE



RELIABLE



MANAGEABLE



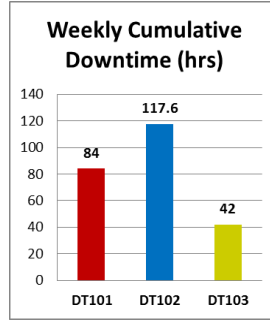
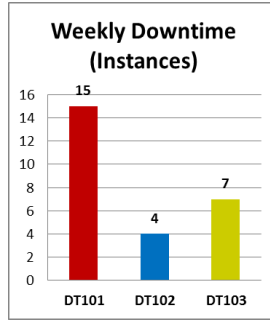
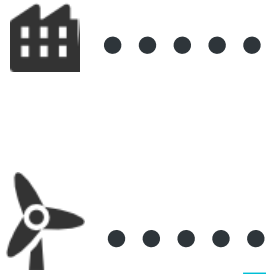
SECURE

INFRASTRUCTURES

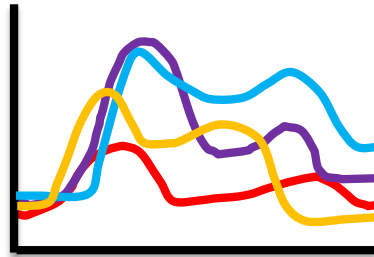
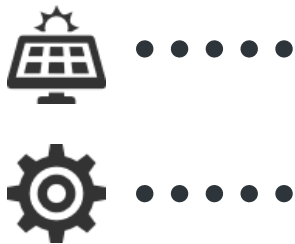
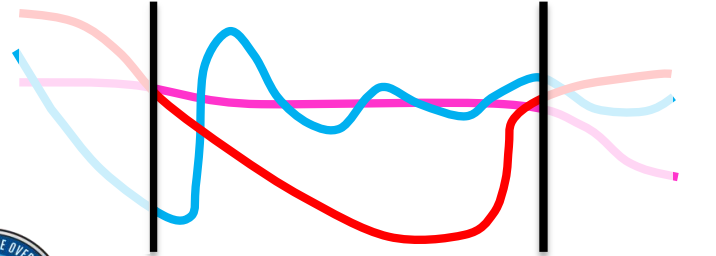


OSIsoft's PI System

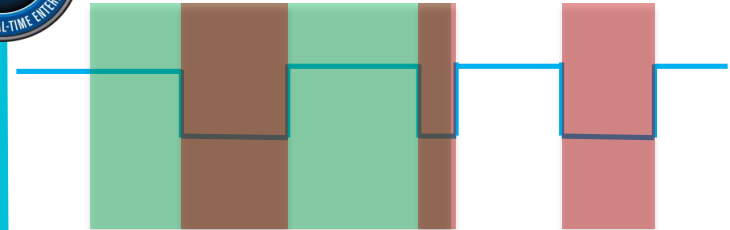
Compare Assets



Simplify Data Analysis



Name	Max
EF1	122.47
EF2	112.73
EF3	98.61
EF4	125.24



Compare Events

Discover Interrelationships

The PI System Basics



COLLECT

Collect

Collect data from hundreds of sources. Over 450 Interfaces.

Interfaces



HISTORIZE

Historize

Archive large volumes of data. Scalable Infrastructure.

Servers



ANALYZE

Analyze

Access real-time or historical data for the entire enterprise at any time.

Analytics



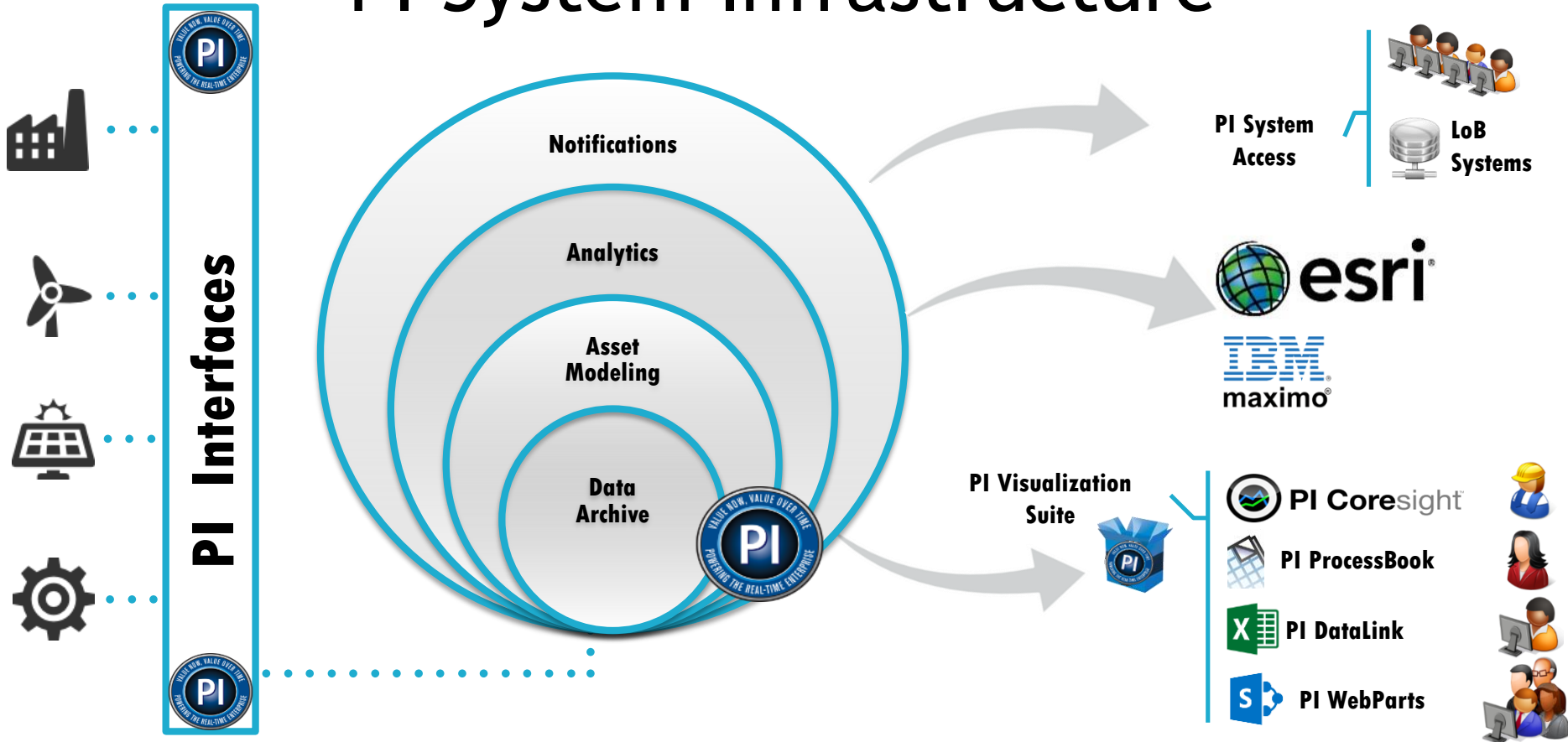
VISUALIZE

Visualize

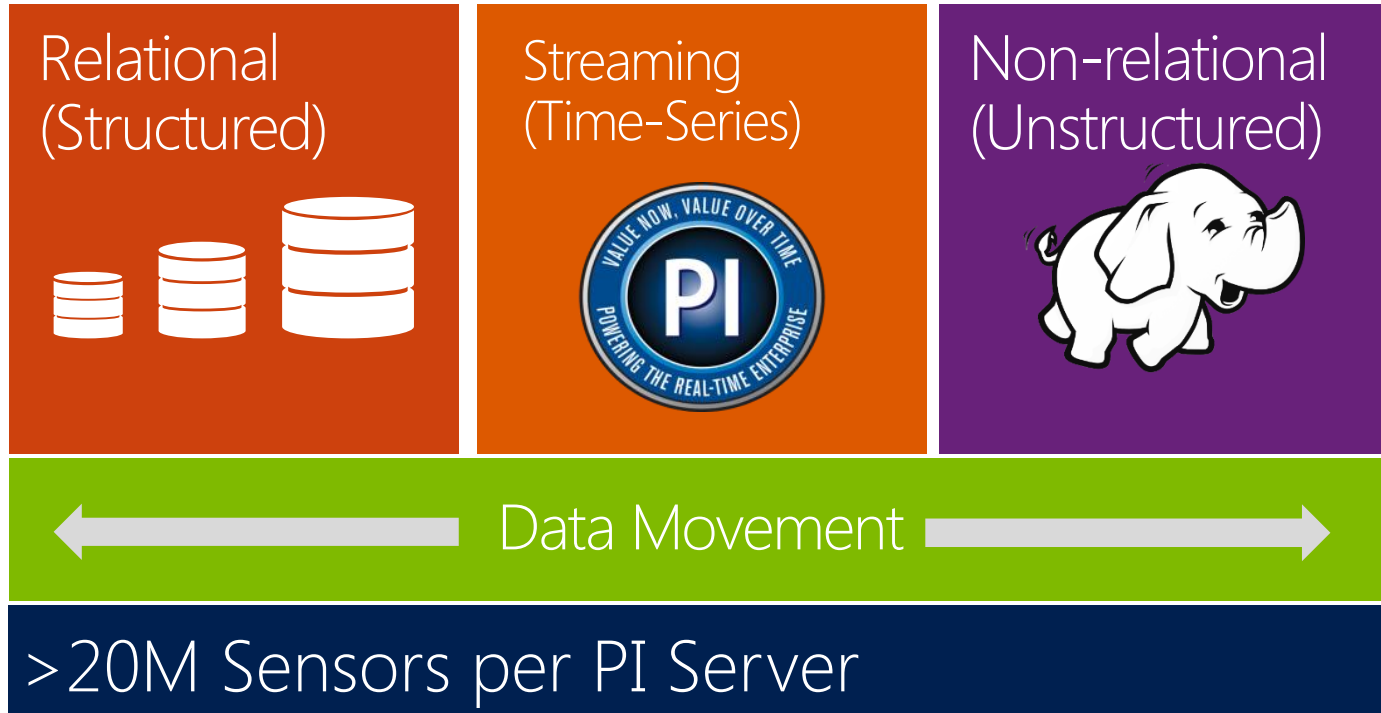
View data, identify problems, and take corrective action with familiar, easy-to-use graphical tools.

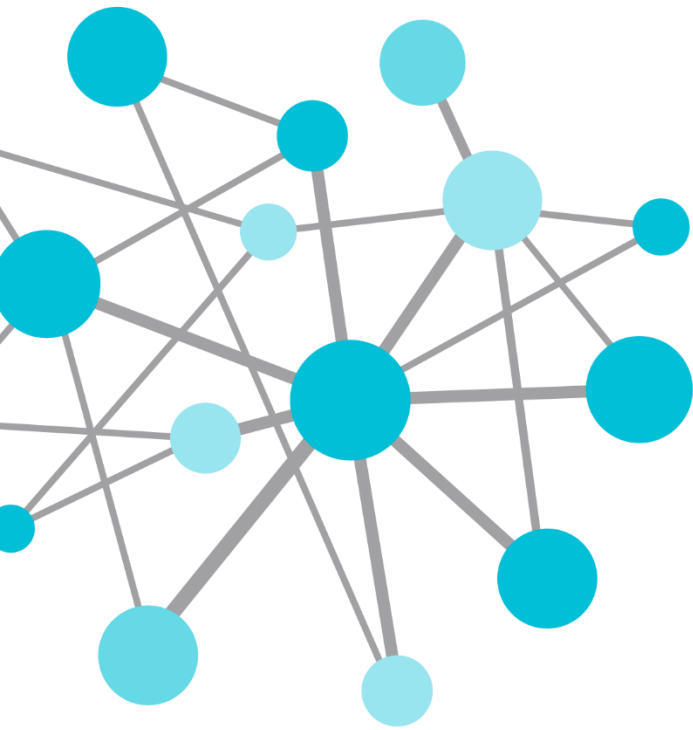
Visuals

PI System Infrastructure



PI System & Big Data





Opportunities

Installations/Campus



Community-wide
Dashboards

Renewable and
Microgrid
Management

Event
Notification and
Analysis

Asset
Management of
Critical
Infrastructure



COLLECT



HISTORIZE

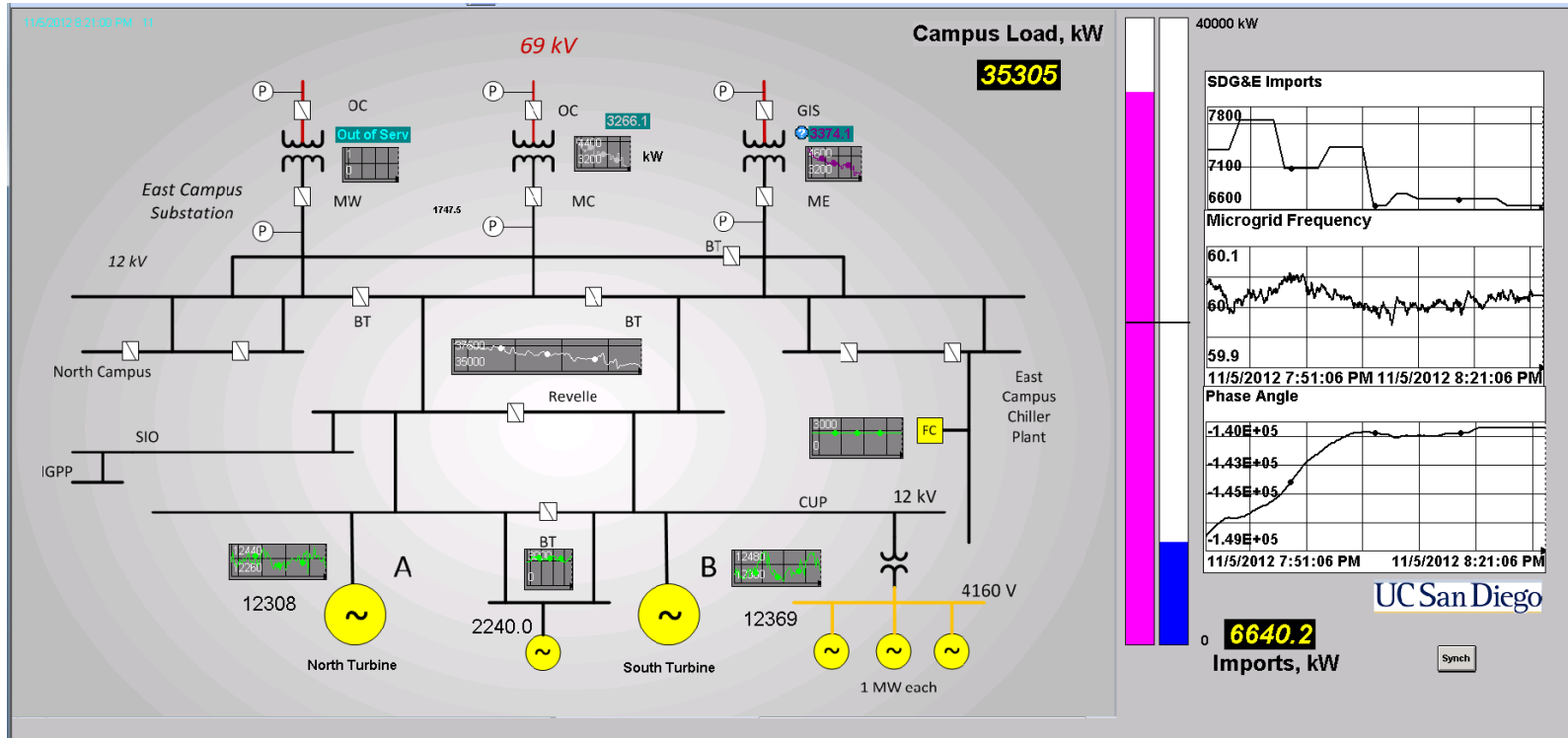


ANALYZE



VISUALIZE

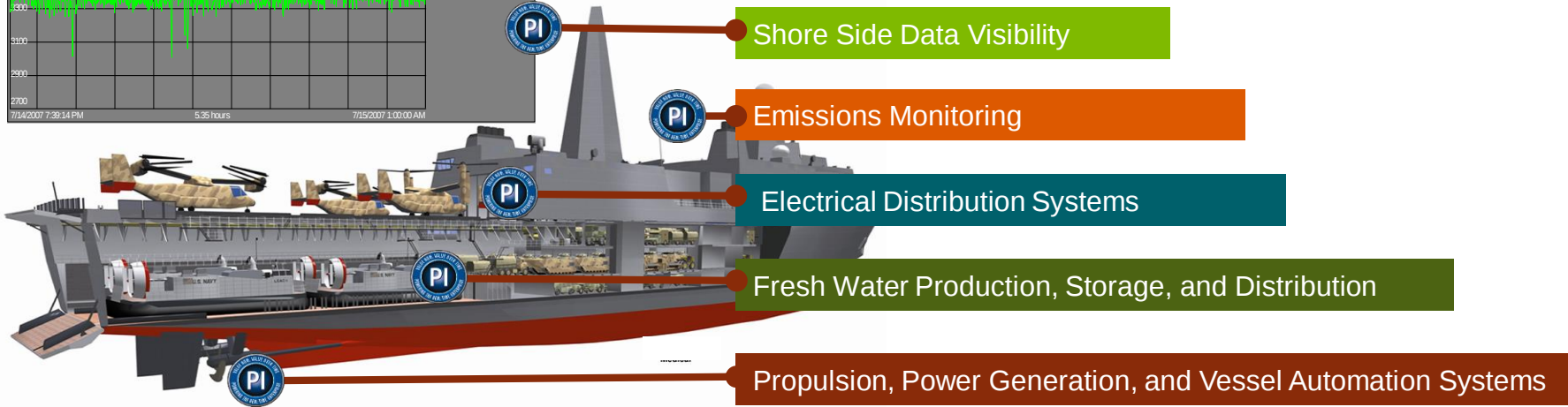
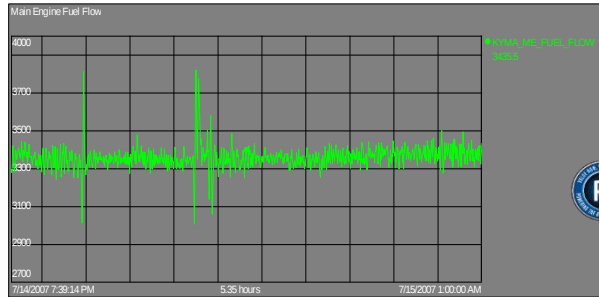
PI System: UCSD Microgrid



Case Study at:
http://www.osisoft.com/resources/case_studies/Case_Studies.aspx

Situational Awareness

Create Consistency
Across Fleets, Deliver
KPIs Ashore

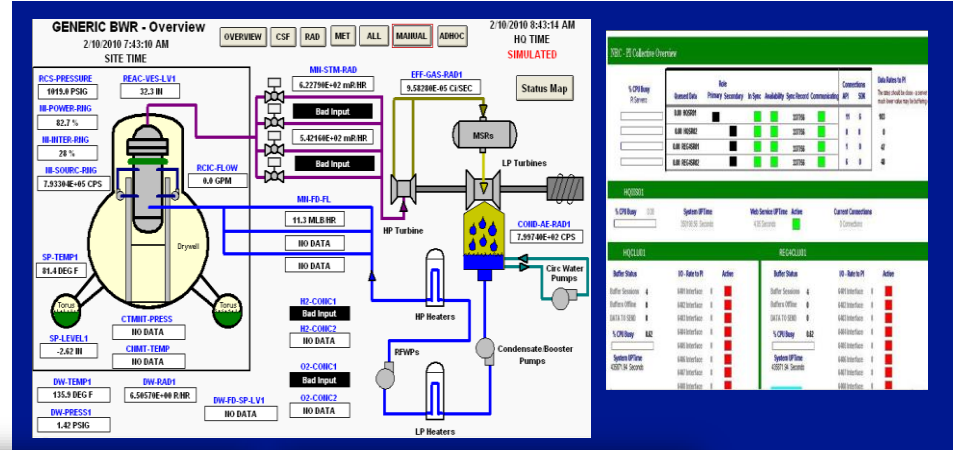


PI System

NRC ERDS



Emergency Response Data System (ERDS) is used to receive plant data and display 'one version of the truth' for multiple users across various locations.



Customer Business Challenge

- State Regulators need connectivity
- Need similar interface for both NRC and State Regulators
- Users located at multiple facilities
- Verify that the data being sent is the same data that is being displayed - Need easier way to tell when a plant is disconnected.

Solution

- HA Replicated PI Servers
 - Allows NRC to keep the system online while doing software updates (patches, etc.)
 - No downtime for system maintenance
- PI Visualization Tools
- Custom Interface for ERDS protocol
- Enterprise Agreement (EA) & Center of Excellence (CoE)

Customer Results / Benefits

- **Visibility** - NRC supervision has recognized PI as a key tool in emergency response
- **Security** - Replacement System is much more secure than the original system.
- **Reliability** - Redundancy of servers has provided for a VERY reliable system (High Availability)
- **Compliance** - With stringent government (FISMA) security standards

Data Centers



Capacity Planning

Energy,
Environment,
Power
Management

Event Notification
and Analysis

Continuous
Improvement,
Enterprise PUEs ,
and KPIs

Increase Efficiency, Improve Planning, and Reduce IT and Facility Costs



COLLECT



HISTORIZE



ANALYZE



VISUALIZE

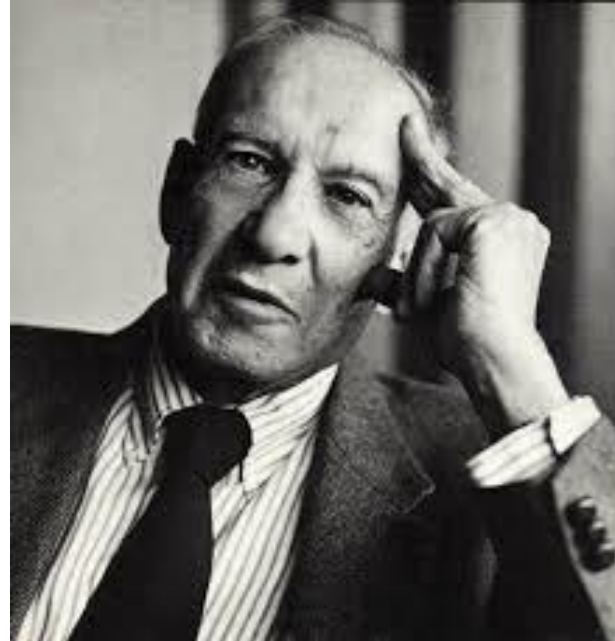
Bring your Maps to Life



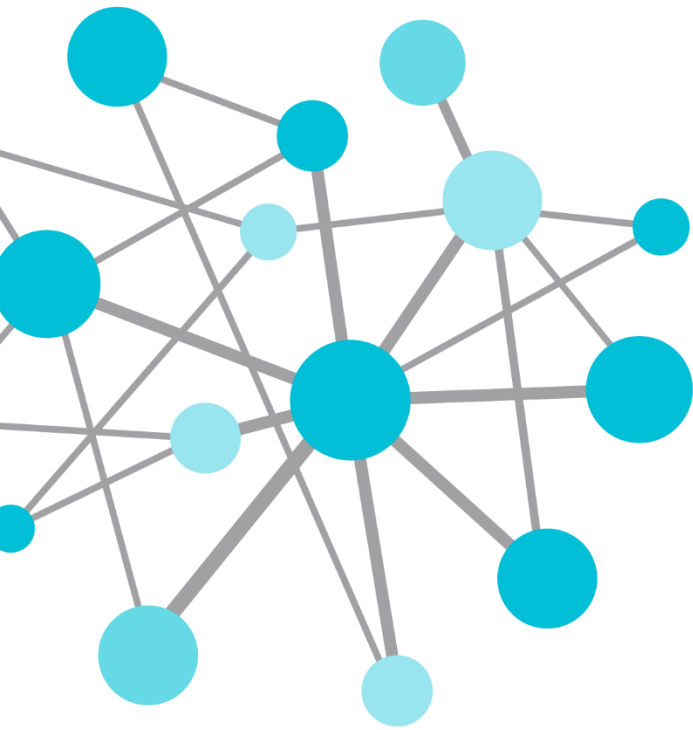
OSIsoft - The PI System

Decreasing the Cost of Curiosity

“The important and difficult job is never to find the right answers, it is to find the right question”



Peter Drucker,
The Practice of Management



Thank You

Presented by Mark McCoy
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Federal Solutions Architect

OSIsoft, LLC