



OSIsoft®

REGIONAL SEMINARS 2012

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



Welcome & Agenda

Aberdeen

Presented by

Mark Peterson
OSIsoft EMEA

Agenda

- OSIssoft company profile & update
- The Power of Data

OSIsoft Company Profile

- ❑ Founded by Patrick J. Kennedy in 1980
- ❑ Headquartered in San Leandro, CA, USA
- ❑ 800+ employees in 30 offices worldwide
- ❑ 250+ employees in product development
- ❑ Over 20% of revenue invested in R&D
- ❑ 15,000+ Installed Sites, over 110 countries
- ❑ 24/7/365 “Follow the Sun” Technical Support
- ❑ Strategic partnerships with Microsoft, Cisco Systems, SAP
- ❑ Partner friendly infrastructure <http://partners.osisoft.com/>
- ❑ ~30% Growth Y-o-Y from 2010 to 2011
- ❑ Industry standard Real time Infrastructure for Streaming data and events



Industry Roles: PI Systems World Wide



POWER & UTILITIES



OIL & GAS



CHEMICALS & PETROCHEMICALS



PHARMACEUTICALS, FOOD & LIFE SCIENCES



MATERIALS, MINES, METALS & METALLURGY

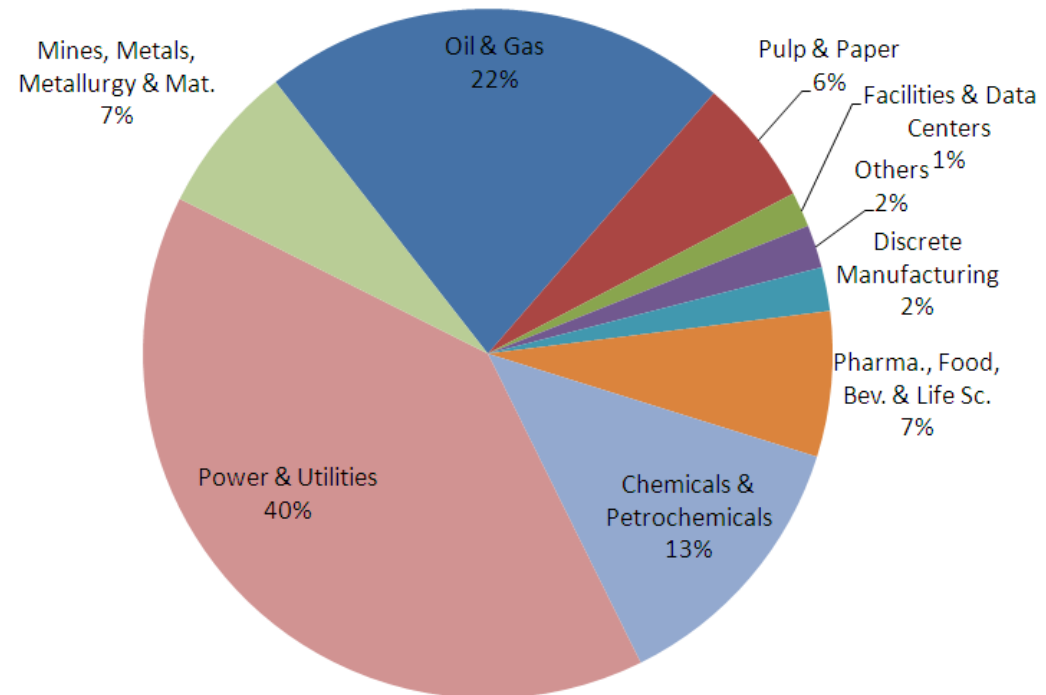


PULP & PAPER



DATACENTERS, IT & TELECOM

by Industry (%)



Diverse & Expanding Customer Base Across Industries



OSIsoft: World wide growth



Recent Recognition of OSIssoft

- Presidential “E Award”
 - OSIssoft awarded the Presidential “E Award for exports” by U.S. Department of Commerce Secretary John Bryson at the White House.
 - The E Awards are the highest recognition any U.S. entity may receive for making a significant contribution to the expansion of U.S. exports.
- Microsoft “Sustainability Partner of the Year 2011-12”
 - Inaugural award from Microsoft for Sustainability
 - Recognising excellence from within Microsoft’s extensive global partner community in driving Sustainability initiatives



The Power Of Data

Presented by

Mark Peterson

OSIsoft EMEA Alliances

Etymology of the word “data”

Data is derived from the Latin word datum

Could be interpreted as:

“to give”

“something that is given”

a form of present or gift



Whilst Data can be a gift and has significant value.....



“...a wealth of information can create a poverty of attention and a need to allocate attention efficiently...”

Herbert Simon

Economist

Nobel Prize Winner - 1978

*Data Eruption, Data flood,
Data Tsunami, Data deluge*

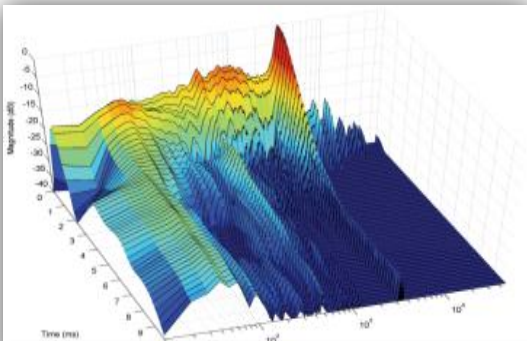
Personal Level: “Information Overload”



Real time data....BIG DATA.....Requires a new approach to leverage the Power of Data

- OSIssoft has been doing “Big Data” for 30+ years
 - Fortunately, OSIssoft customers have been data driven for many years. You have a head start in the developing practice of data analysis and data science.
- To succeed in the future and handle the phenomenon
 - People aspect
 - New roles will be required to take on the challenge
 - Specialist Data analysts, Data Scientists, Data Experts
 - Maybe even a “Chief Data Officer”
 - Technology aspect
 - Greater use of technology to capture and harness more Data
 - Continue to Increase the ability to collect, manage, process and share Data
 - Improve analytics capabilities and simplify the means of interacting with Data
 - Adopt an enterprise wide, infrastructure led approach to managing Data

Data Growth and Data Management



Syncro Phasors

4.8K data streams,
120Hz

3 years online

Unique Events: 55
Trillion

Estimated Data:
436TB



Automated Metering

20M meters, 5-min
reads

7 years online

Unique Events: 177
Trillion

Estimated Data:
1,413TB



Fleet Monitoring

1K assets, 1M points

10 years online

Unique Events: 6,307
Tr

Estimated Data:
50,458TB



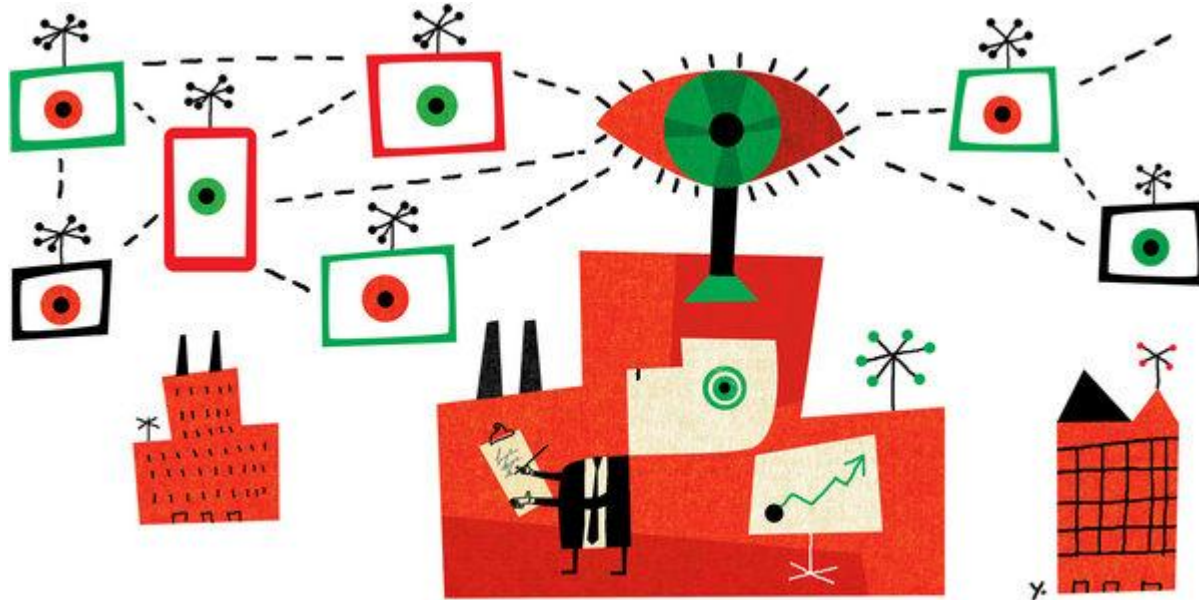
Opportunity, “Power Of Data”

- Knowledge Preservation
- Root Cause Analysis
- Proactive, condition based maintenance
- Energy & resource management
- Asset monitoring
- Sustainability initiatives
- Etc.....

At the beginning of the last decade OSIsoft predicted that Data would be “the currency of the next decade”

We firmly believe this claim is still valid today.

The Value of the Power of Data. When There's No Such Thing as Too Much Information



Recent MIT research concluded that Net gains in **Output and Productivity** were **5 to 6 %** higher with Data Driven Decision Making

Reference: Brynjolfsson, et al., MIT, How does Data-Driven Decision making Affect Firm Performance, 2011.
<http://www.nytimes.com/2011/04/24/business/24unboxed.html>

How are you harnessing
the Power of data?



Power of Data: Value Creation Trends

- Organisations are recognizing the need to connect information to decision making and actions.
- Greater emphasis is being placed on the management of knowledge as an enterprise asset.
- Software tools continue to move away from isolated applications (islands) developed by technically skilled employees (e.g., spreadsheets)
- Growing trend to combine corporate knowledge with business logic (business rules) and make this accessible and visible across the enterprise.

Attributes of Power of Data Value Creation

- Remove organisational barriers and facilitate collaboration
- Promote the full potential of synergy amongst all operations across the Enterprise
- Make information and knowledge available to Anyone at Anytime from Anywhere
- Find hidden opportunities and value through better visibility of what the data is saying
- Identify and deploy Best Practices across the Enterprise

Infrastructure & Advanced Technology delivers Sustainable Value for the Enterprise & is required for increasing Business Agility.

Infrastructure is required to unlock the Power of Data..

Real-time Infrastructure Delivers Opportunities

Electrical Power



Communications



Transportation



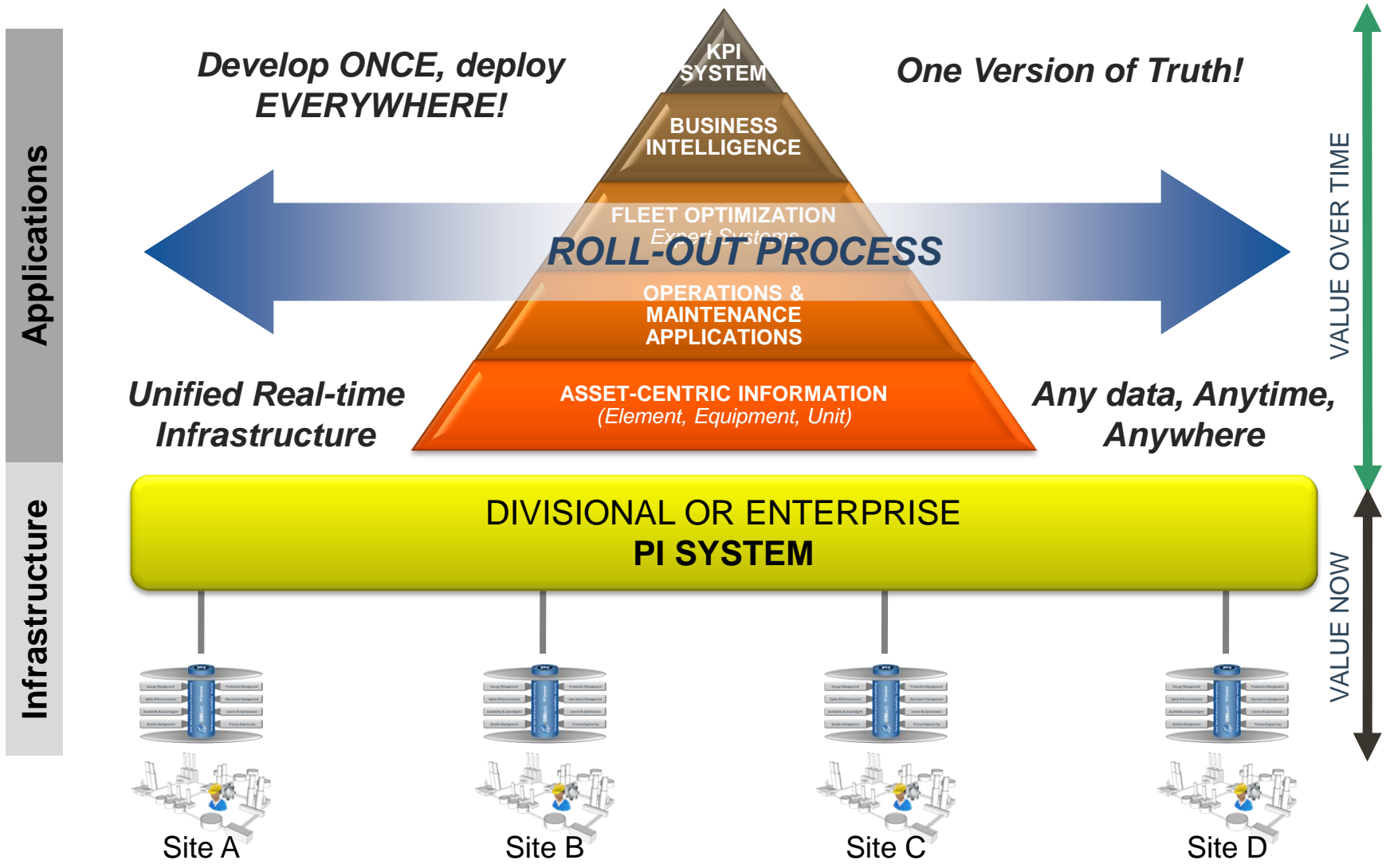
- ❑ **Valuable** – delivers a recognized benefit
- ❑ **Reliable and Secure** – always available, safe and trusted
- ❑ **Accessible** – adaptable to innovation, easy to use
- ❑ **Contextual** - organized to be effective, efficient, and extendable
- ❑ **Sustainable** – must be able to last and adapt to change



Definition of the Real-time Infrastructure

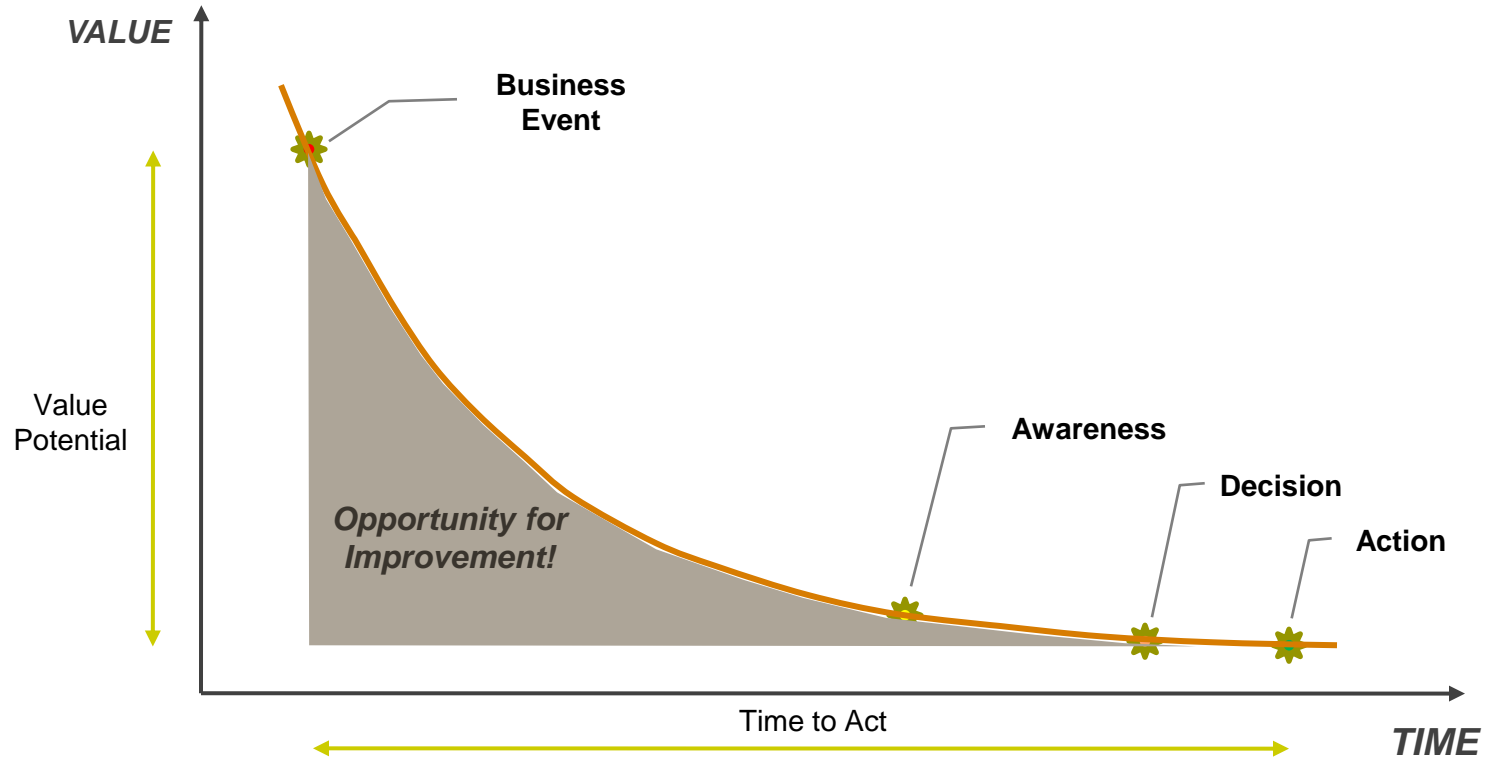
Infrastructure , to harness the Power of Data

Implementing Strategic Initiatives on Enterprise Scale



The Value of a Real-Time Infrastructure

Speeding and informing the decision making process

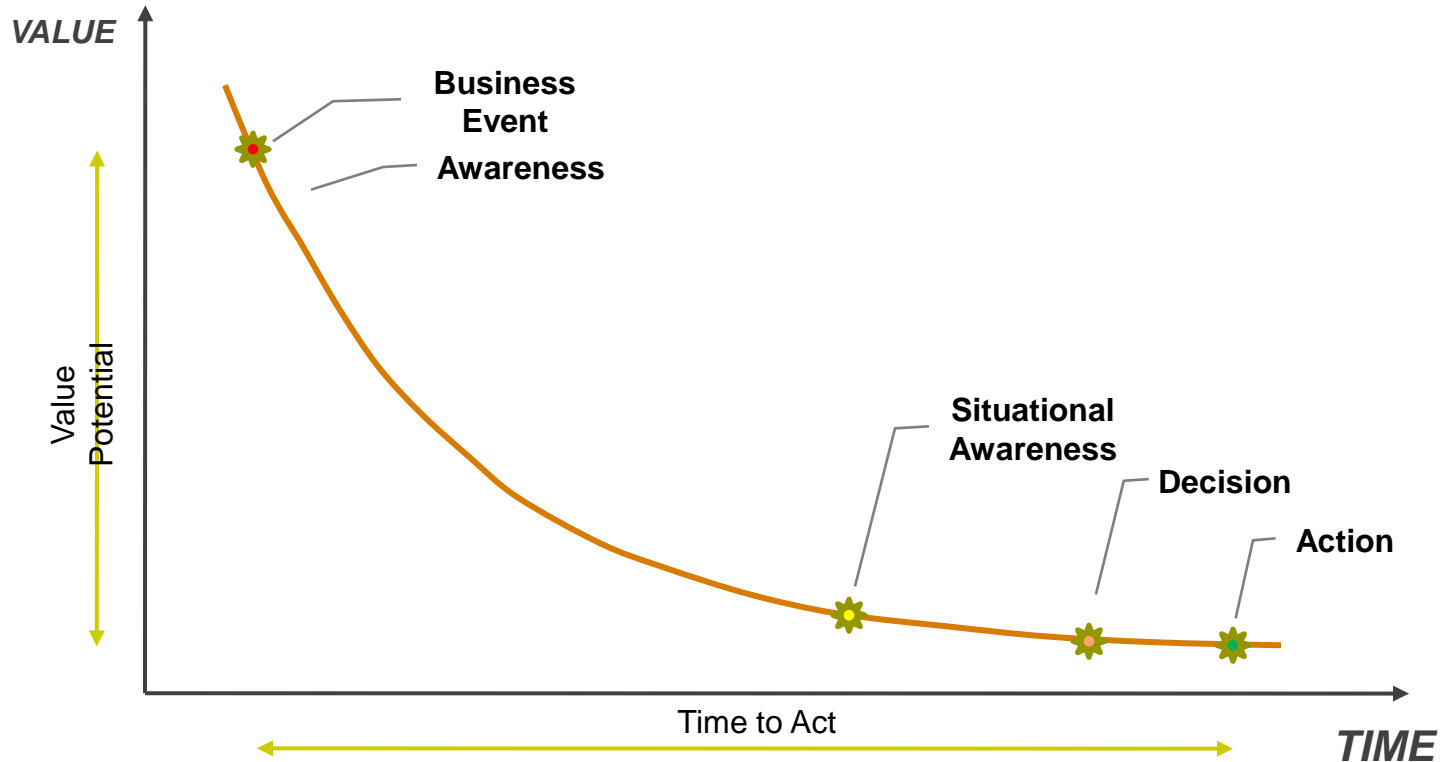


Decision making leads to action being taken:

- The time taken from a business event occurring to action being taken is often a cost or lost opportunity

The Value of a Real-Time Infrastructure

Speeding and informing the decision making process

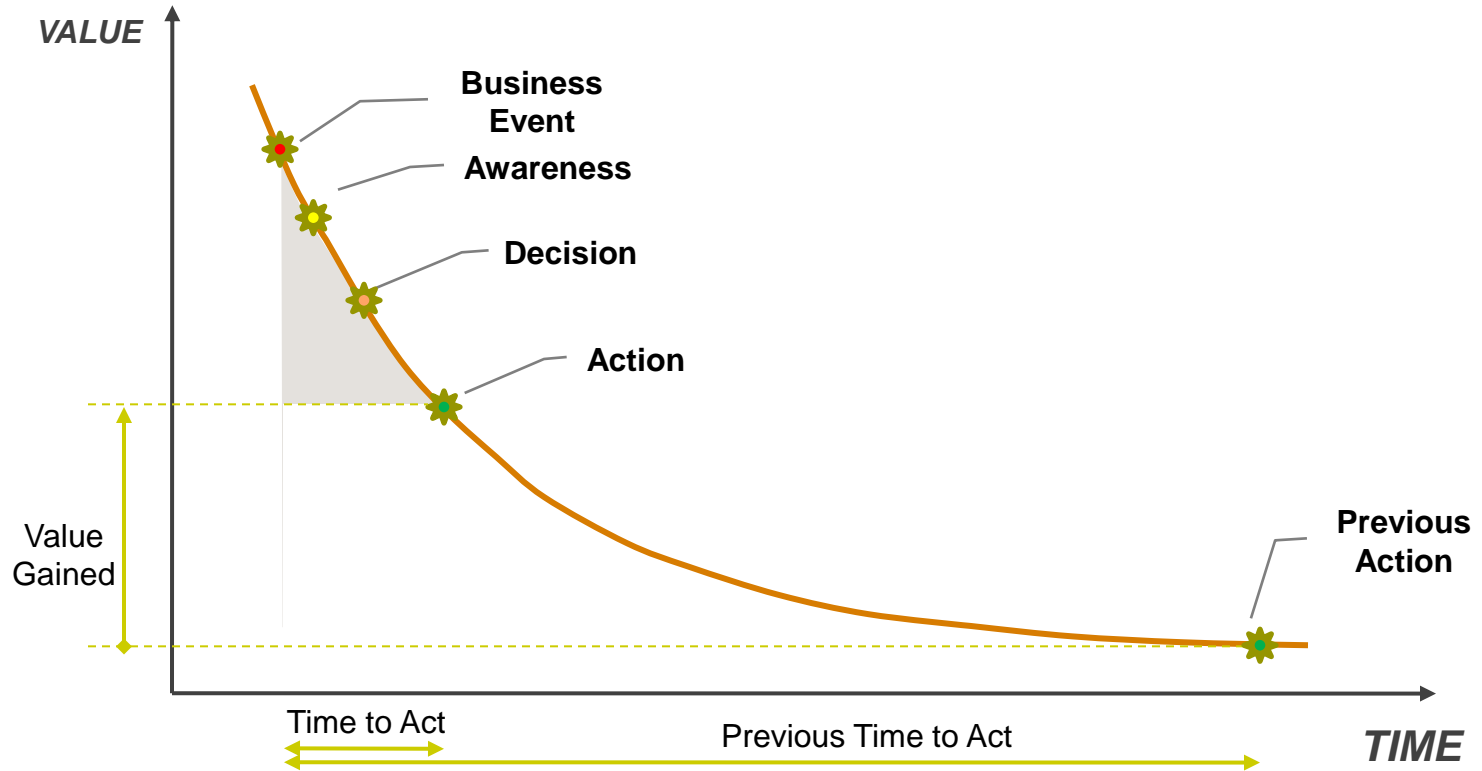


Reduce the time to awareness:

- by harnessing the power of Real-time data using the PI System

The Value of a Real-Time Infrastructure

Speeding and informing the decision making process



Speed up and inform decision making and action taking

- Supported by high quality, real-time information and analytics provide by the PI system

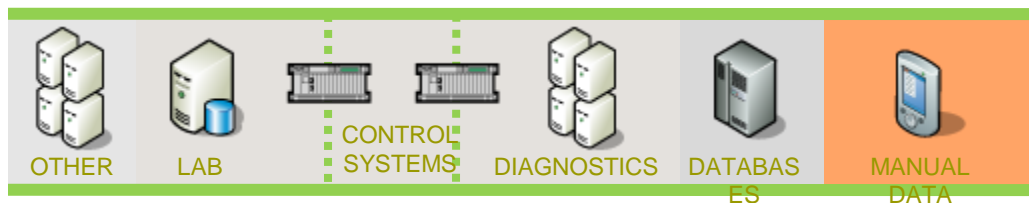
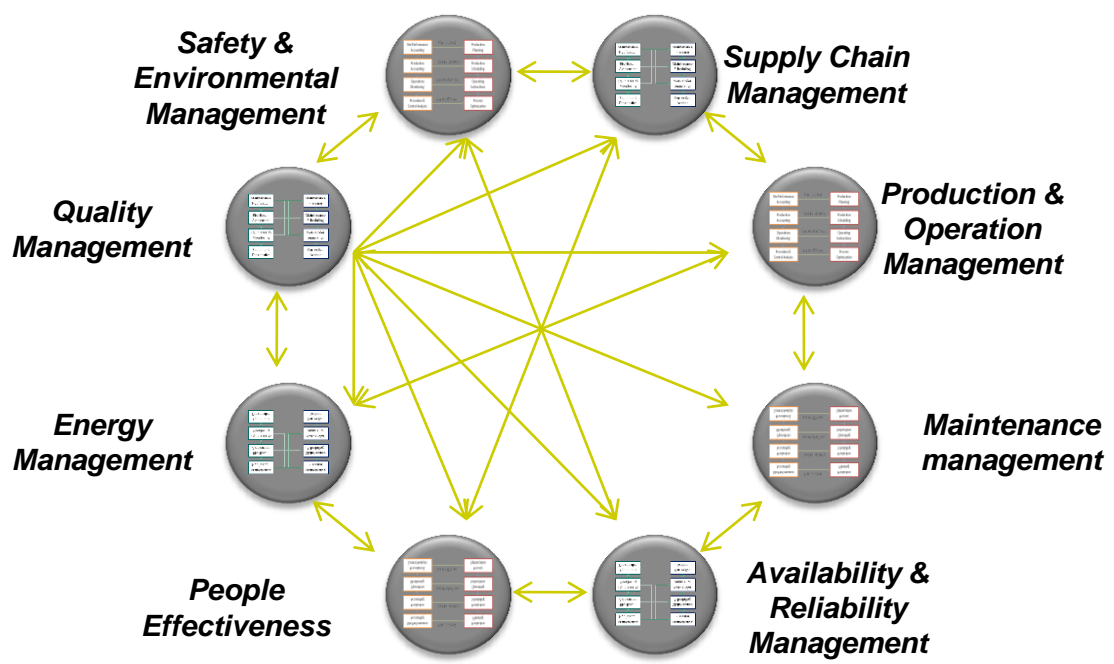
How does it fit into your existing Enviroment?

Typical Situation – Hundreds of Islands

MONEY FLOW
 INFORMATION FLOW
 MATERIAL FLOW



BUSINESS SYSTEM



Level 4
 Business Planning & Logistics

Level 3
 Manufacturing Operations Management

Level 2
 Supervisory Control

Level 1
 Sensing & Control

Level 0
 Process

How does it fit into your existing Infrastructure?

Infrastructure to all Islands

MONEY FLOW

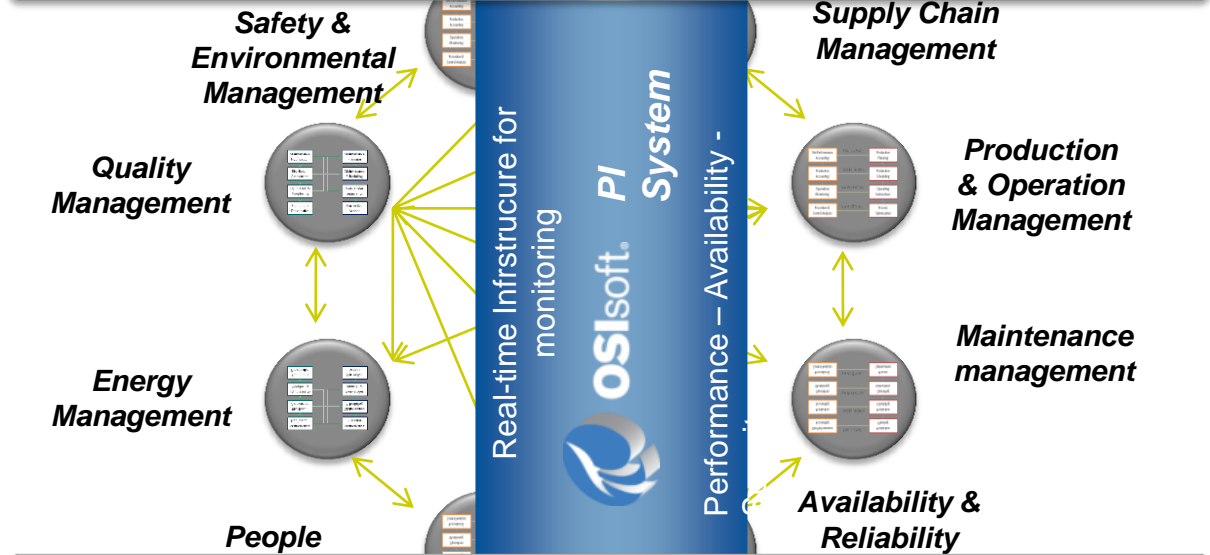
INFORMATION FLOW

MATERIAL FLOW

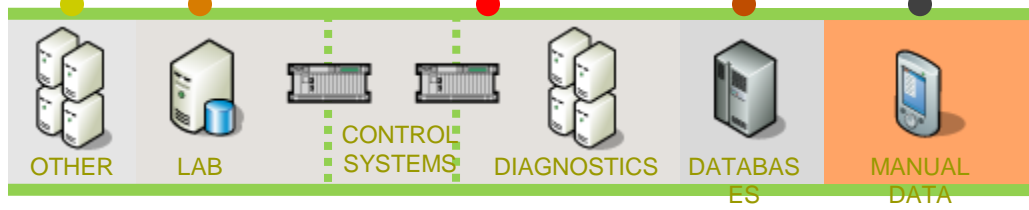


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



How does it fit into your existing Infrastructure?

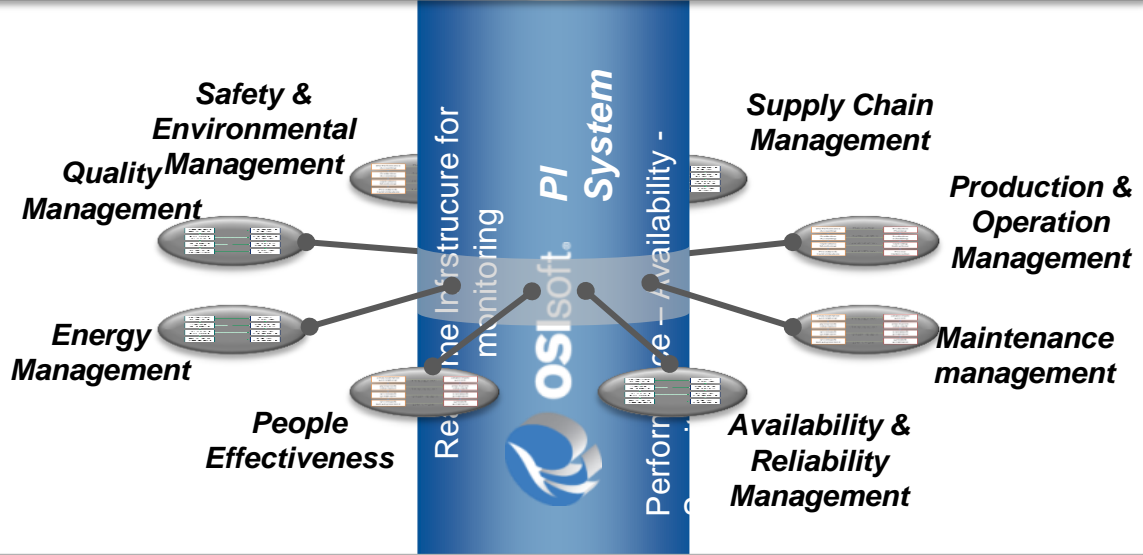
Data foundation for all Business Processes

MONEY FLOW
 INFORMATION FLOW
 MATERIAL FLOW

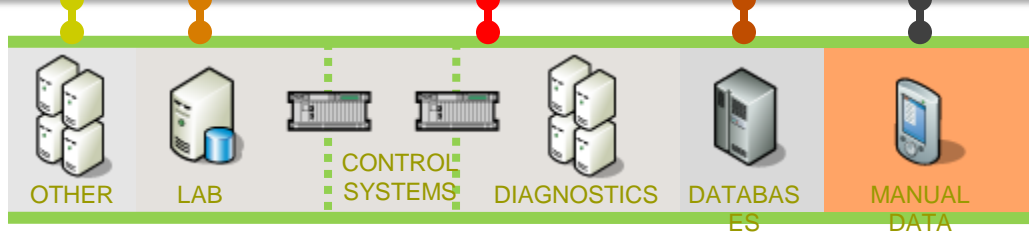


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



Incremental Value by Adding Applications

MONEY FLOW

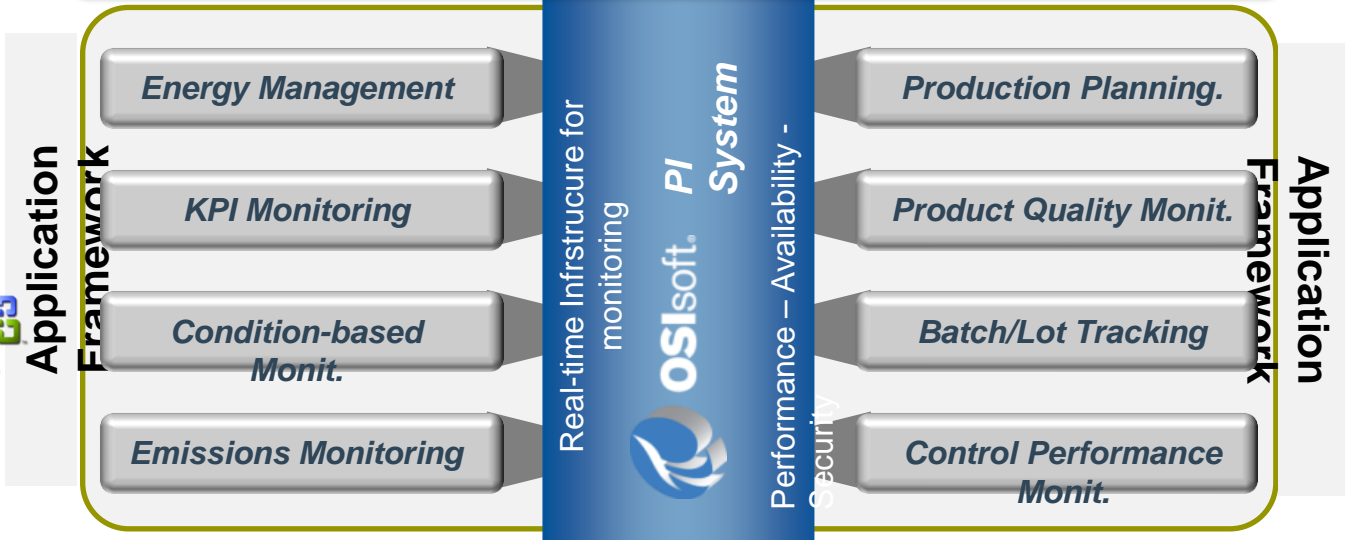
INFORMATION FLOW

MATERIAL FLOW

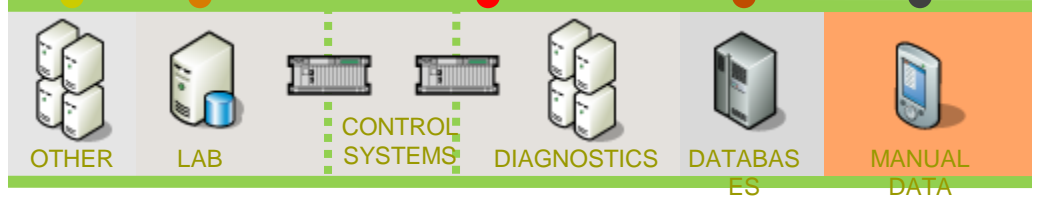


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



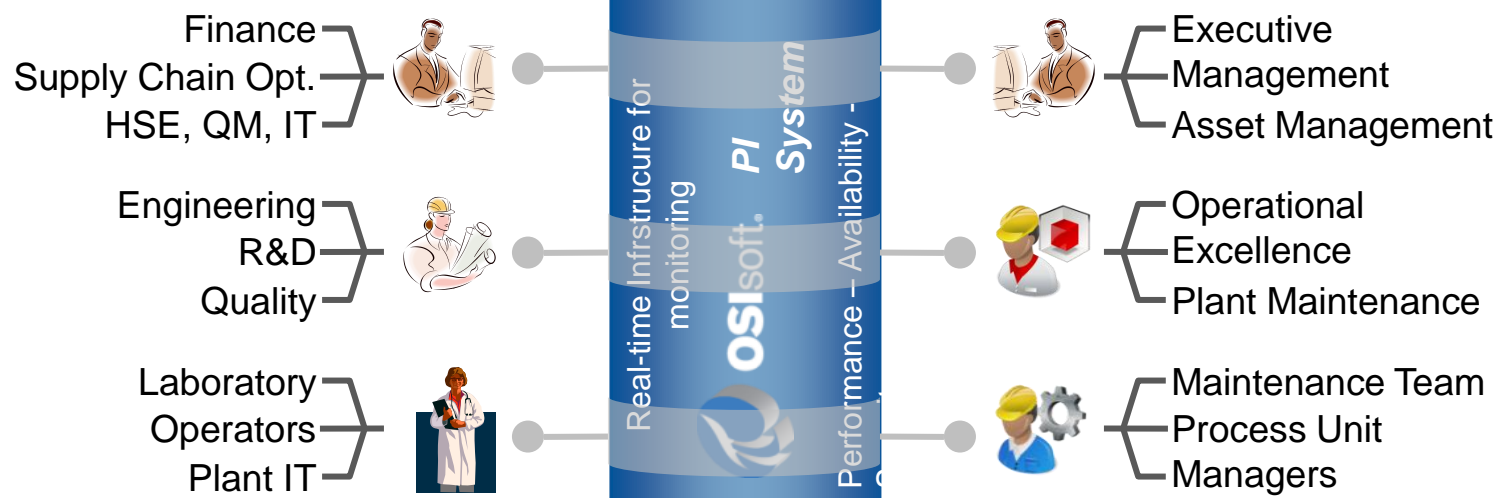
Supporting Collaboration

Everyone works with the same Information – Rules - Tools

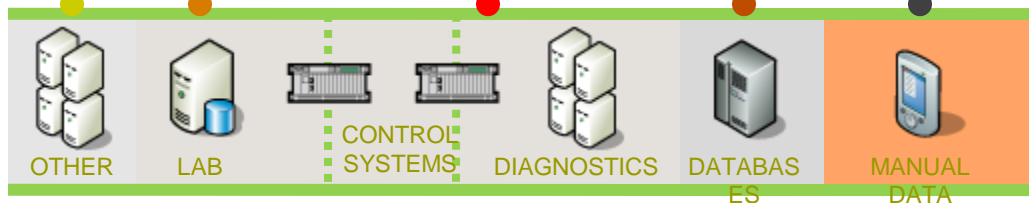


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



Power of Data: Use Cases

Centralized Monitoring and Diagnostic Center

A Technology Center ensures that the Production Fleet operates at peak performance with the highest possible availability in-line with the business and market requirements

- A place where **BorsodChem** knowledge, experience and skills are concentrated to optimize Operations and Maintenance
- **Functions:**
 - Operation & Maintenance monitoring and reliability tracking
 - Diagnosis of the key plant parameters (performance and condition monitoring)
 - Detection of malfunctions before they lead to trips and serious faults in the plant (avoiding catastrophic failure)
 - Archive and retrieval of O&M data
 - Generation of reports on performance and incidents
 - Carrying out of O&M recommendations



Spain-Red Electrica: “Real-time Grid Monitoring for a country”



CORES0: “ Real-Time Monitoring for a group of Countries”

UK, France, Germany, Belgium, Netherlands and Italy

Saudi Aramco: Command & Control Room



PI System: Value for the Enterprise

- Unified Real-time Infrastructure across the entire Organisation
 - One version of Truth
 - Information is available for anyone, anytime and any place
 - Information is meaningful (asset-centric) and actionable
 - Real-time collaboration across departments & sites
- Data foundation for innovation
 - Energy Management / Energy Conservation
 - Sustainability Initiatives etc.
- Protect existing and future investments
 - Standards based, open infrastructure
 - Continuous Incremental value gained as new applications are developed





Thank You!

Please Enjoy
the rest of the day