



OSIsoft®

REGIONAL SEMINARS 2012

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



Welcome to the OSIsoft Regional Seminar Series! **London!**

08:30	Registration and Welcome Coffee	
09:30	Welcome Address- Company Overview	Jim Manekshaw OSIssoft
09:45	The Power of Data	Martin Otterson OSIssoft
10:15	PI System and Product Roadmap	Hans Otto Weinhold OSIssoft
10:45	Break & Demos	
11:15	Asset and Operations Real Time Analytics In Thames Water with PI 2010	Marcus Purnell - Thames Water
11:45	PI Server 2012	Hans Otto Weinhold OSIssoft
12:30	Lunch & Demos	
14:00	PI Asset Framework	René Thomassen OSIssoft
14:30	Predictive Equipment Health Management in Pi Environments	Nick Ward - Bill Cronin O-sys Rolls Royce
15:00	PI Coresight, the new visualization tool	John Daniels OSIssoft
15:30	Break and Demos	
16:00	What you need to know about the PI System and Cyber Security	Bryan Owen
16:30	Integrating the PI System with Enterprise Systems	John Daniels OSIssoft
17:00	Business Intelligence with the PI System	Curt Hurler OSIssoft
17:30	Wrap-up, Demos	



Event of The Year 2012



The Journey Began!

Planning for the greatest show on earth!



What does it take?



- Stadia
- Venues



- Roads
- Airports
- Railways
- Underground



- Security
- Policing
- Healthcare

Infrastructure

- Housing
- Hotels
- Amenities



- Power
- Water

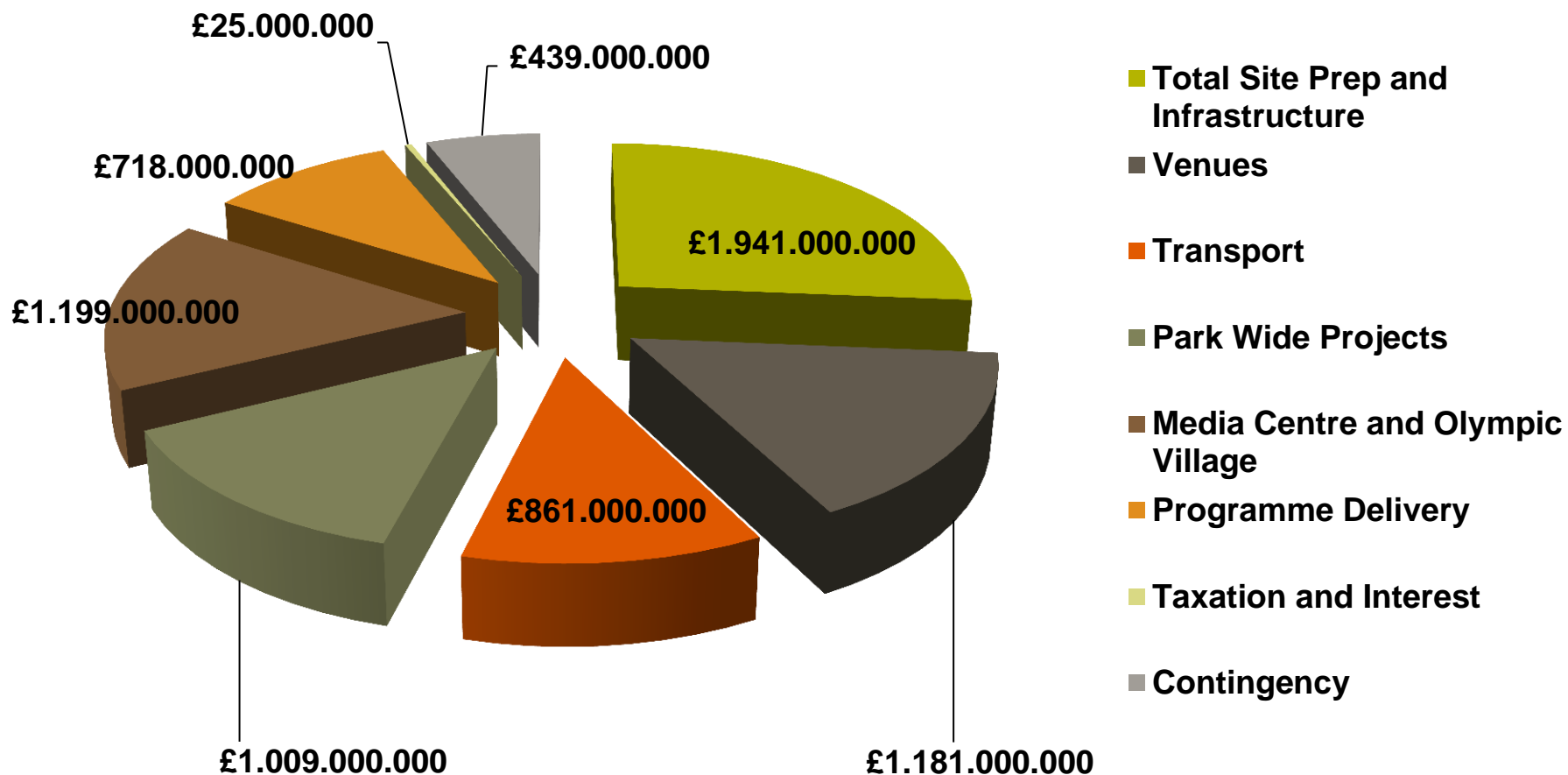


- Telco
- Internet
- Coms





So what is the cost?



Benefits: The legacy of the 2012 Games-

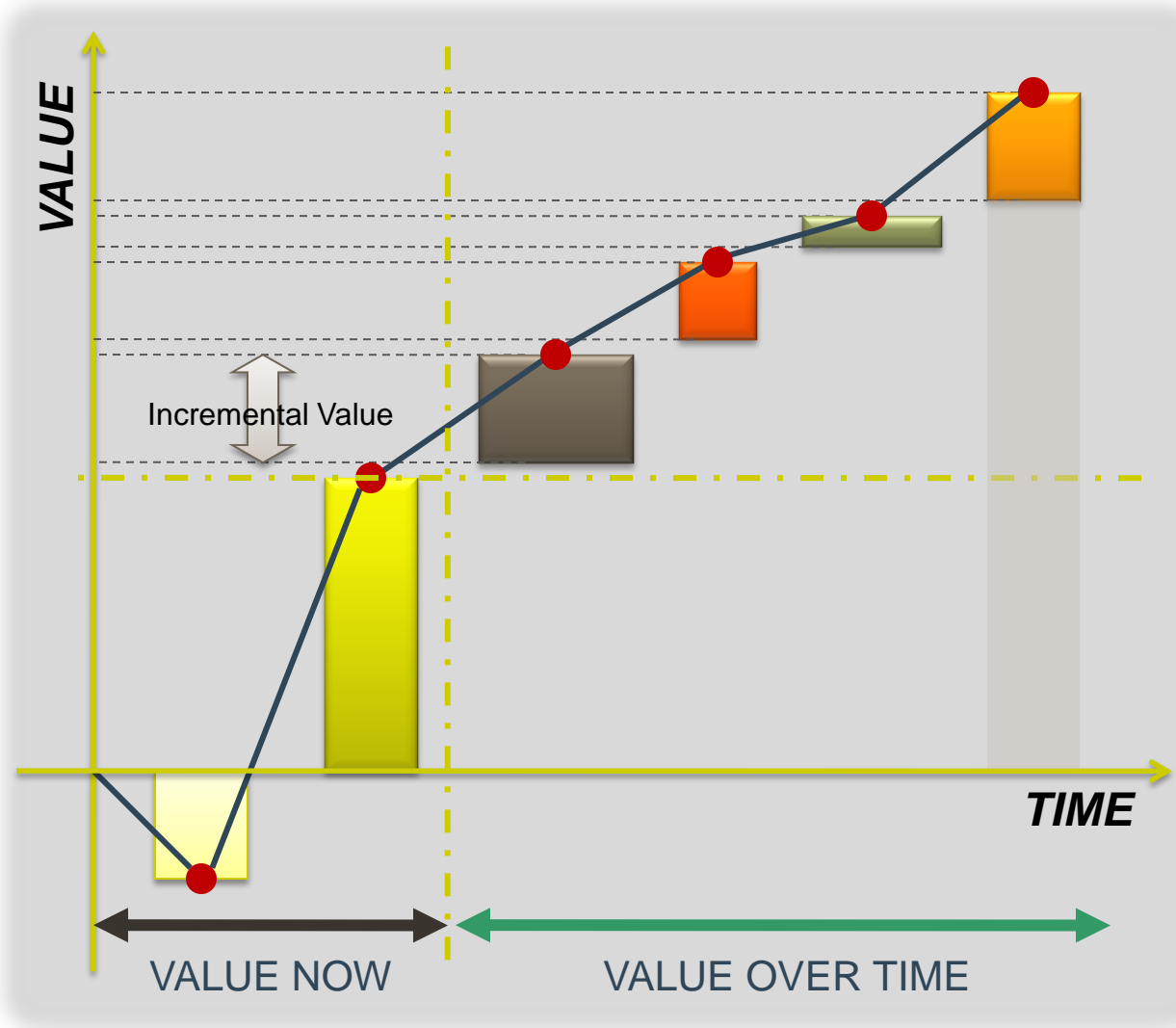
- Visa report predicts consumer spend at London 2012 - £5.1 billion boost to UK economy
 - £30.8bn has been added to the value of residential properties with proximity to Olympic sites
 - Every pound spent on development for the London 2012 Olympics is worth 75 pence in long term investment for east London.
 - new transport infrastructure
 - physical transformation of the Olympic Park
 - business support initiatives
 - jobs and skills training
 - cultural and creative programmes
 - sports programmes
 - housing
 - tourism

Value Now

Value Over Time

Long Term Value Creation Opportunity

Value Now, Value Overtime



Long Term Benefits

- ← Housing
- ← Employment
- ← Business Investments.
- ← Transportation

← Olympics 2012-
Immediate Gain

← Infrastructure
Investment

Real-time Infrastructure for the Enterprise



Enterprise Real-time Infrastructure for managing data and events

Continuous Monitoring

Performance - Availability – Security

Real-time Decision Making

Valuable business decisions based on actionable, Real-time Information

Real-time Communication

Between ISLANDs of data and information

Collaboration

Everybody works with the same Information – Rules – Tools

Agility

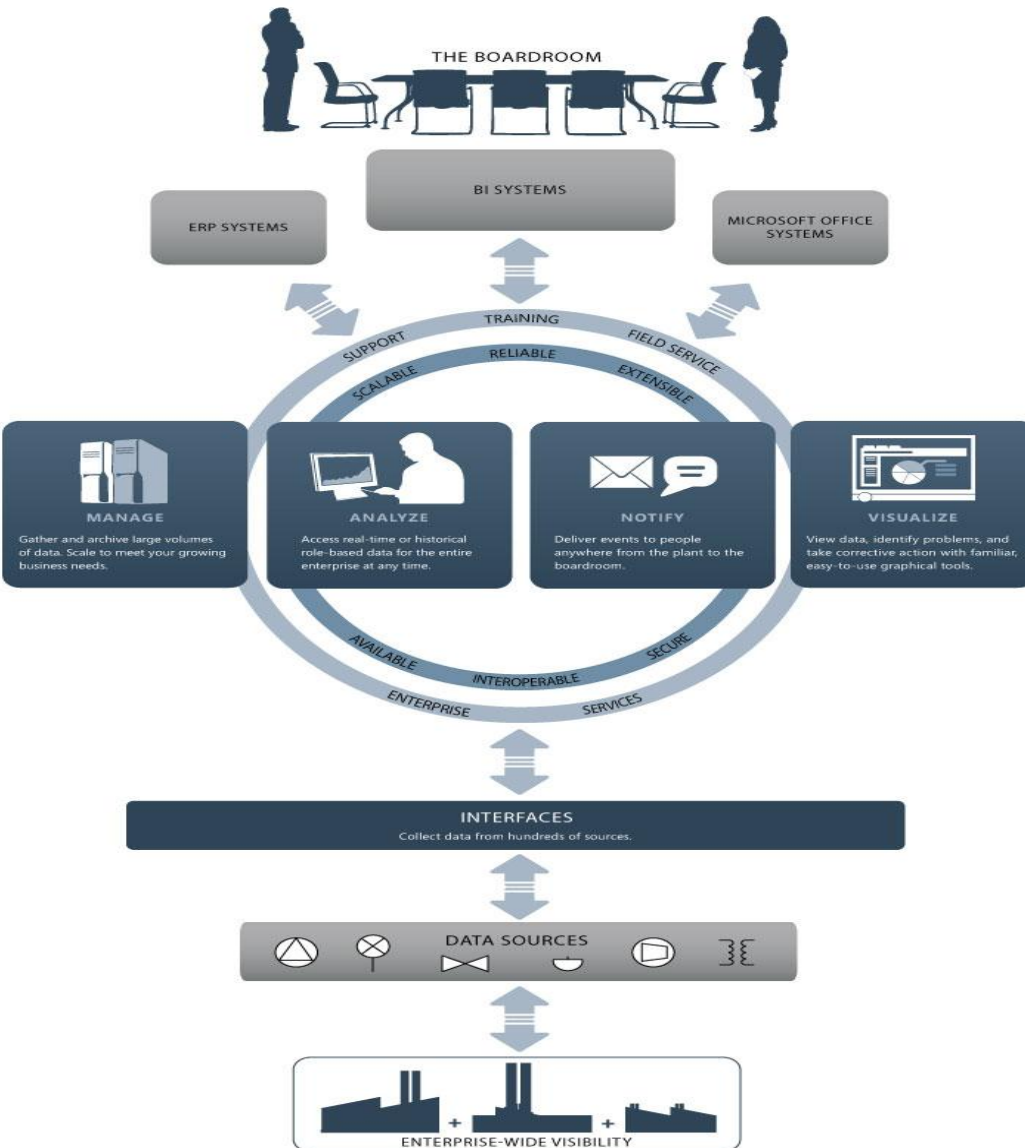
Adapt To Changes in
 - Business / Organization / Process
 - Technology
 From Local to Global

Backbone for Integration

Plant to Business (P2B) Integration

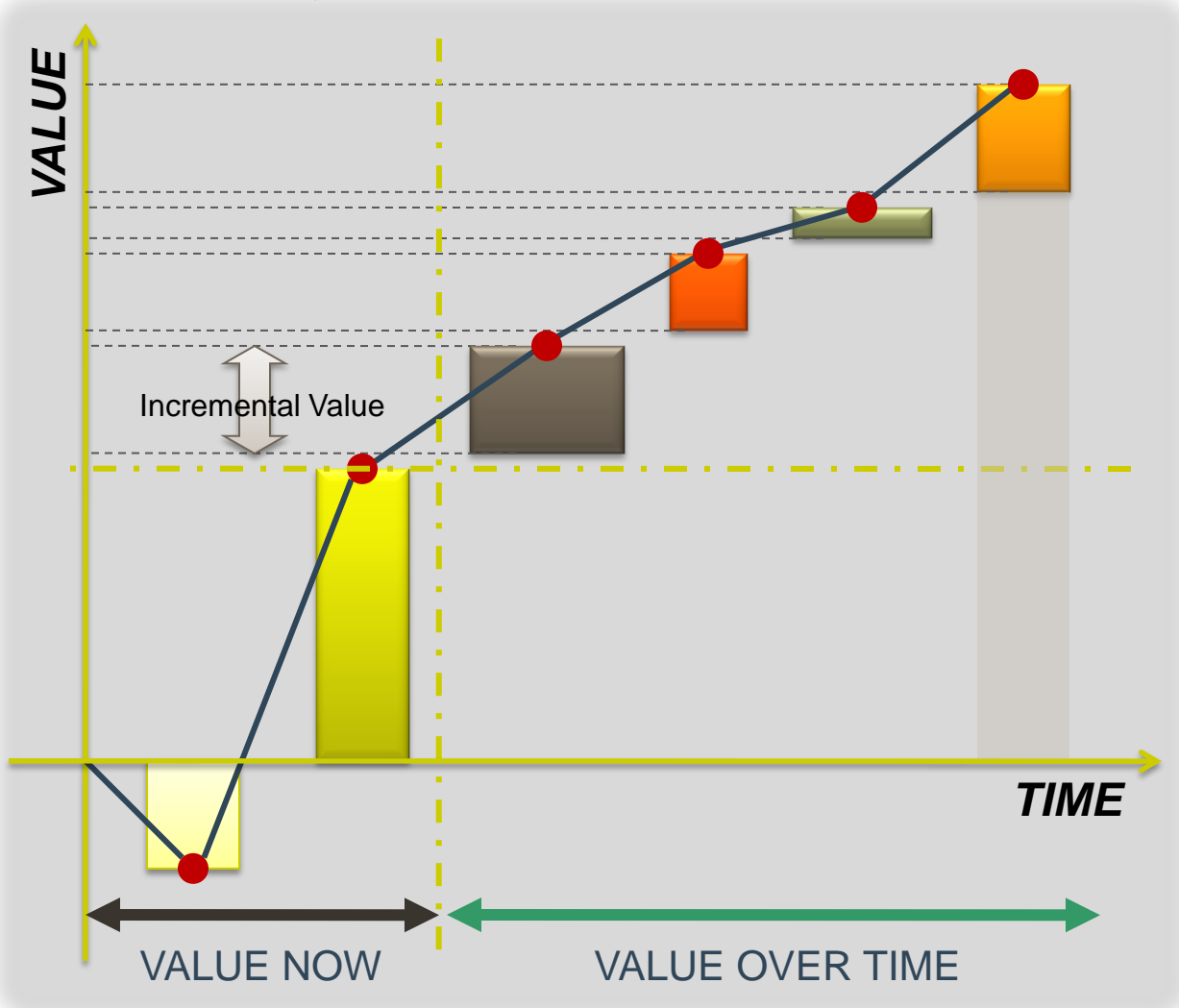
Continuous Improvement

Across the whole Enterprise



Value Creation Mechanism of PI

Value Now, Value Overtime



Application Benefits

← Operations Management

← Environmental Reporting

← Equipment Health Mgmt.

← Performance Management

← Infrastructure Value

← Initial Investment

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

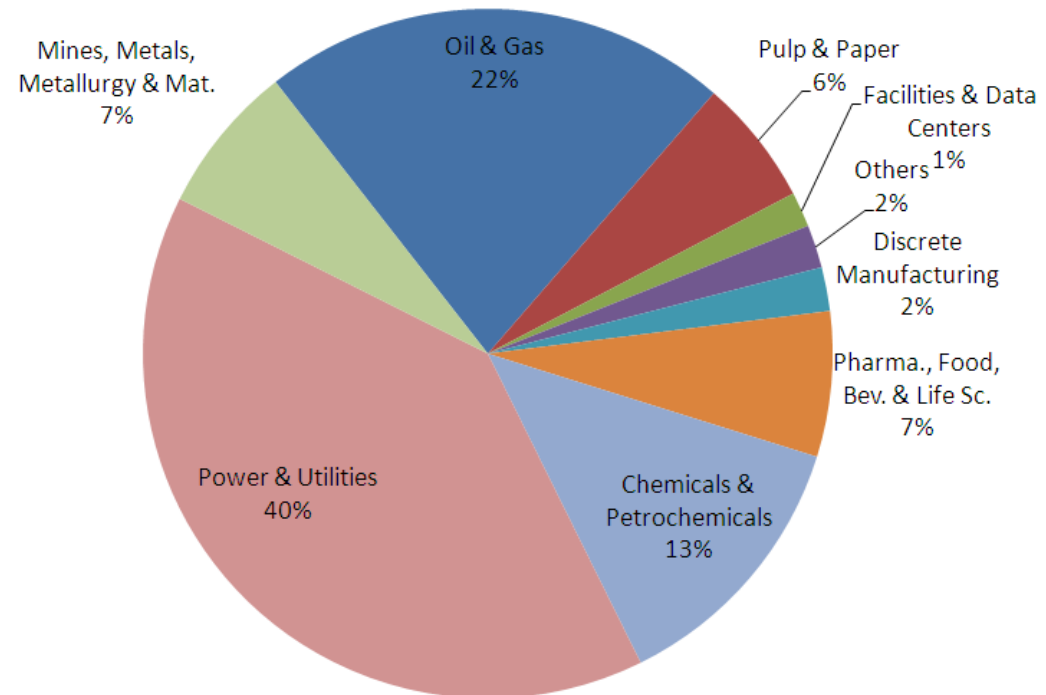


PULP & PAPER



DATACENTERS, IT & TELECOM

by Industry (%)



Diverse & Expanding Customer Base Across Industries





Canadian Natural





DIAGEO



Cranfield UNIVERSITY



nationalgrid

ConocoPhillips



e.on



ENVANTAGE



FISONS



Mobil

EASTMAN

Lilly

GDF SUEZ

Honeywell

HUNTSMAN



Imperial College
London



Johnson Matthey

INEOS Bio

innospec
specialty chemicals



kemira



Kimberly-Clark

KNAUF

Kellogg's

Lonza



Lubrizol



Marchwood
MARCHWOOD POWER LIMITED



MARS
snackfood



MITSUBISHI
POWER SYSTEMS



nexen

MEGGITT
smart engineering for
extreme environments



Osys

NOVARTIS



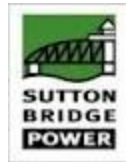
RHI
REFRACTORIES

RWE
The energy to lead



Schlumberger

RioTinto
Alcan



CONSISTENTLY FIRST IN RENEWABLE INGREDIENTS



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 **Martin Otterson** Managing Director & VP of EMEA

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*

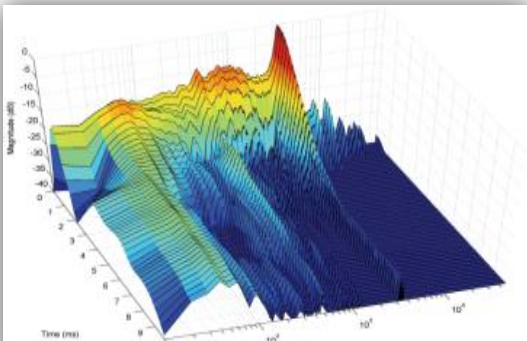
Personal Level: “Information Overload”



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

1,400
TB Estimated Data:
1,413TB



Fleet Monitoring

1K assets, 1M points

10 years online

Unique Events: 6,307
Tr

Estimated Data:
50,458TB



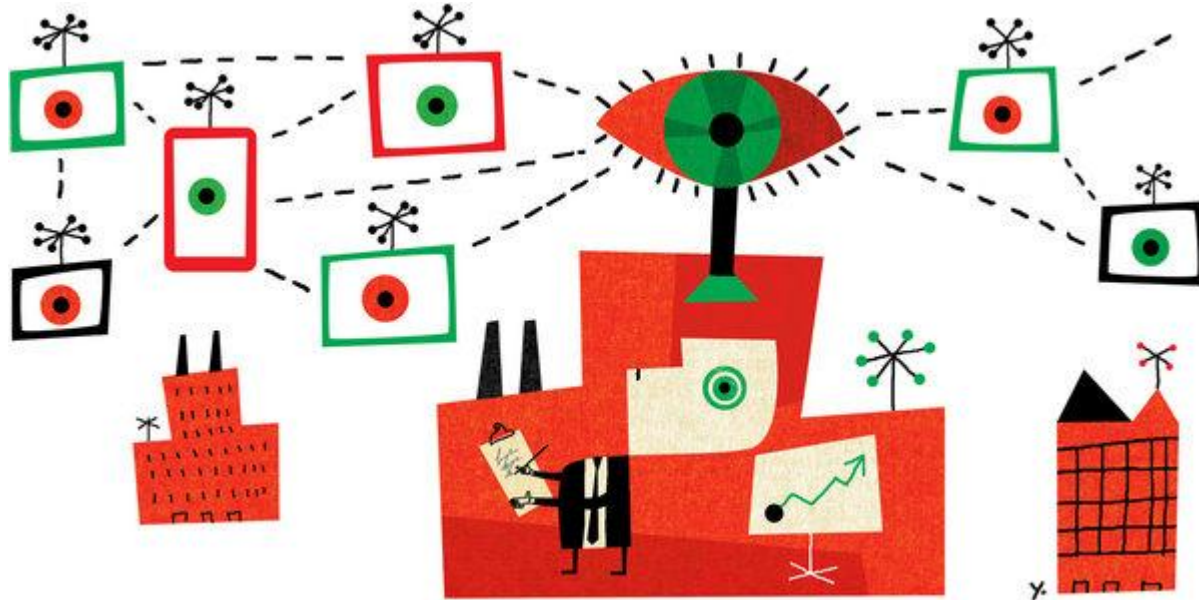
Opportunity, “Power Of Data”

- 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?



Infrastructure is required to unlock the Power of Data..

Real-time Infrastructure Delivers Opportunities

Electrical Power



Communications



Transportation



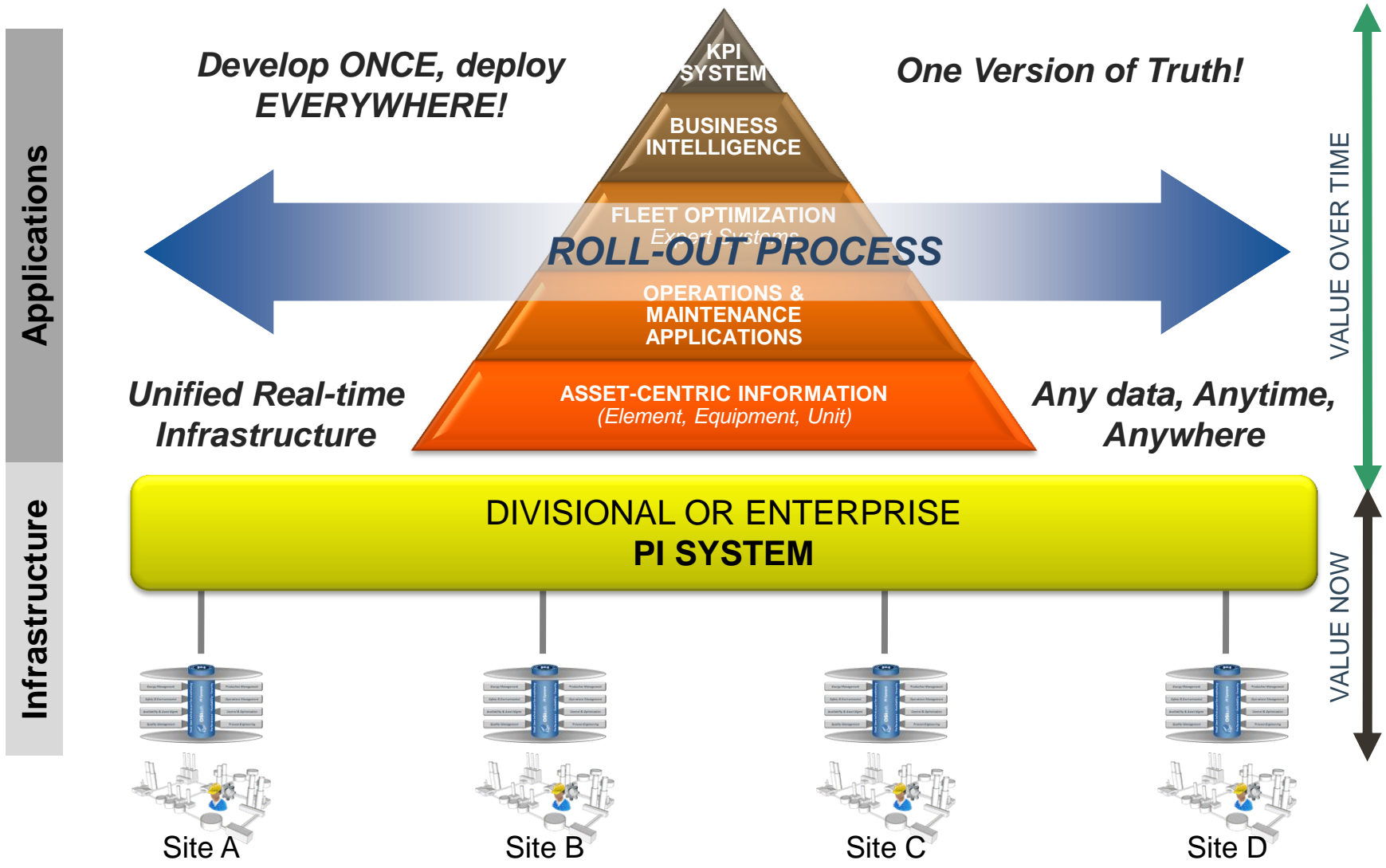
- ❑ **Valuable** – delivers a recognized benefit
- ❑ **Reliable and Secure** – always available, safe and trusted
- ❑ **Accessible** – adaptable to innovation, easy to use
- ❑ **Contextual** - organized to be effective, efficient, and extendable
- ❑ **Sustainable** – must be able to last and adapt to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



Definition of the Real-time Infrastructure

Infrastructure , to harness the Power of Data

Implementing Strategic Initiatives on Enterprise Scale



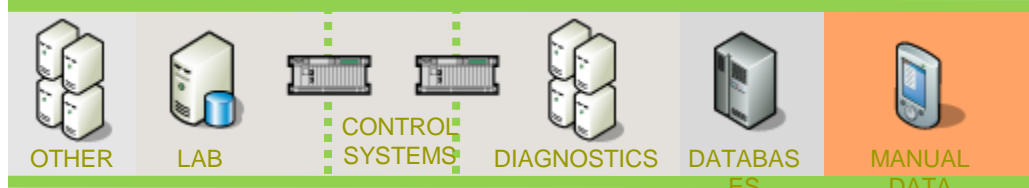
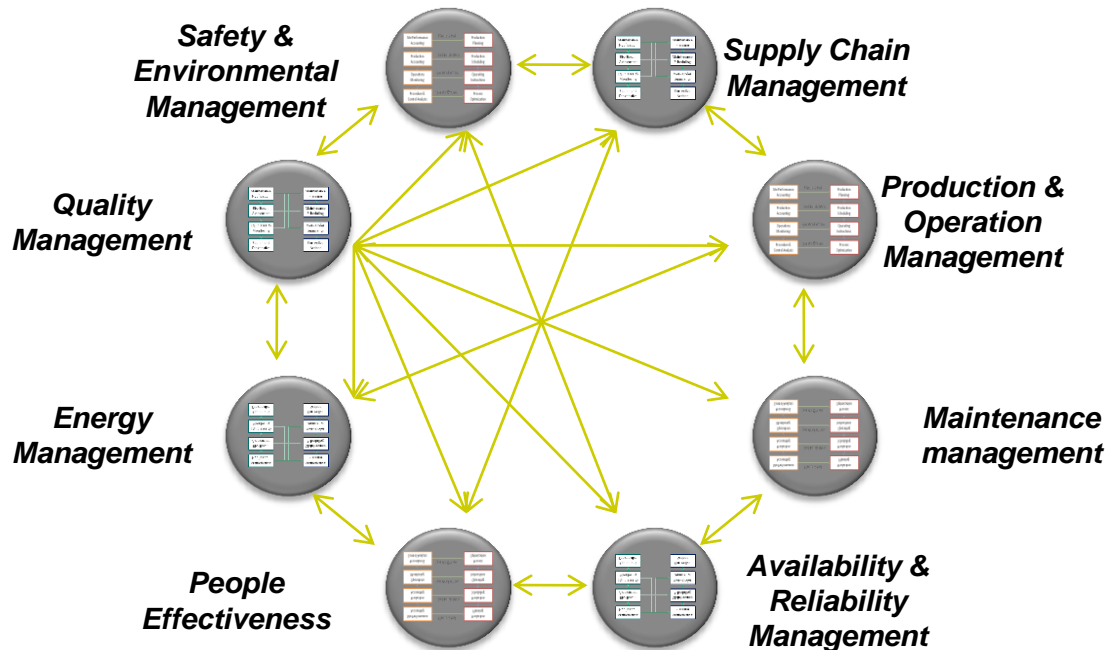
How does it fit into your existing Enviroment?

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

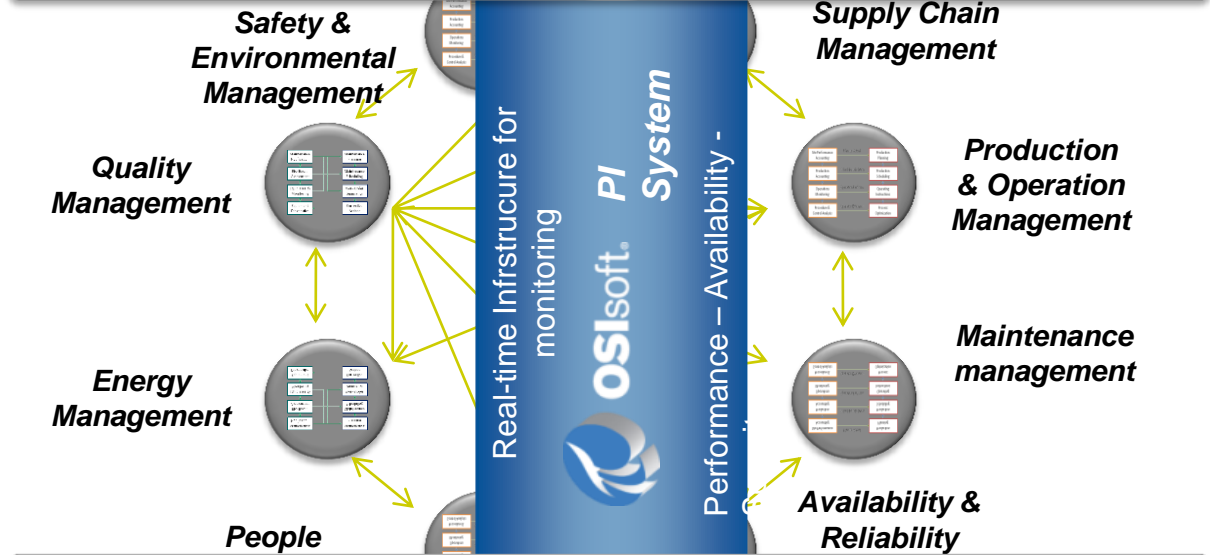
INFORMATION FLOW

MATERIAL FLOW

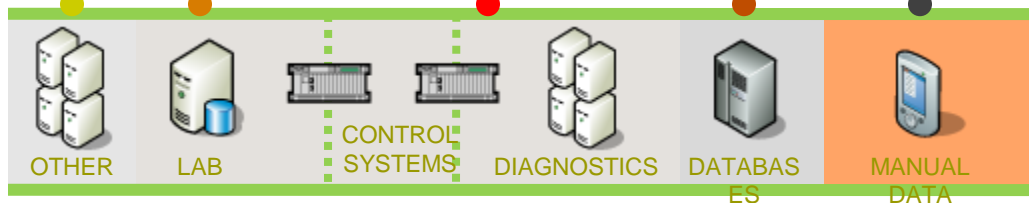


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



How does it fit into your existing Infrastructure?

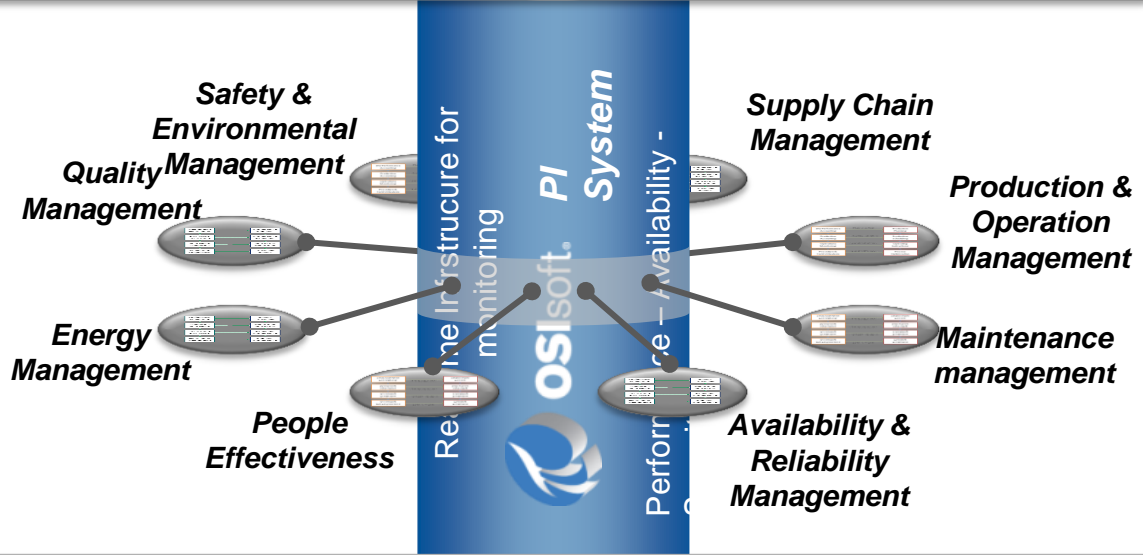
Data foundation for all Business Processes

MONEY FLOW
 INFORMATION FLOW
 MATERIAL FLOW

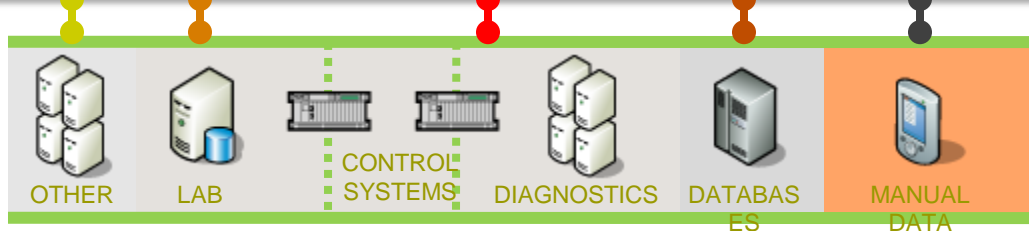


BUSINESS SYSTEM

BUSINESS GATEWAY




INTERFACES



Incremental Value by Adding Applications

MONEY FLOW

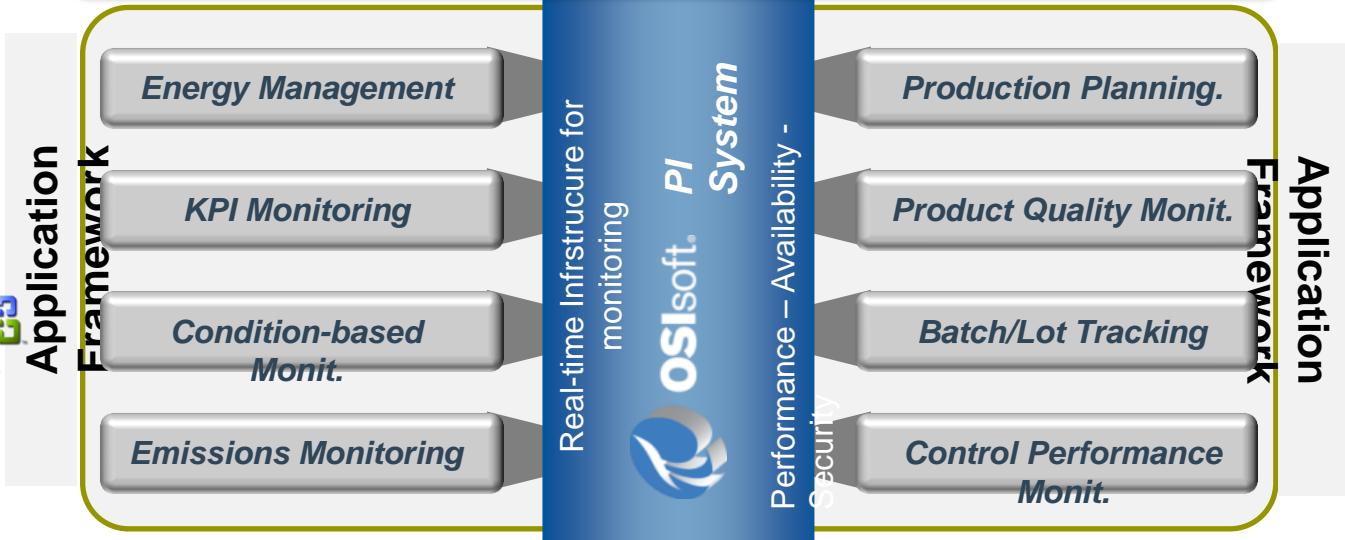

INFORMATION FLOW


MATERIAL FLOW

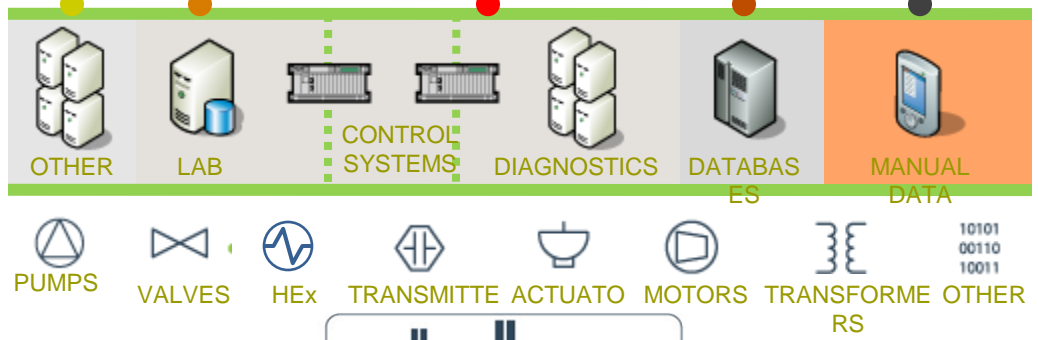



BUSINESS SYSTEM

BUSINESS GATEWAY

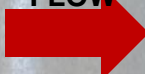



INTERFACES




Supporting Collaboration

Everyone works with the same Information – Rules - Tools

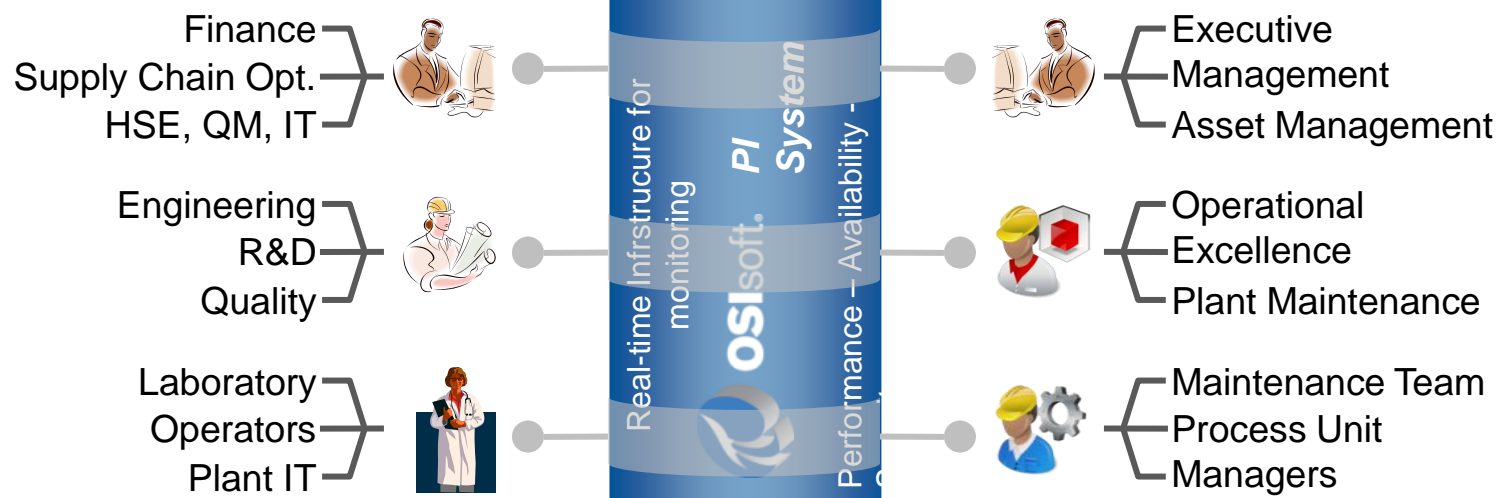
MONEY FLOW


INFORMATION FLOW


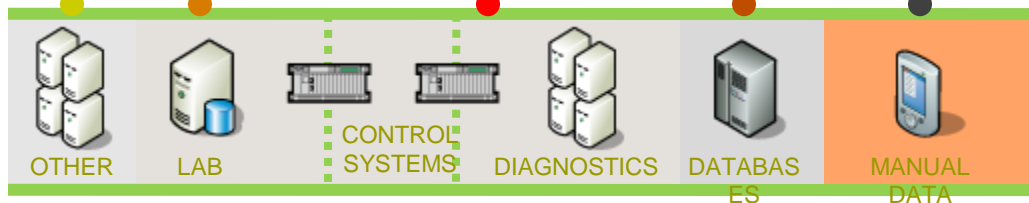
MATERIAL FLOW


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





Future Events: Save the Date

2012 Industry Events

Oil & Transport/Storage
Oct. 9th , Warsaw

Transmission & Distribution
/ Smart Grid
Oct. 24th , Brussels

2012 Partner Event

Oct 15th -17th , London



Thank You!

Please Enjoy
the rest of the day