



OSIsoft®

# REGIONAL SEMINARS 2012

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



# Welcome & Agenda Benelux

Presented by **René Langereis – Account Manager**

08:00	Registration and Welcome Coffee	
09:00	Welcome Address- Company Overview	René Langereis OSIsoft
09:15	The Power of Data	Martin Otterson OSIsoft
09:45	PI System and Product Roadmap	Michael van der Veeken OSIsoft
10:30	Break & Demos	
11:00	The PI System Infrastructure @ GdF Suez (NL)	Jan Postema – GdF Suez
11:30	PI Server 2012	Michael van der Veeken OSIsoft
12:15	PI Coresight, the new visualization tool	Yves Gauthier OSIsoft
12:45	Lunch & Demos	
14:00	PI Asset Framework	Michael van der Veeken OSIsoft
14:30	The PI System: the MES enabler	Bert Super - Avebe
15:00	Integrating the PI System with Enterprise Systems	Yves Gauthier OSIsoft
15:30	Break & Demos	
16:00	PI System Best Practices (High Availability, Virtualization, Disaster Recovery, PSA Licensing)	Hans Otto Weinhold OSIsoft
16:30	Business Intelligence with the PI System	Yves Gauthier OSIsoft
17:00	Wrap up, Demos	

# 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

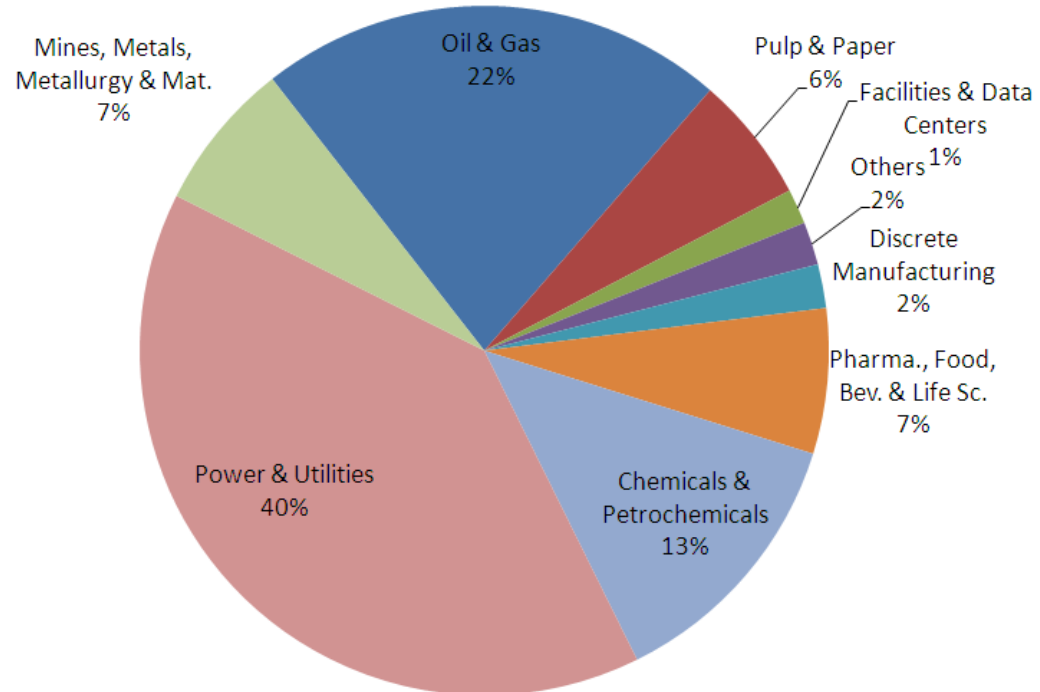


PULP & PAPER



DATACENTERS, IT & TELECOM

Invoices by Industry (%)



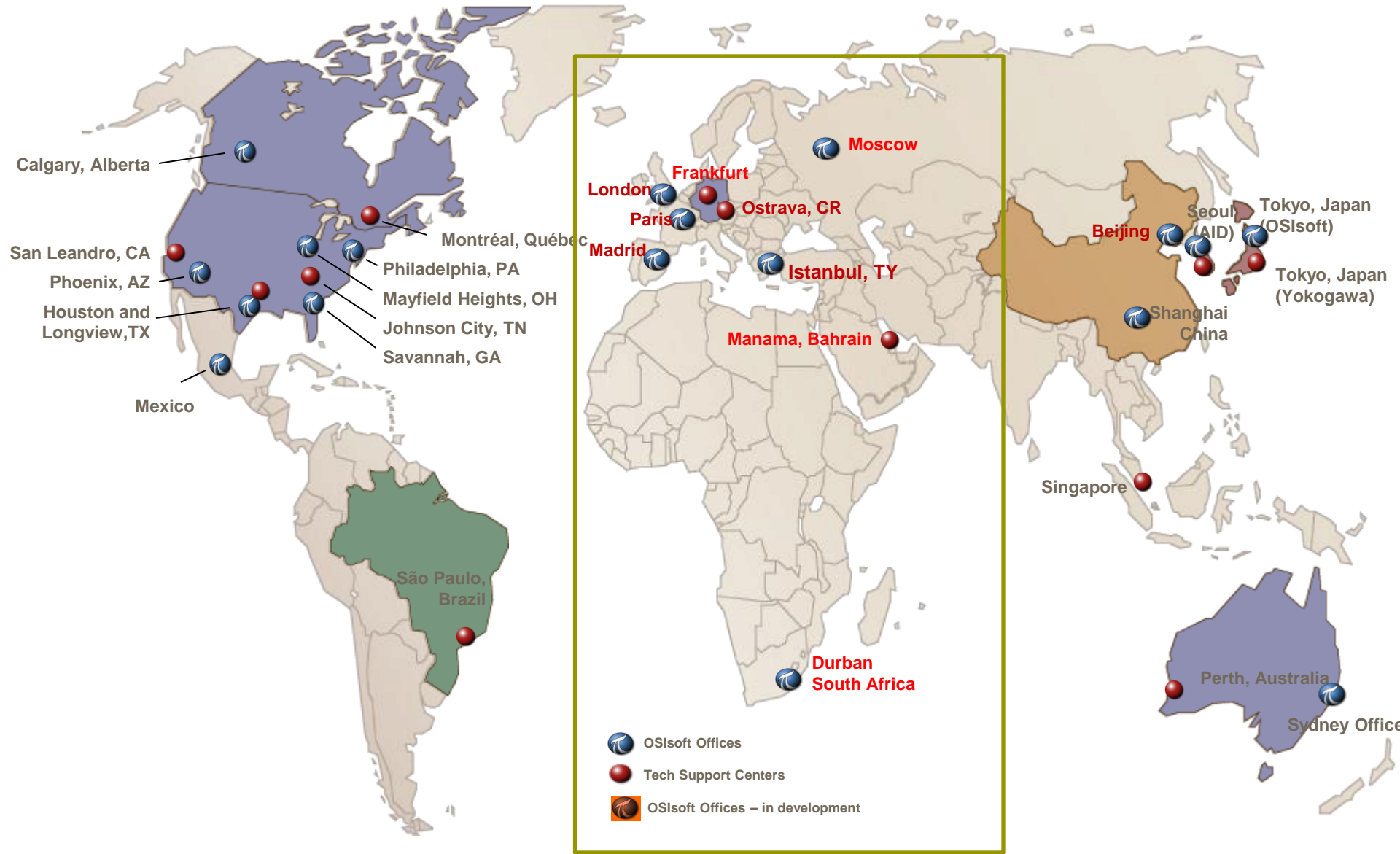
# Diverse & Expanding Customer Base Across Industries . . .



# Benelux



# 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*

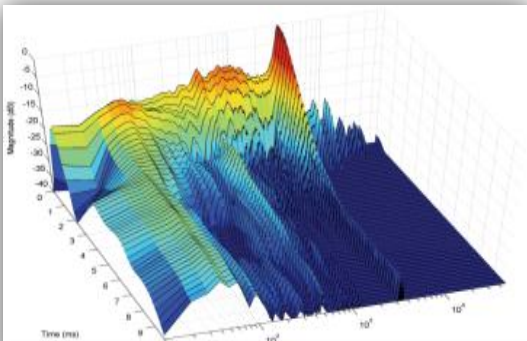
Personal Level: “Information Overload”



# 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

Estimated Data:  
1,413TB



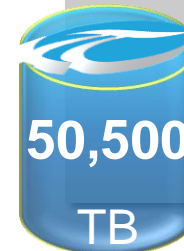
## Fleet Monitoring

1K assets, 1M points

10 years online

Unique Events: 6,307  
Tr

Estimated Data:  
50,458TB



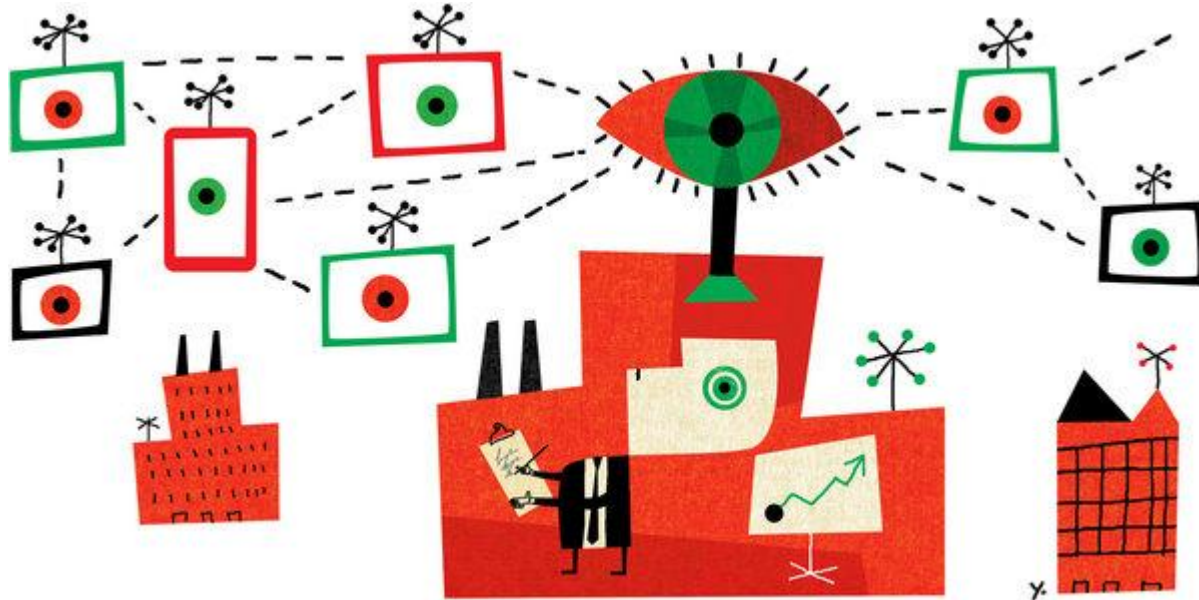
# Opportunity, “Power Of Data”

- 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



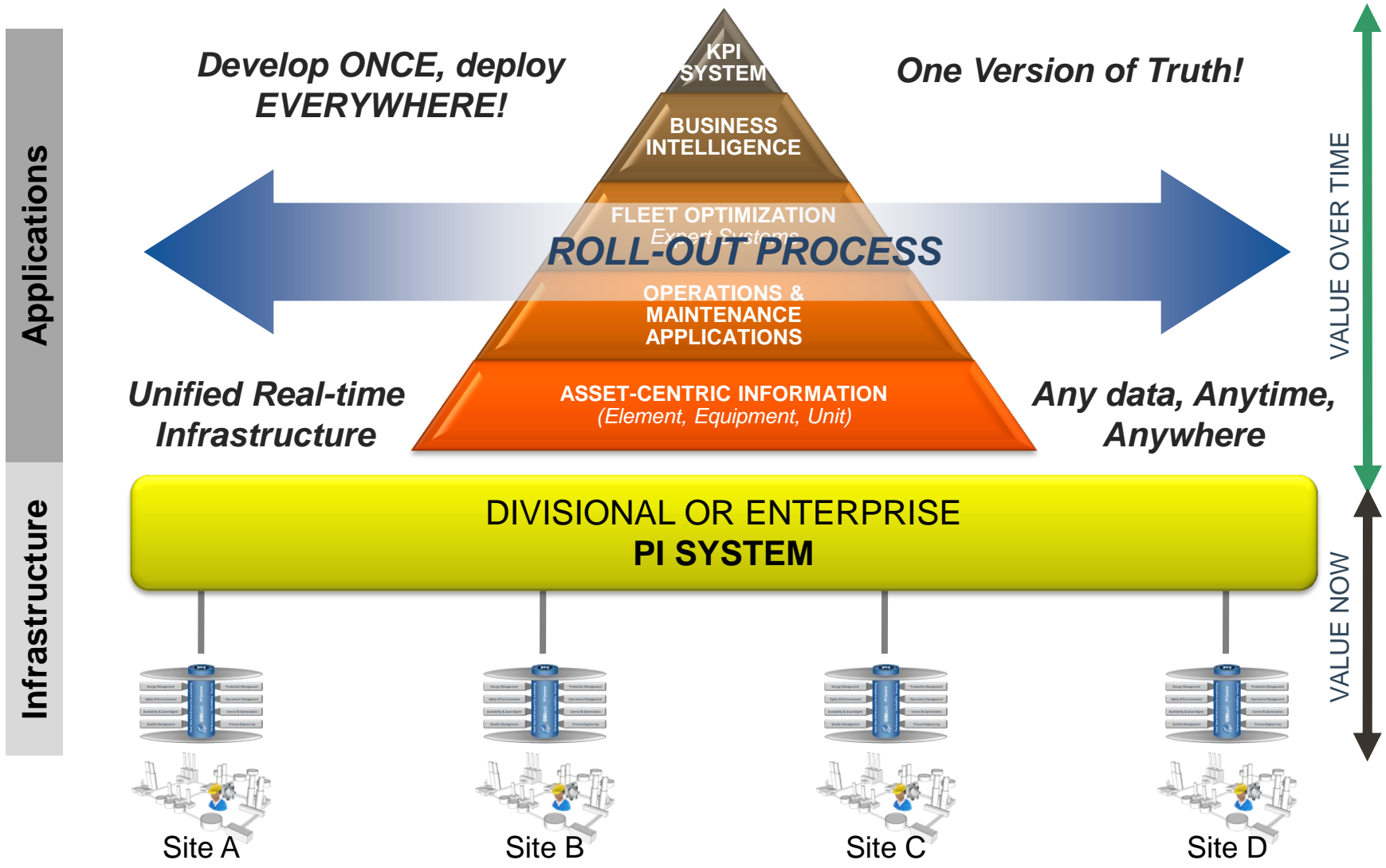
- ❑ **Valuable** – delivers a recognized benefit
- ❑ **Reliable and Secure** – always available, safe and trusted
- ❑ **Accessible** – adaptable to innovation, easy to use
- ❑ **Contextual** - organized to be effective, efficient, and extendable
- ❑ **Sustainable** – must be able to last and adapt to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



# Definition of the Real-time Infrastructure

# Infrastructure , to harness the Power of Data

Implementing Strategic Initiatives on Enterprise Scale



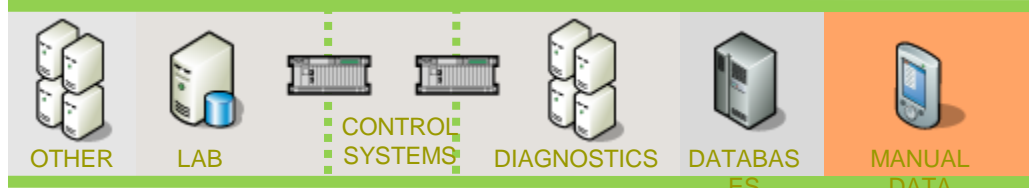
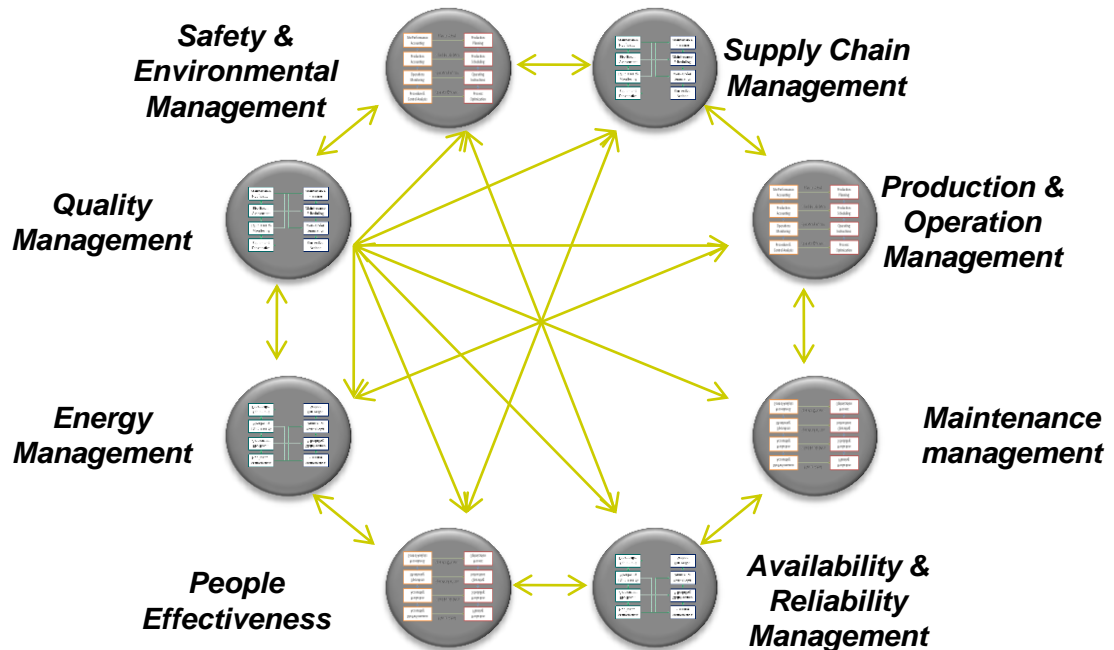
# How does it fit into your existing Enviroment?

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  

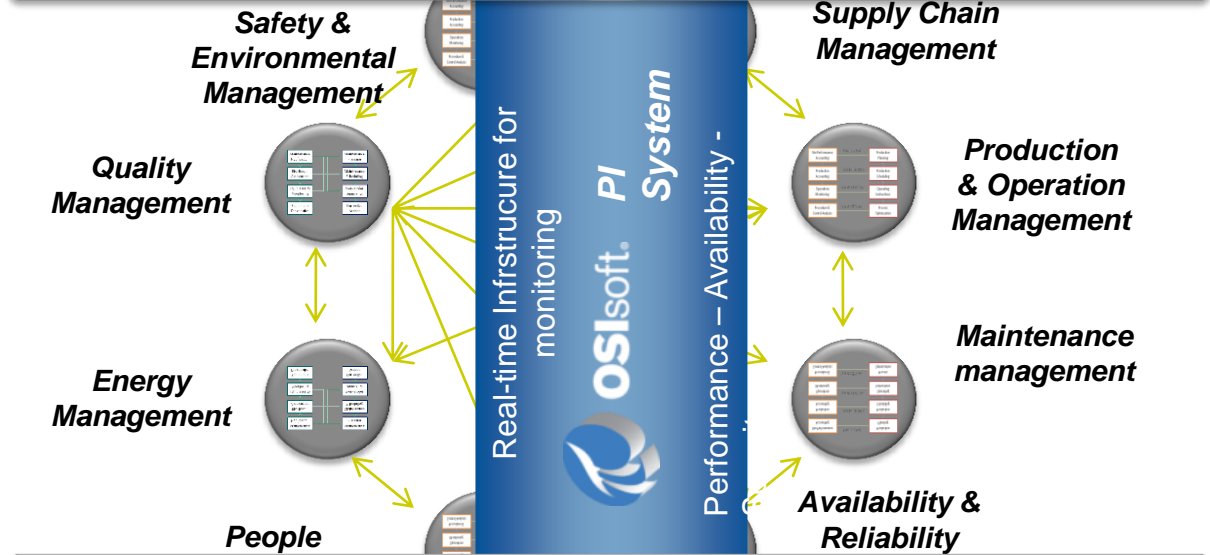

INFORMATION FLOW  


MATERIAL FLOW  

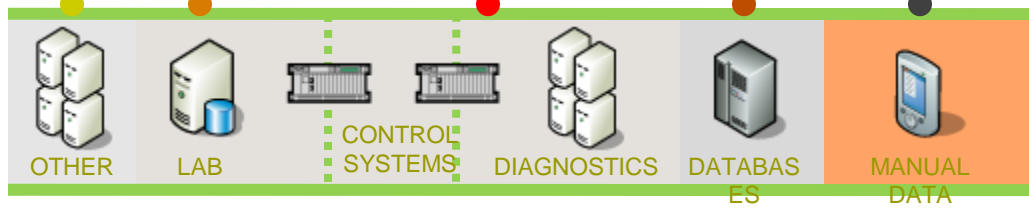



## BUSINESS SYSTEM

## BUSINESS GATEWAY



## INTERFACES



# How does it fit into your existing Infrastructure?

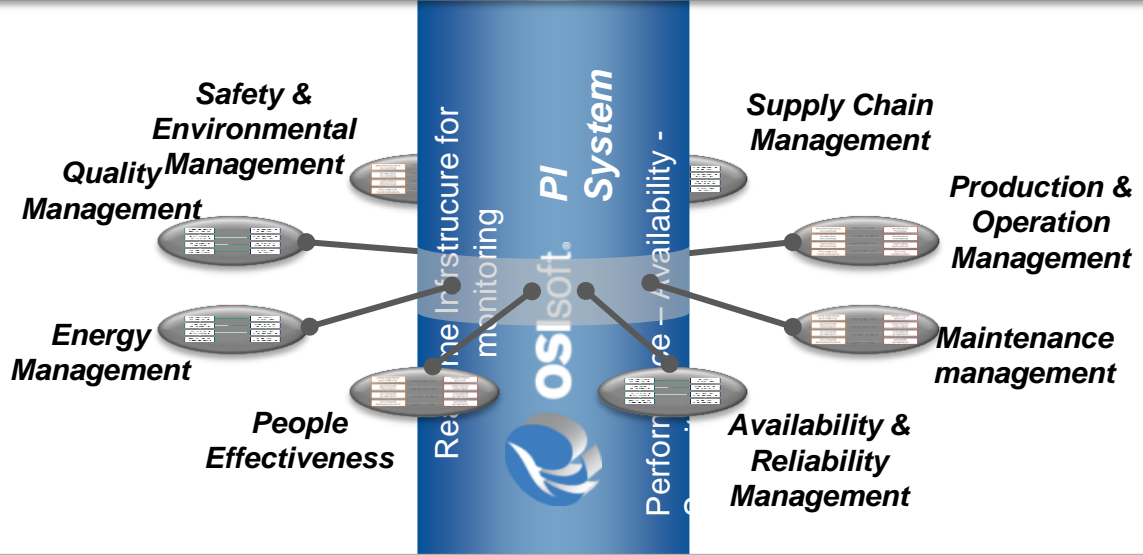
Data foundation for all Business Processes

MONEY FLOW  
 INFORMATION FLOW  
 MATERIAL FLOW

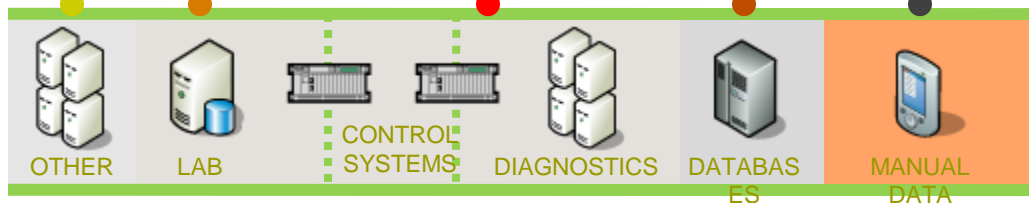


## BUSINESS SYSTEM

## BUSINESS GATEWAY



## INTERFACES



# Incremental Value by Adding Applications

MONEY FLOW

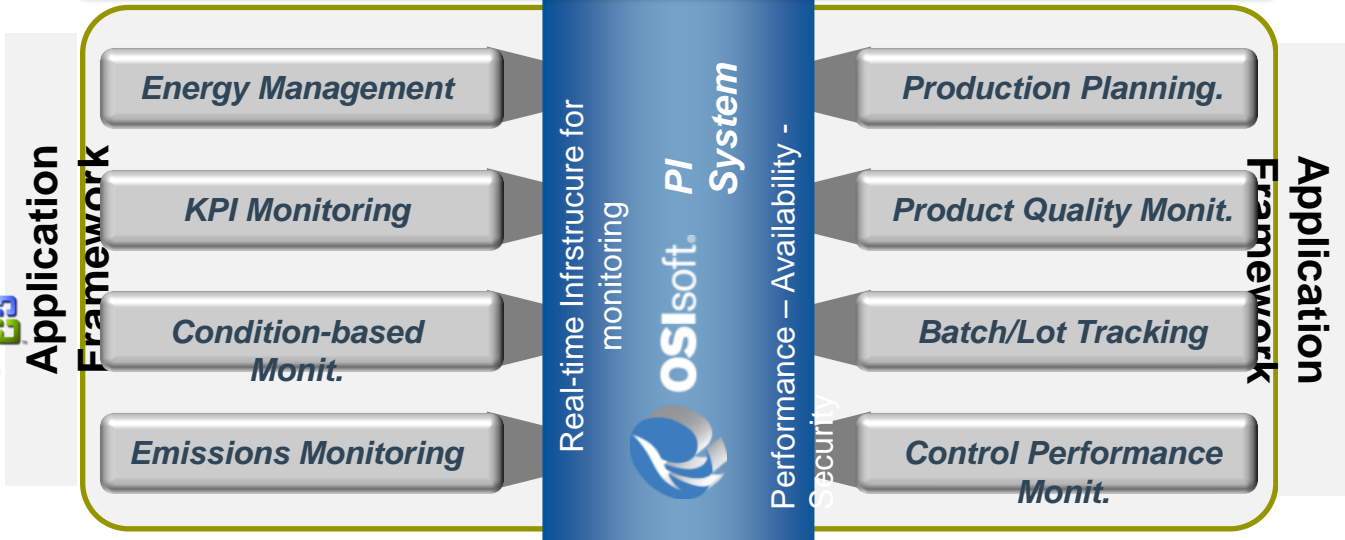
INFORMATION FLOW

MATERIAL FLOW

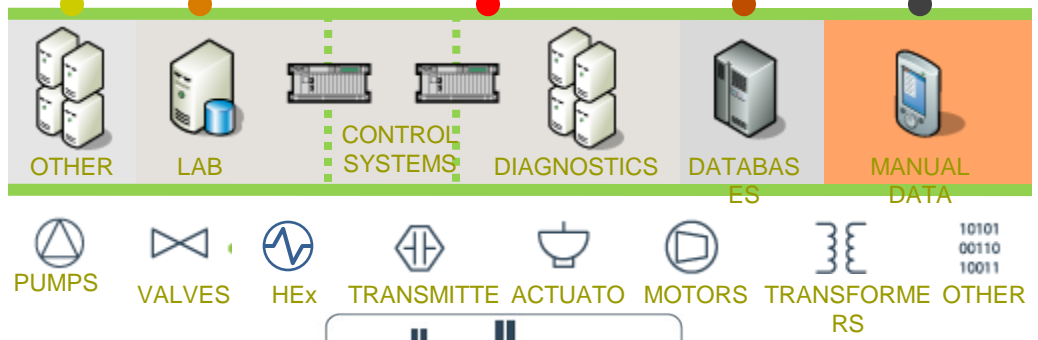


**BUSINESS SYSTEM**

BUSINESS GATEWAY



INTERFACES





# Supporting Collaboration

Everyone works with the same Information – Rules - Tools

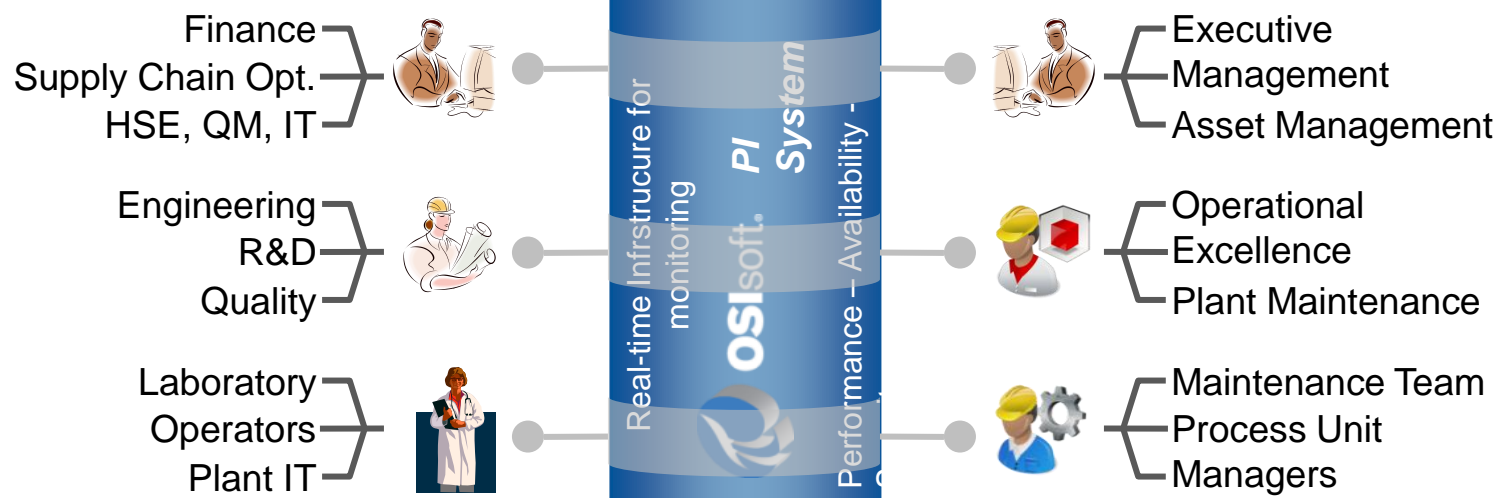
**MONEY FLOW**  


**INFORMATION FLOW**  

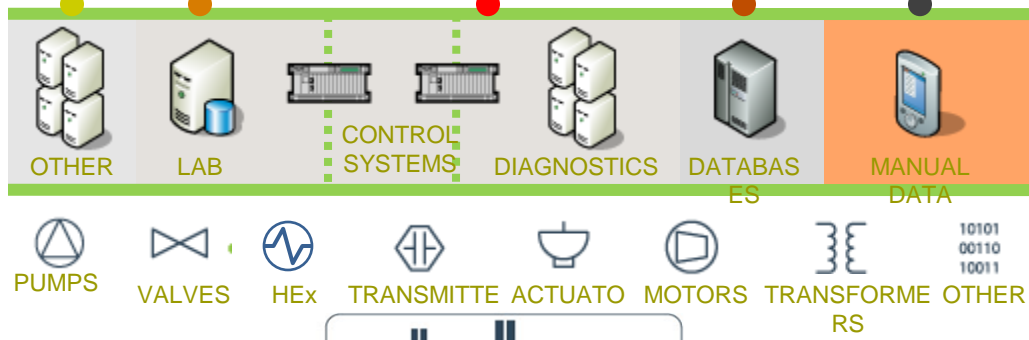

**MATERIAL FLOW**  


## 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”



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

UK, France, Germany, Belgium, Netherlands and Italy

# Saudi Aramco: Command & Control Room



# Establishing the SMART Vision

## Why?

- Significant challenges in today's manufacturing environment
  - ✓ Sustainable Production
  - ✓ Agile Supply Chain
  - ✓ Plant / Enterprise Optimization
- Transition is needed to migrate from traditional strength in manufacturing to *manufacturing excellence* in the 21st Century
- Information is an expectation for continued success
  - ✓ SMART Grid
  - ✓ SMART Phones
  - ✓ SMART Applications
- Overcoming challenges means understanding the contributing factors

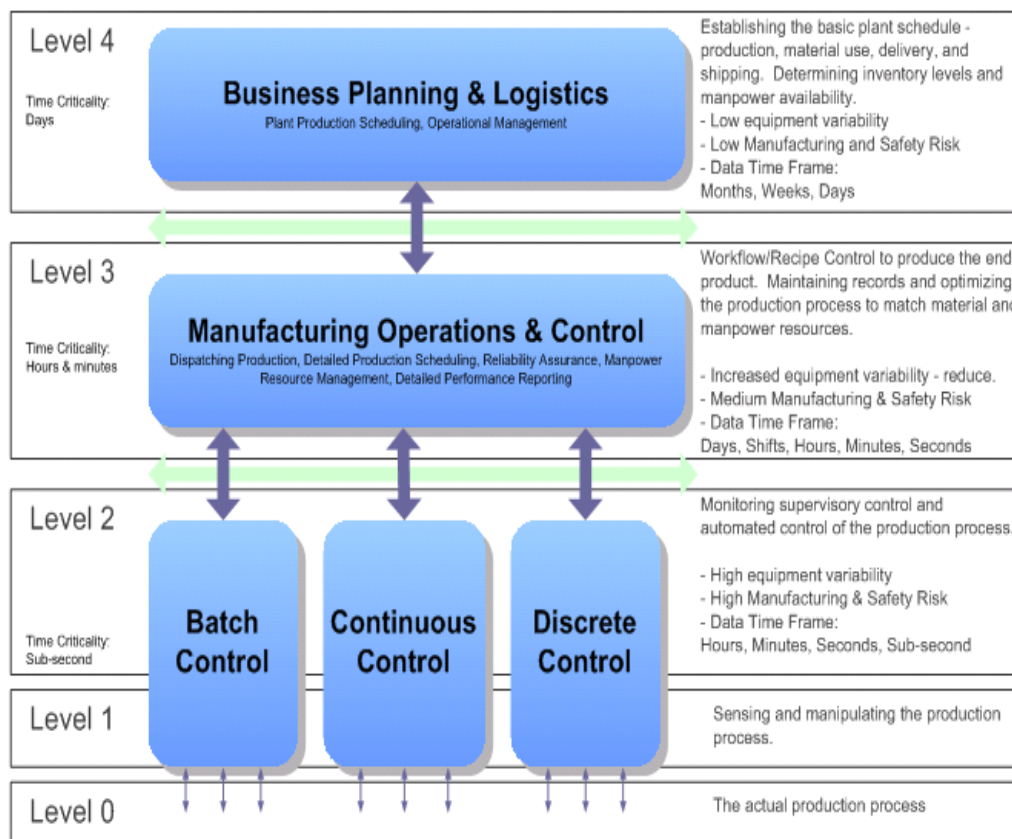
*Let's review some information challenges in the current condition...*

# Establishing the SMART Vision

## Contributing Factors in the Current Condition

### 1. Complexity of Information Sources

Architecture Reference Model - Functions



**External Sources:**  
Web Services, Partners, Public Exchanges, etc.

**Application / DB Examples:**  
Oracle, SAP, SQL Server, Proprietary Legacy, Access, Excel, etc.

**Visual / Analytics Examples:**  
OSisoft, Honeywell, SAS, etc.

**HMI / SCADA Examples:**  
Factory Talk, Citect, Wonderware, Intellution, Schneider Electric, etc.

**PLC / DCS Examples:**  
Rockwell Automation, Siemens, Honeywell, Square D, Emerson, GE Fanuc, etc.

**Instrument Examples:**  
Yokogawa, Rosemont, ABB, etc.

# Establishing the SMART Vision

## Contributing Factors in the Current Condition

### 2. Manual Data Entry and Publication of Metrics

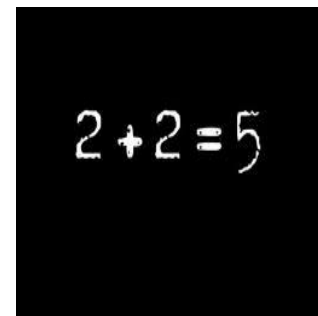
Human resources are being used for data collection and aggregation instead of analysis



21<sup>st</sup> Century technology solutions are not being leveraged to simplify shop floor operations and management

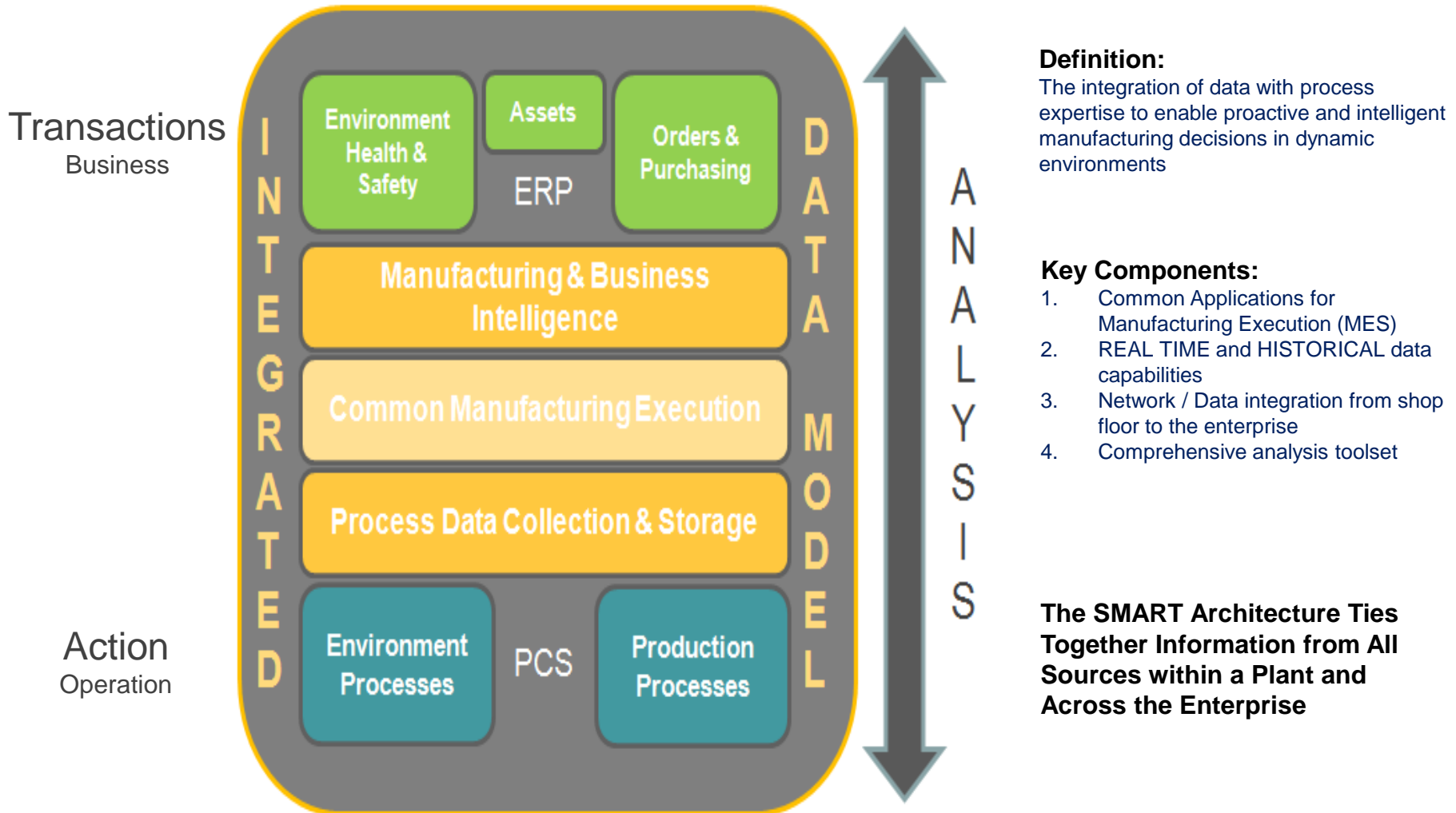
### 3. Actual Enterprise Performance is sometimes overshadowed...

- *By site specific versions of the truth*



# Establishing the SMART Vision

## The SMART Manufacturing Architecture at Alcoa





# 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

**Metal, Mining, & Cement**  
**June 20<sup>th</sup>, Amsterdam**

**Oil & Transport/Storage**  
**Oct. 9<sup>th</sup>, Warsaw**

**Transmission & Distribution**  
**/ Smart Grid**  
**Oct. 24<sup>th</sup>, Brussels**

### 2012 Partner Event

**Oct 15<sup>th</sup> -17<sup>th</sup>, London**



# Thank You!

Please Enjoy  
the rest of the day