OSIsoft®

REGIONAL SEMINARS 2012

The Power of Data

© Copyright 2012 OSIsoft, LLC.

Welcome & Agenda Dublin

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

© Copyright 2012 OSIsoft, LLC.

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

© Copyright 2012 OSIsoft, LLC.

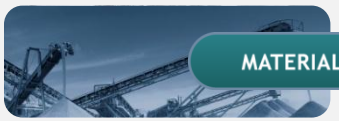
Industry Roles: PI Systems World Wide

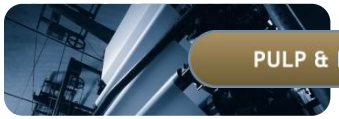
POWER & UTILITIES

OIL & GAS

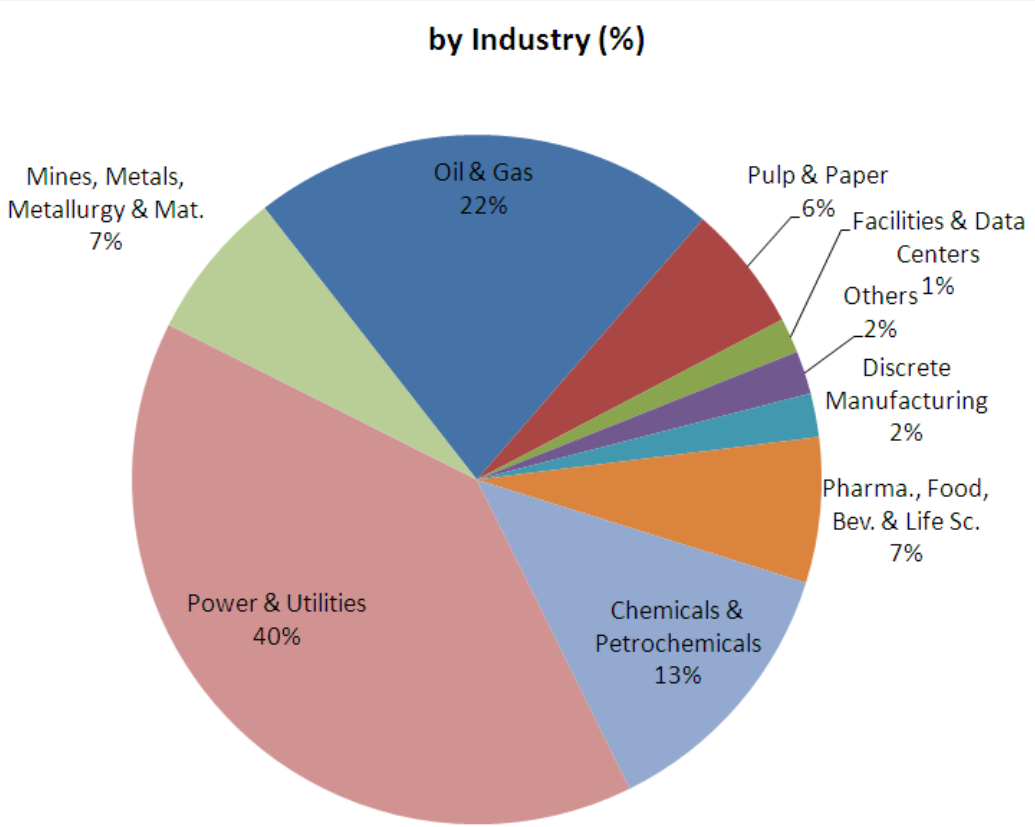
CHEMICALS & PETROCHEMICALS

PHARMACEUTICALS, FOOD & LIFE SCIENCES


MATERIALS, MINES, METALS & METALLURGY


PULP & PAPER

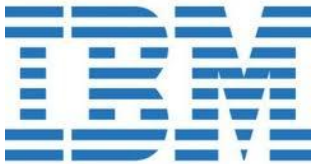
DATACENTERS, IT & TELECOM



© Copyright 2012 OSIsoft, LLC.

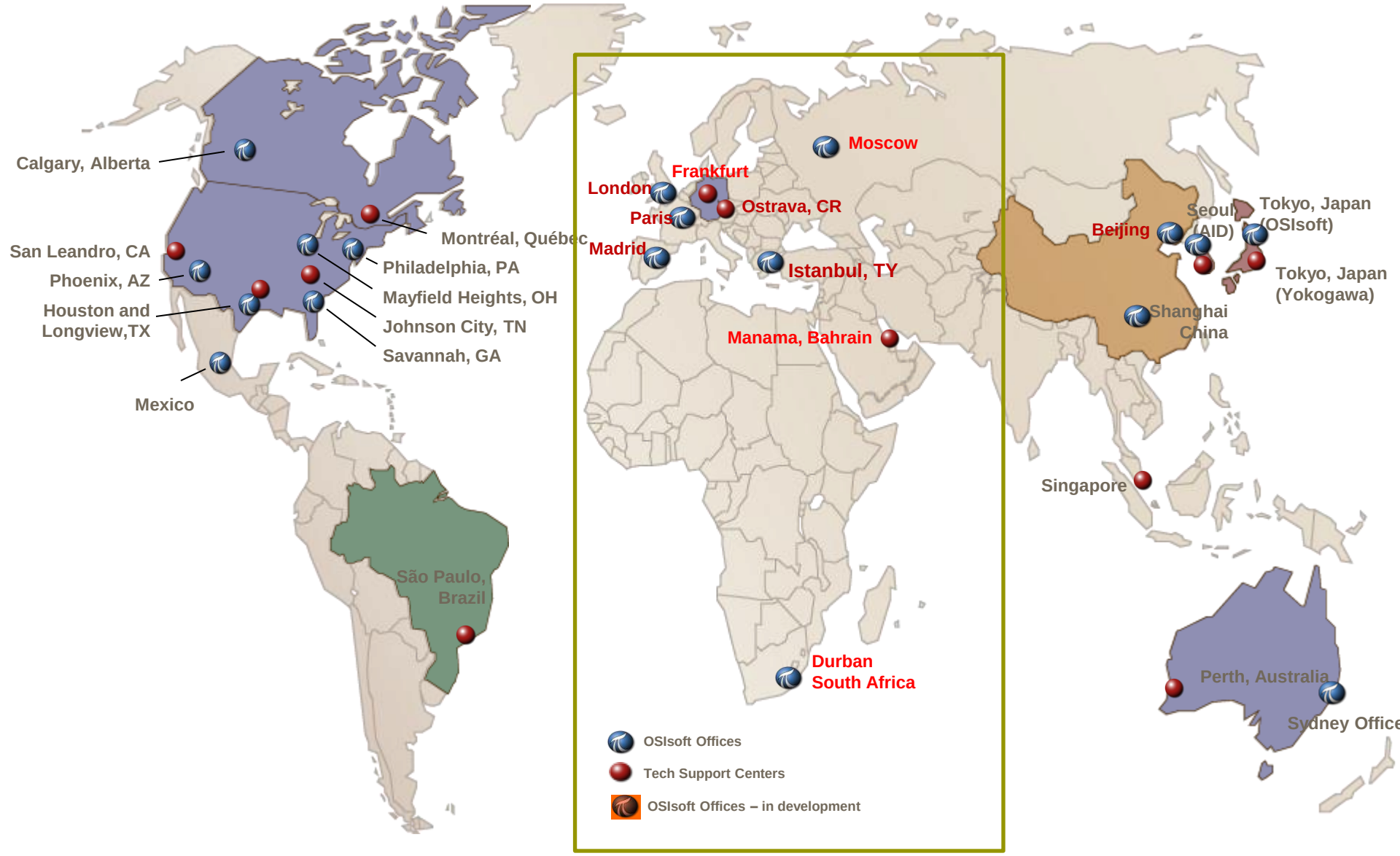
Diverse & Expanding Customer Base Across Industries

© Copyright 2012 OSIsoft, LLC.



© Copyright 2012 OSIsoft, LLC.

OSIsoft: World wide growth



© Copyright 2012 OSIsoft, LLC.

Recent Recognition of OSIsoft

- Presidential “E Award”
  - OSIsoft 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

© Copyright 2012 OSIsoft, LLC.

The Power Of Data

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

© Copyright 2012 OSIsoft, LLC.

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

© Copyright 2012 OSIsoft, LLC.

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"

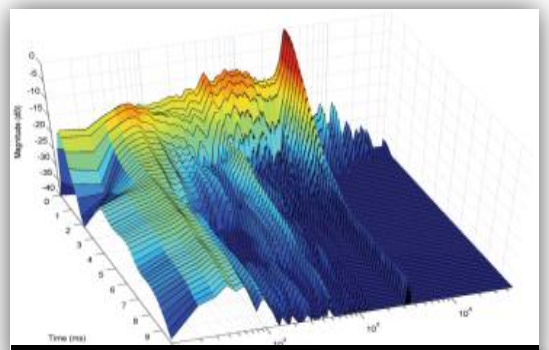
© Copyright 2012 OSIsoft, LLC.

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

- OSIsoft has been doing “Big Data” for 30+ years
  - Fortunately, OSIsoft 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

© Copyright 2012 OSIsoft, LLC.

Data Growth and Data Management



Syncro Phasors

4.8K data streams, 120Hz

3 years online

Unique Events: 55 Trillion

Estimated Data: 436TB

430TB

Automated Metering

20M meters, 5-min reads

7 years online

Unique Events: 177 Trillion

Estimated Data: 1,413TB

1,400 TB

Fleet Monitoring

1K assets, 1M points

10 years online

Unique Events: 6,307 Tr

Estimated Data: 50,458TB

50,500 TB

© Copyright 2012 OSIsoft, LLC.

Opportunity, "Power Of Data"

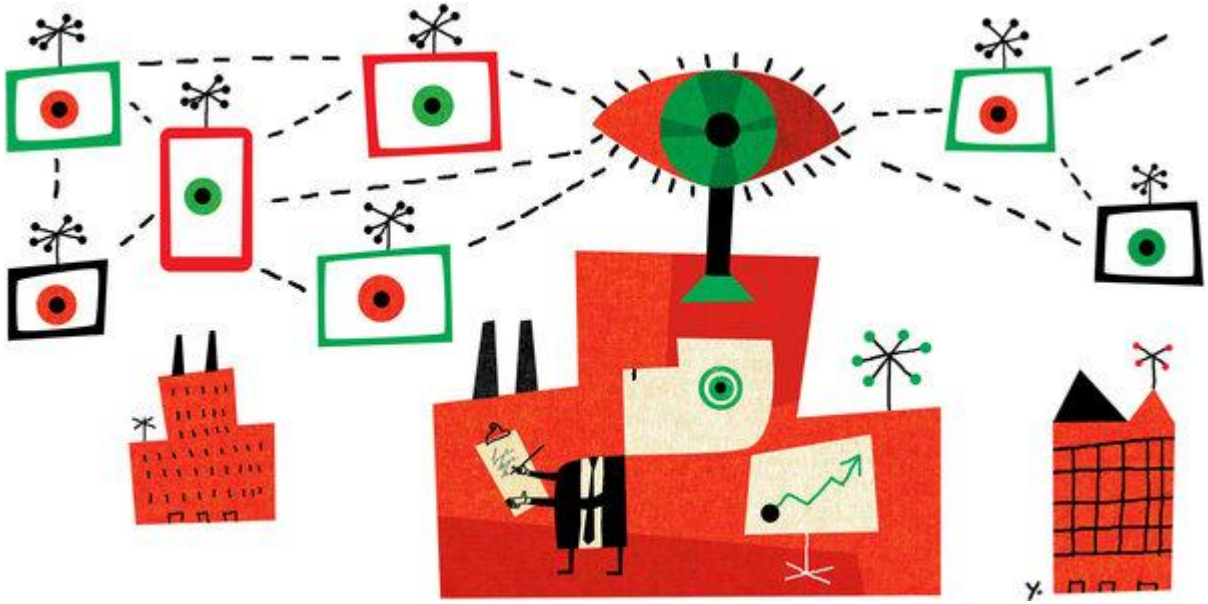
- Knowledge Preservation
- Root Cause Analysis
- Proactive, condition based maintenance
- Energy & resource management
- Asset monitoring
- Sustainability initiatives
- Etc……..

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.

© Copyright 2012 OSIsoft, LLC.

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

© Copyright 2012 OSIsoft, LLC.

How are you harnessing the Power of data?

© Copyright 2012 OSIsoft, LLC.

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

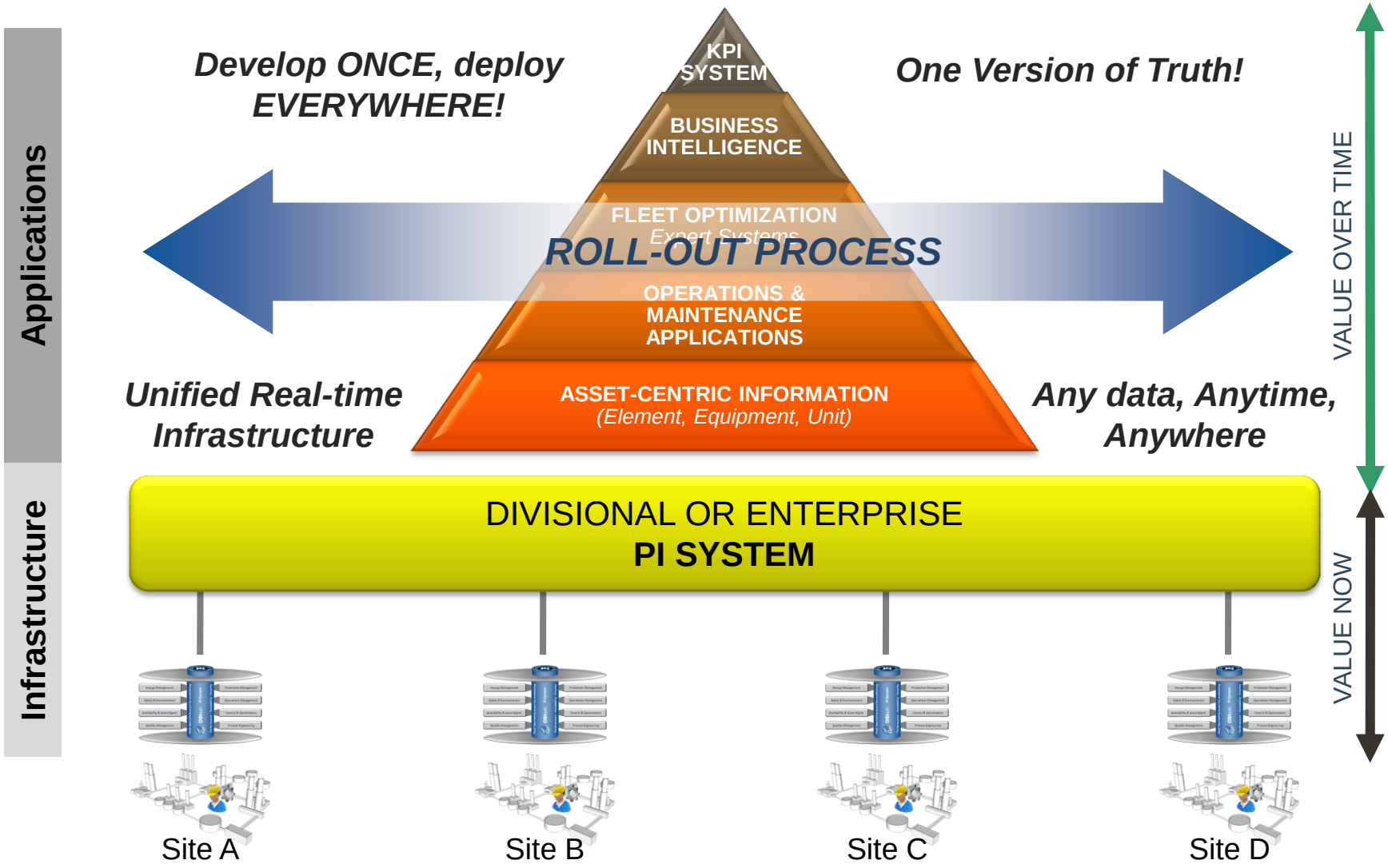
© Copyright 2012 OSIsoft, LLC.

Definition of the Real-time Infrastructure

© Copyright 2012 OSIsoft, LLC.

Infrastructure , to harness the Power of Data

Implementing Strategic Initiatives on Enterprise Scale



© Copyright 2012 OSIsoft, LLC.

What has OSIsoft been focusing on ?

© Copyright 2012 OSIsoft, LLC.

Historian
Over 14,000 installations World Wide….

PI Interfaces → → PI Clents

PI Server

Market Demands for more DATA and how to handle the DATA requires OSIsoft to innovate……

© Copyright 2012 OSIsoft, LLC.

Infrastructure

Connect

Collect data from hundreds of sources.

- Real-time Data
- Relational Data
- Asset Data
- Market Data etc.

Interfaces

Manage

Gather and archive large volumes of data. Scale to meet your growing business needs.

Servers

Analyze

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

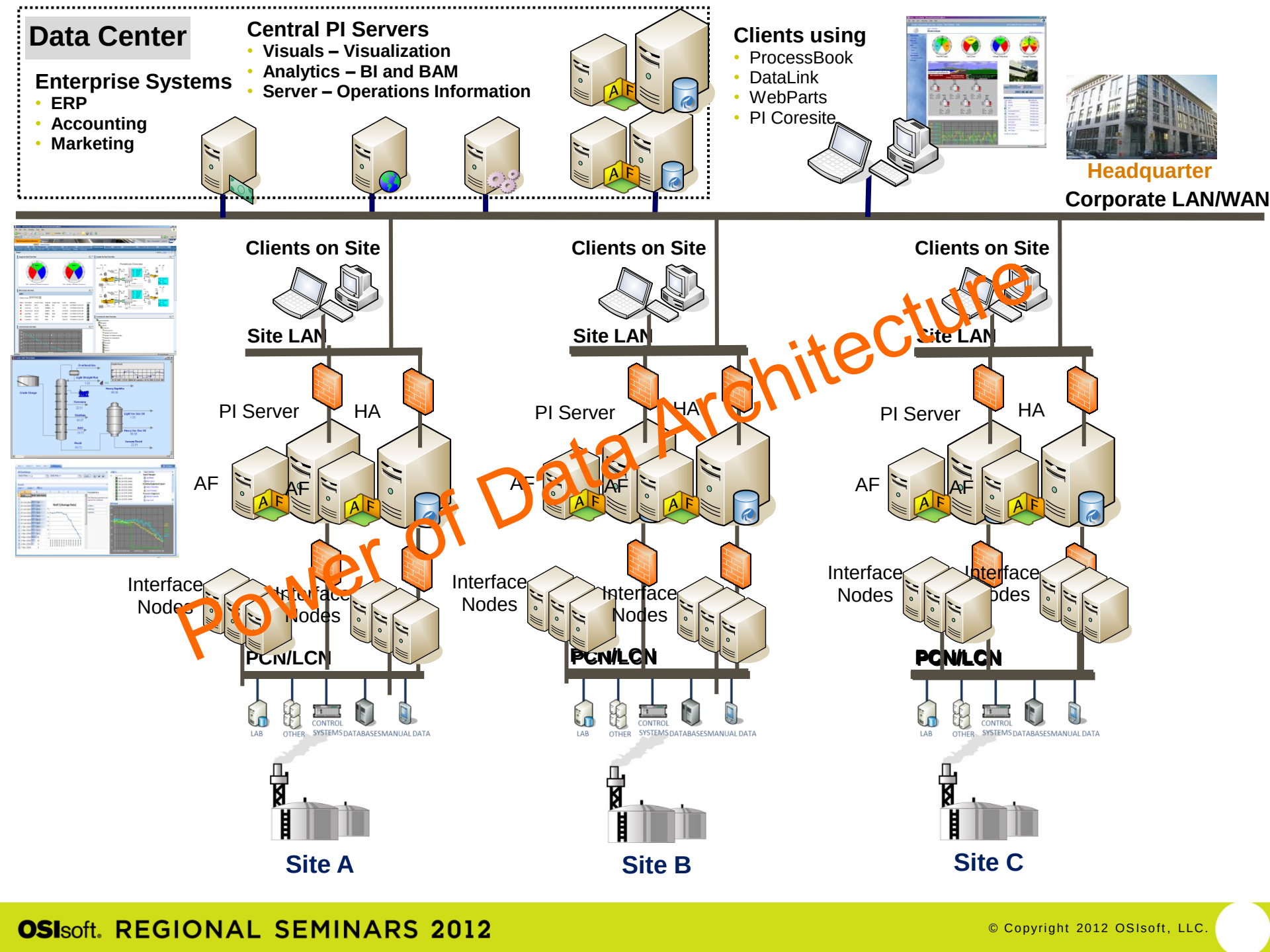
Analytics

Present

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

Visuals

© Copyright 2012 OSIsoft, LLC.



© Copyright 2012 OSIsoft, LLC.

How does it fit into your existing Enviroment?

Typical Situation – Hundreds of Islands

MONEY FLOW

INFORMATION FLOW

MATERIAL FLOW

SOFTWARE SAP PARTNER

mro software ALLIANCE PARTNER

Sun microsystems

Microsoft .net

Microsoft Office

Honeywell ABB

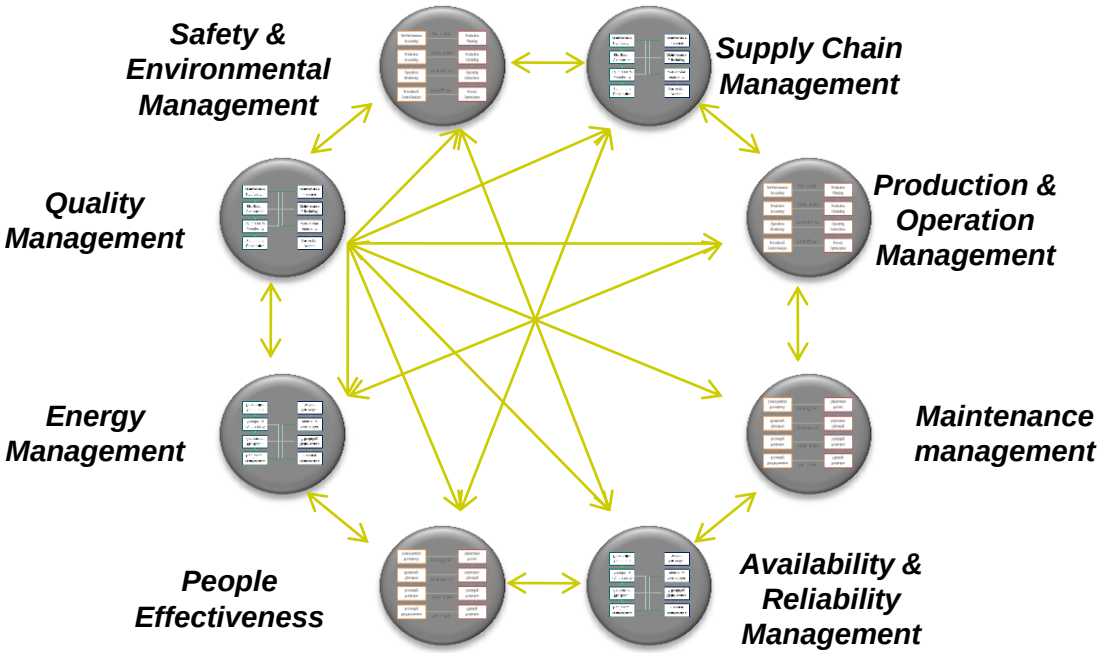
SIEMENS

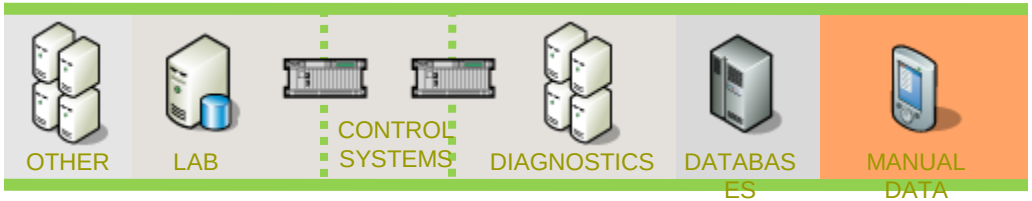
EMERSON

invensys

YOKOGAWA

BUSINESS SYSTEM





Level 4
Business Planning & Logistics

Level 3
Manufacturing Operations Management

Level 2
Supervisory Control

Level 1
Sensing & Control

Level 0
Process

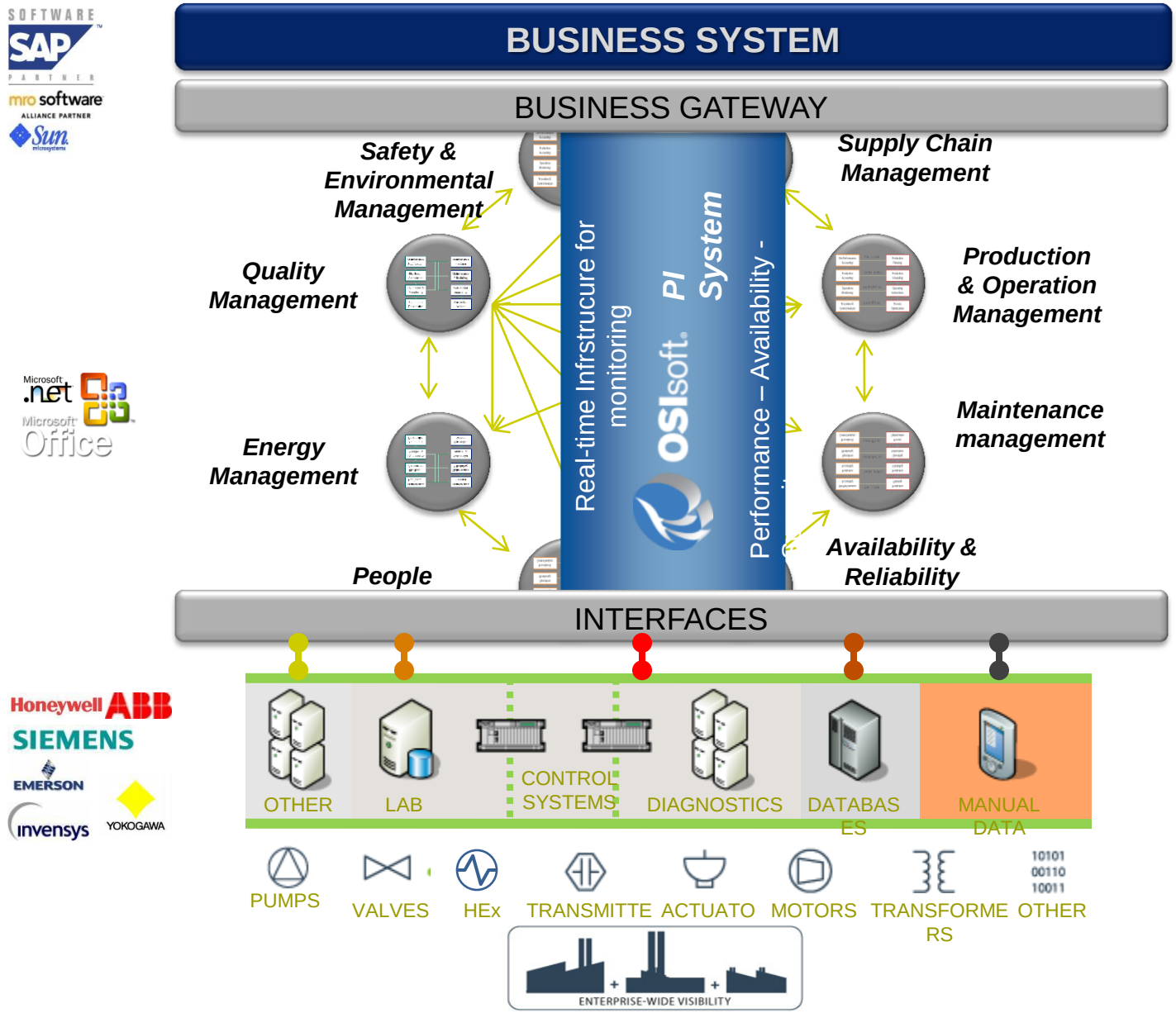
How does it fit into your existing Infrastructure?

Infrastructure to all Islands

MONEY FLOW

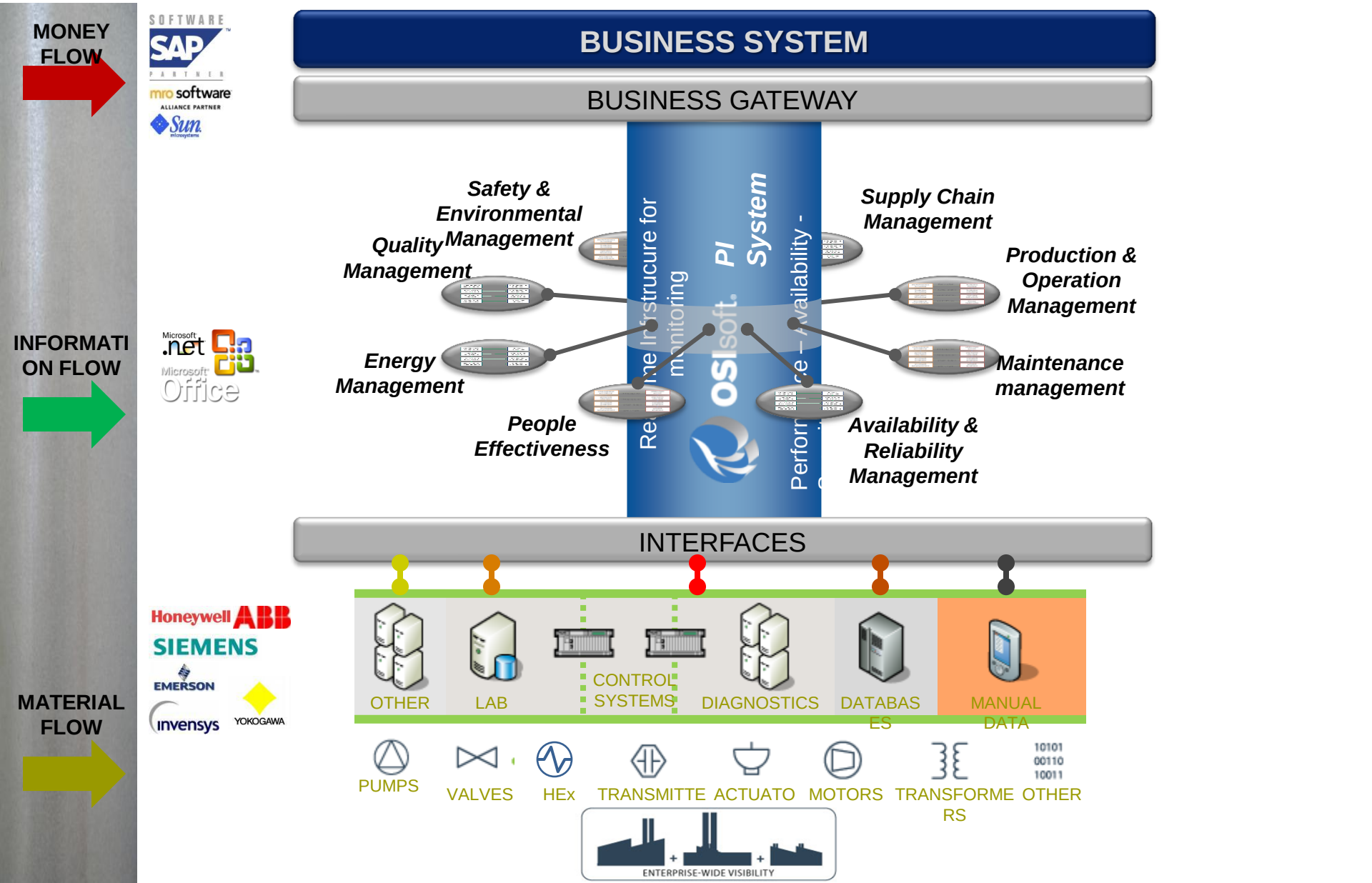
INFORMATION FLOW

MATERIAL FLOW

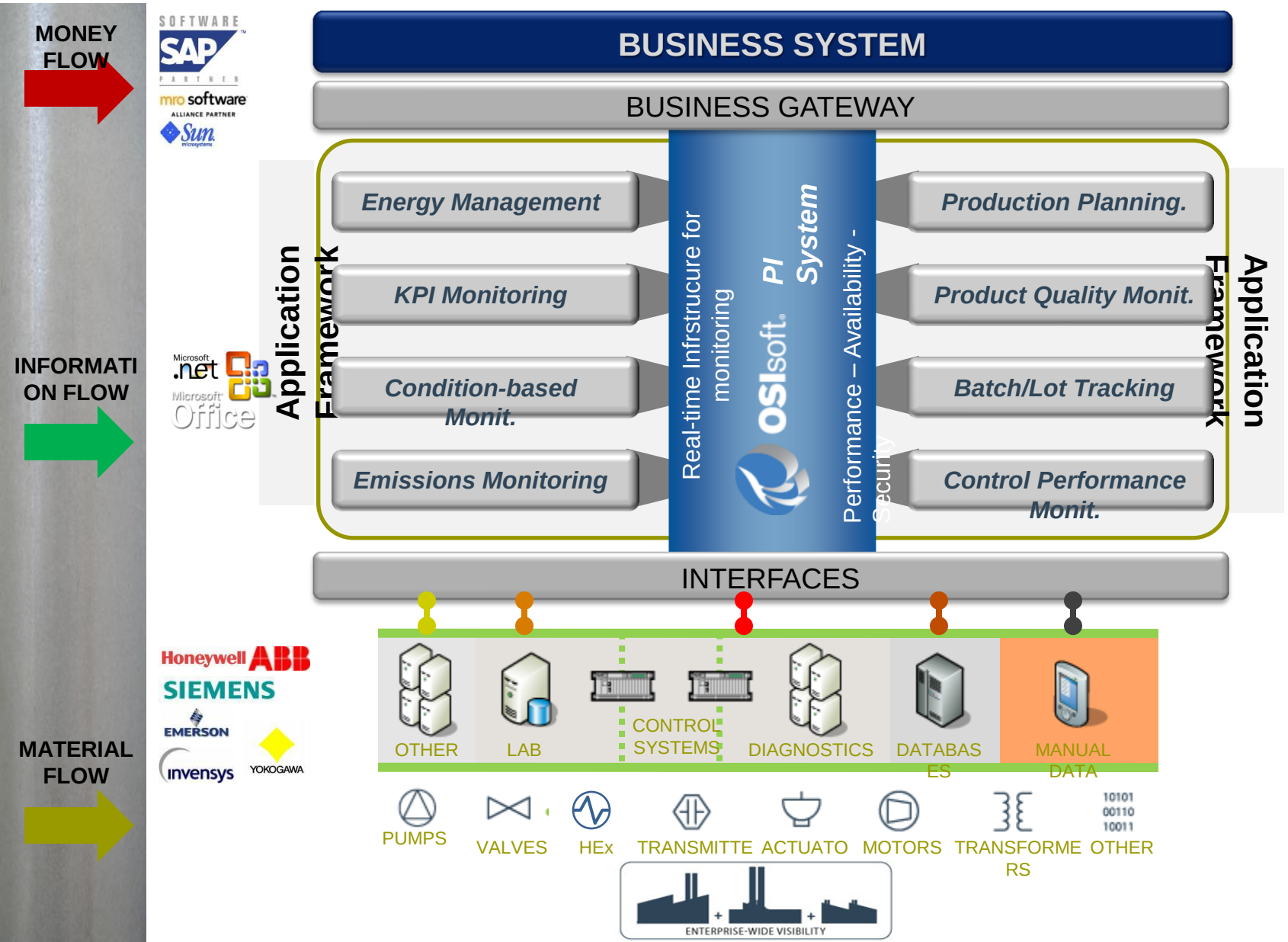


How does it fit into your existing Infrastructure?

Data foundation for all Business Processes

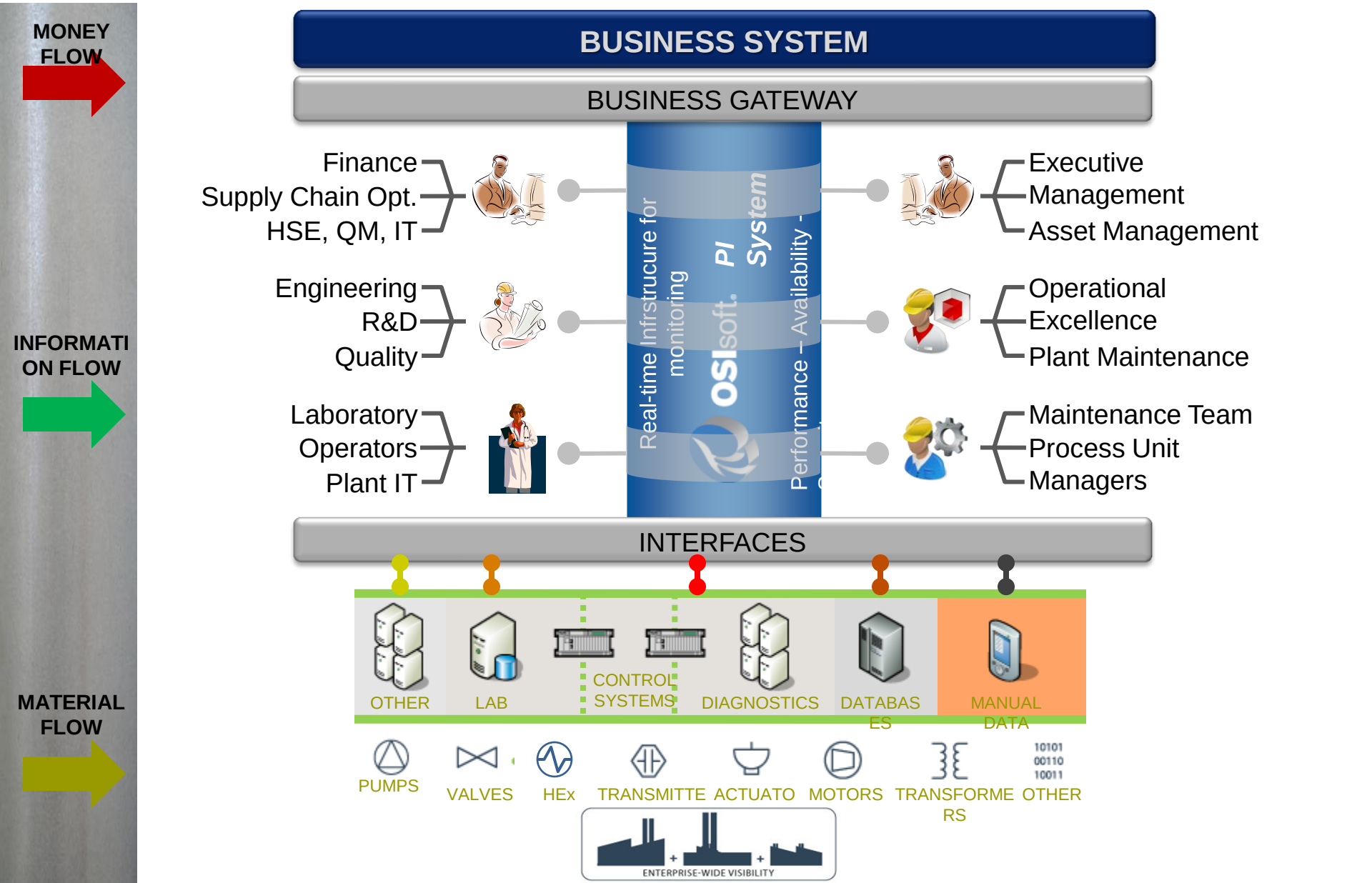


Incremantal Value by Adding Applications



Supporting Collaboration

Everyone works with the same Information – Rules - Tools



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

© Copyright 2012 OSIsoft, LLC.

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

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

UK, France, Germany, Belgium, Netherlands and Italy

© Copyright 2012 OSIsoft, LLC.

Saudi Aramco: Command & Control Room

© Copyright 2012 OSIsoft, LLC.

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

© Copyright 2012 OSIsoft, LLC.

Future Events: Save the Date

2012 Industry Events

Metal, Mining, & Cement
June 20th, Amsterdam

Oil & Transport/Storage
Oct. 9th , Warsaw

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

2012 Partner Event

Oct 15th -17th , London

© Copyright 2012 OSIsoft, LLC.

Thank You!

Please Enjoy the rest of the day

© Copyright 2012 OSIsoft, LLC.