



OSIsoft®

REGIONAL SEMINARS 2012

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



Agenda Warsaw Seminar

Presented by **Martin Otterson**

Managing Director & Vice President of Sales EMEA/Russia

Agenda:

08:00	Registration and Welcome Coffee	OSIsoft
09:00	Welcome Address	OSIsoft Zsolt Oros
09:15	The Power of Data	OSIsoft Martin Otterson
09:45	Customer Presentation	PGNiG Termika Marcin Błasiak
10:30	What's new in the PI System Overview, Roadmap	OSIsoft Tadeas Marciniak
11:00	Break & Demos	
11:30	Do More. Faster. Now! PI Server 2012	OSIsoft Hoa Tram

Agenda:

12:15 Customer Presentation

Basell Orlen
Gniewosz Marszałek

12:45 Lunch & Demos

14:00 Business Intelligence with the PI System
Power Pivot

OSIsoft
Martin Freitag

14:30 Customer Presentation

GDF Suez
Mariusz Damasiewicz

15:00 PI Asset Framework + PI Notifications

OSIsoft
Tadek Marciniak

15.30 Break & Demos

16:00 Customer Examples
Power Generation, Oil&Gas, Transmission

OSIsoft
Zsolt Oros

Agenda:

16:30	Value now, Value over time YouTube learning channel, vCampus, etc.	OSIsoft Petr Sebela
17:00	Wrap-up, Demos	

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/>



Industry Roles- PI Systems- World Wide



POWER & UTILITIES



OIL & GAS



CHEMICALS & PETROCHEMICALS



PHARMACEUTICALS, FOOD & LIFE SCIENCES



MATERIALS, MINES, METALS & METALLURGY

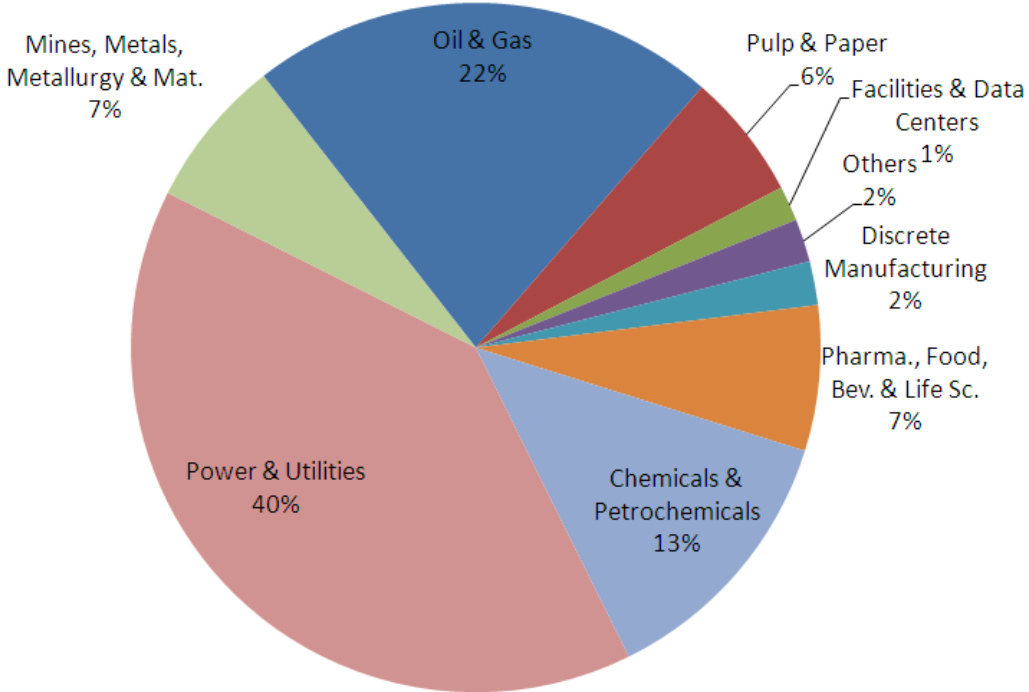


PULP & PAPER



DATACENTERS, IT & TELECOM

Invoices by Industry (%)



Diverse Customer Base Across Industries



Our footprint in Central Eastern Europe



Where is OSISOFT in the world?





“The Power Of Data”

Presented by **Martin Otterson**

Managing Director & Vice President of Sales EMEA/Russia

Etymology of data

...the Latin word **data** derived from the word datum (present, gift; that which is given)

... derived from the Latin word dare (give; dedicate; sell; surrender, give over; send to die)

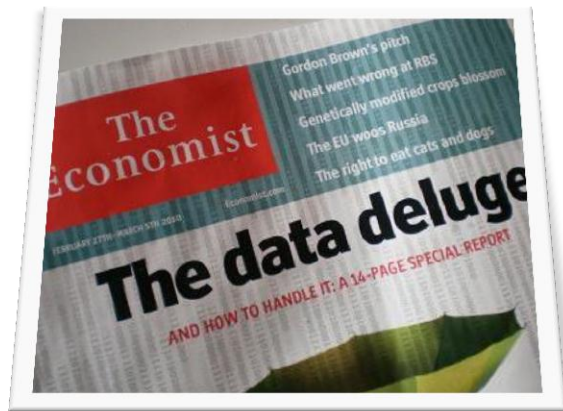


Data Eruption, Data flood, Data Tsunami, Data deluge

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

Herbert Simon

Economist - Nobel Prize Winner - 1978



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

- We have been doing this for 30 Plus years
 - Fortunately, OSIsoft customers have been data driven for many years and have a head start in the practice of the data analysis or data science.

To handle the future.....to handle the phenomenon

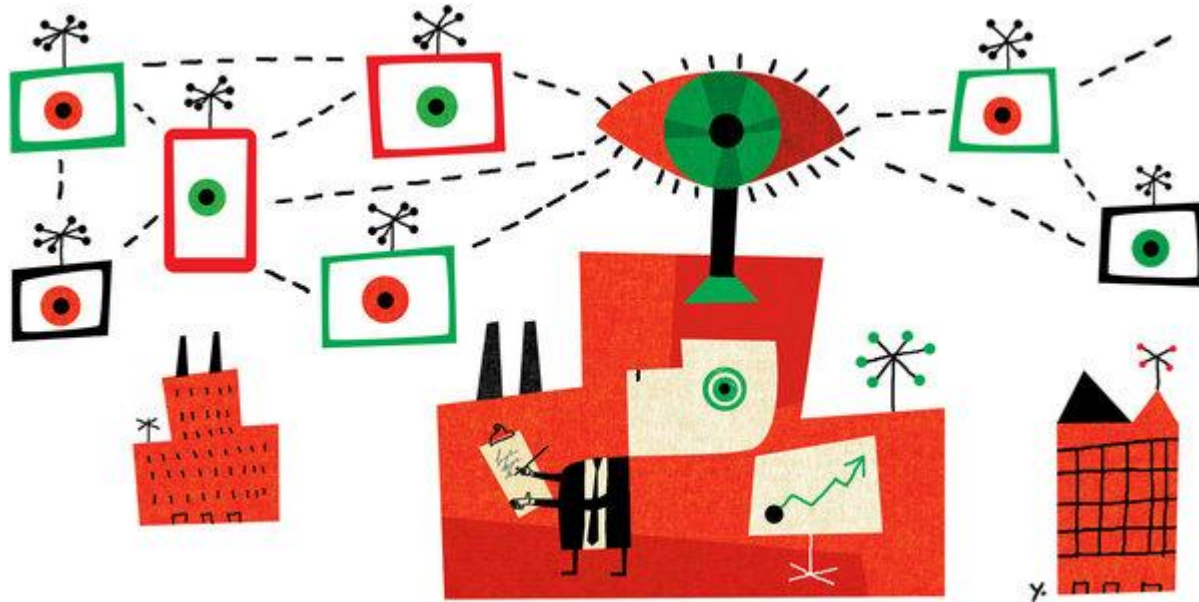
- New Roles required to take on the hype
 - Real Big Data requires new skills and new roles such as **data analysts, data scientists, data experts**

Opportunity, “Power Of Data”

- Knowledge Preservation
- Signal Recognition
- Predictability
- Root Cause Analysis
- Measures
- Augmentation of our ability
- Etc..... & &.....

“real-time data and events” were going to be the currency of this decade and we believe that this claim is right on.

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



- Net gain – **Output and Productivity 5 to 6 %** higher in DDD (Data Driven Decision Making)

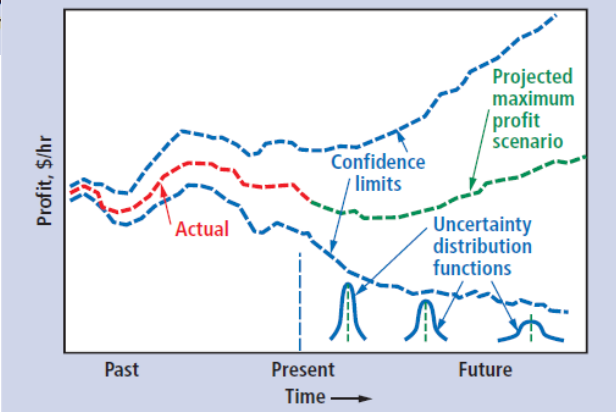
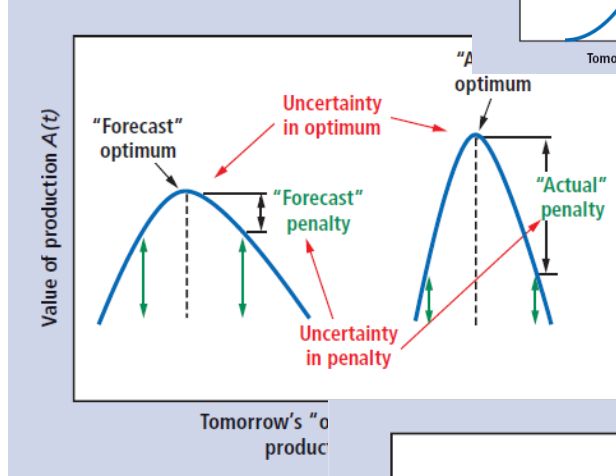
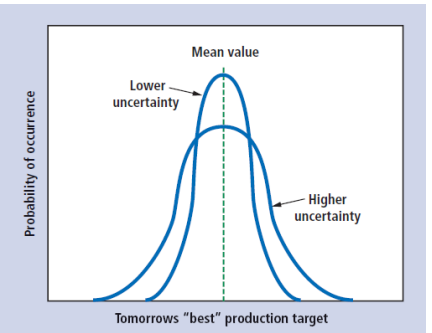
Reference: Brynjolfsson, et al., MIT, How does Data-Driven Decision making Affect Firm Performance, 2011.
<http://www.nytimes.com/2011/04/24/business/24unboxed.html>

Benefits of the Power of Data opportunity:

Data -> Information is as good as the decision made with it

Benefit Areas:

- Reduced Time to Decision
 - Faster time to decision ⇨
 - Reduced Cycle Time ⇨
 - Faster time to market ⇨ PROFIT
- Improved Decision Quality
 - Reduced Decision Uncertainty ⇨
 - Better quality and more products ⇨
 - LOWER COST of production



Information technology investments can generate value by reducing future uncertainty in projected cash flows and the economic reflection of this effect is to reduce the required discount rate and hence to increase the expected value of the decisions made with the information. – Douglas C. White

Power of Data - Value Creation Defined

The ultimate goal of a public corporation is to maximize shareholder value.



Information from internal and external sources is used to make decisions, which create shareholder value upon execution.



The Enterprise Value Creation landscape includes processes of creating value through information, decisions and actions.

Power of Data- Value Creation Trends

- Corporations are recognizing the need to connect information to actions through valuable decisions.
- 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) to more abstract representations of corporate knowledge and business logic (e.g., the use of business rules) that are accessible across the enterprise.

Attributes of Power of Data Value Creation

- Leverage the full synergy potential amongst all subsidiaries across the Enterprise
- Remove the organisation barriers and facilitate collaboration
- Make information and knowledge available to Anyone at Anytime from Anywhere
- Find and leverage hidden opportunities and value through better visibility on the plants
- Identify and deploy Best Practices across the Enterprise
- Infrastructure & Advanced Technology delivers Sustainable Value for the Enterprise and is required for increasing Business Agility.

Infrastructure is required to unlock the Power of Data..

Real-time Infrastructure Delivers Opportunities

Electrical Power



Communications



Transportation



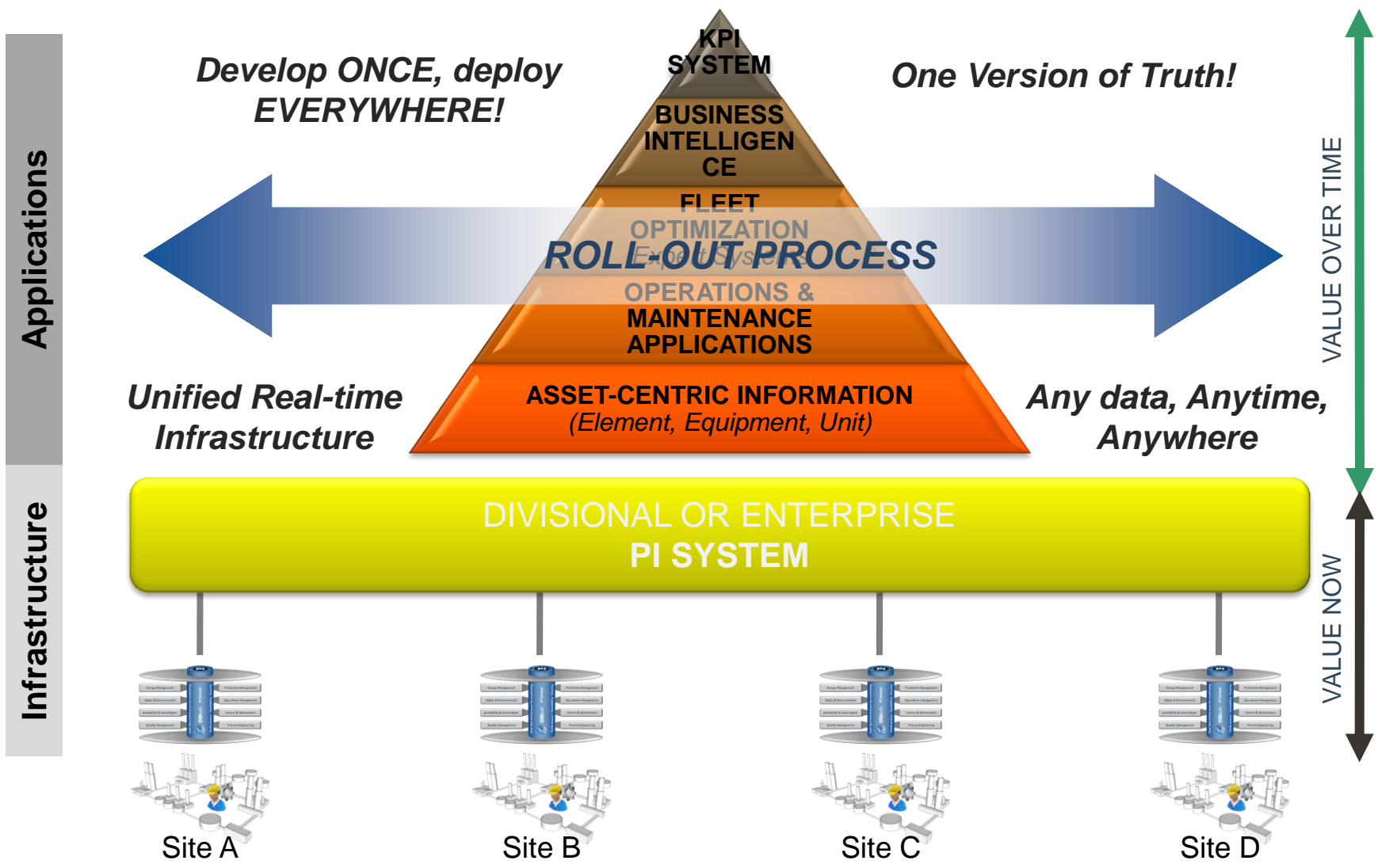
- ❑ **Valuable** – delivers a recognized benefit
- ❑ **Reliable and Secure** – always available, safe and trusted
- ❑ **Accessible** – adaptable to innovation, easy to use
- ❑ **Contextual** - organized to be effective, efficient, and extendable
- ❑ **Sustainable** – must be able to last and adapt to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



Definition of the Real-time Infrastructure

Infrastructure for to harness the Power of Data

Implementing Strategic Initiatives on Enterprise Scale



Types of enterprise software:

Application software

- supports a specific business process or a set of interlinked processes.
 - Examples include financial programs such as General Ledger from SAP or operational programs that cover plant floor operations, sales force automation, or supply chain management.

Infrastructure software

- supports a business application.
 - Types of infrastructure software include middleware (software that interacts across hardware and network environments), messaging (e-mail and collaboration software), storage, security, and network management tools. None of these tools by themselves provides a unique business value. When they are combined, however, these

The PI System is an enterprise infrastructure software !

Enterprise Software Benefits

Application Benefits

Software type	Sample benefits	Benefit classification	Benefit description
Application Benefits	Reduced head count	Hard	Reduction of labor costs for staff members involved with the business process covered by the software.
	Reduced errors	Hard	Reduced cost associated with revising work or handling errors within the old process.
	Increased revenues	Hard	Increased sales directly attributable to the new application technology.
	Productivity savings	Soft	Value of reduced effort spent on the process, which can't be tied directly to cash results.
	Improved quality	Soft	An intangible measure of product, customer service, or operational effectiveness that is often difficult to tie to cash results.
	Improved customer, employee, or partner satisfaction	Soft	Perceived improvements in stakeholder satisfaction that are difficult to tie to cash results.
	Improved information	Hard or soft	Improved decision-making that results from having access to timelier and/or more accurate information, which leads to improved business results or

Enterprise Software Benefits

Infrastructure Benefits

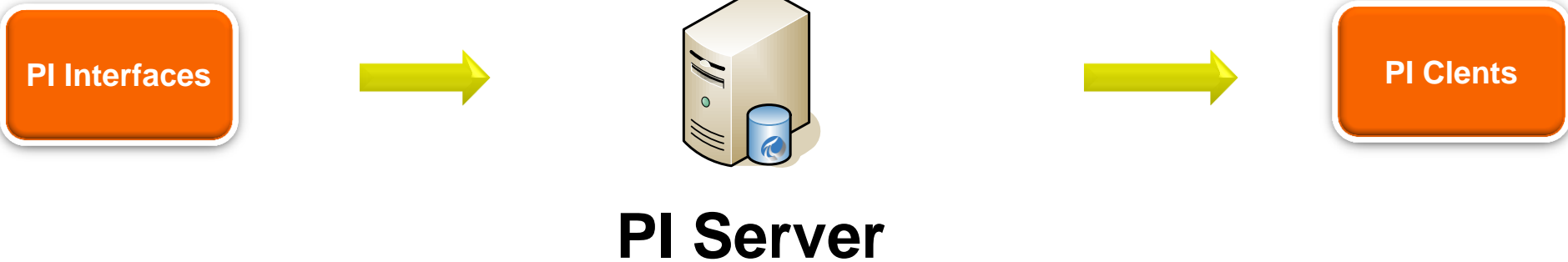
Software type	Sample benefits	Benefit classification	Benefit description
Infrastructure Benefits	Reduced development costs	Hard	Reduced costs associated with modifying infrastructure software in the future, perhaps due to the implementation of more modern technologies or open standards
	Reduced maintenance and support costs	Hard	Reduced costs associated with fewer upgrades, fixes, or enhancements required to maintain the software.
	Improved productivity	Soft	Reduced time spent managing the infrastructure, which can't be directly tied to a cash benefit.
	Reduced risk	Soft	Reduced risk is measured by how the new software can reduce the likelihood that the infrastructure will fail. The cost of failure is calculated against the reduction in probability, leading to a valuable benefit that can't be easily tied to a cash benefit.
	Improved information	Hard or soft	Improved decision-making that results from having access to timelier and/or more accurate information, which leads to improved business results or productivity gains.



What has
OSIsoft been
focusing on ?

Historian

Over 14,000 installations World Wide....



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

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.

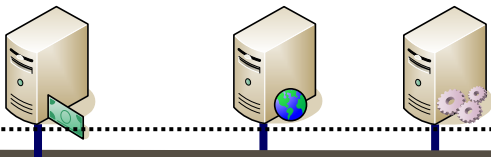
Visuals

PI Analytics

Data Center

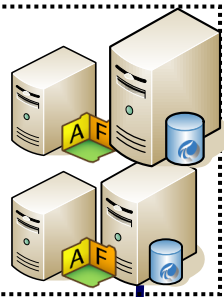
Enterprise Systems

- ERP
- Accounting
- Marketing



Central PI Servers

- Visuals – Visualization
- Analytics – BI and BAM
- Server – Operations Information



Clients using

- ProcessBook
- DataLink
- WebParts
- PI Coresite



Headquarter

Corporate LAN/WAN

Clients on Site

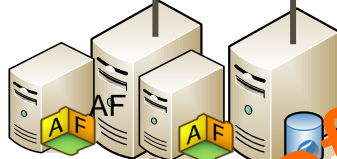


Site LAN

PI Server

HA

AF



Interface Nodes

PCN/LCN



Site A

Clients on Site



Site LAN

PI Server

HA

AF



Interface Nodes

PCN/LCN



Site B

Clients on Site

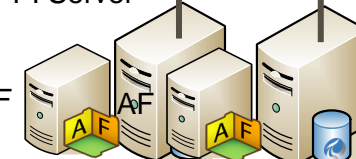


Site LAN

PI Server

HA

AF



Interface Nodes

PCN/LCN



Site C

POWER OF Data Architecture

Value for the Enterprise

- Unified Real-time Infrastructure across the entire fleet
 - One version of Truth
 - Information is available for anyone, anytime and any place
 - Information is meaningful (asset-centric) and actionable
 - Unified Reporting
 - Place for Innovation – new developments
 - Real-time collaboration across departments & sites
- Data Foundation for Innovation
 - Energy Management / Energy Conservation
 - Sustainability Initiatives etc.
- Protects Existing and Future Investments
 - Nothing to Replace
 - No limitations on new system selection



Power of Data Use Case

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 M&D and 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 and Control Room`



SAVE THE DATE

2012 Industry Events

Metal, Mining, & Cement - June 20th

Oil & Transport/Storage- Oct. 9th

T & D/Smart Grid- Oct. 24

2012 Partner Event

London Oct 15th -17th

2013 EMEA Event

Paris XXXX





THANK YOU

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Business Transformation PI System Real-time Infrastructure

What is the Real-time Infrastructure?

Overview



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

The OSIsoft PI System is the highly scalable and secure real-time and event infrastructure that connects people with the right operational and manufacturing information at the right time to analyze, collaborate, and act.

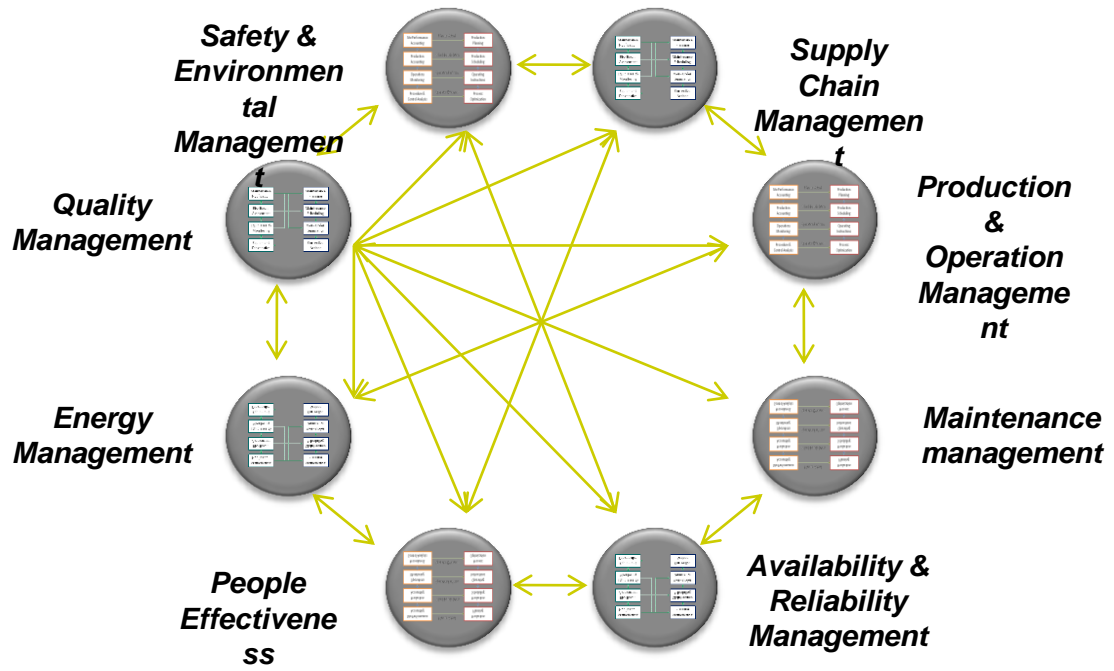
How does it fit into your existing Infrastructure?

Typical Situation – Hundreds of Islands

MONEY FLOW
 INFORMATION FLOW
 MATERIAL FLOW



BUSINESS SYSTEM



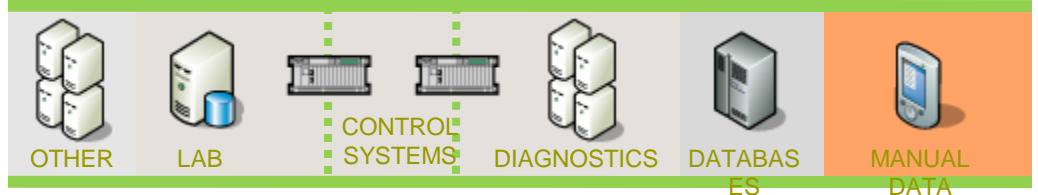
Level 4
 Business Planning & Logistics

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

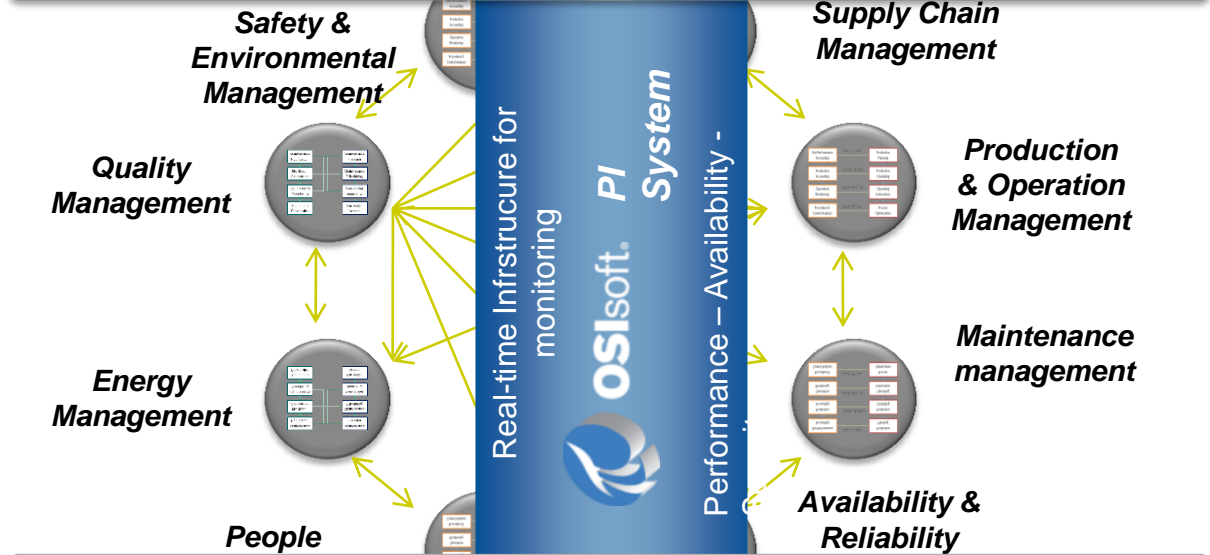
INFORMATION FLOW

MATERIAL FLOW



BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



How does it fit into your existing Infrastructure?

Data foundation for all Business Processes

MONEY FLOW

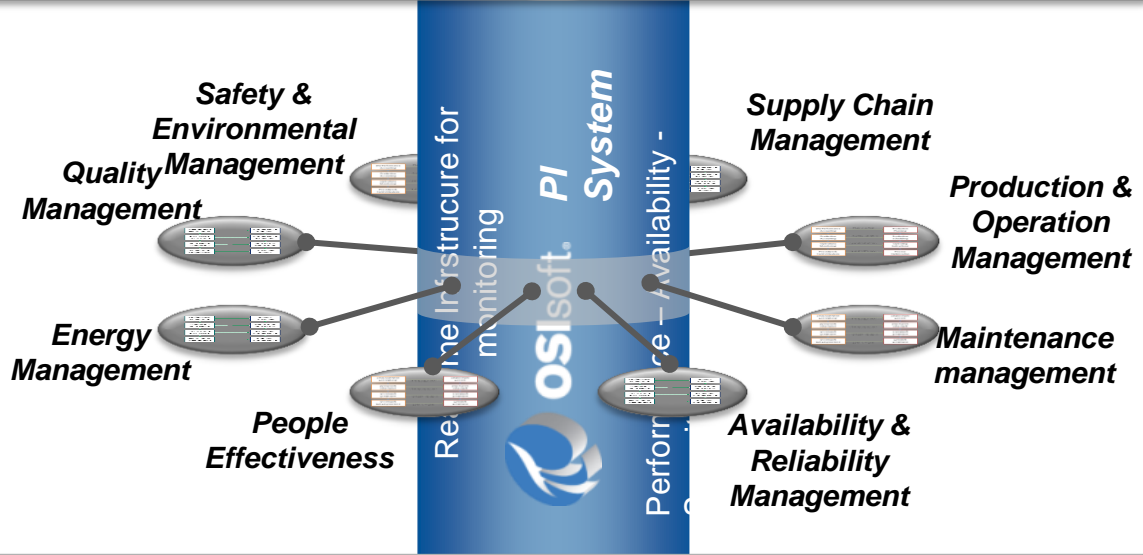
INFORMATION FLOW

MATERIAL FLOW

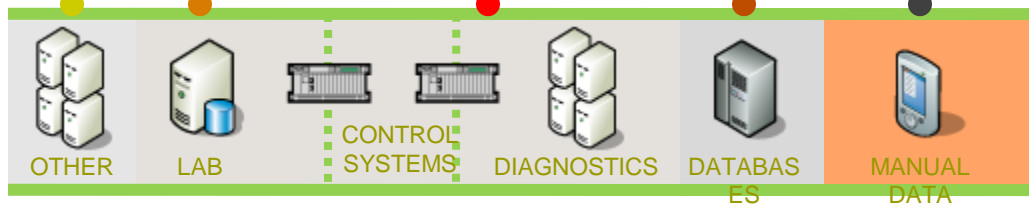


BUSINESS SYSTEM

BUSINESS GATEWAY



INTERFACES



Incremental Value by Adding Applications

MONEY FLOW

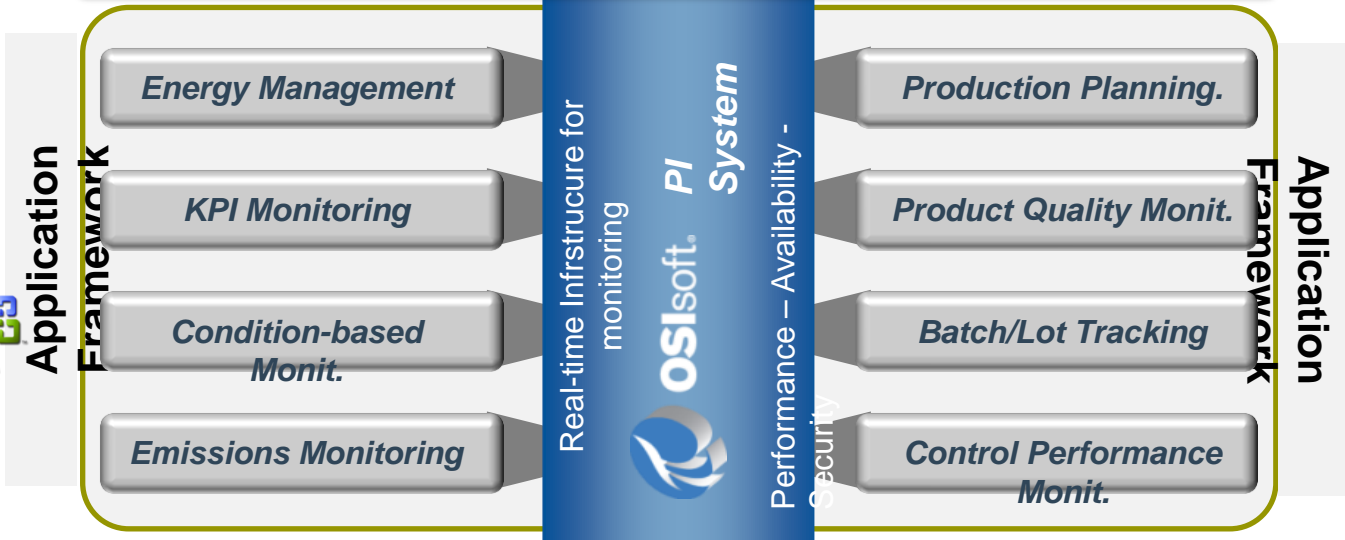
INFORMATION FLOW

MATERIAL FLOW

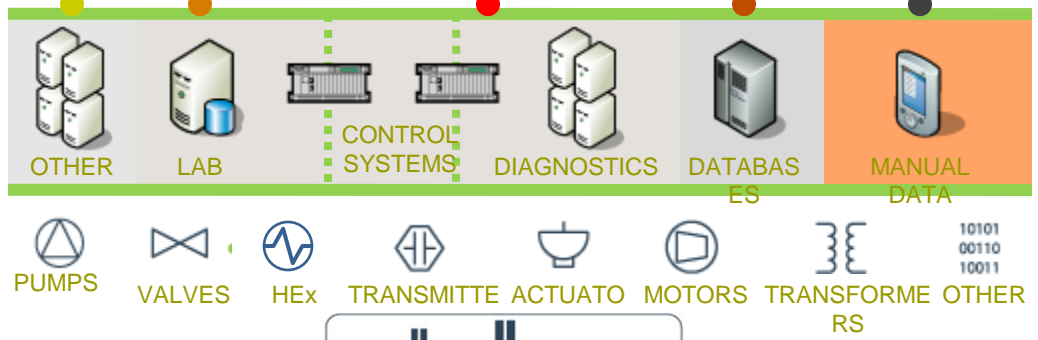


BUSINESS SYSTEM

BUSINESS GATEWAY




INTERFACES



Collaboration

Everyone works with the same Information – Rules - Tools

MONEY FLOW


INFORMATION FLOW


MATERIAL FLOW


BUSINESS SYSTEM

BUSINESS GATEWAY

Finance
 Supply Chain Opt.
 HSE, QM, IT



Real-time Infrastructure for monitoring
OSIsoft. PI System
 Performance – Availability



Executive Management
 Asset Management

Engineering
 R&D
 Quality



Operational Excellence
 Plant Maintenance

Laboratory
 Operators
 Plant IT



Maintenance Team
 Process Unit Managers

INTERFACES

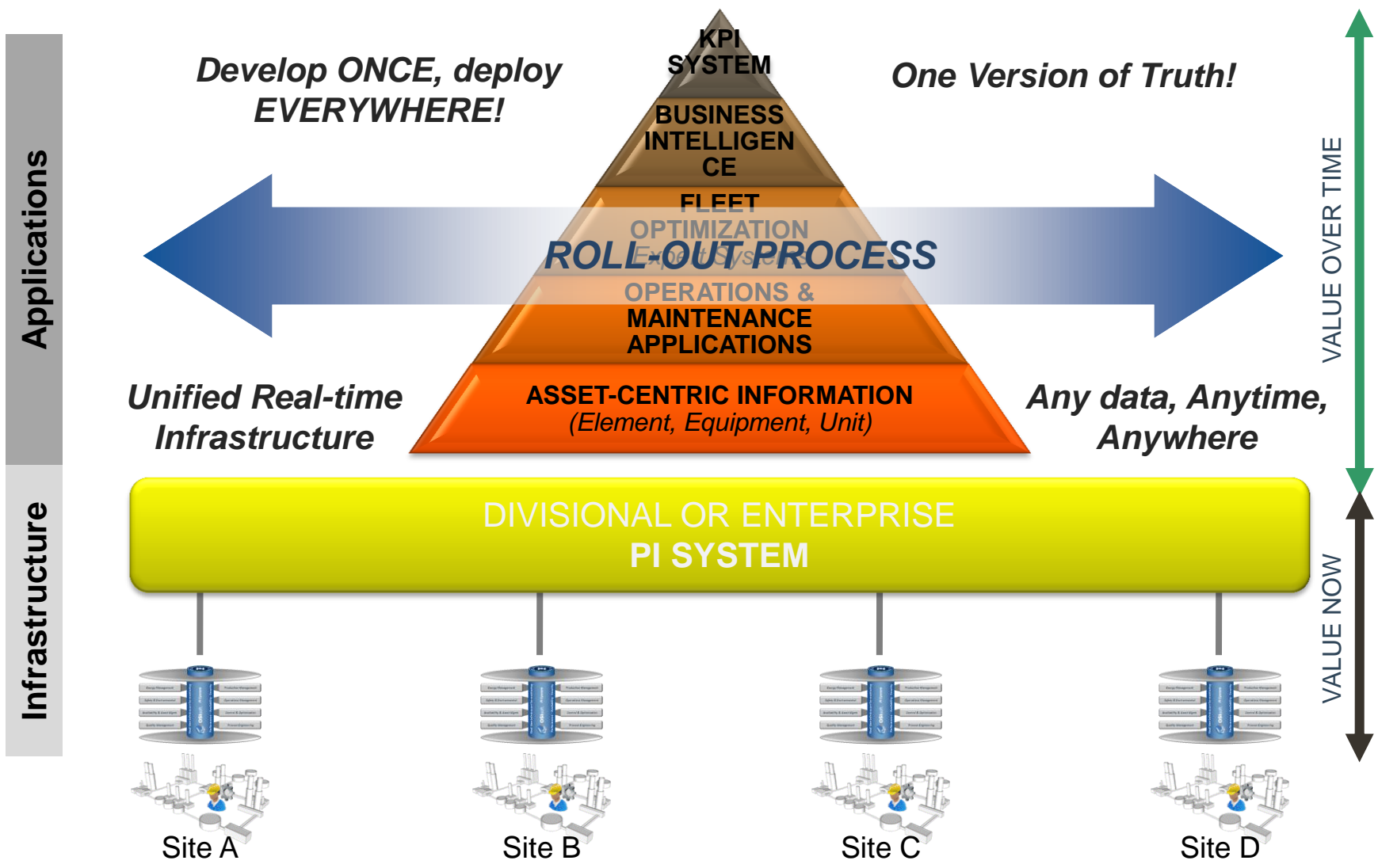
OTHER LAB CONTROL SYSTEMS DIAGNOSTICS DATABASES MANUAL DATA

PUMPS VALVES HEX TRANSMITTERS ACTUATORS MOTORS TRANSFORMERS OTHERS



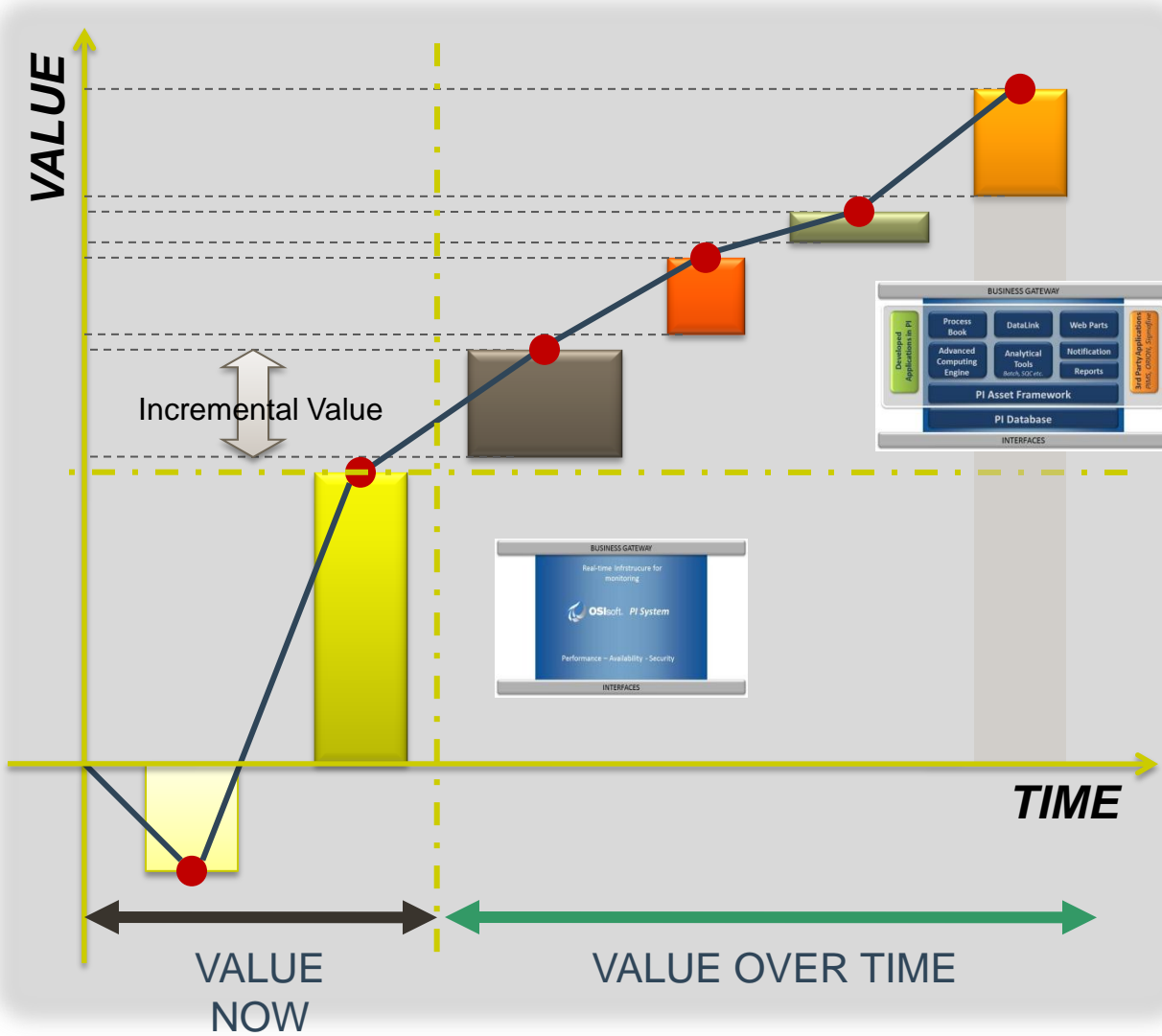
Infrastructure for the Enterprise

Implementing Strategic Initiatives on Enterprise Scale



Value Creation Mechanism of an Infrastructure

Value Now, Value Overtime



Application Benefits

- ← Operations Management
- ← Environmental Reporting
- ← Equipment Health Mgmt.
- ← Performance Management

← Infrastructure Value

← Initial Investment



THANK YOU

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