



# PI System Roadmap

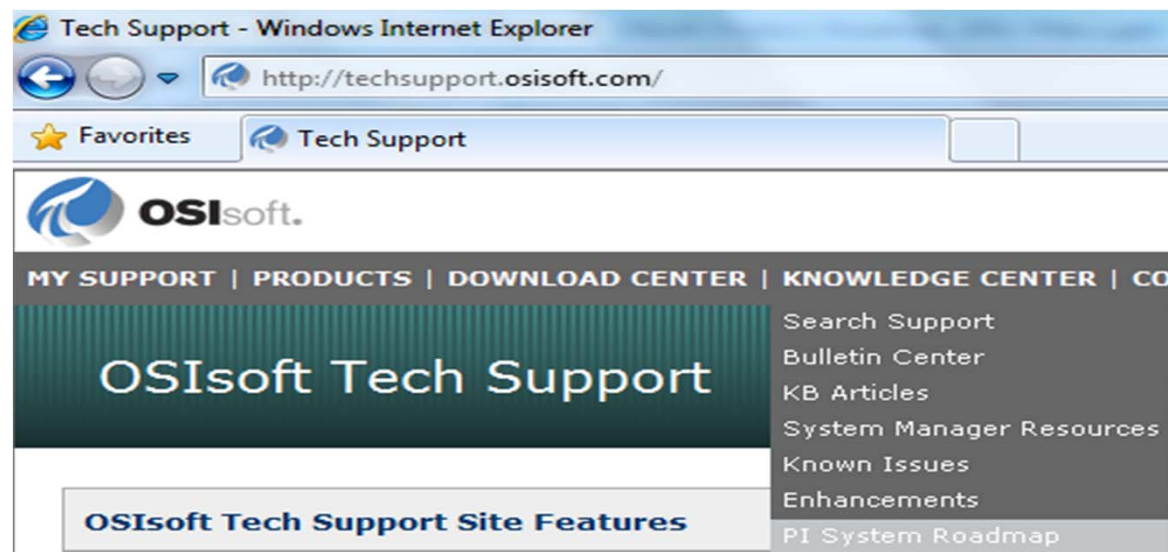
Presented by **John Baier**  
Director, Product Management

# Stay Up to Date On the Web



- See PI System Roadmap on OSIsoft Technical Support

<http://techsupport.osisoft.com/techsupport/NonTemplates/roadmap.aspx>



> Knowledge Center > PI System Roadmap

# PI System Roadmap



Featured Products	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012 - Q4 2012	Q1 2013 - Q2 2013
<b>CLIENT</b> <a href="#">View more</a>	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012 - Q4 2012	Q1 2013 - Q2 2013
PI ProcessBook		✓				🔄		
PI ActiveView			✓				🔄	
PI DataLink		✓				🔄		
PI DataLink Server							🔄	
PI Manual Logger							🔄	
PI WebParts							🔄	
PI Coresight								
<b>DATA ACCESS</b> <a href="#">View more</a>	Q1 2011	Q2 2011					Q3 2012 - Q4 2012	Q1 2013 - Q2 2013
PI JDBC							🔄	
PI OLEDB							🔄	
PI OLEDB Enterprise		◆					🔄	
PI OPC DA/HDA Server								
PI SDK				🔄				
PI Web Services					◆		🔄	
<b>SERVER</b> <a href="#">View more</a>	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012 - Q4 2012	Q1 2013 - Q2 2013
PI ACE	🔄		✓					
PI AF				◆		🔄		
PI for StreamInsight		🔄						
PI Server			✓	◆		🔄		
PI Notifications		🔄				✓		
<b>INTERFACES</b> <a href="#">View more</a>   <a href="#">Search</a>	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012 - Q4 2012	Q1 2013 - Q2 2013

## PI DataLink 2012 Version 5.0

PI DataLink 2012 brings support for the PI Asset Framework allowing you to work with both assets and tags. A new PI System Search enables you to find the information you are looking for quickly and efficiently. PI DataLink 2012 is the most compatible version of DataLink to date and supports 32-bit and 64-bit versions of Microsoft Excel 2007 and 2010.

**GOT  
BIG  
DATA?**

**The  
Economist**

FEBRUARY 27TH - MARCH 5TH 2010

[Economist.com](http://Economist.com)

Obama the warrior

Misgoverning Argentina

The economic shift from West to East

Genetically modified crops blossom

The right to eat cats and dogs

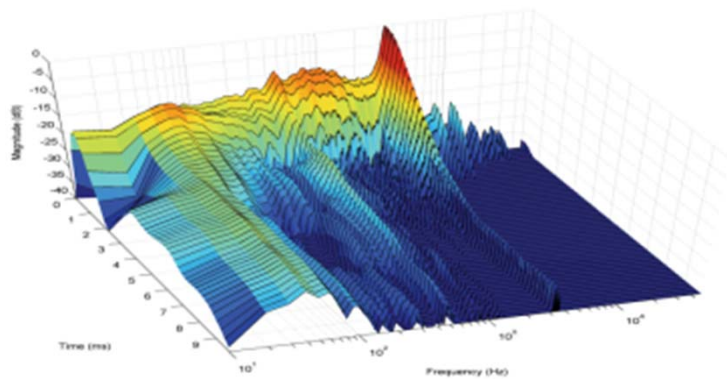
# The data deluge

AND HOW TO HANDLE IT: A 14-PAGE SPECIAL REPORT



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## Syncro Phasors



4.8K data streams, 120Hz  
3 years online  
Unique Events: 55 Trillion  
Estimated Data: 436TB



## Data Center



100K cells, 2M breakers  
10 years online  
Unique Events: 105 Trillion  
Estimated Data: 841TB





## Automated Metering

**1,400  
TB**

20M meters, 5-min reads

7 years online

Unique Events: 177 Trillion

Estimated Data: 1,413TB



## Fleet Monitoring

**50,500  
TB**

1K assets, 1M points

10 years online

Unique Events: 6,307 Tr

Estimated Data: 50,458TB



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# PI System Themes



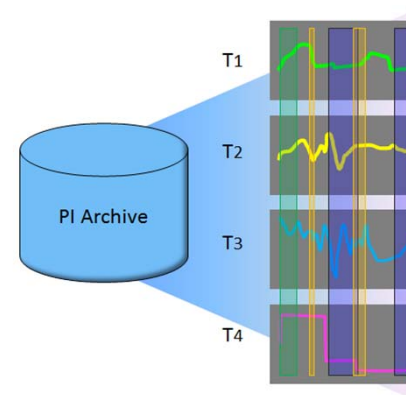
## Scaling

More data  
More updates  
More robust



## Asset-Centric PI

Manage data via  
Asset context –  
Reuse many times



## Event Frames

Identify and use  
important events  
and related data

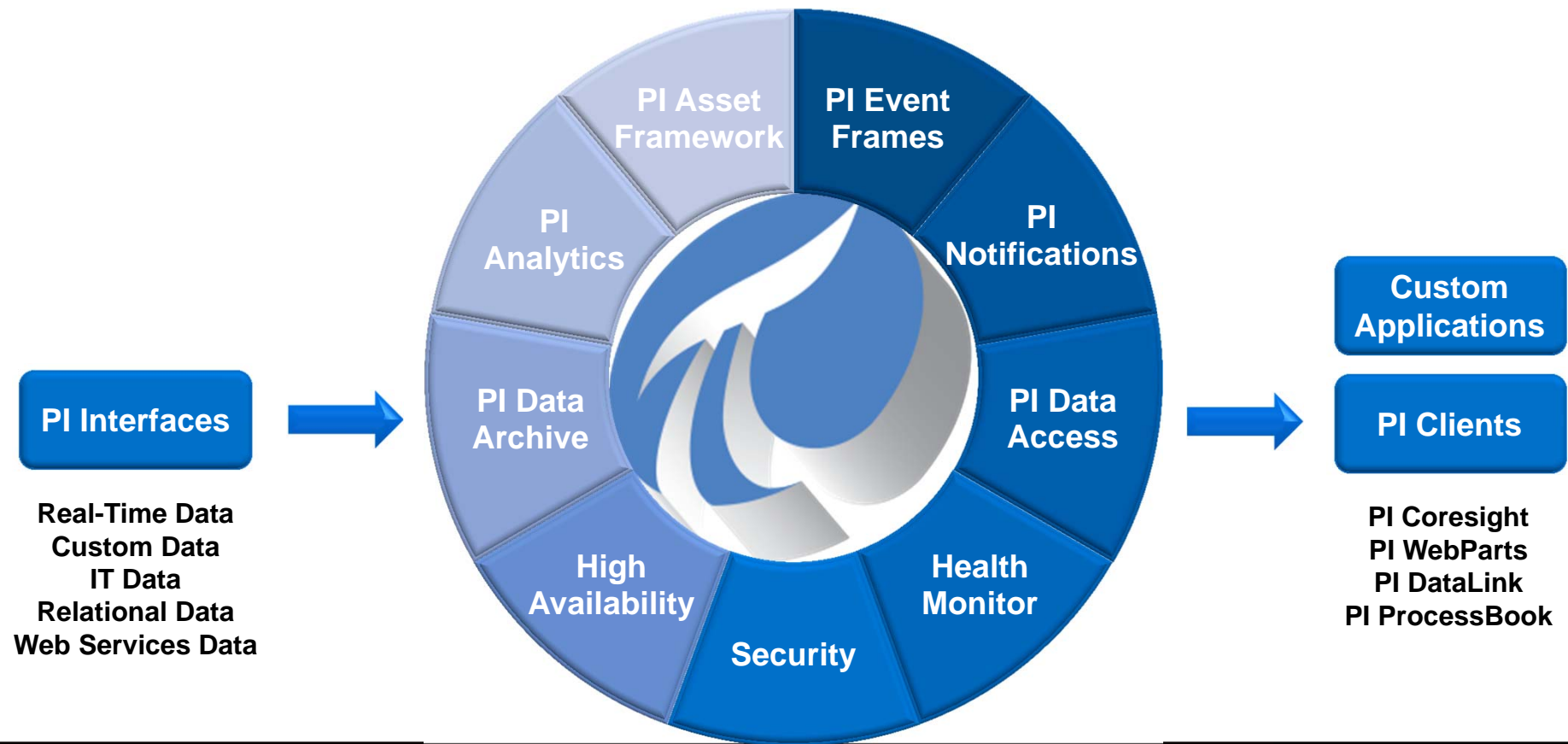


## Visualization

Many roles  
Different formats  
Any device



- PI Server 2010 R3



# PI SERVER 2012



**BIGGER**

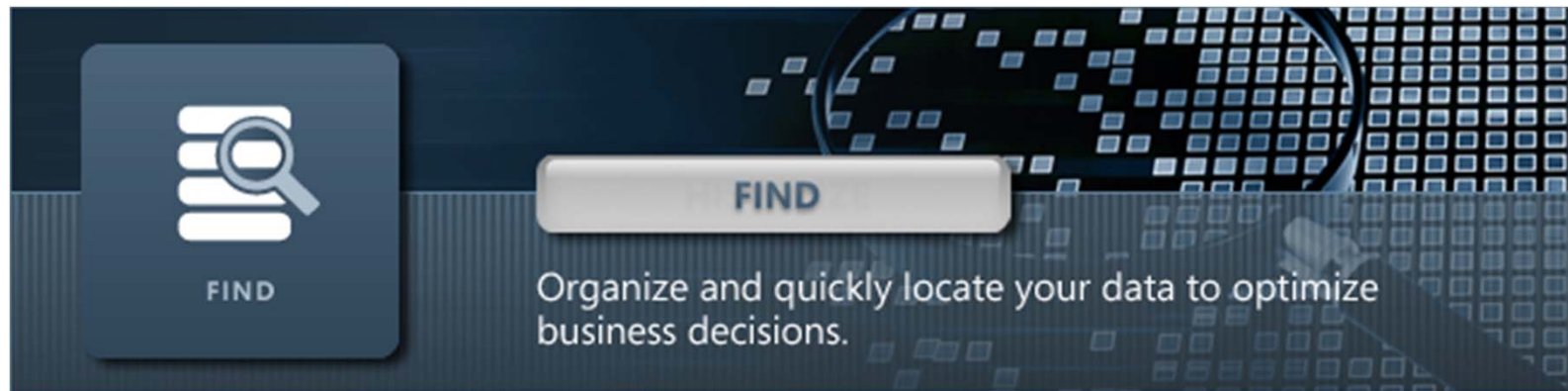
**BETTER**

**FASTER**



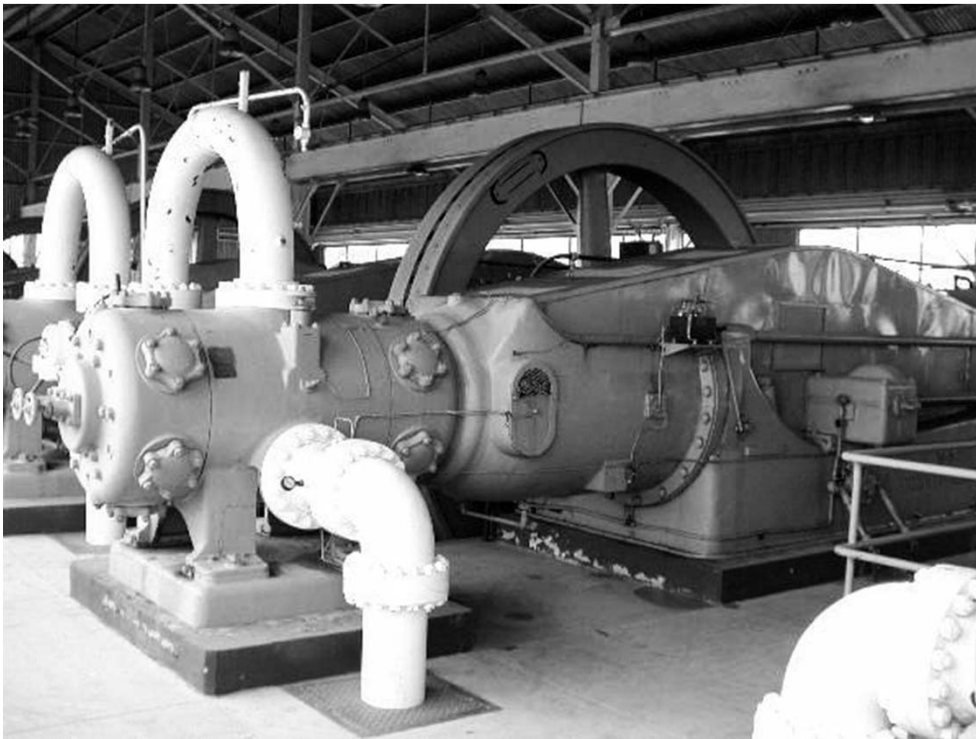
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- Find all data by name, relationship, or usage
- Find important configurations such as analytics and displays
- Find work that you or colleagues have already completed
- Organize and Categorize data so it's easier to find next time
- Reference Data by **Assets** or **Events**

# PI AF Asset Centric PI Example



## Natural Gas Compressor

- RPM
- Fuel consumption rate
- Exhaust temperature
- Oxygen sensor

PI Tags

- Flow in
- Flow out
- Pressure differential

Calculations

- Last service date
- Service type
- Mfr documentation

External Database

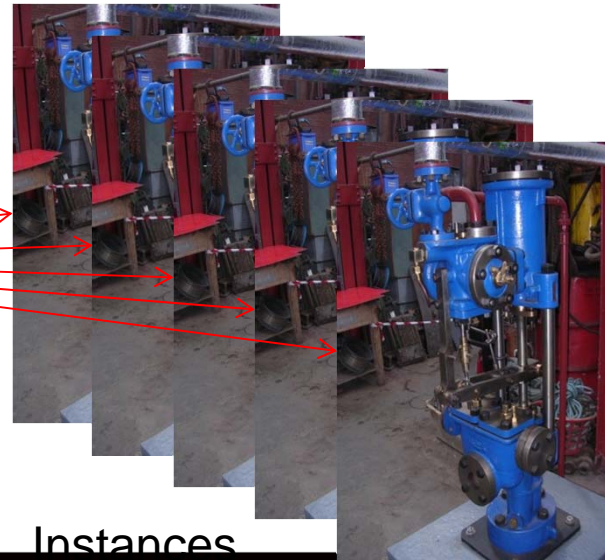


# PI AF Templates

- Element Templates can be created and reused for consistency – changes are propagated to each instance
- Elements can also be created without an Element Template for flexibility



Pump Template

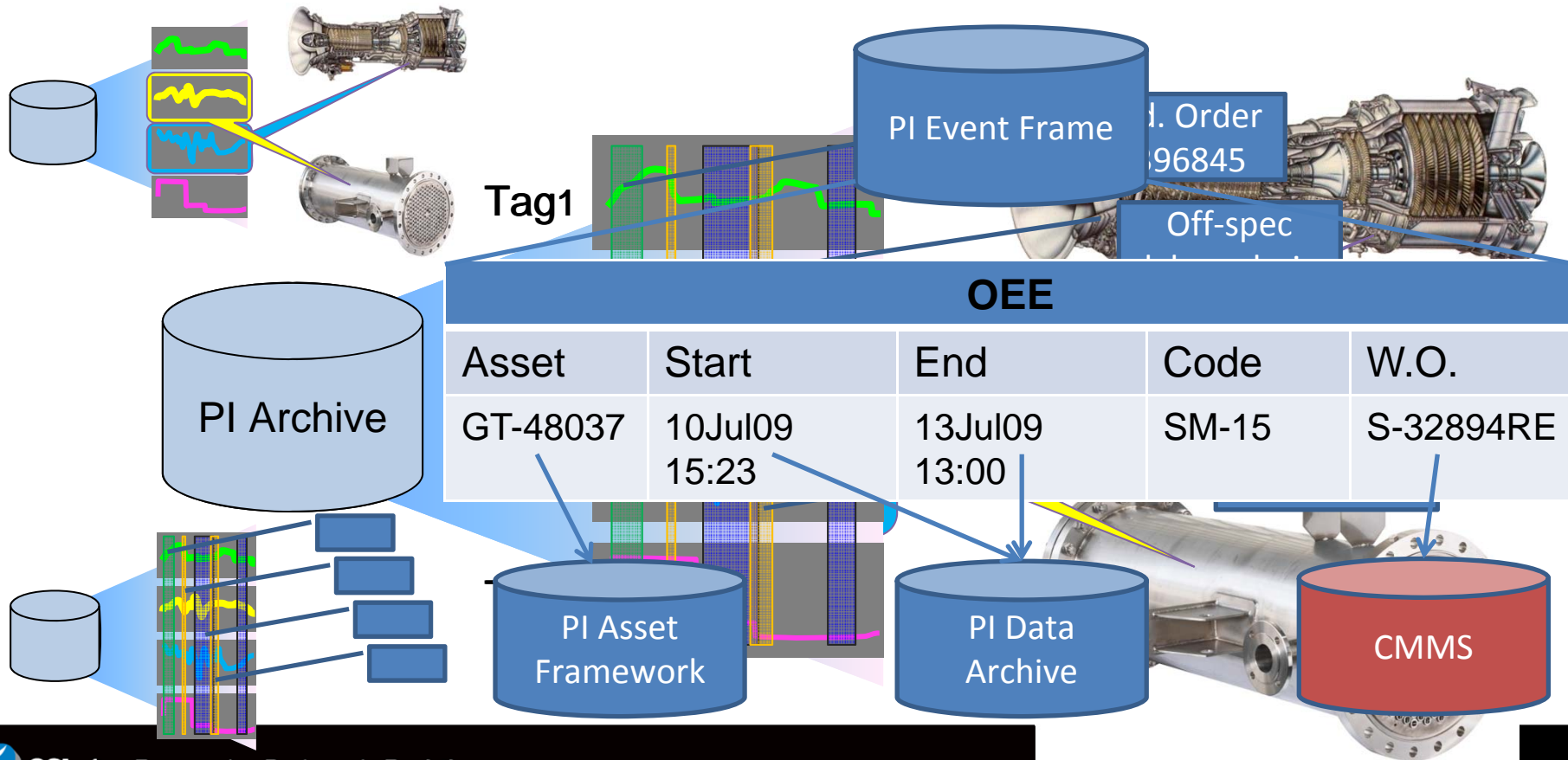


Instances





# Asset Performance Monitoring and Maintenance Systems

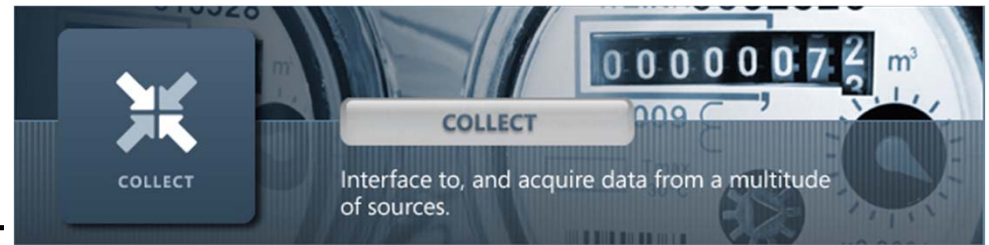


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# Interface Themes

- High Speed
- Meta Data, Auto Configuration
- High Availability
- Buffering
- Proactively built—let us know if you have a data source in need

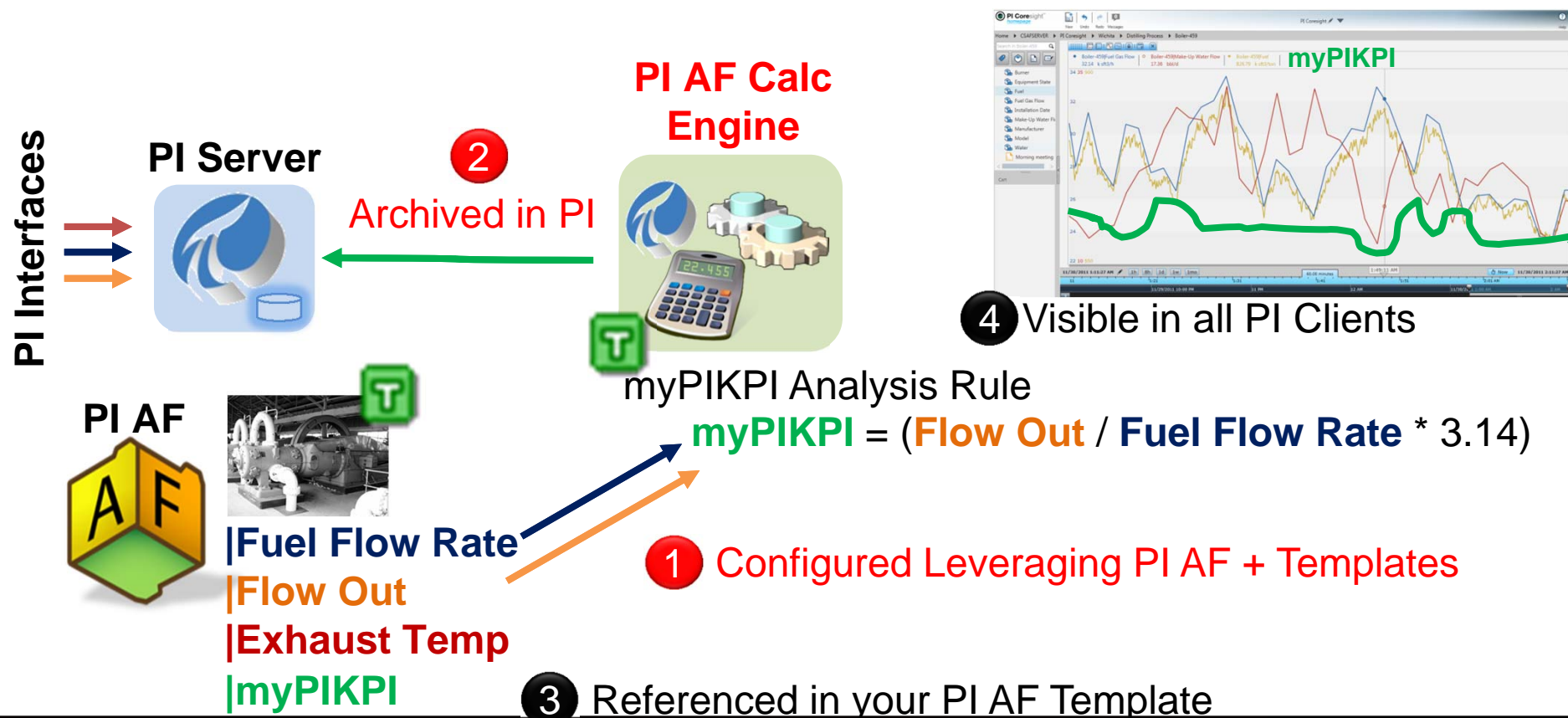


# PI AF Calculation Engine - Goals

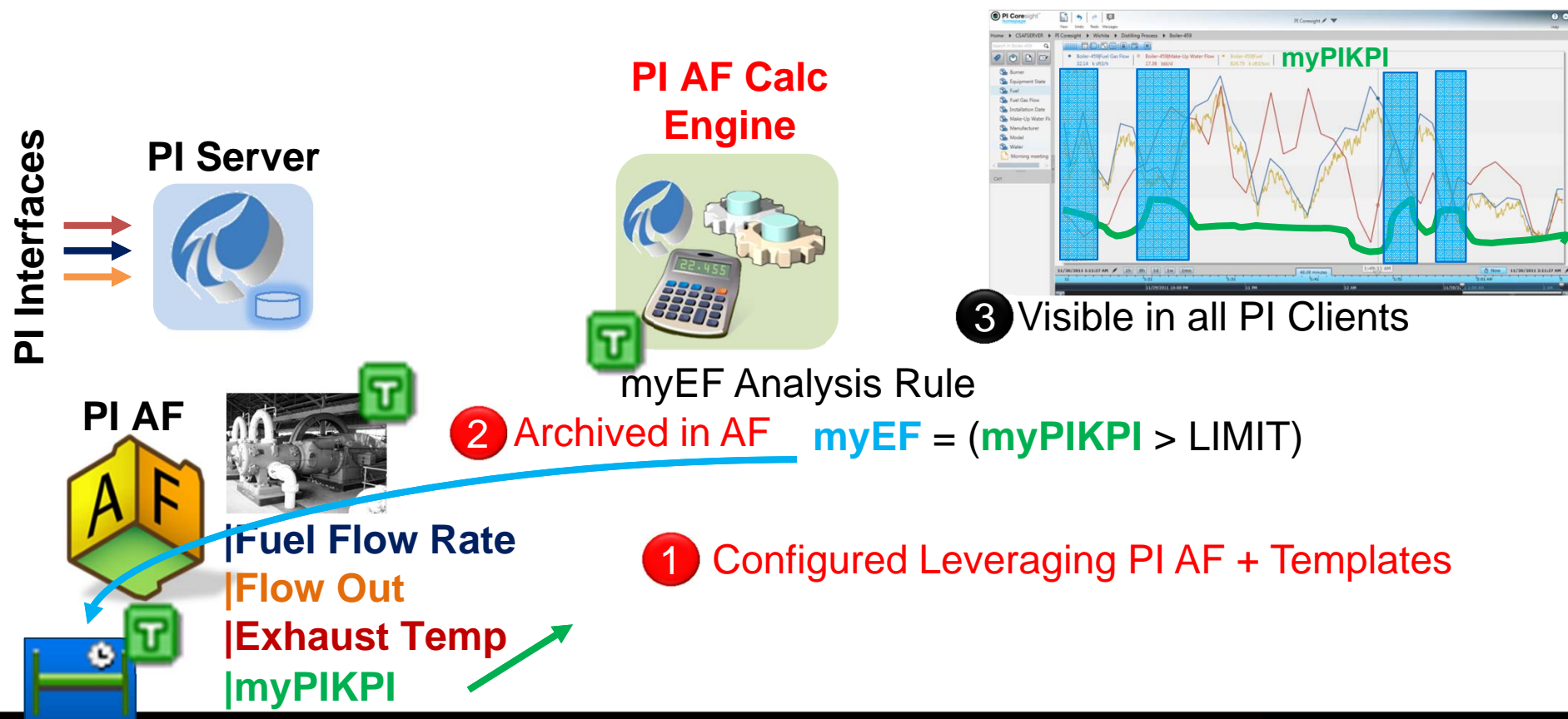
- Majority of your analytics through configuration
- Rich Configuration in PI AF
  - Merge of PE and Formula DR syntax
  - Configuring rollup calculations
- OSIsoft takes care of
  - Scheduling
  - Dependencies
  - Writing results to the PI System
- Very Large Scale
  - Improvements in data access
  - OSIsoft managed scale-out
  - Driven from Templates in PI AF – easy replication



# PI AF Calculation Engine: Write to PI Tags



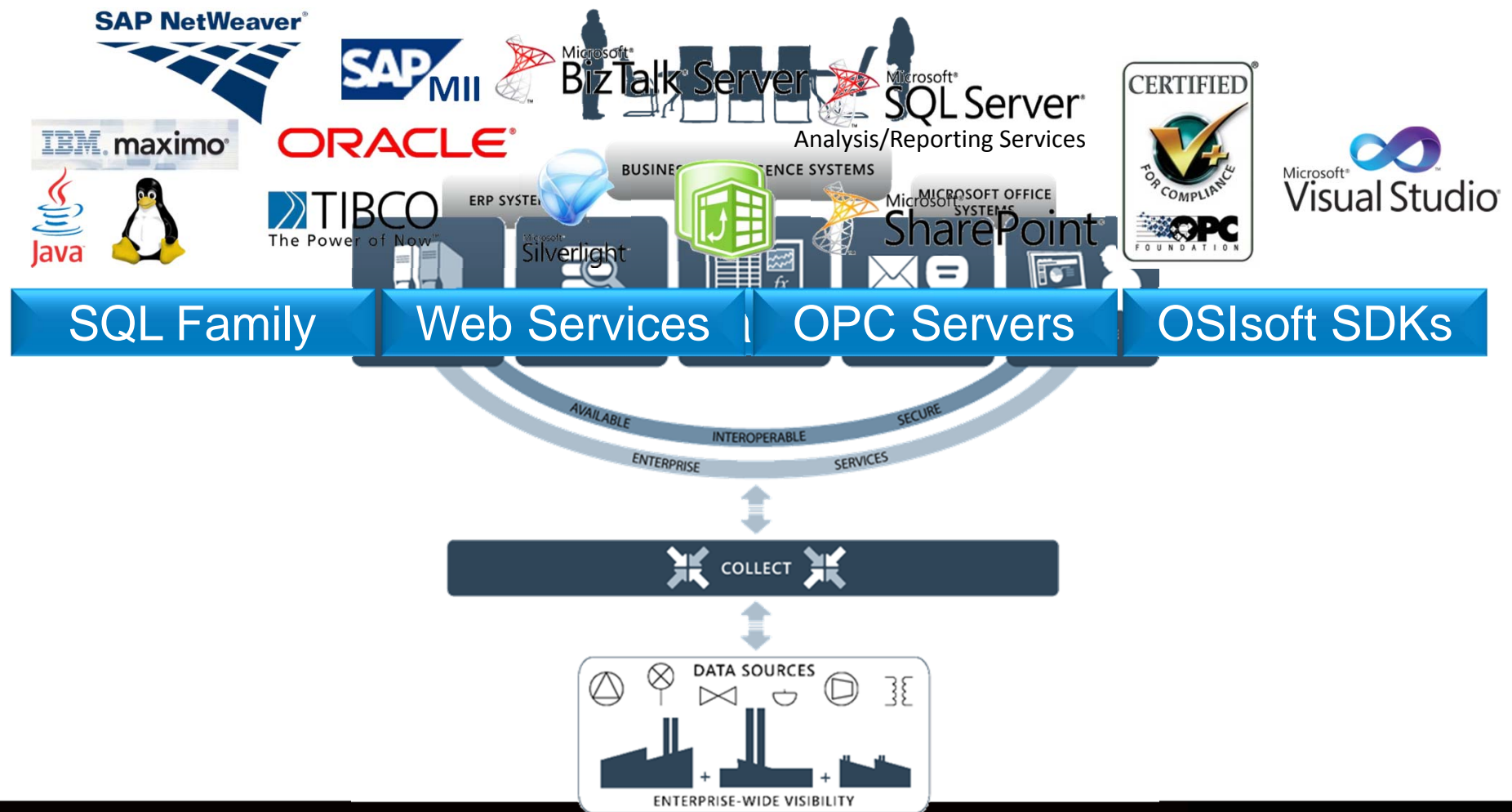
# PI AF Calculation Engine: Create Event Frames





# Find - PI System Search

- Optimized Search Engine for the whole PI System
  - And perhaps related systems
- Indexed for high performance
- Weighted / Ranked Results
  - Helps you find things more easily
- Can crawl many PI Servers and machines
- Includes client artifacts
  - PI ProcessBook Displays, PI Coresight Displays
- Shared by all PI System products and subsystems
- Shared User Experience



## PI Data Access Futures → *PI Integration Services*

- Event Frame support to PI OLEDB Enterprise, PI JDBC, and PI Web Services
- Single PI System SDK
- REST based Web Services (complement to existing SOAP)
- More focus on *integration* with many systems
  - Business Analytics (SQL Server and other data warehouses)
  - ERP (SAP HANA)
  - Maintenance (Maximo)
- Higher speed for all access methods and bulk queries – ability to query many data streams (millions) for values in a particular timeframe

# What is PI Coresight?

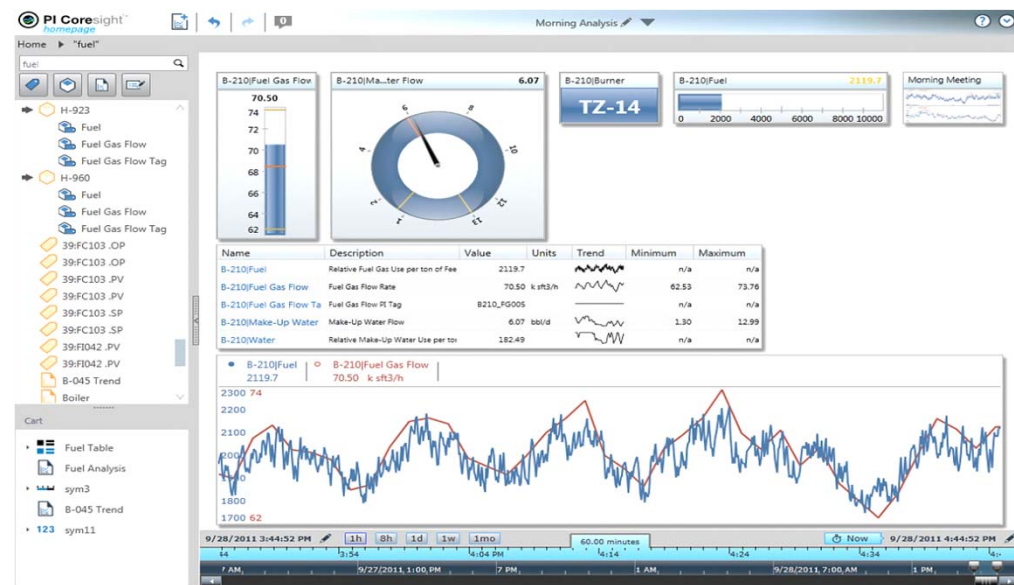


A web-based product for:

- Ad hoc analysis
- Quick investigation
- Collaboration
- Rapid deployment

# Key Features of PI Coresight

- **Search the PI System (including PI AF) and displays together**
  - No need to understand tag names
- **Very fast display creation**
  - Save time
- **Intuitive user interface**
  - Can be used by a wide range of users
- **Easily share displays**
  - Leverage insights across the organization
- **Easy to deploy and maintain**
  - IT-friendly - always have the current version
- **Anywhere, Anytime**
  - All you need is a web browser





# Where Does PI Coresight Fit?

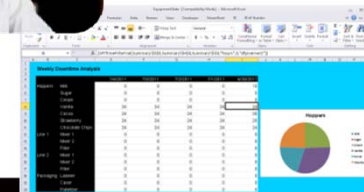
**PI Coresight:**  
*Ad Hoc Analysis & Collaboration*



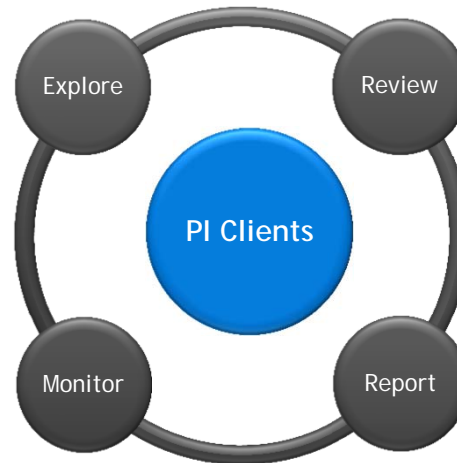
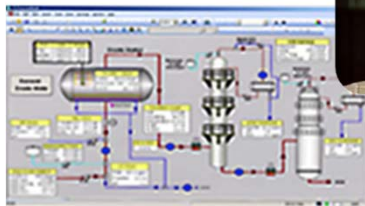
**PI WebParts:** Composite Apps, Shared broadly



**PI DataLink:**  
Reporting and table based analytics in Microsoft Excel



**PI ProcessBook:**  
Display authoring and Process monitoring



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# PI Clients – the 2012 Wave

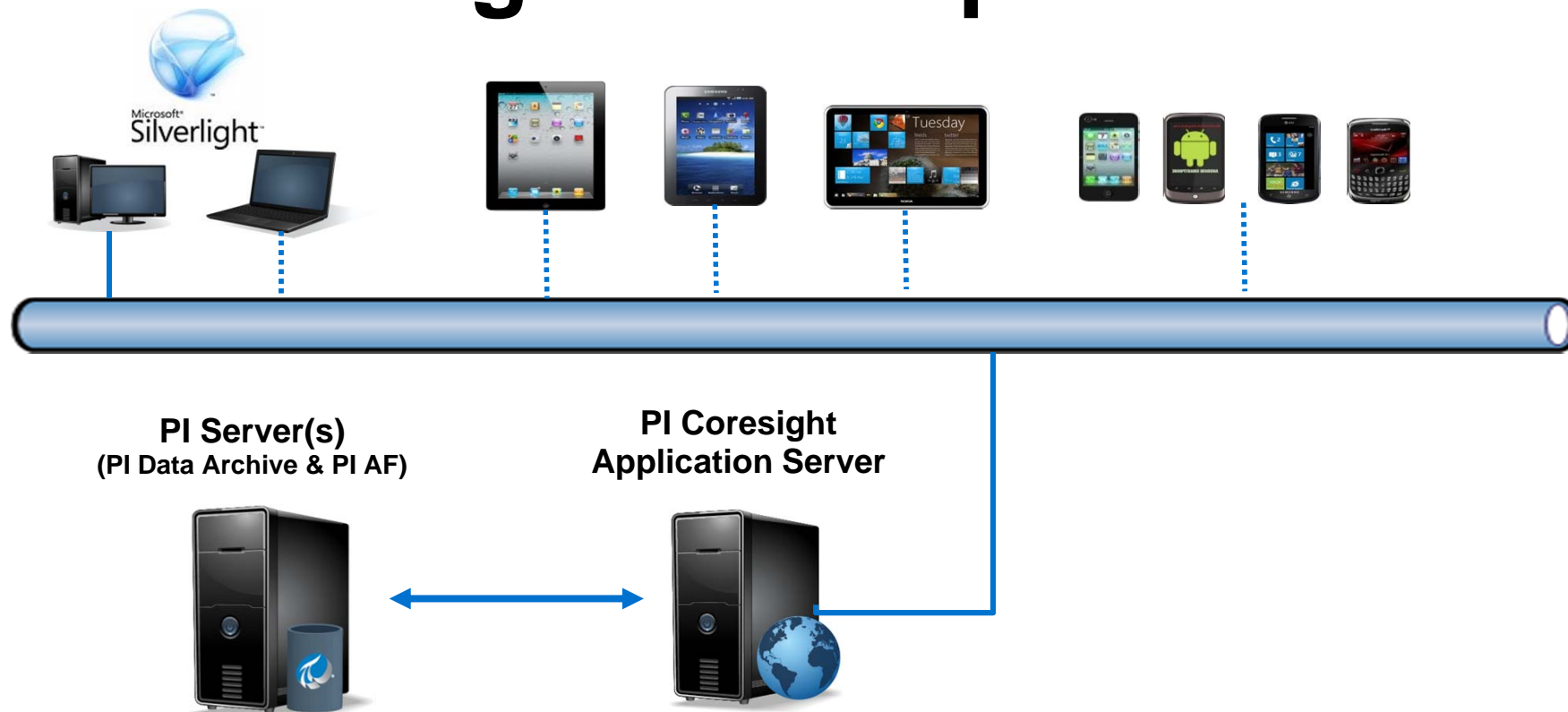
- PI ProcessBook 2012
- PI DataLink 2012
  - PI AF Support – use any Element->Attribute in appropriate functions
  - PI AF and Tag Search
  - 64-Bit Office support
- PI Coresight 2012 – likely multiple releases
- PI WebParts 2012
  - Adobe SVG Viewer replaced with HTML5 / Javascript
    - Updated Graphics, Faster, Supported by any HTML5 browser
  - PI System Search and Browse
  - Allow separate SharePoint visualization server

# Visualization / User Interaction – Future

- PI Coresight – regular releases (~6 months)
  - Improved PI AF Integration – Template Displays
  - Event Frame integration in search, timebar
  - Built-In Trending Analytics
  - Additional graphics – XY Plot
- Continue to leverage Microsoft Office and SharePoint
- ***Mobility – for PI Coresight and beyond***
  - Notifications
  - Trend Visualization
  - Tables with Analytics



# PI Coresight – Multiple Clients



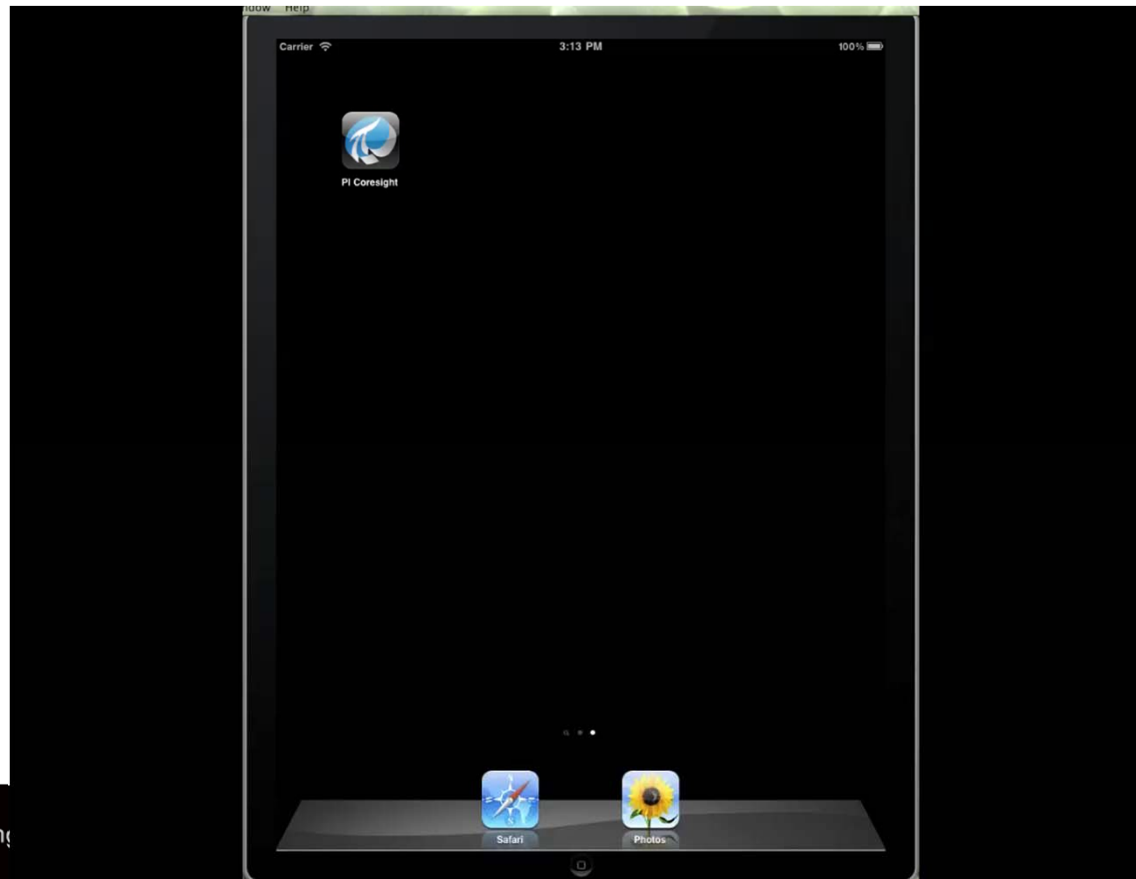
# Life Cycle Management

Data Every Hour of Every Day

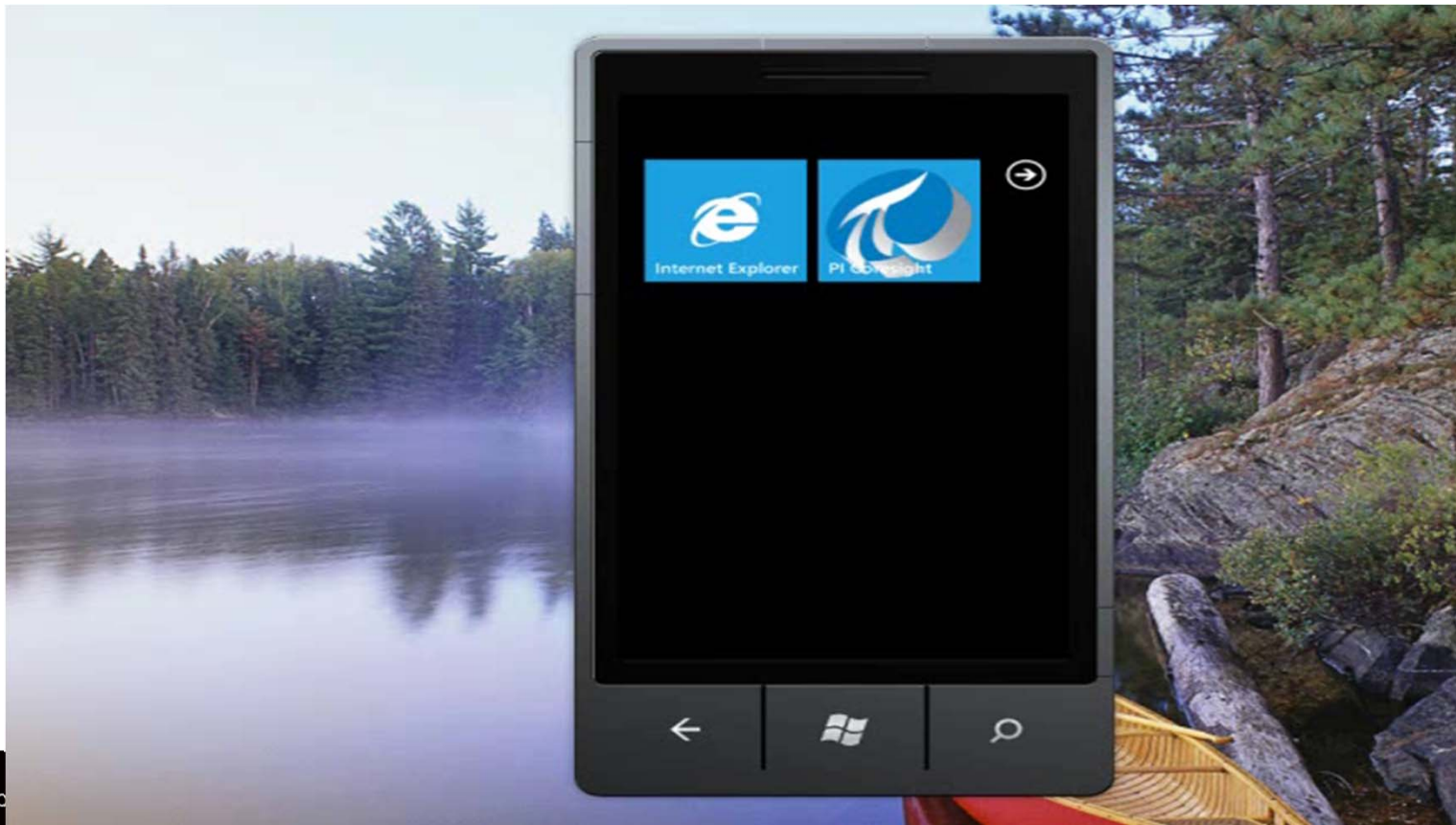
- Focus on business opportunities and value
- Consider time to market and phased deployment
- Expect PI infrastructure to be a trustable resource
- Understand that PI is ALWAYS a partnership to produce the needed products and services



# iPad Demo



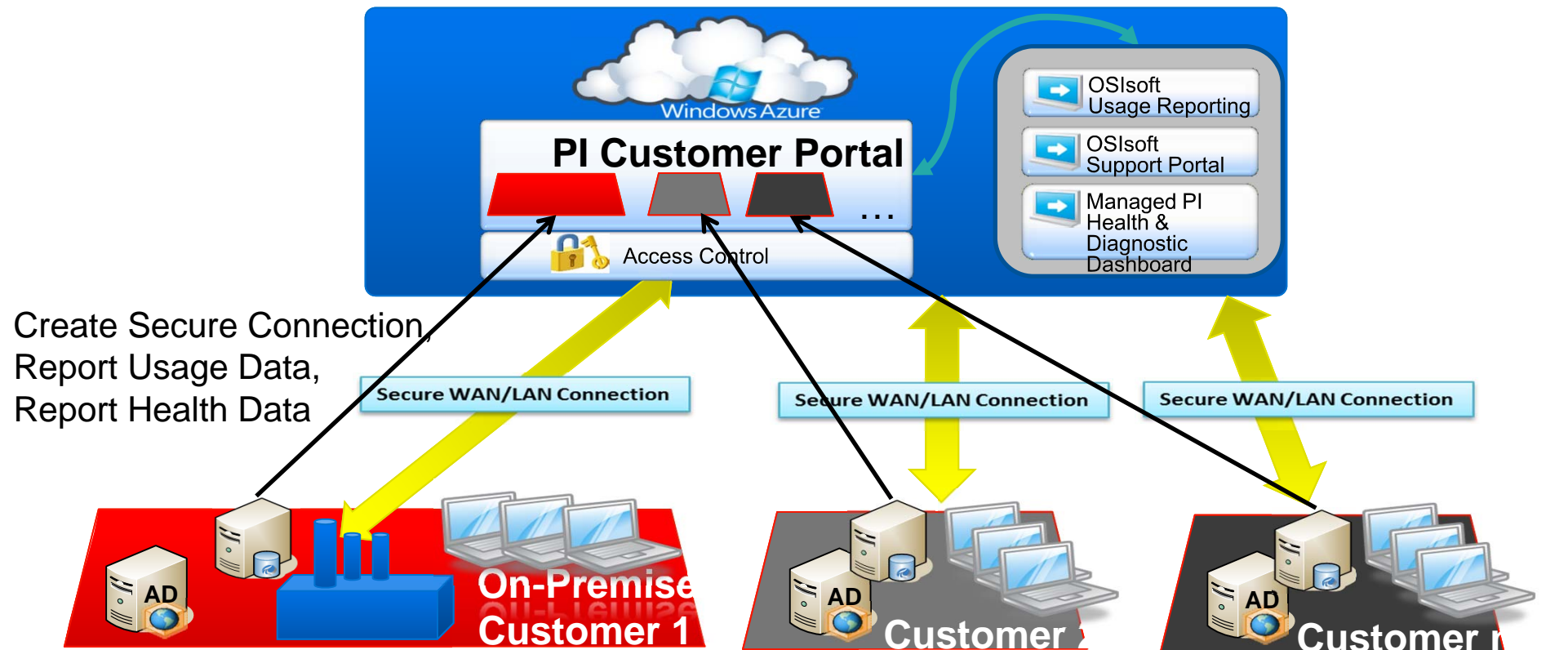
# PI Coresight on WP7 Demo



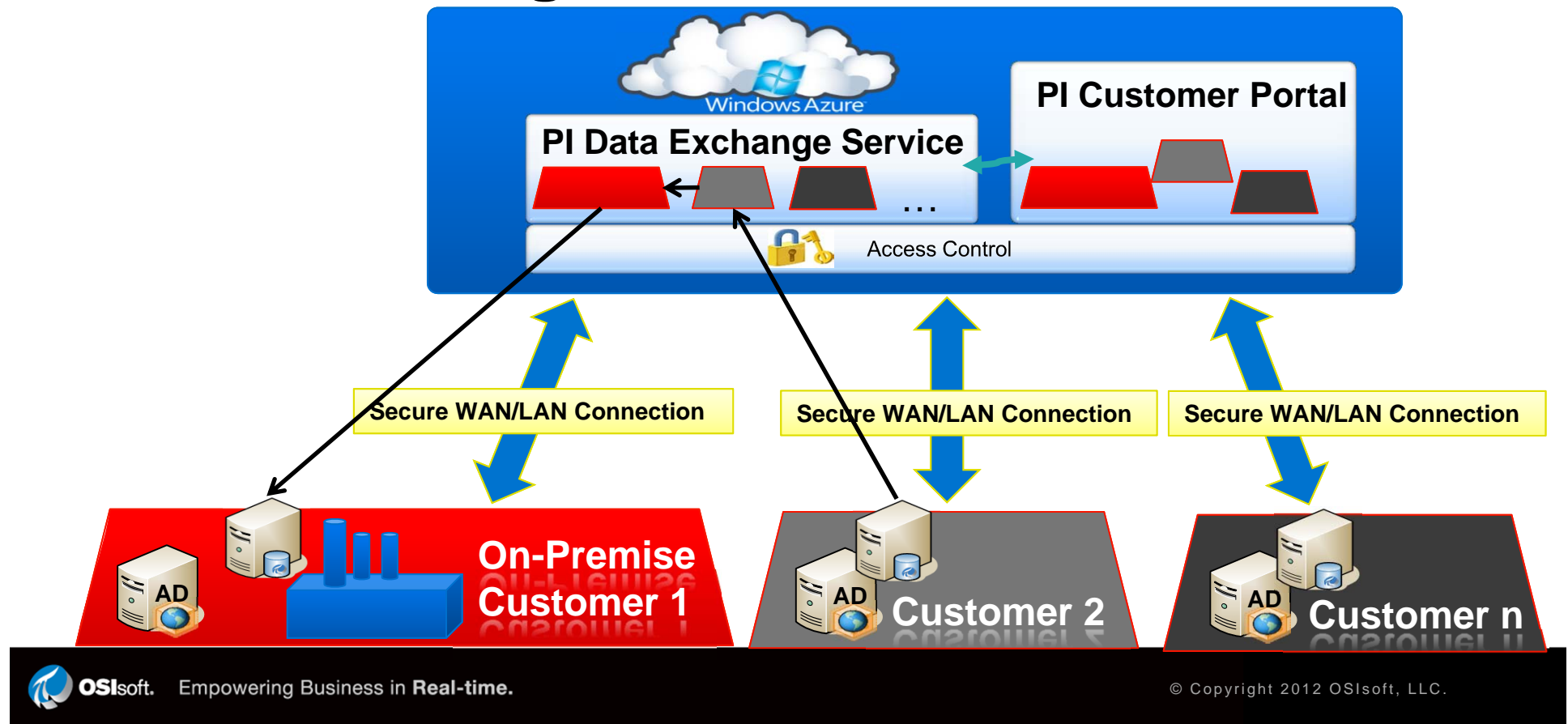
# Evolution of Operating Systems



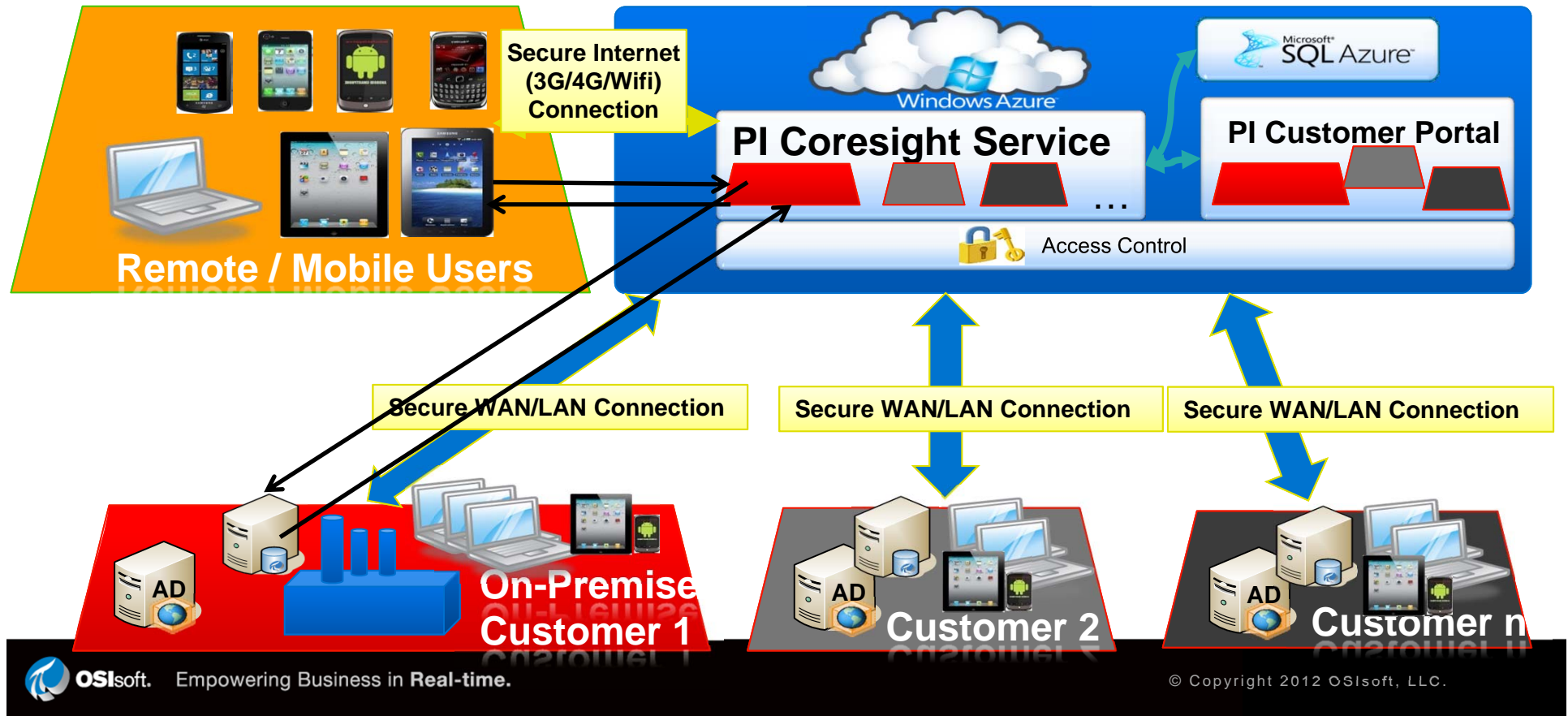
# Managed PI in the Cloud



# PI Data Exchange Service



# PI Coresight Service with Mobility







# Thank you

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