

A decorative graphic on the left side of the slide, composed of a grid of blue triangles of varying sizes, some pointing up and some pointing down, creating a pixelated or mosaic-like effect.

# **Unlock your Data with PI Data Access**

Presented by

Jay Lakumb, OSIsoft



## Unlocking Data?

- Getting the **right data**, at the **right place**, at the **right time**
- By connecting **people** and your **systems** together
  - Connectivity, visibility, interoperability





## Business Challenges

### Disparate systems

- Acquired independently, over time
- Different departments/units

### Domain, industry, or user-specific needs

- PI System is an infrastructure

### Many different targets

- Diverse types of workers
  - Different platforms, media
- 

# Unlocking PI System Data?

- LoB Systems/Databases
- Orchestration/Workflows
- Web/Non-Windows Platforms
- Analysis/BI/Reporting
- Custom Applications



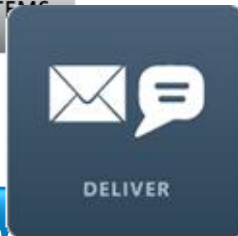
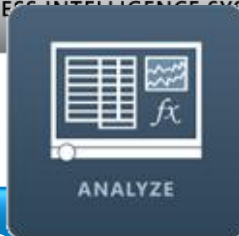
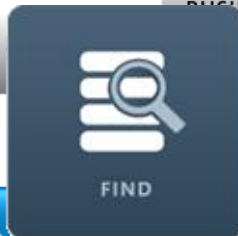
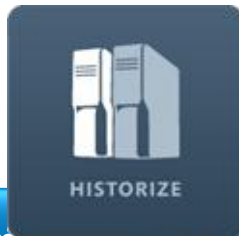
Custom Downtime Analysis Engine

Automated Ordering to Suppliers

# The Products

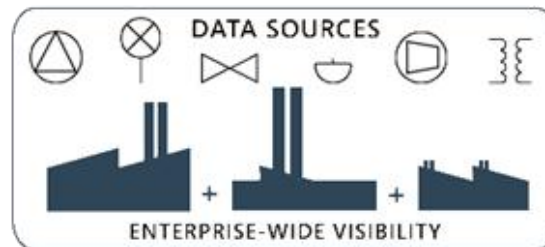


BUSINESS INTELLIGENCE SYSTEMS




SQL Family | Web Services | OPC Servers | Microsoft SDKs

AVAILABLE  
ENTERPRISE  
INTEROPERABLE  
SECURE  
SERVICES





## The last year in Summary

- **Brand new products:**
    - PI JDBC Driver
    - PI OLEDB Enterprise
    - PI Web Services
  - **Going the 'asset' way**
  - **More support for non-Windows and distributed environments**
- 

# The SQL Family

- Set of drivers that expose PI System data in a relational **database view** (OLE DB, JDBC, ODBC)
- Database systems integration, analysis, BI, reporting, Linux



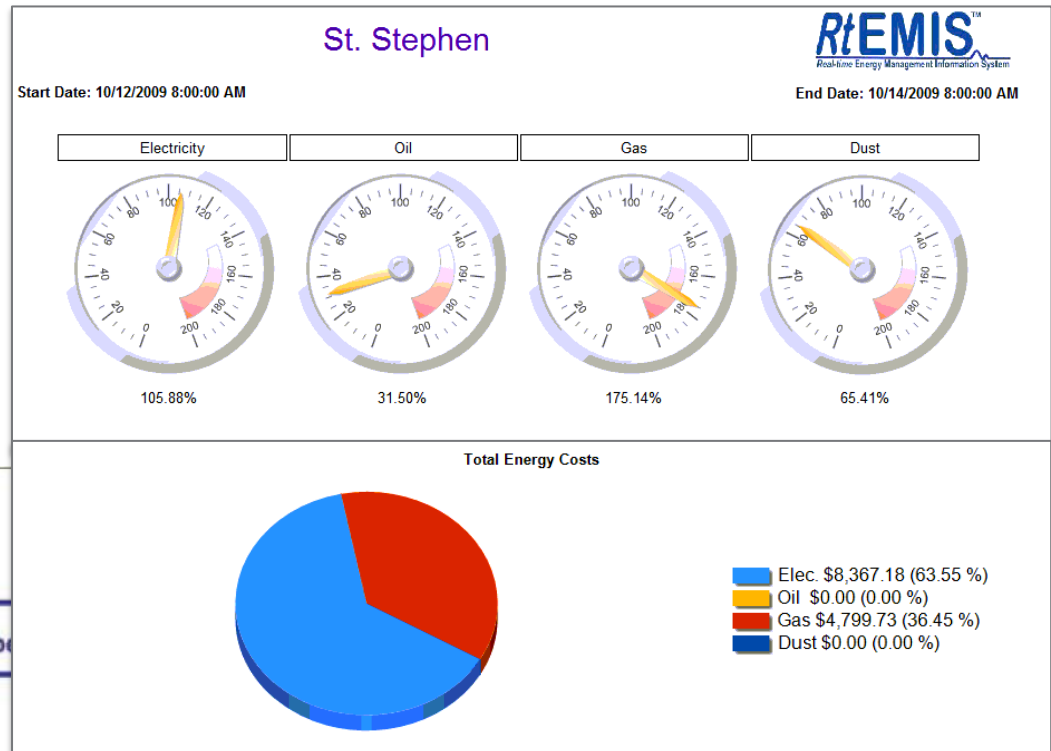
ORACLE®



Custom SQL  
Applications



# Energy Management



## RtEMIS Reports

Access RtEMIS Reports

- St. Stephen
  - Fibrex
    - Fiber1
      - Boiler
      - Dryer
      - Dry Resin
      - Press
      - Refiner
      - RMS
      - Unaccounted: INACTIVE
    - Fiber2
      - Refiner
      - Boiler
      - Dryer**
      - Dry Resin
      - Press
      - RMS
      - Unaccounted: INACTIVE
      - RA Filter
  - Particleboard

### St. Stephen - Fibrex - Fibre

Time Range Report:

KPI Report:

Gas Report:

Oil Report:

Dust Report:

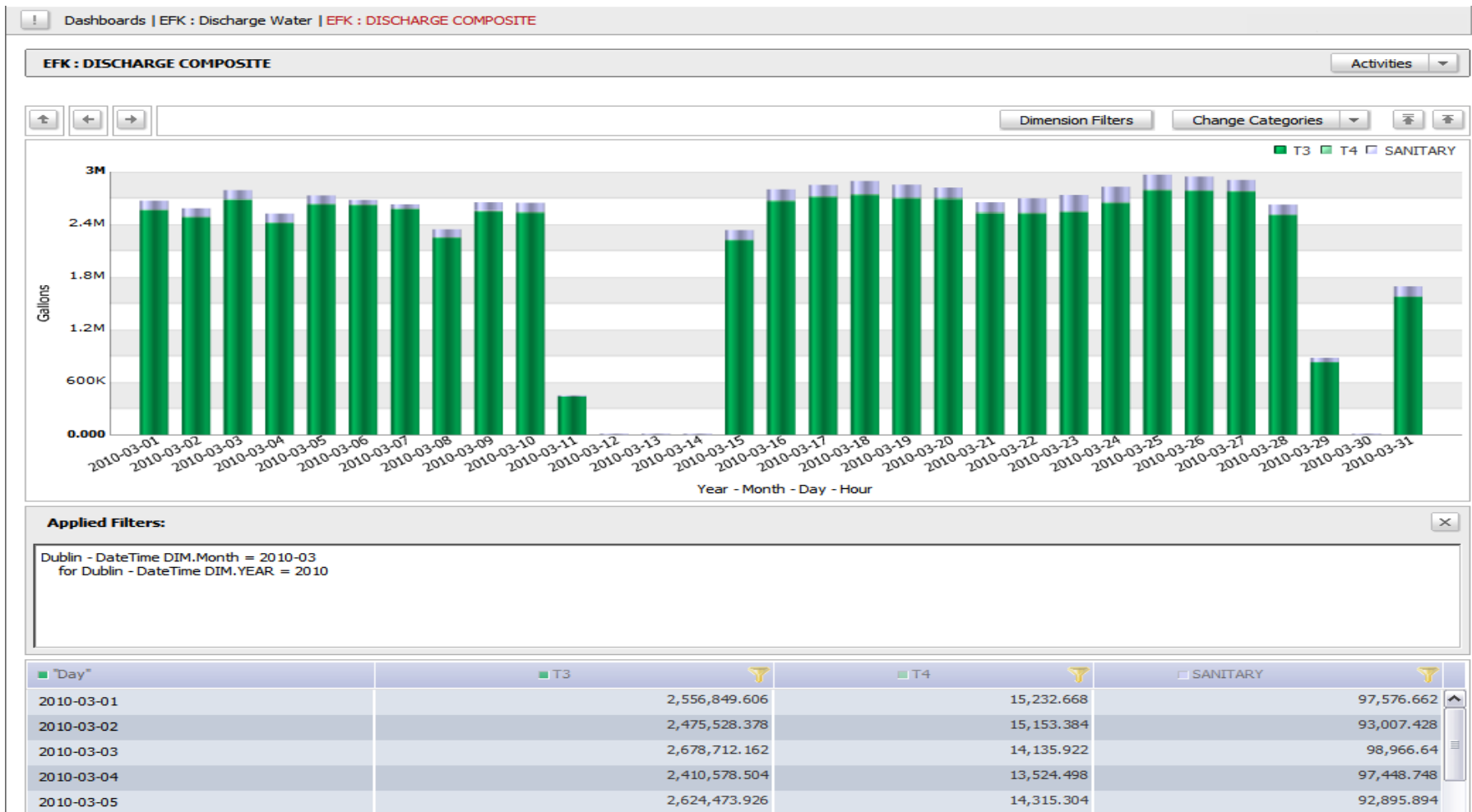
Cusum Report:

- Gas
- Oil
- Dust
- CuSum

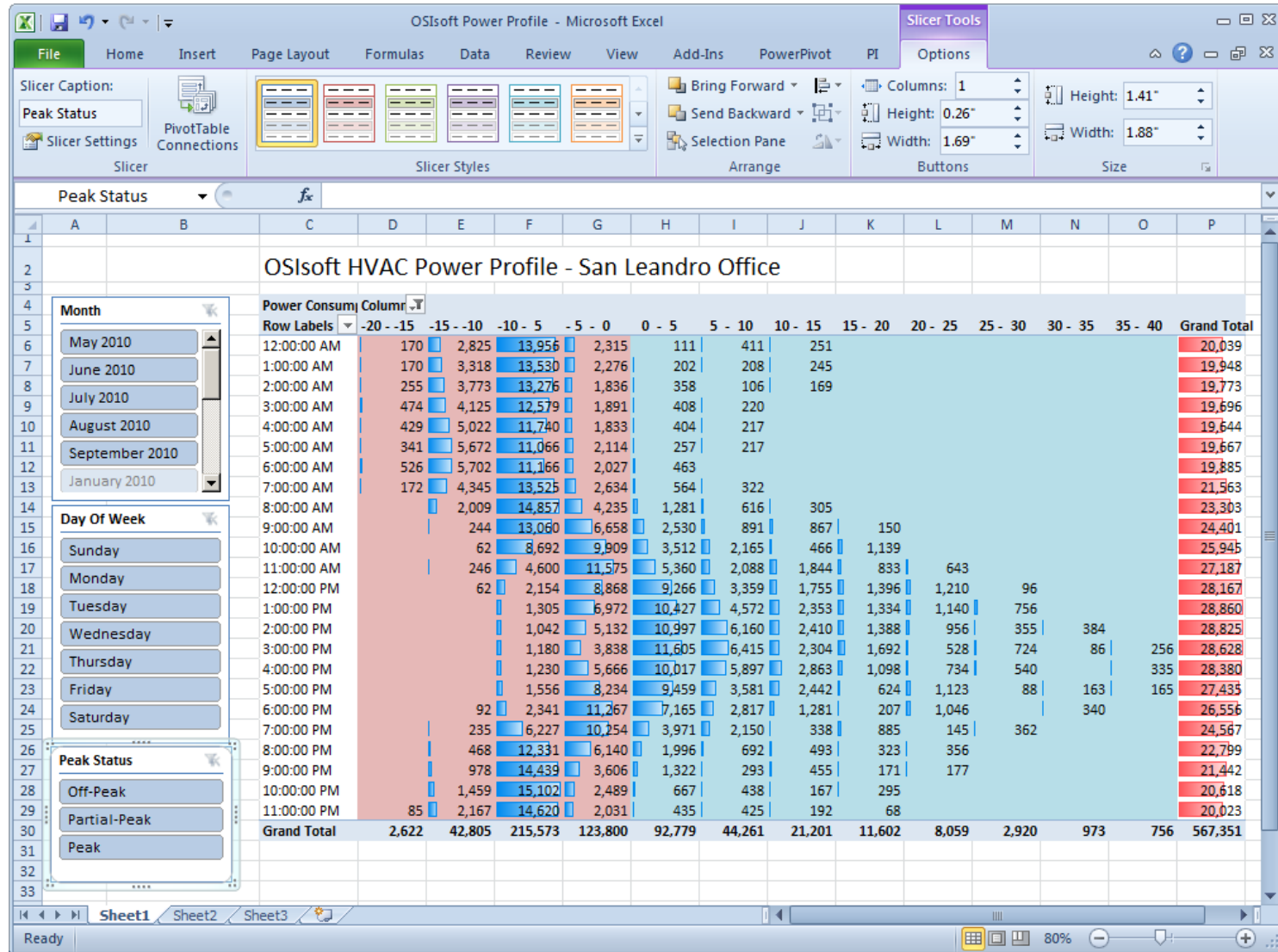




# Environmental Analytics



# Cost Profiling



# Product Inventories and Valuation

## Regional Product Inventory Summary

### Region

Great Plains

Midwest

Northwest

South Central

### Terminal

Angola

Atlanta

Erie

Eugene

Grand Rapids

### Product Group

Distillate

Ethanol

Gasoline

Other

### Month

5

6

7

8

9

10

11

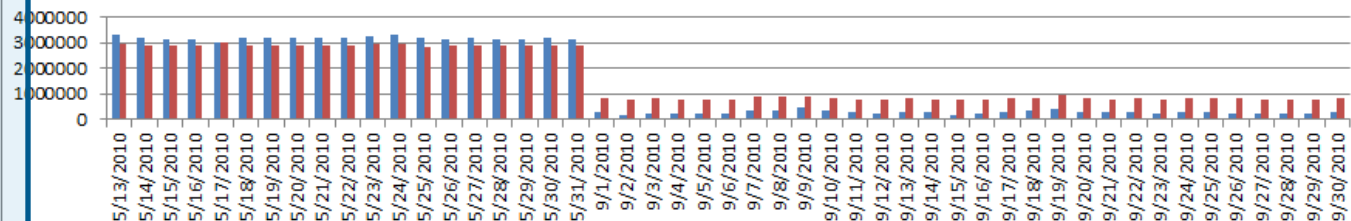
	Distillate		Ethanol		Gasoline		Other	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
0-10 Pen Asphalt							218,321	\$5,390,351
150 - 200 Pen Asphalt							31,464	\$773,703
160 - 190 Pen Asphalt							345,715	\$8,998,954
84 Blend Grade Conventional					419,665	\$41,689,523		
87 Regular Conventional					147,988	\$15,161,320		
93 Premium Conventional					236,008	\$25,967,987		
AE-150 Emulsified Asph							26,499	\$794,984
Distillate Stock	677	\$57,979						
Ethanol			39,894	\$2,708,426				
Isobutane							115,820	\$6,833,369
No. 1 MV 15	70,189	\$4,838,095						
No. 2 NR 500	30,219	\$2,097,169						
No. 6 Fuel Oil	173,671	\$8,518,569						
Normal Butane							39,030	\$3,237,178
RS Soap Solution							2,279	\$34,189
<b>Grand Total</b>	<b>274,756</b>	<b>\$15,511,812</b>	<b>39,894</b>	<b>\$2,708,426</b>	<b>803,661</b>	<b>\$82,818,829</b>	<b>779,129</b>	<b>\$26,062,728</b>

### Spot Market Prices

Product	Price
0-10 Pen Asphalt	\$24.69
150 - 200 Pen Asphalt	\$24.59
160 - 190 Pen Asphalt	\$26.03
84 Blend Grade Conventic	\$99.34
87 Regular Conventional	\$102.45
93 Premium Conventiona	\$110.03
AE-150 Emulsified Asph	\$30.00
Distillate Stock	\$85.60
Ethanol	\$67.89
Isobutane	\$59.00
No. 1 MV 15	\$68.93
No. 2 NR 500	\$69.40
No. 6 Fuel Oil	\$49.05
Normal Butane	\$82.94
RS Soap Solution	\$15.00
<b>\$127,101,795</b>	

## Daily Closing Product Group Inventory

Sum of Net Volume 2

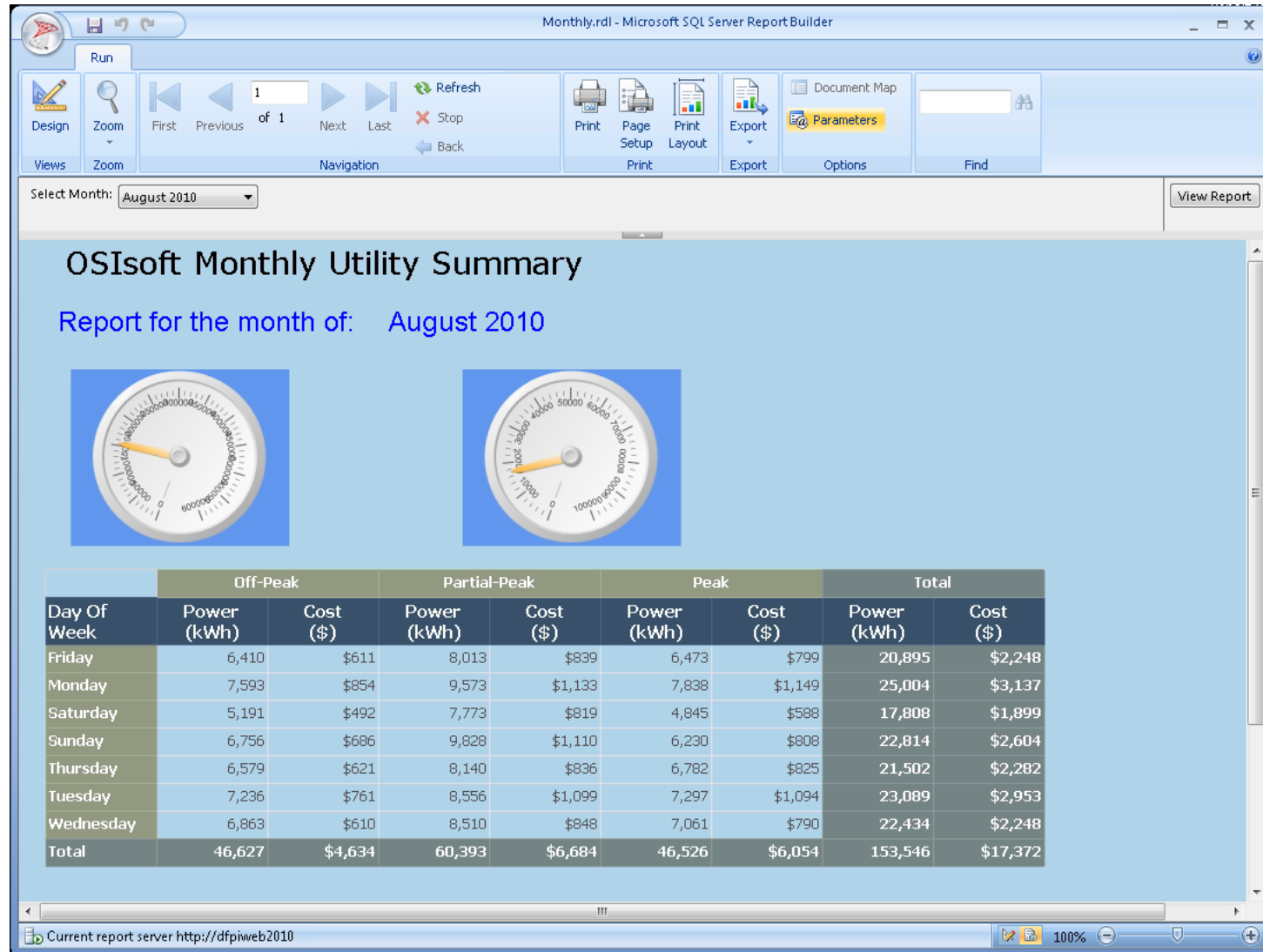


Product Group

Distillate

Gasoline

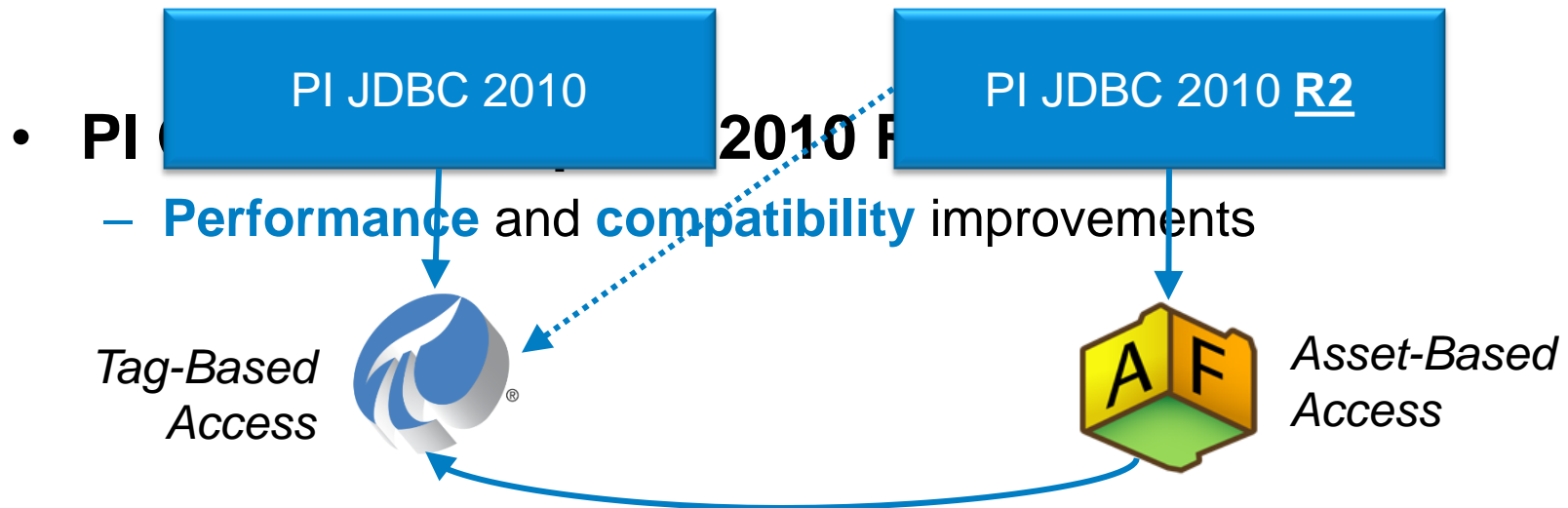
# Reporting



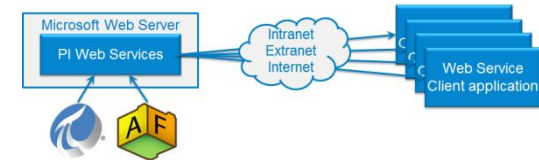
# New in our SQL Family

- PI JDBC 2010 R2

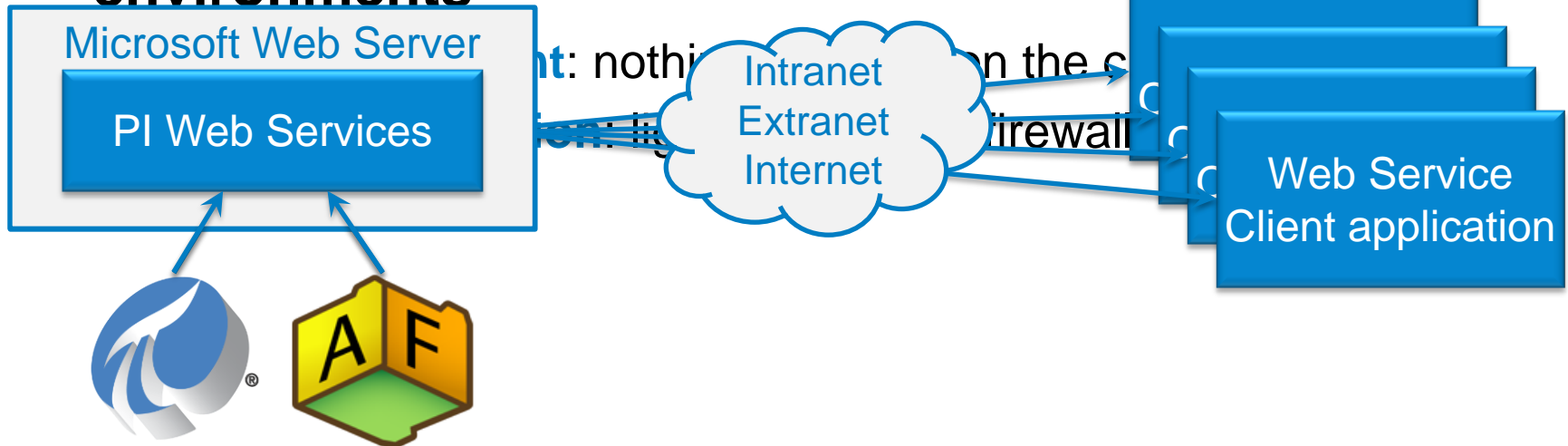
- Go **asset**-centric
- **Performance** enhancements  
(e.g. bulk write operations)



# PI Web Services



- Access to PI System data using standard **web service** technologies
- Facilitates data access over **secure** and **distributed** environments

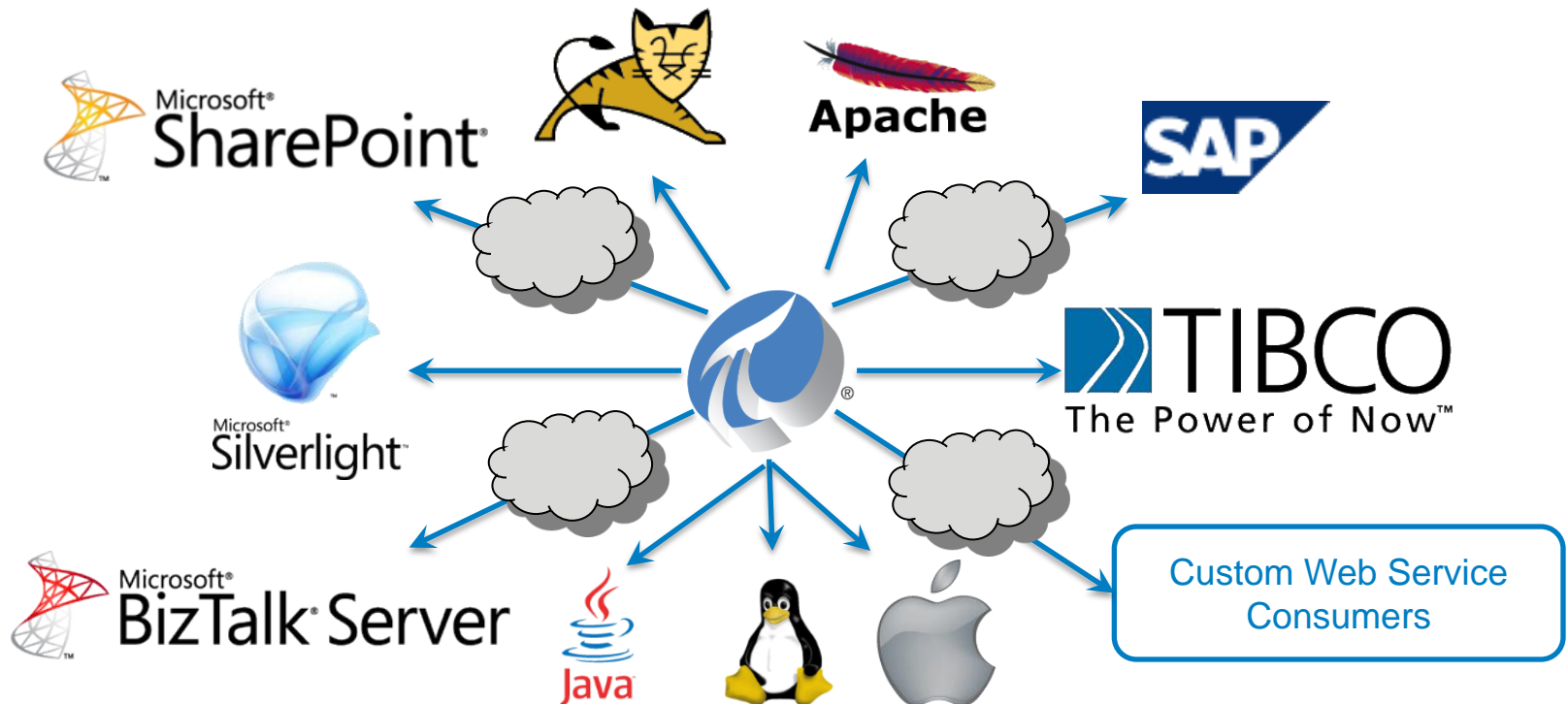


# Use Cases

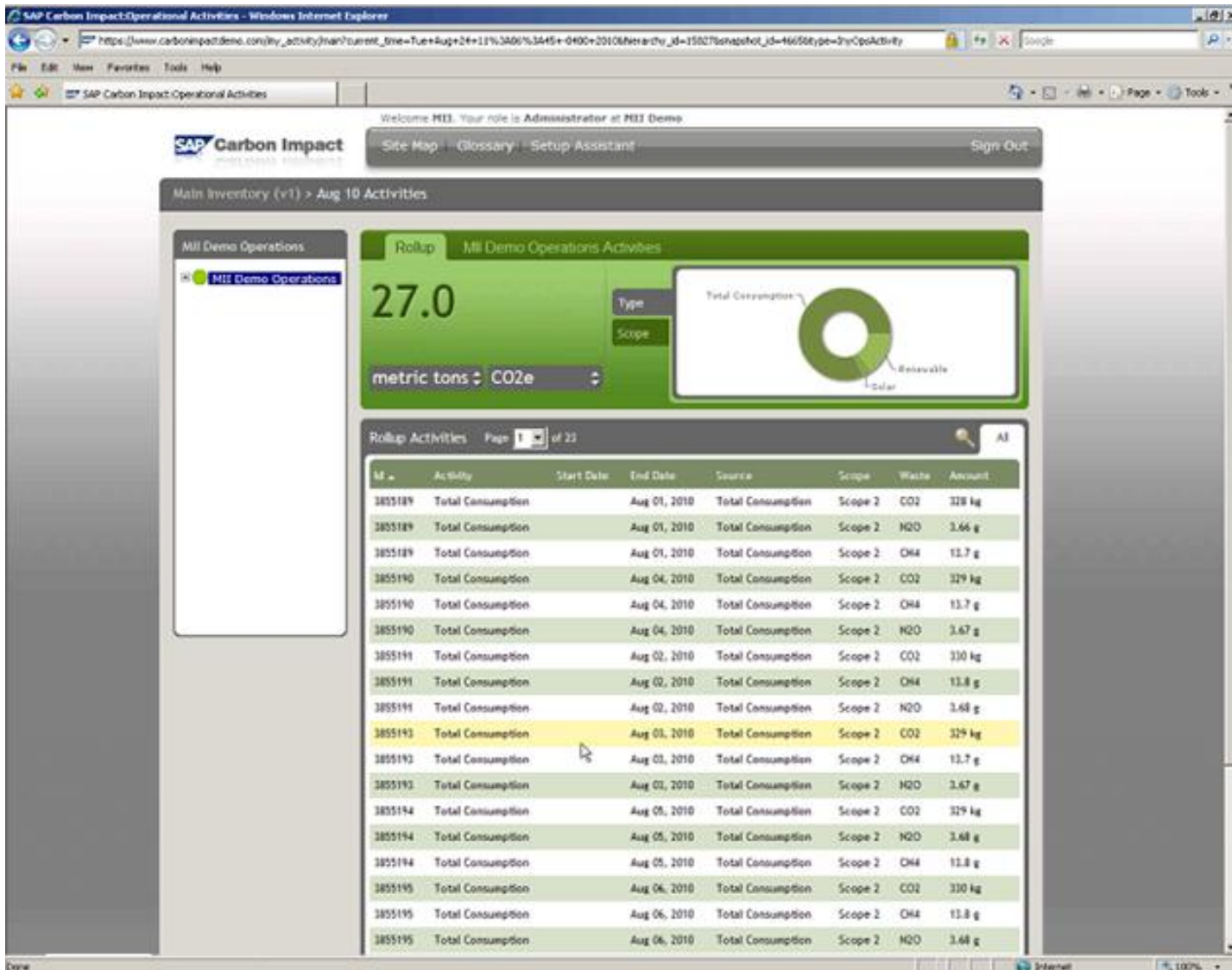
Web-based  
visualization

Integration with  
business systems

Non-Windows  
environments



# Carbon Impact Management





# Geospatial + Timeseries Data Mashup





## New in PI Web Services 2010 R2

- **2 new methods**
  - Simplified 'Get Snapshot'
  - Tag Search
- **Support for additional data insert modes**  
(e.g. replace)
- **Support for additional PI AF Attribute types**  
(e.g. formula, table lookup)

# What's coming next



# How to get PI Data Access

```

AFTTimeRange tr = new AFTTimeRange(new AFTTime(text),
AFValues vals = _afDB.Elements["Pump123"].Attributes
all)

lstValues.Items.Clear();
foreach(AFValue val in vals)
{
    lstValues.Items.Add(val.Value.ToString() +
    time license
}
    
```

products

all)



time license



PI System Access  
(PSA)





# OSIsoft Virtual Campus (vCampus)

## • Online,

- Software
- Focus
- Partner
- Exclusive technology

## • Personal

- Development products

The screenshot shows the OSIsoft Virtual Campus (vCampus) website. At the top, there is a navigation bar with the OSIsoft logo and the text "OSIsoft. virtual campus". Below the navigation bar, there is a large banner image showing a stylized cityscape with various buildings. Below the banner, there are three main content areas: "WHAT IS OSISOFT VIRTUAL CAMPUS?", "EVENTS", and "NEWS".

**WHAT IS OSISOFT VIRTUAL CAMPUS?**

OSIsoft vCampus is a **subscription-based**, online offering that consists of providing everything people need to **develop applications** on the PI System. Focusing on 'doing it right', this **community-oriented** program provides each of its subscribers with:

- Personal development **PI System**
- **Community** experience with discussion **forums** and **blogs**
- Online **library** and **courses**
- Technical, interactive **webinars**

OSIsoft vCampus is intended to facilitate and

**EVENTS**

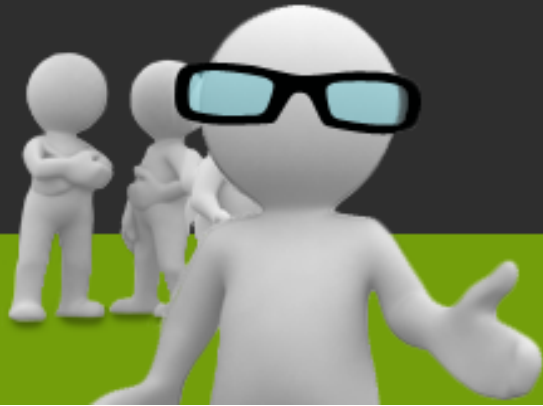
- [27-Apr-11] vCampus webinar: **PI Event Frames - Infrastructure to find data relevant to your Events** (Register here)
- [23-Mar-11] vCampus webinar: **PI ACE 2010 R2 in action** (Register here)
- [23-Feb-11] vCampus webinar: **PI WebParts, What's New since version 2.2?**
- [26-Jan-11] vCampus webinar: **PI System 101 - Security**
- [22-Dec-10] vCampus webinar: **PI System 101 - What makes time-series data and PI special**

**NEWS**

- [13-Jan-11] Official OSIsoft Facebook and Twitter can be accessed via <http://tinyurl.com/OSIsoftFacebook> and @OSIsoft\_News.
- [28-Mar-11] OSIsoft annual Users Conference will hold Mar 28-30, 2011 in San Francisco. Submit papers or register now!
- [17-Nov-10] A video tour of the OSIsoft vCampus has been posted here and is accessible to the whole Internet. Please don't hesitate to share it with **anyone** interested.
- [16-Nov-10] PI Asset Framework (AF) 2010

soft.com  
ft.com  
vCampus

# OSIsoft vCampus Live!



**OSIsoft vCampus Live! 2011**  
where PI geeks meet

Palace Hotel · San Francisco, CA  
Week of November 28th

**November 30<sup>th</sup> - December 1<sup>st</sup> , 2011**

**Palace Hotel, San Francisco**

**[www.osisoft.com/vcampuslive2011](http://www.osisoft.com/vcampuslive2011)**



Thank you