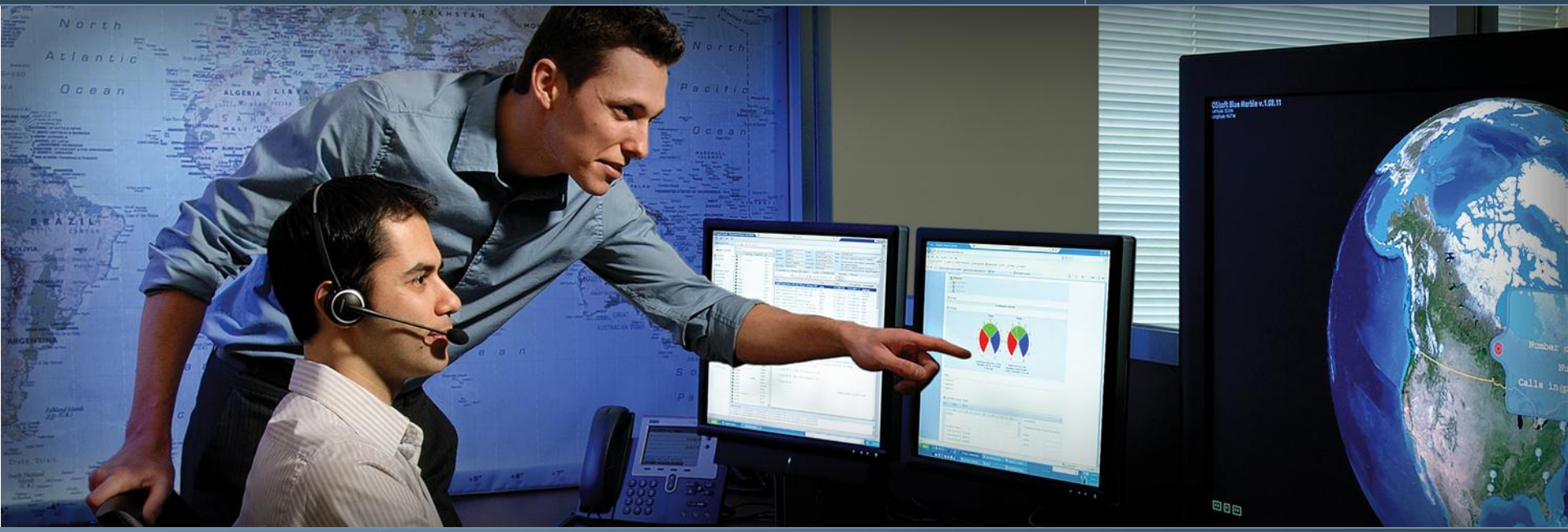
Regional Seminar Series

Warszawa, Poland



Individual Product Functionality Presentation

Tadeas MARCINIAK
Customer Support Engineer
OSIsoft

7th October 2010

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Individual Product Functionality Presentation

- PI ProcessBook
  - PI SQC (Statistical Quality Control)
  - Element Related Displays
- PI DataLink
  - Power Pivot
- PI WebParts
- Batch/Event Frames
- PI AF
  - PI Notifications

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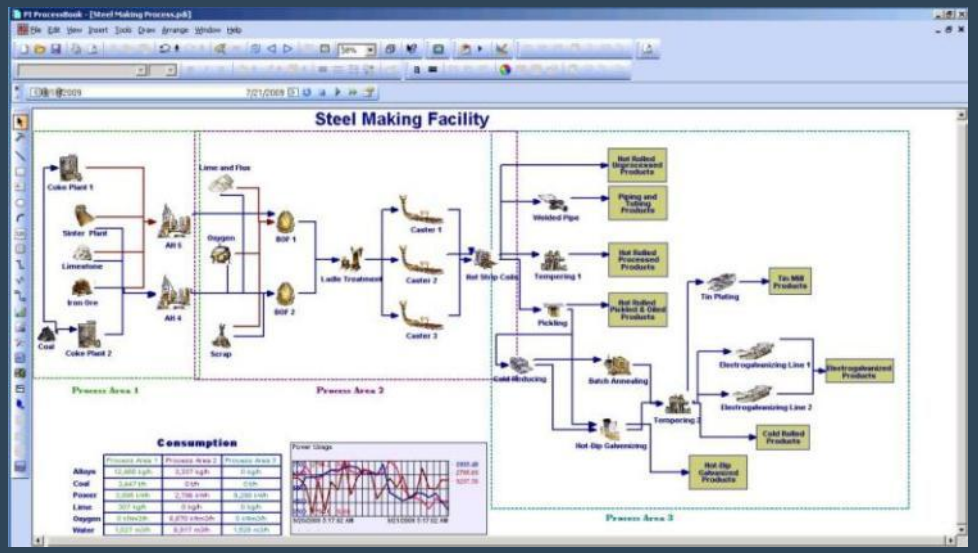
PI ProcessBook



Real Time Information – Currency of the New Decade

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Introducing PI ProcessBook

- PI ProcessBook is tool for graphical dynamic presentation of data and processes
- PI ProcessBook provides tools to create custom “applications” used to analyze data (mostly, VBA)
- PI ProcessBook is integration environment
  - Active X Provider and Container
  - Data from a variety of sources
    - time-series
    - relational databases
    - AF - asset-centric data
- PI ProcessBook can export displays for use in other PI System tools (e.g., PI WebParts)

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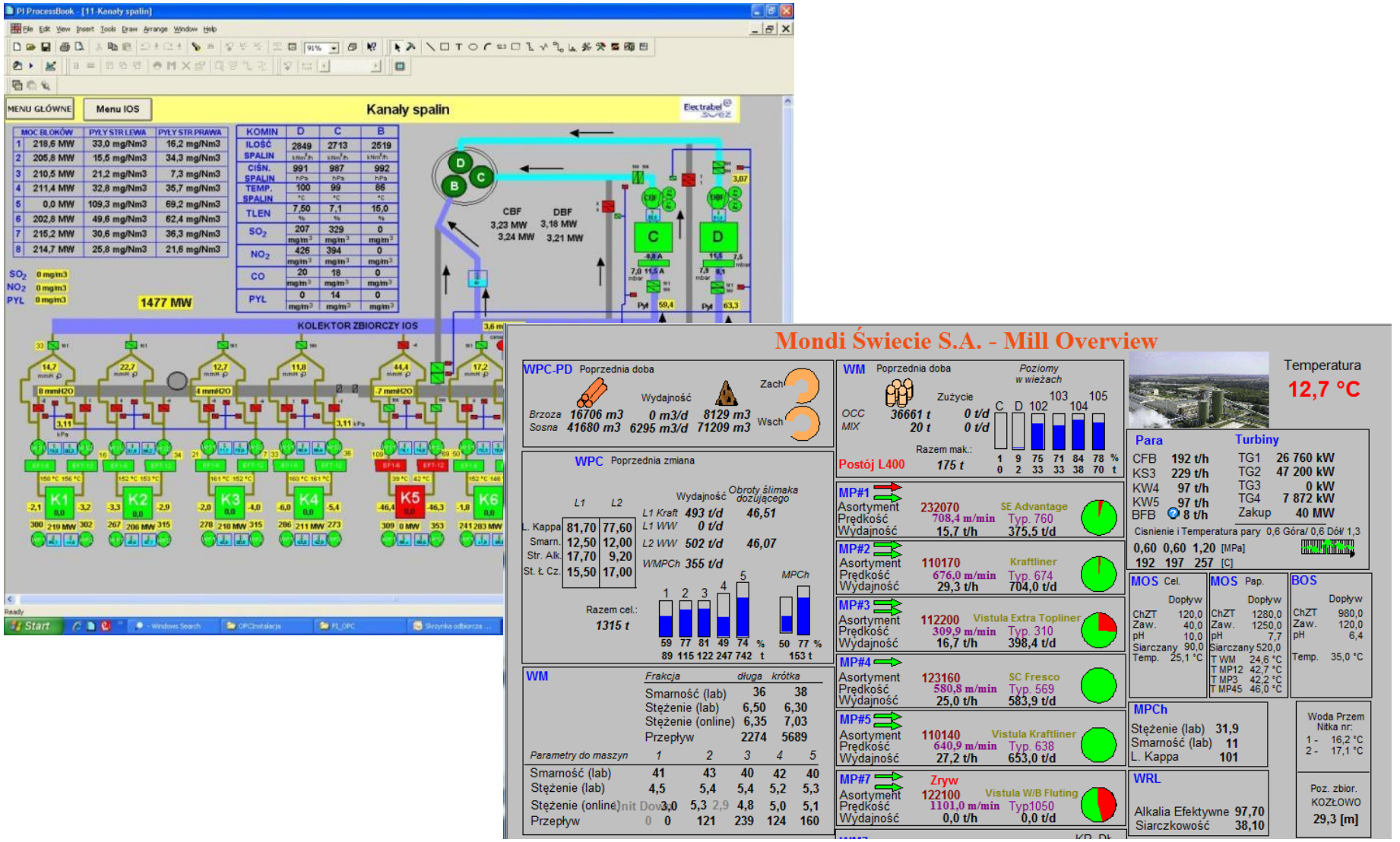
Introducing PI ProcessBook



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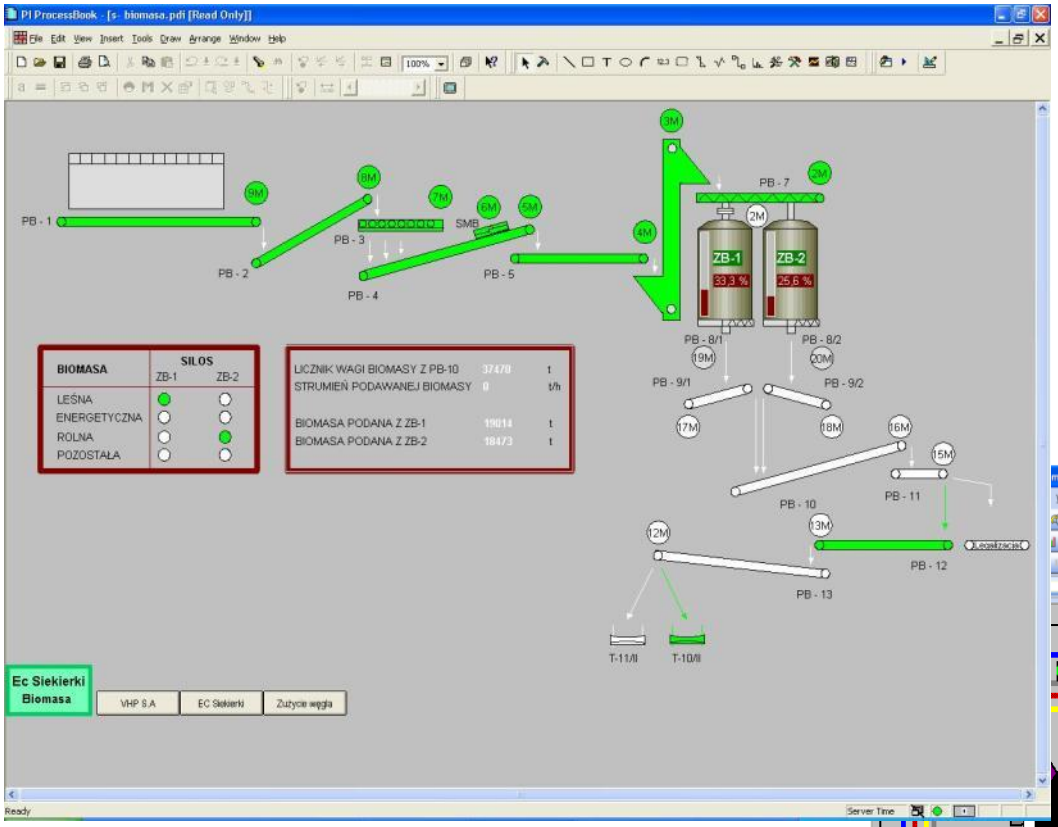
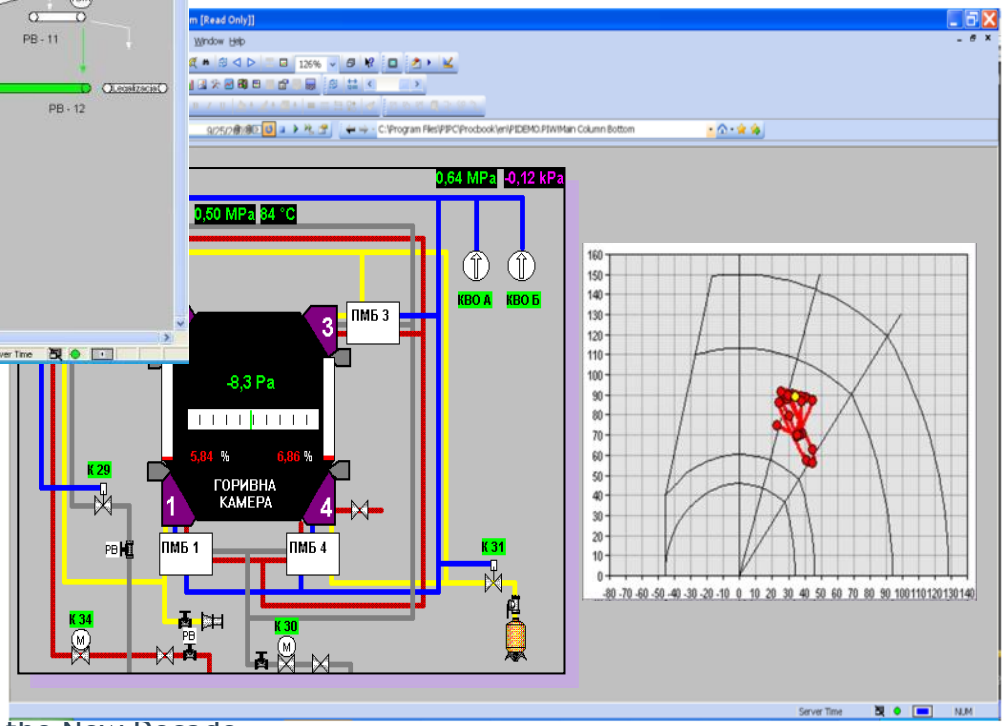
Introducing PI ProcessBook





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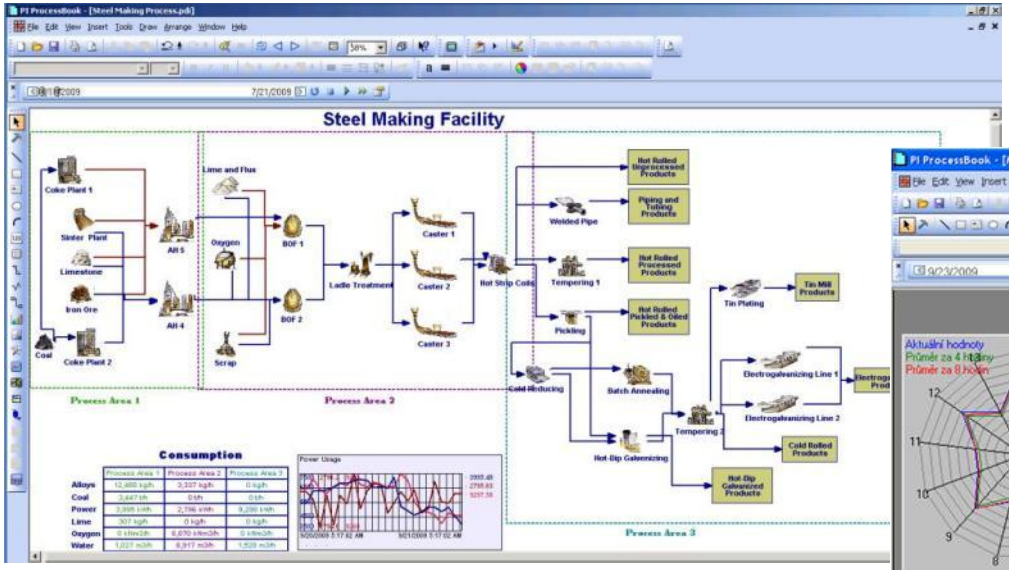
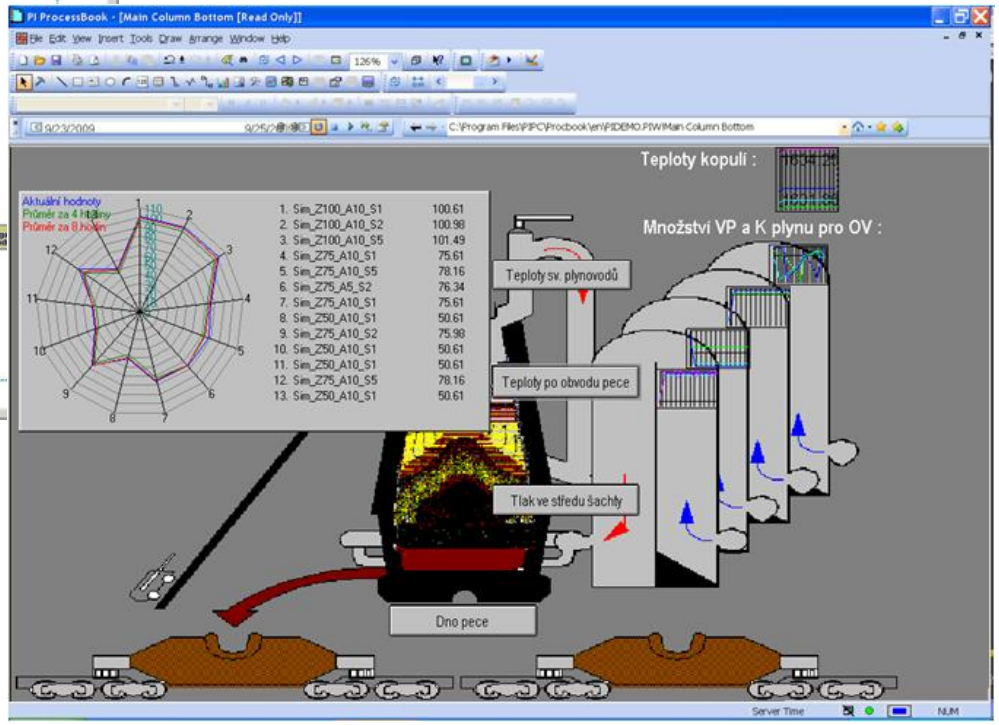
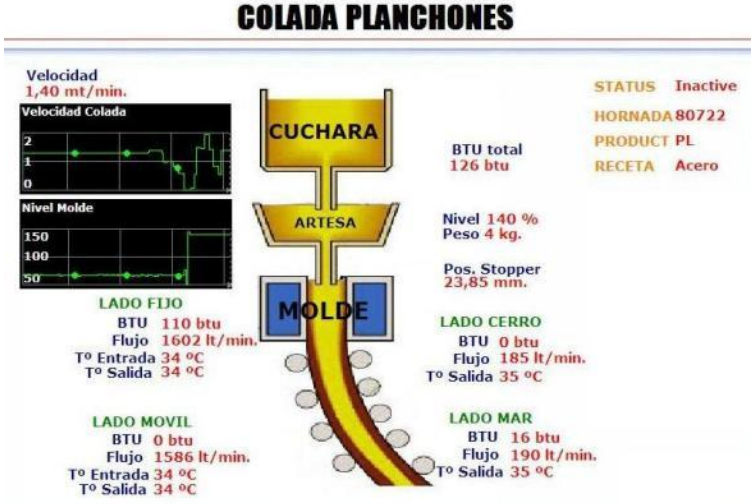
Introducing PI ProcessBook







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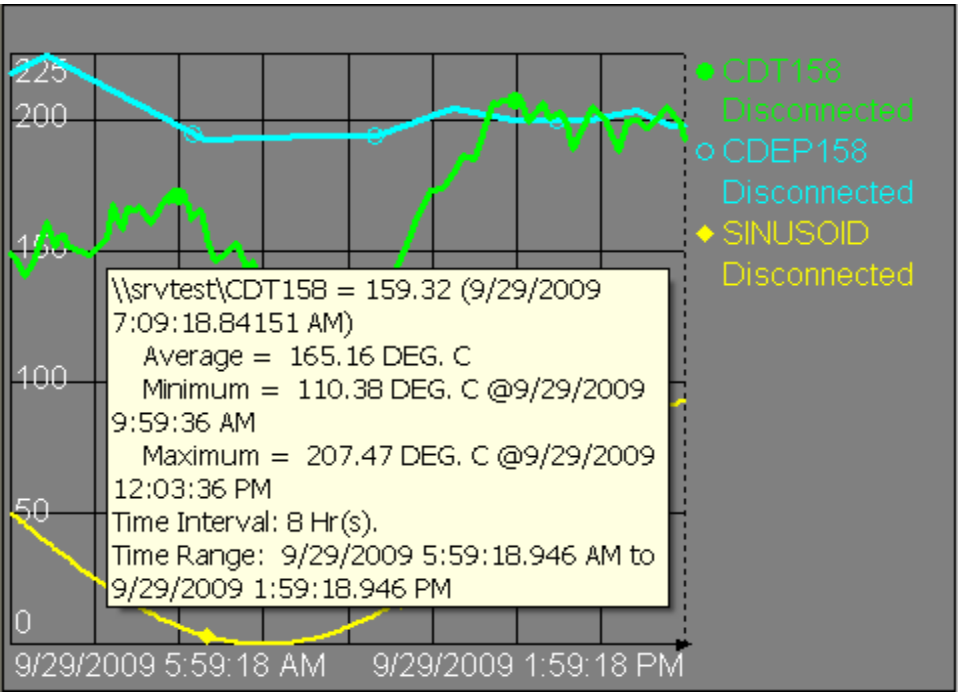
PB 3.2 - ToolTips and Details

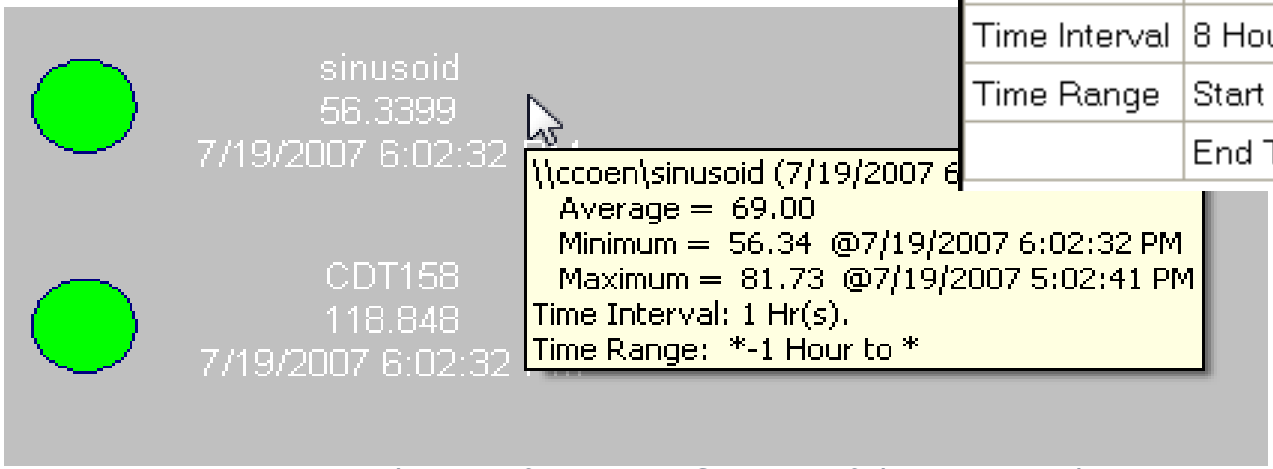


Data Source: \\srvtest\CDT158

Option: Statistics

Trend1

Statistics	Value	Timestamp
Data Type	Float 32	
Average	165.44	
Minimum	110.38	9/29/2009 9:59:36 AM
Maximum	207.47	9/29/2009 12:03:36 PM
Range	97.092	
StdDev	28.268	
PStdDev	28.268	
Count	28800	
Time Interval	8 Hours	
Time Range	Start Time	9/29/2009 6:02:01 AM
	End Time	9/29/2009 2:02:01 PM



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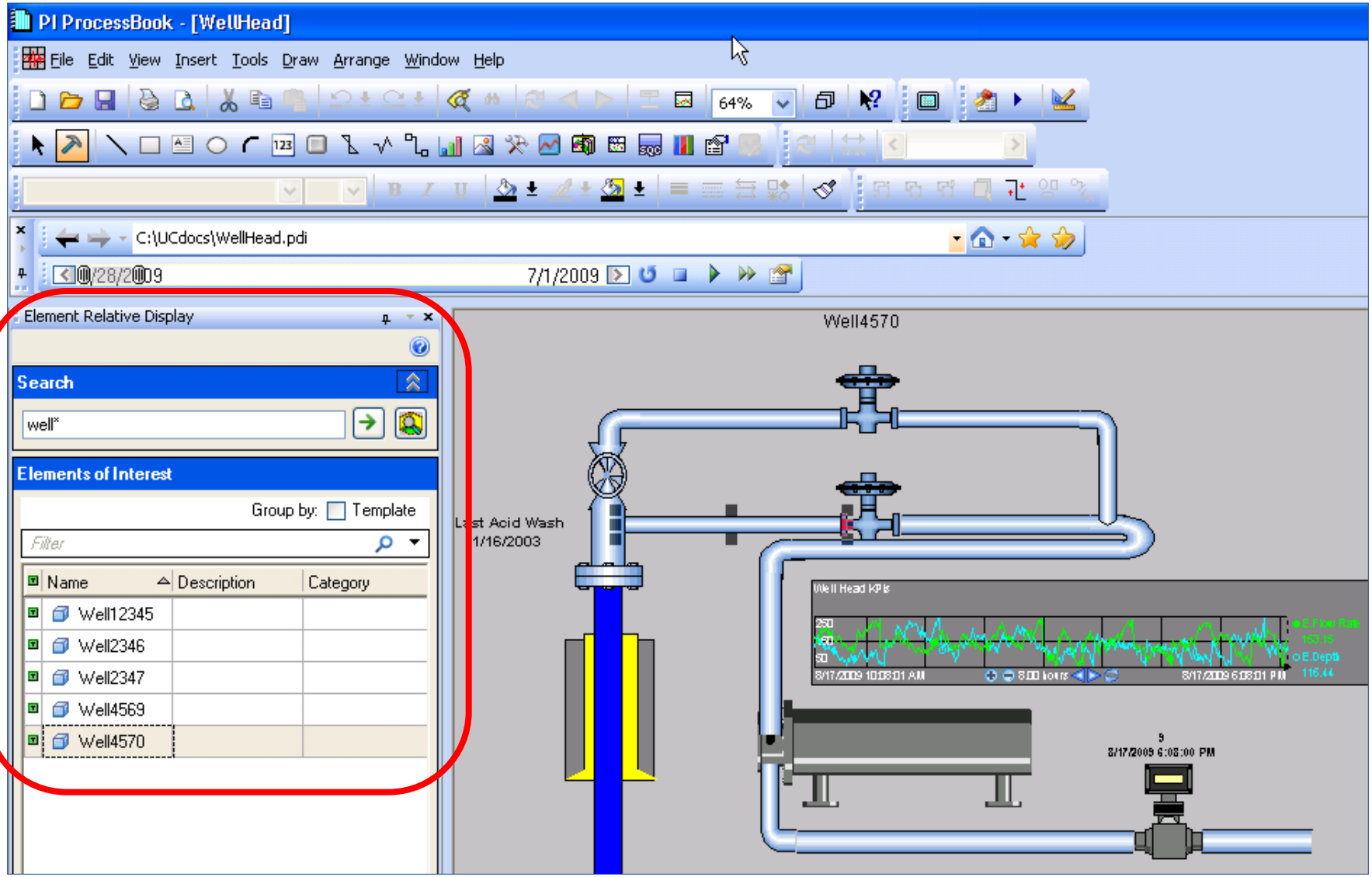
PB 3.2 - AF Element Relative Displays



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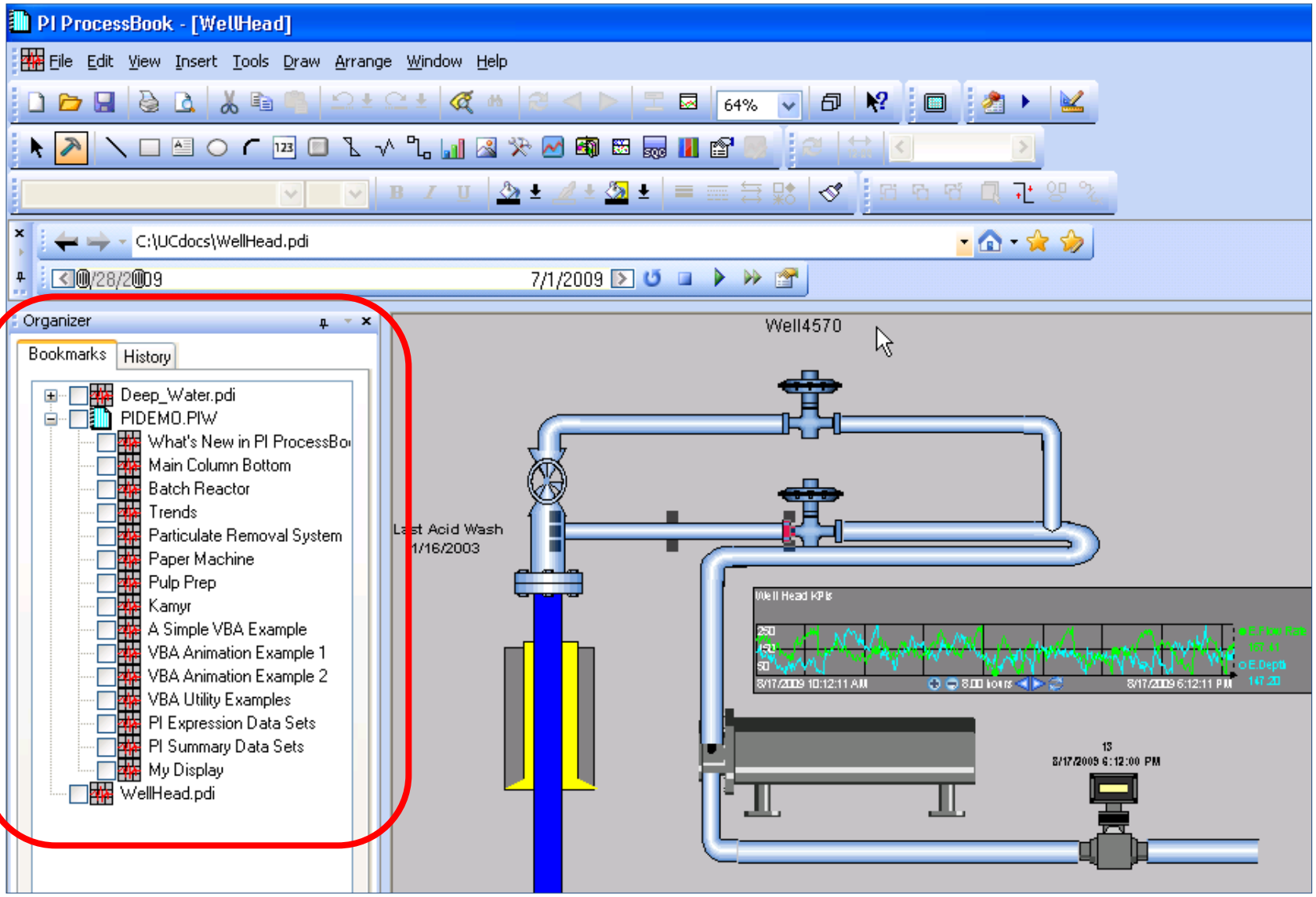
PB 3.2 - Display Browsing and Bookmarking



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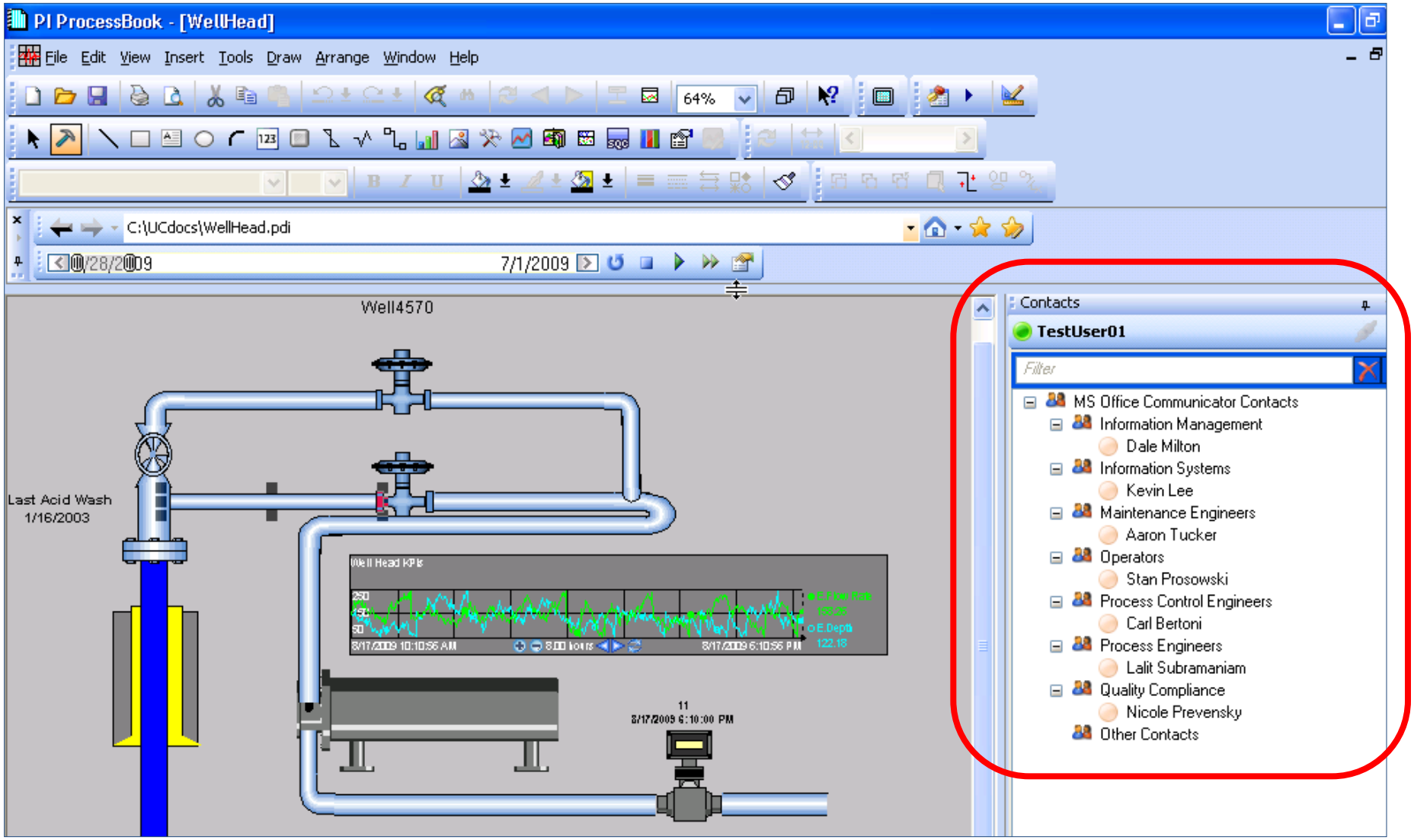
PB 3.2 - Office Communicator Integration



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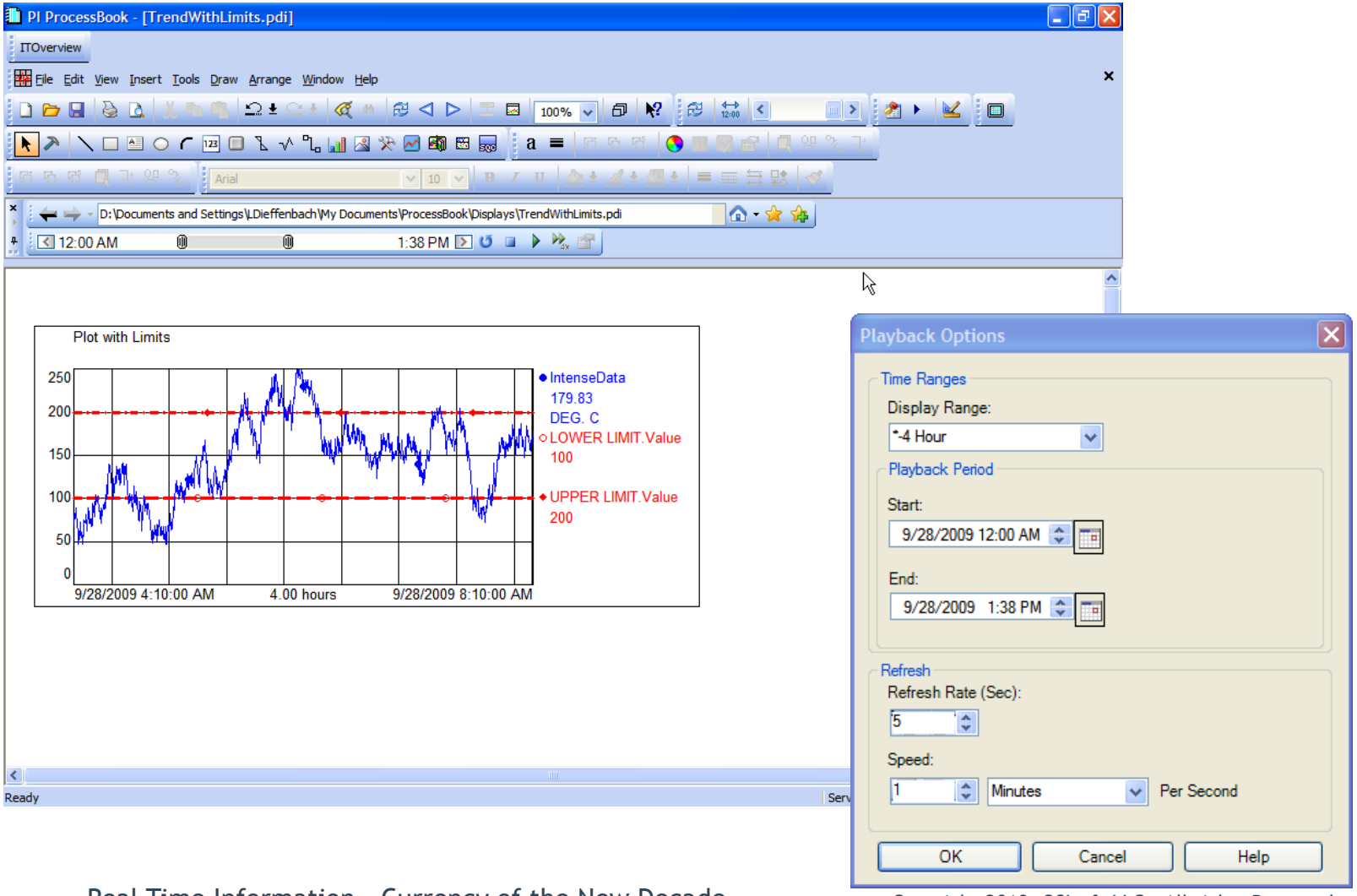
PB 3.2 - ProcessBook Playback Feature



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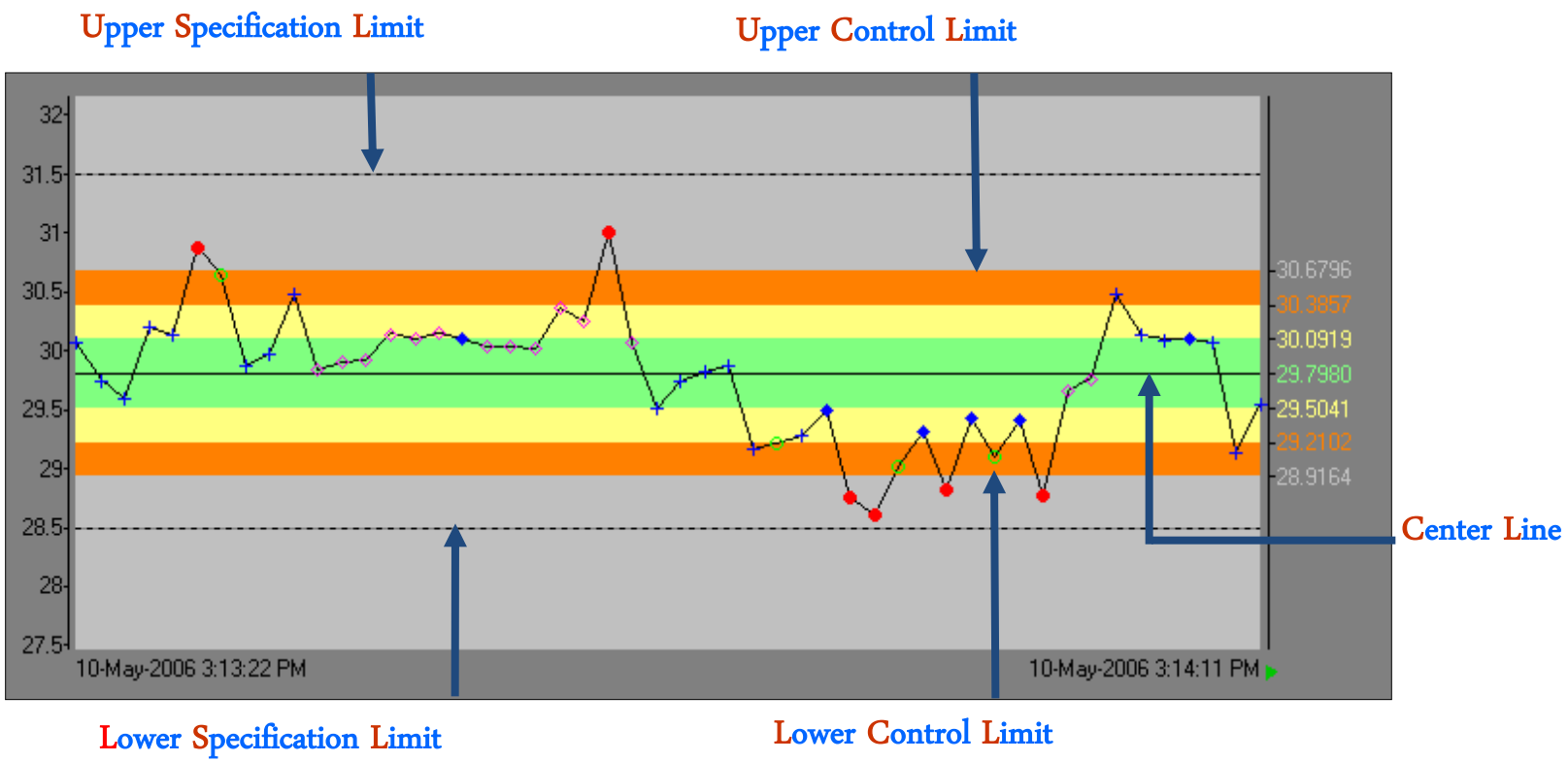
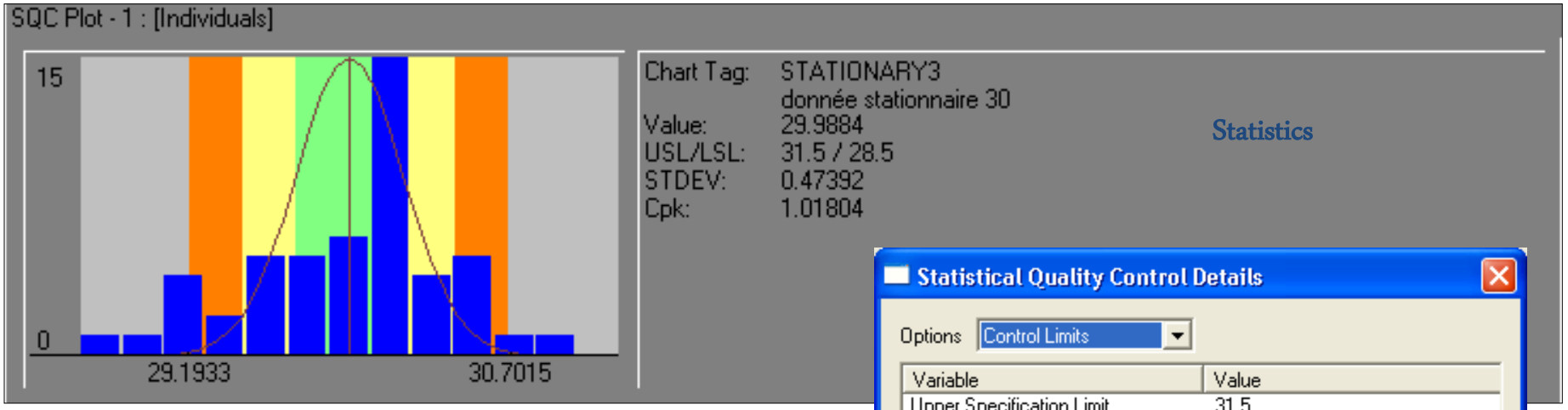
PI SQC (Statistical Quality Control)

PI SQC Client

- SQC (Shewhart) Charts integrated in PI Process Book

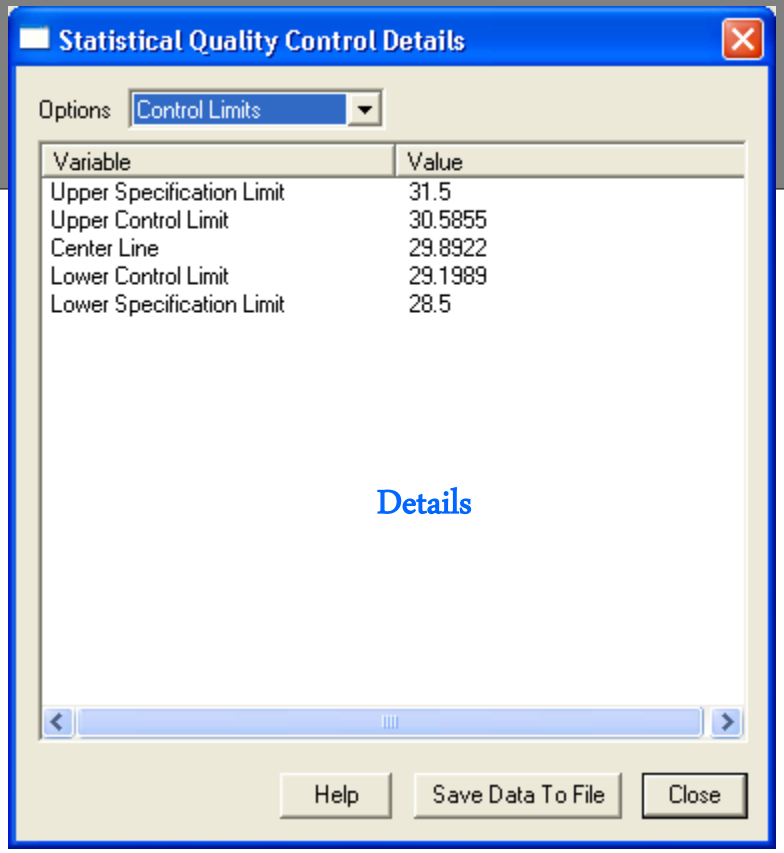


PI SQC (Statistical Quality Control)



Histogram

(distribution)



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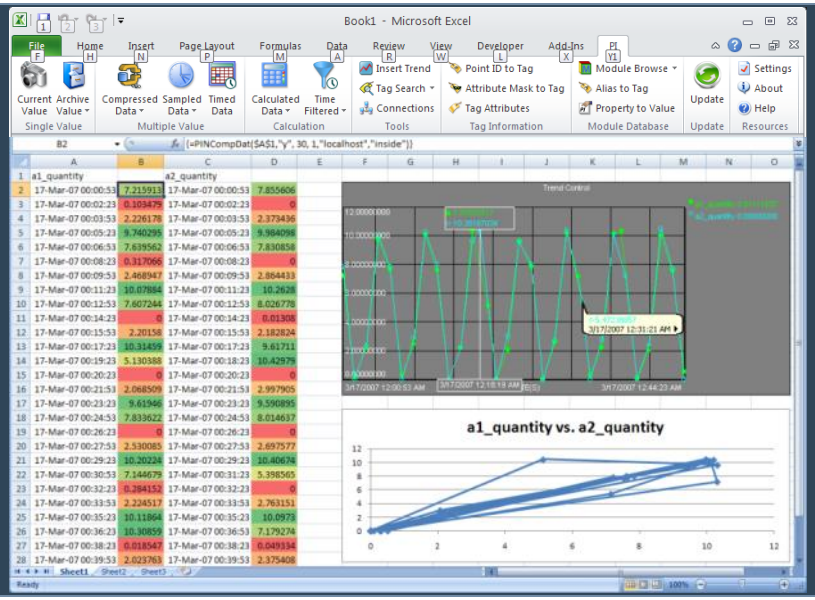
PI DataLink



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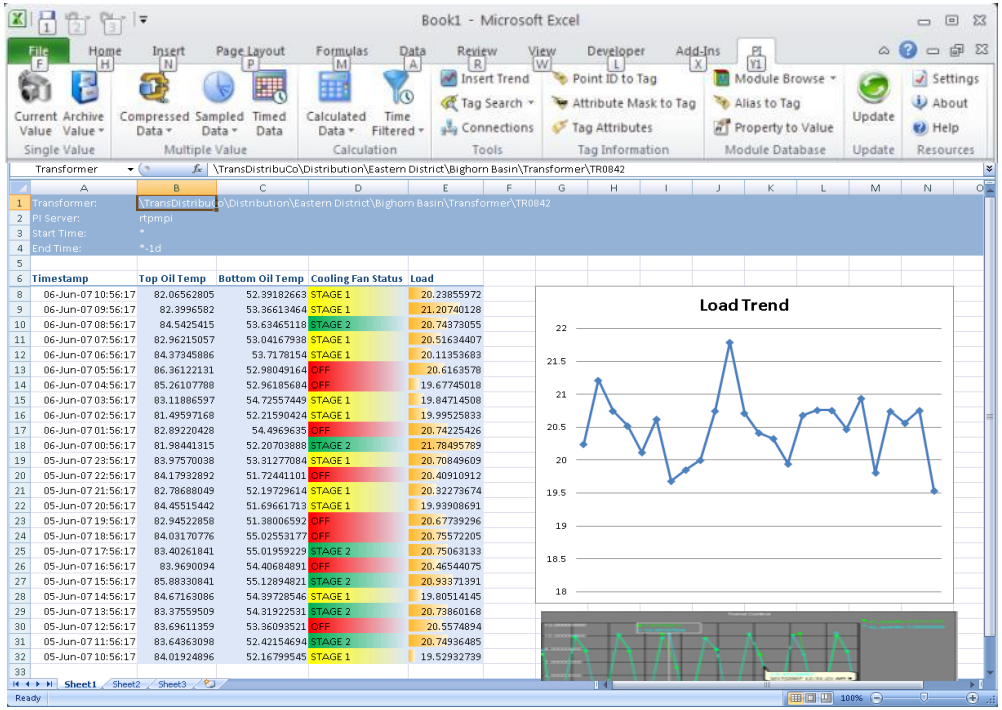
Introducing PI DataLink

- PI DataLink is an Excel add-in that allows users to access time-series data and metadata stored in the PI System
- Used for reporting, data mining, charting, and analysis

Main functions:

- Current data visualization
- Calculated data
  - total, maximum, minimum, average, …
- Time filtered calculations
  - amount of time over which a PI System expression is true (e.g. job time of specific device in a month)
- PI ProcessBook style trend object



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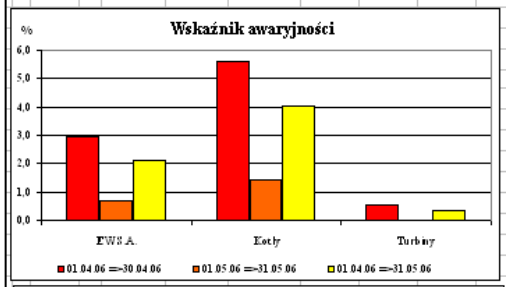
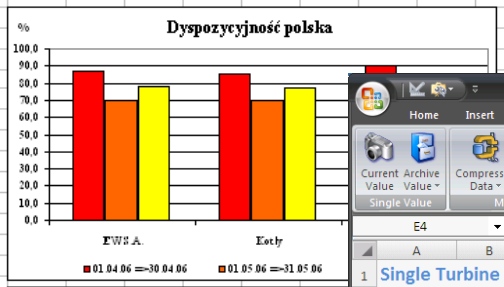
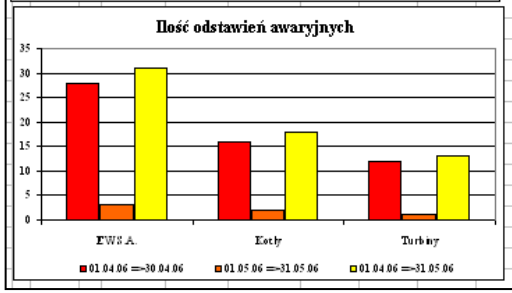
Introducing PI DataLink

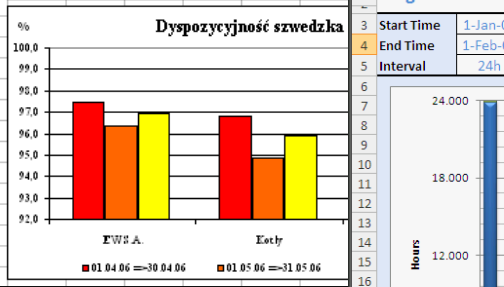
Wskaźniki dyspozycyjności i awaryjności — urządzenia

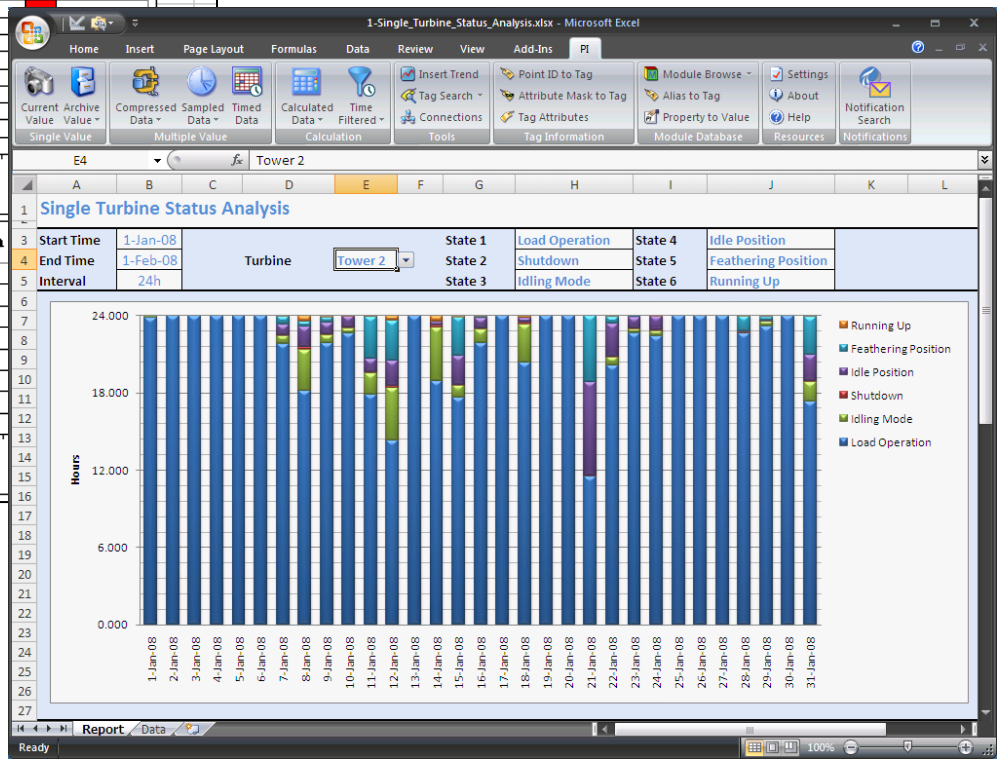
Zakład	01.04.06 =>30.04.06					01.05.06 =>31.05.06					01.04.06 =>31.05.06				
	Awaryjność		Dyspozycyjność		Ilość	Awaryjność		Dyspozycyjność		Ilość	Awaryjność		Dyspozycyjność		Ilość
	Wskaźnik	Ilość awari	polska	szwedzka	uruchom.	Wskaźnik	Ilość awar	polska	szwedzka	uruchom.	Wskaźnik	Ilość awar	polska	szwedzka	uruchom.
	%	szt	%	%	szt	%	szt	%	%	szt	%	szt	%	%	szt
Kotły	5,6	16	85,2	96,8	56	1,4	2	70,3	94,9	21	4,0	18	77,6	95,9	77
Turbiny	0,6	12	90,3	98,8	46	0,0	1	70,3	99,5	19	0,4	13	80,1	99,1	65











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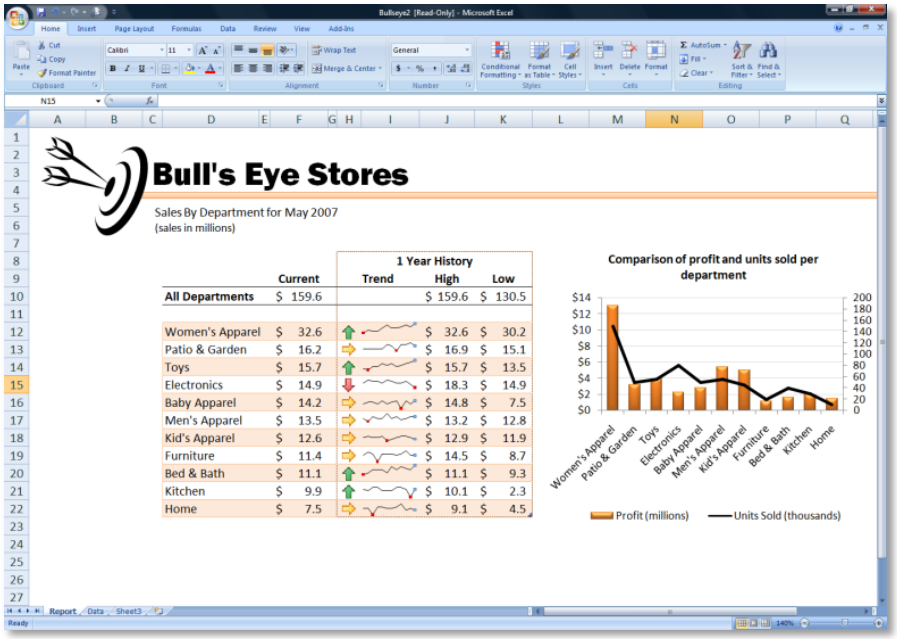
Powerful Personal Analysis Tools

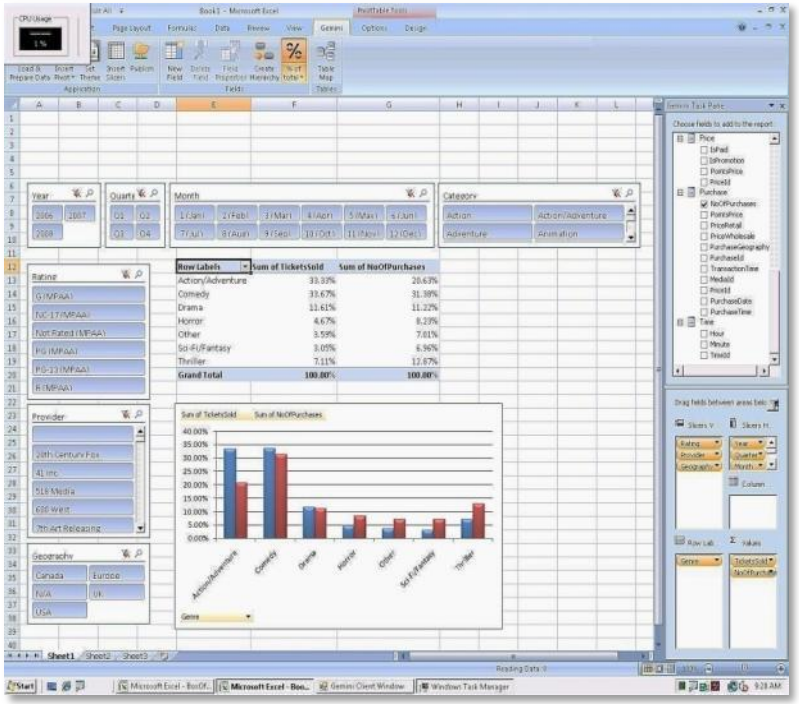
Drive personal productivity and insight

Microsoft® Excel® 2010

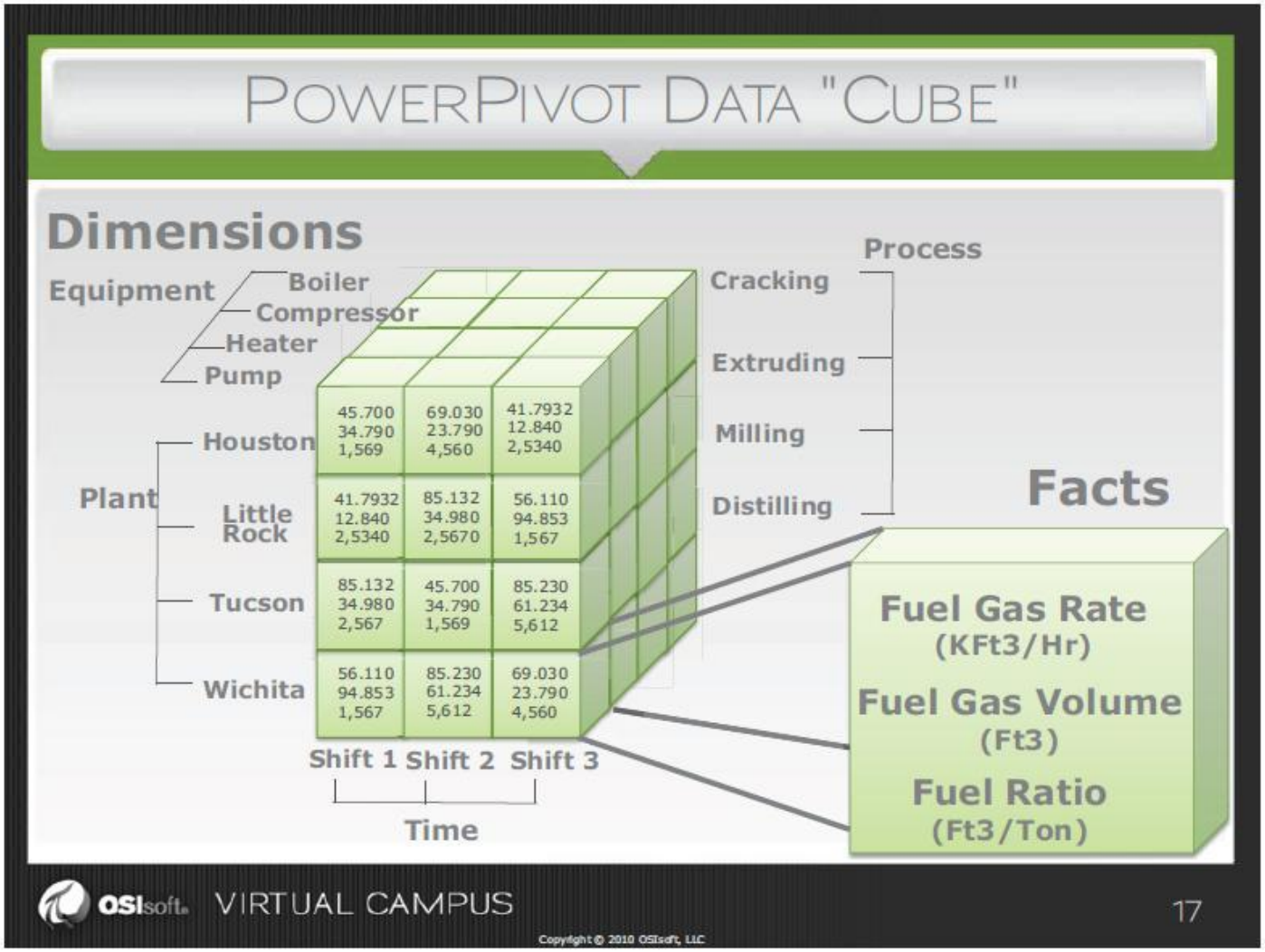


Improved formatting and charts

Easier navigation with Slicers



PowerPivot


PowerPivot Data "Cube"
Dimensions
Equipment
Boiler
Compressor
Heater
Pump
Plant
Houston
Little Rock
Tucson
Wichita
Process
Cracking
Extruding
Milling
Distilling
45.700 34.790 1,569
69.030 23.790 4,560
41.7932 12.840 2,5340
41.7932 12.840 2,5340
85.132 34.980 2,5670
56.110 94.853 1,567
85.132 34.980 2,567
45.700 34.790 1,569
85.230 61.234 5,612
56.110 94.853 1,567
85.230 61.234 5,612
69.030 23.790 4,560
Shift 1
Shift 2
Shift 3
Time
Facts
Fuel Gas Rate (KFt3/Hr)
Fuel Gas Volume (Ft3)
Fuel Ratio (Ft3/Ton)
OSIsoft VIRTUAL CAMPUS
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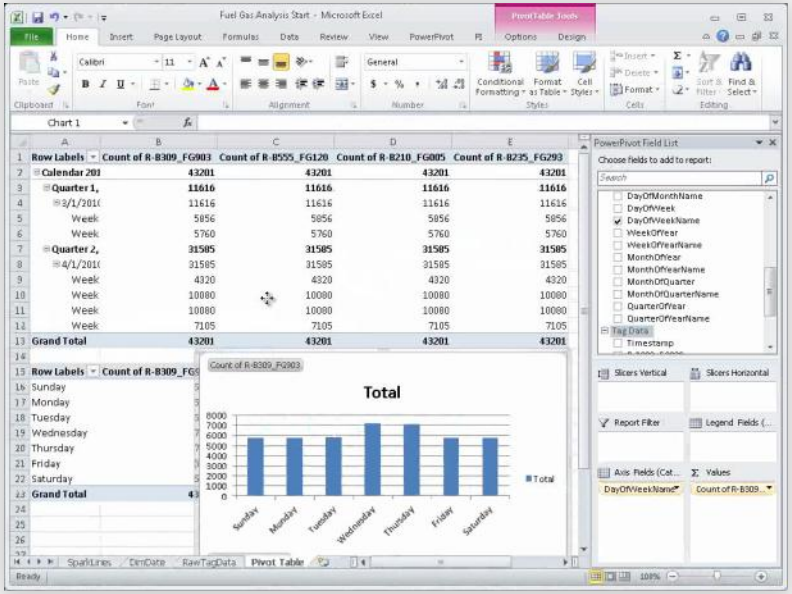
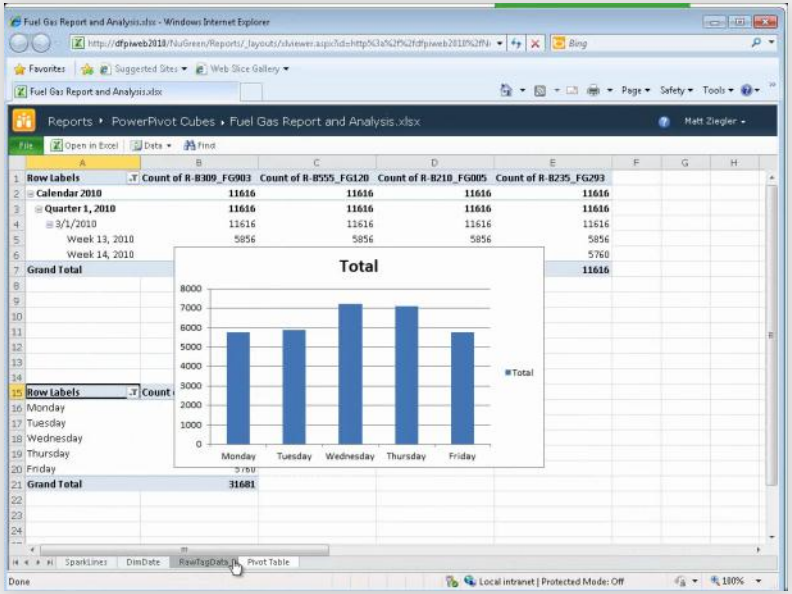
17

Publish and Share *with SharePoint and DataLink Server*





PI WebParts

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What is PI WebParts?

- PI System on the web
  - time-series
  - relational
  - web services data
- Relies on the Microsoft SharePoint Platform

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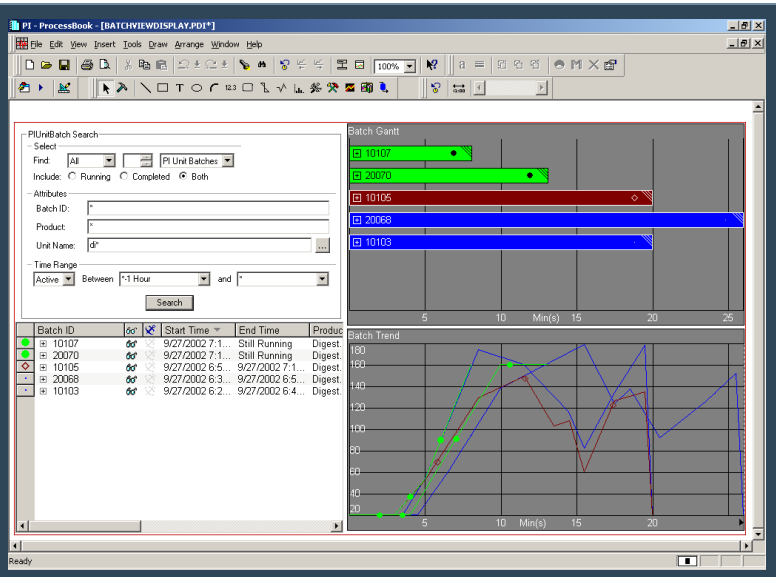
Batch/Event Framing



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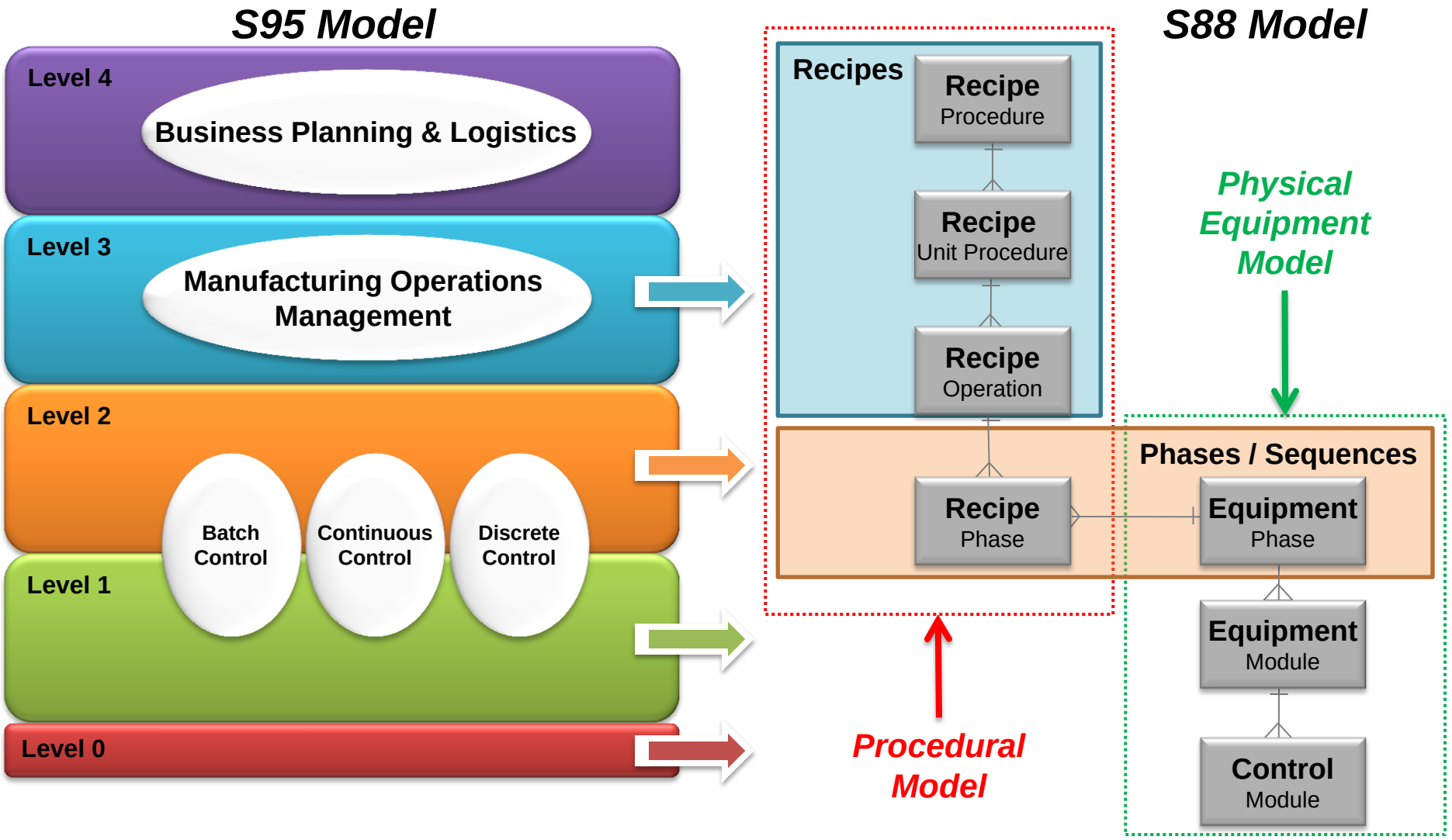
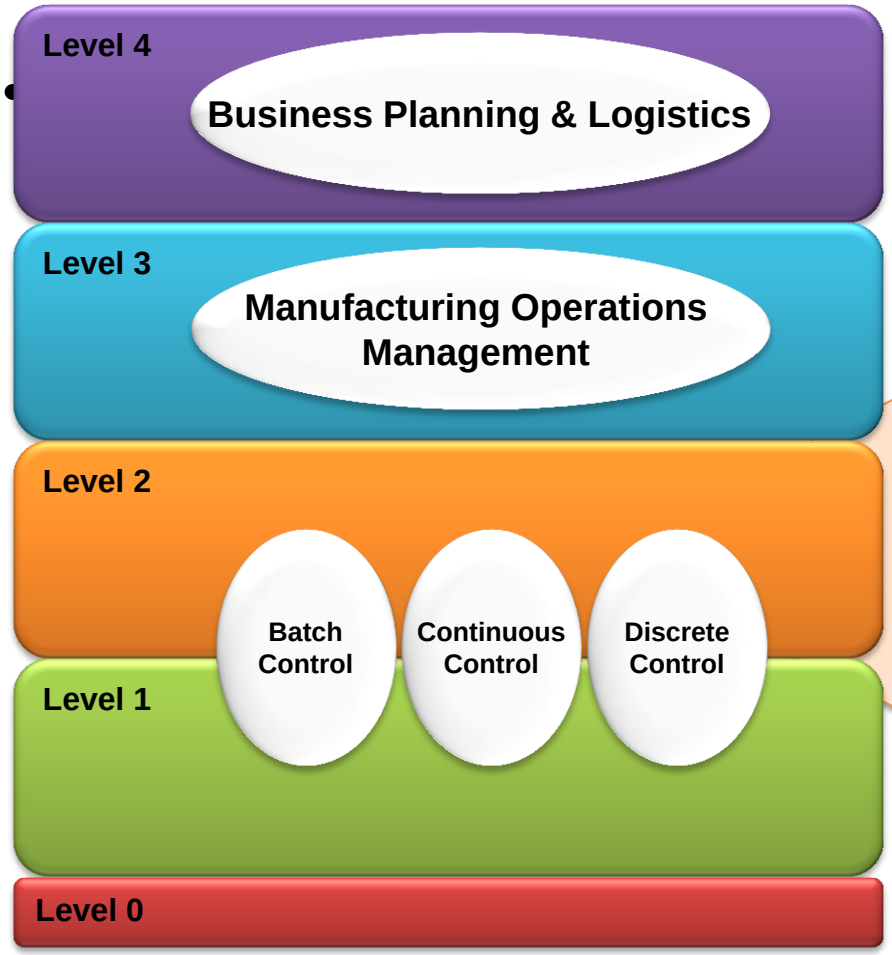
Batch Concept through S95* & S88**



* ANSI/ISA-88 - IEC 61512 - Batch Control

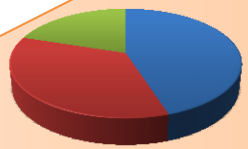
** ANSI/ISA-95 - IEC 62264 - Enterprise-Control System Integration

Challenges at Level 2

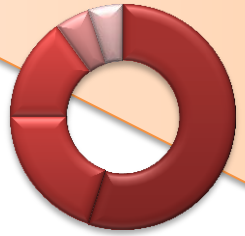


Variable PCS Landscape

Typical Process Control System Landscape

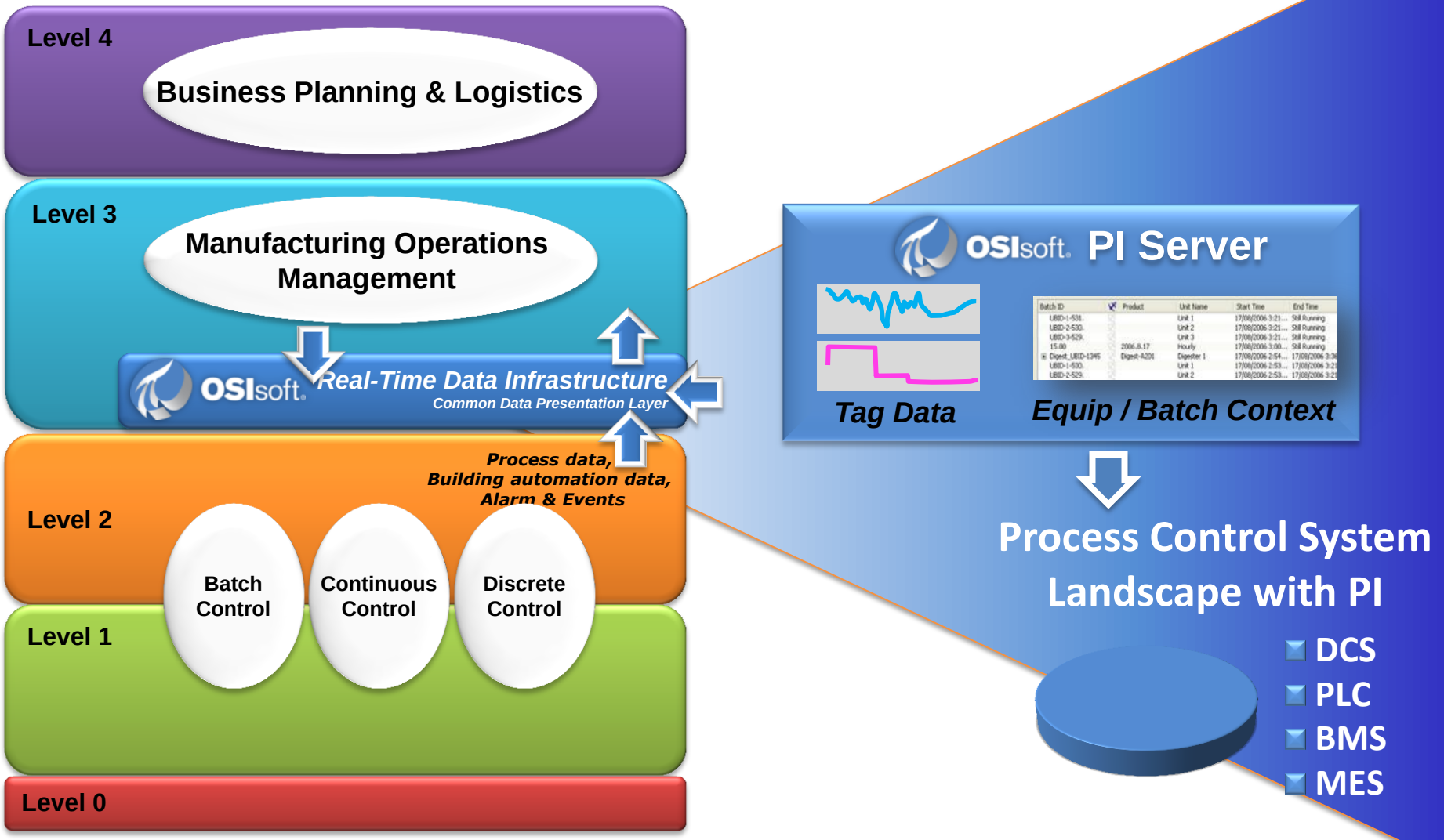


Typical PLC Vendors

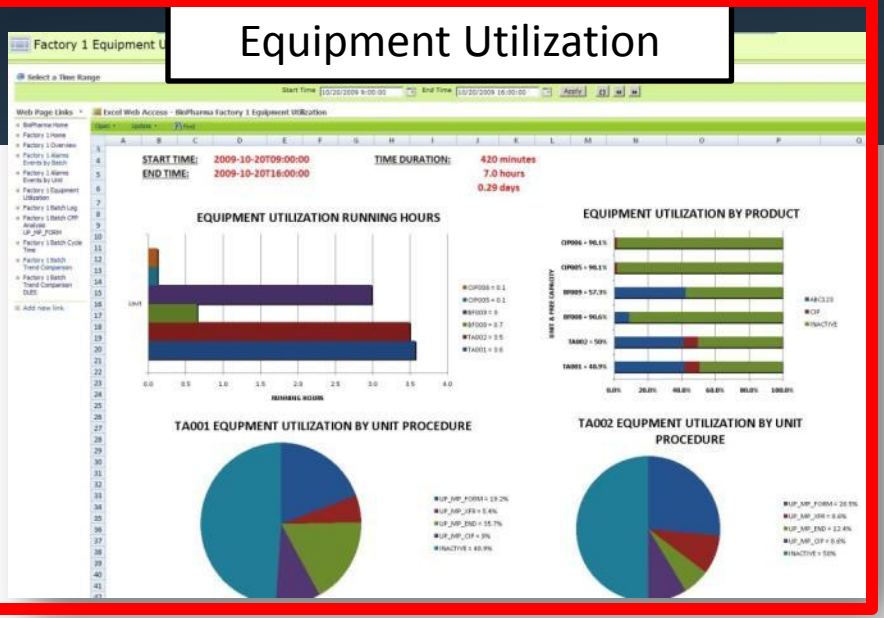


Typical DCS Vendors

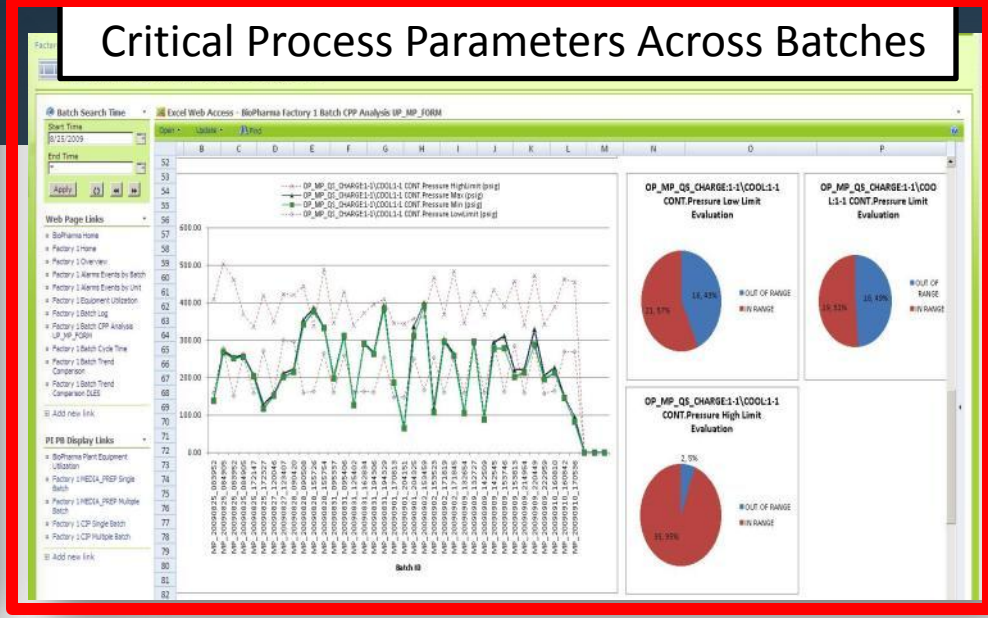
Common Infrastructure for Collecting Data

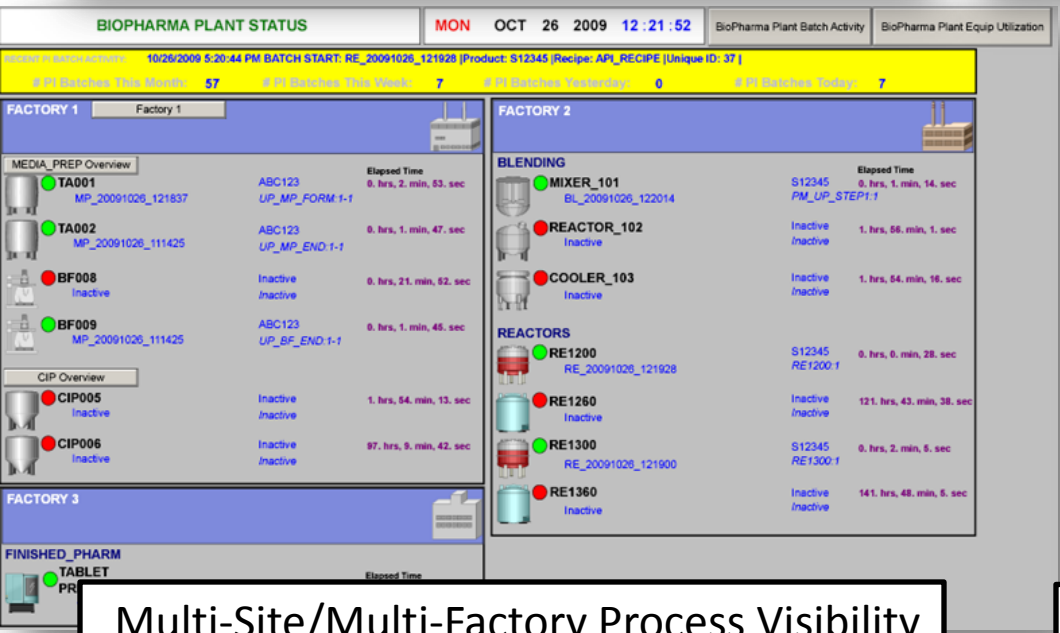


Equipment Utilization

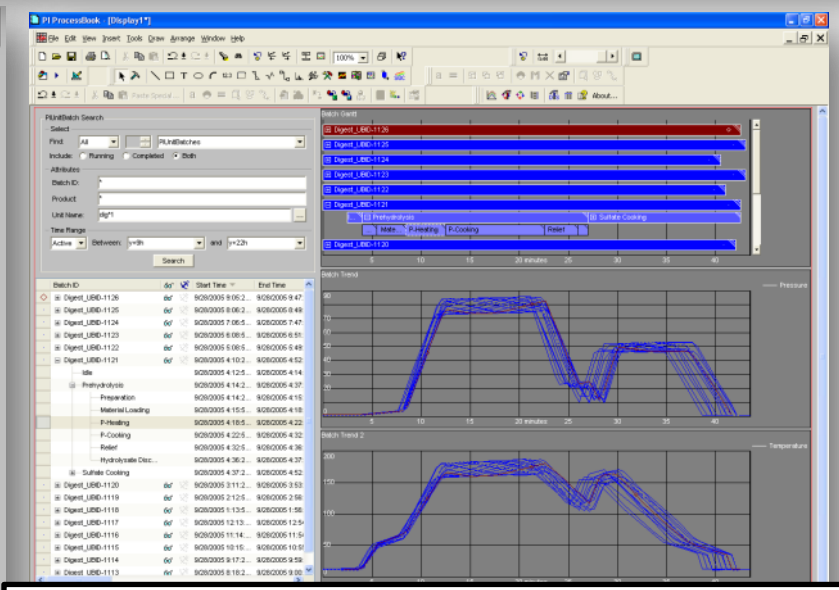


Critical Process Parameters Across Batches





Multi-Site/Multi-Factory Process Visibility



Batch Trends / Golden Batch Analysis

PI AF

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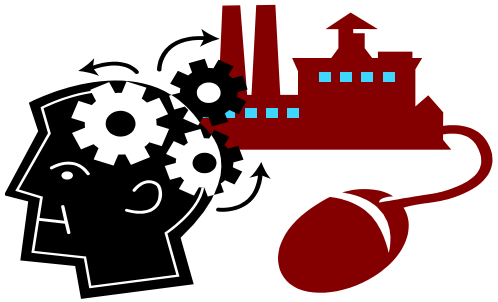
PI AF

- A database of user configured "Process Object Models" called elements which represent the logical components – the assets – in your process.

- The elements form a data directory "middle layer" for PI System clients which **transforms PI System data into information.**



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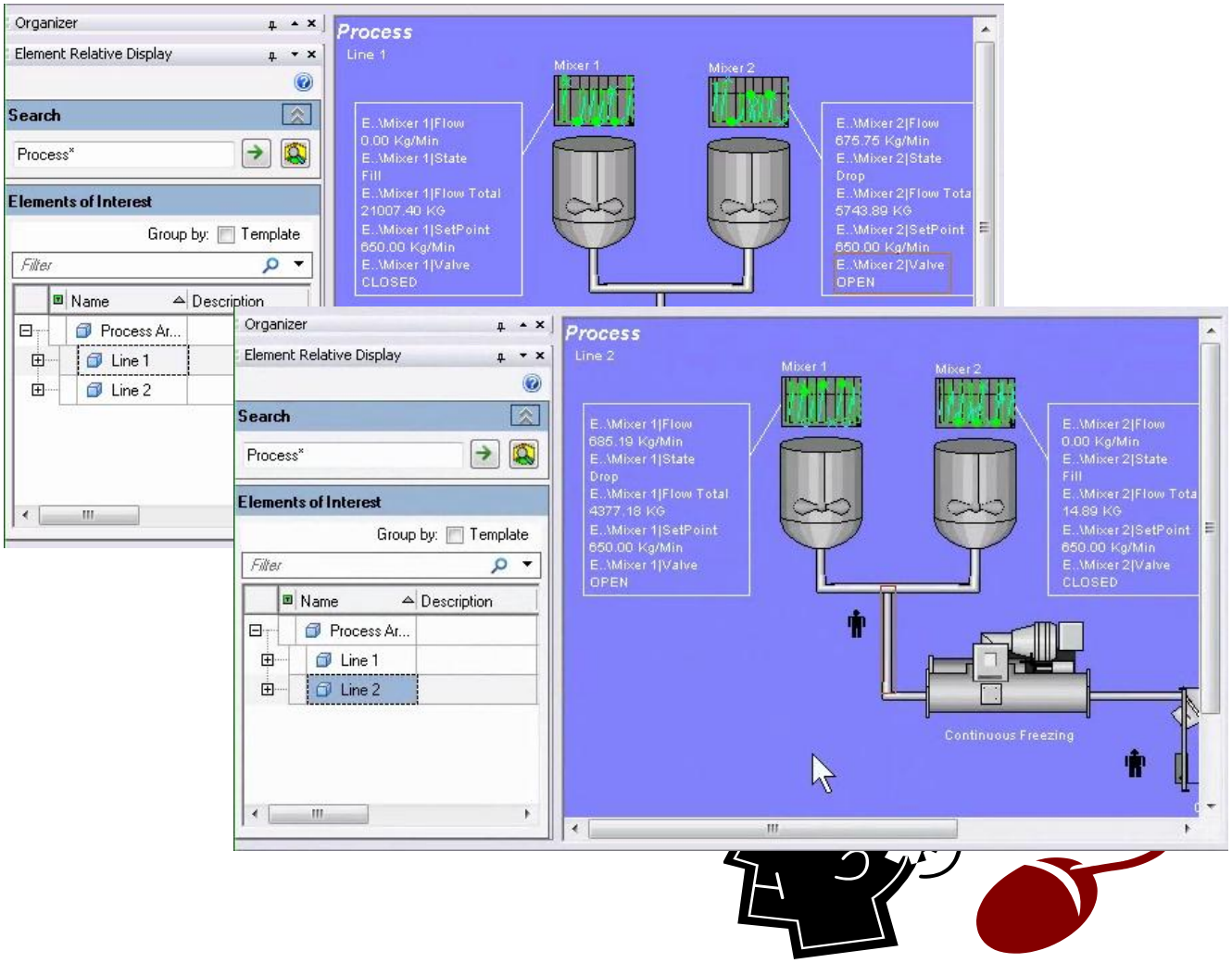
PI AF Example - Module Related Display



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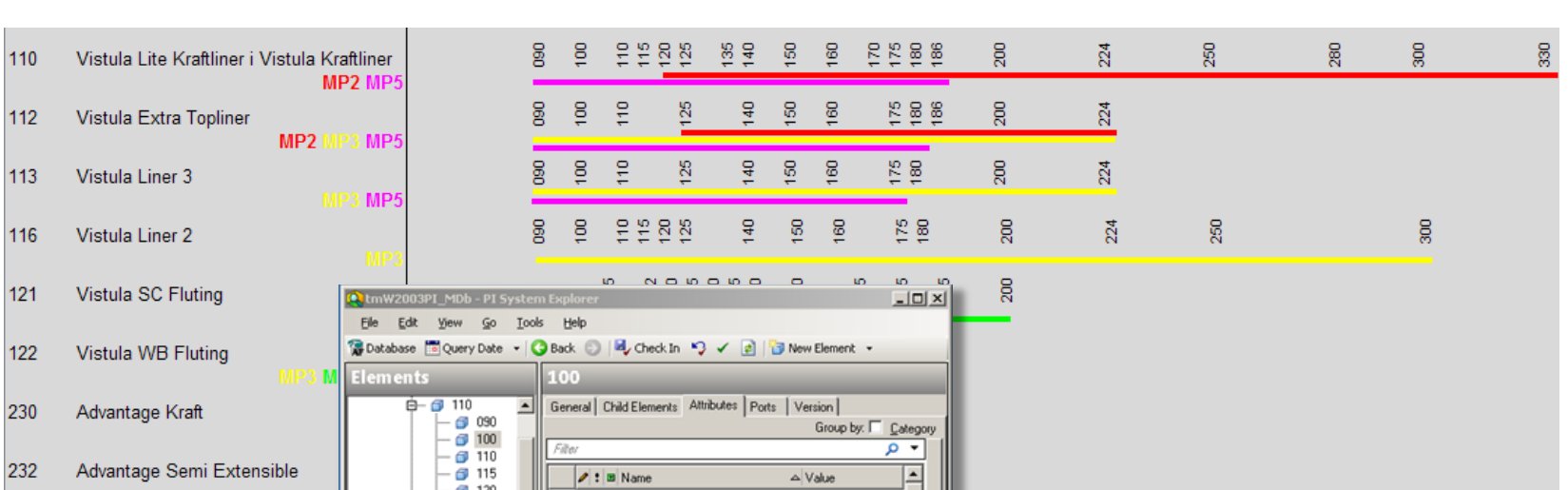
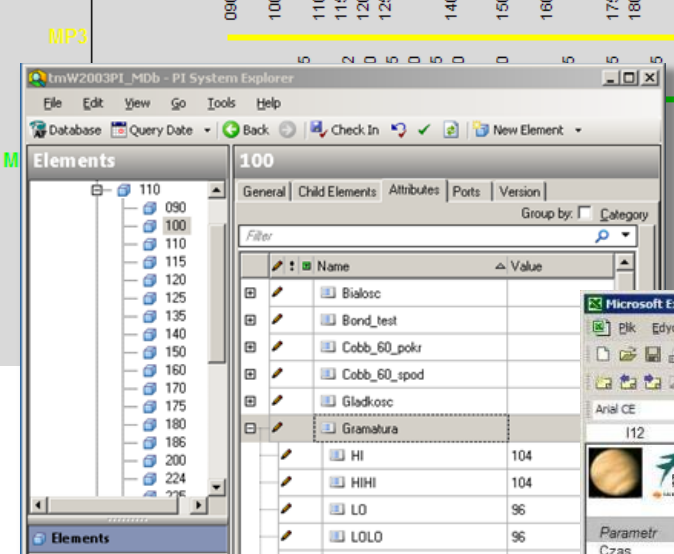
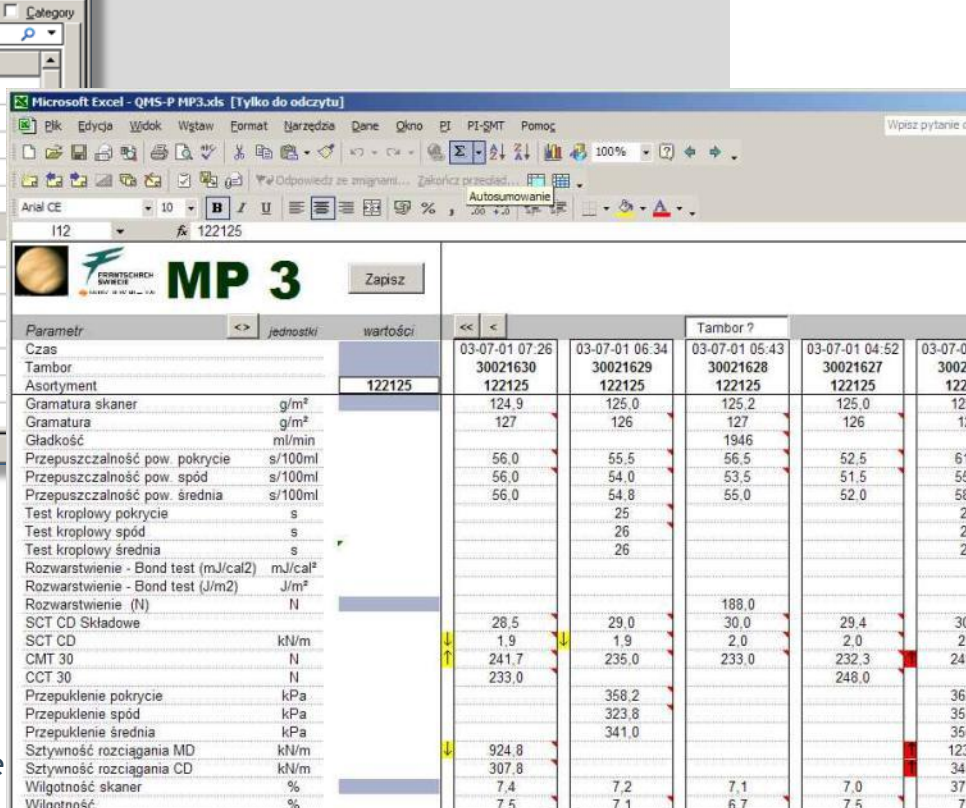
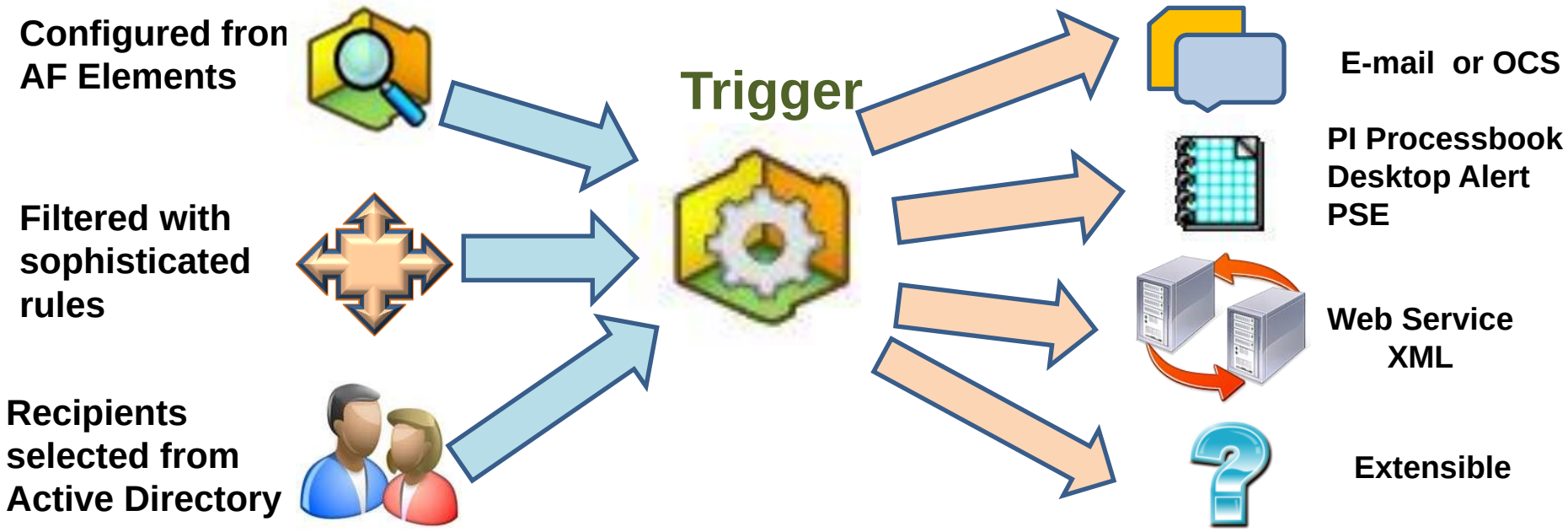
PI AF Example – Product specification







PI Notifications - Overview



Features

- Templates
- Custom Content
- Acknowledgement and Escalation

Delivery Channels

- User can create their own
- OSIsoft vCampus – XML & Skype

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Thank you

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