

# The Janssen Journey to One Enterprise PI System for Real Time Value

Presented by **Carl Van Laer** 



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## Agenda

# Introduction - SPIRIT & Standards

- Use Case #1 Global PI AF and Process visualization
- Use Case #2 Energy and Utility Monitoring
- Other Active Initiatives
- The Next Steps









- Drive the Use and Standardization of the PI System
- Janssen R&D and Manufacturing
- Alignment on Deployment, Content, Execution and Visualization
- Both Process and Facility Data
- Key enabler to initiatives like CPV, Process Visualization and Energy & Utility Monitoring

## **SPIRIT Scope**

Standardize Content	<ul><li>Naming Conventions</li><li>PI AF Templates and Structure</li></ul>
Standardize Execution	<ul><li>PI Interfaces</li><li>Maintenance, Support and Governance</li></ul>
Standardize Visualization	<ul><li>Process Visualization and CPV</li><li>Energy and Utility Monitoring</li></ul>
Standardize Deployment	<ul><li>Architecture</li><li>Qualification</li></ul>

## **SPIRIT** Vision



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### **Global PI AF and Process Visualization – Define the Standard**



- Connect Standardizing Groups for CPV, Recipe Delivery and Execution Systems
- Connect Business and Technical Owners
- Review Platforms: Small Molecule, Large Molecule, Solids, & PDMS
- Identify Key Unit Types and Unit Process Parameters

### **Global PI AF and Process Visualization – Implement Global PI AF**

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- Global Server Create a Global Asset Framework DB
- Implement Global Unit Templates and PI AF Element



## Global PI AF and Process Visualization – ProcessBook Displays &



Init of Measure

## **Global PI AF and Process Visualization – Final Livepoint Displays**

#### PHARMACEUTICAL COMPANIES





- Livepoint Web Based PI Client Tool
- Templates One View for each Unit Class
- Any Unit Reactor, Press, Dryer, Coater, Blender, etc
- Any Platform API Chem, Bio, R&D

### **Global PI AF and Process Visualization – Key Functions/ Benefits**

VISUALIZATION	<ul> <li>User can select any unit across any site and visualize the data in real time, historically or across any number of batches, including multiple batch comparison</li> </ul>
LAB Vs PRODUCTION	<ul> <li>Lab Unit process performance can be easily compared to equivalent manufacturing performance</li> </ul>
DYNAMIC DISPLAYS	• Livepoint Application is dynamically linked to Global PI AF DB. When DB is updated, visualization screens auto refresh with applied changes
SCALABILITY	• Addition of new units or new sites is simple and carried out on PI AF only.
Location Independent	• Data from PI Servers across the globe is visualized from anywhere on one simple application. One PI AF interconnects the enterprise data.

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### Energy & Utility Monitoring – Hierarchical & Template Approach



**Recreate** – Leverage templatized approach used for Process Visualization

**Reuse –** Utilize same designated global PI AF Server

**Connect** – Facility Owners, Energy Campus Groups and ISO Approved Energy Sites

**Review** – Local requirements at site level and align with global business energy initiatives

**Identify** – Meter types and establish templates

## Energy & Utility Monitoring – Link PI AF Elements with View Templates



## **Energy & Utility Monitoring – Global Enterprise Solution**



- Enterprise User access to all sites running on system
- Web link One link for all user, both global and local
- Scalable Several sites identified for integration.

## **Energy & Utility Monitoring – User Interaction**



- Interaction Access any meter/ any site on PI System
- Trends Full Trend interaction. Real time and historical
- KPIs Integrated Metric and Limit capability
- View Every meter at every site in the same way

## **Energy & Utility Monitoring – Scalable and Flexible**



- **Metrics** Rolling Efficiency Calcs, flexible formulae, tag integration.
- Views Front End Public Views and Engineering Views
- **Reports –** Capability to report contributors based on cost or consumption
- Green Energy Contributor Templates – Wind Turbine

## **Energy & Utility Monitoring – Key Functions/ Benefits**

VISUALIZATION	<ul> <li>See any meter on any site in the same way</li> </ul>
ENERGY REVIEW	<ul> <li>Real-time and historical data review functionality</li> </ul>
DVNAMIC DISPLAYS	• Livepoint Application is dynamically linked to Global PI AF DB.
DINAMIC DISI LAIS	applied changes
SCALABILITY	<ul> <li>Addition of new meters or new sites is simple and carried out on PI AF only = Process Visualization approach</li> </ul>
Location Independent	• Data from PI Servers across the globe is visualized from anywhere on one simple application. One PI AF interconnects the enterprise data.

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### **Other Active SPIRIT Initiatives**



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- Other Active Initiatives



# **The Next Steps**

- Further collaboration with Technical and Business Systems Owners and establish integration of Standard PI AF and **Process Visualization** with Business Processes.
- Collaborate with Global Energy Owners and begin roll out of Energy and Utility Monitoring Solution to additional sites with PI System implemented.
- Connect with OSIsoft Technical Team and 3<sup>rd</sup> Party Manufacturers to complete implementation of PI Cloud Connect application. Integrate with Process Visualization Solution.
- Complete external access using **PI Cloud Access** and **Mobile Solutions** technology.
- Complete development of JNJ PI Playbooks & Standard Deployment Templates.

# **Benefits of standardization**

- Standardized PI System deployment & validation
  - 50% of the cost for server deployment / validation
  - Deploy visualization of new equipment / meters in minutes (when tags are available)
  - No software needs to be installed locally; no modifications need to be made sto software to visualize new components
- Standardized visualization
  - Enables a user works across products / enterprise
  - Is a requirement for batch comparison across the enterprise
- Energy management
  - Data is visualized across the globe consolidation on enterprise level
  - Created at ISO 500001 certified sites
  - Compare appels with appels standard calculations/view

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• IT MANAGER MANUFACTURING SYSTEMS

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