3 Important Criteria for Implementing a Process Historian with Experion® PKS

Choose a Solution that Integrates Key Elements of Plant Information Management, including Openness, Scalability, Availability, Data Integrity and Security
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TABLE OF CONTENTS

2 Introduction
3 Need for a Flexible and Reliable Process History Database
4 Requirements for Effectively Maintaining Plant Information
5 3 Important Criteria for Implementing a Process Historian
   — Automated Tag Maintenance and Configuration
   — Consistent and Efficient Data Collection
   — Expanded Visibility to Facility-wide Data
9 Selecting the Best Historian for Experion® PKS
10 Uniformance® PHD: Best-in-Class Features for Historian Applications
11 Conclusion
12 For More Information
Introduction

Reliable, accurate process history is critical to enable operational excellence, regulatory compliance, and accurate business decisions. Inconsistent or missing data can result in significant financial losses or legal penalties. These critical data needs must be met in the lowest cost manner possible to ensure ongoing success.

Instead of Relying on a Third-Party Historian, You Need a Better Approach:

- What if you could automate the configuration and maintenance of process data tags, and thus reduce requirements for management of change?
- What if you could combine tag data and event history in a single dashboard to understand sequence of events?
- What if you could expand your control system’s data collection capacity to enhance the efficiency of engineers, operators and managers?
- What if you could use advanced analytics to proactively detect equipment and process issues?
The profitability of any industrial facility depends in large part on operational continuity or uptime. Plant operators need technology to detect and then prevent unplanned shutdowns due to upsets or abnormal situations. This capability results from the real-time collection and analysis of all reportable operating data.

Need for a Flexible and Reliable Process History Database

The challenge is to ensure large volumes of production information can be provided to the business without generating extra data management work.

- Enhance operational efficiency across multiple systems and sites
- Enable real-time monitoring of critical production processes
- Optimize collection and storage of valuable plant data
- Ensure greater overall data security and reliability
- Enhance decision-making by operators, engineers and managers
- Improve incident investigation and fault analysis
- Increase flexibility for plant reporting and regulatory compliance
- Tighten integration to business and manufacturing systems
- Expand visibility across the business supply chain
Requirements for Effectively Maintaining Plant Information

The main question for process plants is how to optimize data analysis to increase revenue and reduce losses. Most sites have multiple isolated data sources, islands of automation, and duplicated analysis tools.

Plant historians play a critical role in engineering and business analytics. They enable process monitoring and engineering analysis, as well as incident investigation using process data and events. The historian also provides an archive for regulatory and other reporting, as well as interfaces for integration to business and manufacturing excellence programs.

Experience Shows Not All Historians Are the Same

Around the world, industrial organizations have found that plant-level historians provide a manageable, flexible solution to their critical data management needs. However, users should be aware of several important criteria when choosing a process history database solution.
3 Important Criteria for Implementing a Process Historian with Experion® PKS

1. Automated Tag Maintenance and Configuration
   Traditional historian maintenance is performed through periodic or on-demand Management of Change (MOC) processes.

2. Consistent and Efficient Data Collection
   Today’s plant historians deliver value by providing long-term storage of potentially very large amounts of data.

3. Expanded Visibility to Facility-wide Data
   For the industrial workforce, access to real-time data is necessary to maintain the highest level of performance.
Criteria 1: Automated Tag Maintenance and Configuration

Traditional historian maintenance is performed through periodic or on-demand Management of Change (MOC) processes.

This effort requires significant manual intervention and can take days before process history data is available to engineers and managers. In addition, it may often involve error-prone manual steps resulting in incorrect data collection.

Process plants can solve these problems with a solution that automates the management of tag configuration changes between the control system and process historian.

Eliminate the Need for Rigorous Manual MOC Processes

- Tag Synchronization enables faster startup of the plant historian
- Use of PHD’s Experion® Tag Synchronization simplifies startup and creates the entire tag database automatically
- “Hand shake” between the historian and DCS eliminates the risk of manually-generated errors, while supporting consistent data and ensuring all tags comply with plant-specific requirements
- Automating ongoing tag maintenance allows for allocation of key resources to other tasks
- Changes to Experion® points are available in PHD in a matter of a few minutes
Criteria 2: Consistent and Efficient Data Collection

Today’s plant historians deliver value by providing long-term storage of potentially very large amounts of data. However, this data must be consistently collected and stored without incurring undue load on the control system.

Industrial organizations can streamline plant data collection by employing a historian that is tightly integrated with their Distributed Control System (DCS) architecture.

Optimize Data Management Without Impacting the DCS

- PHD’s Secure Experion® Link enables data collection from Experion® history without adding load to the process control network
- Integration with the Experion® historian ensures data recovery in the event of an outage
- Robust server fail-over protects the availability of crucial plant historical information
- Consolidated Event Journal maintains long-term history for Experion® integrated with the Experion® event history for consistency and protection from data gaps
Criteria 3: Expanded Visibility to Facility-wide Data

For the industrial workforce, access to real-time data is necessary to maintain the highest level of performance.

To convert information into actionable knowledge, they need the right data, from the right sources, at the right time.

Plant engineers not only require the ability to monitor and optimize their own unit, but also a high level of visibility into data that may not be available locally. This can include laboratory data, planning data, or data from external control systems.

Improve Access to Valuable Data to Empower Plant Personnel

- Correlate events such as alarms, operator changes and notifications with traditional process history
- Transform islands of process and business data into valuable information
- Provide operations staff with the timely data needed to better align, plan, execute, and improve business results
- Gain full visibility into all plant data without the need for special training or tools
Selecting the Best Historian for Experion® PKS

Plant process control departments must collect data from all facets of their operation and transform it into easily usable, high-value, widely distributed information. But, in many cases, they cannot rely solely on a standardized, enterprise-level historian residing above the plant network.

The smart choice is Honeywell’s Uniformance® Process History Database (PHD).

The Right Solution for All Levels of the Enterprise

Uniformance® PHD provides advanced history for Experion® PKS with unsurpassed performance, integration and reliability. It offers an infrastructure that can unify existing control systems and applications across multiple sites. When integrated with a peer historian at the enterprise level, Uniformance® PHD enables tag synchronization across all layers while supporting high-volume, short-term data at the plant level and lower volume, long-term data for the business.
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Uniformance® PHD: Best-in-Class Features for Historian Applications

• Scalability from a single plant application to a Manufacturing Execution System (MES) platform
• Data collection from disparate sources into a single, easily expandable database
• Robust distributed data collection and management capabilities

• Centralized data storage for Experion® PKS and other control systems
• Consolidated Event Journal for long-term storage of events such as alarms, operator changes and notifications
• Flexible data aggregation and on-demand calculations
• Tag Synchronization solution to minimize cost to build and maintain tag database
• Seamless integration with Experion® to protect against data loss
• Versatile tools to support incident investigation and analysis
• Intuitive approach to applying engineering and business knowledge to data
• Intelligent data processing to ensure decisions are made faster and more consistently

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Conclusion

Operating companies must find a reliable solution for archiving process history data, and also retrieving it for use in trending, quality analysis, troubleshooting and other critical tasks as needs arise.

Honeywell has responded to this requirement by tightly integrating robust process history functionality directly to Experion® PKS, enabling operators, engineers and plant management to analyze performance of the entire operation from a single location.

Achieve Better Process and Business Performance

For Experion® PKS users, it only makes sense to implement Uniformance® PHD as a plant historian. This solution offers the lowest startup and ownership costs, and its Consolidated Events Journal provides a unique capability to conduct event investigations not only across continuous data, but also operator changes, alarms, and more.

Access to timely, accurate, and clear plant information inevitably leads to better, quicker decisions that improve operational performance, efficiency, and safety. Furthermore, the availability of advanced analytics allows operators to gain a deep understanding of the process, its variability, and how it can be improved.
For More Information

To learn more about how you can optimize your process plant historian, visit www.unifomance.com or contact your local Honeywell account manager.