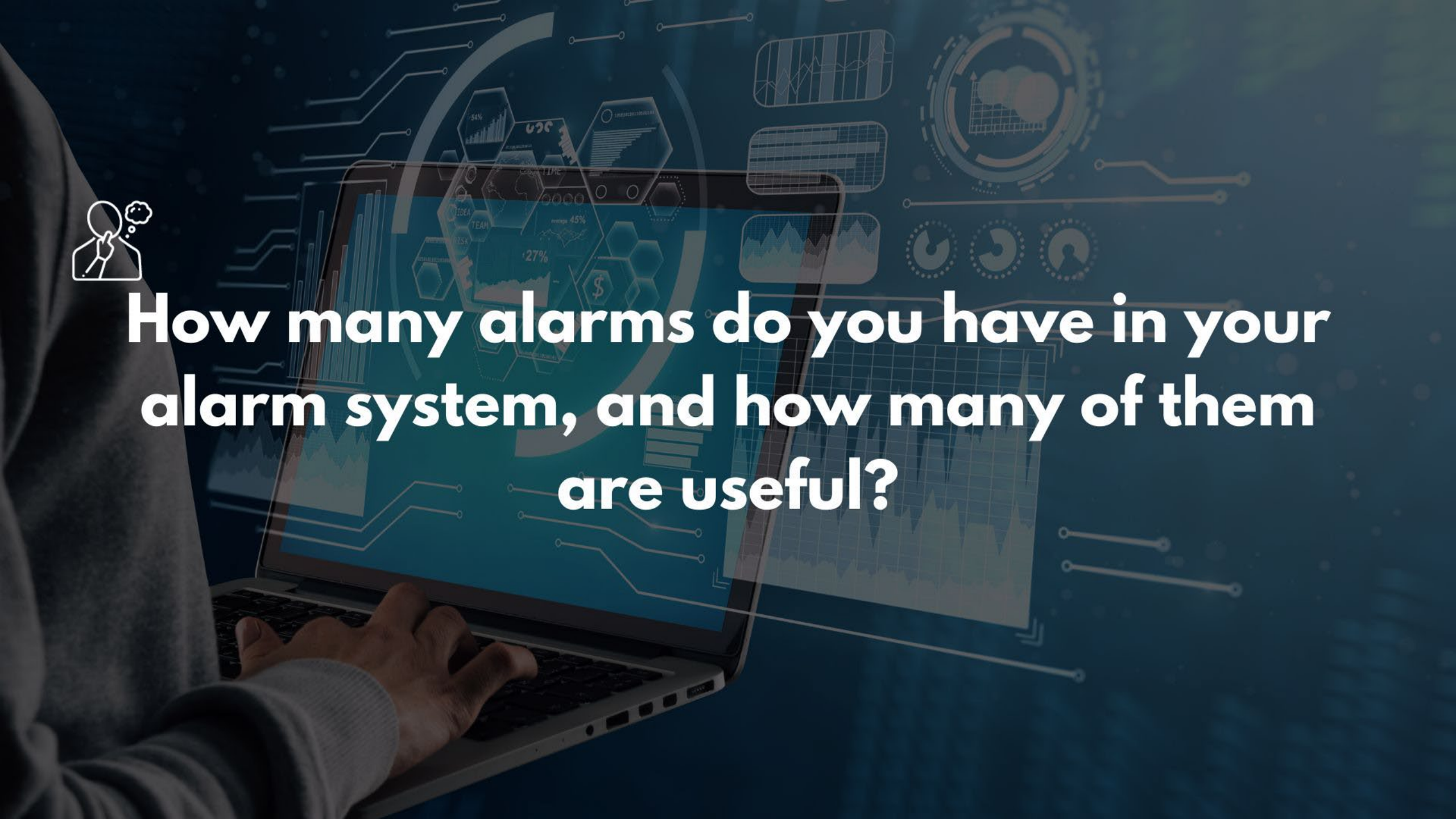
ISDN SOFTWARE BUSINESS

ISDN Industrial Alarm Management Solution



How many alarms do you have in your alarm system, and how many of them are useful?

Evolution of Alarm Management

Past Approach:

- Justification for each alarm was substantial.
- Alarms required physical space and were costly to install.
- Limited to critical process conditions.

CURRENT

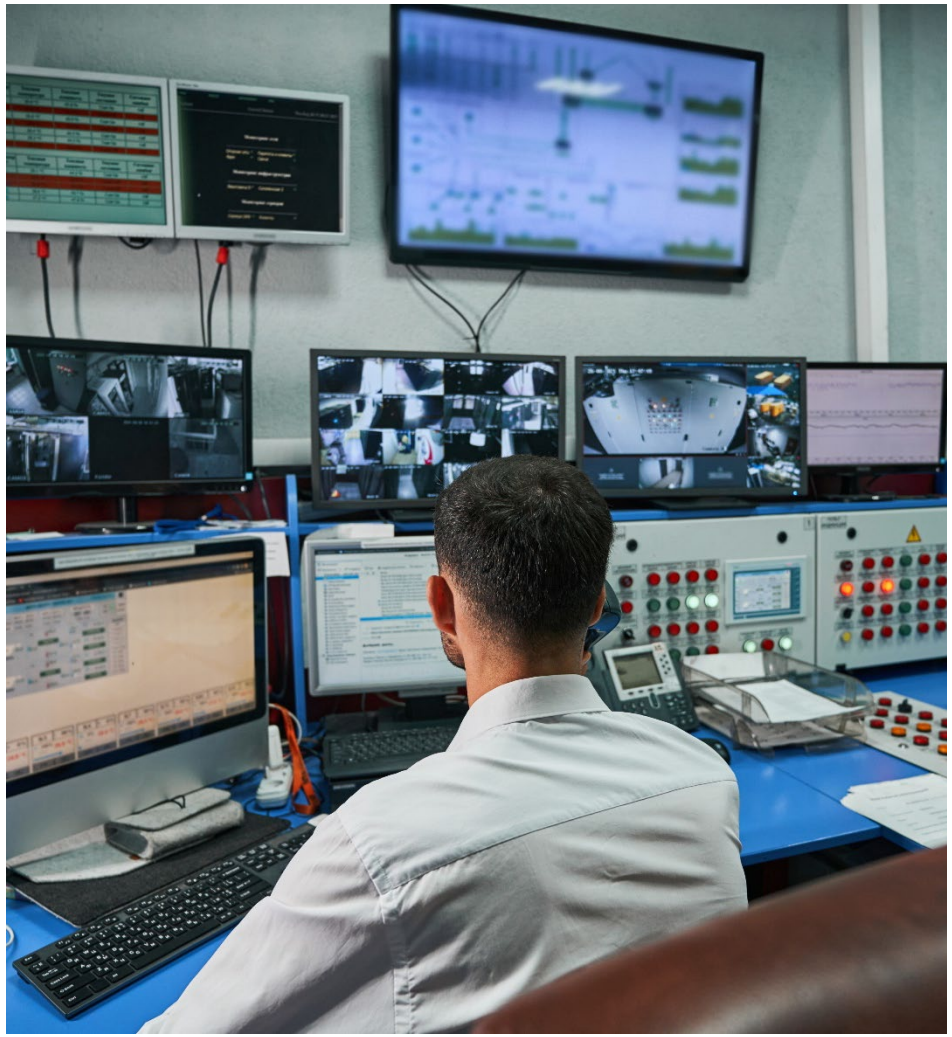
- Minimal investment for alarms; virtually cost-free.
- Alarms now cover a broad range of conditions, beyond just the abnormal.
- Alarm lists have become standard, driven by real-time events.
- Operators view the plant through the "window" of digital displays, not just physical indicators.

The Impact of Alarm Management Challenges

- **Overwhelmed by Alarms:** Operators may overlook critical alarms, leading to suboptimal decisions and potential masking of high-priority issues, risking plant shutdowns.
- **Floods of Alarms:** Excessive alarms can distract operators, causing delayed or incorrect responses to incidents.
- **Nuisance Alarms:** Frequent, non-critical alarms often get ignored or silenced, diminishing the alarm system's reliability.

Cumulative Effect:

- **Alarm systems lose effectiveness.**
- **Production faces unnecessary downtime, affecting profitability.**
- **Operators' situational awareness decreases.**
- **Increased operator stress and fatigue, jeopardizing safety and performance.**

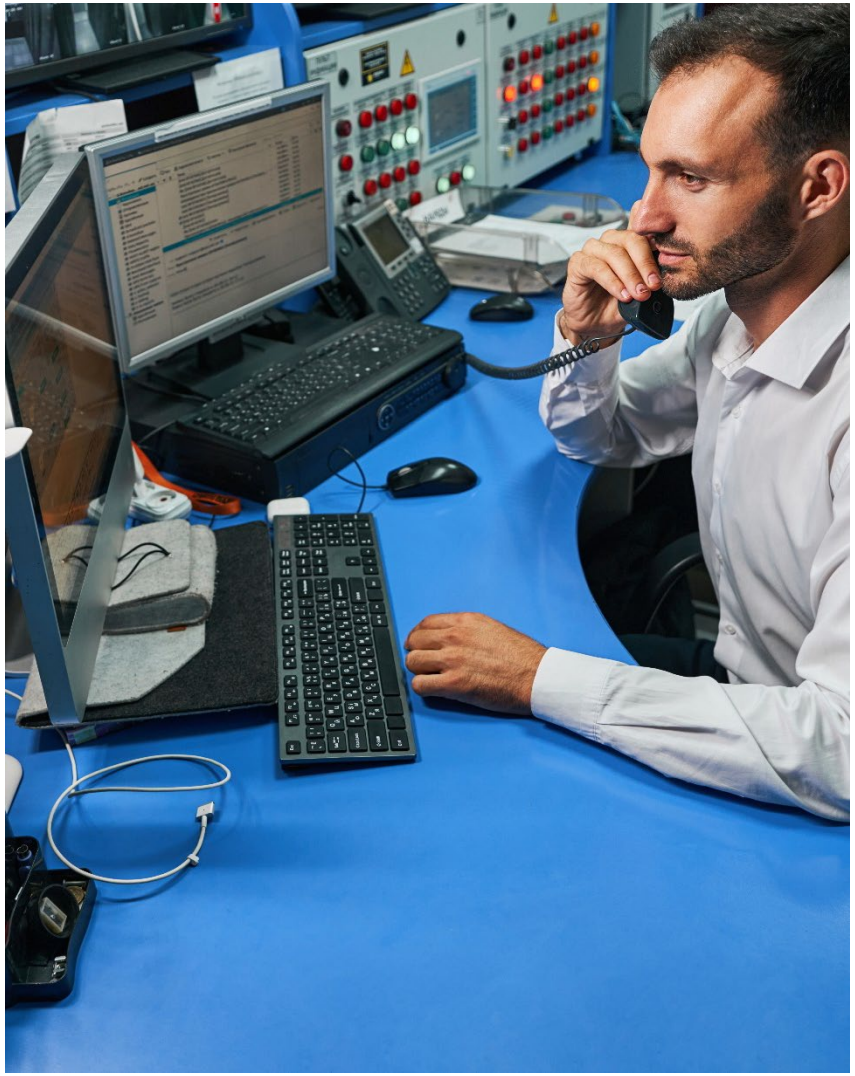


Standards Dictate the Need for Robust Alarm Management

- **The Drive for Standards**: Over the past three decades, various industrial incidents have highlighted the crucial role of alarm management in mitigating risks affecting safety, environment, and productivity.
- **Safety and Productivity at Stake**: Inadequate alarm management has been a key factor in incidents, impacting not just operational efficiency but also employee well-being and environmental safety.
- **Standards as a Response**: To address these challenges, the industry has developed several standards and guidelines

Standards:

- ISA 18.2: This standard incorporates recommendations from EEMUA 191 for managing and maintaining effective alarm systems.
- EEMUA 191: Provides detailed guidance on designing, managing, and procuring robust alarm systems, setting the benchmark for best practices.
- BS EN 62682: Represents the British standards for alarm system management within the process industries, aligning with global best practices.



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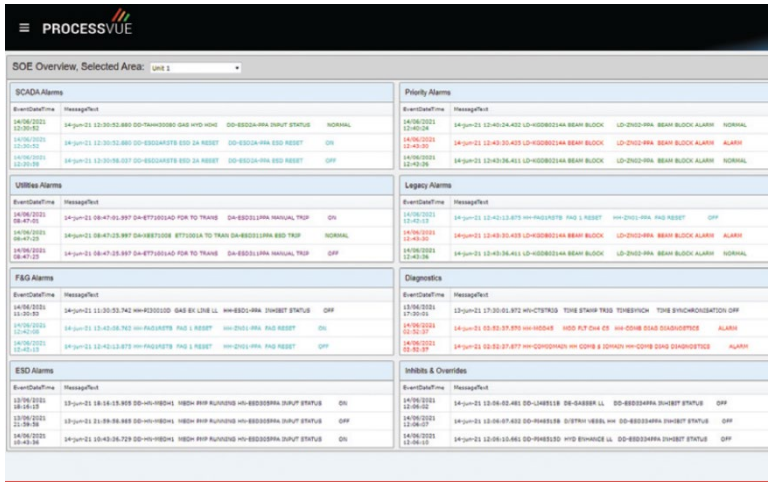
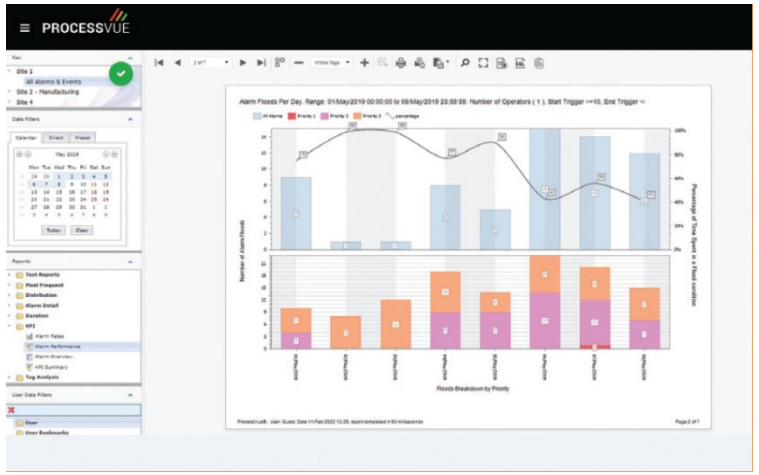
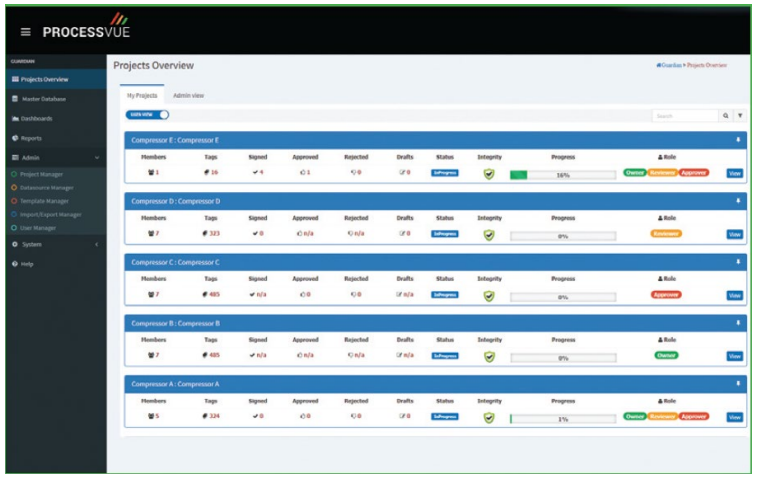






ProcessVue SOE

Realtime view of Alarms & Events. Centralizes and archives alarm and event data, providing a foundational view of operational alerts.

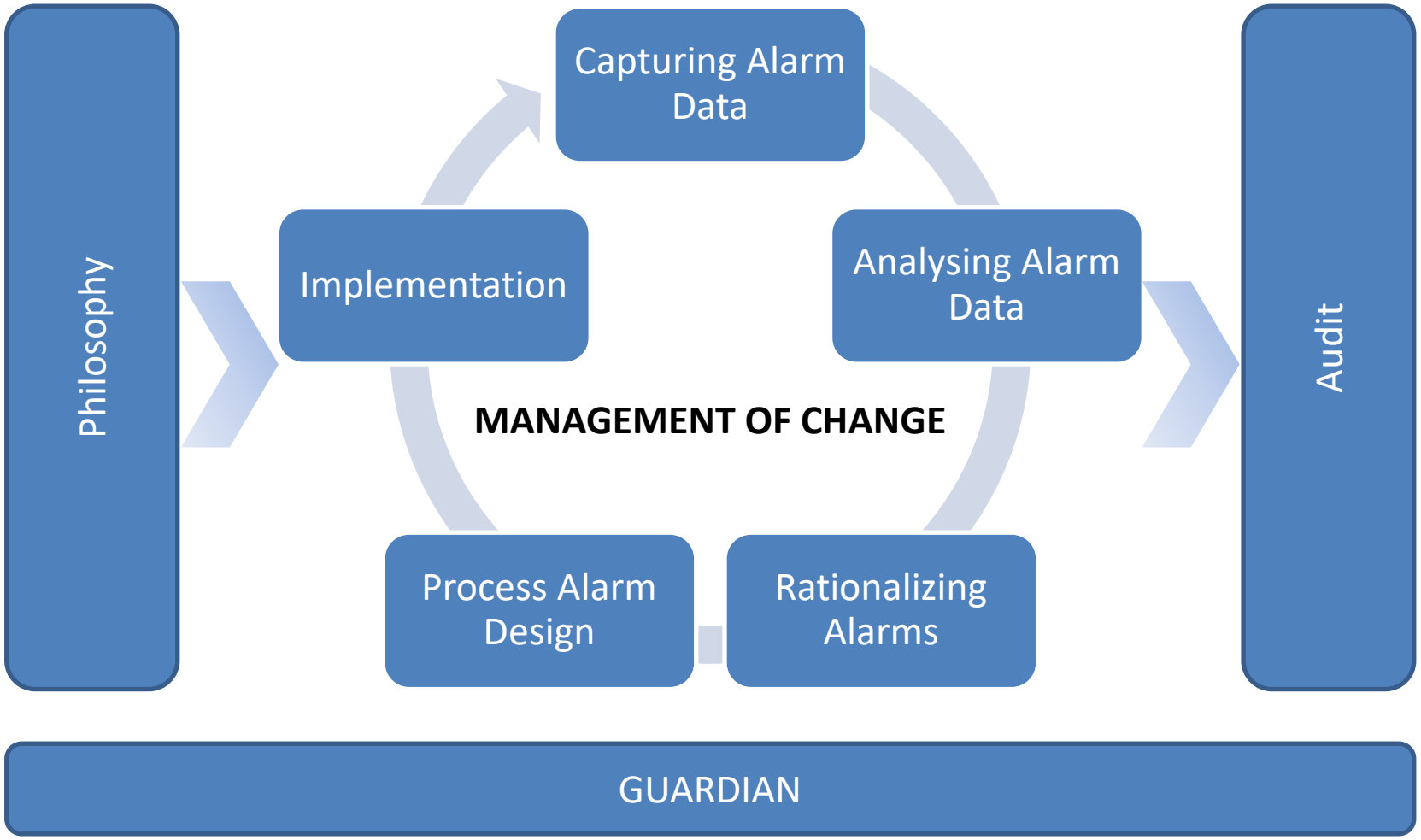
ProcessVue Analyser

Delivers advanced analysis with a rich feature set for KPI monitoring and reporting on alarm data. Benchmarking your alarm system to industry standards.

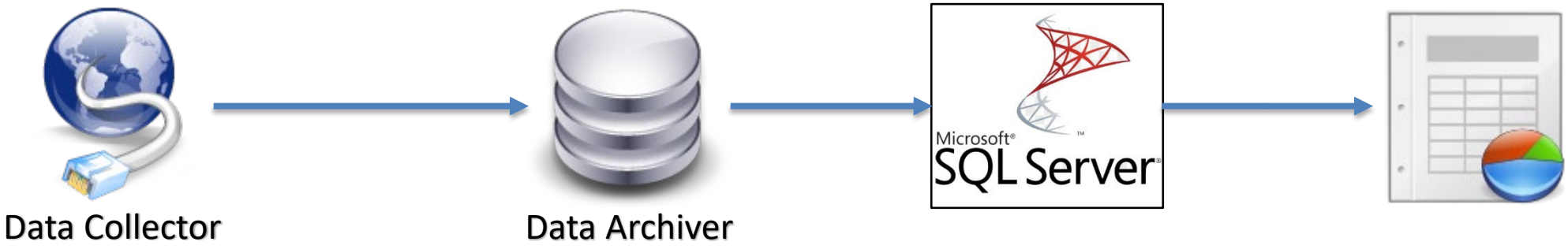
ProcessVue Guardian

Master Alarm Database, streamlining alarm management and rationalization with integrated tools for efficient, safe, and compliant operations.

Continuous Improvement of Process Performance using Guardian

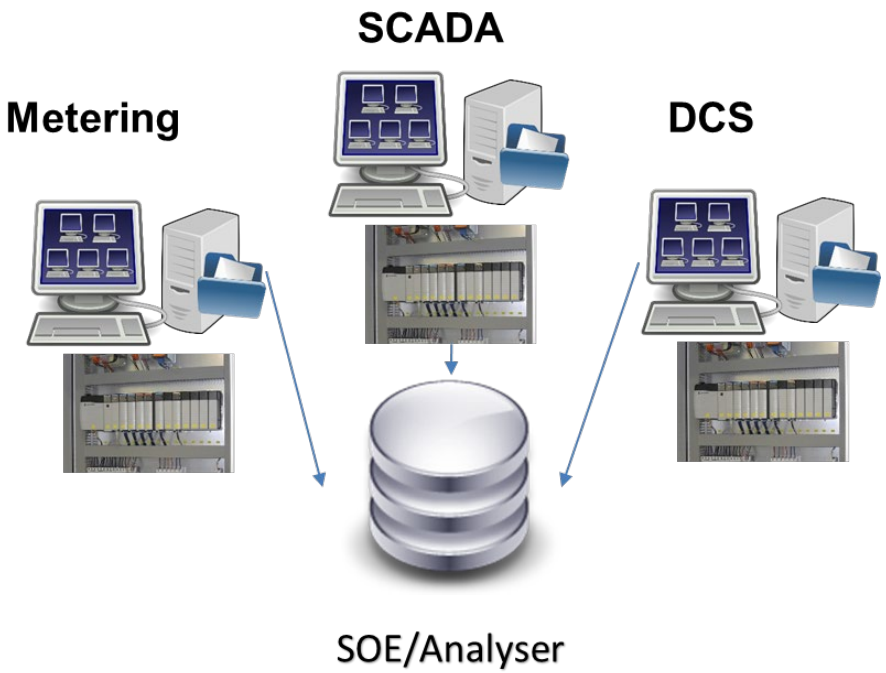


ISDN Industrial Alarm Management - ProcessVue SOE



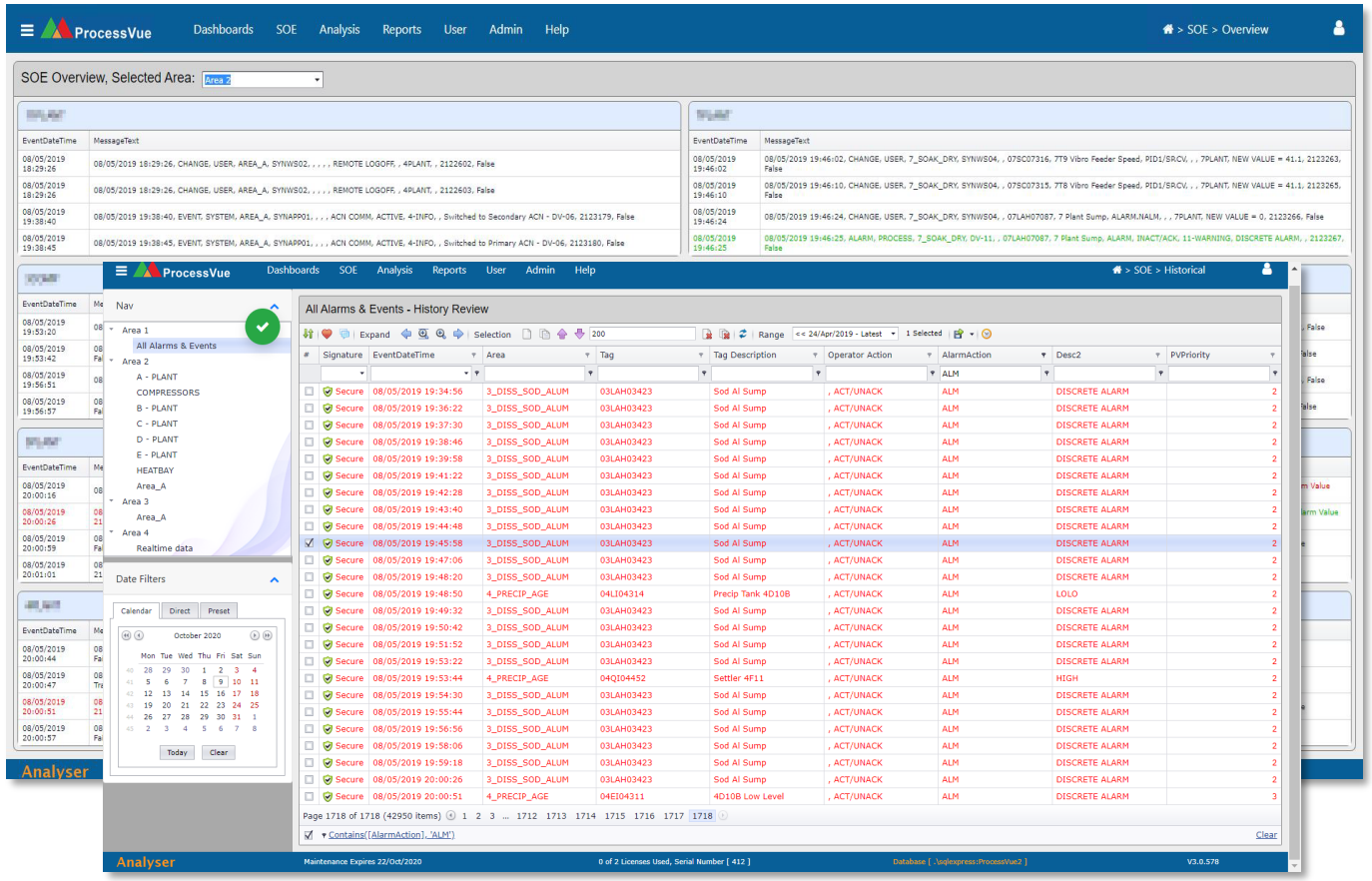
A central alarm collection, storage and management tool for many disparate systems including:

- SCADA Systems
- Distributed Control systems
- Metering Systems
- Fire & Gas detection systems
- Building Management Systems
- Emergency Shutdown systems



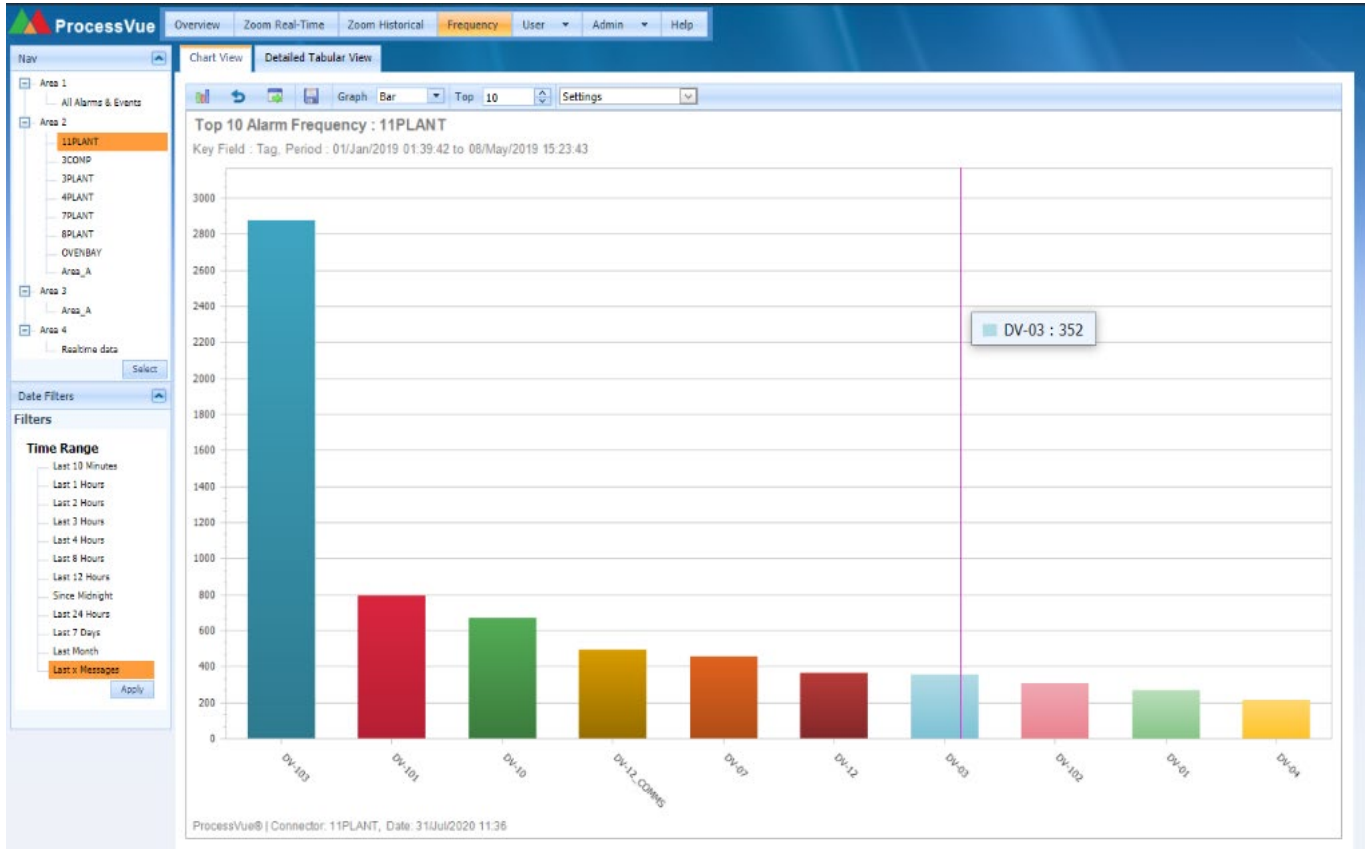
ISDN Industrial Alarm Management - ProcessVue SOE

- Connectivity options:
  - System Platform Historian
  - Intouch (WWALMDB)
  - OPC A&E Subscription
  - SQL Database Connectivity
  - Others…
- Stores 2 Million Records per input – Higher retention with Purge Archive
- Provides a unified view of the alarm data being collected by the system
- Organise alarms by, Area, Priority, Equipment or Operators.

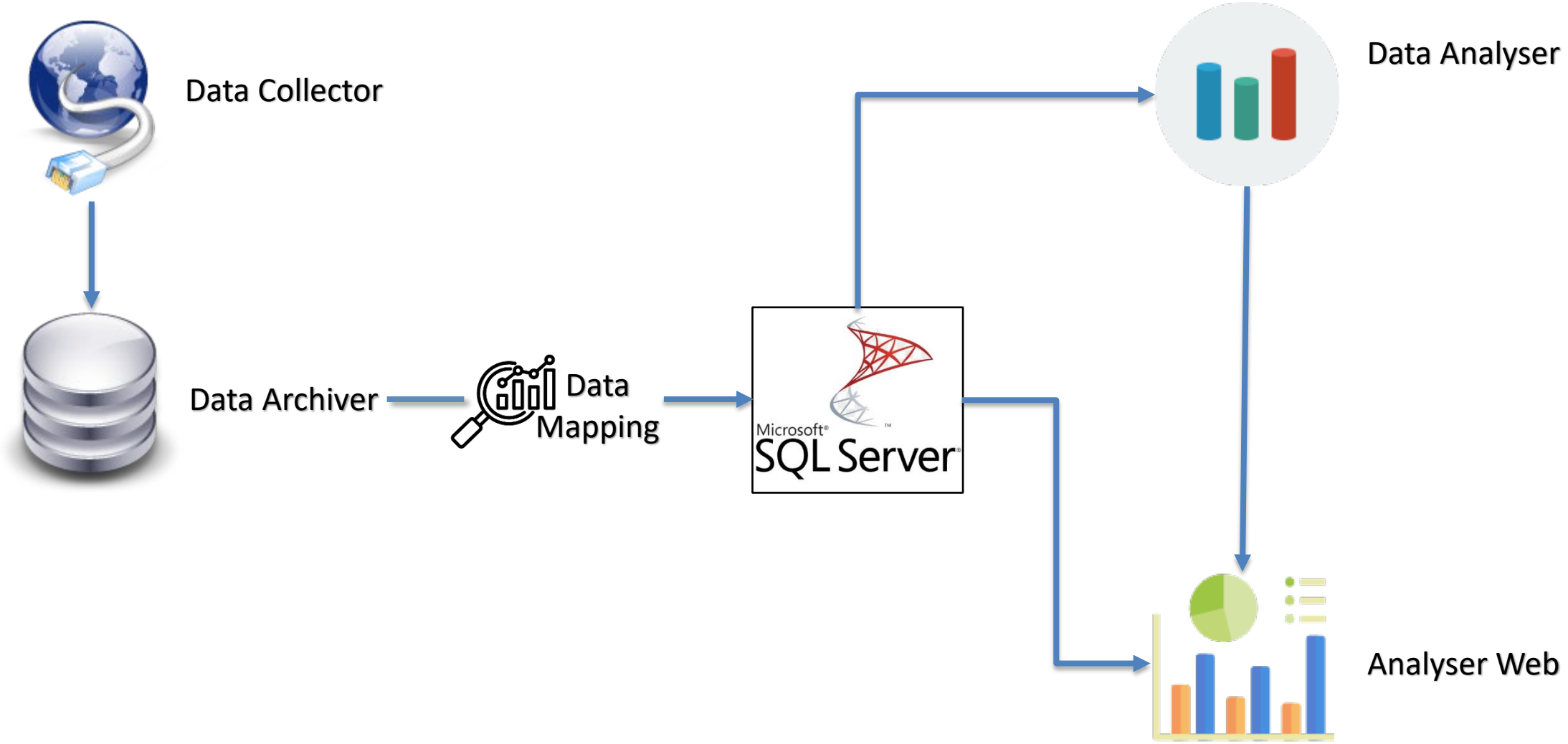


ISDN Industrial Alarm Management - ProcessVue SOE

- Powerful search allows users to filter out unwanted information by exception using parsed fields
- Allows the export of data to industry standard formats such as PDF, Excel, RTF or CSV
- Provides Interactive Frequency Analysis as an additional module
- Allows drill down to:
  - Month
  - Week
  - Day
  - Hour
  - Minute

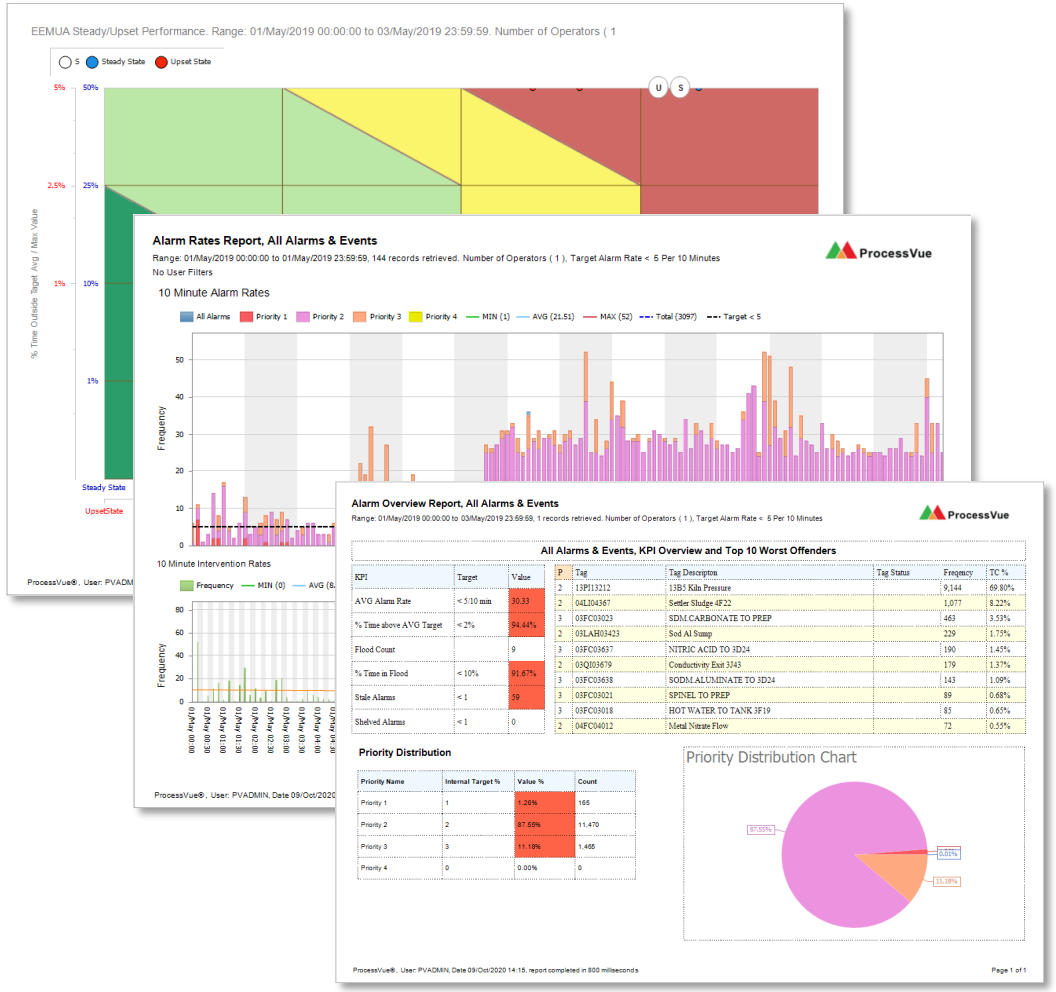


ISDN Industrial Alarm Management - ProcessVue Analyser



ISDN Industrial Alarm Management - ProcessVue Analyser

- Enables benchmarking of your alarm system against industry standard KPI measurements. (ISA 18.2, BS EN 62682 and EEMUA 191)
- Identifies nuisance alarms such as Most Frequent, Chattering and Fleeting and provides intelligence to remediate against them
- Provides Realtime KPI dashboards
- Contains SOE functionality
- Suite of reports, provides intelligence on Alarm System Performance, Most Frequent alarms, Alarm Floods, Alarm Details and many more
- Provides intelligence to remediate against nuisance alarms
- Can be configured to automatically generate and email reports when you want them (shift hand-overs)



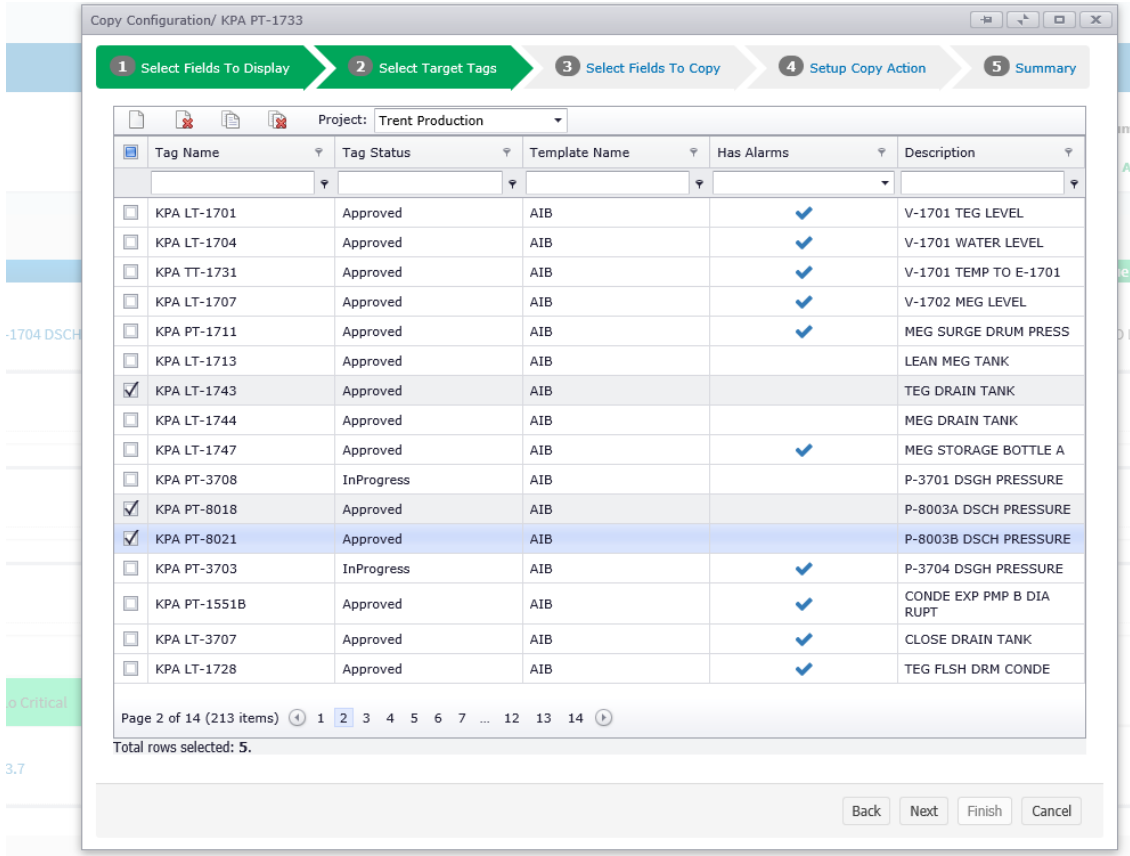
ISDN Industrial Alarm Management - ProcessVue Analyser

TEXT	MOST FREQUENT	DISTRIBUTION	ALARM DETAIL	DURATION	KPI	TAG ANALYSIS
Tag	**Alarms By Tag**	Alarm Status	Active Alarms	Top Alarm Duration Summary	**Alarm Rates**	Alarm Pattern
	Alarms By Tag While Shelved	**Priority**	**Stale Alarms**	Alarm Duration Detail	**Alarm Performance**	
	Interventions By Tag	Plant	Shelved Alarms	**Alarm Flood Duration Detail**	**Alarm Overview**	
	Shelved By Tag	Plant Area	**Chattering Alarms**	Operator Response Duration Summary	**KPI Summary**	
	Acknowledgements By Tag	Unit	**Fleeting Alarms**			
	Alarm Actions By Tag	Operator	Clean Alarms			
		Console				

- **Industry Standard KPI**

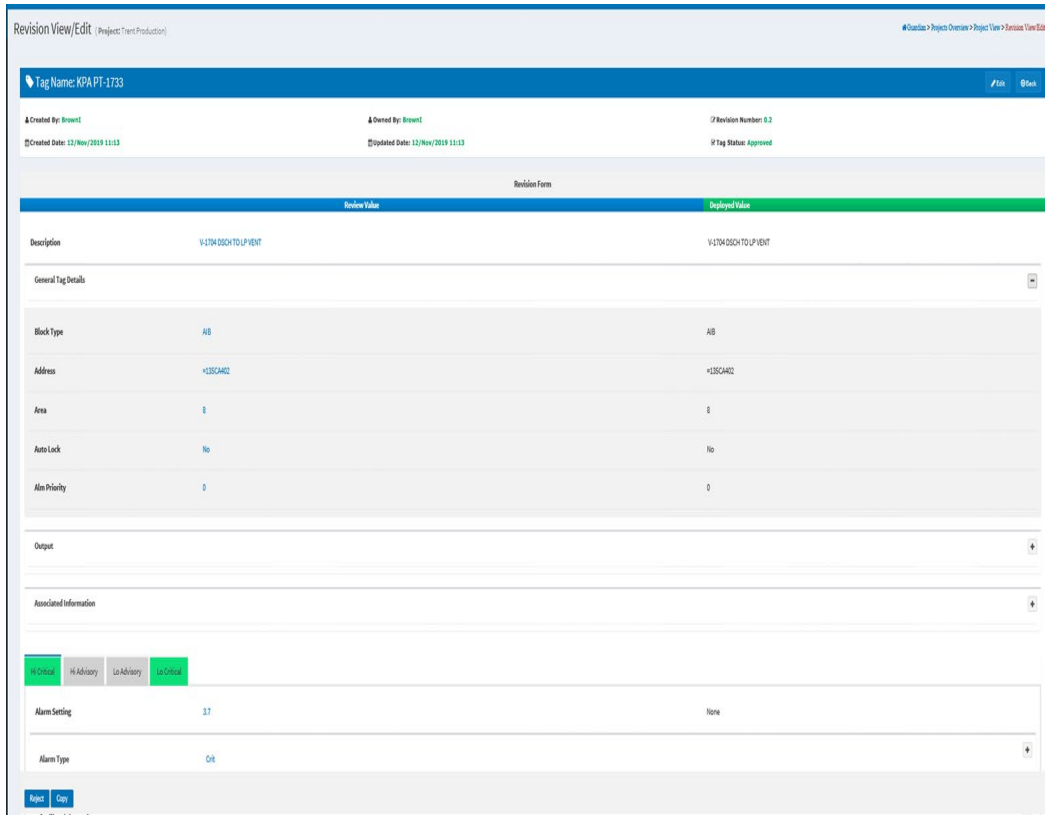
ISDN Industrial Alarm Management - ProcessVue Guardian

- Master Alarm Database (MADb) provides a central repository for alarm configuration details
- Productivity tool set, designed to reduce alarm rationalisation and documentation time.
- Produce an alarm response manual to assist operators take the right actions against alarms.
- Guardian's workflow ensures all alarms are reviewed and approved before they can be deployed.
- Projects are used to organise rationalisation activities, and only people assigned to a project can make changes to the alarm settings



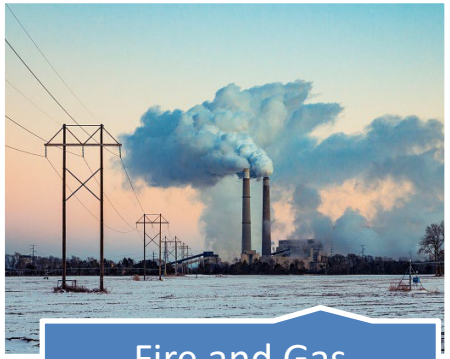
ISDN Industrial Alarm Management - ProcessVue Guardian

- Alarm parameters are exposed through custom templates, decide what information you want to present to end users.
- Templates show both the reviewed parameters and live values allowing you to compare between the two.
- Edited alarm parameters are highlighted so you know what changes have been made.
- Guardian includes information from your alarm philosophy document. Ensuring everyone rationalises alarms in a consistent manner, in accordance with your alarm philosophy.
- Monitor your rationalisation progress through a series of reports and customisable dashboards



Applicable Markets and Industries

Oil and gas



Fire and Gas detection

Pharmaceuticals

Power Generation

Refining and Chemicals

Metals, Mining and Minerals

Manufacturing

Case Study – Premier Oil's Balmoral

Client:

- Premier Oil, UK; operates Balmoral facility in North Sea.

Challenge:

- Frequent alarm system outages; 30,000 monthly alarms across multiple systems.

Solution:

- Installed ProcessVue for ease, reliability, and quick implementation.

Results:

- Zero outages post-installation; user-friendly with advanced reporting.

Benefits:

- Improved safety, efficiency, compliance with EEMUA 191 guidelines.

Impact:

- Enhanced alarm management, continuous data logging, operational safety at Balmoral facility.

AkzoNobel

Interconnector

VALE

EDF ENERGY

TOTAL

e·on UK

OXY

AIR LIQUIDE

KNAUF

MILLIPORE

HIMA-SELLA

Drax Power Limited

South West Water

BRUNEI

SSE

PremierOil

Network Rail

Sellafield Ltd

gsk

Lilly

ISDNHoldings

Thank you