



Case Studies:  
Alarm System Improvements – January 2022

EXPERTS IN INDUSTRIAL AUTOMATION

## Alarm System Improvement

Following oversight by the regulator, an alarm system improvement programme was initiated by a major UK oil and gas operator.

We were requested to design and implement improvements to the alarm system on an offshore installation. The key objectives were to improve operator situational awareness by rationalising control room alarms, to improve the operator interface, improve abnormal situation management, and to achieve the client defined alarm KPIs.



### Result

Reconfiguration of the alarm system ensured that failure of a single operator workstation no longer resulted in the loss of alarm annunciation or visibility.

Following the implementation of an alarm shelving tool, the site operations team now have a safe and secure means to temporarily suppress nuisance alarms until the underlying problem can be addressed.

A 38% reduction in configured alarms was achieved following the successful completion of the alarm rationalisation workshops.

### Scope

Development of a Master Alarm Database providing a list of all alarms and associated attributes to underpin the alarm system improvement programme.

Development of an alarm philosophy to establish the basic definitions, principles, and processes to design, implement, and maintain the alarm system.

Conduct alarm rationalisation workshops to evaluate all existing alarms against principles established in the alarm philosophy document, to qualify which are legitimate alarms, to specify their design, and to capture rationale such as cause, consequence and corrective action to define the expected operator response.

Specification of an Alarm Shelving Tool to provide the operator with a means to manage nuisance alarms safely and securely.

Specification of an Alarm Response Tool that provides the operator with the alarm and tag information, including likely cause of alarm, correct operator response, and time to react.

Development of HMI improvements to enhance the operator's situational awareness.

Specification of alarm grouping and dynamic suppression modifications to help reduce alarm flooding events.

## Contact Details

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