Key tips for implementing effective performance standards management in SAP®

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Safety in all operations is paramount within the oil and gas sector. Ensuring that critical equipment is performing as required is a vital component of safe operations. The most effective way to do this is by implementing an integrated maintenance management system. In addition to enabling preventative and corrective work management this system has to enable performance standards management in compliance with corporate and industry safety standards.

Overview

This brings about the following benefits:

- Reducing costs through increased equipment uptime
- Increasing compliance with global safety standards
- Safeguarding the welfare of employees, contractors and the environment
- Protecting and enhancing the brand's reputation by demonstrating that the organisation is operating in a professional and responsible manner

In Absoft's experience of working with SAP® in the oil and gas sector, which stretches over more than 20 years, we have discovered that there is no 'one size fits all' approach to any performance standards management project. However, we've put together some best practice tips, which you should consider prior to kick-off in order to ensure your project is successful.

1. Define performance standards clearly

Before you start it is essential to ensure that you have defined detailed performance standards for all your equipment. These standards have to be consistent throughout the business and all its assets.

Here is a useful checklist which will help you build a solid foundation for future monitoring and process improvement of performance standards:

- Which production processes are required on each asset?
- What systems are installed?
- Which production process does the system belong to?
- Which systems are fail-safes/redundant?
- Have you assigned all performance standards to every system?
- Have the performance standards been described in a measurable way?
- What are the allowable limits in which the system may perform?
- Have you clearly defined the corrective measures that should be taken if a system fails to perform within the allowable limits?
- What is the consequence of delaying or not executing inspection of corrective work within the advised period of time?

- What is the impact on integrity of the installation, the environment and the production process in case of failure or breakdown?
- How do you rank and prioritise inspection and corrective work?
- How do you monitor compliance with your performance standards?
- Have you got a complete database covering all of the above aspects?
- Is the database up to date?

Taking time to answer these questions allows you to define the scope of a project for implementing performance standards in an integrated maintenance management system. It usually shows that most of this information is managed in a fragmented way which doesn't allow monitoring of the compliance with performance standards in a consistent way, and paves the way within the organisation to see the need for change.

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2. Integrate your performance standards into your existing maintenance processes and systems

Historically, performance standards management has been conducted outside SAP or any other Computerised Maintenance Management System (CMMS). Companies use disparate databases to record actions against activities such as vibration monitoring or oil sampling. Often the processes and systems used for recording data differ from asset to asset too. This means that there is not one true source of information across the company and can lead to duplication of effort, unnecessary equipment downtime and lack of compliance with safety standards.

It is beneficial to bring all these activities and actions into the business's core CMMS or ERP system. This system becomes the 'book of record' for the work management aspects of maintenance activity for the whole company. This provides full visibility of maintenance data and delivers:

- Asset integrity through common work management procedures
- HSE compliant safety critical equipment reporting
- Improved cross asset/cross discipline reporting
- Integration of inspection/performance standards into overall maintenance and operations activities

3. Standardise result recording

One of the main barriers to achieving a consistent view of performance in your business is that inspection results are not captured in an accurate and uniform way. This is due to the complexity of the facilities that the performance management system is tasked to manage.

Every production process requires multiple systems or locations, each system can have multiple equipment attached to it and each equipment usually requires multiple measurement readings every so often.

Therefore, the huge amounts of information collected can be challenging for users to maintain.

Further, although the technicians involved are skilled in their area of expertise this doesn't mean they will record information in a uniform way. This is hardly surprising since different critical systems require different physical measurement. Also, unless result recording is defined in a consistent format, with all equipment and measurements listed and mandatory fields in place, human nature dictates that technicians might miss one of the required measurements and only partially complete the records.

This means that to be truly effective your system must be designed not only to enforce recording of results, but also to make it as uniform as possible and as easy as possible for your staff to use. Making result recording easy – but complete for each system - will improve accuracy, objectivity and resulting outputs.

Once result recording is standardised you can reap the following benefits in day to day operations:

- Automatic inspection work generation is based on actual measurements
- Workflow for failures can be automated ensuring the equipment is replaced or repaired in time
- Trending and predictive reporting becomes possible by taking uniform, accurate and timely measurements. This allows anticipation of equipment failure and buys more time to take action before an incident may occur
- The link between inspection work and inspection results, and mitigation and correction work will be visible and reportable giving a true view on the compliance status of the installation
- Failure causes, detection methods and resolution can be reported on allowing further improvements on the inspection regime

4. Provide detailed dashboards and ensure continuous monitoring of processes

It's all very well to set up the processes in the system but in order to make real improvements to asset and equipment performance you need to monitor regularly what information is held within the system and set up a continuous feedback loop process supported by key analytics and reporting. Reporting must provide transparency around key questions such as:

• What is the compliance status of my assets?

• What performance standards are we failing to deliver against?

• Where are the potential impacts and risks of continued failure to comply with performance standards?

• Which production processes may be affected by a failure?

• What priority should be given to key corrective maintenance work?

Providing clear visibility into these processes through real time dashboard reporting, with drill down capabilities, ensures that issues are quickly identified and dealt with, improving your company's performance.

5. Change management and training

Prior to embarking on your project it is important to have a plan in place which ensures that all relevant stakeholders buy in to the new way of doing things. Resistance to a project like this traditionally stems from the perception that it will result in more work for the technicians involved and will not deliver any real benefits. It is therefore vital that all staff involved in maintenance activities understand the need for change; why performance standards management is being implemented, their role in it, the benefits to them personally and to the business, and what they need to do to support others. Involving the relevant stakeholders in the project at an early stage can help with developing collective understanding, approaches and policies and creates a sense of ownership and familiarity among the people affected.

At a more basic level traditional IT training is required so that all users can execute in the system the daily tasks required of them. Don't let this be an after thought.

Failure to make training a critical component of your project can mean your business fails to capitalise on the benefits outlined at the beginning of this document as people do not understand how to use the system fully and the required data is not available. Since processes, SAP environments and workforce are constantly evolving, best practice is to provide recurring refresher courses and include successful completion of these as part of an individual's annual performance evaluation.

Change management and user training is an extensive topic which warrants serious consideration prior to project commencement. There are many companies that specialise in providing these services and, depending on the internal resource and skills available to you, you might consider outsourcing some or all of the activities involved.

6. Collaboration with other projects

Look at the projects that are going on elsewhere in your business. Identify those that have synergies with the objectives you are trying to achieve, and might help you get there faster or enhance existing processes.

For example, handheld solutions which incorporate RFID and Barcode readers can streamline asset identification to enhance the way you conduct field inspections and manage safety compliancy. This allows technicians to record results in real time wherever they are in the field. This ties all areas of the business, including rentals and equipment in the field, with your inspections.

Further improvements to result recording can be introduced by integrating automatic and real time sensor readings of equipment into the integrated maintenance management system.

Once you've identified the relevant projects in your business you must work with the key people involved in these to ensure that the requirements of your performance standards system are incorporated into their plans.

These are just a selection of tips for ensuring successful implementation of performance standards management within your business. As mentioned at the outset there is more than one way to approach such projects but if your appetite has been whet and you would like to discuss your company's specific situation in more detail please get in touch with us today.

About Absoft

Absoft is an independent SAP consultancy, founded in 1991, with an unrivalled track record in providing oil and gas industry-specific solutions to upstream oil and gas companies of all sizes.

Our extensive SAP customer base includes a number of operators and oilfield service companies in the UK and Norway.

We have carried out successful implementations across five continents – multilingual, multi currency experience.

Absoft focuses exclusively on SAP, and is an SAP channel partner in the UK and Norway. Absoft provides a full range of SAP consultancy services,

from strategic advice, through implementation and development services, to post-implementation support and training.

Absoft's Business Analytics and Technology team are experts in the delivery of SAP BusinessObjects Enterprise Performance Management (EPM) and SAP Business Intelligence (BI) services, focusing on the following disciplines:

- Reporting and analytics
- Performance dashboards
- Planning, budgeting and forecasting
- Enterprise Information Management

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