Optimizing the Future of Work in the Chemicals Industry

Unlocking Value, Retaining Critical Knowledge through Standardized Work Processes

EFESO
MANAGEMENT CONSULTANTS

Based on a recent survey with Chemical Week, over 60% of Chemical business leaders are not satisfied with performance and earnings results. In addition, talent retention remains a key concern for the chemical process industry, given an aging workforce and attrition trends. Many companies have lost critical talent to run, operate and improve their business. Furthermore, mergers and acquisitions have created further inefficiencies in how work is done.

Call to Action

In these challenging times, it is ever more important to standardize and simplify work processes, and improve organizational effectiveness to improve productivity, drive financial performance and safeguard knowledge. The Chemical Week survey revealed that less than 35% of companies report that they have implemented best practice standard work across their global organizations.

The financial impact of implementing standard work processes and streamlining organizations can be significant and is often an overlooked value-creation opportunity. In our experience, companies have realized accelerated productivity gains of 15-20%, additional capacity release of 5-10%, and are able to quickly on-board and train new talent given well defined processes and roles.

How to Implement Standard Work

Start with a comprehensive evaluation of the current state work processes and organizational design for EH&S, operations, maintenance, reliability, quality, and engineering / technology functions to evaluate workflow improvements and value creation. Benchmark against best practice work processes by function, organizational structures, role descriptions and top-tier performance indicators (Figure 1).

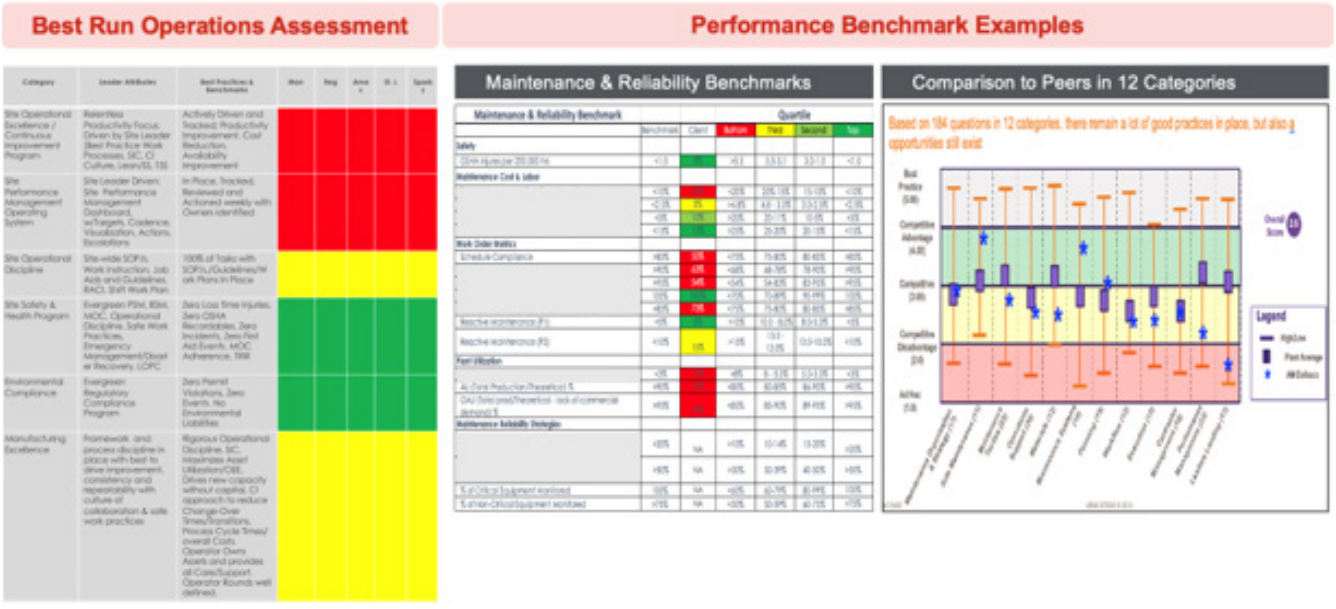
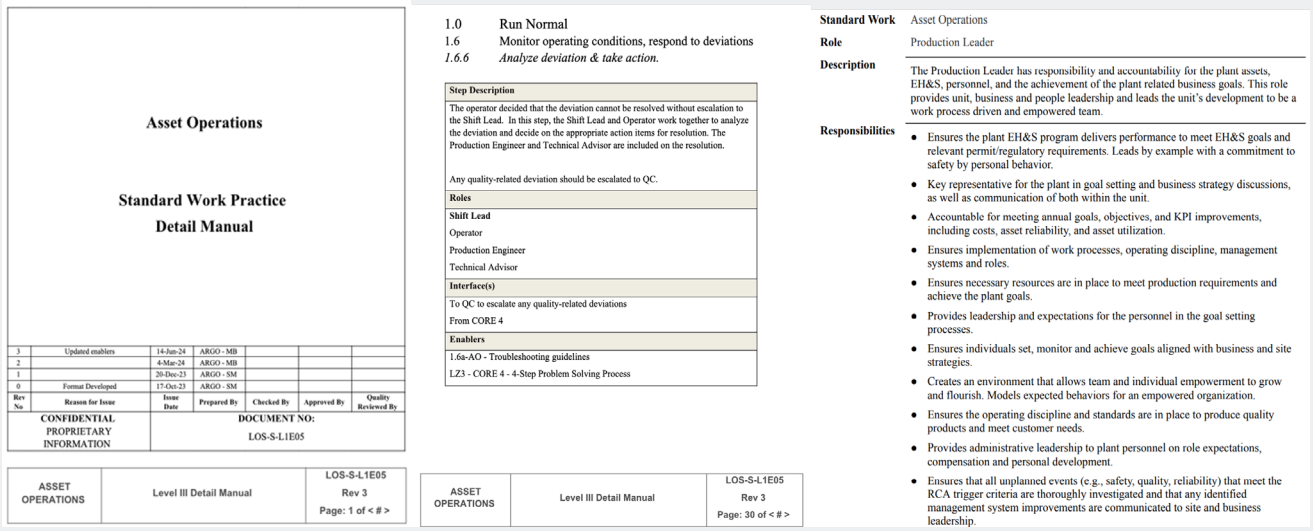


Figure 1. Example: Chemical Process Industry Benchmarks

Implementing standard work can be done quickly and efficiently by working with an experienced partner who brings proven process maps, work instructions, organizational models, and role descriptions (Figure 2 and Figure 3) that are tailored to the chemical process industry. Successful implementations are most often accompanied by a robust change management program conducted in parallel to nurture the right behaviors and culture for the organization.



Asset Operations

Standard Work Practice Detail Manual

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1.0 Run Normal
1.6 Monitor operating conditions, respond to deviations
1.6.6 Analyze deviation & take action.

Step Description
The operator decided that the deviation cannot be resolved without escalation to the Shift Lead. In this step, the Shift Lead and Operator work together to analyze the deviation and decide on the appropriate action items for resolution. The Production Engineer and Technical Advisor are included on the resolution. Any quality-related deviation should be escalated to QC.
Roles
Shift Lead Operator Production Engineer Technical Advisor
Interface(s)
To QC to escalate any quality-related deviations From CORE 4
Enablers
1.6a-AO - Troubleshooting guidelines LZ3 - CORE 4 - 4-Step Problem Solving Process

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Standard Work Asset Operations
Role Production Leader
Description

The Production Leader has responsibility and accountability for the plant assets, EH&S, personnel, and the achievement of the plant related business goals. This role provides unit, business and people leadership and leads the unit's development to be a work process driven and empowered team.

Responsibilities

- Ensures the plant EH&S program delivers performance to meet EH&S goals and relevant permit/regulatory requirements. Leads by example with a commitment to safety by personal behavior.
- Key representative for the plant in goal setting and business strategy discussions, as well as communication of both within the unit.
- Accountable for meeting annual goals, objectives, and KPI improvements, including costs, asset reliability, and asset utilization.
- Ensures implementation of work processes, operating discipline, management systems and roles.
- Ensures necessary resources are in place to meet production requirements and achieve the plant goals.
- Provides leadership and expectations for the personnel in the goal setting processes.
- Ensures individuals set, monitor and achieve goals aligned with business and site strategies.
- Creates an environment that allows team and individual empowerment to grow and flourish. Models expected behaviors for an empowered organization.
- Ensures the operating discipline and standards are in place to produce quality products and meet customer needs.
- Provides administrative leadership to plant personnel on role expectations, compensation and personal development.
- Ensures that all unplanned events (e.g., safety, quality, reliability) that meet the RCA trigger criteria are thoroughly investigated and that any identified management system improvements are communicated to site and business leadership.

Figure 2. Example: Chemical Process Industry Standard Work and role description

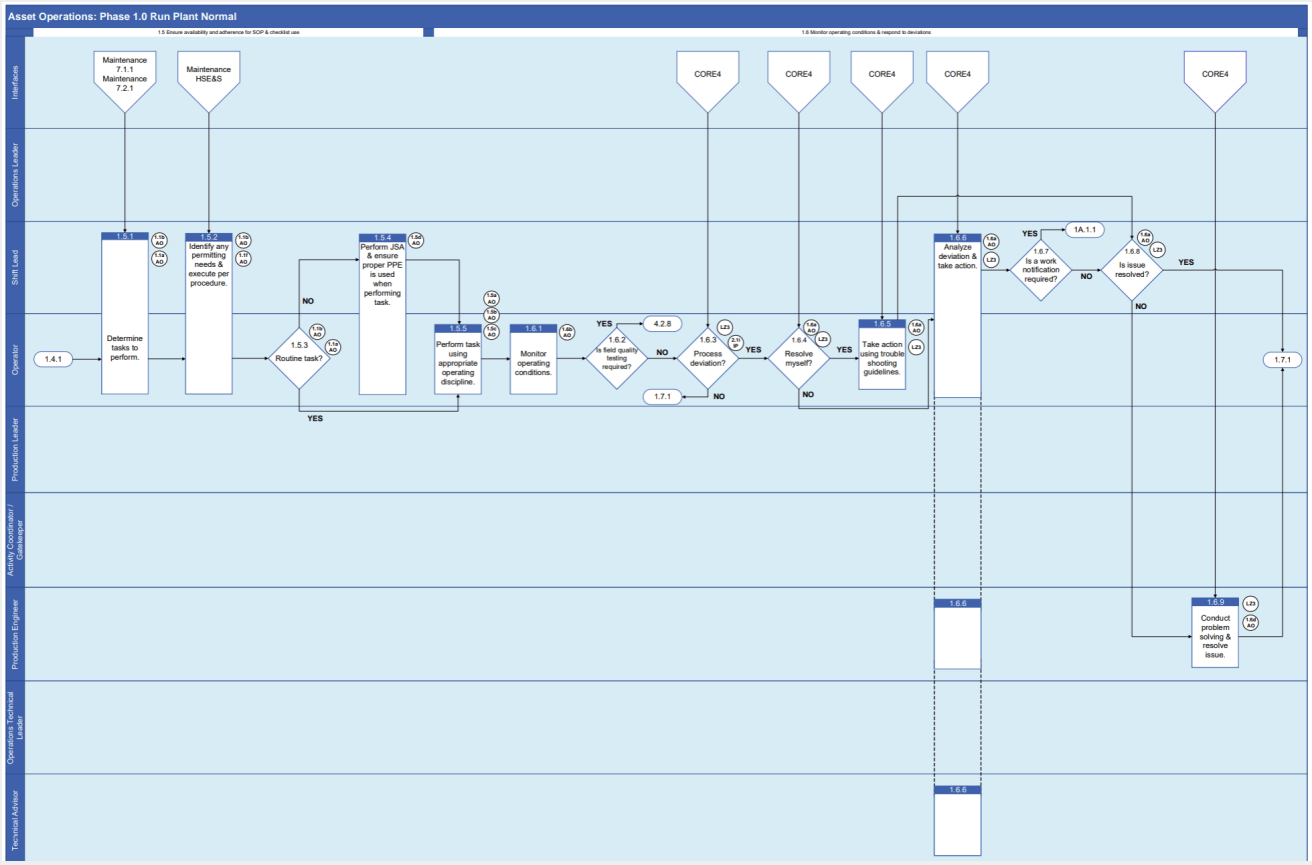

Figure 3. Example: Chemical Process Industry Process Map

The path to establishing globally harmonized standard work processes is a collaborative effort leveraging best practices. This collaboration involves developmental workshops to create your standard work processes and your new simplified organizational design. This is closely followed by specialized training for identified change agents within the organization to roll out the new processes and ensure sustainable implementation and continuous improvement.

Over the past several years, EFESO has executed numerous projects implementing efficient, repeatable, global standardized work processes, and leveraging chemical process industry best practices, with clients around the world. We have seen, firsthand, the power of this standardization through sustainable results and have assisted various organizations on their journey toward Top Tier Performance.

CASE STUDY

EFESO has worked with several large and mid-size global chemical companies over the past few years who faced the same challenge. After years of cyclic growth and contraction, recent economic challenges, mergers and acquisitions, and talent loss, these organizations suffered from antiquated and disparate operational processes and working methods, and organizational complexity. These inefficiencies were spread across various global site locations, resulting in operations personnel with varying degrees of expertise left to effectively run and improve operations. In several cases, EFESO was engaged as a strategic partner to enhance company operational performance, support change management, and implement standard work and organizational effectiveness.

Despite previous attempts at standardization, these organizations had all struggled to maintain and sustain consistent global work processes. The prevalent culture amongst organizations was one of slow and laborious change, which hindered responsiveness to market shifts and impeded operational agility. Initial discussions typically revealed a perception among the teams that the new initiative might be disregarded as merely the “flavor of the month,” highlighting the importance of a robust change management program, an essential element for success.

The EFESO-Client team developed a project plan, customized to the client, integrating a full-time change management leader to support communication and ensure the programs sustainability. The team centered its efforts on three main objectives:

- Develop a comprehensive program for select pilot sites, varying in business, alignment, headcount, operational units, volume, and complexity.
- Create standard work process maps, work instructions, roles, responsibilities, and enablers and accompanying details for enterprise-wide deployment.
- Facilitate reorganizational design and implementation to enable and reinforce the standardized work processes.

An initial evaluation involved assessing current work practices and benchmarking them against industry leaders. This assessment was followed by a thorough organization evaluation to understand current-state organizational design, roles and responsibilities and headcount. Then, workshops were held where teams, representing an array of sites and businesses drafted existing work processes on digital media or in some cases brown paper. EFESO subject matter experts worked collaboratively with the teams to recommend best practices and suggested improvements towards chemical process industry-leading processes. The standard work processes were documented, reviewed with site leaders for alignment, and approved by top operational leadership. Further supporting material was then developed such as role descriptions and work instructions for a comprehensive understanding of the new processes. Finally, the EFESO team pinpointed potential value capture opportunities and drafted an optimum organizational design encompassing the standard work roles.

Champions were selected in the respective workstreams to be the first group trained in the new work processes and to act as change agents as the organization underwent the transformation. In a few weeks, the Champion teams mastered their new best practice standard work processes, and subsequently a training plan was rolled out for the broader site personnel.

The EFESO team remained actively involved, providing coaching and reinforcing rigor. Sustainability aka "making it stick" was a priority, with the project culminating in a governance structure to monitor adherence to the new processes and validate the projected value capture.

After successful implementation was completed at the initial pilot sites, the EFESO team progressed to the next series of sites, identified by the client, completing a quick fit gap analysis and value capture exercise, then preparing those sites for implementation.

On average, clients saw productivity gains of 15-20% and additional capacity release of 5-10%, and now finally had well-documented best practice standard work processes and training aids to quickly on-board new operations personnel. Capturing institutional knowledge and experience in work processes and supporting systems has also significantly reduced the impact of personnel changes.

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