Dorf Ketal
establishes a reliable digital EHS framework

Need

Dorf Ketal were searching for a digital EHS software to encompass their EHS system and turn to a far and wider reaching automated EHS platform

Challenges

ASK-EHS provided them with a web-based EHS software that allowed them to support knowledge and driven hazardous manufacturing along with better access to their EHS network

Benefit

Dorf Ketal was able translate their EHS ecosystem onto an automated digital platform due to the adapted EHS software deployed in coordination and through mutual Handholding.

Customized EHS software developed in close coordination provides specialty chemicals manufacturer with reliable EHS

Dorf Ketal was established in 1992 at Mumbai. Since then, it has rose to a commanding position as a specialty chemical manufacturer. It currently holds more than 300 global manufacturing patents along with 50 odd patents within the U.S. Its main target industry is Oil and gas sector and global catalyst market. Dorf Ketal currently processes one-third of the crude produced worldwide. Their specialty chemical and catalyst business is directed from 10 different countries, located in Asia, Europe and the U.S.

Compliance in chemical industry

"Dorf Ketal" stands for Drilling Oil Refining Fuels and Ketone Aldehydes.

It is one of the largest suppliers of process chemicals and additives for petrochemicals, refineries, polymers, plastics, lubrication and oil stimulation industry. 20 largest refineries in the world use their products. They are also the largest manufacturer of organometallic catalysts.

With their oldest manufacturing base in India spread over 5 sites currently. The need for having a better EHS management system started from one plant. Innate hazards working in background drive chemical industries. Chemical handling, largescale synthesis and control reaction driven mechanism for manufacturing of the final chemical product. These demand material compatibility and process compatibility assessments. This also means a proactive vigilance of the physical manufacturing systems. And the need for established contamination control mechanism.

Some of the key elements within the specialty chemical manufacturing industry from the EHS viewpoint are:

- Material handling
- Instrumentation
- Piping systems
- Protective systems (Heating or cooling systems)
- Fired systems
- Electrical equipment
- Pressure vessels and storage tanks
- Pumps and compressors.

Solution

EHS SOFTWARE

↗ Training management

↗ Accident/Incident/Near-miss

↗ Job Safety Analysis

↗ Behaviour Based Safety

↗ Group Risk Assessment

↗ Knowledgebase

↗ Medical checkup

These physical systems is where the crux of chemical manufacturing rests. Supporting the patents and knowledge driven manufacturing are such systems. That provide the scale and outputs based on global market demands.

They rely on closely held risk assessment and risk mitigation protocols. Along with measures in place for their functional aspect i.e. Job Safety Assessment and Job Hazard Analysis.

The Dorf Ketal process

In 2013, head of HSE at Dorf Ketal through his interaction with ASK-EHS at an OHS exhibition, expressed their wish to explore the EHS software.

During the first demonstration to the Dorf Ketal team. The outcome and scope were understood to be worked upon – together; ASK-EHS could identify their need and demand of a customized EHS software. It encompasses their process elements and requirement to gather the workflow in order to provide a unified EHS solution.

During the next few rounds of talks and demonstrations, ASK-EHS team through requirement analysis and discussions. Pushed to gather as much data and information related to the process management and its correlation to the EHS realm. Innate processes which have been honed over time and tested at facilities. Require the crucial pivot points that help them to be replicated, successfully. Such pivot points are the standard operating protocols.

Within chemical, biotechnology and specialty manufacturing of largescale – group risk assessment and knowledgebase, need to be established. As part of the EHS management framework.

Due to the specialized nature of manufacturing, materials involved and their fine-tuned process methodology. Largescale deployment and implementation requires group risk assessments and knowledgebase. These provide a dedicated support framework to the workforce through knowledge dissemination and reference point. Adding an extra layer of risk mitigation and management to the overall EHS.

The process template for development was suggested by Dorf Ketal. ASK-EHS developed and populated it with EHS data processes. This meant that the partnership became a learning process for both the stakeholders. Their group risk assessment format was already in place. ASK-EHS adapted this onto a digital format making the reach far and wide. And securing the crucial data via software approach. It must be understood at this point that the EHS software was being developed for the functional team – EHS personnel and workforce.

Due to the stringent requirements of Dorf Ketal, painstaking efforts were taken to ensure similar EHS workflow. The customized EHS software then underwent a rigorous 160 point-based revision to accurately fit the needs.

Spreading the EHS software network

Such an adapted and fine-tuned EHS software with core coordinated development was deployed and implemented with only 2 days of training at Dorf Ketal.

However, the key to this was the handholding process bettered with the ASK-EHS approach. The revisions and adaptability is part of the flexible EHS software philosophy.

Which aims to let organizations pick and choose the modules they value the most for their EHS operations. ASK-EHS then gathers and meshes it together for providing its quintessential EHS management approach, digital and automated. However, the role of maturation of understanding and know-how remains a key driver of this process.

Dorf ketal currently uses EHS software at 5 different sites with nearly 260 users. Their training management module helps them identify and address workers who might've missed out on a crucial training, readily. This allows them to plan and schedule mandatory training sessions in accordance to their compliance strategy.

Incident management module provides them a unified solution to document any unsafe action, digitally. Whether it leads to an accident, incident or a near-miss. EHS software also has the capacity to help organizations modify and engender good safety behavior. Behaviour based safety helps to act upon the safe and unsafe EHS observation data by generating insights. Corrective actions can be constituted and trainings can be then given, improving the safety. The digital aggregate of EHS data, year by year further strengthens the "before versus after" scenario. Allowing the EHS personnel to take a good look into developing safe behavior at the organization.

Digital platforms and the expectation

Focusing on the output of digital EHS at work for an organization. Here is a quick action plan to achieve the deliverable insights from 'data transformation' that would be brought forward by automated EHS software. This relates to the ideation where an appropriate vendor has been selected who can deliver an adaptable EHS software as per the requirements.

Designing an organization-wide plan:

- Target the EHS model and ecosystem
- Ensure in-house EHS data governance
- Assure and implement data infrastructure as per vendor recommendation
- Communicating the vision and plan:
- Setup a vigilant program for end-to-end change
- Institute a change management program (the new EHS software can be help out here)
- Groom the workforce for training sessions by vendors, beforehand.