

ROLE OF SOFTWARE IN ENVIRONMENT, HEALTH & SAFETY

How software is supporting the safety initiatives of
global corporations across various industries.



Whitepaper
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NOTE:

Abstract

There is a strange connection between accounting operations and environment, health & safety (EHS) operations of any industrial organization. In accounting, one has internal accountants, external auditors and a regulatory or governing body that ensures certain standards are enforced and followed. For most industrial organizations, there are internal teams of safety professionals, third party inspectors, certifiers and regulatory or governing bodies who audit the processes.

For Indian organizations, the similarities doesn't end right there. In most places, one won't find an accountant using pen and paper to enter his records. Yet, the safety teams continue to use either paper driven systems or have migrated to Microsoft excel driven systems that still require some contribution of pen and paper.

This whitepaper looks at various challenges faced by Indian industrial organizations in their EHS management. It attempts to unearth some myths and discover ways in which the system can be made efficient and user-friendly. Some home truths along with valuable insights also emerge out of this thought process.

Traditional EHS management methods

Although most Indian organizations have progressively migrated to excel driven system, some of the larger (older) organizations have continued to use pen & paper driven systems for EHS management. The process and procedures that have been identified and followed have remained efficient enough to inculcate a safe habit amongst the work-forces. However, safety teams have struggled to migrate to automated systems.

One of the strange myths prevailing in the minds of Indian work-forces is that an automated system (software solution) might actually increase their work-load, when in truth, it may actually reduce it. They fear is that they might need to improve their skill sets and hence get out of their comfort zones. While this is an emotional struggle, there has been strong resistance to any progressive change simply because of the feeling that it might make them redundant.

For organizations using excel driven system, the challenge is to get people to use the system in the first place. Safety professionals are required to have additional MS excel spreadsheet skills that might help them perform better. However, MS excel in itself has limitations that does not allow such professionals to perform well. For e.g. there is no mechanism within MS excel (or other) spreadsheets that allows searching facility which might help one in referring to earlier records whenever needed.

Key challenges faced by safety teams in Indian organizations

Industrial / organizational / site safety teams face some of the most unique problems. An effective safety operation can be defined as one which involves ongoing attention to all the assets that make up the operations along with the safety systems. There are three such important assets which make up an operation or the safety system itself:

- Man: Training | Skills required | Knowledge | Experience
- Site / Location: Audits | Inspections | Unsafe conditions | Unsafe areas | HIRA
- Machines / Material: Audits | Inspections | PPE | Inventory | Maintenance

Safety teams are constantly looking for time to discover and invent fresh ways (methods) of mitigating risks related to the above three assets. Some of the key challenges that safety teams face are listed here;

Results of **construction industry stats** from OSHA:

- › A construction worker who starts at the age of 20 and hopes to work till he's 65 has a one in 200 chance of being fatally injured on the job
- › There is a 75% chance of them having a disabling injury
- › Construction workers account for 20% of all deaths on the job

Cultural challenges

- Migration from paper driven system to software driven and automated systems due to 'resistance-to-change'
- Uneducated and ignorant approach towards software systems
- Non-inclination of management towards investing in software

Technological challenges

- Unaware of technologies available for automating systems
- Little knowledge of how software can be used to make the process more effective

Other challenges

- Not enough service providers in the market have domain expertise (EHS) along with technological prowess
- Safety teams are often required to be on the 'field'. This does not allow them access to a system if they need to enter a critical record

How software helps?

With reference to above example of accounting teams and safety teams, let's have a first look at how software enables to solve some of the accounting challenges.

- Accountants do not need to enter any of the records with a pen. The software has been calibrated in a manner that takes care of records in the globally (or locally) accepted format. Once a record has been entered, it automatically reflects at other places, according to the standards that are being followed.
- Accounting software systems has been made to prepare reports in multiple formats, using pre-determined criteria.
- Multiple users can access the software. Pre-determined access rights can be ascertained and provided as per the roles & responsibilities of the person.
- Having multiple users allows different people to access some of these reports. Software is developed in a manner where senior management teams can decide access rights, to be given to different users.
- There are software systems available which can represent trends in accounts that might support critical decision making.

Some home truths:

- One key aspect of accounting is that they are not required to be out on the 'field-of-operations' like sites, production areas etc.
- Most accounting standards follow a single standard (e.g. IFRS) system, making it easy to develop and implement the software across any industry
- Accounting software contains calculations (maths) and does not include dynamic data like those found in the EHS domain (like safety meetings, safety certifications, safety trainings etc.)

Generally, software has been able to provide data points that have helped global organizations take critical decisions quickly and more efficiently. How has software been able to do this?

- Software has been able to provide trends in a graphic format. This helps users get a real-time, accurate and clear picture of their performance.
- It has been able to automate some of the routine tasks that form a part of the overall operations, thereby, saving time and increasing productivity.
- It has the ability to provide facilities like "search mechanism". This helps users discover essential reference points that help in decision making.
- It helps to schedule tasks in a manner that they can be monitored and managed efficiently. Software helps users with interactivity which is one of the key factors.
- Recent technological advancements have provided unprecedented support to the applications like;
 - Cloud based operations
 - Access across multiple machines/devices (handheld devices, smart phones, smart kiosks)
 - Features to perform across multiple platforms (custom OS, user friendly, responsive features)
 - Real-time updates
 - Integration of software with web portals / internet (or other real-time platforms – e.g. stock market)
 - Dynamic saving & reporting features
 - Syncing capabilities for offline and online operations

India's cricketing legend **Sachin Tendulkar** was struggling to score runs against Australia in their test series down under. He looked to get support from an unlikely source – **the computer analyst**. The analyst informed that he **got out 7 out of 10 times** playing the square drive on the up. He practiced NOT playing the shot for a few days before the game. When he went in to bat, the Aussies observed that he refrained from playing the shot throughout his entire innings of **241 not out**, one of his best innings in his career

NOTE:

Solutions available

Broadly, there are two options that are available currently for EHS management;

- a) Ready-made software
- b) Customized software

a) Readymade software

- Fixed set of applications
- Limited in usage – licensed for limited users, limited period, limited storage
- Companies need to adopt the software procedures and work-flows
- When adopted, training needs to be provided to the users
- Generally, such software is economically priced
- Small & mid-sized business owners, contractors, young start-ups firms can also use the software effectively

b) Customized software

- Adapts to the work-flows of the implementing company
- Freedom to provide desired applications without any limitations
- Similar to ERP solution thereby, giving distinct advantages in terms of EHS performance
- May incur a high cost (one-time) and requires a dedicated service provider

While both options have their pros & cons, it is safe to say that the benefits they provide far outweighs the consequences of an incident / accident in any corporation. The investments (based on the choices made) can result in significant ROIs by way of increase in productivity, lower employee turn-over rates, boosting worker morale and establishing a safety culture in the organization.

END NOTE

Please use software.

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In case you're looking for a demonstration of how ASK-EHS' software solution can work for your organization, contact **Dipal H. Ejardar** at – dipale@ask-ehs.com or on **(+91) 96876.81596**