How EHS Information Systems Can Help Minimize Non-Compliance from Employee Turnover

GLOBAL ENVIRONMENTAL SOLUTIONS

Introduction

Today’s job landscape can be volatile – from retiring baby boomers to the sentiment among gen-Y workers and millennial workers that staying with one company for an entire career is not in their best interest.

Research suggests that direct replacement costs for employee turnover can reach as high as 50 to 60 percent of an employee’s annual salary, with total costs ranging from 90 to 200 percent of annual salary (Allen, 2008). This figure does not include interview costs, sign-on bonuses and the immediate impact that switching from an experienced to an inexperienced resource can have on productivity and team morale.

Viewed through the lens of environmental, health and safety (EHS) compliance and risk management, turnover can negatively impact business operations and the company’s bottom line. This translates not only into cost, but also into operational and compliance risk that goes beyond the balance sheet and into the areas of social responsibility and sustainability, which are now staples of investor research.

For EHS professionals, the solution to mitigating employee turnover risk and associated business impacts lies in standardizing, aggregating and integrating institutional knowledge into your EHS information system.

Case Studies – Failures and Successes

Over the past 20 years, with the advance of technology across industries, information systems have been implemented for EHS reporting. EHS information systems are a necessity for dealing with the volumes of data and report formats required by regulatory agencies across the globe, not to mention their role in collecting and aggregating information for shareholder and other stakeholder reports.

EHS information systems manage, track and report on your EHS data. They use software to support compliance and best practices across all parts of your organization to meet industry standards, exceed corporate goals and ultimately improve the health and safety of your workforce. EHS information systems are sometimes also known as EMIS (Environmental Management Information Systems) and are part of a larger systematic approach to organizational and information management called an Environmental Management System (EMS).

Certainly, EHS information systems can help organize and centralize your data, and a well-implemented system can be used to track EHS reporting obligations and history. But, enabling the required flow of data in and out of the software so that the software is a vehicle for achieving compliance...
Case 1 - Short Term Notice Transition

An experienced EHS engineer responsible for internal and external reporting at Company A gave his two weeks’ notice just before the regulatory annual reporting deadlines. The engineer was responsible for preparing an annual Corporate EHS data request and a Title V air emissions report. The Plant Manager needed to decide how to deliver accurate, on-time reports.

Company A had implemented an EHS information system to calculate emissions for multiple reporting purposes, including Title V, Greenhouse Gas (GHG), and Toxics Release Inventory (TRI). Plantwide data historians were integrated with the EHS information system to provide daily and monthly totals used in the standardized emission calculations. The integration used data validation rules to help identify suspect data. To extract information from the data, the plant built a reporting platform for quarterly and annual reports. As part of their EMS, Company A had documented data owners, data validation rules and external report generation.

Ultimately, the Plant Manager divided up the report responsibilities between another onsite EHS engineer and a consulting firm. There was a smooth transition to create the reports with standardized emissions and a documented reporting process.

Despite these efforts, however, the onsite EHS engineer and the consulting firm did not receive some important information about vital reporting deadlines and obligations. A requirement was almost missed for a new Maximum Achievable Control Technology (MACT) report, which is an EPA (Environmental Protection Agency) standard for reducing toxic air emissions. The MACT report needed line-by-line review of the regulation to ensure no other requirements were skipped. Similarly, there was no documentation on how emissions were compiled for an internal corporate data request. In the end, the engineer and consulting firm needed to recreate a prior year’s emissions to do the current year’s report.

Case 2 - Transition Between Locations

Company B owned many small plants where the EHS role was performed by staff with many roles and limited EHS experience and who moved between plants to fulfill open positions.

Company B implemented an EHS information system for multi-media compliance and reporting and to support their EMS. Company B decided to use standard tasks and calculations to make sustainment and transition easier. In the system, supervisors bulk-assigned tasks to new staff and monitored task completion status by pulling a report to see the overdue tasks that required follow-up.

As a direct result of the EHS information system implementation, Company B needed very little onboarding for staff transitioning between plants since they were already familiar with the tools and processes from their previous plant. After the system was in place for a few months, Company B had fewer violations for missing reporting deadlines or permit renewals.

Case 2: Main Takeaway

Challenge: Staff performing the EHS role are spread out among different plants, have limited EHS experience, and have multifaceted jobs.

Solution: Use standardized tasks and calculations; bulk-assign tasks to new staff and monitor tasks for completion within your EHS information system.
Case 3 - Transition of Job Responsibilities

Company C maintained a large plant with many compliance obligations. Because of new permitting projects, they decided to move an EHS Manager to another plant that needed an experienced manager.

Company C had implemented a compliance calendar within an EMIS (i.e., EHS information system) with tasks and recurring due dates assigned to the original EHS Manager. However, the EHS Manager, upon departure, did not reassign the tasks to the replacement manager and did not train them on the EMIS software. There was no onboarding program for the replacement EHS Manager and Company C did not have system monitoring processes in place to check for and follow up on overdue tasks.

Ultimately, Company C received multiple violations for missed reporting and permit renewal deadlines because the replacement EHS Manager did not know when report or permit renewals were due.

Case 3: Main Takeaway

**Challenge:** EHS Manager moved to a different plant.

**Solution:** Compliance Calendar with tasks and due dates.

**Lesson Learned:** Compliance calendars are a great tool; however, tasks must be reassigned upon staff transitions, staff should be onboarded and trained on all information systems, and overdue tasks must be monitored.

Case 4 - System Monitoring Driving User Adoption

Company D had an EMIS covering compliance tasks, legal registry, environmental aspects and controls, air emissions, water reporting and waste tracking across more than 600 locations. To help monitor and drive system usage and user adoption, Company D created several system status and monitoring reports.

One of these reports was a task usage report that showed metrics for task completion, such as past-due, coming-due and completed-on-time. The report was not only informative for corporate environmental leaders, it also drove the business divisions of the company to engage their users regarding system usage.

Initially, the metrics were poor around past-due and completed-on-time tasks, and upon seeing the results, the business divisions took it upon themselves to improve performance. As a result, the numbers rose over a few months and subsequently maintained steady and acceptable levels for the six plus years that the system has been in use.

A system monitoring report was also created with the intent of checking how users were entering various data into the EMIS. Business processes and business rules have been defined as part of the system deployment, and where the software itself was unable to enforce these rules and processes, the report lists out potential issues. Corporate and business division leaders now review this report monthly and have the chance to correct data issues before they are carried forward into regulatory or other reports. The results also give company leaders a way to identify where additional training may be needed, since the report can highlight trends within or across sites with data issues.

Case 4: Main Takeaway

**Challenge:** More than 600 locations to track.

**Solution:** Comprehensive EMIS with detailed reports that allowed the company to engage users and improve performance.

Lessons Learned and Recommendations

Based on years of experience with leading companies to implement and support EHS information systems, Jacobs and its partner Intelex Technologies, a leading EHS software provider, have identified multiple activities that help to maximize the potential benefits related to transition and turnover.

System Design and Configuration

- Design systems to take advantage of using **roles and teams** as opposed to individuals. Most software packages provide this capability and using roles or teams will make it much easier to first identify activities to transition and then execute that transition in the software. Intelex’s flexible security model does exactly this, allowing security to be setup based on roles and teams.
- Establish and enforce **business rules** where the software itself does not provide the control and be intentional about the flexibility you give to sites to do things differently. This homogenizes system usage and allows for easier transition across sites and roles and for better programmatic monitoring. Certain software
packages allow for greater control of data input and workflows than others, but for any software solution, it is important to create a framework, via design, that ensures consistency and purpose to all data and configuration. Intelex’s tailored approach accommodates unique business processes while driving consistency across the organization. Examples of this include:

- **Naming conventions** - provide user guidance with naming system objects to ensure consistency and help with reporting and training.

- **Report-specific data requirements** - it is highly unlikely that the out of the box base configuration will meet all your business requirements. From the outset, you need to design the configuration to meet internal and external reporting requirements that align with your management and work processes. Start with the end in mind, rather than expecting to start with a base configuration, and then iterate until it eventually satisfies business needs.

- **Template-driven configuration** - software packages may or may not require the use of templatized configuration to drive standards across company assets, but make sure to take advantage of this capability in cases where reporting and data should be consistent across assets. This will enable users to react better and more quickly to changes in reporting requirements.

- Implement and take full advantage of the EHS compliance **calendar/tasking** functionality. Go beyond the minimum compliance requirements to include the interactions that support those requirements (data requests, internal reviews and preparatory steps done within the system). This helps to document and control the full set of activities around reporting instead of just representing report submission as a checkbox once it is complete. Intelex has comprehensive process and reporting capabilities to help track activities around reporting.

**System Rollout and Sustainment**

- Incorporate EHS information systems into **management systems** and other process documentation such as standard operating procedures. Doing so typically requires the establishment of document controls and process monitoring, and this brings the EHS information system into the umbrella of International Organization for Standardization (ISO) or other EMS oversight, often resulting in the following benefits:
  - Centralized version control of system reference/training documentation.
  - Incorporation of system activities into site standard operating procedures (SOPs), embedding the system where it belongs in operations activities.
  - Clarification of the role of the system in employees’ jobs, which helps to minimize user adoption issues and gives managers system usage enforcement leverage.

- Establish **user communities** to keep users involved and learning – when enabled and supported, users will be your best source for ideas to improve the system. Seek out process or subject area leads and establish regularly scheduled sessions, so experiences and learnings are shared. Strong user communities are a vital support system for onboarding new personnel or dealing with transition.

- **Monitor** the system for usage and improper usage. Automated and report-based checks can be built to help catch violations of business or data rules before they occur. This includes monitoring compliance calendar/tasks and other data entry, reviewing levels of system usage and establishing norms to monitor against. As personnel onboard or transition into new roles, this monitoring will help them stay pointed in the right direction as they ramp up their system usage.

**Conclusion**

Ensuring a smooth transition between personnel is a challenge for any company, particularly when it comes to staying on top of compliance obligations. With appropriate system design, monitoring and integration into other EHS and operational processes and systems, your EHS information system will not only be a safeguard to ensure compliance for the company, but it will also guide your employees, new and experienced, on the what, how, when and why regarding their job responsibilities.

Interweaving job tasks and EHS information systems is a great way to clearly outline the expectations for use and minimize the risk of low adoption, which is one of the most common reasons for system ineffectiveness.

With over 1600 clients globally, Intelex has built one of the most extensive EHSQ Software platforms in the world. Over the past decade, Intelex has led the way in
developing process breadth and depth across Environmental, Health & Safety and Quality processes, tailored for organizations to meet a range of unique business operation needs.

These processes have been built on one of the industry’s most extensive platforms, delivering:

- Process integration across business operations to drive efficiency, meet compliance needs and mitigate risk
- Data collection, consolidation and visualization to easily meet compliance and stakeholder reporting needs while enabling data-driven decision making to drive continuous improvement
- Market-leading mobile capabilities, delivering a flexible and easy-to-use interface for field workers to provide inputs and engage with the EHSQ program, and
- Integration with key providers of regulatory and training content to enrich the value of your platform while minimizing administration.

Lastly, it’s important to make the right level of investment in an EHS information management solution. Trying to save money by limiting the number of user licenses or business processes that are supported by the systems will hinder system adoption and effectiveness. On the other hand, engraving the solution throughout the organization helps to drive best practice outcomes for your organization to meet industry standards, exceed corporate goals and ultimately improve environmental health and safety.

References

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About Jacobs
Jacobs leads the global professional services sector delivering solutions for a more connected, sustainable world. With approximately $12 billion in revenue and a talent force of more than 50,000, Jacobs provides a full spectrum of services including scientific, technical, professional and construction- and program-management for business, industrial, commercial, government and infrastructure sectors. For more information, visit www.jacobs.com, and connect with Jacobs on LinkedIn, Twitter, Facebook and Instagram.

About Intelex
Intelex Technologies Inc. is a global leader in environmental, health, safety and quality (EHSQ) management software. Since 1992 its scalable, web-based platform and applications have helped clients across all industries improve business performance, mitigate organization-wide risk, and ensure sustained compliance with internationally accepted standards (e.g., ISO 9001, ISO 14001, ISO 45001 and OHSAS 18001) and regulatory requirements. Virgin Atlantic, Brinks, Air Liquide, Lafarge, Volvo and over 1,300 customers in 150 countries trust Intelex to power their EHSQ initiatives. Intelex is one of North America’s fastest-growing technology companies, recognized as a Great Place to Work for over 7 years, recipient of Waterstone’s Most Admired Corporate Cultures award, and Deloitte’s Best Managed Companies award. For more information, please visit www.intelex.com.

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