Improving Workforce Safety and Productivity

Leverage Asset Information Management to Protect and Optimize Your Workforce
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Workforce safety is not always seen as being closely connected to information, aside from the need for basic operating and procedural manuals. The notion that effective information management can significantly improve workforce safety, as well as efficiency, is too often overlooked.

The key objectives of asset operators in the resources, utilities and infrastructure sectors—along with managing and maintaining those assets to drive business—is to sustain safe and reliable operations, specifically to cause zero-harm to employees, the public and the environment. The role of information in making this happen is, in fact, critical—and not just having the right information, but ensuring it’s complete, accurate, up-to-date, context-specific and accessible to all relevant users—in real time and from any location.

**Asset Information Management is Critical to Workforce Safety**

Highly regulated, asset-intensive industries face a major task managing the safe operations and maintenance of large, complex assets, and information plays a crucial role. To begin with, standard operating procedures for those assets must be carefully documented and readily available so workers can do their jobs effectively while avoiding industrial accidents. That documentation must also be broadly accessible to staff for purposes of product updates, amendments to safety standards and regulations, and to reflect any changes made to the plant or its policies and procedures. Beyond that, asset information management (AIM) means ensuring that all asset-related documents, drawings and data required by staff tasked with maintenance, repairs and upgrades are accurate, complete, up-to-date, trustworthy and governed by Management of Change procedures and policies.

Another critical factor, particularly in today’s labor force where skills shortages are prevalent and many experienced workers are changing jobs or retiring, is knowledge management. Companies need the ability to capture and document the tacit operational and training knowledge these workers have accumulated through experience to ensure asset-specific knowledge isn’t lost once they leave. And this knowledge, along with existing training content, should be available on demand to help reduce the millions in fines companies incur each year due to safety and training non-compliance.

To manage this broad range of safety-related issues, most organizations have rigorous health, safety and environmental (HSE) programs. These are designed to ensure workforce, public and environmental safety by identifying, mitigating and managing major asset-related risks. From an information management standpoint, it’s critical that all documents related to these programs, their procedures and controls, and their practical execution are also easily and centrally accessible, not only for organizational purposes, but also in case they’re required for regulatory or legal proceedings. This applies also to certification and training records that allow employees to work on certain equipment.

To help organizations understand the broader implications of AIM in relation to workforce safety, this paper looks at the key asset information challenges today’s organizations face, the way those challenges can affect both workforce safety and efficiency, and the major benefits available to organizations that make AIM a priority.
Where Does It Hurt?

Today’s organizations face a number of information-related pain points around workforce safety and efficiency, many of which can be mitigated by strong AIM solutions.

It takes too long to find the latest revision, or workers find themselves following the wrong document or procedure.

Many of the solutions companies currently employ to resolve integrity and safety issues—such as adding more document controllers or creating an independent knowledge base—are too expensive and labour-intensive, or simply serve to create another information silo within the organization. Even with such solutions, key asset information and governance controls still remain disconnected from the asset itself.

Effective asset information management links processes, master data and content together. It enables auditable version control and records management—providing accurate and trustworthy information at your fingertips—for a specific functional location (FLOC), piece of equipment, material, vendor, work order or task.

Asset operators cannot consistently follow the correct procedures and safety bulletins.

Again, developing a discrete knowledge base or implementing in-house programs and applications can simply create more problems around inconsistent, divergent processes and procedures. In the end, workers just end up searching a different system for what they need.

Organizations should be able to easily update procedures and documentation via automated review cycles or whenever an equipment change occurs. Furthermore, current best practices and standard operating procedures should be embedded in the context of the work order or process to ensure consistency and compliance.

Due diligence is undocumented.

While it may seem that this issue is only related to compliance and the possibility of litigation, claims and penalties, undocumented due diligence may, in fact, signify that it never actually happened, a scenario that clearly raises safety issues.

The ability to transparently manage revisions and the audit trails of documents and processes means both regulators and operators have assurance that assets are being safely inspected, managed and maintained. All types of information—including electronic documents, paper and emails—should be available from a single source of truth, governed by Management of Change.

The aging workforce challenge: organizations do not effectively capture the accumulated knowledge of experienced and retiring workers.

If experienced workers are consistently expected to bridge the gap between incomplete information and new hires or novices, what happens when they leave or retire? This can create significant knowledge gaps in training; slow down onboarding procedures; increase costs if older workers or specialists have to be retained or contracted; and reduce the workplace safety quotient that comes from years of an individual operating and maintaining a specific asset.

It’s necessary to extract and document this knowledge, often in the form of unstructured information, or increasingly in the form of digital assets such as video. That information must then be integrated into best practices and procedures, made accessible to all workers and embedded in the context of operating procedures, work orders and processes. Act now, while your experienced workers are still on the job and available to teach. Wise companies will also bolster their knowledge transfer framework by training multi-skilled, cross-functional teams.
“There exists a considerable challenge in gathering, storing and reusing the knowledge and experience of corporate ‘Wise Owls,’” says Rick Quarmby, Manager of Information Management with Hydro Tasmania. “However, as Owls move into retirement territory, we fail to respect, capture and acknowledge the immense value of their contributions and experience. The amount of wisdom that literally ‘walks out the door’ is something of a travesty.”

In a manifesto on “Attaching Knowledge to SAP® Business Objects,” Quarmby not only reflects sagely on the dangers and dilemmas that arise when organizations fail to retain and disseminate the knowledge of their “wise owls,” he also demonstrates how a modern technology platform, such as OpenText Extended Enterprise Content Management (xECM) and OpenText Media Management, can effectively capture and manage that knowledge. The process allows “tacit information” gleaned from experienced workers to be integrated into existing information management processes, linked to specific objects and made universally accessible to knowledge workers and collaborators.

**Don’t lose the experience and knowledge of your “Wise Owls”**

**Case study**

**Company**
Hydro Tasmania is a leader in renewable energy development and Australia’s largest producer of renewable energy.

**Challenge**
The company—with over 1,100 employees, including over 700 maintenance and operations workers—is currently adopting a range of OpenText Enterprise Information Management solutions, including Application Governance and Archiving for Microsoft® SharePoint® and xECM. They are in the early stages of integrating SAP with their OpenText platform and are also working with their business partners and clients to find the best ways to leverage the technology.

**Solution**
With xECM and Application Governance and Archiving for SharePoint in place, Hydro Tasmania is successfully integrating its SAP applications with its full range of enterprise content in Content Server and SharePoint, enabling new efficiencies and capabilities. In one example, key documentation associated with water conveyance assets were lost track of over time, due to confusion over which is the latest revision, poor information governance and duplication. Using OpenText, an enterprising employee reviewed and distilled the safety and compliance critical documents, collected them in Content Server (including enhanced metadata, added knowledge and attachment to SAP objects) and shared the collection with other users and collaborators. By applying OpenText Enterprise Information Management (EIM) solutions in such innovative ways, Hydro Tasmania believes that EIM will be one of the keys to their future success.

**Potential impacts of poor asset information management**

- Injuries or fatalities involving workers or the public
- Incidents that damage equipment, the environment or the operator’s reputation
- An extended MTTR (mean-time-to-repair) due to incomplete or inaccurate information or work packages for the asset, work orders or material master
- Inability to access, modify and utilize asset-related safety information while in the field
- Low productivity or wrench time due to maintenance and engineering spending too much time on duplicate data entry and documentation
- Overall efficiency loss due to poor training, knowledge transfer and onboarding
Strong Asset Information Management Delivers Multiple Benefits

With a robust AIM solution in place, organizations can reap a broad range of benefits, a large number of which are related to safety and efficiency. Most importantly, you can ensure that all information about the asset, materials and vendor is provided to workers—wherever they are—in the context of the work being done. By having this material dependably available, you can increase asset uptime and integrity and improve consistency and compliance with processes.

The ability to foster strong, trusting relationships with partners and vendors is another major advantage. Relevant parties can collaborate to maintain the most current revisions and procedures for asset management-related documents and processes, ensuring both transparency and accountability on all sides. Master data, related documentation, task lists and workflows are all accessible across the extended enterprise, enabling process collaboration beyond the firewall and across related functional silos.

Although AIM can clearly help reduce both asset downtime during shutdown-turnaround projects and MTTR (mean-time-to-repair) when executing work orders, AIM’s impact is less obvious when it comes to employee engagement and job performance. When workers have the right information at their fingertips, they can operate assets more easily and be confident they’re acting knowledgeably. This leads to improved job satisfaction—a factor that not only improves productivity, but can have an indirect positive impact on safety.

The ability to better manage corporate memory and thereby facilitate training is, as noted, one of the most important AIM benefits. For example, companies should be able to configure documentation, procedures and best practices as templates and embed them directly in the workspace of any process, activity or asset. With the right solution, all types of information can be managed, including audio, video and photos. This way, knowledge and procedures are captured in a readily transferrable format; for example, a videotape of a plant walk-through.

When Safety is Paramount, Information Management Should Be Too

Safety in the context of operating and maintaining major assets starts with the hands-on workforce, but it goes beyond that to include the public and the environment as well. This means companies have a tremendous responsibility in promoting and enabling safety in the broadest context possible. To perform their work in a safe and timely manner and ensure no internal or external parties will be endangered or harmed, workers need the correct information, at the right time.

Unfortunately, information management is too often seen as a secondary activity, something to be performed in addition to the core task or activity at hand. Instead, information management needs to be recognized and required as a primary activity that is integrated with and embedded in the work and processes that plant, operations and field workers carry out.

Without an AIM platform supporting your EAM (enterprise asset management) and ERP (enterprise resource planning) systems, it’s almost impossible to make this happen consistently, reliably and across the full range of organizational functions, including engineering, maintenance, material management and project management. With a proper platform in place, however, companies can be certain asset information and procedures are complete, up-to-date and readily accessible to workers in the plant or in the field—and be confident that your organization’s information is being leveraged to enhance workforce safety, not diminish it.

ARC Advisory Group research indicates that poor asset information management costs organizations an average of 1.5% of their annual revenue. That’s an average. Specific accidents and incidents can far exceed that level of damage, sometimes resulting in irreparable damage to the environment or the operator’s reputation.
OpenText Asset Information Management

OpenText Asset Information Management is available within our Enterprise Information Management platform. Leveraging OpenText xECM, the solution provides native integration with each of your SAP or Oracle ERP and EAM systems. It extends their key processes to help you seamlessly manage both structured (master data) and unstructured information (documents, engineering drawings, digital media and big data).

A collaborative workspace is automatically created for any asset-related business object or process, whether it’s an equipment tag, functional location, work order, material master, vendor, schedule work package, deliverable or task. Secure and accessible to both external and internal workers, the workspace enables in-process collaboration across the extended enterprise.

OpenText solution accelerators for SAP Plant Maintenance (SAP PM/EAM), Project and Portfolio Management (SAP PPM), Environmental Health and Safety Management (SAP EHSM) and Supplier Relationship Management (SAP SRM) accelerate time-to-value, providing best practice implementation frameworks for achieving operational excellence in SAP processes. These solutions improve information management for equipment, material masters, vendors, work orders, task lists, certifications and training records, and when capturing EHS incidents in the field from a mobile device. Content and processes are also accessible by non-SAP users using the productivity tools and applications you prefer—on mobile devices, from a standard web browser or through Microsoft SharePoint.

To learn more about how asset information management can help your organization improve the safety and efficiency of your workforce, please contact:

Advisors@opentext.com
1-800-499-6544
www.opentext.com

About OpenText

OpenText is the leader in Enterprise Information Management, helping customers to create a Digital-First World by simplifying, transforming and accelerating their information needs. Our offerings span the needs of the entire digital enterprise, with Enterprise Content Management, Business Process Management, Customer Experience Management, Information Exchange and Discovery solutions. Over 100,000 customers already use OpenText solutions, either on premises or in our cloud. For more, visit www.opentext.com.