The Digitization of Permitting: Safety, Compliance, and Productivity

PROMETHEUS GROUP

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Maintenance is evolving. Is Your Permitting System Keeping Pace with Your Goals?

The floodgates of Industry 4.0 have opened. These advances bring new opportunities, challenges, and requirements to every aspect of enterprise maintenance, including permitting. The benefits of electronic permit to work systems far outweigh the traditional methods of paper permits. Smart connected products and platforms are redefining business models and reengineering the possibilities of asset management. To keep pace, organizations need to streamline processes, reduce redundant effort, and leverage automated, intelligent systems. True digital transformation for your organization needs to include an integrated safe system of work (ISSOW), including lockout tagout software and an electronic permit to work system.

Organizational leadership often recognizes the advantages of digitizing their permitting processes, but may have legitimate concerns about implementation, safety, scalability, and integration. Paper permitting has severe disadvantages, but it is familiar. However, the right digital permission solution can provide a hard ROI that isn't easy to dismiss.

Permitting Needs to Advance

While other areas of asset management have made great strides adopting digital and mobile technologies, permitting has remained relatively unchanged. This is to the detriment of the maintenance strategy and the business' overall operational effectiveness. Recent years have seen a surge of investment in

planning and scheduling. Many organizations have come to recognize the value of implementing connected planning and scheduling solutions.

Digitized, optimized, and streamlined planning and scheduling increases wrench time and decreases unplanned downtime. Richard "Doc" Palmer, author of the "Maintenance Planning and Scheduling Handbook," estimates that many organizations can achieve an average 57% wrench time improvement by implementing "a proper planning and scheduling system." These benefits have come to be widely recognized. However, relatively few organizations have recognized the incredible advantages that come with digitizing the permitting process. Like with any new technology, the early adopters of modernized permitting tools will be positioned to fully realize the financial, regulatory, and personnel return on investment that these systems make possible.

The Costs and Dangers of Paper Permitting

The question shouldn't be "can we afford digital permitting?" It's better to ask if you can afford to continue with paper!

Paper permitting processes have numerous problems. These issues can have significant impacts on productivity, safety, reputation, and ultimately, profitability. In today's competitive global markets, organizations can no longer tolerate the risks of rigid, outdated paper processes that create inefficiencies and limit communication and visibility. Paper permitting is risky for both staff and the organization itself. Staff risk their health and their very lives. These risks impact the
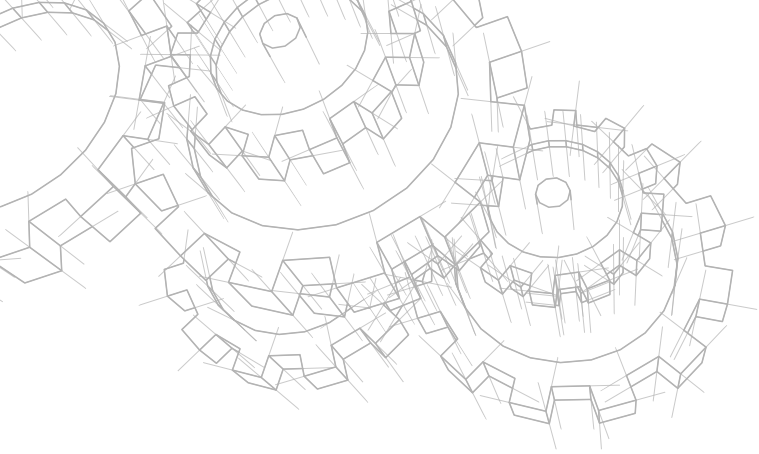
organization as well, but companies must also deal with the risk of failing to meet compliance regulations.

Checkbox Mentality

The danger of paper permitting is that it can create a "checkbox mentality." Workers aren't paying full attention and thinking critically. Instead, they often rush through a repetitive, unchanging process that may appear somewhat pointless. In many cases, the approvals/validation process is arbitrary, subjective, and may not be strictly enforced.

This, in tandem with the repetitive nature of paper permits, can create the perception that permitting is "busy work" without real consequences. This can lead to Supervisors or Lead Operators missing critical details or making errors that put maintenance technicians — and the organization — at risk.

Subjective and Inconsistent

Even at its very best, paper permitting is only as good as the person conducting the walkdown. As a result, permit to work processes, job safety analyses, risk assessments, and conflict management are subject to human error and inconsistency. Inevitably, as different people conduct the same permitting process, the results will differ widely based on experience, skill, attention to detail, distractions, attitudes, and more.

Additionally, many elements of paper permitting rely on tribal knowledge: undocumented information passed between employees, often without a solid understanding of the reasoning behind it. This degrades the paper process further. Information is spread haphazardly from employee to employee, is open to interpretation, and cannot be verified or corrected.

Inefficient and Duplicate Efforts

Many organizations are familiar with the long lines at permit huts and the lost time executing work. Not only is paper permitting itself slow and inefficient, but it requires many efforts be repeated when they could otherwise be reused. For example, preparing permits for an annual turnaround can result in weeks of work. Relying on paper permitting means the work is then repeated the following year! This is time that could be easily saved with the right digital process.

Paper permitting inevitably leads to a high volume of (often redundant) written procedures. These take time to create, review, and follow. The result is paperwork for paperwork's sake, eating up huge swathes of productive time. Even worse, it doesn't make the work environment safer or more productive.

Safety Hazards, Decreased Productivity, and Compliance Issues

All of these issues create safety hazards that put workers in harm's way and jeopardize the organization's ability to meet compliance and regulatory requirements. They also decrease the productivity of both employees and assets, with time-wasting redundant tasks, the risk of lost time incidents, and delayed maintenance or extended downtime.

Missing even just one critical lock-out, for example, can put an employee at risk of serious injury or death and can result in fees and penalties from regulatory bodies.

Elements of a Sustainable Digital Permitting Solution

In the era of Industry 4.0, organizations benefit from high return on investment when they implement digital permitting solutions that can be integrated with a larger asset management platform that ensures end-to-end visibility across both maintenance and operations divisions.

Intelligence and Automation

A true digital permitting solution is far more than just an editable form. Proven solutions have built-in intelligence that understands the bigger picture and can give your organization the

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[1] https://www.cgi.com/sites/default/files/files_uk/articles/implementing_enterprise_asset_management_for_dummies.pdf

same insight. Digitized permitting means the end of guesswork, human error, and inconsistency by building on the collective knowledge of your team and the recognized industry standard best practices and regulations.

By connecting the maintenance and operations workflows, a digital permitting solution can automate and streamline many time-consuming and repetitive tasks, from tag printing to isolation point validation, through to generating permit requests and issuing permits directly to maintenance technicians. A digitized permitting solution can even dynamically help maintenance technicians identify hazards and assess risks based on similar work executed in the past. An intelligent, connected system offloads much of the manual, repetitive work from employees, ensuring that it is automatically completed in a timely and consistent manner, with a comprehensive historical record.

Templating and Time Savings

The majority of an organization's shutdowns or turnarounds are essentially identical to the previous years. Despite this, in paper systems, preparing annual isolation schemes can take multiple employees several weeks.

Digital permitting leverages the work that has already been done with smart templates that are ready to execute in the following years. The integrated templates bridge the gap between permitting and planning and scheduling, reducing the required effort significantly. Customers have saved as much as 800+ hours in preparing annual isolation schemes for shutdowns. This results in thousands of dollars in savings every year. In another scenario, creating permitting templates enabled the customer to shorten the planning and scheduling process. They increased time on tools from 30 to 50 percent, decreasing the cost per hour of work and contributing to a net savings of $1.8M USD.

Processes and Compliance

An effective solution helps organizations meet regulations and follow their procedures, without allowing the documentation to become overcomplicated. It should aim to trim the fat without cutting corners.

Digitized permitting reduces the number of duplicates, conflicting, or redundant procedures. It reduces the time employees spend on documentation, training, and unnecessary work steps, which increases productivity.

Digital permitting processes has enabled some businesses to reduce procedural documents from 5,000+ pages to less than 100 pages. They can keep all the critical materials while dispensing with the unnecessary ones and standardizing their processes across work sites.

Increased Safety

Digitizing and incorporating risk assessments (RAs) and job safety analyses (JSAs) into your safe work system ensures consistency and standardization, so that no important controls are overlooked, or information is misplaced due to outdated versions or lost documents.

Safety is something that is never done. Organizations should always strive for continuous improvement in this area, which is why RAs and JSAs should be considered "living" repositories.

A sustainable digitized permitting solution is based on an industry leading hazard identification risk assessment database (HIRA) that provides a comprehensive starting point for the organization. It then builds on the collective knowledge and unique requirements of the business by allowing health and safety experts to edit, add, and remove controls as needed.

Additionally, the responsive system also examines similar jobs executed in the past and automatically associates the appropriate hazards and controls based on the information your health and safety experts have put in the template.

Conflict Management

On paper, the only way to identify conflicts is if the operator identifies them. Identifying hazards requires diligence and ongoing intensive effort. It is not realistic to believe that operators will maintain this level of effort perfectly and in perpetuity.

It's all too easy for operators to miss hazards or conflicts. As a precaution, this often results in unnecessary blanket isolations so employees can be sure they have covered everything.

An integrated and intelligent permitting solution takes the element of human error out of the equation with built-in rules. Conflicts are identified automatically when they occur. Permit Owners can edit the conflict rules in an easy-to-use matrix, easily configuring the system to your unique specifications.

Integrated and Connected Platform

Permitting touches every part of the asset process. A standalone safe work solution brings value, but the benefits of an integrated solution are even greater.

An integrated platform ensures consistency, real-time information transfer, and visibility. It does this by connecting mobile, planning and scheduling, permitting, approvals, and other ERP systems into a singular asset management experience.

Permitting is one critical piece of a much larger asset and work management strategy. Integration is vital to transparency and communication between maintenance and operations teams and the key to decreasing lost time incidents and increasing wrench time.

ePAS: Higher Productivity, Immediate ROI

Prometheus Group's ePAS solution transforms your existing paper-based and digital permitting systems into a powerful, Integrated Safe System of Work (ISSOW). The result: work that is streamlined, recorded, risk assessed, and audited while providing unprecedented visibility to the whole business. The ePAS solution can be scaled and integrated as part of an end-to-end asset and work management platform, with best-in-class mobile and planning and scheduling solutions for full visibility across your organization.

Prometheus Permitting & Safety seamlessly connects with your existing ERP, CMMS, or EAM system to deliver digital transformation for your control of work systems. Integration with other modules of the Prometheus Platform extends the value of the solution, further empowering planning, scheduling, mobility, and other elements of the asset management process.

To learn more about features and functionality, visit our website and review our Permitting and Safety section.

LEARN MORE

About Prometheus Group

Prometheus Group is a leading global provider of comprehensive and intuitive enterprise asset management software solutions that work within ERP systems and span the full work management life cycle for both maintenance and operations. Developed jointly with end users, Prometheus software enhances the customer experience for planning, scheduling, and executing work for both routine maintenance and shutdowns and turnarounds, all while protecting the workforce with safety solutions and electronic permit to work. Our straight-forward functionality, graphical visualization, and simple processes enable customers to increase productivity, reduce costs, and improve reporting. For more information, please visit www.prometheusgroup.com.