

MYZEL Lifecycle Platform combines management of human and machine

Networking for greater safety

Ensuring that the shop floor runs smoothly is a responsible task: productive processes must go hand in hand with the protection of human, machine and data. When you look at the machine lifecycle, each phase poses specific demands on safety – and on those who must ensure it. The digital MYZEL Lifecycle Platform is a Software-as-a-Service solution, which provides support in matters of Safety, Security and Compliance throughout the machine lifecycle.

Production managers, safety officers or management – those responsible for production and safety are faced with the daily task of keeping track of machinery and personnel. This includes issues relating to liability protection, employee protection, data protection and productivity. Different challenges need to be overcome, depending on where a machine is in its lifecycle.

Four core values for safe interaction between human and machine

- **Employee protection** is the top priority when it comes to protecting people from physical and psychological hazards. A risk assessment lays the foundation for an effective protection concept, which includes access and permissions for personnel, for example. The effectiveness of the protection concept is regularly reviewed and revised if necessary.
- However, should an industrial accident occur during the operational phase, the question is whether the responsible parties can be made **liable**. If the worst should happen, a company must also be able to prove that it has taken measures in advance, such as employee training for example. The protective measures must therefore be well documented, and the documents must be up-to-date and readily available at all times.
- Even though human safety is the top priority, **productivity** should be maintained throughout the entire machine lifecycle. Reducing manipulation and misuse plays a part in this, as does controlling access.

- To ensure **data** protection and therefore Security, machines and processes must be protected against unauthorised access from inside and outside. Security is a "moving target" that requires regular risk assessments, because the threats posed by cyber attacks or manipulation are constantly evolving.

One of the ways in which operators protect these four core values is by ensuring that their machinery is always state-of-the-art. In addition, the applicable standards and laws must be applied. As the technology and standards are constantly changing, it is important for production and safety managers to maintain an overview. The qualifications and permissions of machine operators must be included, to prevent the (unintentional) manipulation of processes by insufficiently qualified personnel, for example.

Connected future on the shop floor

With a Software-as-a-Service solution such as the MYZEL Lifecycle Platform from Pilz, those responsible for production have the necessary overview of Safety, Security and Compliance – throughout the entire machine lifecycle.

In nature, MYZEL (EN = mycelium) forms an invisible network of fine fungal threads that connects trees, plants and microorganisms. MYZEL from Pilz embraces this principle: the software solution creates connections between data, people, and machinery, promotes the flow of knowledge, and forms the basis for intelligent, adaptive systems. This is how a biological model becomes a technological vision for a connected future. In the first release, Pilz presents the MYZEL Lifecycle Platform with integrated asset management and freely selectable workflows.

One platform creates a centralised overview

In practice, operators digitally map their production sites on the platform, including all machines and users. Each machine can be linked to the relevant documents (instructions, validations, declarations of conformity, health and safety guidelines, maintenance schedules) and each employee can be linked to the relevant permissions (evidence of training, certificates). These documents can then be retrieved from anywhere at any time and can also be edited offline. The range of

functions of the MYZEL Lifecycle Platform is designed for companies with a small to medium number of machines, who want to take that step into digital management – without purchasing unnecessary functions. Companies that operate internationally also benefit from the customisable range of functions and the transparency offered by the MYZEL Lifecycle Platform. The often tedious search for documents such as operating instructions, evidence of training or test reports, which are often stored in different locations or depend on individual knowledge holders, is a thing of the past with the asset management of the MYZEL Lifecycle Platform.

A clear connection between human and machine

Production and safety managers can manage all documents centrally on the platform. They get a comprehensive, up-to-date overview of the machinery and employees. This is also what makes it special, as other asset management systems only record the machines and not the people who work with them. The four core values show that it makes sense to consider human and machine together when it comes to safety issues. Even a machine that is operated in accordance with the current state of the art and in compliance with the law can be (unknowingly) manipulated if personnel do not have the appropriate qualifications or permission. Safety and productivity can only be harmonised if they are viewed as a unit.

Knowledge base at the heart

At the heart of the Software-as-a-Service offer is myCore, the central starting point. Users create their machines in myCore and upload all relevant documents and information, such as operating instructions, certificates, logs or employee data, to the MYZEL Lifecycle Platform. If another asset management system is already in use, it is possible to import the data into MYZEL. A dashboard gives users a clear, simple overview of the status of their assets (data, people, machinery), so they can immediately identify where action is required – if deadlines are approaching or evidence is missing, for example. This dashboard can be customised to your own needs. For example, a dashboard can be customised to a company's most important regulations, to ensure compliance. This provides managers in particular with an

overview of the assets that need protecting. For optimum traceability, all actions in the system and the users who performed them are recorded in the audit log.

Easier management of Safety and Security

For those responsible for safety, such as health and safety specialists, questions relating to Machinery Safety are the main focus: are all machines state-of-the-art in terms of safety? Where are inspections due? Do all employees have the right training? The MYZEL Lifecycle Platform helps production and safety managers deal with machinery and personnel.

Pre-defined workflows support day-to-day work. Depending on your needs, you can choose from three workflows, which you can subscribe to on a monthly basis:

- **mySafeDesign** – The workflow for safe machine design guides the user through the risk assessment or validation – for new machinery.
- **mySafeOperation** – The workflow for safe machine operation provides users with support for inspection in accordance with legal requirements.
- **myAccessControl** – The workflow for industrial access management is available to manage employees' individual entry and access rights.

Compliant at all times – also thanks to AI

Behind the respective workflows are digital implementation check lists and templates, to keep track of inspection requirements on a daily basis or carry out a risk analysis, for example. AI-supported functions, such as the analysis of machine images to assess a safety risk, enable particularly efficient implementation.

Users with in-depth expertise can use the workflows to carry out the inspections themselves. With its experienced service and consulting experts, Pilz continues to provide support during implementation and offers complete service packages, if such knowledge is not established within the company. If standards and legislation change, users will find up-to-date templates in MYZEL to reliably check compliance. These templates are continuously fed into the system; no need for the user to update manually. The workflows help occupational safety specialists and production

managers to create evidence and corresponding documents throughout the lifecycle. This means that documentation is immediately to hand in the event of an accident or liability claim.

Managing permissions simply

The same applies for accessing the machine or processes: if a company uses the Pilz Identification and Access Management System (I.A.M.), all access and permissions are managed centrally in the myAccessControl workflow, and the associated safe operating mode selection is clearly displayed. If some activities require certain qualifications, this information is stored and, when the certificate expires, the MYZEL Lifecycle Platform indicates the need for action. Recurring measures such as mandatory safety training can also be reliably documented on the platform. This creates transparency with security issues, because it is clear who has which permissions on the machine.

MYZEL Lifecycle Platform is the answer to the core values

For **employee protection**, users of the MYZEL Lifecycle Platform always have an overview of which machine inspections or employee qualifications are available and when they need to be reviewed. Full, systematically organised documentation serves as a legal safeguard (**liability protection**) with regard to personnel and machinery protection. Full documentation on maintenance or emergency management, available at all times, minimises production downtimes and increases **productivity**. In the MYZEL Lifecycle Platform, data is stored securely and **in compliance with data protection**. Systematic permission management, which can be implemented with the myAccessControl workflow, also increases the level of security. The platform is certified in accordance with ISO/IEC 27017 and ISO/IEC 27018. All data is stored on EU servers.

Conclusion

The MYZEL Lifecycle Platform is a Software-as-a-Service solution that supports production and safety managers throughout the entire machine lifecycle. This allows them to digitise and optimise their workflows. The platform covers the processes

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from machine assessment through to controller design. MYZEL is constantly being expanded with new functionalities. Pilz's many years of Safety and Security expertise have been incorporated into the Software-as-a-Service offer. Documentation relating to personnel and machinery is becoming ever more comprehensive and complete thanks to the centralised document management and workflows on the MYZEL Lifecycle Platform. At the same time, you can dispense with paper documents and, even if responsibilities change, the filing remains complete. This enables machine manufacturers and operators to ensure that their machines are always up to date in terms of Safety, Security and Compliance.

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