



WHITEPAPER

Digitization in window manufacturing

Introduction

The realization that digitization is the key to success is also increasingly gaining ground in the window manufacturing industry. Intelligent digitization strategies and technologies are in demand. In view of the dynamic development prevailing on the market, a sophisticated digitization concept helps to sustainably optimize processes and value chains and to ensure the future viability of a window company.

In this context, industry ERP systems play a key role because, as an integrated system, only they can provide the necessary data basis.

Why a modern ERP system is essential

A wide variety of processes and workflows are carried out in companies every day. All too often, companies still use different, "in-house" or outdated software solutions to map these processes, which do not meet modern requirements in terms of security, consistency and efficiency.

If you want to drive forward the digital transformation, it is worth starting precisely here. Holistic ERP systems are the prerequisite for this because they provide the necessary data basis. Processes can be made more efficient and transparent, security can be improved and information becomes available.

In order to secure the investment, care should be taken when selecting an industry ERP to ensure that further developments and innovation within the solution are guaranteed in the long term.

Digitization in window manufacturing

The extent to which processes in window construction can be digitalized depends on the performance of the software solution used. Modern solutions are process-oriented and highly integrated.

All company processes from quotation and order entry to delivery and installation on the construction site can be mapped consistently with a high degree of automation.



Information is available wherever and whenever it is needed. In concrete terms, for example, information can be collected on the construction site for order processing and made available to colleagues in the office to create a continuous flow of work.

We live in a time of maximum individualization. This also applies to software. Modern industry ERP is characterized by its high parameterization and scalability. This enables the greatest possible adaptation to different market requirements, whether in a small craft business or in a globally active industrial company.

The following section takes a closer look at the digitization of some key processes in window construction.

Window technology

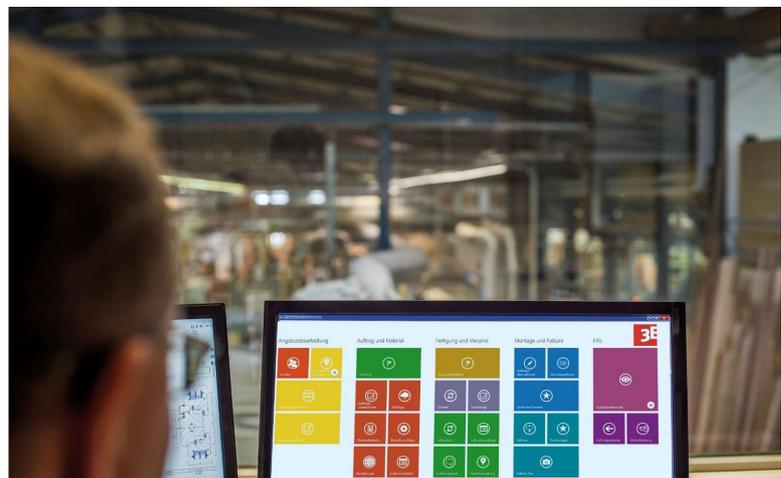
Future-proof ERP solutions digitally map the entire range of window technology. The technically demanding entry of windows and front doors is made considerably easier by technical support, e. g. by design modules for special shapes or the possibility of entering PVC windows with a wooden window look.

A variety of integrated interfaces and web configurators, such as filling or shutter configurators, make the process even more convenient and shift the master data issue back to the supplier.

Order handling

Order management is the heart of an ERP. There is hardly a process that is not linked to order processing. Therefore, there is much to be gained if order processing can be well structured.

One of the criteria is the adaptability of the system to the different needs of the users. How user-friendly is access to order-relevant data?



Some companies work predominantly in commercial construction, others supply construction elements for private homes, work exclusively with trade partners or find their market in a healthy mix of these. This places very different demands on the solution used. An ERP supports different order types (service order, commercial order, division of an order into individual production orders) and maps them with the associated costing and billing modes.

Filter options and dashboards have proven to increase usability and focused work. This creates a highly individualized information center for users directly at their workplace.

Sales and trade

There are also many different scenarios in sales: trade partners, construction companies, own sales representatives. Here, too, the ERP must be able to cover the entire spectrum, e. g. with web-based dealer solutions. The browser solution is available on the Internet, so no installation is necessary. The window manufacturer's database is used for intuitive window entry, with all restrictions and plausibility checks. Such web-based dealer solutions are also ideally suited for use in the field.

Thanks to the direct connection to the manufacturer's system, master data in the online configurator is available immediately and live; entered data is transferred to the manufacturer's system without repeated entry. All that is required is Internet access and the manufacturer's authorization.

You can't do without materials management

What would an ERP system be without integrated materials management? Order processing creates material requirements, and integrated industry software provides precise information about what is needed for which order, down to the last screw. Digitalization in procurement includes real-time information about stock levels, automatic generation of order proposals and completely paperless handling of the ordering process with suppliers.

Not only the procurement process, but also the associated delivery and invoicing processes as well as warehousing and backorder management are fully electronic. Bar-code-based material procurement is geared to production and delivery deadlines. This ensures that the resources required for production are available on time. All goods movements can be recorded by scanning operations. For the scanning process, the use of smartphones proves to be extremely practical.

The paperless processing of orders with supplier partners via openTRANS not only ensures that data is always available to both sides, but also helps to eliminate sources of error and speed up processing.

Production planning and control

Especially in production planning and control, the use of a fully integrated industry ERP brings considerable advantages. The window construction software provides a comprehensive database, ideally with data from materials management and capacity planning. Automatic and separate lot creation for frame, sash and even parts lots makes planning more flexible. In the area of reporting for the creation of commercial documents, data can be edited directly in a real screen display.

Since the software solution provides the data basis - even for complex control systems - it also plays a central role in machine control. Production controlling, paperless production, integrated factory production control, digital feedback and real-time evaluations, control station technology, dispatch transfer - with these features, a modern ERP system supports the production process and guarantees maximum automation and flexibility.

More efficiency through well-organized workflows

Workflow management allows processes in the company to be mapped and automated digitally and resources to be used in the best possible way. A higher-level status management system regulates the flow of orders and processes. Individual data views allow users to focus better on their work and complete tasks efficiently.

Workflow management brings more security and traceability and thus increased process quality while at the same time reducing the workload of employees.

Interfaces and integrations also contribute to a smooth workflow management process. The integration of other systems, such as document management systems for automated document processing, opens up further possibilities.

Mobile solutions - The integration of processes on the construction site

End-to-end digitization also integrates processes that take place outside the company, e.g. on the construction site or at the customer's premises.

With a modern ERP, all order-relevant data is available to the service technician on a mobile basis. Data can be collected electronically on site via an app in the form of text, videos, audio and images.



The direct communication with the main system allows the immediate exchange of data exchange of data. Thus, colleagues in the plant can react to facts recorded on site without delay.

Activity reports and working hours can be recorded and confirmed on the go during a service appointment. Service and installation jobs can be planned via the app.

Summary

An innovative industry ERP offers intelligent solutions for the digital transformation in window construction and, in particular, for the topics of data exchange, networking and automation: flexible and adaptable order management, digitalized merchandise management, paperless production and control station technology, end-to-end digitalization of processes up to the trade and the construction site. All processes along the value chain are given structure and transparency.

Competitiveness and economic success increasingly depend on how well the digital transformation is implemented.

A well-founded digitization strategy is most easily realized with a modern ERP system at its heart. This gives companies a solid basis for designing paperless processes, automating workflows and making information available.

About 3E

With almost three decades of experience in the development and implementation of software solutions in window manufacturing, 3E Datentechnik GmbH in Oberkochen has become a reliable partner in digitization, also internationally. The 3E team includes about 90 experienced specialists and highly motivated young talents. More information on: www.3e-it.com