

From Scheduling to Planning
for complete APS solution



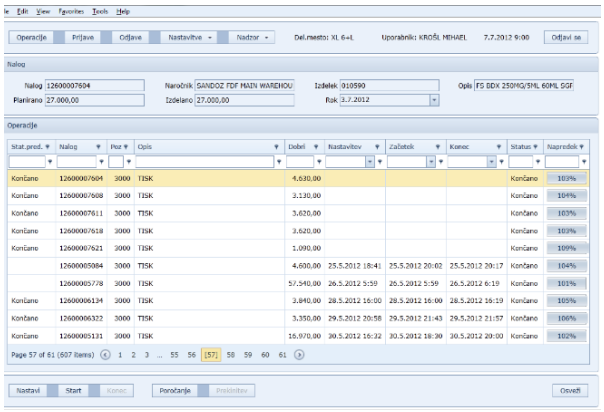
ShopFloor – Flexible production monitoring system

ShopFloor is an Internet application, which can be run on all computer devices used in production. Computer devices can be built into machines or exist as stand-alone computers with plain or touch screens. The ShopFloor application can also be installed in portable terminals with bar code or table readers, as well as in smartphones.

Description

The basic version of ShopFloor enables the registration of employees for the workplace and the recording of events related to the execution of work order operations:

- User registration
- Start and end of work on the operation
- Interrupt entry
- Registration of normative or exceptional consumption of materials
- Registration of the produced quantity of products and scrap



Picture: ShopFloor Form of Operation

The application suggests to the user the order of execution of work operations based on the schedule, which is prepared by the planner in the ERP system. The best results are achieved using the APS system.

The basic implementation of the application includes a control panel for setting program parameters and user authorizations, as well as a system for reviewing and possibly editing recorded events. The extended implementation of the application includes a graphical analytical-reporting system with a display of recorded data.

The ShopFloor application stores, records and processes data in its own database. This basis allows us independence from the ERP and APS systems.

Ability to connect

We achieve the necessary connection with ERP and APS systems with pre-prepared and, if necessary, adapted ERP and APS interfaces. The interface enables two-way data transfer, ie from the ERP system to ShopFloor and from the ShopFloor system to the ERP system.

From ERP system, data on employees and jobs are occasionally transferred to ShopFloor, and data on work orders and their operations and materials are transferred in real time. From ShopFloor system to ERP, data on the realization of work orders, time spent and materials are transferred in real time.

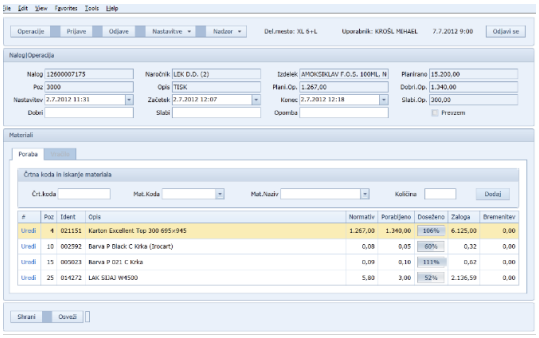
The basic version includes the Preactor APS interface, which transfers data on the planned start and end of each operation from the APS system to the ShopFloor system, and data on the completion of work order operations is transferred from the ShopFloor system to the APS system. It is also possible that the planning data can be reached directly from the ERP system.

ADVANTAGES:

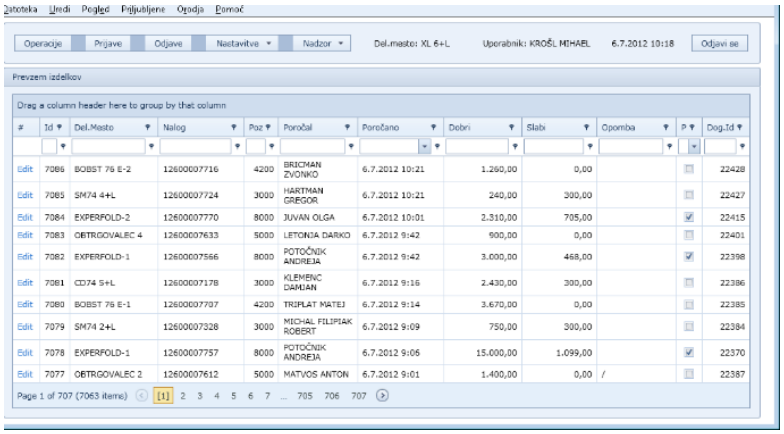
- Collecting data into the system at the time of the event
- Little interaction with the system for collecting detailed data for monitoring and calculation of production
- Handy analysis of collected data
- Seamless integration with other information systems
- Multilingualism

Materials and products

ShopFloor is designed for real-time enrollment, and for multiple enrollment of material consumption and manufactured quantities of products and scrap. Consumption of materials is related to the operation of the production order.



Picture: ShopFloor Forma Reporting



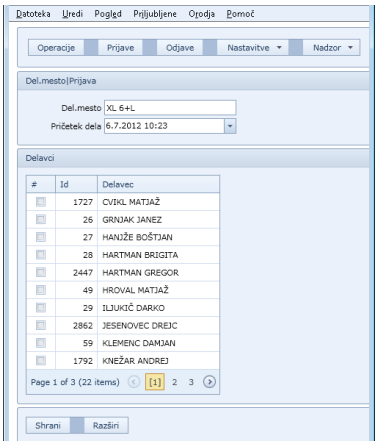
Picture: ShopFloor Analytics - Product Download

Registration and deregistration of employees

ShopFloor uses two unique methods to record employee presence at operations:

- The operator registers first, who then registers the collaborators
- Login (and logout) to the workplace, which we use in analytics to divide attendance time in relation to the duration of operations

An employee can be registered for more than one job at the same time, which is also included in the analytics for dividing the employee's time spent on operations.



Registration of employees for the job

Adjustments for special requirements

During the introduction into the production environment, users mediated special requirements, which we successfully included in the ShopFloor application. Here are some of the user requirements:

- Simultaneous processing of multiple operations
- Preventing the start of operations and in the environment, where optional operations are involved in the technology
- Inclusion of different rules for parallel execution in case of service order operations
- Include additional forms in the application to display data in graphs, tables or text
- Enable customized, time-triggered data processing

Updates applications for recording, storing and processing data, collected in the form of signals from PLCs and communication interfaces.

Vision of development

ShopFloor intends to become the leading solution for performing and monitoring production in small and medium-sized enterprises in the Alps-Danube-Adriatic region, and will be offered globally, through a group of companies and experts, organized in Lean Scheduling International (LSI).

We will achieve a leading position among production monitoring systems in small and medium-sized enterprises by including an extensive range of good practices, which we incorporate into our customers' production processes with the ShopFloor solution. We have gained knowledge of production processes and good practices with the development of ERP, MES and APS systems in the past 20 years.

Usability

ShopFloor can be run on modern devices, running Windows CE, Linux, Android or iOS systems. The same is likely to apply to all future operating systems, which we don’t even know yet. A prerequisite is that the devices support wired or wireless network connections and have a built-in Internet browser. The best performance is expected in an environment where users have devices with the ShopFloor app in the workplace.

Development tools

To develop an Internet application, we use modern software tools: Microsoft Visual Studio 2019 and the C # programming language, as well as the ASP.NET DevExpress toolkit. We use Microsoft SQL Server 2019 R2 for the database.

Contact details and additional information

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