

INTERNATIONAL ROLL-OUTS WITH PRE-MADE FLX-TLS TEMPLATES

REFERENCE REPORT

The automotive supplier Brose, which operates globally, can control all industrial trucks in 23 countries across all time zones and language borders centrally from Bamberg, while optimizing transport routes. This is possible with the SAP® integrated FLX-TLS Material Guidance System from Flexus.



Flexus has developed its open system further

according to our wishes and integrated our requirements into the product standard."

*Michael Müller
Team Leader Material Flow,
Information Systems,
Brose Group*





Europe, Asia, America: What seems far away on a map is getting closer and closer at the Brose headquarters in Bamberg (GER). The SAP system installed here controls the data streams of all 62 locations operated by the automotive supplier across 23 countries. At Brose, the worldwide SAP rollout is based on the so-called template approach: A template is a blueprint for the uniform flow of processes with a corresponding range of functions.

With the global template at Brose, processes and functions can be copied quickly and transferred to new locations in the desired combination based on the modular principle, saving an enormous amount of time: "We only need a few days to set up the information technology at a new assembly plant," reports Michael Müller, Team Leader Material Flow, Information Systems, Brose Group.

MORE AND MORE VALUABLE

Over the years, the template has been developed further in a number of steps. "In 2015, we still lacked a function for the central optimization and control of intralogistics," recalls Müller.

This involved planning the use of industrial trucks in incoming goods as well as in production supply and disposal. Transport of empties and special tours had to be controlled with the new central solution also, while objects not managed in SAP such as waste containers or empties had to be taken into account as well.

The search for a suitable partner led to Flexus AG, which is based in Würzburg, being selected to provide an SAP-integrated solution. "References from the

automotive industry as well as the versatile functions of the Material Guidance System FLX-TLS were factors in favor of Flexus", states Müller. Thanks to the ideas and project progress of Brose and all other users, the "FLX-TLS becomes more and more valuable and versatile with each upgrade".

FAST TRAINING

Within the Brose Group, the system was used for the first time at the site in Würzburg, resulting in a



significantly shorter training period for new forklift drivers since 2016, and thus greater efficiency in the processing of transports. The employees now receive clear instructions on their forklift terminals. Furthermore it is possible to have the routes visualized as a digital map of the plant premises.

In addition, the FLX-TLS provides documentation of each transfer point of the pallets and containers, which are often transported in multiple stages, so that irregularities

and errors can be quickly detected even afterwards. It can be determined individually at which stages of the process the drivers must scan and confirm. "In areas with experienced drivers, we can avoid having to scan the transported goods multiple times when picking them up and setting them down, which increases productivity," explains Müller.

In the beginning of 2017, Brose deployed the second stage of the FLX-TLS, which can now also control tugger trains in various scenarios. As an example, transports of large or small load carriers (GLT and KLT), fixed timetables or shuttle trains are being differentiated and integrated. When loading the tugger trains, the driver receives concrete suggestions regarding the loading spaces for the respective containers.

INTEGRATED CONNECTOR: CONTROL OVER AGVS AND NARROW-AISLE FORKLIFTS

The TLS also makes life a lot easier for drivers at Brose's US site in Tuscaloosa, Alabama. The narrow-aisle trucks used there are connected to the TLS via an interface. This means that every driving



command is transmitted directly to the forklifts and then automatically implemented at the push of a button.

"The Flexus solution functions as an integrated connector, which means we can do without an additional external warehouse management system at this point," explains Müller. This significantly reduces the complexity of the system.

As a "neutral instance," any form of hardware can be controlled with the FLX-TLS. At Brose's UK location in Coventry, the solution even controls the automated guided vehicles (AGVs), though any combination of AGVs and conventional forklifts is possible.

TIME ZONES WITHOUT SCARE

Meanwhile, Müller and his team have introduced the solution at ten Brose locations in Germany, the UK, the US, China, the Czech Republic, Mexico and Slovakia. "We were even able to solve the time zone problems when executing the worldwide tugger train timetables together with Flexus," highlights Müller.

In this context, international rollouts can also be carried out without any problems. Only in exceptional cases Brose requires help from Flexus, since the system consists of precisely defined modules. According to Müller, they can be centrally configured in a "familiar SAP environment."

The same applies to the support that Brose provides with its own employees at all locations, completely independent of Flexus. The automotive supplier is also completely independent when selecting forklift terminals.

"The solution works independently of devices, so that existing equipment can still be used without any problems," reports Müller. Additionally, the user interfaces with large and easy-to-understand buttons, designed by Flexus, can be operated effortlessly and intuitively via touchscreen. The software is also available in Chinese, Spanish, Slovak, Czech, German and English for the currently existing locations.

MORE THAN 10 MILLION TRANSPORT TASKS

Conclusion: With the FLX-TLS by Flexus, Brose has achieved a standardized basis for the control of all industrial trucks that can be rolled out globally with little effort. So far, more than 10 million transport tasks have been generated with the FLX-TLS. Roll-outs to other locations have already been initiated.

ABOUT BROSE

Brose is the 4th largest family-owned automotive supplier in the world. The company develops and builds mechatronic systems for vehicle doors and seats as well as electric motors and electronics, such as steering, brakes, transmissions and engine cooling. Around 26,000 employees at 62 locations in 23 countries generate sales of €6.3bn. Every second new car in the world is equipped with at least one Brose product.

MATERIAL GUIDANCE SYSTEM FOR SAP®

BACKGROUND

FLEXUS AG BACKGROUND

Die Flexus AG, based in Würzburg, specializes in optimizing intralogistics processes through innovative software products and consulting know-how. The SAP partner with mobility competence offers a holistic approach based on the analysis of potentials as well as the conception and implementation of measures that improve material flow. Many years of experience in mobile data entry and the implementation of forklift/transport guidance systems have set the basis for it. For this purpose, SAP add-ons by Flexus are used. Through direct integration with SAP® ERP, these solutions are particularly advantageous.

SOFTWARE BACKGROUND

Flexus AG, an SAP partner, offers solutions for networked SAP® intralogistics. The solutions improve the interaction of people, processes and technologies within the company. This ensures efficient processes and concrete business benefits in the sense of Industry 4.0. The applications include the FLX-TLS transport and forklift control system for SAP® for simple and transparent control of all existing resources that are required for material flow in a company. This includes the optimization of forklifts, tigger trains, high-rack warehouses, employees with mobile end devices and internal truck traffic. The system ensures a smooth flow of material and reduces empty runs to a minimum. Numerous modules and extensions enable optimal adjustment to your needs.

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The logo for FLEXUS, featuring the word "FLEXUS" in a bold, blue, sans-serif font. A small orange dot is positioned above the letter "X".

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