

# CENTRAL CONTROL OF LOGISTICS THROUGH FLX-TLS AT DAIMLER

## REFERENCE REPORT

Intralogistics platform - Integrated and central control of operative SAP® logistics processes for SAP ERP and SAP S/4HANA.



*The savings potential and results of the FLX-TLS*

*Material Guidance System by Flexus AG convinced us from day one."*

*Armin Barth  
Head of Logistics Bus West  
Europe EvoBus GmbH  
Location Neu-Ulm*





As part of the Daimler Buses Group, EvoBus is not only the largest bus manufacturer in Europe, but also one of the world's leading bus manufacturers, producing coaches, intercity buses and city buses at its Neu-Ulm site in Germany.

In order to ensure production supply, the ones responsible decided to use a networked and central SAP® logistics system for the control of material flow.

#### CHALLENGES IN TRANSPORT PROCESSING

At the location in Neu-Ulm, capacities as well as scheduled and unscheduled trips were controlled manually. This resulted in a high number of empty runs, a disproportionately large fleet of vehicles and long reaction times. A problem with the use of tugger trains was that orders that were ready for collection on the route were not known beforehand. This meant that no suitable trailers or resources could be scheduled. Therefore in some cases the individual tugger trains were either overloaded or underloaded.

With these major challenges, the ones responsible were looking for a partner to implement all these requirements. Flexus AG, the SAP® partner based in Würzburg (GER), was soon noticed. With the FLX-TLS Material Guidance System ("FLX-TLS") for SAP®, Flexus AG offers a solution that already covers the majority of the requirements in its standard version.

The FLX-TLS allows the bundling of various materials from the small parts warehouse into one transport order. Real-time data transmission makes it possible to track the exact location of material in process at any time. At the same time, efficiency in logistics is guaranteed by the automated and utilization-oriented control of the transport volume.



The system not only enables the simple and transparent control of the forklift fleet - it also takes into account all existing resources necessary for material flow in the plant.

The functions include the optimization of forklifts, tugger trains, employees with mobile devices as well as the internal truck traffic. The FLX-TLS represents a comprehensive approach for cross-departmental control and route optimization of the

material flow. The implementation is designed for SAP ERP and SAP S/4HANA.

### EFFICIENT MANAGEMENT

For the material supply of the internal logistics areas, the various means of transportation (forklifts, tugging trains, ...) are efficiently controlled via the real-time client and mobile terminals. This ensures transparency even in complex high-rack warehouses. A sequenced and demand-oriented workforce planning takes place within the picking areas.

The visualization of the picking orders enables a transparent order processing. Real-time data transmission enables paperless picking. The integration of trend-setting technologies simultaneously improves the ergonomics of the employees and reduces sources of error. The dynamic control via the FLX-TLS in operative logistics leads to flexible and efficient processes.

### EFFICIENT AND OPTIMIZED CONTROL OF TUGGER TRAINS USING SAP®

With the FLX-TLS, tugging trains are also controlled directly via SAP and supplied with transport orders. The tugging train control is based on the maintenance of routes and tours and is an extension of the FLX-TLS Material Guidance System for SAP®.

A route describes a fixed sequence of departure and arrival points that can be reached by a tugging train. The automatic optimization and synchronization of all routes in real time ensures the supply of production. Even short-term changes are incorporated into the overall process by automatic recalculation.

The scheduled orders are visualized in a clear cockpit and can be processed with regard to sequence and assignment. For the driver of the tugging train, the current route is displayed on a hall plan directly on the forklift terminal.

### OPTIMIZED TRANSPORT ORDER DISTRIBUTION TO VARIOUS MEANS OF TRANSPORTATION

The transport orders are created automatically or manually via the Flexus operator dialog. This ensures production supply and disposal with materials, empties and other relevant transport.

The transport orders are optimized in a central order pool and distributed to the various resources (forklift, tugging train, picking trolley, automated guided vehicles).

### REAL-TIME KEY FIGURE DETERMINATION AND ACTIVE AREA CONTROL

The transmission of current and system-side key figures and malfunctions ensures transparency at all times and helps to solve problems quickly and efficiently. Preparation, summary and provision of real-time information in 2D and 3D increases traceability from incoming goods to assembly.



### CONCLUSION

The use of the FLX-TLS Material Guidance System optimizes the entire internal material flow of EvoBus GmbH. Cost savings were achieved by reducing manpower, allocating resources more efficiently and reducing the fleet size.

In addition, the automated control processes increase stability, quality and flexibility. The FLX-TLS is used as a central picking and route guidance system at the Neu-Ulm site. Roll-outs to other plants of the group are already being planned.

### ABOUT EVOBUS

As part of the Daimler Buses Group, EvoBus is not only the largest bus manufacturer in Europe, but also one of the world's leading bus manufacturers, producing coaches, intercity buses and city buses at its Neu-Ulm (GER) facility.

With the brands Mercedes-Benz, Setra, OMNIplus and BusStore, EvoBus is a leading full-line supplier.

# MATERIAL GUIDANCE SYSTEM FOR SAP®

## BACKGROUND

### BACKGROUND FLEXUS AG

Flexus AG, based in Würzburg, is specialized in the optimization of intralogistics processes through innovative software products and consulting know-how. The SAP partner with mobility competence offers a holistic approach from the analysis of potentials to the conception and implementation of measures to improve material flow. This is based on many years of experience in mobile data entry and the implementation of forklift and transport control systems. SAP add-ons by Flexus are used for this purpose. Due to direct integration with SAP® ERP, the solutions are particularly advantageous.

### BACKGROUND SOFTWARE

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-TGS 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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FLEXUS AG

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

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