Efficient control of your tugger trains directly via SAP®
In intralogistics, the tugger train is often used as a logistics round train. It consists of a tow tractor for pulling a flexible number of trailers.

Supply and disposal in production is ensured by having the tugger trains drive the predefined routes. The view or kanban principles are often used for material supply. A great advantage of the tugger trains lies in the fact that larger quantities of material can be transported with a reduced number of tours.

A major difficulty with using tugger trains is that orders that are to be picked up on the route are not known in advance. This means that the resources and trailers required, as well as the recommended route, cannot be planned ideally.

Another problem in this respect is the under- or over-utilization of the individual tugger trains. The tugger train control for SAP® by Flexus offers a solution. The tugger 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 source and destination locations that can be reached by a tugger train. Each route consists of several tours, which can be compared to a bus schedule, i.e. there is a time specification for when the tours of each route start.

**Tugger train control & flexible tour planning**

Order determination takes place directly in SAP®, taking into account the working time model, breaks, planned times and much more. By considering these parameters it is possible to use different tours and routes in different shifts. For example, the night shift runs a different route than the early shift.

The tours of the tugger trains can be created directly from SAP® in three different ways with the tugger train control.

There are fixed tours, where the tour always starts at certain times. Dynamic tours exist, where a tour starts as soon as it is full or a due date has been reached. And there are also permanent tours, where the next tour starts when the last one has been finished.

The scheduled orders are visualized in a clear cockpit and can be edited with regard to sequence and assignment.
The tugger train control for SAP® ensures continuous production supply and disposal.

Functionality of tugger train control

The transport orders are created automatically, e.g. from production order data, or manually via the Flexus operator dialog. This ensures both the production supply and disposal with materials, empties and other relevant runs. The transport orders are then placed in a central order pool. From here, they are distributed to the routes and tugger trains in an optimized manner.

The transport orders are assigned to the tugger train on its mobile handheld / terminal, so that the right order is processed by the right employee at the right time.

Optimized transport order distribution

The optimization and control algorithms shorten the transport routes for material supply with tugger trains by calculating the most sensible routes in advance. Historic data and the actual distance between destinations are used to plan departure and time routes.

Combined order processing with different vehicles is also possible. For example, the system also enables multi-stage transports. This means that material can be transported to a depot by a forklift truck and from there the tugger train driver just picks up the available material onto his trailer.

Integration of trailer management

Trailers towed by a tugger train can be permanently assigned to one tugger train or they can be towed, or coupled as well as decoupled, by different vehicles. In addition, each trailer type can be set with its own capacity and defined positions. The positions on the trailer can also contain properties. This makes it possible, for example, to define weight limits for certain places on the trailer.
FLEXUS – Your SAP® Intralogistics Partner

Flexus AG is your competent consulting and development company for the process-oriented implementation of SAP® logistics solutions.

As certified SAP® partner, we have a long-standing expertise in the field of intralogistics. The Flexus solutions for SAP® intralogistics range from FLX-Yard Management, the FLX-Material Guidance System and the comprehensive portfolio for mobile apps with innovative technologies.