

AGV - Autonomous Guided Vehicle





Change Driver

An international chemical company moves 20 million tons of transport volume per year at one of its production network locations; 30% by ship, 30% by rail and 40% by truck.

The dispatching process of a train takes 22 hours from arrival to the filling station and another 22 hours to departure.

By using special AGVs with a total weight of 120 tons each, the shunting time is to be reduced by 95% to 2 hours for 7 million tons of transport volume per year.

A high-performance radio network, 99.9% of which is available 24/7, is required for the safe operation of the AGVs on the plant premises in general traffic.





Damovo Approach

The demands on the radio network are extremely high. In addition to the high availability of 99.9%, the network must be able to send a constant 15 Mbps HD video signal from each AGV upstream to the control center, where the AGVs are monitored by an operator. The transmission delay must not be longer than 50 ms in order to stop the AGVs quickly.

Damovo achieves and exceeds all customer requirements by using a private local and redundant 3GPP compatible 4G mobile network (LTE) on a local radio frequency (3600Mhz) specifically provided by the Federal Network Agency for this application. This solution is unique in Germany.



Customer Value

DAMOVO

How the **customer** benefits

Customers now receive deliveries from the chemical company up to 2 days faster. The higher total throughput also allows the company to purchase a larger total volume per year from this site.

Deliveries can also be made more flexible and adapted at short notice.

How the **company** benefits

By using AGVs instead of freight trains, the dead times in the logistics process are reduced by 95% through dispatching.

In addition, logistics operating costs are reduced by more than 50% for the company's own rail operation with 12 locomotives and 1,000 tank cars.

The campus distribution rail network and marshalling yard are no longer needed - freeing up valuable traffic areas and land for further production facilities.