



LEADER

Energy is more valuable than ever, and Europe's climate targets – as set down, for example, in the European Green Deal – are ambitious, especially for the rail industry. The European version of the **LEADER** (Locomotive Engineer Assist Display & Event Recorder) Driver Advisory System (DAS) represents a powerful response to challenging questions such as how to improve operational energy efficiency and boost capacity utilization across the rail network.

Driver Advisory Systems designed to save energy, such as **LEADER**, are essentially navigation systems that provide train drivers with recommendations on how best to drive efficiently. These driving recommendations, which are continuously updated and optimized, appear on an ergonomically optimized display. They are based on information provided by an s-DAS (standalone Driver Advisory System), including the train's configuration, route, timetable, current speed and geolocated position.

The key: live updates on current operating conditions

Ideally, driving recommendations should also be based on live updates on current traffic conditions obtained from the relevant traffic management systems by c-DAS (connected Driver Advisory Systems). For example: By influencing LEADER-recommended driving speeds, the ZLR messages (known as "green functions") circulated by DB Netz AG in Germany are already helping drivers avoid predicted conflicts in heavily utilized infrastructure that could otherwise result in unscheduled stops. Integrated c-DAS not only make a major contribution to improving energy efficiency and capacity utilization, as required by the European Green Deal – they also tend to make the day-to-day work of train drivers less stressful.



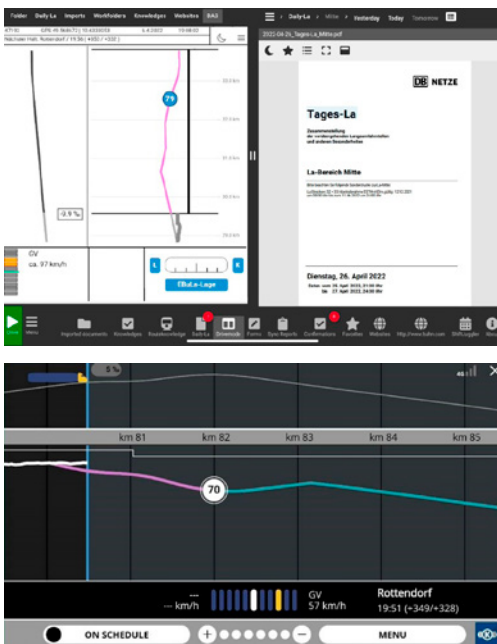
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Benefits to the customer

- No vehicle interface required – high level of flexibility
- Tool for real-time monitoring and analytics that operates in tandem with a carbon-neutral, cloud- and web-based back office
- Increased energy efficiency in rail operations, also in terms of traction and wear & tear
- Major contribution to enhancing and improving traffic flow, as well as rail infrastructure capacity, by incorporating live traffic updates on infrastructural occupancy

Multiple deployment options thanks to three product versions:

Driver Advisory Systems for mobile devices



LEADER4DiLoc

A product developed for the European rail market and operated by cooperation partners Knorr-Bremse Systeme für Schienenfahrzeuge GmbH and CN-Consult GmbH. The Driver Advisory System functions are embedded in CN-Consult’s DiLoc|Sync workflow environment for driver’s cab processes running on mobile devices. With its many applications, DiLoc|Sync acts something like a Swiss Army knife for digitizing the driver’s cab.

LEADER4Tablet

Knorr-Bremse’s own DAS for mobile devices – essentially a port of the user interface that has been successfully used by DB Cargo Germany for several years. Suitable for operators whose use of tablets while trains are running is purely confined to driving recommendations. This version of LEADER® is also suitable for inclusion in other existing applications.

Driver Advisory Systems built into the driver’s cab



Here, LEADER runs on a panel PC permanently installed in the driver’s cab. Both operators and their personnel benefit from an ergonomically optimized user interface with a clear layout that uses the entire screen to display driving recommendations. This makes interpreting the recommendations as intuitive and stress-free as possible.

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