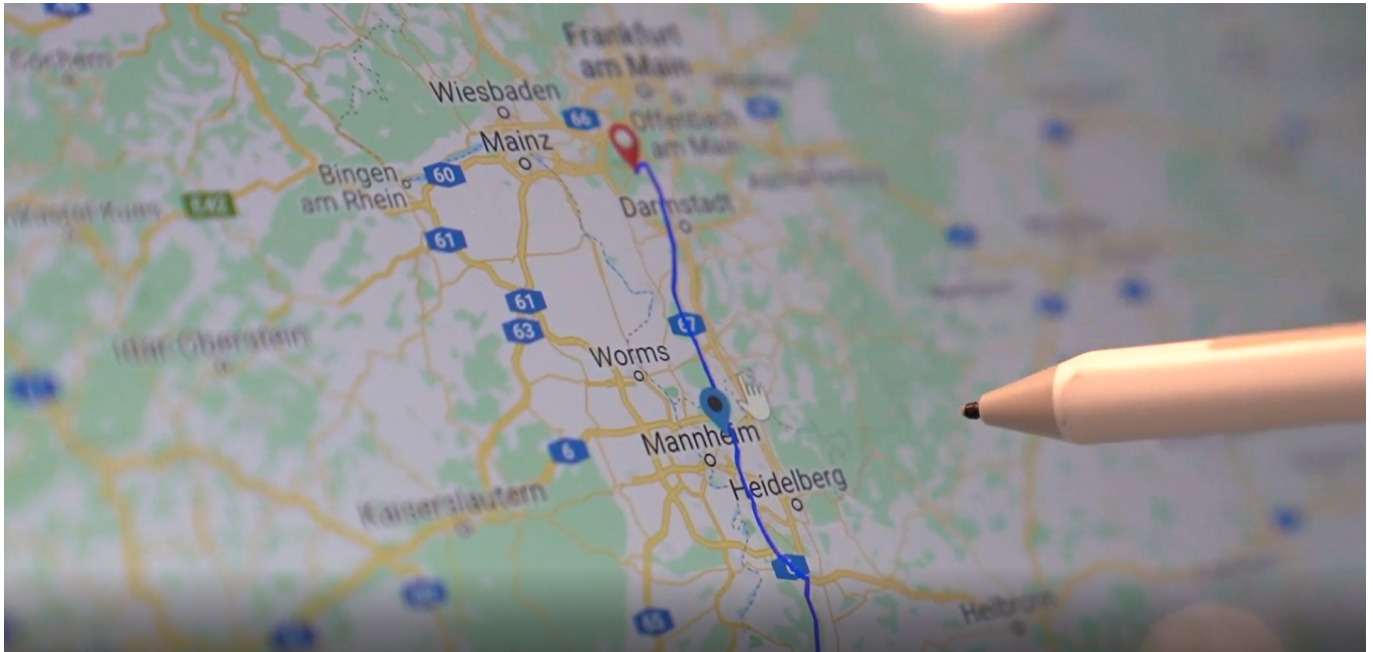




OEM versus retrofit telematics

IMAGE SOURCE: AREALCONTROL

OEM versus retrofit telematics

16 May 2023 by AREALCONTROL

Ulric E.J. Rechtsteiner, GF, **AREALCONTROL GmbH**, Stuttgart

Telematics systems are becoming increasingly important in the construction industry. They enable precise monitoring of machines, equipment and employees on the construction site. There are two basic types of telematics systems: OEM telematics and retrofit telematics. This technical article highlights the differences, advantages and disadvantages of these two systems in relation to the construction industry.

OEM telematics

OEM telematics is installed directly by manufacturers of machines and equipment. These systems are specifically designed for the machines and often offer extensive functions regarding technical data and sensor technology in the construction machine, especially machine performance and maintenance.

Advantages:

- OEM telematics has been developed by machine manufacturers specifically for their own products, so integration and operation is easy and seamless.
- Because the system is integrated into the machine from the start, it is often very accurate and can provide precise data.
- OEM telematics can also usually monitor the performance and maintenance needs of the machine, which can help minimise downtime and extend the life of the machine.
- Another advantage of OEM telematics is that they are often integrated with manufacturers' service processes, simplifying schedule management for maintenance and inspection

Disadvantages:

- OEM telematics is often more expensive than retrofit telematics.
- If a construction company uses different machines from different manufacturers, multiple telematics systems may need to be used, which can lead to compatibility issues.
- Logging in to multiple OEM platforms and operating the different screen layouts on each is often seen as a hassle.
- OEM telematics also cannot be easily retrofitted to older machines, which means that older machines may not be equipped with the latest technologies.

Retrofit telematics

Retrofit telematics are installed after the machine or equipment has been purchased. These systems are often cheaper than OEM telematics and offer similar features and in particular automated billing, time tracking per machine and person as well as per job site and monitoring of machine performance and maintenance.

Advantages:

- Retrofit telematics can be installed on older machines, which means that construction companies are not forced to upgrade their entire fleet to use telematics.

- As retrofit telematics is developed by third-party suppliers, it is often compatible with a wide range of machines and equipment from different manufacturers.
- Aftermarket telematics systems are usually more cost-effective than OEM systems. They can be installed on almost any device or machine, regardless of manufacturer. This gives companies more flexibility in choosing the telematics system that best fits their needs.

Disadvantages:

- One disadvantage of aftermarket telematics systems is simply the subsequent installation effort and its disposition.
- Another disadvantage is that they can sometimes be less accurate than OEM systems, as the latter are deeply integrated and retrofit systems have to obtain deeper technical data via CAN/FMS and OBD data (depending on the vehicle/machine type). For aftermarket systems, accuracy depends on the quality of installation and configuration.
- Finally, the price of aftermarket telematics systems can be a disadvantage. While they are typically more cost-effective than OEM systems, the cost of installation and integration can increase due to the large number of machines and equipment on a job site. For smaller companies with limited budgets, this can be a barrier to implementing the system and reaping the benefits of telematics.

In summary, it can be said that the disadvantages of retrofit telematics, and whether they apply at all, depend decisively on the competence of the provider. Long-standing and experienced telematics providers in particular already have the most important technical data from the CAN bus available for several thousand machine and vehicle types over several years of construction. This means that completely mixed fleets of vehicles and machines can be mapped on one platform. This in turn reduces costs for training, implementation and interfaces to further IT systems.

And ultimately, it must also be clear that telematics solutions do not necessarily have to "flash and shine" like Las Vegas at night, but often, according to the Pareto principle (80/20 rule), much more is already gained than without telematics.

Do you want more information about telematics?

Read the next article "[Choosing a telematics provider and what to consider](#)".

Visit **AEALCONTROL** for more information!

Source: AREALCONTROL