

# How to get your asset tracking project off the ground as an automaker and supplier

## Five aspects for logistics specialists in the automotive industry to bear in mind – from choosing the right technology to implementation

Tracking the position and load status of load carriers and various means of transport along the entire supply chain is a multifaceted process. Automakers and suppliers therefore need to clearly define their requirements and outline possible hurdles before embarking on a tracking project. It's a surefire way to ensure they find the device technology and solutions architecture that enables them to connect different partners, locations, and assets across the world. Additionally, it helps them ensure that the tracking solution pays off in the long run.

But what questions should companies be asking themselves to find that perfect solution? With many track-and-trace projects for load carriers to our credit, we have identified five key questions that automotive logistics specialists should address before initiating a tracking project.



### Where is the solution being implemented?

From local to global – logistics specialists in the automotive environment should define where the tracking solution is being utilized. This way, they can narrow down their options to the tracking technologies available in the target regions.

**Radio coverage** in particular is a factor to be considered in this decision: Sigfox, for example, is widely available in western Europe, but coverage is often spotty in eastern European countries such as Poland, Romania, and Bulgaria.

When **tracking assets across national borders**, companies must also comply with different regulatory requirements. The licensing rules for tracking software and hardware can vary from country to country. Issues such as waste disposal, local digital taxes, and customs procedures also need to be dealt with.

If **airfreight** is involved, a tracking solution must also meet specific security requirements. It not only has to be approved for air traffic by aviation safety agencies, its deployment must also be coordinated with the airline transporting the freight.

Safety rules for **dangerous goods** are another key factor. In Europe, companies have to comply with ATEX guidelines, among other regulations.



## What type of tracking is required?

Logistics specialists in the automotive industry should ask themselves how frequently they would like to receive data on the whereabouts of their load carriers such as trucks, semitrailers, locomotives, rail cars, and sea freight containers. Generally speaking, there are three ways of obtaining information:

- One is **real-time tracking**. This option provides detailed insights by delivering data to the user almost continuously – for example, every three minutes (20 times an hour). This can be done with all-in-one devices or a combination of sensors and gateways.
- Another approach is to have **tracking devices send information at certain intervals**, for example, one to five times a day, or to have certain events, such as the inflow and outflow of goods, trigger the transmissions.
- The third option is **logging**, in which no data is transmitted. A suitable tracking device merely collects the data, which can then be read at a later point in time.

Automakers and suppliers can narrow down their choice of tracking technologies further by defining the transmission intervals that best serve their purposes. For example, LoRaWAN wireless technology can send no more than six packages an hour. Every ten minutes is just not frequent enough for real-time tracking, thus ruling out this option. The frequency of data transmissions can also affect the service life of tracking devices.



Learn more about how Rehau uses our solution to optimize load carrier turnarounds with OEMs.

[Track and Trace in action at Rehau](#)



## What other parameters should be considered?

Tracking solutions can do more than just pinpoint the locations of load carriers. They can also **take temperature readings, monitor humidity levels, log shock events**, and the like. Companies should consider what factors they want or need to keep an eye on. One such example is ensuring that highly flammable items such as car batteries are delivered undamaged to the plant. It subsequently poses the question as to how exactly these parameters should be monitored and what the margin for error is.



At the company nox Nachtexpress, 10,000 load carriers are now equipped with sensors, with an expansion of this collaboration currently in planning.

[Track and Trace in action at nox NachtExpress](#)



## What requirements should the tracking hardware fulfill?

The service life of battery-operated tracking devices can quickly become a limiting factor in tracking projects, which makes it all the more important for companies to consider the desired **service life of the hardware** used, while also keeping an eye on the cost price of load carriers. Planning errors made at this stage will result in considerable overhead and drive up costs.

In automotive logistics, for example, a **vehicle generation (about seven years)** can serve as a guide. Companies usually purchase millions of load carriers for use in this time frame and the tracking devices should last just as long.

Logistics specialists should also take into account the conditions under which the tracking devices are installed. Should the hardware, for example, be able to withstand **adverse weather conditions and strong temperature fluctuations**? A clear definition of the framework conditions greatly simplifies the process of finding the right tracking device for a use case.



## How great are the implementation efforts and how flexible is the solution?

The complex supply chains in the automotive industry require tracking solutions to offer a **high degree of flexibility**. Logistics specialists should test in advance if a solution meets their needs in terms of integrating many different partners, locations, and load carriers. The multiclient capabilities of a solution is another aspect to consider: oftentimes it is necessary to provide access to certain information to only a limited group of stakeholders.

Last but not least, automakers and suppliers should take account of **implementation costs** of a tracking solution. On the one hand, this involves the installation of hardware on-site: can the devices be easily installed on the load carriers – for example, using magnets – or does it require professional support? On the other hand, companies should also consider the IT infrastructure: This calls for testing the extent to which a solution needs to be integrated into an existing system and how great the efforts to carry out this integration are.



While our employees previously had to keep records of the number of load carriers and search for missing containers, they now have a clear overview at a mouse-click.

Henry Kussatz, Business Development Manager at  
logistics company nox NachtExpress

## Start your tracking project with Bosch.IO

The abovementioned factors provide clear direction as to which tracking approach best achieves results in conjunction with the financial resources earmarked by a company. Of course, there are also other factors that play a role in making the right decision.

We'd be glad to assist you in finding a tracking solution that best suits your needs.



Do you have additional questions?

Feel free to contact me directly.

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