

Expertise: Electrification

Industries: Mobility, Energy

Connected monitoring for repowered electric trucks





Overview of the partnership

Partners:	TROVA and Consat Digital Solutions.
Objective:	To equip TROVA's repowered electric trucks with a connected platform for real-time monitoring, fault detection, and future digital services.

TROVA is building a circular path to electrification by converting existing diesel trucks into battery-electric vehicles for last-mile logistics. Together with Consat Digital Solutions, the company has implemented a connected platform that gives engineers and operators real-time visibility into vehicle performance, battery status, and faults – while creating a digital foundation for future scale.

TROVA's business is based on repowering heavy-duty trucks: refurbishing existing diesel vehicles and converting them into battery-electric trucks for logistics applications. To support both product development and commercial rollout, TROVA needed a way to monitor how the trucks perform in real operation, detect faults early, and create a stronger service offer around the vehicles.

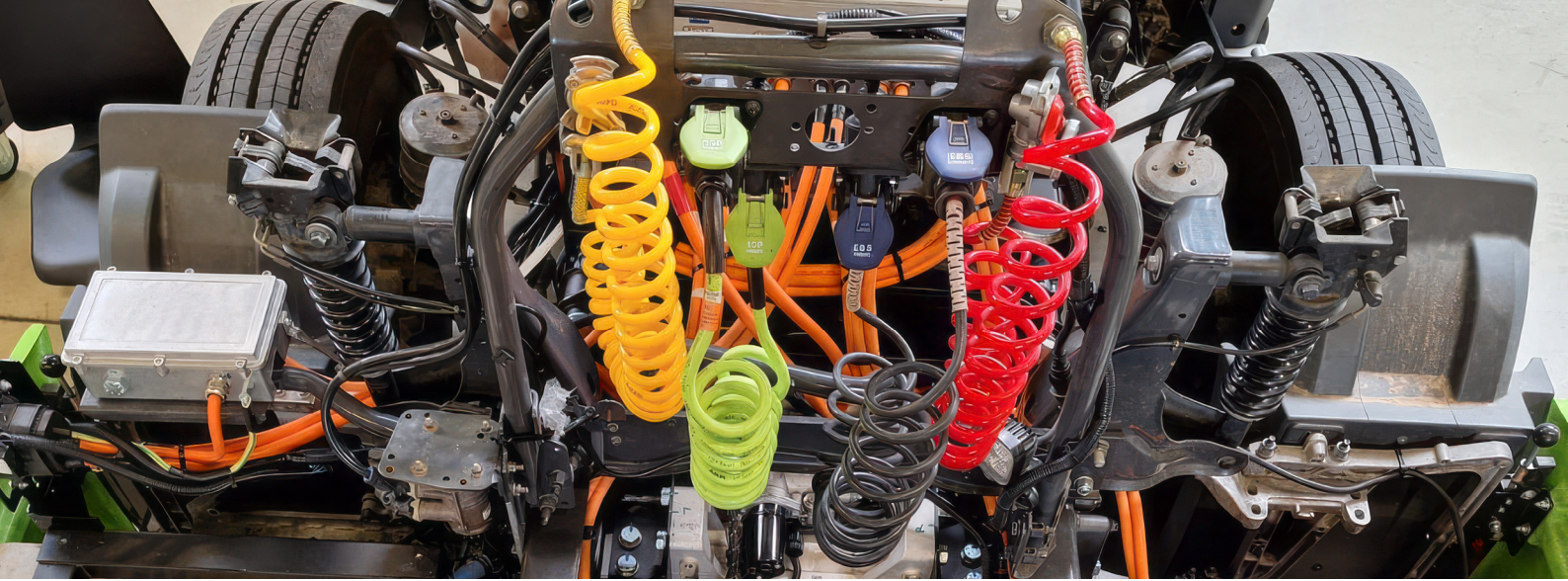
The collaboration with Consat grew out of an earlier relationship with TROVA's US operations, where Consat had already deployed an IoT platform for connected EV terminal trucks. When TROVA's European organisation needed a similar capability for its repowered trucks, Consat adapted the existing platform and gateway to a different vehicle model and operating context

A pragmatic partner

The partnership has been set up as a hybrid delivery model. TROVA's lead engineer, Marco Caponi, provides requirements from the vehicle engineering side, while Consat contributes with a senior system architect together with backend and frontend developers, gateway/embedded engineering, connectivity management, dataanalysts, DevOps, and cloud expertise in the wider delivery team.

The work has been managed in two-week sprints, with close alignment between the teams and a clear focus on getting a working solution into operation quickly. Because Consat could build on an already proven platform and gateway, the first version was up and running in less than three months.

Today, the collaboration continues through operations, maintenance, and ongoing development as new requirements emerge.



Challenge

TROVA needed real-time visibility into the performance and fault status of its repowered electric trucks during early commercial rollout and future scale-up.

Solution

Consat Digital Solutions adapted its existing IoT platform and gateway to TROVA's European truck setup, creating a connected monitoring solution for performance tracking, alarms, and ongoing product improvement.

The challenge

TROVA is a young company building a new offer around repowered battery-electric trucks. That created a dual challenge.

First, the team needed to verify that the trucks were performing as expected in real operation. Second, it needed a way to detect faults in real time and respond quickly if something went wrong.

This was especially important in an early commercial phase, where the connected platform needed to support both product improvement and future scale. Without access to live vehicle data, it would be harder to understand battery behaviour, vehicle health, and route performance – and harder to build a reliable service around the trucks

The solution

Consat delivered a connected solution that combines onboard data collection hardware, an IoT platform, and an application layer for truck monitoring.

The system collects relevant vehicle data and presents it in a way that allows TROVA to monitor truck performance, follow battery and vehicle health, and respond to alarms and fault events. The platform gives TROVA live insight into how its repowered trucks behave in operation and provides a practical basis for understanding whether the vehicles are performing according to design.

Consat's system includes gateway engineering that reduces the data sent from Trova truck to the cloud by using filtering, on-change reporting, batching, and compression:

- **Filtering:** Only signals that are cared about are uploaded.
- **On-change reporting:** No repeated or noisy values.
- **Batching:** One message per minute, minimising header overhead (TCP/IP + TLS + NATS).
- **Compression:** Batches are reduced by ~60–70% in size before sending.

This delivers approximately 99% savings in both storage and bandwidth.



Key outcomes

- Real-time monitoring of truck performance and fault events
- Faster insight into how repowered electric trucks behave in operation
- A connected foundation for TROVA's continued product development
- A digital service layer that can support future customer-facing fleet monitoring

Summary

- TROVA needed connected visibility into the performance of its repowered electric trucks
- Consat Digital Solutions adapted an existing IoT platform and gateway to a new European vehicle setup
- The solution enables real-time monitoring, fault handling, and ongoing product improvement
- The partnership creates a digital foundation for future services as TROVA expands in Europe

The result

The connected platform has given TROVA an operational view of its trucks from an early stage in the company's development. That visibility supports both day-to-day monitoring and longer-term product refinement.

"Thanks to the platform developed with Consat, we are able to monitor our vehicles live and analyse data efficiently at a later stage. This allows us to implement targeted software updates and deliver more reliable, trustworthy vehicles."

Marco Caponi, R&D Engineer, TROVA

"The partnership has helped TROVA identify where improvements need to be made on the product while also strengthening the offer TROVA can bring to its own customers. As the business grows, the platform also gives TROVA the basis for offering remote monitoring as a service to fleet operators," says Vinay Dhar, CSO, Manager Digital & AI Business, Consat Digital Solutions.

Value-driven innovations

The project demonstrates how early collaboration and cross-functional digital engineering can help turn an emerging electrification concept into a more scalable and service-ready offer.

By adding connected monitoring to TROVA's repowered electric trucks, Consat has helped create a foundation not only for real-time performance follow-up and fault handling, but also for future services such as predictive maintenance, remote support, and customer-facing fleet monitoring.

"It gives TROVA an early opportunity to differentiate – and to build new services around the data," says Vinay.

Contact us

Would you like to learn more about how we can support your operations with electrification, vehicle monitoring and new digital services? Contact us, we'd be happy to tell you more or arrange a meeting.