



Success Story: MEILLER

MEILLER trucks get an upgrade with innovative diagnostic app

KDAB designers and developers team up to help construction giant innovate

Tipper trucks (or dump trucks) provide critical assistance to industries as varied as building and road construction, mining, and recycling and waste management. In fact, more than 95% of all worldwide professional construction companies have at least one in their fleet. But even an industry that's over 160 years old faces the same challenges to improve and perform as any other.

Tipper trucks are valuable assets; every minute a tipper truck spends in a service bay is a minute that work stops elsewhere. However, keeping these large vehicles fully functional is simpler said than done.

Even though tipper mechanisms are highly ruggedized and built for punishment, they are very complex machines with over one thousand parts. Diagnostics are available on the trucks but are located on many separate systems throughout the vehicle superstructure; their unintuitive displays require dedicated training and specialized service equipment. For technicians this makes reading, interpreting, and diagnosing problems difficult—for drivers, it's nearly impossible.

To allow trucks to reach their maximum utility, tipper market innovator MEILLER turned to KDAB. The primary challenge was to allow drivers to diagnose and solve many common, fixable issues themselves without having to take their trucks in for service. KDAB and MEILLER



KDAB created a solution to replace an aging PC application that is simple enough for drivers from diverse backgrounds and yet robust enough for service techs.



Cutting down the time that vehicles are in service improves customer productivity and positions MEILLER as an industry innovator.



agreed that the challenge seemed solvable by a smartphone app with connectivity to truck diagnostic systems. Knowing that the best user interface is built on user-centric requirements, KDAB completed their requirements analysis by interviewing a sample of drivers. They discovered that not only would the interface need to operate intuitively and simplify complex workflows, but that it would need to be primarily icon-based to accommodate drivers from diverse backgrounds—some not fully literate, some speaking other languages—who may not be able to rely on reading text.

Using these key insights, KDAB was able to develop a Qt-based smartphone app that would run on either Apple or Android devices, and that could also be integrated directly into the truck's infotainment system at some point down the road. The app targets common trouble spots, helping drivers not only diagnose issues with the tipper mechanisms but also access crucial information about the truck's contents like load temperature—important for tasks

like asphalt hauling. The app is simple to use for drivers, allowing them to pull out their phone, tap a few icons, and quickly correct simple problems. But it also helps the more experienced service technicians more easily determine root cause of equipment failures and identify repairs.

Cutting down the time that vehicles are in service is a huge win for both MEILLER and their customers. The benefit to customers in improving tipper uptime is obvious. Other than creating more useful products, the benefit to MEILLER is in maintaining their status as an industry trend-setter. This year, MEILLER received the prestigious EuroTransportMedia (ETM) best brand award for the fourteenth consecutive time. But staying ahead of the pack requires a lot of hard work and increasingly involves incorporating innovative software into heavy equipment. Even if only in a small way, KDAB is happy to help MEILLER maintain their leadership in the construction vehicle space.



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About the KDAB Group

The KDAB Group is the world's leading software consultancy for architecture, development and design of Qt, C++ and OpenGL applications across desktop, embedded and mobile platforms. KDAB is the biggest independent contributor to Qt. Our experts build run-times, mix native and web technologies, and solve full stack performance issues and porting problems for hundreds of customers, many among the Fortune 500. KDAB's tools and extensive experience in creating, debugging, profiling and porting complex applications help developers worldwide to deliver successful projects. KDAB's trainers, all full-time developers, provide market leading, hands-on, training for Qt, OpenGL and modern C++ in multiple languages. Founded in 1999, KDAB has offices throughout North America, Europe, and Asia.