Click or scan for more
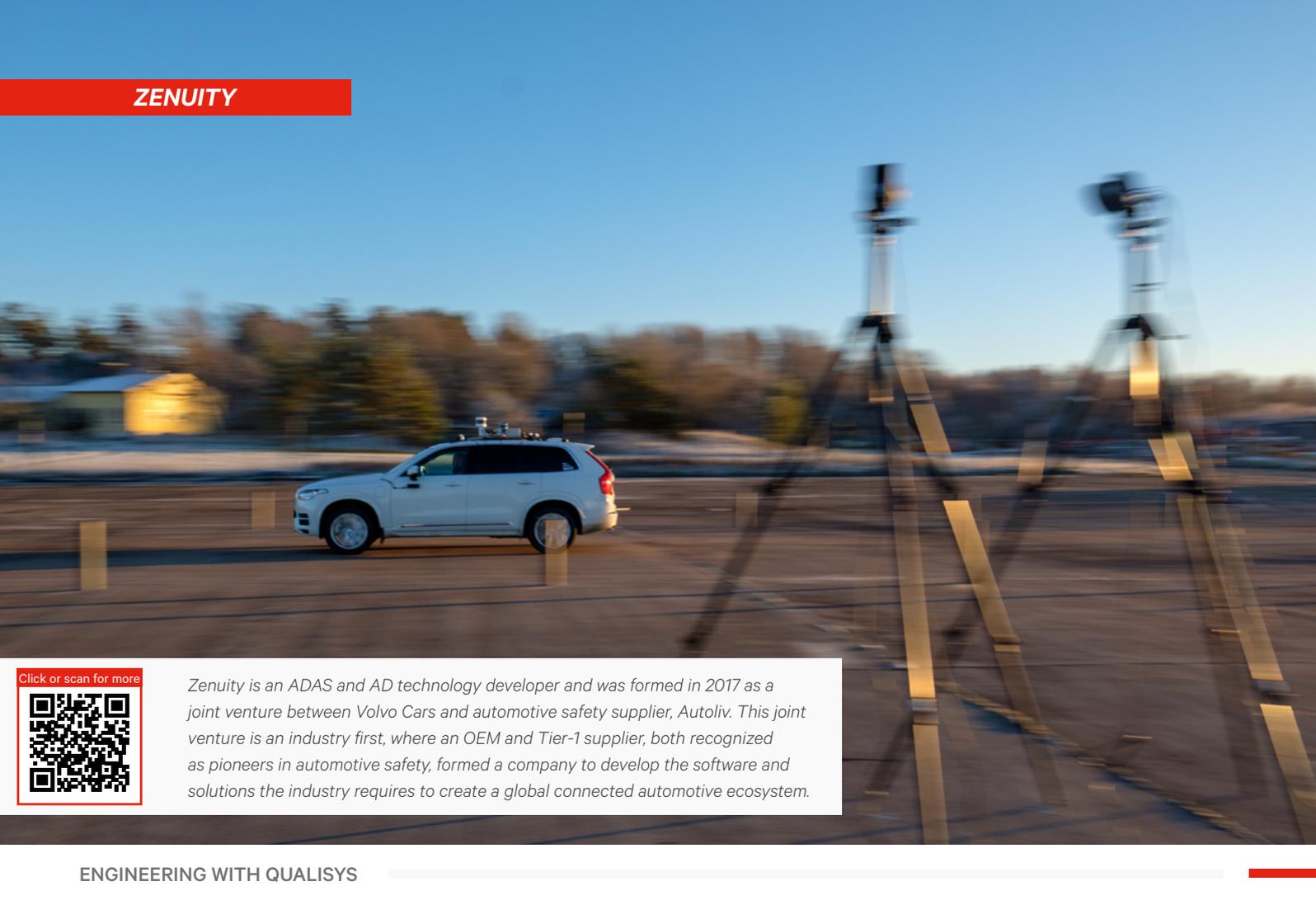
Zenuity is an ADAS and AD technology developer and was formed in 2017 as a joint venture between Volvo Cars and automotive safety supplier, Autoliv. This joint venture is an industry first, where an OEM and Tier-1 supplier, both recognized as pioneers in automotive safety, formed a company to develop the software and solutions the industry requires to create a global connected automotive ecosystem.

A drive for intelligent and safe mobility

With an ambition to make safe and intelligent mobility available to as many people as possible, the company sought out technology that would aid to the localization vehicles. Location-based services require positioning systems, which can estimate the user location. GPS is often used in navigation, tracking, and public safety, but in indoor environments, signals from the GPS satellites are obstructed, delivering limited coverage and inaccurate results.

Recognizing that optical motion capture technology provides a solution for indoor vehicle localization and automation, Zenuity's sites were soon provided with 12 Qualisys 7+ cameras in a 170 m^2 ring to support their work in the development of

autonomous driving solutions. For instance, by tracking the location of a vehicle performing its regular tests, the developers may use the vehicles positional and orientational data collected to determine traffic gaps and time instances to perform maneuvers and calculate algorithms to apply in automated testing.

With weatherproof capabilities, Qualisys 7+ cameras allow the work to continue in an outdoor setting to test specific maneuvers in various scenarios. The system's open source real-time software development kit allows the testing team to use the system to work in cohesion with their own autonomous software applications. Algorithms determined in earlier stages of

testing can be used to control vehicular movement in real-time when performing automated maneuvers on a test track. With this function, team can have a higher degree of automation which minimizes manual labor. The team has also used the system to track objects within the vehicle itself, giving insight to ergonomic designs and driver reaction tendencies.

> *"The mocap system is a very powerful tool, sometimes we come up with new applications for it and in that sense, it's quite exciting to use such a system for our work."*

Christoffer Gillberg
Development Engineer, Zenuity