



TIC-IT & Park-IT

The Trusted Intelligent Connected Autonomous Vehicle consortium (TIC-IT), is part of the national strategy to establish the UK as a global-leading centre of excellence for the development, testing and commercialisation of CAVs.

View the video here <https://www.youtube.com/watch?v=yTm4kLPuYas>

Find out more here: zenzic.io/testbed-uk/trusted-intelligent-connected-autonomous-vehicles-park-it/

Midlands Future Mobility (MFM)

Midlands Future Mobility benefits from a diverse road network of over 100km, and will accelerate progress in CAV technology and infrastructure, enabling users to develop features in a highly-connected and monitored real-world environment.

Find out more here: midlandsfuturemobility.co.uk

Digi-CAV

The validation of high-level autonomy features requires large amounts of test data, which conventionally is achieved by accumulating miles on the road and dedicated proving grounds. According to the Rand Corporation, typically 275 million miles would need to be driven without failure in fully autonomous operation to have a 95% confidence level, both in terms of costs and the speed of bringing new models to market. A conventional new car model costs between \$1-6 billion to take through from design to commercialisation, and as much as half of this can be validation costs. For highly automated vehicles (SAE Level 4+) vehicles currently in development, the validation costs are likely to be significantly higher, which will slow the introduction and take-up through increased costs.

This project has the ambitious objective to establish the feasibility of building a connected autonomous vehicles (CAV) simulation platform that enables plugging in external heterogeneous components such as electronic control units (ECU), autonomous driving modules, simulation software, sensor data and algorithms. Level 4 autonomy capability will be demonstrated through a Hardware-in-the-Loop (HiL) simulation solution (e.g. CAV control ECU for autonomous vehicle connected to a simulation platform) emulating a real world scenario. Accelerated testing will be demonstrated by a novel modular approach that will use Big Data Analytics and causality analysis. A key feature of this platform is that it will be agnostic to the source of the component, that is have compatible functionality without forcing IP owners to disclose their protected methods and algorithms.

This feasibility project will de-risk the technical approach and form the foundation for a larger, follow-on project which will bring on board potential customers and IP owners to ensure the final capability is applicable throughout the supply chain.