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16 June 2022

News Release

North East based consortium successfully completes UK's first autonomous HGV pilot

The pioneering 5G Connected and Automated Logistics (5G CAL) pilot has succeeded in its mission to prove the potential of next generation technology in overcoming barriers for a more efficient future for last mile logistics.

Becoming the first in the UK to prove the delivery of zero emission automated logistics, the 5G CAL pilot is now complete and is raring to continue with a proposed series of projects to develop the technology and establish a testbed for connected and automated logistics in the North East.

StreetDrone's innovative autonomous and teleoperation technology, built into a Terberg EV truck, was on show at Vantec in Sunderland at the pilot's closing event on Friday 17th June. Presented by the project's partners, delegates at the event gained access to insider knowledge of the challenges and successes of the pilot, alongside video footage of trials and an overview of what's next for 5G CAL's proposed expansion.

The consortium comprises of the North East Automotive Alliance (NEAA), Sunderland City Council, Newcastle University, Coventry University, Connected Places Catapult, StreetDrone and Perform Green, and supported by Nissan, Vantec Europe, Terberg DTS UK and Fergusons Transport.

These innovative partners have spent the last 23 months understanding and utilising pioneering 5G technology in an operational automotive environment for the very first time in the UK, to develop the UK's first zero emission automated logistics HGV.

The 5G CAL pilot is a proof of concept to prove that an autonomous truck can be automated to drive between Vantec and Nissan. The vehicle's teleoperations system uses next generation technology connected to a private 5G network to facilitate remote teleoperations.

> Paul Butler, CEO of the North East Automotive Alliance (NEAA), said: "It is an extremely proud moment to be able to stand here and say that the use of 5G powering

a unique hybrid of autonomous and teleoperated technology has now proven the potential for unprecedented change in the field of last mile logistics.

"We hope that this successful 5G CAL project is the first of several phases required to operationalise this new technology, ensuring financial viability to further prove the benefits to the UK's automotive sector from right here in the North East."

Martin Kendall, Managing Director at Vantec Europe Limited, said: "The prospect of taking our findings further and exploring the advantages the pilot has revealed, is very promising for the future of Connected Automated Logistics.

"This marks a significant milestone for the industry and for the use of next generation 5G technology to drive powerful future solutions."

Martin added: "Having our drivers involved during the operational phase in both the 'In Cab' and Tele Ops activities has really enabled the workforce to see the benefits regarding new skills that will come to our industry.

It really was exciting to see, on the 9th and 10th June, Vantec delivering a loaded vehicle into Nissan using the autonomous and tele operations."

Mike Potts, StreetDrone Co-Founder and CEO, explains market demands and future solutions further: "With a majority of the distribution and logistics market demanding increased automation to improve quality and productivity while reducing the cost and environmental impact of operations, a critical technical driver enabling the transformation of industrial logistics has been a staged approach to the deployment of autonomous and automated vehicles."

This 'ready, steady, go' approach is best demonstrated by StreetDrone's automated HGV delivery work at the Nissan Sunderland plant in the UK. The repetitive driving of articulated goods vehicles along an arterial route on the manufacturing site is now partly enabled by autonomous and teleoperated software, a useful substitute for scarce HGV drivers.

The blend of autonomous driving with teleoperation provides a tiered capability that StreetDrone has worked hard to integrate.

> Potts added: "Our approach to automating the way vehicles deliver goods efficiently in ports, freight yards and at manufacturing facilities has been pragmatic. We automate when our technology readiness is fit for purpose and ready to deploy. Simply put, we deliver smart automation in stages."

StreetDrone's approach speeds-up deployment to deliver the desired productivity gains in a safe manner, but also brings the additional benefit of preserving the value of in-service hardware – in this case high unit cost HGV tractors – by converting manual vehicles for automation during their useful lifespan.

> Potts continued: "Automation is all about the yield, and generating heavyweight capex requirements for new machinery when a company is looking to achieve reduced costs through automation makes no sense. Our methodology is distinct as it builds a pathway for autonomous operations to deliver savings immediately, keep overheads light and ensure the business ambition is matched with technology readiness."
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> Patrick Melia, Chief Executive at Sunderland City Council, said: "Through this 5G CAL pilot, we have been able to showcase the power of 5G and our unique supporting smart city infrastructure, which are stimulating real advancements for both logistics and advanced manufacturing.
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> "This successful pilot has revealed a host of new opportunities, not just commercially for the automotive sector, but for upskilling and new job prospects, empowering local people by creating the potential for careers in higher value, better paid jobs.
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> "Sharing expertise to grow the sector and attract new industries aligned to automation and teleoperations provides an exciting outlook for Sunderland, the wider North East region and the UK as a whole."

The 5G CAL project was awarded a share of £30 million through 5G Create, an open competition combining British creativity with innovative new uses for 5G as part of the

Department for Digital, Culture, Media and Sport's £200 million 5G Testbeds and Trials programme (5GTT).

> Digital Infrastructure Minister, Julia Lopez, said: "It is fantastic to see the UK's first zero emission autonomous HGV pilot succeed in Sunderland using pioneering 5G technology.
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> "This is one of the flagship projects funded by our £30 million 5G Create competition and is crucial to boosting the country's productivity, reducing emissions and improving people's lives."

The government is pushing ahead with its plans to unlock new economic benefits and productivity boosts from 5G while commercial rollout continues at pace. It has now funded 24 5G testbeds across the UK, which have trialled almost 70 different 5G technologies, products and applications.

The £30 million package consists of £16.4 million from the government match-funded by organisations ranging from large tech and telecoms companies to SMEs and local authorities.

〈Pictures at the event〉

Image: L to R: back: Mark Potts, StreetDrone Co-Founder and CEO, Paul Butler CEO of the North East Automotive Alliance (NEAA), Martin Kendall, Managing Director at Vantec Europe. Front: Patrick Melia, Chief Executive at Sunderland City Council.

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