



Association of Directors of
Environment, Economy, Planning & Transport

ADEPT President's Awards 2020

Entry form

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| Award category: | 2: Digital Innovation/ Technology |
| Title: | DRIVEN |
| Entrant: | Oxfordshire County Council |
| Main contact name and email address: | George Economides George.economides@oxfordshire.gov.uk |
| Partner/s (if applicable): | Oxbotica, TRL, TfL, RACE, Cicero, AXA XL, Nominet, Telefonica, University of Oxford, Oxfordshire County Council |
| Headline summary (150 characters, c. 30 words) DRIVEN built and combined all parts required for autonomous vehicle fleets on public roads. Joining specialists, innovators, enablers and transport experts, DRIVEN was the most complex CAV trial ever attempted. | |

Please attach any supporting photos separately as jpg or png files.

Please paste links to any supporting video evidence here

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|--------|---|
| Link 1 | https://youtu.be/WaB4ZjXYRRw |
| Link 2 | https://www.theguardian.com/technology/2019/oct/03/driverless-cars-in-new-london-trial-in-complex-urban-environment |

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500-word project outline (please ensure you address all the judges' criteria – for more info see [here](#))

DRIVEN was a 3-year ground-breaking Connected Autonomous Vehicle (CAV). Its aim was to build all the components required for a fleet of L4 autonomous vehicles operating on public roads. This brought together world-leading experts from the relevant fields:

- Oxbotica, a spin-out of University of Oxford is one of the top companies in the world in autonomous vehicles. They have been in charge of creating the fleet of 6 vehicles and the fleet management system. Oxfordshire County Council (OCC), has been instrumental in facilitating the real-world trials, engaging with the emergency services, traffic management systems and sharing local knowledge. This was supported by the academic work of Oxford University's Robotics Institute (ORI).
- Transport Research Laboratory (TRL) are experts in road safety assessment. Their work has been to create static and dynamic risk matrix to evaluate the type of accidents most common in Oxford and London and which of these can be reduced by the autonomy systems trialled. Based on their work in DRIVEN, TRL have created a BSI standard (PAS 1881) on the safety case framework for AV road trials, as well as consortium white paper on the future of traffic management. In assisting their work, OCC has been integral part in inputting the needs, expectations and abilities of a local authority.
- RACE (Remote Applications in Challenging Environments) is one of the national CAV testbeds, located in Oxfordshire. RACE was the location for closed-road of CAV trials before public roads, and OCC worked closely in setting up a framework of evaluation as to when to move trials from private to public roads.
- Telefonica/O2 have been providing the communication capabilities of the Autonomous vehicles. OCC worked with Nominet, Telefonica and RACE to map (according to our records) the existing connectivity, measure its reliability and then use this to assess the possibility of cyber/ cyber-physical attacks.
- Nominet was responsible for the cybersecurity and risk assessment of the trials, providing a framework and complete breakdown of the possible threats, and was also responsible for the data sharing between partners. OCC worked closely with Nominet in the cybersecurity work but also to establish the link between infrastructure assets data sharing (streetlights, traffic lights, traffic management) and the vehicles. OCC, Nominet and TfL established the first system for secure monitoring of trials especially for traffic management professionals.
- TfL supported the trials in London and collaborated closely with OCC in establishing the needs for local authority, especially for safety and network management. DRIVEN work contributes the TfL's CAV statement: <https://tfl.gov.uk/corporate/publications-and-reports/connected-and-autonomous-vehicles>
- AXA XL have created a bespoke, world-first product to insure autonomous vehicles. OCC have supported in providing background information on the road network.

Additionally, OCC have established a dedicated Innovation Hub and held public exhibitions alongside the trials that disseminated the learnings of the project widely to all members of society and enable new ventures to collaborate to bring the AV mobility closer.