

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Oxbotica Ltd	Enabling Affordable Autonomy Using Hybrid Dense Vision	£249,690	£174,783
Project description - provided by applicants			
Autonomous vehicles have vast economic potential for UK plc. Like any new technologies, the adoption curve can be dramatically accelerated by improving the balance between cost and benefit. However this delicate balance is often overlooked in many studies and sensor costs currently limit any reasonable business case. This proposal is about inducing a step change in the affordability of autonomous vehicles that will accelerate this nascent technology to deployment. The Feasibility Study will combine new, ground-breaking Intellectual Property in 3D dense vision into a road-going prototype and assess the performance of this radical low-cost alternative to laser localisation over many thousands of miles of testing. The outcome will be an analysis of the performance of a new Hybrid Dense Vision approach - leading to a reference design for an ultra-low cost sensor system for autonomous vehicles that could reduce existing sensors costs for autonomous systems by over an order of magnitude.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
INRIX UK Ltd Connect Plus Services	V2 gritter	£78,574	£44,702
Project description - provided by applicants			
Deciding if and where to salt roads during winter is a worldwide problem, and typically uses limited roadsidesensors' data in weather forecasts. Around the zero degrees critical area, not salting has safety implications butunnecessary or too much salting wastes money and causes damage to the environment. Because of forecasts'limitations due to using fixed sensors, estimates suggest 10-50% of salting is actually not needed, costing £16 -£80m a year for the UK alone. So this study examines if weather and other data from connected vehiclesprocessed by INRIX can improve decision making. For the M25 in winter 2015/16, we will compare the saltingdecisions that would be taken by Connect Plus Services (CPS) if they had new vehicle based data against theiractual decisions, to quantify real benefits and assess feasibility of this innovation. The project will quantify thevalue of vehicles as extra sensors and assess innovative new products and services. Such evidence will helpshow the benefits of the data, improve how it is collected / presented for salting and reduce risk in further R+D.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Myrtle Software Ltd	Efficient Computer Vision ADAS Hardware for Connected and Autonomous Vehicles	£210,650	£147,455
Project description - provided by applicants			
Bringing the next generation of Advanced Driver Assistance Systems (ADAS) hardware to automobiles is complex, expensive, iterative and slow. Development and rollout in the marketplace is further slowed by the high standards naturally required by the car industry. A major consequence of this situation is that advanced computer vision algorithms, which are used in other industries for human safety, are not appearing as quickly as they should within the increasingly connected cars on the roads today. This project is to explore the feasibility of developing a new technology in real-time image processing to drastically reduce the iteration times of producing ADAS hardware. The project will produce hardware versions of key algorithms using our software and evaluate the efficiency of our new process. If successful this project would see the UK well-placed to be at the forefront of owning the IP within all the chips in future car models and leading the way in making our roads safer.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Navtech Radar Ltd	A feasibility study into the use of radar technology for environment mapping on autonomous vehicles	£227,906	£159,534
Project description - provided by applicants			
<p>One of the key challenges in developing fully autonomous vehicles is the question of the navigation of driverless cars. Just as with human drivers, a vehicle must know its precise location in order to know how it should behave, where it should go next and what challenges may lie ahead. Traditional GPS technology is not accurate enough to be used in such a critical task, and as such prototype driverless vehicles have so far relied on lidar technology. Lidar is a laser based technology that measures and maps the area around a vehicle and is able to create a map of the surrounding area. Though the data is very accurate, the nature of light based technologies means that any poor conditions such as fog, heavy rain or snow, or dust have a serious impact on the reliability of the sensor. Navtech will therefore use this project to investigate the feasibility of producing a radar based system that will provide an equivalent performance to the lidar technology.</p>			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Ordnance Survey Ltd Satellite Applications Catapult GOBOTiX Ltd Oxford Technical Solutions Ltd TRL Ltd Royal Borough of Greenwich Sony Europe Ltd	Atlas	£249,959	£174,606
Project description - provided by applicants			
The Atlas Project will study the feasibility of and requirements of the technologies and services required to deliver autonomous navigation 'anywhere' in a safe, reliable and resilient manner. Specifically, the project will study the navigation, mapping, data, communications and processing requirements; identifying the on-vehicle and infrastructure elements required to support autonomous navigation. The project also considers how data can be reused for the planning of urban environments more suited to autonomy. The consortium partners collaborating on this project are: Ordnance Survey (lead), Gobotix Ltd, Oxford Technical Solutions Ltd, Transport Research Laboratory, Sony Europe Ltd, Royal Borough of Greenwich and Satellite Applications Catapult.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AVL Powertrain UK Ltd	Virtual validation Environment for Driver Assistance Systems (VEDAS)	£248,174	£124,087
Project description - provided by applicants			
In today's competitive market, automotive manufacturers and suppliers must achieve faster time to market as well as improved quality and reliability. For ADAS features, this is especially the case due to the rapid growth in this field. Additionally they must satisfy customer and regulatory demand for greater safety and robustness. Product development and design must be optimised and verified with a limited number of available physical prototypes and to tight timescales. Methods to conduct some of these activities virtually will be of significant benefit. Full-vehicle validation will still be required, so opportunities to make this process more robust and time-effective will appeal to OEMs. This feasibility project will develop processes and methodologies needed to support a virtual validation environment for ADAS and autonomous vehicles. Such an environment will allow faster, more controllable and adaptable validation.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
The Floop Ltd University of Sheffield Tata Motors European Technical Centre PLC	Driver experience based learning system for autonomous cars	£210,535	£165,554
Project description - provided by applicants			
The sensor and recording mechanisms utilised in telematics insurance systems record driving data to analyse behaviour and risk according to individual mobility and external risk factors. The aim of this project is to investigate whether such data, following anonymisation could also be used to inform automated driving algorithms in autonomous cars; i.e. by influencing automated behaviour when considering mass behaviour of other vehicles. Correct decision making by future autonomous cars will crucially make judgements in various traffic situations and their trust and comprehension of other drivers typical background mobility data should likely be considered. This project aims to investigate the use of mass manual driver data to: 1) improve autonomous vehicle decision making capabilities and 2) Facilitate validation means of autonomous vehicle modelling and testing. This project aim is especially important in mixed transition environments (i.e. containing a mixture of autonomous and manual driving vehicles) to provide understanding of how autonomous vehicles 'fit-in' based upon normalised road and driver behaviour in order to both minimise and quantify risk.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Thingful Ltd	Connected Car Data - Creating new business models	£240,113	£168,079
Project description - provided by applicants			
<p>This project assesses the feasibility of real-time vehicle data sharing within a decentralised system of data producers and consumers, making use of data from embedded automotive connectivity modules. We demonstrate a system for making vehicle data accessible to a variety of third parties through an IoT system that mediates access via a decentralised and trustless transaction management system, with drivers' explicit consent and incentivisation. It will be built on technical and business model innovations that we at Thingful are already developing for other verticals. The potential of connectivity and increasing level of sensor based automation in vehicles is not being harnessed due to a lack of a clear value and business proposition for automotive OEMs. This feasibility work will demonstrate that creating a sensor data service for automotive aftermarket channels, app developers and other parties (that are affected by or have a direct interest in the automotive value chain) accelerates value creation in the industry and will show how a technology like Thingful enables and supports it.</p>			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Emissions Analytics Ltd Imperial College London	Optimised Vehicle Autonomy for Ride and Emissions	£247,618	£210,390
Project description - provided by applicants			
<p>This project aims to demonstrate the concept of optimising the driving style of autonomous vehicles (AVs) for passenger ride comfort, vehicle emissions and fuel consumption, and journey time. The results of this project will evaluate the impacts of customers interacting with AVs to specify a driving style to suit their requirements (e.g. minimise travel time, or maximise comfort) on AV fuel consumption and emissions and on traffic at the network level using simulation methods. The collaboration between Emissions Analytics and the Centre for Transport Studies, Imperial College London, combines access to a range of vehicles for testing, expertise in vehicle emissions measurement, innovation in sensor development and expertise in the simulation of AVs. New measurements of ride comfort and emissions will be used to develop models that can be used in further simulations of passenger-AV interactions. As part of this project, a ride comfort sensor will be developed to independently measure vibrations so that standard ride comfort metrics can be calculated. The ride quality sensor developed in this project will also be used to detect road degradation for highways maintenance.</p>			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Amey OW Ltd EURATOM/CCFE Oxbotica Ltd Siemens PLC Westbourne Comms Company Ltd	PAVE: People in Autonomous Vehicles in Urban Environments: Culham City	£247,159	£190,067
Project description - provided by applicants			
I want to live in a vibrant community with easy access to work, leisure, family and entertainment and to my local towns and the countryside. I want to be independent and mobile in my old age. I want to live well and I want my great grandchildren to be able to live well too. Technology will play a key role in delivering these aspirations. Connected autonomous vehicles will be part of the solution. Culham City is a new test site that will be used to explore how smart technologies can improve how we live by enabling the safe and controlled testing of the next generation of transport solutions. In the process we will generate the evidence, to convince users, regulators, insurers and investors alike, that autonomous vehicles are a benefit to society. Culham City puts real people at the heart of CAV research and will create a world leading facility that will anchor CAV research in the UK for decades to come.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Roke Manor Research Ltd	Road Accident 3D Reconstruction	£34,546	£17,273
Project description - provided by applicants			
Who is responsible for a road accident involving driverless cars? The answer to this question, and many like it, is the motivation for this proposal: To study the feasibility of producing a highly precise 3D reconstruction of a vehicle's trajectory, in the build-up to a road accident and the accident itself, by advancing event data recorders such as dashcams.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Machines with Vision Ltd	Pinpoint: Simple, low-cost, compact and precise localisation for highly autonomous vehicles	£174,697	£122,288
Project description - provided by applicants			
Highly automomous vehicles need to know their location relative to the road but GPS is not accurate enough. Autonomous vehicles being developed and tested today use rich 3D maps of the environment to determine the vehicle position to within a centimeter or so but the technology is very expensive, bulky and power hungry. We have identified a radically new way to determine vehicle location that is not only cheaper, more compact and more efficient but should also determine position to millimeter accuracy. Our system uses a novel 3D imaging sensor. In our project we will build a prototype of the sensor, demonstrate the ability to localise a vehicle and develop the commercial value proposition and route to market.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
Autord Ltd Empire Racing Cars Ltd Imperial College London	Autonomous Motorcycle Platform Feasibility	£234,290	£180,207
Project description - provided by applicants			
This project explores and demonstrate the technical feasibility of an autonomous motorcycle platform			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: Connected and Autonomous Vehicles - Feasibility

Competition Code: 1507_FS_TRANS_DAAV

Total available funding for this competition was £2.5M from BIS and the Centre for Connected and Autonomous Vehicles

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

Participant organisation names	Project title	Proposed project costs	Proposed project grant
AptCore Ltd	A Low Cost Hardware and Software Platform for Situational Awareness of Autonomous Vehicles	£174,850	£122,395
Project description - provided by applicants			
This project will assess the feasibility of providing a low cost hardware and software platform for provision of collision avoidance and situational awareness capability to autonomous vehicles. The system envisaged will comprise of a set of licensable hardware designs together with the necessary software applications and developer configuration tools, to enable non-experts to implement and configure a system suitable for their pod or other autonomous vehicle. This will greatly lower the barrier to entry into the autonomous vehicle market, bringing the benefits of increased competition and lower price. This would be the first offering of its kind, and could be considered an innovative, possibly groundbreaking product if it proves feasible. The project will bring together some of AptCore's existing IP, function libraries and example applications, and build on these, adding further capability and a user configuration tool to attempt to implement a situational awareness system with collision avoidance suitable for a small electric vehicle e.g. a pod.			

Note: you can see all Innovate UK-funded projects here

<https://www.gov.uk/government/publications/innovate-uk-funded-projects> Use the Competition Code given above to search for this competition's results