LAND ROVER IS MAKING ALL-TERRAIN AUTONOMY A REALITY

- **Jaguar Land Rover is developing off-road self-driving SUVs in project CORTEX**

- **The £3.7m project is exploring all-terrain, all- weather autonomous capability**

- **World-first '5D' technology is enabling Level 4 and 5 off-road automation**

Coventry, UK, 30TH May 2018 – Jaguar Land Rover is developing autonomous cars capable of all-terrain, off-road driving in any weather condition.

The world-first 'CORTEX' project will take self-driving cars off-road, ensuring they are fully capable in any weather condition: dirt, rain, ice, snow or fog. As part of the project, a '5D' technique combining acoustic, video, radar, light detection and distance sensing (LiDAR) data live in real-time is being engineered. Access to this combined data improves the awareness of the environment the car is in. Machine-learning enables the self-driving car to behave in an increasingly sophisticated way, allowing it to handle any weather condition on any terrain.

Chris Holmes, Connected and Autonomous Vehicle Research Manager at Jaguar Land Rover, said*: "It's important that we develop our self-driving vehicles with the same capability and performance customers expect from all Jaguars and Land Rovers. Self-driving is an inevitability for the automotive industry and ensuring that our autonomous offering is the most enjoyable, capable and safe is what drives us to explore the boundaries of innovation. CORTEX gives us the opportunity to work with some fantastic partners whose expertise will help us realise this vision in the near future."*

Jaguar Land Rover is developing fully- and semi-automated vehicle technologies, offering customers a choice of the level of automation, while maintaining an enjoyable and safe driving experience. This project forms part of the company's vision to make the self-driving car viable in the widest range of real-life, on- and off-road driving environments and weather.

CORTEX will develop the technology through algorithm development, sensor optimisation and physical testing on off-road tracks in the UK. The University of Birmingham, with its world leading research in radar and sensing for autonomous platforms and Myrtle AI, machine learning experts, join the project. CORTEX was announced as part of Innovate UK's third round of Connected and Autonomous Vehicle Funding in March 2018.

ENDS

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About Jaguar Land Rover

Jaguar Land Rover is the UK's largest automotive manufacturer, built around two iconic British car brands: Land Rover, the world's leading manufacturer of premium all-wheel-drive vehicles; and Jaguar, one of the world's premier luxury sports saloon and sports car marques.

We employ more than 43,000 people globally and support around 240,000 more through our retailer network, suppliers and local businesses. Manufacturing is centred in the UK, with additional plants in China, Brazil, Austria and Slovakia.

At Jaguar Land Rover, we are driven by a desire to deliver class-leading vehicles, which will provide experiences our customers will love, for life. Our products are in demand around the globe. In 2017 Jaguar Land Rover sold 621,109 vehicles in 130 countries, with more than 80 per cent of our vehicles being sold abroad.

Our innovation is continuous: we spent more than £4 billion last year on new product creation and capital expenditure.

From 2020 all new Jaguar Land Rover vehicles will be electrified, giving our customers even more choice. We will introduce a portfolio of electrified products across our model range, embracing fully electric, plug-in hybrid and mild hybrid vehicles as well as continuing to offer ultra-clean petrol and diesel engines.

About CORTEX

CORTEX is a 30 month collaborative project launched in March 2018 to support the development and delivery of self-driving vehicles in the UK. CORTEX brings together leading technology and automotive expertise as well as academia to deliver highly capable self-driving vehicles. CORTEX is jointly funded by government and industry. The competition was delivered by the UK's innovation agency, Innovate UK.

Levels of autonomy

Level 0 - No Automation: There is no automation, the driver is in sole control of the vehicle.

Level 1 - Driver Assistance: The driver has assistance for one function eg cruise control.

Level 2 - Partial Automation: The driver has assistance for two functions eg speed and steering such as Traffic Jam Assist.

Level 3 - Conditional Automation: The car undertakes normal driving functions autonomously in a specific environment but the driver may be required to retake control if the environment is too challenging.

Level 4 - High Automation: The car can operate independently in specific environments such as urban environments or motorways, without any driver intervention.

Level 5 - Full Automation: No human control of the vehicle is needed. The vehicle can complete a journey without any human intervention.