



Department
for Transport



Drone-Technology

RESEARCH INNOVATION GRANTS

Department for Transport

Drones Technology Research Innovation Grants Programme (D-TRIG) 2021

GRANT SPECIFICATION



Introduction

DfT's Drones Policy Team is seeking to advance promising new products and services within the drone industry. This ambition is being delivered through the Drones-Technology Research Innovation Grants (D-TRIG) Programme, which will be launched in summer 2021. Through an open grant funding call, up to six projects will be awarded £30k to undertake research and development work.

Eligibility

D-TRIG provides 100% funding and is open to all businesses (including micro, small and medium-sized enterprises) to support research projects which will examine the integration of drones into UK airspace. The Department seeks genuinely innovative solutions and would welcome bids from organisations outside of the transport sector or consortia that can see a role for their technologies, tools and approaches in delivering benefits in this space.

In order to apply to the D-TRIG scheme your business must be based in the UK.

Please also note:

- The DfT will consider proposals from consortia. However, a lead applicant, who will be the grant recipient, should be identified.
- Previously unsuccessful applicants are welcome to apply again with improved/ revised bids.
- Applicants making more than one application will need to demonstrate an ability to deliver the projects concurrently.

Scope

This document provides details of the scope of the funding calls within the 2021 D-TRIG competition. Applicants are advised to consider these specifications along with the guidance document to ensure the application questions are addressed appropriately. The D-TRIG funding route is intended to support projects that are between TRL 2 and 4 on the Technology Readiness Level (TRL) scale. The aim of the funding is to enable innovators to progress towards TRL4 by proving the feasibility of a concept.

Project proposals should clearly highlight the innovative and novel aspects of their proposed transport solution. The solution could well be a completely novel idea or approach. However, approaches or innovations from other areas, applied in a novel way to transport, are also of interest. All applications must be innovative and focussed on science, engineering or technology to solve a transport challenge. Projects must have an innovative aspect, although this does include products being used in innovative ways outside of their original intended use.

Projects supported through this D-TRIG funding call must deliver a robust assessment of the transport benefits that their proposals can bring. Successful applications will need to clearly demonstrate the following:

- What transport challenge(s) the innovation is aiming to solve.
- Evidence of state-of-the-art innovation being carried out in practice.
- That the team has the skills and expertise to deliver the project plan.
- Potential for delivery of tangible transport and/or commercial opportunities for the UK.

Competition Themes

The 2021 D-TRIG scheme will comprise of 3 separate themes, as outlined below.

Theme 1: Onboard Detect and Avoid

Key area of focus – Electric Conspicuity (EC)

Examples of possible projects within this theme are:

- Sensors to observe and interpret situational awareness
- Processing of sensor data to make real-time decisions
- Integration with existing solutions for airspace users
- Remote identification including network remote ID
- Onboard transmit and receive solutions

Theme 2: Autonomy

Key areas of focus – autonomous charging and onboard weather processing

Examples of possible projects within this theme are:

- Unattended solutions – e.g. drone in a box
- Sense and navigate
 - Onboard automated battery charging solutions
 - Ground based charging infrastructure
- Gathering data using drones
 - Miniaturisation and increased onboard processing capability
 - Edge processing of onboard data

Theme 3: Communications

Key area of focus – navigation.

- Navigations

Examples of possible projects:

- Redundancy and fail over of C2 communications
- Secure protocols for GCS to UAV communications
- UAV to UAV mesh communication
 - Redundancy and fail over of navigation systems
 - Precise navigation and landing solutions

Please note that these examples are not exhaustive, and we would be interested in hearing about other ideas within the three theme areas. If you are unsure about whether your project would fall within the scope of this competition and would like to discuss it with us, please contact drones-TRIG@cp.catapult.org.uk.