



ABOVE AND BEYOND

Remote inspections beyond visual line of sight

WHO IS INVOLVED?

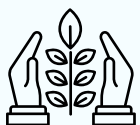


Callen-Lenz



IMPACT:
Disruptive

KEY BENEFITS/THEMES



Environmental



Financial



Health & safety

WHAT IS THE CHALLENGE?

The complex nature, size, and distant locations of energy networks' assets means that the inspections they are required to carry out can be difficult.

Although drones are currently used for inspections, it is recognised that remote inspections by drones beyond visual line of sight (BVLOS) can unlock greater benefits.

However, current airspace regulations do not allow for this to happen.

WHAT WAS OUR APPROACH?

The aim of the project, which was scoped with Connected Places Catapult (CPC) and the Civil Aviation Authority (CAA) was to establish a regulatory framework that allows drone operations to be conducted BVLOS.

The EIC has been involved in this project since its inception in 2011, in collaboration with the Department for Business, Energy & Industrial Strategy (BEIS), Department for Transport (DfT) and the Transport Catapult (later known as the Connected Places Catapult).

After an initial project supported through NIA funding across several energy networks, the Above & Beyond project was scoped across a range of stakeholders.

WHAT ARE THE OUTPUTS?

Above and Beyond set out to deliver concept of operations (CONOPS), safety cases, and flight trials, to enable regulatory approval and to demonstrate the ability to fly BVLOS in unsegregated airspace.

The project defined industry use cases and delivered the most extensive civil trials of BVLOS drone operations ever conducted to date in the UK.



“Callen-Lenz are delighted to be working with the EIC and [their] network partners, making great progress with the CAA and other stakeholders to help enable routine commercial BVLOS capabilities on network assets.

The work to create a standardised provision for drone operation across the UK's gas and electricity networks is significant and has the potential to revolutionise the maintenance of critical infrastructure.

By obtaining CAA approval, the framework will pave the way for utility companies to use drones in inspections of their network infrastructure.”

Richard Trueman
CALLEN-LENZ

A highly flexible map-based planning tool was also developed during the project, which may have wider use.

KEY FINDINGS

The project uncovered the key barriers to widespread adoption of generic BVLOS CONOPS in the UK, and has helped both industry and the aviation regulator to focus efforts to address these barriers.

NEXT STEPS

The project findings have been presented by the EIC (on behalf of its network partners) to BEIS and CPC, as part of the pathfinder programme in March 2022.

The UK Government published a report titled "[Flightpath to the Future](#)", which incorporates the findings and learnings of the pathfinder programme, and sets out a plan to unlock the potential that drones have to offer, not only to the energy sector, but to the entire UK infrastructure.

Sign up to the EIC hub today and explore the latest opportunities to get involved with our industry partners or get in touch with us at enquiries@ukeic.com to find out more