



UK Research
and Innovation



Innovation Hub Guide for Innovators: Getting Your Prototype off the Ground An Introduction to Experimental Flying



Documents

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Introduction

This document provides guidance on regulations for innovators who want to conduct experimental flights on the pathway to developing innovative aircraft and concepts.

Advances in developing novel (e.g. electric) powertrains are driving the design and introduction of innovative aircraft designs, under concepts like Advanced Air Mobility (CAP 2122). We are seeing innovators making rapid advances in the design of Electric Vertical and Take-Off (EVTOL) aircraft. Other innovators are making significant progress with replacing fuel powertrains in existing aircraft with electric battery or hydrogen powertrains.

This guide is for innovators who want to conduct experimental flights to test their design and validate the performance of their aircraft, or showcase their innovation to the public, government, and investors. In it we explain which approvals are required to conduct experimental flights in the UK, and some of the restrictions that apply to experimental flights.

A separate guide has been released as CAP2289 for innovators who intend to plan or start the certification of an aircraft. Within that we explain which regulatory approvals are required, and the key stages of the certification process.

These guides have been designed to assist innovators and those outside of the aviation sector in developing their knowledge of initial airworthiness and how it works in practice. The guide offers an introduction to some of the most commonly used terms and processes enabled under the UK's regulatory framework. We have provided a number of links to outline the certification landscape for existing aviation and emerging concepts; and develop the knowledge of innovators beyond this document.

From the 31 December 2020, State of Design duties transferred from EASA to the CAA. As a result, we have responsibility for approving the design and production of all aircraft in the UK. International coordination still continues to play an important role in the CAA's approaches.





Experimental aircraft

Aircraft specifically designed or modified for research, experimental or scientific purposes, and likely to be produced in very limited numbers.

UK Basic Regulation, Annex 1



The true method of knowledge is experiment
William Blake