



UK Research
and Innovation



Innovation Hub Guide for Innovators: On the Path to Certification An Introduction to Initial Airworthiness



Documents

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Introduction

This document provides guidance on regulations for innovators who intend to start the certification of their innovative aircraft

Advances in developing novel (e.g. electric) powertrains are driving the design and introduction of innovative aircraft, under concepts such as 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 battery or hydrogen powertrains.

This guide is for innovators who intend to plan or start the certification process for an aircraft. It explains which regulatory approvals are required, and the key stages of the certification process.

A separate guide has been released as CAP 2290 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. This can be accessed through www.caa.co.uk/innovation.

These guides have been designed to assist innovators and those outside of the aviation sector in developing their knowledge of what *airworthiness* is and how it works in practice. They offer 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. We briefly describe mechanisms that enable validation of applicant certification activities in other countries within this guide too.





Airworthiness

The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

ICAO, Annex 8