



Boscombe Down Motion Simulator

Fully configurable air training and testing

Executive summary

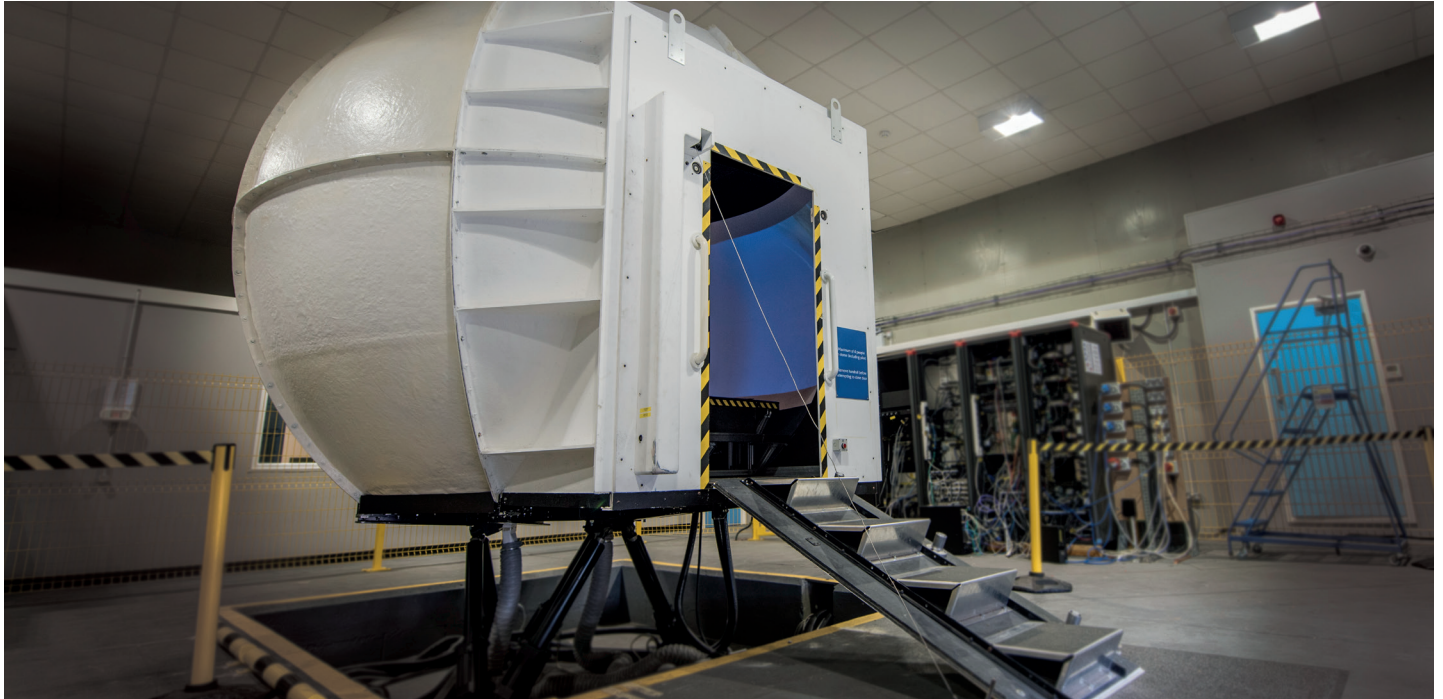
The Boscombe Down Motion Simulator (BDMS) at MOD Boscombe Down, operated by QinetiQ, has been used by our customers since 2008. It was originally part of the Vectored-thrust Advanced Aircraft Control (VAAC) project, which was a testbed and precursor to the F-35. Since then, customers both internal and external have used the simulator for a range of air test and training projects to provide cost and time saving training and testing, tailored to their individual needs. In this example, the BDMS provides a solution for the development of a rating scale for aircrew workload.

The brief

The customer, Aircrew Systems Integration (ASI), was conducting an iterative test and evaluation programme on a novel workload rating scale to help with flight testing. This rating scale provides a more concise, efficient toolset for rating a pilot's workload. ASI was facing issues with access to suitable aircraft in order to conduct the relevant research and development work, as well as the time required to organise suitable test points. Issues included cost of flying as well as difficulty of obtaining approval and the availability of aircraft.

“ The BDMS was absolutely instrumental in the recent acceptance of a technical paper to the International Conference of Aerospace Societies, for which the ASI team is extremely grateful. ”

Garnet Ridgway, Senior Engineer, Aircrew Systems



Our solution

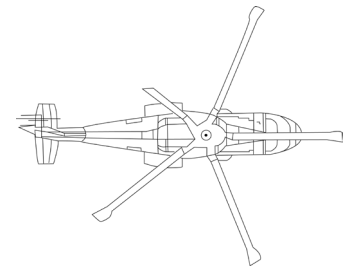
Using our fully reconfigurable Full Flight Simulator, QinetiQ was able to tailor and configure the cockpit environment and flight model to allow various flight regimes to be used to help develop the rating scale that ASI needed. This involved using simulated communications panels and dynamic flight model changes to create multiple scenarios where the rating scale could be used, without the customer having to source availability or approval of aircraft.

Outcomes and benefits

The BDMS allowed the research and development of a new rating scale to

be rapidly modified and tested without the cost, difficulty and safety considerations that would be needed for a full flight trial with real aircraft.

- Rapid modification and testing saving time: a number of different scenarios can be performed all in one place
- Cost saving from avoiding the use of live full flight trials in real aircraft
- Risk reduction due to being conducted in a completely safe and simulated environment
- Fully tailored to the customer's needs, to suit their specific user requirements.



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QinetiQ is always on your side, protecting, improving and advancing your vital interests

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