

Quality assurance statement

Superior, quality-assured global weather forecast information provided by the Met Office, the UK's national weather and climate service.

AVTECH's Aventus NowCast™ product line is underpinned by the best available aviation weather forecasts in the world today, which are those provided by the Met Office in the UK.

Using forecasts from the Met Office guarantees quality and accuracy. By working in partnership, we can assure you that AVTECH's Aventus NowCast™ products are based on the best weather forecasts possible.

High-definition forecasts for Aventus NowCast™ feature a unique accuracy powered by the Met Office's world-leading global forecast model. You can access these products through a delivery mechanism developed with close co-operation between the Met Office and AVTECH.

The increased horizontal, vertical and temporal resolution of forecasts available from AVTECH's Aventus NowCast™, when compared to other suppliers in the marketplace, enable better airplane energy management and time prediction. This is a key part of moving to time and performance based operations.

This guarantee of quality is based on the technical platform outlined on the next page.

Signed by



Exec Head of Aviation - Met Office

World leading accuracy and weather science

World-leading forecast accuracy

To provide world-leading global forecast accuracy, we are driven by scientific excellence. A world-class science research programme is coupled with strong technological development and a 24/7 operational infrastructure, enabling the provision of accurate and resilient forecast services to worldwide aviation, government and industry customers.

Increasingly the scale of resource needed to develop and maintain such cutting-edge weather and climate models and deliver accurate and reliable forecasts is becoming the domain of a few major centres around the world. The Met Office are one of those centres, and one of only two in the world with the responsibility for the provision of global World Area Forecast Services (WAFS), including ICAO compliant wind, temperature and weather hazard information. The Met Office is also one of nine global Volcanic Ash Advisory Centres (VAACs).

Continuously improving

We continually develop our forecasting model, taking advantage of an ever-improving understanding of atmospheric processes and the rapidly increasing supercomputer power. This enables a continual advancement of accuracy, detail and timeliness of weather forecast information which results in a more efficient flight routing, plus aviation hazard information can increasingly enable improved safety, passenger comfort and efficiency in decision making.

Planned developments include further upgrades to global forecasting model resolution, plus an increased capability to run more 'ensemble' models to better quantify uncertainty in the forecast evolution.

Compared to others

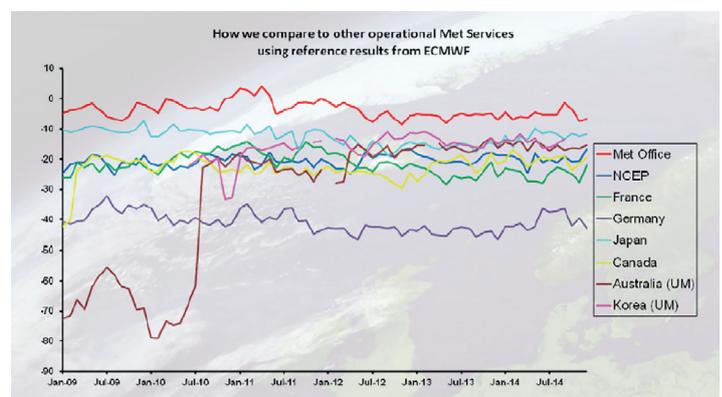
Our forecast accuracy has been shown to be leading in comparison with other world forecast centres. The image below shows a comparison against ECMWF* where verification ranks the Met Office as the highest performer. Other leading centres, including Australia and South Korea, use the Met Office's weather model as a basis for their forecasting operations.

It also highlights the improvements in accuracy achieved by Canada, Korea and Australia as a result of adopting the Met Office Unified Model.

Comparison of forecast accuracy

Verification results of the Met Office's global model as a percentage difference to ECMWF* Source: http://www.metoffice.gov.uk/media/pdf/b/1/Vision_of_Precision.pdf

*ECMWF is the European Centre for Medium Range Weather Forecasting; a multi-state funded organisation focusing on longer range forecasting. ECMWF provides a recognised accurate forecast. Due to the longer processing time, the forecast information is not available for operational decision making time-frames. Hence it is often used as a benchmark for forecast comparison.



Further details on the Met Office Science Strategy for 2016–2021 can be downloaded from the Met Office website...

www.metoffice.gov.uk/research/overview