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CASE STUDY · MARLUC SYNOPSIS

Met Office AI for Everyone and FastNet

IMPLEMENTED 2023 ONWARDS · SCIENCE AND RESEARCH · UNITED KINGDOM · BAND D · CLAIMED ONLY

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The UK's national weather service runs a staff AI programme, AI for Everyone, and has built an AI weather model, FastNet, with the Alan Turing Institute. FastNet runs as a non-operational trial; forecasts are still produced by physics-based models.

ABOUT THIS SYNOPSIS

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Facts and figures are as reported by the sources listed below, which may be incomplete, self-reported or out of date. Check the original source before relying on any figure.

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NOTICE WORDING LAST UPDATED 16 NOVEMBER 2026

AT A GLANCE

Frontier case: AI used for a scientific, medical or engineering breakthrough. The transformation is potential and unproven; MarLuc grades what has changed in practice so far.

AI used: AI weather prediction model (graph neural network), generative AI drafting pilot, and staff AI assistants (Microsoft Copilot, GitHub Copilot).

Implemented: 2023 onwards. Grade: band D, Task support, Claimed only.

Headline result, as reported: Staff AI tools and training in place; the FastNet AI weather model matches the Global Model on some measures but is not yet operational, by the Met Office's account

1 · The case

The facts, as reported by the 5 sources listed at the end. Where a source is silent, the field says "Not reported".

Organisation

Met Office. The UK's national meteorological service. It runs physics-based forecasting models on a supercomputer run with Microsoft, which the Chief AI Officer says cost £1.3 billion. Staff numbers: Not reported in the sources used. Canvas block: 5. People and skills. Also 4. Operations and process.

Business challenge

The challenge. By the Chief AI Officer's account, AI weather models from large technology companies looked far stronger from around December 2022. People asked why the Met Office needed a new supercomputer and a workforce of physicists. The Met Office says AI models can produce forecasts faster and at lower computing cost, but may struggle with rare or extreme events.

How it was addressed. The Met Office ran AI adoption as a two-track programme. AI for Everyone gives all staff training, surgeries, tools, hackathons and seminars, backed by policies; the Met Office says Microsoft Copilot and GitHub Copilot are deployed across the organisation. Funded teams work on harder problems: FastNet, a machine learning weather model co-developed with the Alan Turing Institute, now runs in near real time as a non-operational trial. A separate six-week pilot with AWS tested generative AI for drafting the Shipping Forecast. [1] [2] [3] [4] [5]

Who implemented it

The Alan Turing Institute (University or research lab): Co-developed the FastNet model through the AI4NWP partnership.
Amazon Web Services (Model or cloud provider): Partner in the non-operational Shipping Forecast pilot using the Amazon Nova model.
Microsoft (Software vendor): Supplies Microsoft Copilot to staff; GitHub Copilot is also deployed.
In-house (In-house): Met Office: runs AI for Everyone and builds and evaluates FastNet.

Technology (SEAM pillar E)

SEAM types: T2 Embedded AI in existing software, T5 Custom / fine-tuned models, T8 Predictive / ML models. Deployment: Mixture. Vendors and products: Microsoft, GitHub, Amazon Web Services, FastNet, Microsoft Copilot, GitHub Copilot, Amazon Nova.

Where it was built in: FastNet runs in near real time alongside the physics-based models for comparison; staff assistants are deployed across the organisation; the AWS pilot fine-tuned a model on weather data and past bulletins outside operations.

What changed

Before: physics-based forecasts, with staff worried about AI, by the Chief AI Officer's account. After: staff have AI assistants and training, and the workforce moved from worried to curious, by her account. Forecasts and warnings are still produced from physics-based models; FastNet is not yet operational and there are no plans to use AI to produce the Shipping Forecast. [1] [2] [3] [4] [5]

What it cost

Not reported for the AI programme. The Chief AI Officer cites £1.3 billion for the supercomputer, which runs the physics-based models.

What it saved

Not reported. The Chief AI Officer says AI weather models run tens of thousands of times faster than physics-based ones; no savings in practice are reported. [1] [2] [3] [4] [5]

Governance and control

A Chief AI Officer leads responsible use of AI. The Met Office says it will change operational forecasting only when scientific evidence is clear, that meteorologists stay central, and that FastNet is evaluated in real time and retrospectively. Vendor and agent controls: Not reported.

S2 · Accountable owner · Claimed
A Chief AI Officer leads the responsible use of AI in forecasting, climate science and national resilience, by the aibl write-up of her talk. [1]

A1 · Safe use · Claimed
AI for Everyone is backed by clear policies, by the Chief AI Officer's account; the policies are not published in the sources used. [1]

A2 · Human in the loop · Claimed
The Met Office says expert meteorologists evaluate new approaches and that AI is meant to complement operational meteorologists. [2] [4]

A3 · Monitoring and assurance · Claimed
AI forecasts are assessed in real time and retrospectively, and operational changes wait until evidence is clear, by the Met Office's account. [2] [3]

A4 · Vendor AI · Not reported
Not reported. Microsoft, GitHub and AWS tools are named; controls on their use are not described.

A5 · Agent controls · Not reported
Not reported.

A6 · Standards and regulation · Not reported
Not reported.

What worked, what did not, what is unproven

WORKED

– FastNet's accuracy is comparable to the Global Model and exceeds it on some metrics, by the Met Office's account.

– Staff moved from worried to confident to curious about AI, by the Chief AI Officer's account.

– A six-week pilot with AWS went from concept to prototype and a published paper, by the Met Office's account.

DID NOT

– FastNet is not yet operational and its daily output is not to be used for decisions, per the Met Office.

– In the AWS pilot, the best workflow matched forecasters' exact words for 62% of four core attributes; there are no plans to use AI to produce the Shipping Forecast.

UNPROVEN

– Whether FastNet performs well enough on extremes to enter operational forecasting.

– How much staff use the AI assistants and what time they save.

– Whether blending AI and physics models lowers cost or improves warnings.

Timeline

2023 Met Office and the Alan Turing Institute launch the AI for Numerical Weather Prediction

Apr 2026 Met Office reports a completed six-week, non-operational pilot with AWS on drafting the Shipping Forecast with generative AI [4]

Jul 2026 Met Office says FastNet's accuracy is comparable to its Global Model on some measures; FastNet is not yet operational [3]

Oct 2026 Chief AI Officer describes the two-track AI for Everyone programme at aiblLIVE London [1]

2 · Grade and SEAM assessment

MarLuc's opinion, made on the evidence above. How cases are graded: marluc.co.uk/case-studies/how-we-rate

Level of change and impact

Claimed: A. Grade: D, Task support. Proof: Claimed only. Level of change: Task support.

Task support (Level 1, band D), claimed as potentially transformational (band A). Staff use AI assistants; FastNet and the AWS pilot have not changed how forecasts are made.

Graded D, claimed A. Staff have AI assistants and training, which is task support. FastNet and the AWS text-drafting pilot are both non-operational, so forecasting practice has not changed yet. The Met Office describes AI as having the potential to transform forecasting; that is potential and unproven here.

The SEAM view and lessons learnt

The Met Office separates broad staff adoption from funded work on hard problems, and holds operational change until evidence is clear. That suits a safety-critical service. The transferable point for a larger organisation is to run both tracks at once while keeping a clear test for when a model may change the service. What staff use has achieved is not yet measured in any source.

1. Run broad staff training alongside a few funded teams on hard problems.
2. Set the evidence test for operational change before trials begin.
3. Measure staff use of AI tools, as well as mood.

Evidence

Score 1 of 4. Self-reported: Met Office news, research and blog pages and the Chief AI Officer's talk as written up by aibl.

Evaluation method. Self-reported: Met Office statements and a conference talk. FastNet's skill is reported against the Global Model by the Met Office; the staff programme reports no measures beyond a change in mood.

Status. Ongoing: FastNet runs as a non-operational trial and the Met Office is working towards integrating it into operational workflows; AI for Everyone continues.

3 · Original sources

Read these in full. To challenge a fact or a grade, use the contact form at marluc.co.uk or the link on https://marluc.co.uk/case-studies/met-office-ai-for-everyone-fastnet

[1] aibl: AI change management at the Met Office: why the people came first
https://aiblmedia.com/downloads/ai-change-management-met-office/

[2] Met Office: Artificial Intelligence for Numerical Weather Prediction (FastNet)
https://www.metoffice.gov.uk/research/approach/collaboration/artificial-intelligence-for-numerical-weather-prediction

[3] Met Office: New research shows AI can produce trustworthy, physically realistic weather forecasts
https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/weather-and-climate-news/2026/new-research-shows-ai-can-produce-trustworthy-physically-realistic-weather-forecasts-

[4] Met Office blog: Met Office and AWS are pioneering how AI could shape the future of text-based weather services
https://www.metoffice.gov.uk/blog/2026/aws-met-office-ai-shipping-forecast

[5] Met Office: AI and Met Office people
https://www.metoffice.gov.uk/research/ai/ai-and-met-office-people

Met Office website: https://www.metoffice.gov.uk

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