Government investment in supercomputing includes Edinburgh

The UK Government's Business and Energy Secretary, Alok Sharma, has announced £1.2 billion of investment over the next decade, in a state of the art supercomputer which will improve forecasting of severe weather events.

The data will be used to help inform government policy in dealing with climate change and working towards net zero emission targets.

The new supercomputer will be managed by the Met Office and will offer more sophisticated rainfall predictions and better forecasting for airports.

Business and Energy Secretary and COP26 President, Alok Sharma, said: "Over the last 30 years, new technologies have meant more accurate weather forecasting, with storms being predicted up to five days in advance.

"Come rain or shine, our significant investment for a new supercomputer will further speed up weather predictions, helping people be more prepared for weather disruption from planning travel journeys to deploying flood defences."

UK Government Minister for Scotland Douglas Ross said: "The UK Government investment in Edinburgh's super computers helps keep our capital at the forefront of cutting edge technology.

“The University of Edinburgh facility will benefit scientists from across the UK as they are given the opportunity to use this new technology. This additional funding builds on the work of the Edinburgh and South East Scotland City Region Deal which is creating world-leading hubs for AI research.

“The UK Government is committed to combatting the impact of climate change on top of creating thousands of high-earning jobs and ensuring businesses and public services in the UK are the first to benefit from the latest innovations.”

Edinburgh investment

Cirrus Phase II: Preparing for Heterogeneity at Exascale

Led by: The Edinburgh Parallel Computing Centre at the University of Edinburgh

EPSRC support: £3.5 million

Cirrus Phase II will expand the capabilities of the Cirrus service by adding specialised GPUs to the current system. GPUs are commonly used as graphics/video cards in mobile phones, personal computers and games consoles. However, specialised GPUs can be also be used in supercomputers as accelerators enabling them to run numerical calculations more quickly. The technology used in Cirrus is expected to be used in some of the first Exascale supercomputers and will allow scientists to test and adapt their code for modelling and simulation to be ready to advance discovery and innovation as soon as Exascale systems become available. It will help to ensure the UK has a supply of individuals trained with these specialised skills and could lead to far more rapid and detailed discoveries in new areas and the projects Cirrus has already supported, such as modelling protein shape for better drug design and simulating tidal flows to optimise turbine installations and their effects on sea beds. The new GPUs will also provide a high-performance platform for AI training and research, a critical and rapidly growing area.