

# Accelerating decision making with pay-per-use access to HPC



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Environmental models are becoming increasingly sophisticated and complex as our knowledge of processes and behaviours improves. While these new models are driving improved environmental decision-making, they also require significant computational power.

### The challenge

Large organisations may be able to buy major high-performance computing (HPC) infrastructure, but small and medium-sized companies usually lack the necessary financial resources.

### How we help

EPCC's Accelerator service provides easy, cost-effective access on a pay-per-use basis to both HPC infrastructure and environmental modelling software.

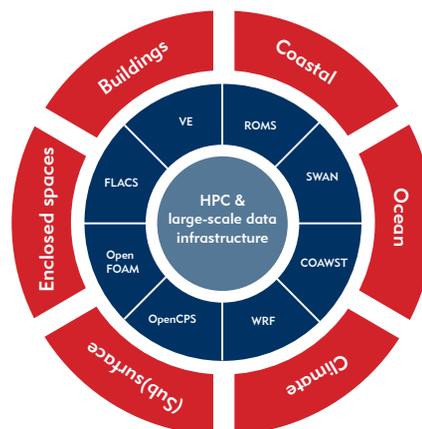
A wide range of modelling software is available such as ROMS, SWAN and WRF for macro-scale ocean and climate modelling, and OpenCPS for seismic modelling.

At the micro-scale, software such as VE is available for modelling the energy efficiency of buildings, and FLACS for fire and explosion modelling in and around buildings.

### The benefits

Accelerator's environmental modelling service opens up access to a range of modelling software on EPCC's major computing and data infrastructures, so allowing our users to accelerate time to results without costly investment in HPC.

Accelerator is fully supported by EPCC's experts, who are on hand to deal with any usage problem. All HPC and associated services are hosted within EPCC's highly secure, purpose-built Advanced Computing Facility, ensuring the highest level of protection for user data.



Our Accelerator service connects environmental sectors with high-performance computer modelling and data services.



# EPCC: the UK's leading supercomputing centre

## Our Accelerator service: supercomputing on demand

Cirrus is just one part of our Accelerator service, which delivers high-performance computing capability at a fraction of the cost of buying and operating in-house HPC services.

Accelerator can be used as a:

- Transformative HPC resource accelerating development and discovery lifecycles
- Flexible HPC resource smoothing out demand peaks
- Contingency over internal HPC infrastructure failure

Accelerator provides access to:

- ARCHER: our high-end compute system for large-scale simulation and modelling challenges
- Cirrus: a midrange, industry-standard Linux cluster. An ideal platform for applying commercial software tools



to solve a range of CFD and FEA simulation and modelling problems

- RDF: our large-scale data facility giving access to petabyte-scale data storage and archive facilities.

## The World Class Data Infrastructure

The World Class Data Infrastructure (WCDI) will be a new facility managed by EPCC for the secure and trustworthy hosting and analysis of huge and varied datasets. Available to academia and industry, the WCDI will underpin the Data-Driven Innovation programme of the Edinburgh and South East Scotland City Region Deal.

We have been certified for the ISO 27001 Information Security standard for all the supercomputing and data services that we run, such as the NHS National Services

Scotland national Safe Haven. A Safe Haven is a secure environment in which data is linked and accessed, providing a high-powered computing service, secure analytic environment, secure file transfer protocol for receipt of data, and provision of analytic software.

With our unique combination of facilities and skills, we aim to be a leader in the secure hosting and management of datasets for academia and industry.

## With the security of our exceptional expertise

With over 100 highly-qualified permanent staff, we ensure you get the most from our systems.

We can help you with:

- General HPC support
- Data management and analytics
- Computational modelling & simulation
- Training & consultancy
- Software development

To discuss our services for business, contact George Graham at EPCC:  
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