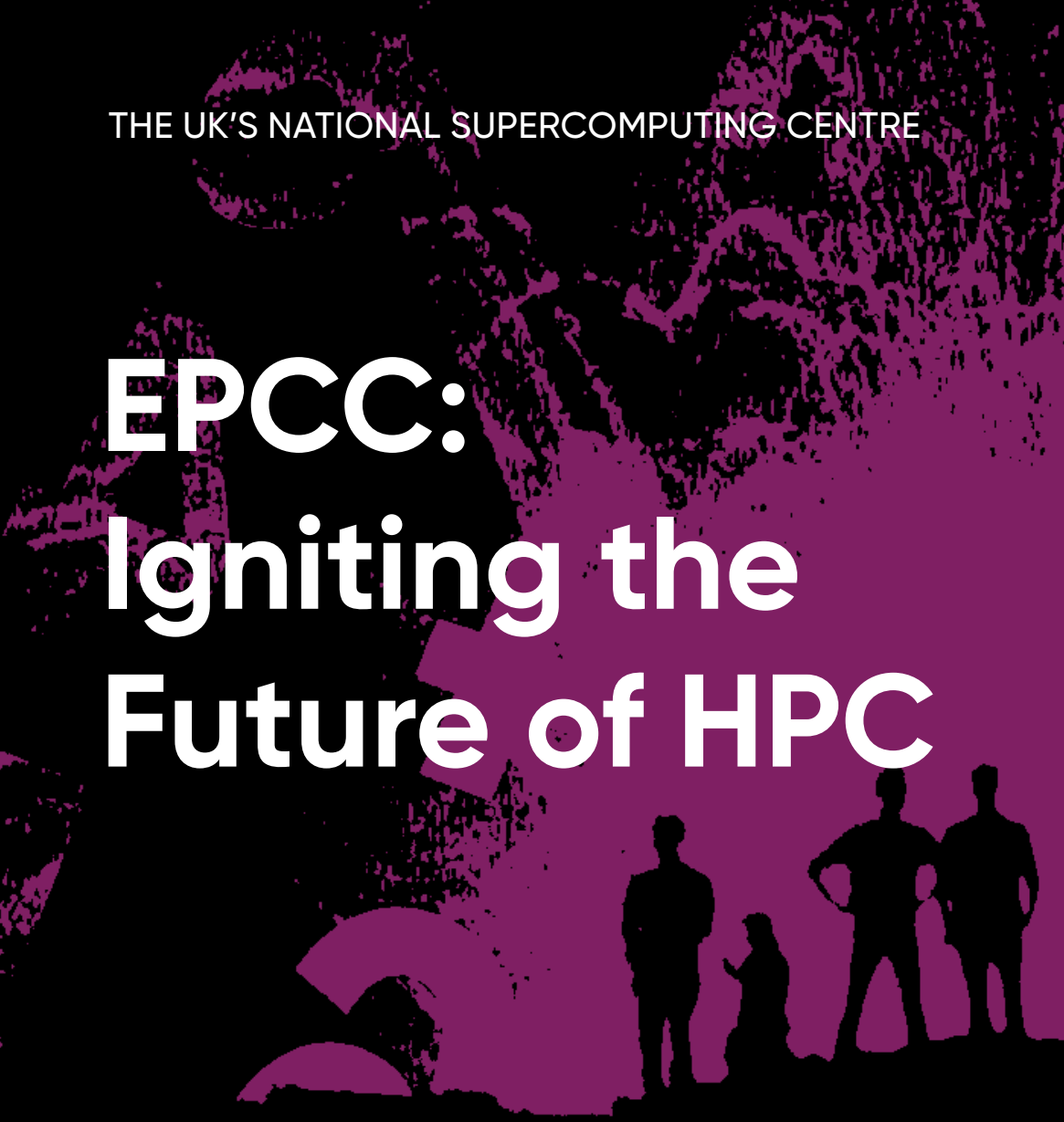
THE UK'S NATIONAL SUPERCOMPUTING CENTRE

EPCC: Igniting the Future of HPC



Celebrating 35 years of excellence and a new national role

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2025 is a milestone for EPCC

After three and a half decades of pioneering high-performance computing, EPCC's services to the research and innovation HPC communities in the UK have been recognised with its designation as the UK's first National Supercomputing Centre.

This year, as SC25 embraces the theme "HPC Ignites", EPCC proudly reflects on its journey and looks ahead to a future shaped by strong foundations, creative sparks, impactful flames, and a sustainable vision.

In all of this, EPCC remains firmly committed to accelerating the effective exploitation of novel computing throughout industry, academia and commerce.

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THE FUEL

Strong Foundations, Robust Community, Knowledge Sharing & Collaboration

EPCC's legacy is built on technical excellence, academic rigour, and collaborative spirit. Since its inception in 1990, EPCC has grown from a university-based centre into a national and international leader in HPC, data science and AI.

Infrastructure. Over the last three and a half decades, EPCC has operated some of the UK's most powerful supercomputers, beginning with the CRAY T3D, the UK's first national supercomputing service, and later national services such HECToR, and more recently ARCHER and its replacement ARCHER2. These systems have supported thousands of researchers across disciplines—from climate science to genomics. Now, with the announcement of £750m funding from the UK Government, EPCC is embarking on the development of the next national supercomputing service.

Community. EPCC has cultivated a vibrant HPC community, fostering inclusivity and shared learning through initiatives like the UK HPC-SIG, Women in HPC, Diversity in HPC and HPC Champions.

Training & Education. EPCC's MSc in High Performance Computing and Data Science has trained over 500 graduates, many of whom now lead HPC efforts globally. Its Centre for Doctoral Training in HPC continues to shape the next generation of computational scientists.

Collaboration. EPCC has led and partnered in hundreds of collaborative projects, including Horizon Europe, EuroHPC, collaborations in Japan and the United States, as well as many UKRI-funded programmes. New opportunities are emerging with Canada, and once again in Europe, continuing its commitment to collaboration across the global HPC community.

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THE SPARK

Creativity, Innovation & Inspiring Engagement

Innovation is at the heart of EPCC's mission. As HPC evolves, it continues to ignite new ideas and inspire engagement across sectors.

AI & HPC Convergence. EPCC is pioneering the integration of AI with HPC, enabling breakthroughs in materials discovery, drug design, and autonomous systems. As part of the Data Driven Innovation initiative in Edinburgh it works with a range of AI-focused hubs, ensuring the UK remains at the forefront of intelligent computing.

Quantum & Emerging Tech. EPCC is exploring quantum-classical hybrid computing, collaborating with national labs and startups to prepare for the post-exascale era.

Digital Twins & Simulation. EPCC's expertise in large-scale simulation powers digital twins for energy systems, urban planning and manufacturing—turning data into actionable insight.

Public Engagement. Through initiatives like New Scientist Live, the Big Bang Fair, DataFest, Edinburgh Science Festival, and interactive exhibits, EPCC brings HPC to life for the public, demystifying complex technologies, sparking curiosity and inspiring future careers.

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THE FLAME

Passion for Impact, Growth & Evolution

EPCC's passion for impact drives its growth and evolution. As the UK's National Supercomputing Centre, EPCC is uniquely positioned to deliver transformative outcomes across science, industry, and society.

Scientific Impact. EPCC supports world-class research in climate modelling, fusion energy, astrophysics, and biomedical science. Its systems have enabled discoveries that shape policy and improve lives.

Industrial Innovation. EPCC works with SMEs and global enterprises to accelerate R&D, optimise processes, and unlock new capabilities. Its supercomputing and Edinburgh International Data Facility research cloud offerings make advanced computing truly accessible to organisations of all sizes.

Policy & Strategy. EPCC advises Government and funding bodies on national HPC strategy, ensuring that investments align with societal needs and scientific priorities.

Global Leadership. Working with UK Government, EPCC represents the UK in international leadership forums, including the G7, contributing to standards, best practices, and collaborative research.

Inclusive Growth. EPCC is committed to equitable access to HPC. It supports a wide range of activities to ensure new users can access its systems, for example its recent Cerebras CS-3 workshops. EPCC also supports the increasing range of disciplines turning to supercomputing to support its science and innovation.

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SUSTAINABILITY

Durable Future, Energy-Efficient Computing & Long-Lasting Community

As HPC scales to exascale and beyond, sustainability is paramount. EPCC is leading efforts to ensure that high-performance computing remains environmentally responsible and socially inclusive.

Green HPC. EPCC designed and operates the Advanced Computing Facility, an energy-efficient data centre incorporating liquid cooling, renewable energy, and carbon accounting. Its work on sustainable HPC architectures, NetDRIVE Community Champion roles, and founding of the Green RSE SIG informs global best practices.

Software Sustainability. EPCC champions maintainable, reusable software through initiatives such as the Software Sustainability Institute and the Society of Research Software Engineering, ensuring long term value for computational tools.

Skills & Careers. EPCC invests in lifelong learning, offering training for researchers, developers, and professionals. Its commitment to career development sustains a thriving global HPC workforce.

Resilience & Continuity. As a National Centre, EPCC is committed to continuity of service, data integrity, and disaster recovery — supporting critical research even in times of crisis such as the COVID-19 pandemic.

Community Building. EPCC nurtures a long-lasting community through mentorship, alumni networks, and collaborative events. Its ethos of openness and support ensures HPC remains a shared endeavour.

With SC25 embodied by "HPC Ignites", the designation as the UK's first National Supercomputing Centre sees EPCC re-ignited to take supercomputing in the UK to new heights, doing so collaboratively with partners right across the global HPC community.

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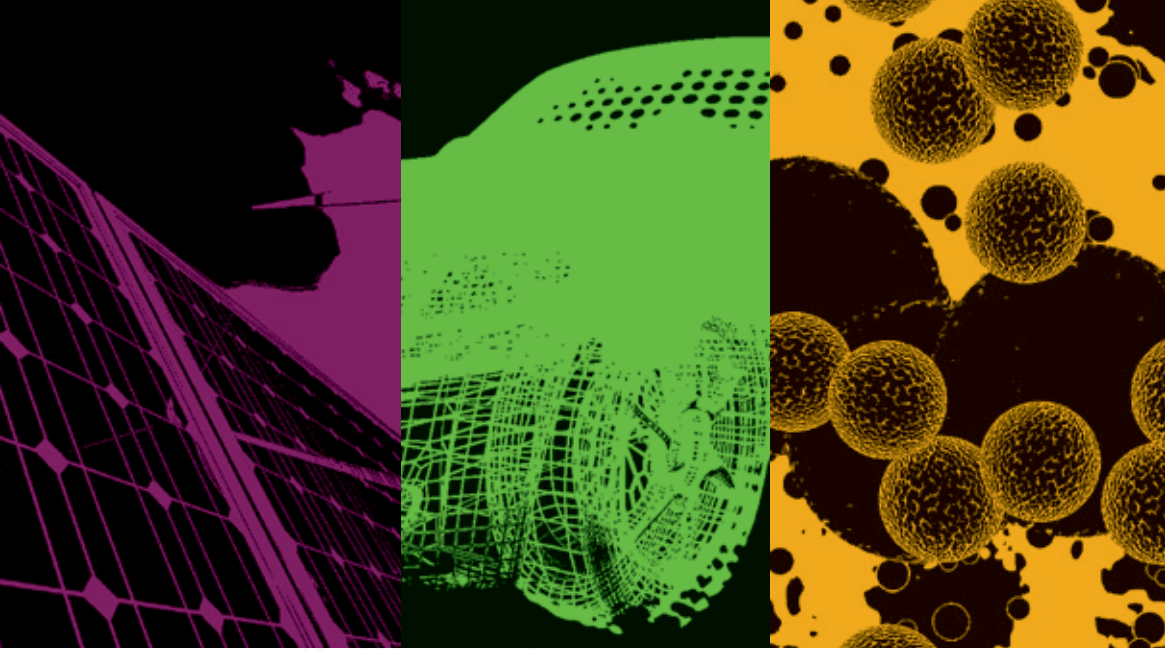

To learn more about what EPCC does, visit...

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