



A RICOH Company



Technologies



CAMBRIDGE
RESEARCH COMPUTING

High-Performance Computing for Research & AI

University of Leeds

Case Study

The Challenge

Research at the University of Leeds is becoming increasingly data intensive, with growing demand from disciplines including engineering, medicine, environmental science, artificial intelligence and digital humanities.

However, the University's existing HPC environment was becoming increasingly difficult to maintain. Ageing infrastructure, older software stacks and limited GPU capability meant demand from researchers was beginning to exceed available capacity, while operational complexity continued to grow.

The University of Leeds wanted more than simply a hardware refresh. It was looking for a long-term partner that could deliver a modern HPC platform while helping develop internal capability, improve researcher experience and support future growth in AI-enabled research.

About University of Leeds

The University of Leeds is one of the UK's leading research-intensive universities, supporting thousands of researchers across a broad range of academic disciplines.

High-performance computing forms a critical part of the University's digital research infrastructure, enabling complex simulation, modelling, AI training and data-intensive research that would otherwise be impossible using conventional computing resources.

As AI adoption continues to accelerate across higher education, the University recognised the need for an HPC platform capable of supporting both today's research priorities and future innovation.



UNIVERSITY OF LEEDS

Why MTI

Following a competitive tender process, the University selected MTI because of its ability to bring together the right combination of technology, specialist expertise and delivery capability.

Working alongside Dell Technologies and Cambridge Research Computing, MTI provided a single delivery model covering procurement, commercial management, project delivery and governance, ensuring the University benefited from a fully integrated solution rather than managing multiple suppliers independently.

Beyond delivering the infrastructure itself, MTI helped establish a partnership focused on long-term success, combining enterprise technology with specialist HPC expertise and ongoing knowledge transfer to help build capability within the University's own team.



The Solution

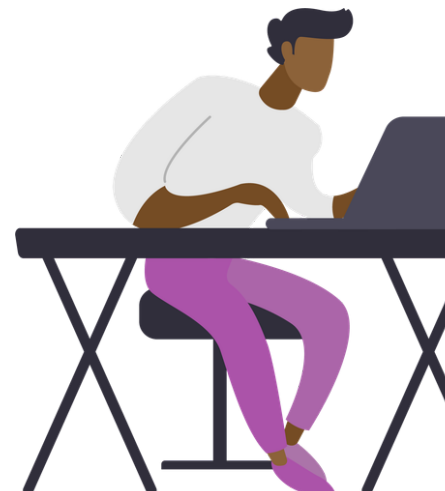
MTI designed and delivered a modern high-performance computing platform in partnership with Dell Technologies and Cambridge Research Computing.

Dell Technologies supplied the enterprise infrastructure, Cambridge Research Computing provided specialist HPC implementation, optimisation and knowledge transfer, while MTI led overall programme delivery, commercial management and customer engagement.

Throughout the project, the three organisations worked as one team, ensuring the University received not only a technically robust solution but also the operational support and expertise needed to maximise long-term value.

The solution included:

- ✓ **96 Dell PowerEdge 17th Generation AMD compute nodes**, delivering a high-performance, scalable HPC platform.
- ✓ **Dedicated Dell PowerEdge 17th Generation AMD management, login and optimisation nodes**, supporting efficient cluster management and user access.
- ✓ **Dell PowerEdge XE7745 GPU servers**, each equipped with **8 NVIDIA H200 GPUs**, accelerating AI, machine learning and advanced research workloads.
- ✓ **High-performance InfiniBand networking** with dedicated management and monitoring networks for maximum performance and resilience.
- ✓ **Specialist HPC implementation and optimisation** delivered by Cambridge Research Computing.
- ✓ **Knowledge transfer and operational enablement**, equipping the University of Leeds team with the expertise to manage and optimise the platform independently.
- ✓ **End-to-end project delivery, procurement and commercial management** through MTI's single delivery model.
- ✓ **A scalable architecture** designed to support future expansion, increasing research demand and next-generation AI workloads.



Key Benefits

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| ✓ Modern HPC platform supporting AI-ready research | ✓ Trusted partnership across MTI, Dell Technologies and CRC with combined expertise |
| ✓ Increased compute and GPU capacity to deliver faster results with accuracy | ✓ Knowledge transfer supporting long-term independence and staff retention |
| ✓ Improved researcher experience to enhance the university experience and service usage | ✓ Platform designed to scale with future research demand and reduced lead times |
| ✓ Reduced operational complexity to decrease ongoing service costs | ✓ Single commercial and delivery model to reduce complexity |

The Outcome

The new HPC platform gives researchers across the University of Leeds the compute capability needed to support increasingly complex workloads across engineering, environmental science, medicine, AI and digital humanities.

Delivered through the combined expertise of MTI, Dell Technologies and Cambridge Research Computing, the platform provides a scalable foundation for future research while strengthening internal capability through ongoing support and knowledge transfer. The project is already helping to:



Accelerating Research

Supporting AI, simulation, modelling and data-intensive research across a growing number of academic disciplines.



Building Long-Term Capability

Helping the University maximise the value of its HPC investment while developing the expertise to support and evolve the platform.



Supporting Future Growth

Providing a scalable, modern platform that can evolve alongside changing research demands.



We have been very pleased with the project with MTI, CRC and Dell. It has allowed us to take a broad and holistic view of the problem and ensured we deliver a high-quality HPC cluster and service to our researchers.

David Baldwin
Director of Digital Research
University of Leeds



About MTI

MTI Technology is a leading provider of end-to-end data centre, cloud and cyber security solutions and services, with a strong presence across the UK and Europe. For more than 35 years, we have helped organisations harness technology securely and effectively, guided by our mission to build a secure digital future for our customers. Combining deep technical expertise with a comprehensive services portfolio, we work closely with customers to deliver resilient, business-focused outcomes - a commitment reflected in the long-standing relationships and recommendations we continue to earn.

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