

NUCLEAR ENERGY CASE STUDY

Rolls-Royce Nuclear University Technology Centre

The background

Nuclear fuel represents an efficient, sustainable energy resource for power generation and propulsion applications. Our understanding of reactor and fuel technologies, and how nuclear energy can be more effectively harnessed, is evolving.

The challenge

As a global power systems company, Rolls-Royce invests in and acquires technology and products across a range of diverse fields, including nuclear. Staying at the forefront of this technology is crucial. Rolls-Royce achieves this by establishing direct connections with expert research capabilities.

2009

Nuclear UTC established
to develop nuclear energy
technologies

The solution

The Rolls-Royce Nuclear University Technology Centre (UTC) was established in 2009 at The University of Manchester, to develop technologies for use in the nuclear power industry.

The Nuclear UTC continues the University's long-standing and rewarding collaboration with Rolls-Royce. Our partnership enables the exchange of knowledge and skills between academic and industry personnel, and develops the skills of future nuclear scientists and engineers. Together, with research currently focussed on material properties, modelling of processes in the nuclear plant, and safety and reliability, we are helping to support the future development of nuclear energy technologies.

The benefits

For Rolls Royce...

High-quality research expertise at the forefront of technology; access to a wealth of skilled people, enabling recruitment and retention of highly-qualified and motivated staff.

For The University of Manchester...

Real-world challenges for our research; support for the University's nuclear technology research and development portfolio, ensuring continuity and quality.

For society...

Opportunities for the next generation of nuclear scientists and engineers to develop their skills; potential research applications for civil nuclear power and the nuclear submarine programme; innovation across the nuclear fuel cycle, securing the future of nuclear energy development.

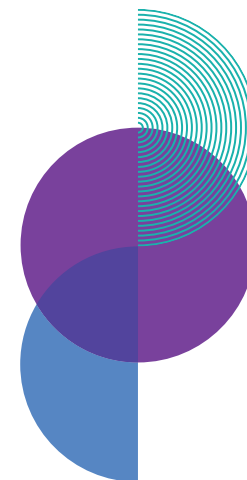
“The Rolls-Royce UTC is focused on research that will enable us to tackle real-world challenges such as nuclear safety and reliability. The work we do will have applications in both the civil nuclear programme and the submarine programme, and will help to develop the skills of future nuclear scientists and engineers.

*Professor Tim Abram,
School of Mechanical, Aerospace and Civil Engineering*

MANCHESTER
1824

The University of Manchester

**We are working
in partnership with
Rolls-Royce to tackle
real-world challenges
and help support
future development
of nuclear energy
technologies.**



Summary

Nuclear power represents a highly efficient, sustainable source of energy, with a diverse range of potential commercial applications. Understanding of how to most effectively harness this technology is evolving with the next generation of reactors.

That's why the Nuclear University Technology Centre was established in 2009. A collaboration with global power systems company Rolls-Royce, this centre gives Rolls-Royce access to pioneering technologies and research expertise, and provides University of Manchester experts with the opportunity to apply their research to real-world challenges.

Our work has potential applications for both civil nuclear power and the nuclear submarine programme.

THE WORLD WORKS BETTER WITH US