

The UK's National Nuclear Laboratory

This is NNL

Strategic Plan 2021

Nuclear Science to Benefit Society

#NewClearFuture

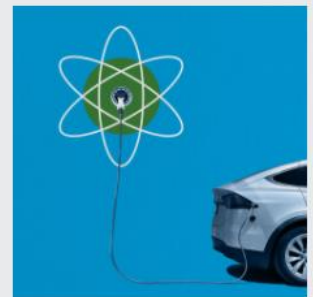
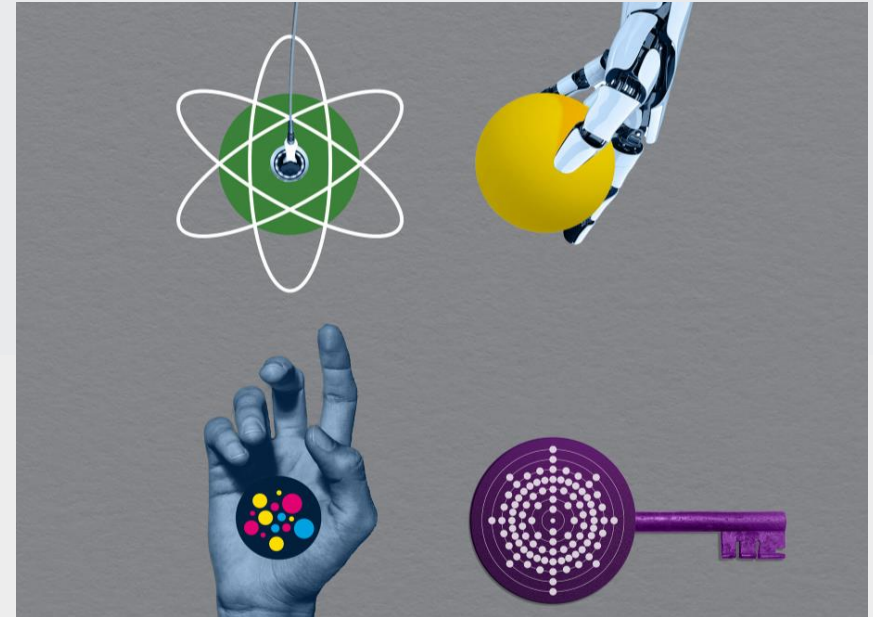


Delivering for the New Nuclear Landscape

The nuclear landscape has changed.

Focus Areas

We are building on the world-class solutions and successes we have already delivered to create a new agenda with four Focus Areas.



Clean Energy

Securing the UK's place as a global leader in the clean energies of the future by developing advanced nuclear technologies and leading their deployment



Environmental Restoration

Driving a step change in the way legacy and future wastes are processed by applying innovative science and breakthrough technologies



Health and Nuclear Medicine

Establishing an indigenous UK supply of vital medical radioisotopes



Security and Non-Proliferation

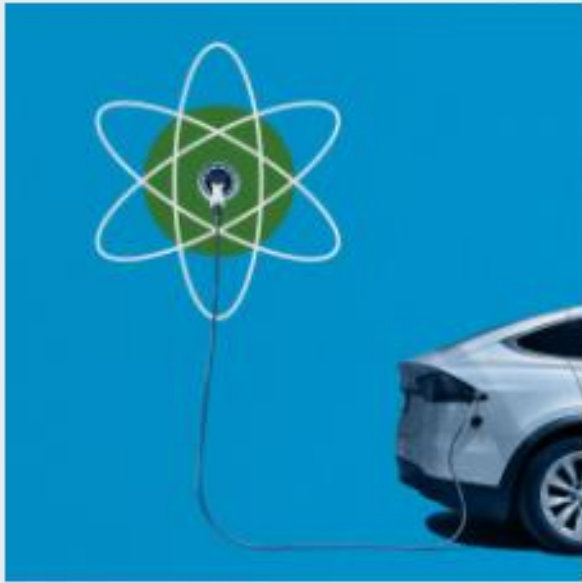
Facilitating the global deployment of new nuclear technologies by ensuring security and non-proliferation



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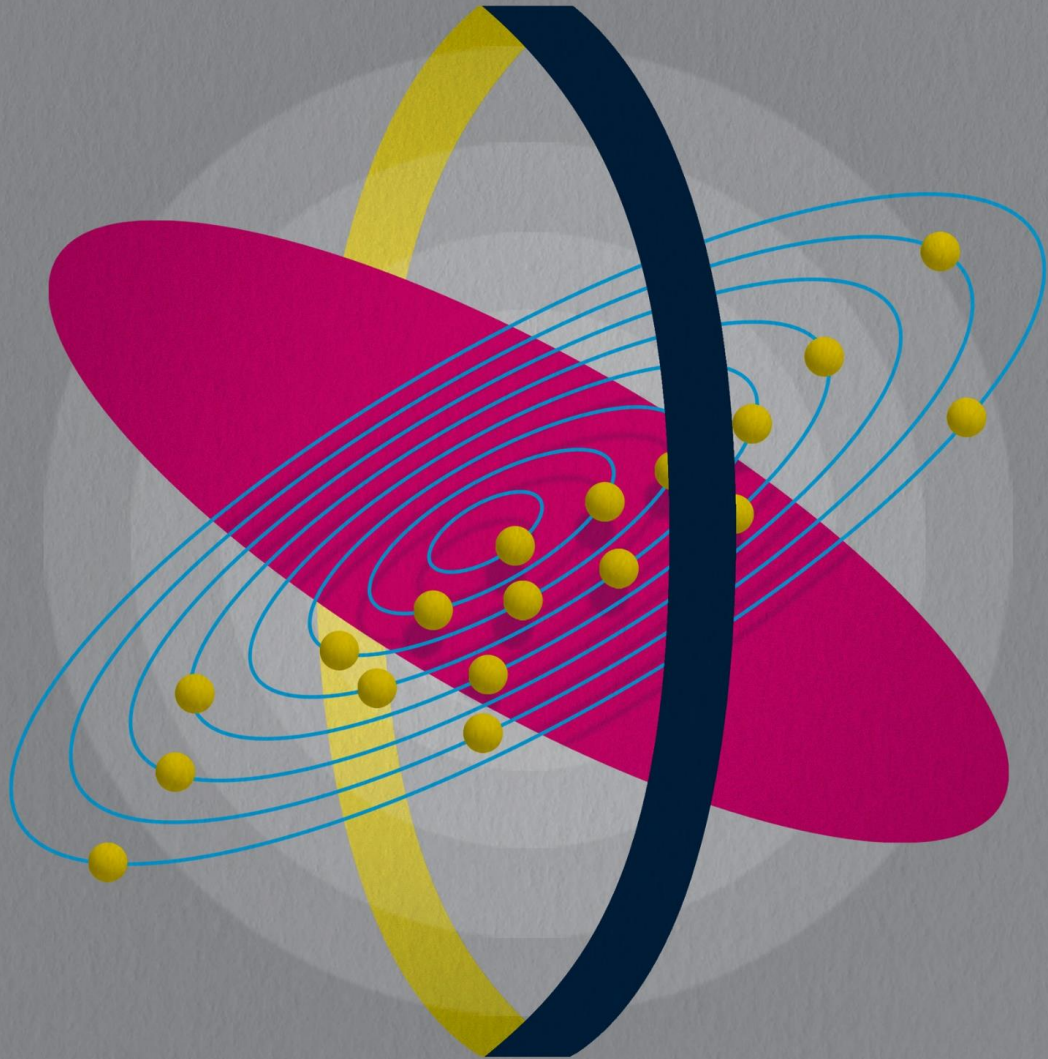
Health and Nuclear Medicine

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Security and Non-Proliferation

Facilitating the global deployment of new nuclear technologies by ensuring security and non-proliferation



The UK's National Nuclear Laboratory

Our Science and Technology Agenda

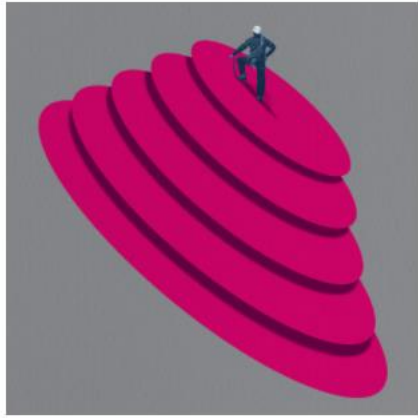
**Unleashing Innovation and
Meeting the UK's Climate
Change Targets**

Nuclear Science to Benefit Society

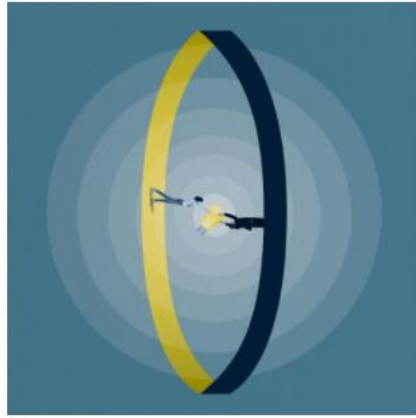
#NewClearFuture

2021-2026

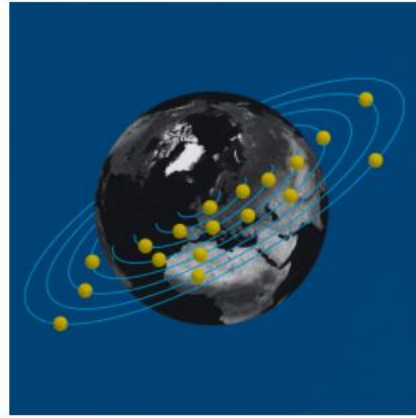
<https://nnl.foleon.com/nnl-st-agenda/our-science-and-technology-agenda/cover/>



Core Science



Innovation



Strategic Research

Collaboration in Numbers

We are currently involved in

12

EU programmes

with a combined value of

€75 million

and recently won

all six

of our bids for **Horizon 2020** funding

In 2020, we supported around

100

PhD students

and

25

postdoctoral research assistants (PDRAs)

at

20

universities

Each year, we engage with

30+

international events

In 2020, we supervised

25 researchers

on behalf of the **Nuclear Decommissioning Authority (NDA)**

involving a team of

60+

industrial experts

and collaborate with a range of **international partners** including the

IAEA & NEA

as well as other national laboratories in **Canada, France, Japan and the USA**

Since 2015, researchers from

35

different organisations

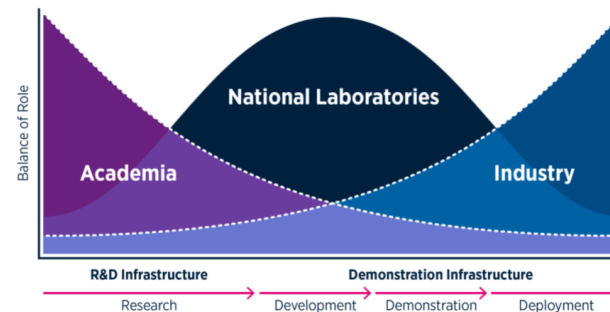
have accessed our facilities, with

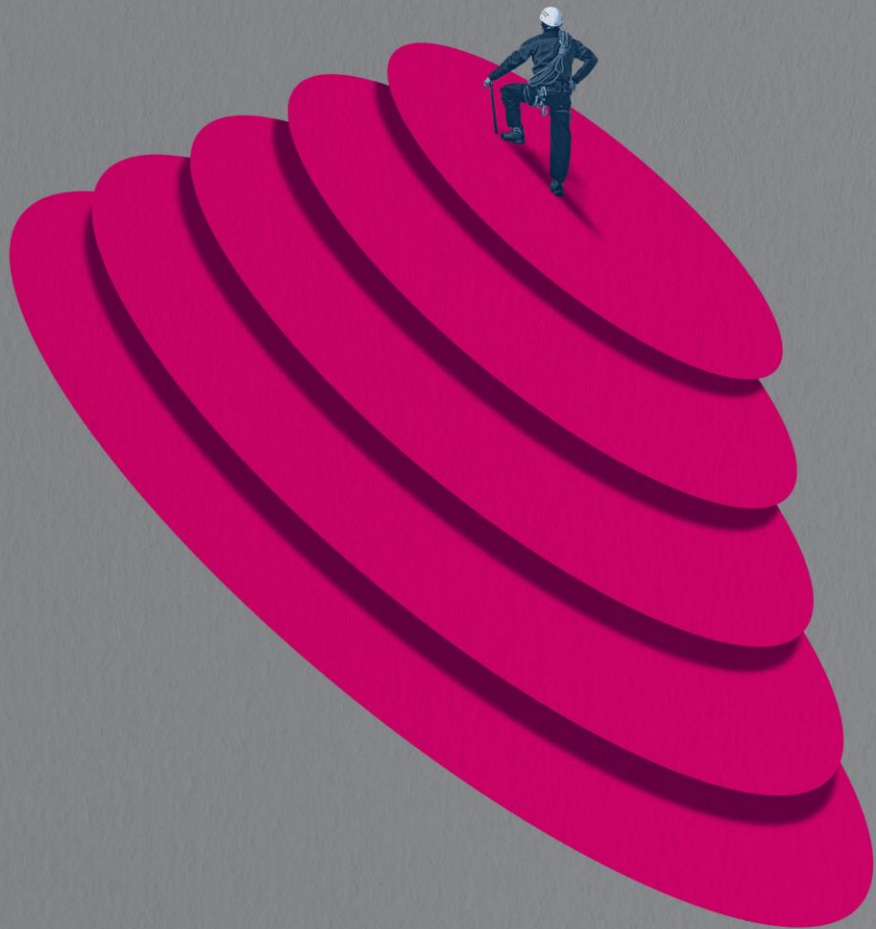
30+

different nationalities represented

Collaboration

We recognise that we cannot hold these three pillars up alone. The foundation that underpins all our work is Collaboration: working with academia, industry partners and our national and international collaborators to bring together key skills, infrastructure and financial resources, ensuring that we can successfully deliver our Science and Technology Agenda.





Our 12 Core Science areas

Our Core Science themes provide a platform for innovative and scientifically challenging work for our scientists, of which risk taking – but with a fail-fast approach – is a necessary component.



Advanced Recycling Isotope Separations (ARIS)



Environmental Radiochemistry



Post Irradiation Evaluation (PIE) & Materials Performance



Reactor Chemistry (& Corrosion)



Advanced Fuels



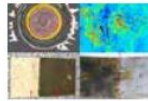
Thermal Treatment



Nuclear Safety



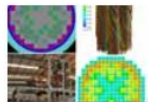
Structural Integrity



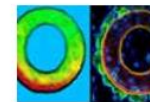
Decontamination Science



Health and Nuclear Medicine



Reactor Technology



Irradiated Fuel Characterisation

Strategic Research



Advanced Fuel Cycle Programme (AFCP)

Evolving advanced fuels and recycling concepts to elevate the UK's clean energy innovation.

AFCP is a multi-disciplinary programme that is supporting the nation's transition to net zero by 2050 and, in the process, providing a platform for UK manufacturing and engineering businesses to expand and innovate.



Alpha Resilience Capability (ARC)

Sustaining and enhancing the UK's world-leading alpha skills capabilities.

Led by the Nuclear Decommissioning Authority (NDA), the programme is a collaboration of industry partners focused on ensuring the UK maintains alpha resilience in capability and skills for decommissioning, long term material storage, and disposition in addition to future clean energy advancement. Our experts lend essential support to ARC by driving Plutonium research and development, and leading on the Technical Workstream.



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Advanced
Nuclear
Skills 
Innovation
Campus



CHALLENGES

ABOUT US

PARTNERS

PROJECTS

NEWS

EVENTS

SIGN IN

Advanced Nuclear Skills and Innovation Campus: academic research and development projects

On behalf of the Department for Business, Energy and Industrial Strategy (BEIS) and the National Nuclear Laboratory (NNL), Game Changers are inviting proposals from academic institutions for access to facilities at NNL's Preston Laboratory to undertake research and development projects focussing on advanced nuclear technology.

The projects must be undertaken between 8th November 2021 and 25th March 2022.

This funding call is part of a short pilot of the Advanced Nuclear Skills and Innovation Campus (ANSIC), delivered by NNL on behalf of BEIS, and will provide research grants of up to £65k per project. It is intended that two research projects will be funded. The cost of instrument and facility access at NNL's Preston Laboratory and support from NNL experts will be covered by ANSIC, and therefore free at point of use for the successful researchers.

Find out more

In this call, proposals for research projects that explore all potential uses of nuclear technology as part of a low carbon economy are invited. This includes, but is not limited to, research projects investigating:

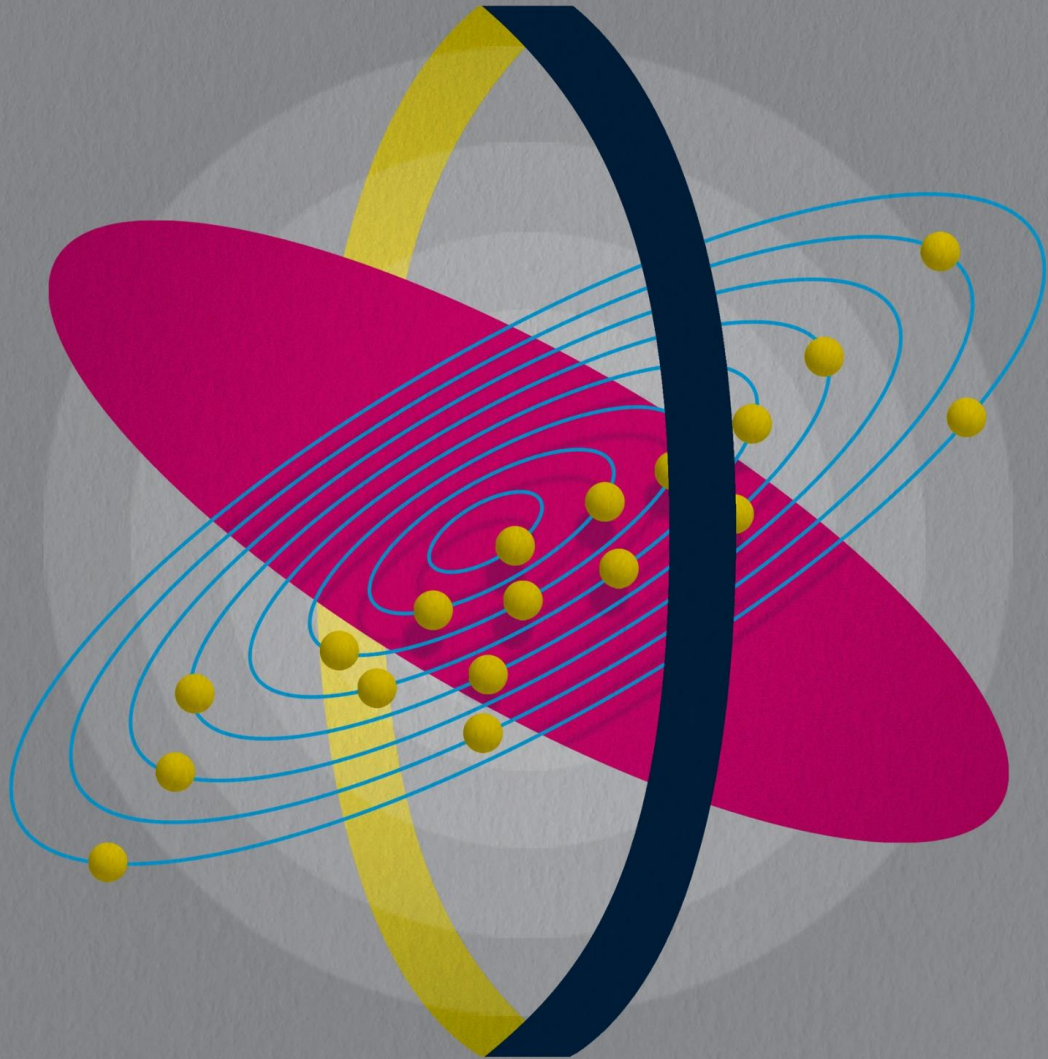
- The use of nuclear technologies in hydrogen production, direct heat for industrial or domestic use, energy storage, chemical synthesis and production of medical isotopes
- Technologies that enable the recovery and reuse of radioactive waste material for energy and non-energy use
- Technologies that reduce the cost of advanced nuclear systems
- Mechanisms of enabling licensing and validation of new technologies
- Opportunities to derive additional value from advanced nuclear systems



An online briefing event will take place at 11am on 15th September 2021 to provide an overview of ANSIC and further information about this call. The application process will be explained in detail and attendees will have an opportunity to take part in a Q & A session. [Registration is free and via Eventbrite.](#)

Proposals must be submitted using the Game Changers online application system. The deadline for applications is 12 noon on Thursday 30th September 2021.

[https://www.gamechangers.technology/challenge/Advanced Nuclear Skills and Innovation Campus: academic research and development projects](https://www.gamechangers.technology/challenge/Advanced_Nuclear_Skills_and_Innovation_Campus:_academic_research_and_development_projects)



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