National Laboratories Alliance

National Laboratories Alliance

What is the National Laboratory Alliance (NLA)?

The National Laboratories Alliance (NLA) is formed from twelve **Public Sector Research Establishments (PSREs)**. It was formerly known as The Interlab Forum.

The PSRE community is in a unique position to deliver impact through enhancing the way we are able to respond to national crises, protect our people and environment, project global influence and enhance our prosperity both by anticipating and responding to national threats.

National Laboratories Alliance

What is the National Laboratories Alliance (NLA)?

NATIONAL NUCLEAR LABORATORY

HSE

UK Atomic Energy Authority

[dstl]

UK Health Security Agency

Met Office

Fera

AWE NUCLEAR SECURITY TECHNOLOGIES

Centre for Environment Fisheries and Aquaculture Science

NPL

Animal & Plant Health Agency

THE Pirbright INSTITUTE

National Laboratories Alliance

- 12 Labs, partly or wholly owned by Government
- Collective staff numbers circa 25,000
- Collective revenue >£2.5bn

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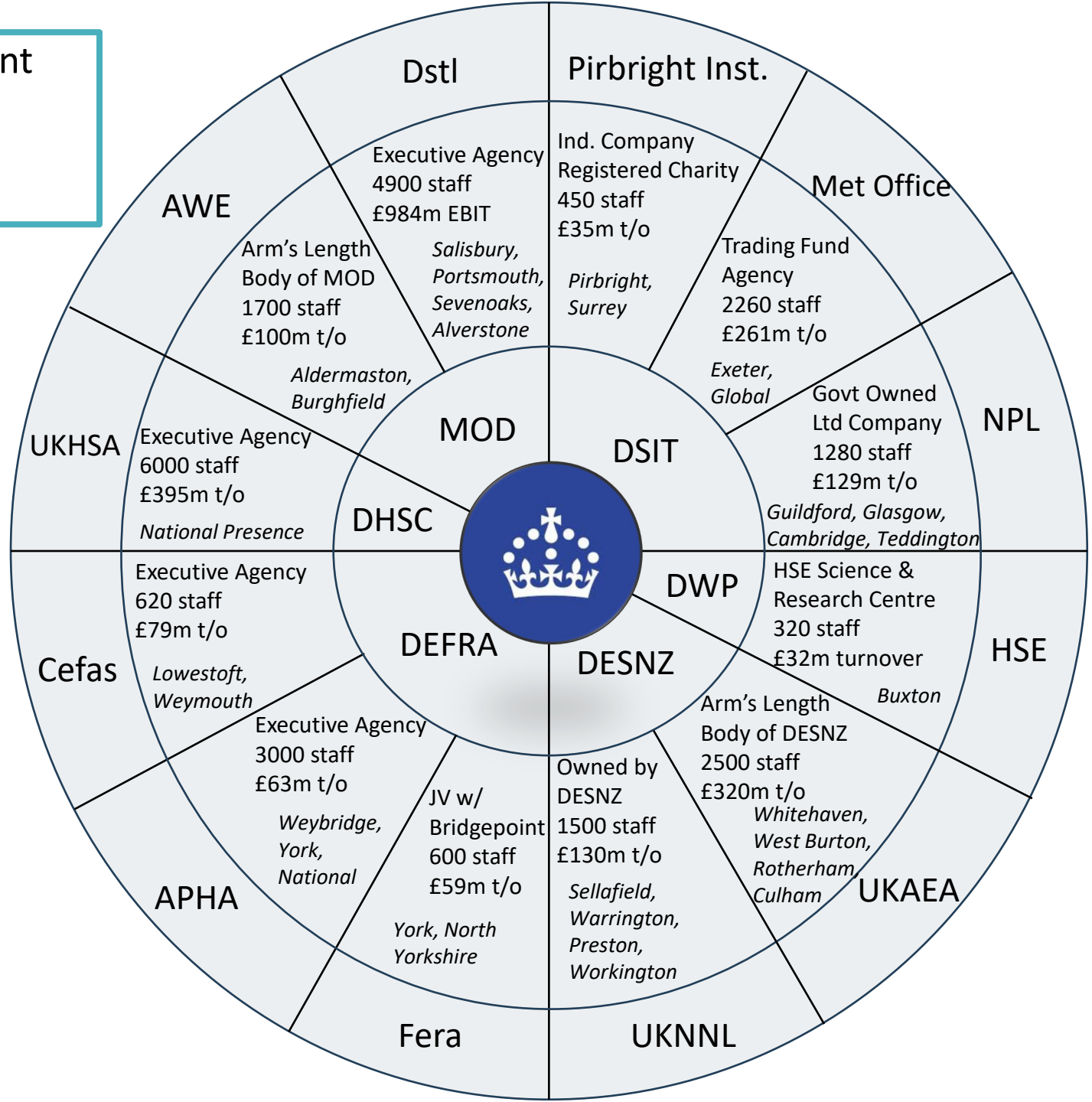
Animal & Plant Health Agency
AWE
Cefas
[dstl]
Fera
HSE
Met Office
United Kingdom National Nuclear Laboratory
NPL National Physical Laboratory
UK Health Security Agency
The Pirbright Institute
UK Atomic Energy Authority



NLA Purpose

…. to further the effectiveness of individual members as well as the collective value of PSREs through:

- the **sharing** of best practice;
- **collaborating** on strategic activities;
- **optimising** the use of member's expertise and resources in areas of mutual interest;
- increasing **professional development** opportunities;
- acting as a **testbed** for key changes to improve collaborations and permeability across the broader PSRE forum;
- serving as a 'go to' **body for scientific opinion, advice, measurement support** upon demand from GCSA's office (and other Government Departments).

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Animal and Plant Health Agency (APHA)

Their mission is “to protect the health and welfare of animals, as well as the general public, from disease”, for the benefit of people, the environment and the economy.

APHA is an executive agency of the Department for Environment, Food & Rural Affairs.
Their capabilities include:

- Analytical Services
- Bacteriology
- Biological Sciences
- Biomathematics, Modelling and Risk Analysis
- Epidemiology
- Molecular Biology
- Parasitology
- Pathology and Animal Sciences
- Pest and Disease Control
- Veterinary Medicine
- Virology

Animal & Plant Health Agency

Animal and Plant Health Agency (APHA) Website

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Atomic Weapons Establishment (AWE)

The United Kingdom's Atomic Weapons Establishment (AWE) provides the warheads for the UK's nuclear deterrent. It is one of the largest high technology research, design development and production facilities in the country.

They aim to "deliver nuclear warheads for the UK's deterrent and use our expertise to support national security."

Their capabilities include:

- Computational Physics, Chemistry
- Engineering (systems, design, mechanical, electronic)
- High Performance Computing
- High Power Lasers and Optical Diagnostics
- Materials Science (conventional, nuclear and energetic materials)
- Mission Effectiveness Studies
- Nuclear Security
- Pulsed Power and Radiography (destructive and non-destructive)
- Radiation and Health Physics
- Radiological and Nuclear Threat Reduction
- Shock Physics and Hydrodynamics (explosive firing chambers and diagnostics)

AWE NUCLEAR SECURITY TECHNOLOGIES

AWE Website

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Centre for Environment, Fisheries and Aquaculture Science (Cefas)

[Centre for Environment, Fisheries and Aquaculture Science (Cefas) website]

The Centre for Environment, Fisheries and Aquaculture Science (Cefas) is a world leader in marine science and technology, providing innovative solutions for the aquatic environment, biodiversity and food security.

Their capabilities and facilities include:

- Advice and Consultancy
- Emergency Response
- Laboratory Services and Analysis
- Modelling
- Programme Management and Training
- Marine Technology, including Cefas Endeavour, UAV operations and small-scale robust electronics

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Defence Science and Technology Laboratory (Dstl)

Dstl helps to identify and monitor national security risks and opportunities; and protects the UK and national interests by addressing physical and electronic threats from state and non-state sources

Their responsibilities include:

- Supplying sensitive and specialist science and technology services for MOD and wider government.
- Providing and facilitating expert advice, analysis and assurance on defence procurement.
- Leading on the MOD's science and technology programme.
- Horizon-scanning
- Acting as a trusted interface between MOD, wider government, the private sector and academia.

Defence Science and Technology (Dstl) website

Fera Science Ltd. (Fera)

Fera is an applied science leader, helping clients tackle their most complex challenges through deep expertise and trusted partnerships.

Working across food, health, and the environment, we turn evidence into clarity, impact and advantage — enabling people and organisations to make confident decisions in an ever-changing world.

Their responsibilities include delivery of measurement and advisory support to:

- Uphold biosecurity in the natural environment and at the UK borders.
- Serve as National Reference Laboratory (NRL) for the Food Standards Agency (FSA) including natural toxins, organic contaminants, smoke flavourings, food and feed additives.
- Defra designated NRL for Plant Pests across Mycology, Nematology, Bacteriology, Virology and Entomology, also for Bee Health. Support to Defra for GM/ PBO releases.
- Key service provider to Defra, FSA and Home Office for Emergency Response CBRN work and provision of Emergency Response work and advice to Defra for wildlife and environment.
- To deliver strategic scientific support to Government via Defra and its affiliates (Natural England, Environment Agency and RPA) and ALBs for testing and surveillance ranging from soil, water & eco-system health, to traceability & authenticity in global food/ feed chains, to socio-economic & land-use optimisation for natural capital.
- Support Defra (VMD), HSE (CRD) and related bodies for the safety evaluation of chemical and biological products including their environmental fate (veterinary & human pharmaceuticals, plant protection products, biocides, General Chemicals (REACH etc)
- Lead on Laboratory Proficiency Assessment Services across such scopes.

Fera

Fera Science Website

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Health and Safety Executive (HSE), Science Division

HSE's Science and Research Centre undertakes research, experimentation and accident investigation on behalf of the government and private organisations, to understand and manage the health and safety risks created by workplace activities

Their capabilities include:

- Net Zero and energy innovation
- Large-Scale Testing and Evaluation
- Risk Management and Process Safety
- Data Analytics
- Human Factors
- Worker Health Solutions

HSE Science Division Website

Met Office

Their vision is “to help people make better decisions to stay safe and thrive”. They focus on making a difference and delivering greater benefit, delivering those services through exceptional scientific, technological and operational expertise.

Met Office Website

The Met Office is a key part of the weather and climate community, and is the national meteorological/weather service for the UK. They provide critical weather services and world-leading climate science.

Their capabilities include:

- High Performance Computing
- Informatics
- Weather Science, including air quality, ocean forecasting, satellite applications
- Climate Science which covers climate, cryosphere and ocean; Foundation Science, which includes global modelling and observation-based research
- Applied Science

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National Nuclear Laboratory

"To deliver world-leading nuclear expertise and innovative solutions and our purpose, which represents what we need to do as a business, is to serve the national interest and create value for our customers, by pushing the boundaries of science, technology and innovation.“

National Nuclear Laboratory (NNL) is the UK’s principal nuclear fission research and development organisation, providing the technical knowledge and capability to ensure that the country’s civil nuclear energy programmes are delivered safely and cost-effectively.

NNL has three specific roles: UK technical advisor; Commercial business; National strategic technical work.

Their capabilities include:

- Data Analysis
- Decision Science and Modelling
- Decommissioning and Environmental Services
- Nuclear Plant Operations
- Robotics
- Strategic Research and Development
- Waste Management

NATIONAL NUCLEAR LABORATORY

National Nuclear Laboratory (NNL) Website

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National Physical Laboratory (NPL)

"As the UK's National Measurement Institute, NPL develops and maintains the national primary measurement standards…For over a century, we have worked with customers to translate scientific expertise into economic prosperity, skilled employment and improved quality of life."

The National Physical Laboratory (NPL) is a world-leading centre of excellence in developing and applying the most accurate measurement standards, science and technology available. Their capabilities include:

- Materials
- Biotechnology
- Metrology
- Earth Observation & Climate
- Electrochemistry
- Electromagnetics
- Electronics Mathematics, Modelling & Simulation
- Radiation Dosimetry
- Ultrasound & Underwater Acoustics

National Physical Laboratory (NPL) Website

NPL has founded a Postgraduate Institute for Measurement Science (PGI) which is comprised of around 200 postgraduate researchers supervised by staff in collaboration with over 30 UK universities and industrial partners. It acts as a gateway for companies and research organisations to understand and utilise measurement to perform research and innovation.

The Pirbright Institute

The Pirbright Institute is a charitable company, limited by guarantee, funded by BBSRC (Biotechnology & Biological Sciences Research Council). Pirbright is contracted by Defra (government Department of Environment, Food & Rural Affairs) as the UK Reference Laboratory for nine high-consequence viral pathogens of farm animals. Pirbright is also the Europe/Asia Reference Laboratory for WOAH (World Organisation for Animal Health) for these viruses, and the World Reference Laboratory for FAO (United Nations Food & Agriculture Organization) for three of these viruses.

The Pirbright Institute is a UK National Capability, providing:

- UK Reference Laboratories
- Diagnostic Surveillance Capabilities
- Monitor and detect outbreaks of viral diseases of farm animals
- Critical role in the control and elimination of disease outbreaks when they occur.
- Research into prevention of disease outbreaks
- Tools to combat outbreaks
- Expert advice and support on particular viruses to UK Government
- Training materials and courses for UK and global vets and scientists
- Centre of excellence for biorisk management and bio-containment engineering

THE Pirbright INSTITUTE

The Pirbright Institute Website

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UK Atomic Energy Authority (UKAEA)

The UK Atomic Energy Authority (UKAEA) leads the delivery of sustainable fusion energy and maximises the scientific and economic benefits from its work.

UK Atomic Energy Authority

UKAEA is an Executive Non-Departmental Public Body sponsored by the Department for Energy Security & Net Zero. It focuses on **research** to build the fusion knowledge base, working with partners to **deliver fusion powerplants** and enabling the **growth of a UK fusion industry**.

UKAEA owns UK Industrial Fusion Solutions on behalf of the Government – the delivery vehicle for the national prototype fusion plant programme, STEP.

UKAEA's key capabilities include:

- Plasma science and operations
- Materials research
- Robotics and remote handling
- Tritium and the fusion fuel cycle
- Advanced computing
- Engineering and technology

[UK Atomic Energy Authority (UKAEA) Website]

National Laboratories Alliance

UK Health Security Agency (UKHSA)

UK Health Security Agency (UKHSA) exists to protect and improve the nation's health and wellbeing and reduce health inequalities.

UK Health Security Agency

Their capabilities include:

- Emergency response
- Field epidemiology
- Infectious disease surveillance and control
- Public health strategy
- Chemical, radiation and environmental hazards

[UK Health Security Agency (UKHSA) Website]

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For more information, please contact jon.virgoe@npl.co.uk, or visit the NLA Website

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