

# Benefits of RCNDE's Associate Membership

*UK Research Centre in Non-Destructive Evaluation (RCNDE)*

*22nd March 2024*

[www.rcnde.ac.uk](http://www.rcnde.ac.uk)

*"Strong relationships with industrial partners have led to a successful centre that is internationally recognised" EPSRC*



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- Background and structure
- Membership types
- Benefits of Associate Membership
- Relevant RCNDE activities



# UK Research Centre in NDE

## What is it?

- A collaboration between universities and industry for the purpose of making an impact through NDE research and training
  - Three guiding principles: World-class scientific research; Industrial benefit; Impact on NDE profession
- Approaching ~70 Industrial, Academic & Associate members – multi sector
- 8 main university partners
- Links to the CDT in Quantitative NDE and FIND CDT

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**RCNDE**  
UK RESEARCH CENTRE IN NDE

# UK Research Centre in NDE

2024



## History & Background

- **2003-2008 – RCNDE 1**

£4.5M grant, 5 industrial partners at the start

- **2008-2013 – RCNDE 2**

£9M grant, 14 industrial/9 associate partners

- **2014-2020 – RCNDE 3**

£10.5M grant, Bath → Manchester, 15 industrial/ 29 associate partners

- **2021-Present – RCNDE 4**

Portfolio of grants









Addition of Liverpool and Southampton

Expansion of activities- Different TRLs

14 industrial/8 academic & ~45 associate partners

# 8 Universities

## (20+ multi-disciplinary research groups)

							
<p>Guided ultrasonic waves</p> <p>Ultrasonics incl. sensors</p> <p>Electromagnetics</p>	<p>Ultrasound Sensors (eg EMATs, MEMS, etc)</p> <p>Ultrasonic tomography</p> <p>Electrostatic imaging</p>	<p>Ultrasound arrays and inversion</p> <p>Eddy-currents</p> <p>Muon tomography</p> <p>Composite inspection</p>	<p>Ultrasonic &amp; optical methods</p> <p>Laser ultrasound</p> <p>Additive manufacturing</p>	<p>Electro-magnetic tomography</p> <p>Quantum sensors</p> <p>Terahertz imaging</p> <p>XCT</p>	<p>Ultrasonics incl. arrays</p> <p>Robotics</p> <p>Laser ultrasound</p> <p>Ultrasonic inversion</p>	<p>X-ray</p> <p>X-ray computed tomography</p> <p>Thermal stress analysis</p> <p>Digital Image Correlation</p>	<p>Thermal stress analysis</p> <p>Digital Image Correlation</p>

# 14 Cross-sector Global Industrial Partners



	Airbus	Rolls-Royce	BAe Systems	DSTL	IHI	EDF	NDA	Jacobs	Hitachi	ONR	Shell	BP	Petrobras	MTC
Aerospace	X	X	X	X	X									X
Power					X	X	X				X	X		
Nuclear		X			X	X	X	X	X	X				
Defence	X	X	X	X										X
Public Sector				X						X				X
Oil & Gas								X			X	X	X	
Manufacturing	X	X	X		X				X					X
Transport	X	X							X					
Civil						X	X	X						X



# Associate Members



# Industrial Membership options

## Tier 1 - Full membership (£45k p.a.)

- Steering the research programmes to meet company strategic objectives
- Value for money through strong leverage of public funds and industrial collaboration
- Early access of new technologies, including rights to use research outputs
- Intellectual leverage through cross-industry collaboration, access to state-of-art facilities & international experts for advice
- Networking with other industrial and academic members
- Access to associate members representing the NDE supply chain and RCNDE's associated doctoral training scheme
- Track record of transitioning 16 years' research outcomes towards industrial application

## Tier 2 - Non-profit membership (£22.5k p.a.)

- RCNDE board member full voting rights
- Directing academic NDE research
- Networking with other members across the entire industry, supply chain, and academia
- 50% discount on full membership fees

## Associate membership (Variable)

- Early awareness of RCNDE research results
- Access to credible new technologies
- Participation in RCNDE's associated doctoral training scheme
- Special rates for small companies (SMEs)



# RCNDE membership categories comparison

		TIER 1 £45K per annum *	TIER 2 £22.5k per annum **	ASSOCIATE MEMBERSHIP Variable ***
<b>BENEFITS</b>	Steering research programmes to meet company strategic objectives, i.e, seat at the Management Board and voting rights, participation in the periodic Review of the NDEvR Vision	Yes	Yes	No
	Value for money through leverage of funding opportunities	Yes	Yes	No
	Able to bid for RCNDE internal funding calls, when applicable	Yes	Yes	No
	Cross-sector industrial collaboration and networking opportunities	Yes	Yes	Yes
	Early access to new technologies, including royalty -free rights to use research outputs	Yes	No (IP rights can be acquired via a licence)	No (IP rights can be acquired via a licence)
	Access to state-of-the-art facilities and international experts for advice	Yes	Yes	No
	Access to the latest updates from the NDE supply chain (associate members)	Yes	Yes	N/A
	Access to world-class talent via RCNDE's associated doctoral training scheme	Yes (no access fee)	Yes (access fee under review)	Yes (access fee under review))
	Facilitation of higher-TRL programmes	Yes	Yes	Yes
	Guidance and assistance with technology transfer	Yes	Yes	Yes
	Access to full reports of RCNDE research projects	Yes	Yes	No (access to a summary report)
<b>MEETINGS</b>	Industrial working groups and tours of university labs	Yes	Yes	No
	Annual review conference	Yes	Yes	Yes
	Centre for Doctoral Training conference	Yes	Yes	Yes
	Progress webinars of core research projects	Yes	Yes	No
	Technology Transfer days	Yes	Yes	Yes
	Technology workshops	Yes	Yes	Yes
	RCNDE Board meetings	Yes	Yes	No
	Free attendance to workshops co-organised by RCNDE	Yes	Yes	No (discounted rates)

# Benefits (1)

- Cross-sector industrial collaboration and networking opportunities
  - Open to all our members with opportunities for networking at the different events RCNDE organises throughout the year.
- Access to world-class talent via RCNDE's associated doctoral training scheme
  - Excellent route for technology transfer.
  - Reduced access fee for Associate Members.
  - In the first three CDTs:
    - 36 EngDs have been sponsored by Associate Members and 20 more have received some other support from them.
    - 12 students were recruited by the company that sponsored them. 11 other students were recruited by Associate Members.
  - FIND CDT: 6 Associate Members sponsoring projects and 3 more prospective projects with Associate Members as sponsors.
  - Great proportion of completed EngDs sponsored by Associate Members.

# Benefits (2)

- Facilitation of higher-TRL programmes and sharing of information on relevant funding opportunities/events
  - RCNDE always keen to have conversations on how to help – examples of KTPs, Innovate UK projects, spin-off companies' experiences.
  - Regular email updates on relevant funding opportunities/events/information.
- Guidance and assistance with technology transfer
  - RCNDE open to work with Associate Members that want to do technology transfer projects (support with consortia building)
  - Dedicated events: Technology Readiness workshops, Technology transfer events
- Summary reports of RCNDE core research projects
- Special rates for small companies (SMEs)
  - Fewer than 10 employees: £150 p.a.
  - 11-50 employees: £450 p.a.
  - 51-250 employees: £1,500 p.a.
  - More than 250 employees: £7,500 p.a.

# RCNDE Annual events

These annual cycle of events are held on a rotation at University-member locations

- Annual Review conference (24<sup>th</sup> April 2024, University of Strathclyde)
  - Presentations of RCNDE Core and Aligned projects by academic PI's , also includes Impact Enhancement and Technology Transfer/Feasibility projects
- Centre for Doctoral Training conference (23<sup>rd</sup> April 2024, University of Strathclyde)
  - Since 2020, CDT conference is open to all Associate Members. Presentations from Year 2 and Year 4 CDT and associated (iCASE, scholarships) students
- Technology Transfer day (January 2025 at MTC)
  - Focused on aspects relevant to technology transitioning
  - The day includes presentations and is an opportunity for Associate Members to promote their technology transfer activities with practical demos of their technology to industry and academic members
  - Excellent networking opportunity



# RCNDE Workshops

- Online Technology workshops focused on thematic areas
  - provide a platform for Associate Members to give talks on the technological advances behind their products and services with a Q&A.
  - 3-4 workshops per year.

Planned for 2024/25 are:

- SHM/CM (follow-up workshop)
  - Material characterisation
  - Modelling and validation
  - Complex geometries
- Technology Readiness Reviews: when a project is nearly completed, a full technical and commercial review is performed to identify any gaps in the work and to outline the next steps. Relevant Associate Members are invited to advise on higher TRL activities.
  - Discounts to workshops co-organised by RCNDE. Recent workshops include:
    - NDE for Industry 4.0., NDE Requirements for Civil Structures.



# Website

<https://rcnde.ac.uk/>

- Member's area accessible to Associate Members
- To request a user login, email [rcndeinfo@ndevr.org.uk](mailto:rcndeinfo@ndevr.org.uk) or fill in the contact form on the website

<https://rcnde.ac.uk/members/>

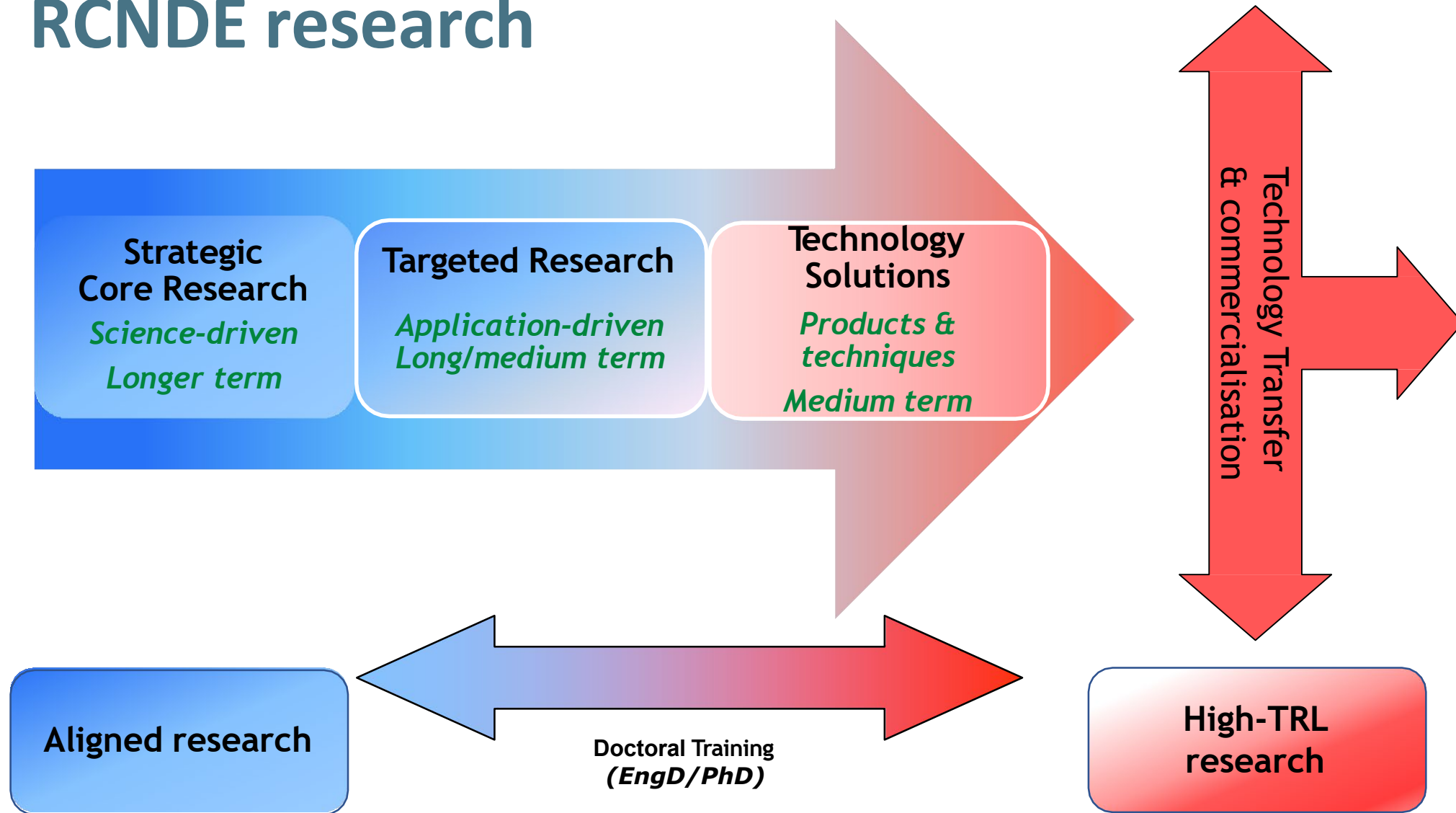
The screenshot shows the RCNDE website's members page. At the top, there is a dark navigation bar with the email [rcndeinfo@ndevr.org.uk](mailto:rcndeinfo@ndevr.org.uk), social media icons for Twitter and LinkedIn, and a search bar. Below this is the RCNDE logo and the text "UK RESEARCH CENTRE IN NDE". To the right of the logo are links for "CONTACT US", "FOR MEMBERS", "FOR MEMBERS", and "LOGOUT". A secondary navigation bar contains links for "HOME", "ABOUT", "OUR WORK", "WHY JOIN", "THE COMMUNITY", "NEWS & EVENTS", and "CONTACT".

The main content area is titled "Members" and is organized into several sections, each with a list of links:

- Management**
  - RCNDE Board Meeting Documents
  - Industrial Visits and Working Group Reports
  - RCNDE Confidentiality guidance
  - Technology Transfer Events
- Strategy and vision**
  - Research Vision, Members Research Priorities & "Big Idea"
- Project information**
  - Core Research Annual Reports, Review Presentations & Progress meetings
  - Targeted Research Presentations
  - Feasibility studies and Technology Transfer Projects
  - EPSRC Grant Application and Contractual Documents
  - Seminars, Workshops & Special Interest Topics
  - Centre for Doctoral Training Documents
  - Research Register
  - Seminars, Workshops & Special Interest Topics 2
- Communications**
  - Newsletters
  - Invited Papers
  - Members' Information, Presentations, Posters etc
  - Research Summaries
  - Publications 2008 – 2012
  - Software Downloads
  - Publicity Documents
  - TRL and CRL Information documents
- Supporting documentation**
  - Full member's contact list
  - Honours and Awards
  - RCNDE logos
- International Advisory Board**
  - Core Research Annual Reports, Review Presentations & Progress meetings\_IAB

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# RCNDE research



# 2012, 2017 and 2022 Visions



**2012**  
Insight, Vol. 54, No. 3,  
pp 124-127, March 2012



**2017**  
Insight, Vol. 59, No. 9,  
pp 469-472, September 2017



**2022**  
Insight, Vol. 64, No. 11,  
pp 625-632, November 2022

Latest Vision is available from [www.rcnde.ac.uk](http://www.rcnde.ac.uk)  
and [www.bindt.org](http://www.bindt.org)



# RCNDE 2023-2028 Strategy

- ***Vision*** is to be the *world-leading centre of excellence in NDE research through active partnership with the industrial user community.*
- Our ***Mission*** is to continue playing a leading role in the UK and global innovation landscape by:
  - *Supporting world-class scientific research* by funding and partly funding cutting-edge research in the area of non-destructive evaluation.
  - *Delivering industrial benefit* by liaising and collaborating with our wide and well-established industrial membership.
  - *Developing the NDE professionals of the future* by supporting teaching and training and contributing to the UK's education environment.
  - *Supporting the RCNDE community and wider stakeholders* through horizon scanning, capture and articulation of future requirements and needs.

# RCNDE 2023-2028 Strategy

- Associate Members are vital in transitioning the technology from the lab into the market.
- Special efforts made to increase RCNDE's engagement with Associate Members as key players in this process.
  - Grow involvement in RCNDE's research programmes,
  - Improve their exposure to Full Members
  - Ensure all Associate Members are aware and make the most of the benefits that their membership offers them.
- For more information about RCNDE's strategic activities and to view the 2023-2028 vision please go to the website <https://rcnde.ac.uk/projects/strategic-activities/>



# Summary

- RCNDE now a well-established partnership between industry and academic researchers.
- Our aim is to produce world-class scientific research that provides our members with industrial benefit and has a real impact on NDE profession.
- Related doctoral training provides great networking and recruitment opportunities
- Associate Members are key in transitioning the technology from the lab into the market.
- Increased efforts to engage with Associate Members in the next five years.



# Ways to connect...

[www.rcnde.ac.uk](http://www.rcnde.ac.uk)

E: [rcndeinfo@bristol.ac.uk](mailto:rcndeinfo@bristol.ac.uk)

X [@RCNDEOfficial](https://twitter.com/RCNDEOfficial)

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