



THE UK'S COMPOSITES INNOVATION CENTRE

BRINGING TOGETHER THE BEST MINDS AND BEST TECHNOLOGIES TO SOLVE THE WORLD'S MOST COMPLEX ENGINEERING CHALLENGES.



**NATIONAL
COMPOSITES
CENTRE**



DRIVING INNOVATION IN COMPOSITES

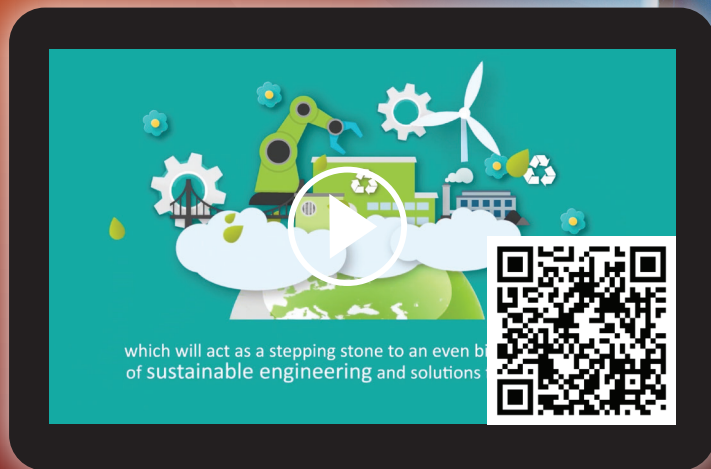
The National Composites Centre (NCC) is an independent, open-access technology centre delivering world-class research and development of composites. As part of the UK's Catapult innovation network, we offer our partners access to the latest technology, provide technical expertise and the business support they need to overcome barriers to innovation and accelerate their growth.



"WE ARE INDUSTRY'S LEADING RESEARCH AND DEVELOPMENT PARTNER. WHEN COMPANIES NEED TO MAKE THINGS LIGHTER, STRONGER, SMARTER AND MORE SUSTAINABLE, THEY COME TO THE NCC."

Richard Oldfield, Chief Executive

SUSTAINABILITY AT THE HEART



Sustainability is a critical element to our work, as well as a global priority with a huge drive for change. Today, composites already support the drive to a carbon neutral future through:

- light-weighting to reduce emissions
- manufacturing higher performance products, such as larger wind turbine blades to generate more renewable energy
- increasing the lifespan of products by decades, through corrosion resistance and durability.

However, we know we need to do more and alongside the CPI, we lead the Sustainable Composites partnership. Together our aim is to accelerate the development of net zero impact composites, processes and technologies, bringing together the UK's composites expertise to quickly turn research breakthroughs into industrial applications.

WORLD CLASS DIGITAL ENGINEERING

The need to embrace digital transformation to remain competitive and profitable has never been stronger. The challenge is how to harness digital technology to fuel innovation and agility, create new business models and stimulate growth.

We help organisations to identify and build the capabilities that they need to advance transformation within their own and customer organisations. We work with them to develop, demonstrate and adopt digital capabilities that enable them to move forward in their engineering transformation journey. We offer access to a range of virtual and physical test beds

that help organisations to test quick-fire projects and early stage technologies in a secure, industry-like environment with expert support and skills. Access to our industrial test beds can be initiated through a number of routes; direct funding, collaborative or academic research through to industry funded initiatives.

We collaborate and deliver a range of digital engineering programmes including Digital Engineering Technology & Innovation (DETI), 5G-Encode, Smart Factory Innovation Hub, that showcase world class digital engineering practice and concepts on industrial scale test beds.



CUTTING-EDGE TECHNOLOGIES

More than £250m has been invested in our capabilities, which can be trialled on a pay as you play basis, with our expert support. Ten world-leading automated composite manufacturing capabilities have been installed in the past 18 months and include;



The AFP- ATL cell is a uniquely designed capability that combines both AFP and ATL in a single system. The dual system can be used individually or together to collaborate and create large, complex structures with minimal downtime.



An ultra-high-rate deposition cell that can lay up to 5m x 20m wide components with mm accuracy with 20m multi zoned oven and a state-of-the-art verification cell to accompany the scale.



Europe's largest multi axial composite braider.



An impressive composite overmoulder, which is of particular interest to automotive and other high rate manufacturing sectors.

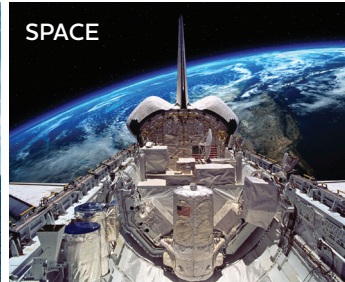


CREATING NEW OPPORTUNITIES

Because we're part of the UK's High Value Manufacturing Catapult we work as not-for-profit and we're here for businesses of all sizes and from all sectors. We're working with some of the largest OEMs on their most critical current R&D projects as well as working with supply

chains, SMEs and micro companies to explore and accelerate the use of composites.

The NCC can support with rapid-turnaround manufacturing challenges to long-term R&D collaborations, all matched to suit budgets and timescales.



MEMBERSHIP

An NCC membership gives you access to our 'beyond' state-of-the-art technology and the best composites engineering capabilities in the world, as well as expert advice from specialist engineers and the exclusive opportunity to network and build relationships with other members.

We have four tiers of membership: Tier 1, Tier 2, Associate and SME Affiliate. Each membership level has a host of benefits, including the use of NCC facilities for private venture work, exclusive members briefings, free training places and much more.



SME SUPPORT

NCC Connect is our dedicated SME support team set up to ensure your business can swiftly access our resources. With a team of over 350 specialist composites engineers and a world-class technology R&D centre, we will work with you to deliver solutions that meet your time and cost requirements.

- Technical Response Team: a dedicated, multi-disciplinary SME support engineers to support and consult on your technical projects and supply chain enquiries.
- SME Boost scheme: Up to £25k of matched funding for UK SMEs to develop composite technologies, products and processes.
- SME Affiliate Member scheme: Affordable access to a year of benefits including training, events, equipment and the wider NCC membership network.
- Line walks: A free site visit to provide immediate advice on how to improve product development and manufacturing processes.
- Innovation workshops: A complimentary full day session with our team of specialist engineers to bring your ideas to life.

CUTTING-EDGE TRAINING

Leaders in composites training, we work with organisations to re-skill and up-skill teams and individuals across every sector. From micro-SMEs to multi-nationals, the workshop to the boardroom, we're experienced in building composites capabilities in a range of disciplines.

We offer hands-on experience of the latest digital manufacturing technologies through our range of bespoke and off-the-shelf courses, which are designed to suit a variety of levels of experience, from apprentices to technicians, experienced engineers to senior management.

Training is available at the NCC in Bristol, at your organisation, and online, in a wide range of topics, including:

- Introduction to Composites
- Resin Infusion
- Resin Transfer Moulding
- Manual Prepreg Techniques
- Repair
- Automation for Composites Production
- Composite Design
- Joining Principles
- Strength & Stiffness
- Measurement & Inspection
- Sustainability in the Composites life cycle

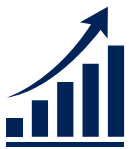
Find out more:
www.nccuk.com/training



THE NATIONAL COMPOSITES CENTRE IN NUMBERS



10 years
of innovation
excellence



£250m+
invested in
capabilities



60+
university
partners



400
composites
specialists



150
researchers
at UoB



8
major sectors
supported



60+
members



**NATIONAL
COMPOSITES
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GET IN TOUCH

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SME support enquiry: connect@nccuk.com

www.nccuk.com

