# Introducing NCC Large Structures Innovation Centre

## Shape the development of LSIC capabilities and future funding opportunities

Online





Proud to be part of | University of Bristol | CATAPULT High Value Manufacturing

# NCC Introduction

Greg McCombe

# NCC part of the High Value Manufacturing Catapult

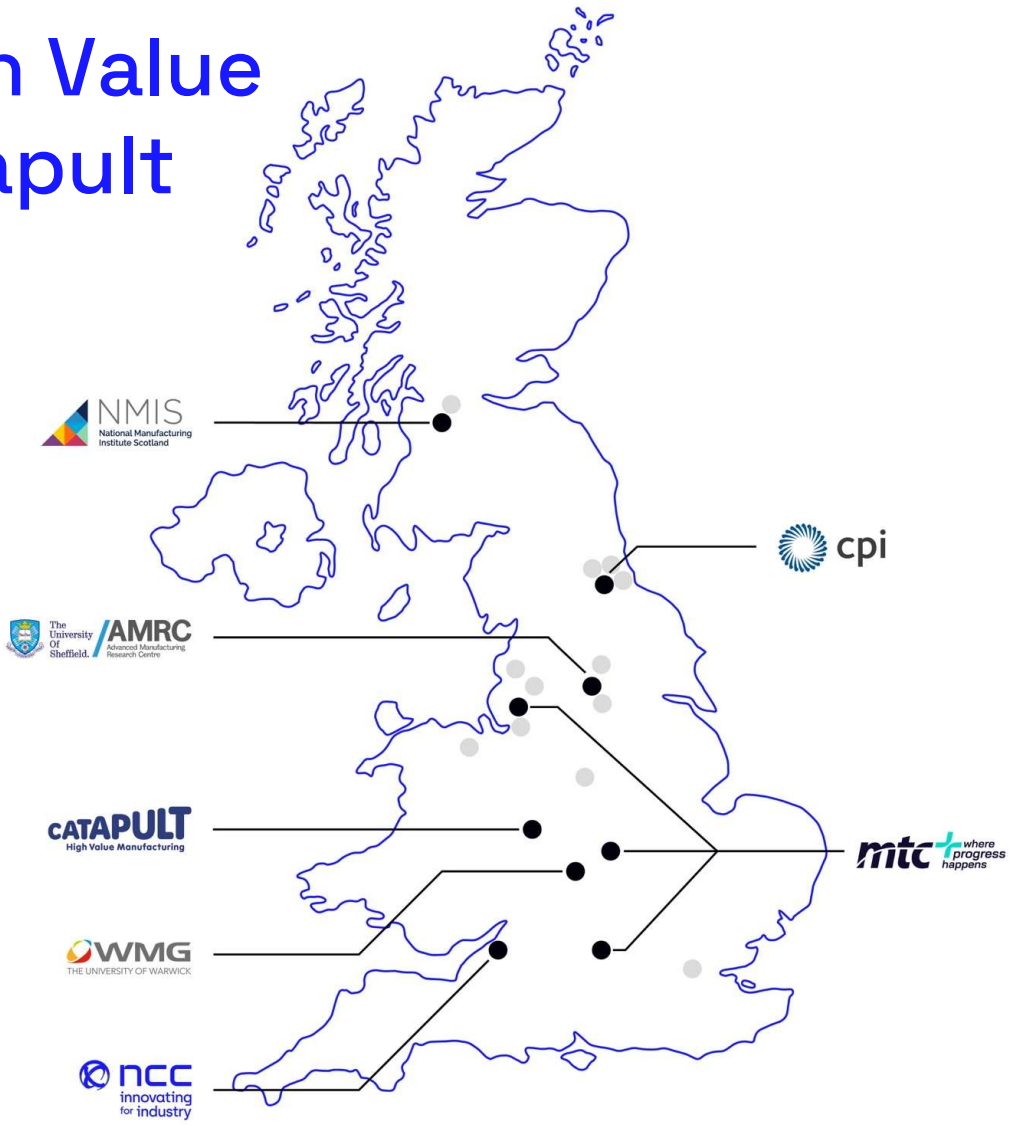
Proud to be part of the **High Value Manufacturing Catapult (HVMC)**

Established by **Innovate UK** in 2011

**6 centres of industrial innovation across 25 sites** working together on the future of manufacturing.

## Delivering impact:

- **£500m+** generated R&D spend each year
- **£609m** net additional GVA each year

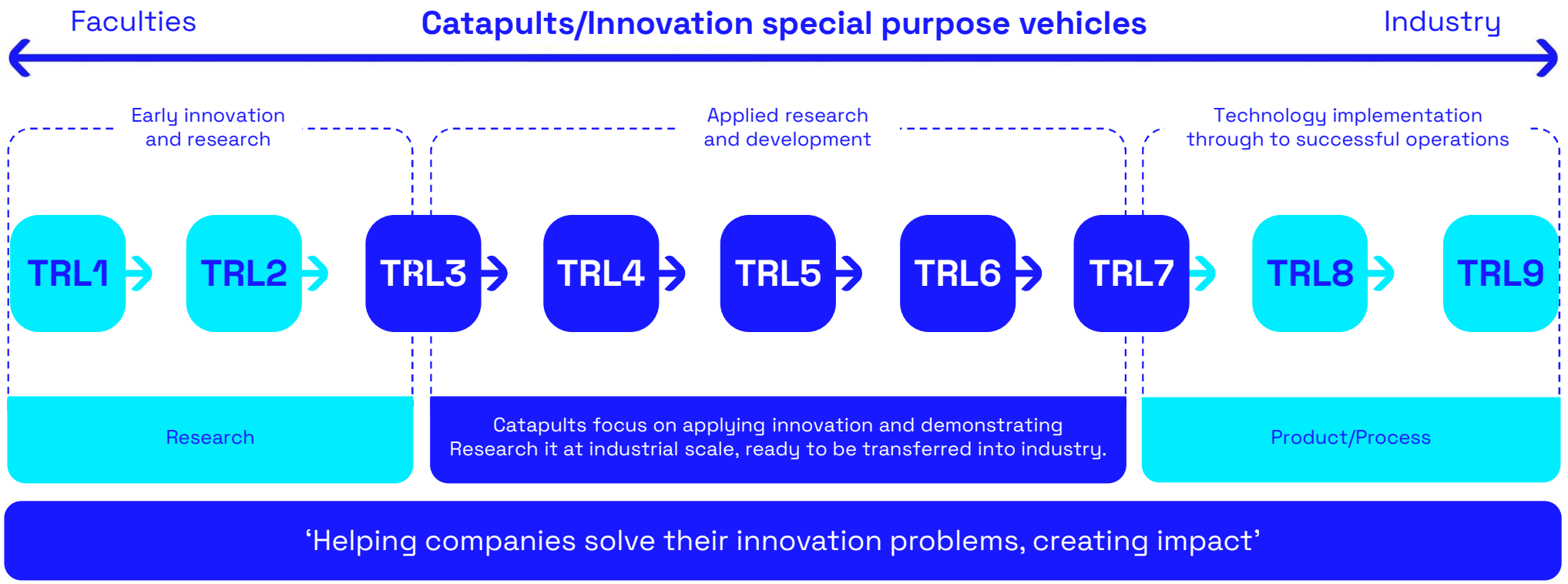


# HVMC: Delivering industrial transformation in critical sectors for the UK

**Over the past five years, we've turned £1.6bn in public funding into £7.7bn in GVA - supporting more than 6,000 firms, 55% of which are SMEs**

- Industry's innovation partner
- Not-for-profit organisation
- Full scale industrial demonstration of capabilities
- Extensive industrial & academic networks

# Supporting end-to-end research & innovation capability



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# NCC at a glance...

Over 100 academic partners

10 state-of-the-art technologies

300 businesses supported per annum

More than 400 specialist engineers

£50m turnover

£300m invested in capabilities

Over 70 members

4 locations

# Our sector portfolio

## Aerospace

**Innovating globally-leading advanced manufacture**

Aerostructures, propulsion, interiors, systems & in-service

## Defence

**Innovating sovereign capability**

Advanced materials, hypersonics, autonomous systems, digital engineering, emerging tech

## Energy

**Innovating the energy transition**

Wind, hydrogen, oil & gas, new nuclear

## Other sectors

**Innovating & growing UK businesses**

Space, growth sectors & foundation industries, adjacent markets (e.g. AI & materials)

# Technology portfolio

We connect technology strategy to real-world delivery through our end-to-end engineering services.

## Materials

Advanced materials

## Product

Systems engineering

Design & test

Circularity

## Process

Composite processes

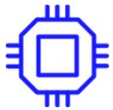
Metallic processes

Production systems

Assurance

## Growth initiatives

Future technologies



Digital transformation

Complex systems

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# Skills & Workforce Development

NCC thought leadership and specialist training interventions help prepare the future manufacturing and engineering workforce.

## Defining future skills
Connect workforce development with emerging technologies.

## Developing future workforce
Develop future engineers and innovators.

## Delivering skills
Expert-led training to develop people and the future workforce.


**Micaela Owen**
Head of Delivery - Skills

**Leah Ritchens**
ATPL- Skills

**James Waldock**
ECL- Skills

skills@nccuk.com

# SME support

Using our expertise, advanced capabilities and collaborative support, we help manufacturers of all sizes boost productivity and innovate – whether by adopting proven technologies or developing world first solutions

How we can support you on this journey...

**Engage**

- Signposting
- Supply Chain Connections
- SME Affiliate Scheme

**Discover**

- Site Visit
- Discovery Workshop
- Technical Advice

**Transform**

- Innovation Projects
- Adoption Projects
- Training

Funding Support – SME Boost/ Grant Identification

## Innovating for SMEs

**Leah Waldock**
Head of Delivery – Industrial Innovation

**Ashley Parkinson**
SME Engagement Manager

**Carys Holloway**
Technology Programme Manager

Connect@nccuk.com

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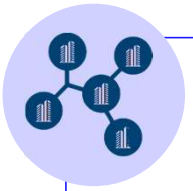
# NCC Engagement & Ways of Working



## Multiple options to work together

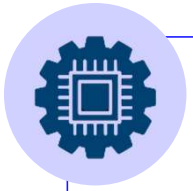
- Customer direct funded work
- Membership
- Joint Industry Programmes
- Competitively won grant funded programmes e.g. Innovate UK, Horizon Europe

## Access to UK Network & Policy

- Access to UK Academic network
- Driving policy at UK government level
- Connected to the High Value Manufacturing Network

## Government funding invested in NCC capability development

- State-of-the-art equipment
- Addressing key industry challenges
- Workforce & skills development



## Data security across our customer network is highly important

- Appropriate IP management
- Extensive review procedures in place
- State of the art facilities (cybersecurity, closed cell, etc...)

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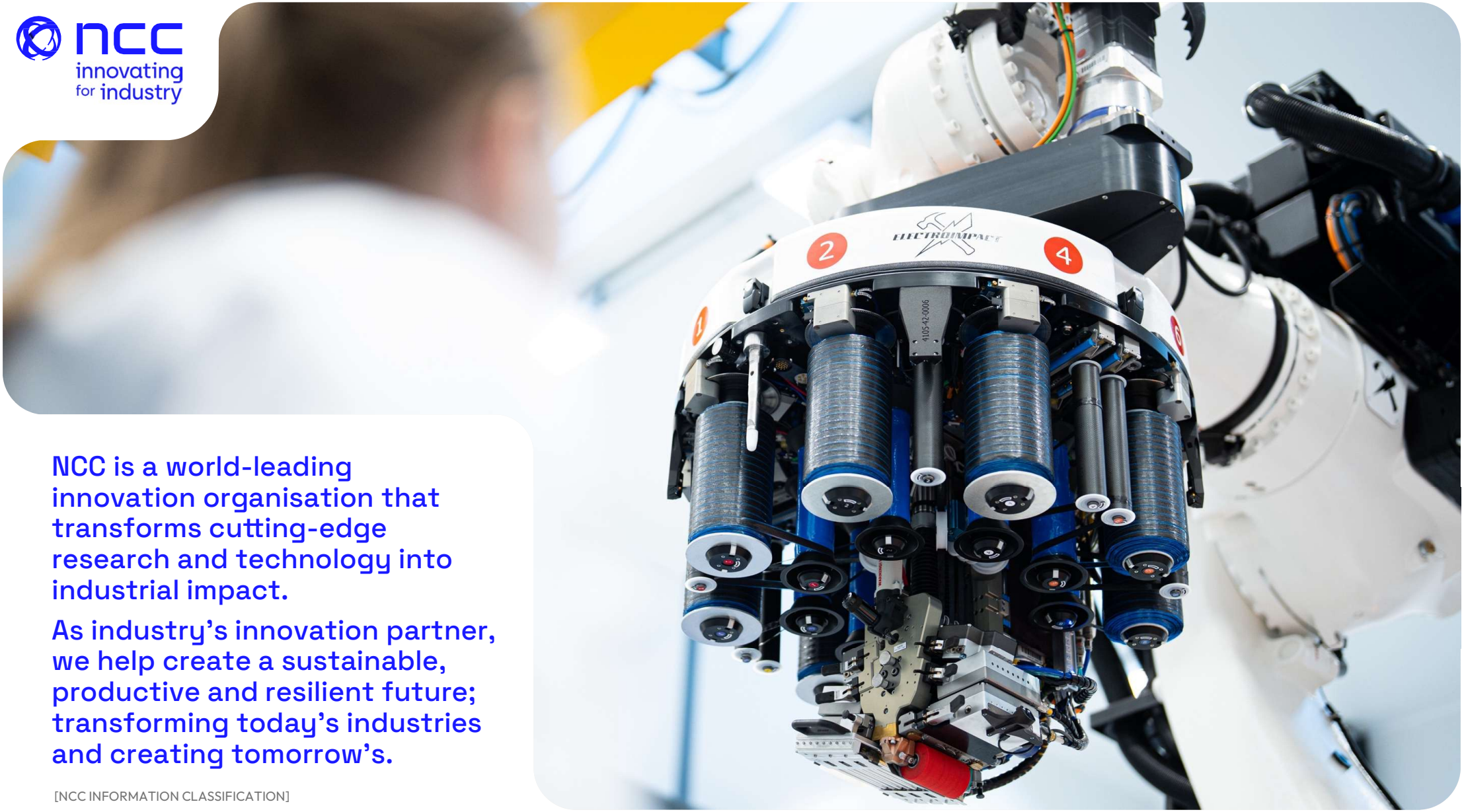



NCC is a world-leading innovation organisation that transforms cutting-edge research and technology into industrial impact.

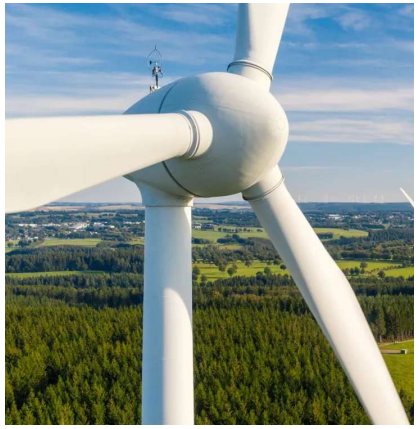
As industry's innovation partner, we help create a sustainable, productive and resilient future; transforming today's industries and creating tomorrow's.

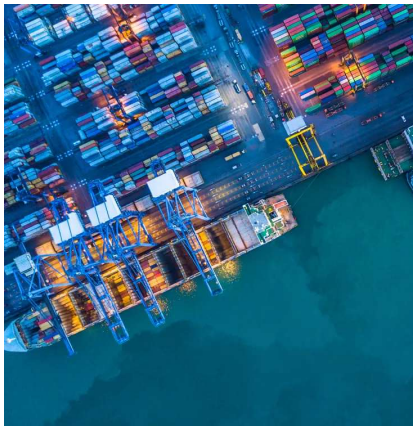
# Large Structures Innovation Centre

Ffion Rodes

# Large Structures Innovation Centre
# What do we mean by large?

LSIC fills a long-standing gap in the UK's innovation landscape - providing companies working with large, complex components the space, equipment and specialist engineering expertise to accelerate development with confidence






It will give industry access to the capabilities needed to advance technology innovation across the entire engineering life cycle – from concept to end-of-life – helping businesses of all sizes industrialise new products faster and achieve their growth ambitions

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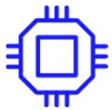
# LSIC Delivering National Impact

- National capability – A new national open-access facility for the development of large structures – starting with energy, anchoring product & technology leadership
- End to end Innovation Support – provides the space, equipment and expertise to accelerate innovation from product concept, through life management and end of life
- Collaborative Industrial Impact – Unites industry to accelerate technology development for improved productivity, quality, safety and through life performance
- Supply Chain Competitiveness – Strengthens supply chain capability to boost competitiveness and resilience.
- Skills for Emerging Technologies – Builds the capabilities needed to translate early-stage innovation into industrial application

New Technology Innovation



Digital Factory

Material Development

Automated Manufacturing

TRL 1 - 2
Novel Ideas

TRL 3 - 7
Prototype to Industrial Scale Demonstration

TRL 8 - 9
Industry Adoption

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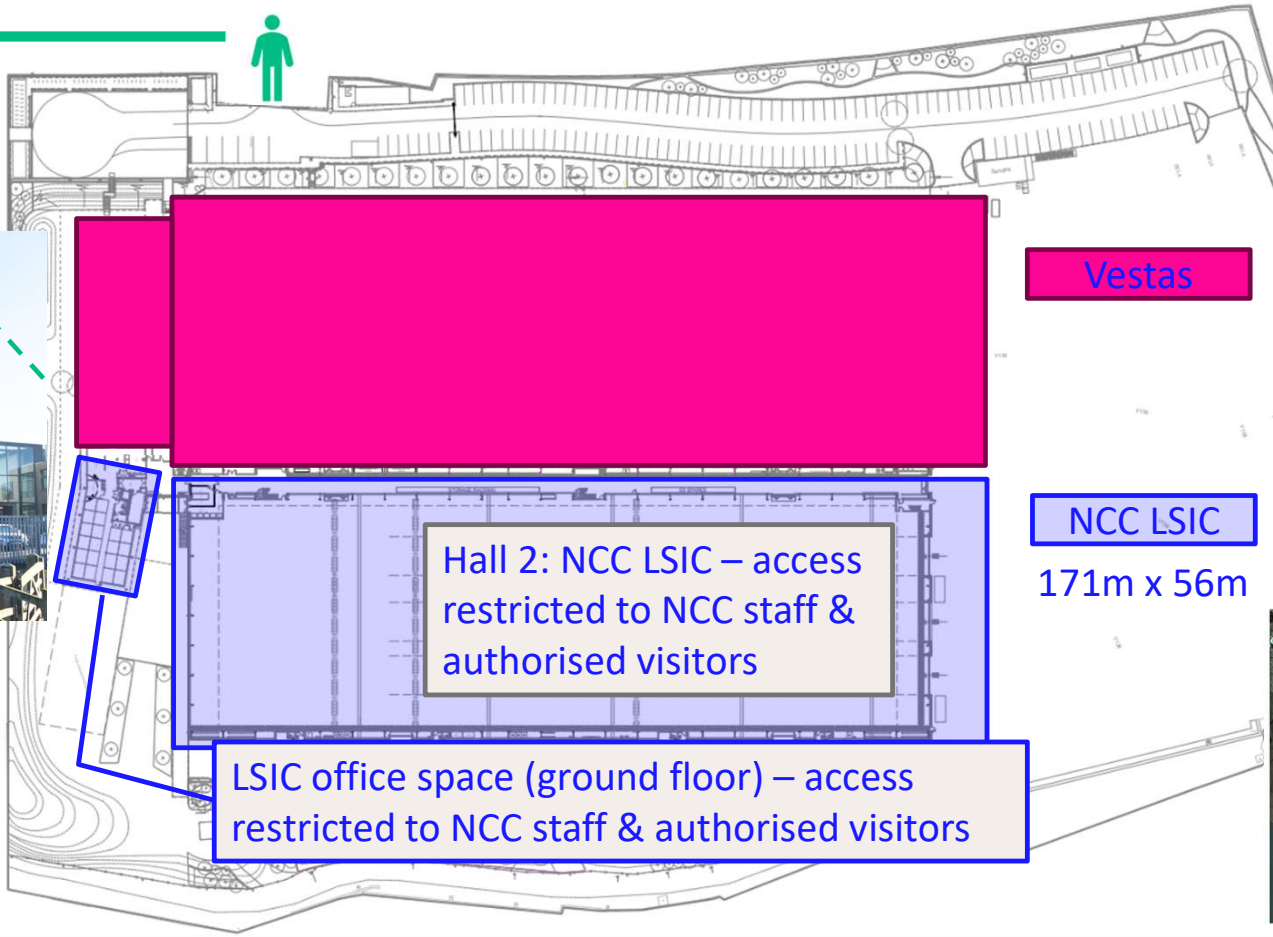
# LSIC Facility Location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# LSIC – Technology Development Focus Areas

With an overall vision to expand our offerings to a wider range of sectors the initial focus areas for LSIC programmes will be covered under the following topics areas aligned with UK national interest:

Pultrusion & new material innovations

Sustainability & zero waste enablers

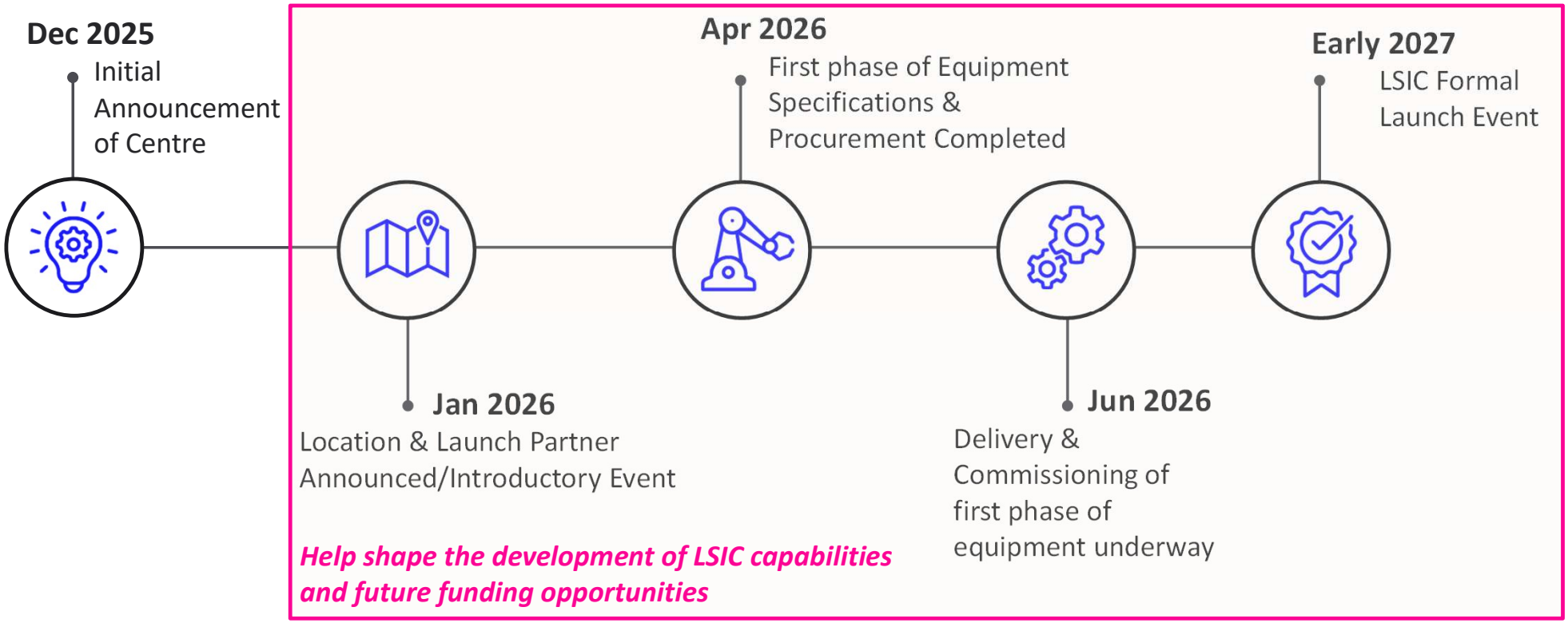
Rate Enabling Processes

Right First Time Production

A connected approach Through Life

Stakeholder engagement → Capability & programme scoping – JIPs/grant funding/direct funded → Project kick-offs

# LSIC Development & Early Engagement Timelines



# Funding Landscape & Ways to Collaborate

Helen Peramatzis

[INFORMATION CLASSIFICATION]

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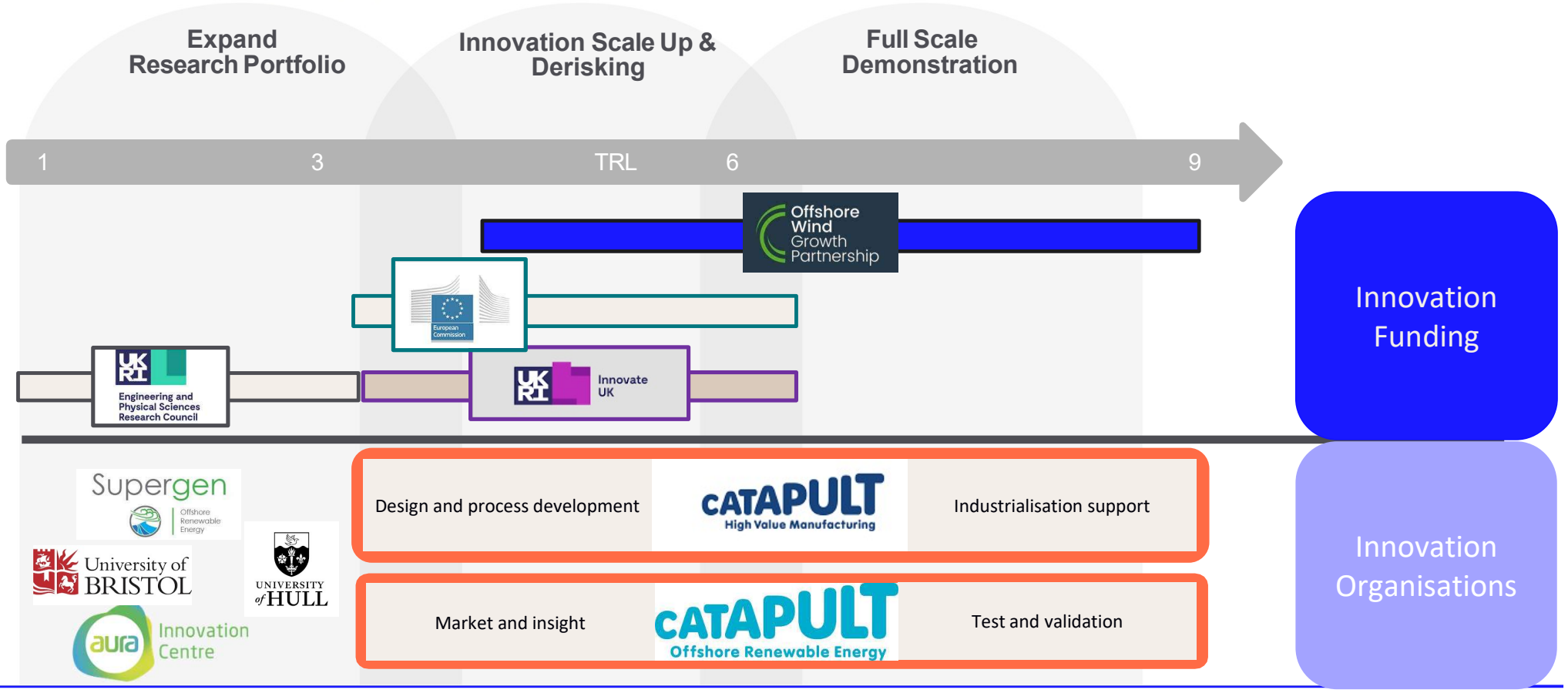
# UK Funding Opportunities



# Innovating for energy

Mission:

- Accelerate the development and competitiveness of the UK offshore wind supply chain in global market
- Empower businesses through targeted funding, expert support and innovation programmes
- Strengthen domestic manufacturing and industrial capability
- Enable UK companies to compete and lead in the global offshore wind market.

**Open now!** Closing 20 Mar. 2026.
**Objective:** Accelerate innovation in two critical areas of UK supply chain:

- Industrial foundations & substructures
- Substations & electrical design

**Value & eligibility:** £1 million total pot, £25k-£200k per project to support near-to-market or market ready solutions. Supported by Equinor, SSE Renewables

Over
**£26.8m**
funding awarded to UK companies

**391**
projects supported

**1650**
newly created jobs in offshore wind

Over
**£69.5m**
contracts won and retained in offshore wind by supported businesses

December 1, 2025
**Offshore Wind Growth Partnership awards £2.4 million to scale up UK supply chain**

October 27, 2025
**OWGP launches new funding call to deliver Industrial Growth Plan offering up to £25 million per project to boost offshore wind manufacturing**

https://owgp.org.uk/

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# Great British ENERGY

Mission: to accelerate deployment of clean, home-grown energy across to create jobs, strengthen UK's energy independence and ensure that taxpayers, billpayers and communities benefit from secure, affordable, low-carbon energy systems.


**Launched:** 11 Dec. 2025. Closing Dec. 2026.
**Objective:**
- Increase UK manufacturing capacity
- Create & support jobs in UK
- Promote resilient and sustainable means of production

**Value & eligibility:** £300 million in capital grant funding to build UK manufacturing capability for key constrained components in offshore wind & enabling electricity networks

- Mooring and anchoring
- Blades
- Nacelles
- Towers
- Transition Pieces

# Horizon Europe

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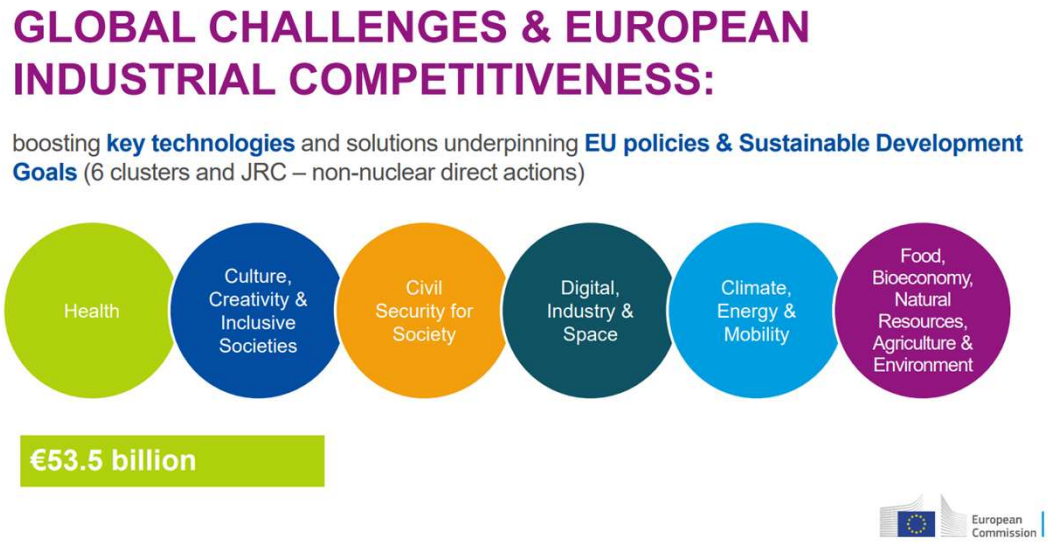
EU's flagship research and innovation programmes.

Types of funding actions:

- **Research & Innovation Actions**: early-stage, high risk, high-impact renewable energy concepts
- **Innovation Actions**: Demonstration and scale-up of renewable technologies
- **Co-ordination & support actions**: Networks, capacity building, market uptake

Who can apply:

- Universities and research organisations
- SMEs and large industry
- Public bodies, NGOs and energy agencies
- Cross border consortia from EU and associated countries




Horizon Europe 2026-2027 Work Programmes published 11 December 2025 with EUR 14 billion of funding opportunities to boost research and innovation.

http://ec.europa.eu/horizon-europe

UK National Contact Point: ncp-crosscutting@iuk.ukri.org

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# Innovate UK: The UK's national innovation agency

Mission: drive productivity, growth and competitiveness through business led innovation

Across all sectors – from manufacturing and AI to health energy, and creative industries.

Funding calls aligned to industrial strategy.

Funds:

- Researchers & research organisations
- Businesses
- Universities, NHS bodies, charities, NGOs and other institutions

**Advanced Manufacturing Supply Chain Innovation**
**When:** Opens 2 Feb , closes 11 Mar 2026.
**Objective:** Feasibility studies to explore making supply chains more resource efficient and resilient aligned to 2 of 6 high growth areas: advanced manufacturing, clean energy industries, creative industries, defence, digital & technologies, life sciences.
**Value:** Up to £5million total pot, projects £50-100k, up to 9 months in duration from July 2026.

https://www.ukri.org/councils/innovate-uk/funding-assessment-and-award-management/

# Ways of working with NCC

## NCC Capability Development

100% Catapult Funded

- ✓ Aligned to NCC strategy
- ✓ Aligned to IGP strategy
- ✓ IP shared with appropriate parties
- ✓ NCC Lead
- ✓ Customer opportunity to provide industry use case

## Pre-Competitive Joint Industry Programmes

Joint Funded

- ✓ NCC Lead
- ✓ Industry Contribution
- ✓ Pre-competitive topics
- ✓ Multiple partners – including supply chain/OEM/industry partners
- ✓ IP shared

## Grant Funded Programmess

Grant Derived

- ✓ Collaborative Programme
- ✓ IP shared
- ✓ Competitively won
- ✓ Funding split derived by grant funding request e.g industry matched funding, limit on RTO funding percentage.

## Commercial Programmes

100% Customer Funded

- ✓ Aligned Customer Technology Roadmaps but IP sensitive
- ✓ Customer owned IP
- ✓ Customer Lead
- ✓ NCC (and others) contracted to deliver

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# Solar Capture: prototype to market [SME Support]

- Solar Capture, a specialist in photovoltaic innovation, accessed NCC's matched funding programme to support turning a smart concept for an integrated solar roof tile into a viable product for the UK housing and infrastructure sectors.
- **Proving it works - and can be made at scale**
- Solar roof tiles need to do a lot more than generate energy. They need to install easily, perform reliably, and meet strict fire and weatherproofing standards - all while maintaining the appearance and function of traditional roofing.
- NCC worked with Solar Capture to validate the composite structure, optimise the design for repeatable manufacturing, and create confidence in the production process - moving the technology beyond early-stage prototyping.

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# SusWIND Accelerating sustainable materials & technology for wind turbine blades

SusWIND is a collaborative innovation programme, launched in 2021, focused on creating a viable circular economy for wind turbine blades.

Funded by:

EDF
sse Renewables
bp
Vestas
TotalEnergies
ScottishPower Renewables

Supported by:

The Crown Estate
scottish renewables
Crown Estate Scotland
Oighreachd a' Chrùin Alba
BVGassociates
Zero Waste Scotland
renewableUK
Net Zero Technology Centre
Technology Driving Transition

**Reclaim**

Enabling end-of-life blades to re-enter the supply chain as recycled material for other sector applications.

**Adopt**

Introducing more sustainable materials and processes to reduce the environmental footprint of blade manufacture.

**Develop**

Designing wind turbines for circularity and eliminating production waste from the onset.

**Lifecycle assessment**

Underpins every facet to ensure decisions are made with the intention of minimising environmental impact

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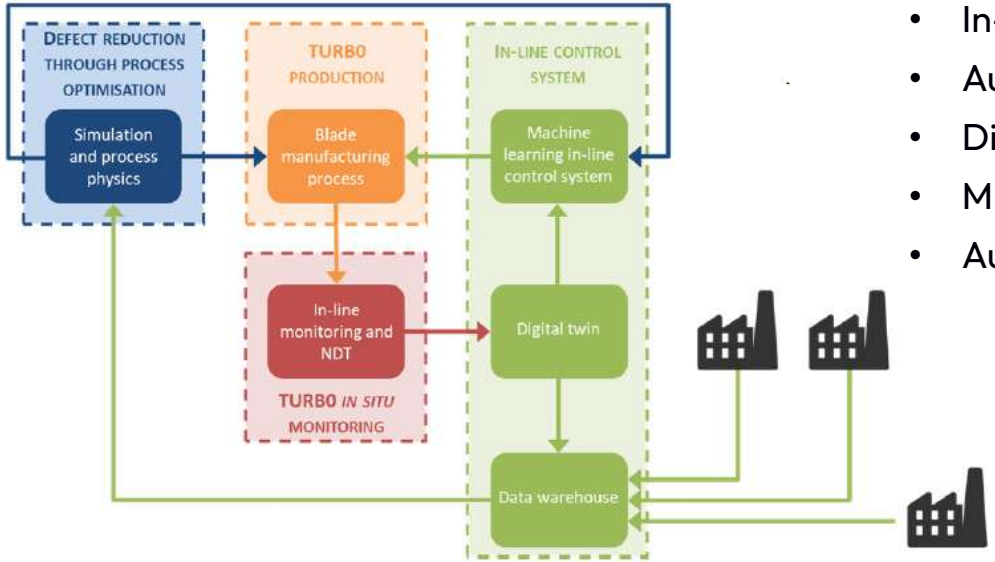
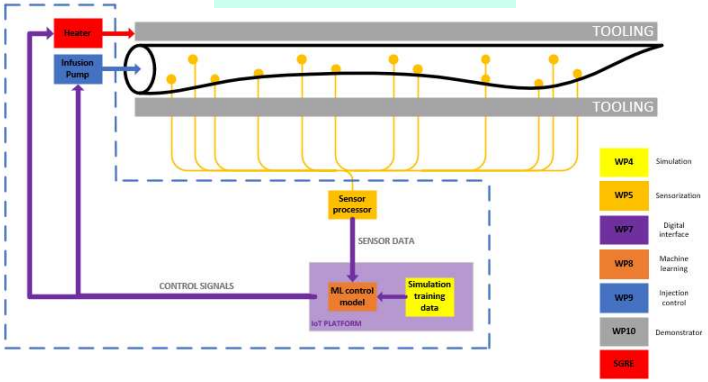
# **TURBO:** Digital engineering to achieve zero waste wind turbine blades

Improving the sustainability of wind turbine blade (WTB) production by reducing defect formation and improving repair strategies in composites and coatings




- Simulation of production process to minimise defect formation
- In-line sensorisation to monitor wind turbine blade composite infusion
- Automated NDT for sub-surface inspection
- Digital twin for WTB production and data warehouse
- ML-based in-line system control
- Automated repair strategy

Blade infusion




DTU NORBLIS get it right ARDITEC synthesites cpi SMARTIA HÜBERS VIVID COMPONENTS UNIVERSITAT POLITÈCNICA DE VALÈNCIA SIEMENS Gamesa RENEWABLE ENERGY

European Commission

# Development Themes

Ffion Rodes

# Aligning LSIC Capabilities with Industry Challenges

Current priority development topics:

- Rate Enabling & Safety Enhancing Processes
- Right First Time Production
- Through Life
- Sustainability & Zero Waste Enablers
- Towers & Foundations
- Pultrusion & New Material Innovations

# Summary & Closing Remarks

# Summary - Large Structures Innovation Centre

A keystone of the wind innovation ecosystem, the LSIC accelerates both short-term (<1 year) product improvements and long-term (>5 years) next-generation technologies to boost productivity, quality and safety across manufacturing and through-life performance.

The Large Structures Innovation Centre will:

- Provide a full-scale, offline production environment where companies can design, develop and de-risk next-generation high-performance large components, and optimise through-life and end-of-life management — all within an open-access space that can be configured to protect proprietary information.
- Strengthen and grow the UK wind-energy supply chain, creating the conditions to attract green-shored companies and anchor long-term industrial capability in line with the UK's 2024 Offshore Wind Industrial Growth Plan.
- Support innovation across multiple sectors, recognising that advanced materials development, automated manufacturing, through-life and end-of-life management of large structures, and full-scale recycling capabilities have wide industrial application.

# Questions?

Email: largestructures@nccuk.com

Website: nccuk.com/largestructures/

Look out for us at JEC & Wind Europe

# Thank you!