The High Value Manufacturing Catapult

HVMC is the biggest of the UK’s 10 Catapult Networks

- 7 centres
- 27 technologies
- 3500 people
- £700m assets
- 1/3 government funded
- 2/3 industry funded
- c.2000 projects per year

All key industry sectors covered

UK Catapult Network

- Cell and Gene Therapy
- Compound Semiconductor Applications
- Digital
- Energy Systems
- Future Cities
- High Value Manufacturing
- Medicines Discovery
- Offshore Renewable Energy
- Satellite Applications
- Transport Systems
It is estimated that **80% of innovations fail** in this so-called Valley of Death.

The NCC, a member of the UK’s High Value Manufacturing catapult, fits in the transitional space.
The National Composites Centre in numbers

- 2011 officially opened
- £200m invested in capabilities
- £36.7m of the £200m invested in 10 new capabilities
- 10 tailor-made, world-leading technologies

- 21,500m² facility at NCC HQ
- 350 composites engineers
- 150 engineers at ACCIS

- 46+8 members + major sectors supported
- 60+ university partners
- 725 organisations engaged

- 46% of those are SMEs

- 10 locations, NCC HQ and NCC Filton
NCC: Emerging as a leader in Digital Engineering

- Digital Engineering Technology and Innovation
  - 5 Enabling Capabilities, 4 Industrial Use Cases
  - Skills Programme
  - Concurrent Engineering Approach (vs Made Smarter)
  - Made Smarter Innovation Hubs
  - First results already showing great promise

- 5G Encode
  - UK’s first industrial 5G test bed installed
  - AR/VR to support design, manufacturing and training
  - Monitoring and tracking of time sensitive assets
  - Wireless real-time in-process monitoring and analytics
Develop “better” products using Composites

- Increased Performance
- Cost effective
- Improved design
- Efficient Manufacture

Improve Sustainable Composite Materials
- Performance driven bio-derived alternatives
- Materials developed for EOL
- Reduced toxicity
- Design for sustainability
- Materials sustainability data

Remove and reduce EOL cost and environmental burden
- Develop circular options at End of use phase
- Business models & Markets EOL focused
- Legislation informed by data
- Leading best practice
SusWIND: Accelerating Sustainable Composite Materials and Technology for Wind Turbine Blades

• Not an option from 2025 on
- Second life for composites
- Application in construction

youtu.be/qnHkcDhYacE