



Materials and Manufacturing Vision 2050

21 March 2023, 14:08

Walter Auwers

The Innovate UK Materials and Manufacturing Vision 2050 sets out some thought-provoking considerations. It is aimed at stimulating interest, focus and action to make the UK a leading, world-class destination for advanced low-carbon manufacturing.

With more than 170 recent references analysed and more than 120 stakeholders consulted, this is one of the most significant and inclusive studies of its kind. This [document](#) is a long-term view highlighting that:

- UK manufacturing faces urgent challenges such as climate, resilience and productivity,
- UK manufacturing offers incredibly exciting opportunities and is a great career option,
- UK has the talent and innovation infrastructure to realise its vision of being world-class.

In fact, it is an invitation to completely reimagine the role that materials and manufacturing should have within our economy and society in a strongly net-zero focused world. The UK sees a clear potential to become a world-class destination of choice for advanced low-carbon manufacturing.

The three strategic imperatives will be:

- **net zero and resource efficient**, understanding the environmental impact of every stage in the supply chain and manufacturing process and widely adopting sustainable practices,
- **resilient and responsive**, with the agility to mitigate risks arising from the changing global economy, interruptions to supply of critical minerals and materials, national and global disruptions, and climate change,
- **technologically advanced and digital**, to improve efficiency across supply chains, enable novel business models, support whole-system design and deliver highly customised products.

The vision is guided by these three strategic imperatives. They provide the key insights for 5 core and 5 enabling areas of focus for the UK:

The core areas:

- materials for the future economy
- smart design
- resilient supply chains
- world class production
- longer in use and reuse

The enabling areas:

- clean energy,
- proactive regulations and policy,
- future skills,
- networked relations,
- evolving value models.

Innovate UK is the UK's national innovation agency. It is part of the UK Research and Innovation.

Sources:

[Materials and Manufacturing Vision 2050](#)

Authors



Walter Auwers