

NWSMART5.0

Strengthening North West UK Manufacturing
Through Industry 5.0 Innovation

WELCOME TO THE WORKSHOP



We will begin shortly



University of
Salford
MANCHESTER



Greater Manchester
Chamber of Commerce



Engineering and
Physical Sciences
Research Council

CyberFocus



CENTRE FOR
**SUSTAINABLE
INNOVATION**



Digital Transformation for North West Manufacturing SMEs

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🌐 <https://www.salford.ac.uk/csi>



University of
Salford
MANCHESTER

NWSmart5.0

- A collaborative initiative supporting manufacturing organisations in the North West as they navigate secure digital transformation.
- A programme strengthening cybersecurity capability, supports responsible adoption of emerging technologies, and builds long-term resilience across the region.
- Includes interactive workshops, a digital knowledge hub and tailored support for local companies.



CyberFocus



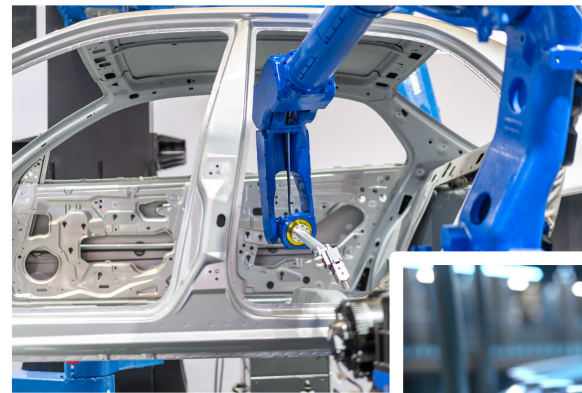
The context

Manufacturing sector in UK

Manufacturing in the UK

9%

of the total UK GDP



Manufacturing in the UK

23%

of the total UK GDP
when considering the
wide supply chain
and indirect impacts



Manufacturing in the UK

34%

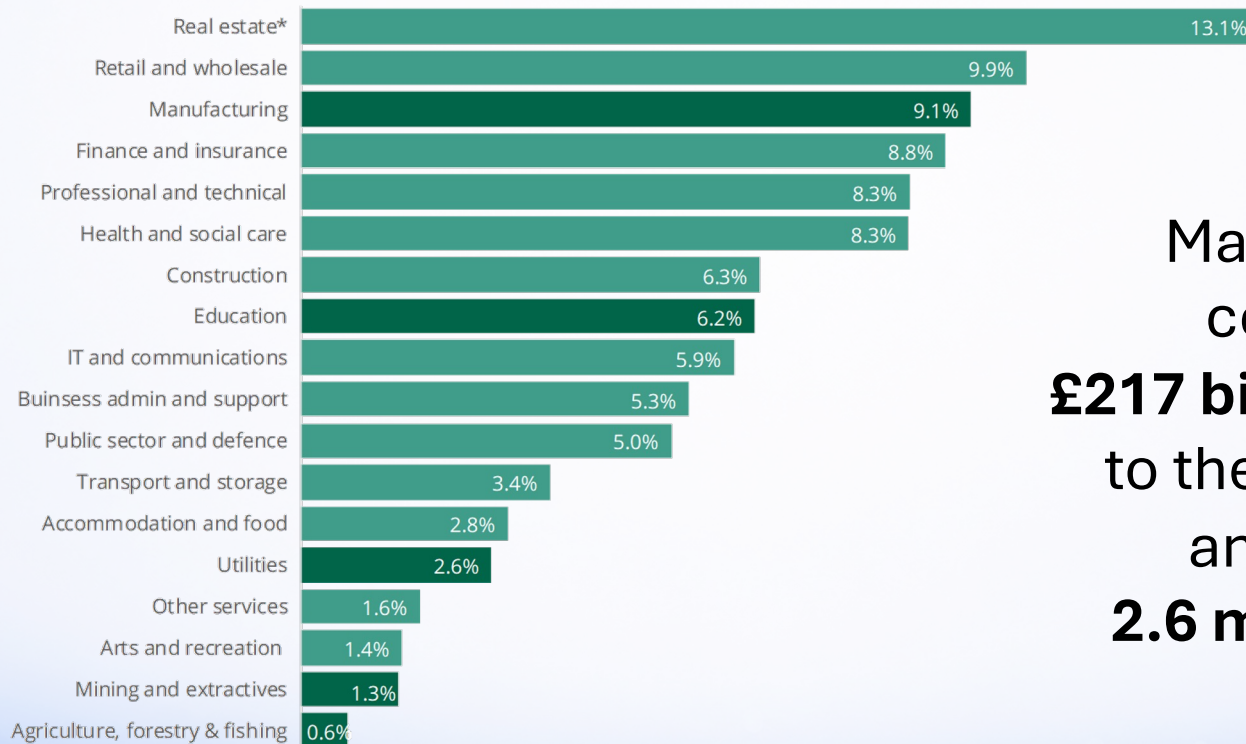
of the UK total exports



Manufacturing in the UK

Economic output by industry

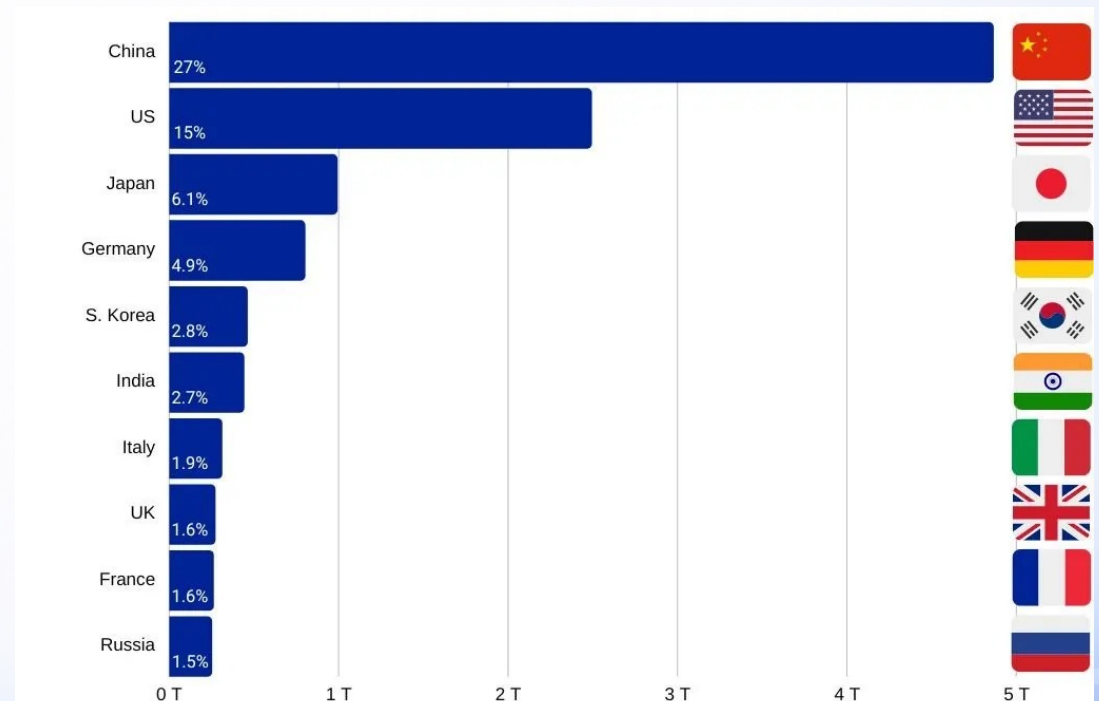
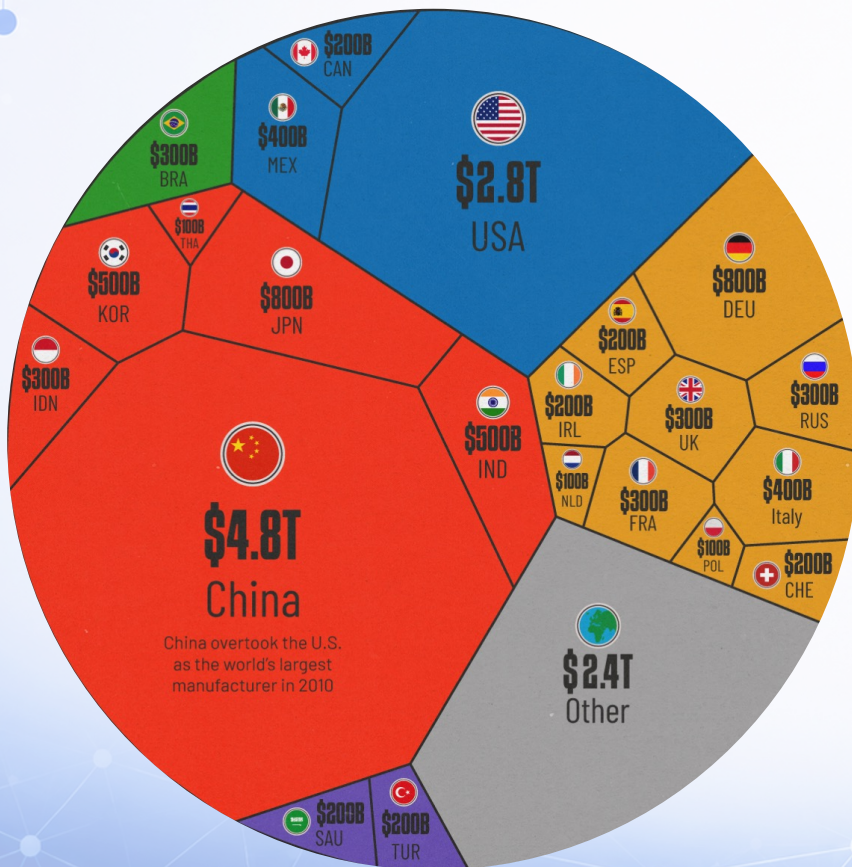
% gross value added, UK, 2023



Source: ONS, GDP output approach - low level aggregates, 30 September 2024. *Real estate includes imputed rents for owner-occupied properties.

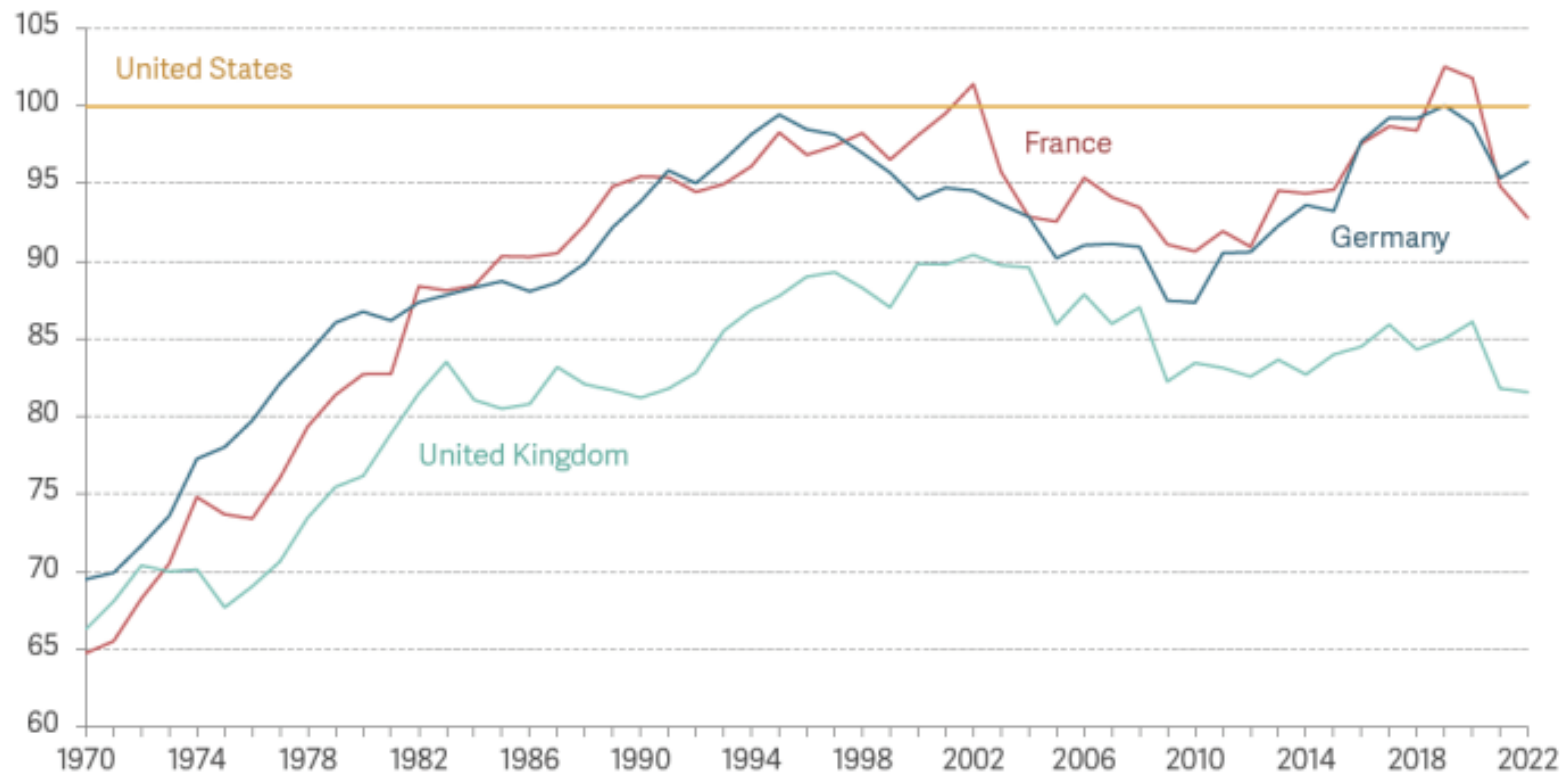
Manufacturing
contributes
£217 billions annually
to the UK economy
and employs
2.6 million people

Top Manufacturing Countries



Productivity

Ratio of GDP per hour worked compared to the US, current PPP



Productivity

Value added per person employed, US dollars, current PPPs, 2021 or latest available year



“

Increasing output per worker
to German levels would boost
UK GDP by £180bn a year.

Alex Tuckett

Senior Economist, PwC

Question:

The UK has world-class universities, strong innovation capabilities, and advanced manufacturing firms. So why do you think UK productivity continues to lag behind many competitor nations? What is the real barrier?

“UK productivity lags behind international competitors primarily due to:

- *a chronic lack of **business investment**,*
- ***slow diffusion of technology** from high-performing "frontier" firms to the wider economy, and*
- *a distinct **inability to translate world-class research** into large-scale commercial manufacturing and scale-ups”*

Productivity

£18B

annual cost of
unplanned downtime in
UK manufacturing sector



Innovation

Boosting productivity and growth in UK manufacturing

Key elements of a successful strategy to boost productivity and growth in UK manufacturing



Bridging the skills gap



Driving automation and robotics



Financial incentives and access to finance

Question:

"Imagine you had £1 million to improve productivity in your manufacturing company. Would you invest it in

- *new technology,*
- *workforce skills,*
- *process improvement,*
- *leadership development, or*
- *data capabilities?"*



Nov 2025

Digitalisation is placed at the centre of manufacturing competitiveness, productivity, resilience and sustainability.



1. **Digital transformation is a key route to improving productivity, reducing costs and accelerating innovation.**
2. **Industrial Digital Technologies** (IDTs – AI, ML, IoT, DT, Robotics, Cyber...) are strategic priorities
3. **Support for SMEs is a major focus.**
Providing funding, advice, training and digital adoption support.





4. Digitalisation and sustainability are linked

5. Skills development is critical.

Creating a workforce capable of operating increasingly digital and automated production environments.

6. Data is becoming a strategic industrial asset.
Making greater use of data-driven decision-making.





7. Innovation ecosystems and collaboration matter.

Universities, research organisations, technology providers, catapult centres, regional innovation clusters...

8. Cybersecurity is now a manufacturing issue.

Placing cyber security alongside AI and advanced connectivity.

9. The UK wants to become a leader in Industry 5.0.

Manufacturing agendas focused on people, technology and environmental outcomes together.



The future of UK manufacturing belongs to organisations that embrace digitalisation, invest in people and skills, and turn data into a strategic asset.

New opportunities

- Digital transformation is accelerating
- Strong government and industry investment
- Growing demand for sustainable and smart products

Knowledge hub

<https://nwsmart.secureailab.co.uk/>



The screenshot shows the NWSMART5.0 Knowledge Hub website. The header is dark blue with the text 'Knowledge Hub' on the left and a navigation menu on the right containing 'Home', 'Cybersecurity', 'Safe AI', 'Digital Transformation', and 'More'. The main content area has a light blue background on the left with the NWSMART5.0 logo (a stylized robotic arm and gear) and the text 'Empowering North West Manufacturing SMEs' followed by the tagline 'Secure • Smart • Sustainable • Human-Centred'. A blue button with the text 'Browse Knowledge Hub →' is positioned below the tagline. On the right side of the main content area is a large image of a white industrial robotic arm in a factory setting, with a computer monitor displaying data charts in the background.

Consultation Request Form



Next session

STRATEGISING CYBER RESILIENT MANUFACTURING OPERATIONS FOR NORTH WEST SMES



**23RD JUNE
2026**



08:30 AM



**UNIVERSITY OF SALFORD –
GMIoT BUILDING**

Room GMIoT 002 – Ground Floor
Frederick Road Campus
M6 6PU



Feedback Forms

thank
you

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