

OCO

Mechanical Engineering

UK Market Guide

Prepared for Saxony Trade and Invest



CHALLENGE.
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Section 1 UK Mechanical Engineering Overview

At a Glance

UK Mechanical Engineering Revenue

£42 billion

Mechanical Engineering industry revenue by 2020

Annual Growth Rate

23%

2020-2025

UK Mechanical Engineers

71,500 people

A 2.3% increase from 2021

UK Mechanical Engineering Industry Drivers

The UK mechanical engineering sector is a significant part of the country's industrial landscape contributing to various industries such as **automotive, aerospace, construction and manufacturing**. The UK mechanical engineering sector is influenced by various drivers, including **economic, technological, regulatory and societal factors**.

The UK mechanical engineering sector is interconnected with global markets through trade and supply chains.

The UK has a strong focus on research and development in mechanical engineering with Universities and research institutions conducting cutting edge research in areas such as **materials science, fluid dynamics and advanced manufacturing techniques**.

The growth of mechanical and electrical engineering UK after H1 2020 has been prolific, leading to supply issues for both materials and labour which have been furthered by Brexit, providing opportunities for international investors.

A THRIVING SECTOR THAT PRESENT MANY OPPORTUNITIES FOR INTERNATIONAL INVESTORS

Trends/Recent News



Atlantic Green completes first UK battery

30MW Buxton asset on track for energisation in first quarter 2024

12 January 2024 Energy Storage

[Image: Atlantic Green]

RELATED STORIES



Anesco battery site adds power

20 AUGUST 2018



Orsted signals UK battery charge

Atlantic Green has announced the mechanical completion of its first project, the 30MW Buxton battery energy storage system in England.

The BESS will have a 60MWh connection distribution and will assist Derbyshire in tackling the climate crisis, helping to reduce carbon emissions across the county to net zero said the developer.

Atlantic Green said the end of the construction phase means the site remains firmly on track for energisation in first quarter 2024.

The project, secured with a 30-year lease, marks a milestone for the developer as it is the first of a series of projects encompassing over 1GWh currently in its development pipeline which includes the 600MWh Cellarhead battery and 270MWh Project T.

Atlantic Green is a joint venture between Nofar Energy and Interland aimed at the development of UK battery energy storage.



Companies are using digitalization to optimize manufacturing processes, improve predictive maintenance and enhance product design and development.



Growing focus on sustainability and environmental responsibility are forcing companies to develop eco-friendly products, implement energy efficient processes and reduce fossil fuels.



Advanced manufacturing techniques are revolutionizing the way components are designed, prototyped and produced. These techniques offer opportunities for driving innovation in the sector.



There is a shift towards renewable energy influencing the design and development of mechanical systems and components. Engineers are involved in the design across many sectors e.g. EV.



Increasing urbanisation and the demand for smart infrastructure are driving innovation in areas such as transportation, healthcare and construction.



The COVID-19 pandemic highlighted vulnerabilities of global supply chains, prompting companies to reassess their sourcing strategies and supply chain resilience.



UK Mechanical Engineering Trends summary

Opportunities

Market Access

- The UK mechanical engineering industry is diverse and offers access to a wide range of sectors such as automotive, aerospace, construction, manufacturing and renewable energy. Companies can leverage their expertise and capabilities to tap into these markets and expand their customer base.

Technological Expertise

- Companies wishing to expand into the UK market who have advanced technological capabilities and expertise in areas such as automation, robotics, additive manufacturing and sustainable engineering products. These capabilities can be leveraged to develop innovative solutions and differentiate themselves in the UK market.

Innovation & Research Collaboration

- The UK has a strong ecosystem for innovation and research collaboration with world class universities, research institutions and innovation hubs. There are resources available allowing companies to collaborate on research projects, access funding opportunities and develop new technologies and products for the UK market.

Collaboration & Partnership

- Collaboration and partnership with UK based companies, institutions and regional hubs can help facilitate market entry and provide access to local networks, resources and expertise. This can also help navigate the regulatory landscape in the UK, create distribution channels and accelerate market penetration.

Opportunities

Key Low Carbon Sectors

Net Zero presents cross-cutting opportunities across the whole of the economy and the UK is among the most exciting countries in the world for green industries.

The recent Powering Up Britain plan sets out how the government will continue to deliver on net zero and energy security commitments by promoting and funding key sectors.

These sectors offer unique opportunities for you to help the UK achieve its Net Zero target:

Power

- Offshore wind
- Nuclear
- Green energy generation and networks

Fuel Supply and Hydrogen

- Hydrogen

Transport

- Advanced Automotive Technology
- Battery Technology and Energy storage

Industry

- CCUS (Carbon Capture, Utilisation & Storage)
- Chemicals

Heat and Buildings

- Heat pumps
- Heat networks
- Construction

Cross-Cutting Action

- Green Finance
- Freeports and regional offers

Section 2 Key Players

Major Players in the Market



ROLLS-ROYCE



www.rolls-roycemotorcars.com

HQ: London, UK

Intl locations: Americas, EMEA inc. UK, APAC, Africa

Rolls Royce is a global leader in aerospace, defense and power systems. The company manufactures engines, propulsion systems and power generation equipment.



www.jaguarlandrover.com

HQ: Coventry, UK

Intl locations: Americas, EMEA inc. UK, APAC

Jaguar Land Rover is a British automotive manufacturer known for its luxury vehicles under the Jaguar and Land Rover brands. The company designs, engineers and manufactures a range of cars and SUVs with a focus on innovation.

BAE SYSTEMS



www.baesystems.com/en/home

HQ: Farnborough, UK

Intl locations: Americas, EMEA inc. UK, APAC

BAE Systems is one of the largest defense contractors in the world specializing in aerospace, defense and security solutions. The company designs and manufactures many aircraft and systems

SIEMENS



<https://www.siemens.com/uk/en.html>

HQ: Munich, Germany

Intl locations: Americas, EMEA, APAC, Africa

Siemens is a multinational conglomerate with a significant presence in the UK, particularly in the fields of automation, energy and healthcare. The company provides a range of engineering solutions.

Section 3 Trade Shows

Trade Shows (order by date)

Trade Show	Location & Date	About
MACH Exhibition	Birmingham, UK 15 th - 19 th April, 2024	Organized by the Manufacturing Technologies Association (MTA), MACH is the UK's premier manufacturing technologies event, covering a wide range of engineering disciplines including machining, metalworking, automation, and additive manufacturing.
CHEMUK 2024	Birmingham, UK 15 th & 16 th May, 2024	This event brings together engineering professionals from across different sectors to explore the latest products, services, and technologies in the field of engineering.
Maintec	Birmingham, UK 5 th – 6 th June, 2024	Maintec is the UK's leading maintenance, reliability, and asset management event, catering to professionals in engineering, manufacturing, and utilities.
Subcon	Birmingham, UK 5 th - 6 th June, 2024	Subcon is the UK's premier subcontract manufacturing event, focusing on contract manufacturing, outsourcing, and supply chain management.
The Engineer Design Show	Coventry, UK 9 th – 10 th October, 2024	This event is dedicated to engineering design and innovation, bringing together design engineers, product developers, and industry experts to explore the latest technologies, materials, and techniques in engineering design.
Advanced Engineering	Birmingham, UK 30 th -31 st October 2024	The UK's largest annual gathering of engineering professionals featuring multiple co-located events covering various sectors.

Section 4 Resources

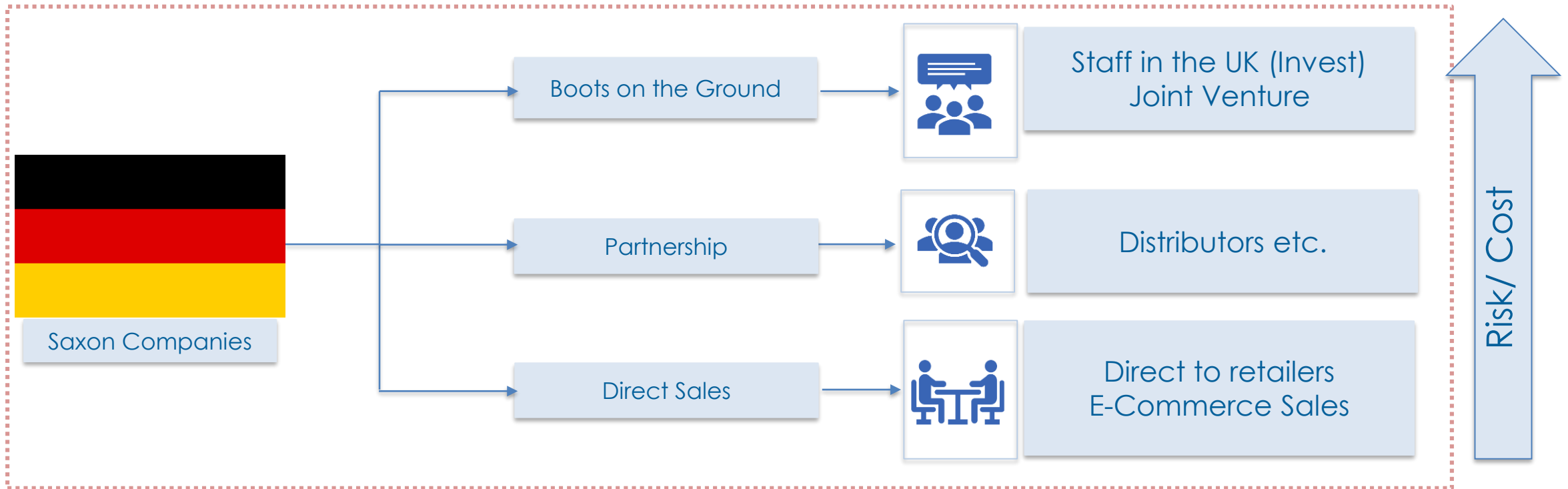
Key Associations

Trade Association	About
Institution of Engineering and Technology (IET)	The IET is one of the largest multidisciplinary engineering institutions in the world. It provides a platform for engineers and technologists to share knowledge, collaborate, and advance the engineering profession.
The Institution of Mechanical Engineers (IMechE)	IMechE is a professional engineering institution dedicated to promoting the art, science, and practice of mechanical engineering. It offers networking opportunities, professional development resources, and technical publications for mechanical engineers.
The Royal Academy of Engineering	The Royal Academy of Engineering is the UK's national academy for engineering, representing the engineering profession and promoting excellence in engineering education, research, and innovation.
The Engineering Council	The Engineering Council is the UK regulatory body for the engineering profession, responsible for setting and maintaining standards of professional competence and conduct for engineers and engineering technicians.
Composites UK	Composites UK is the trade association for the UK composites industry, covering sectors such as aerospace, automotive, construction, and marine engineering. It provides support, information, and networking opportunities for companies involved in composite materials.

Section 5 Routes to Market

Key Potential Routes to Market

Various Options Dependent on Internationalization Plan



Multiple factors impact the route to market including opportunities, barriers, but most importantly risk and cost verses reward. Each Saxon company has specific needs and thus, every route to market must be tailored within your own internationalization plan. The above is a broad guide to some of the options available.

Pros & Cons

DIRECT TO END USER

PROS

- Absolute control over sales and marketing activities
- Greater market as no commission or fees to third parties

CONS

- No in-market presence which makes it harder to respond to changing trends
- Required to build own network
- Learning curve to understand new culture
- Potential language barriers
- No awareness of upcoming projects in the pipeline
- Travel and time costs for senior staff to build brand awareness

DISTRIBUTOR

PROS

- Distributors can provide access to new markets and customers
- Cover multiple target industries
- Distributors complementary product lines offer greater opportunities for system or bundling strategies
- Partner on the ground proactively selling products
- Country cultural alignment and language support

CONS

- Product can get lost in a catalogue of options
- Cultural fit is hard to find
- Commission fees
- Less control of sales and marketing/branding activities than direct sales

BOOTS ON THE GROUND

PROS

- On the ground staff culturally aligned to the consumer making sales and marketing campaigns potentially easier
- Easier to respond to changing trends and cultural barriers
- Complete ownership of entire operation in-market (unless done by joint venture)

CONS

- Significant cost and risk element depending on extent of operation e.g. production
- Difficulty aligning culture in-market to HQ
- May require repeat visits from Senior Saxon based staff to mobilise

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