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MATERIALS  
RESEARCH &  
INNOVATION

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**UNLOCKING UK ECONOMIC  
GROWTH THROUGH  
MATERIALS INNOVATION**

Materials Map of the UK

# FOREWORD

The UK's materials innovation landscape is highly diverse and rapidly evolving. Throughout the country, businesses of all sizes are developing, manufacturing, deploying and recycling advanced materials that underpin economic resilience, assist in the transition to net zero and support innovation in advanced manufacturing across all industrial sectors. These activities will help to grow our economy in line with government aspirations.

This new Materials Map builds on the evidence underpinning the Royce-led National Materials Innovation Strategy and offers a first step towards raising awareness of the UK's innovation capability. The map provides a series of activity snapshots within regional ecosystems, highlighting key sectors and economic indicators.

The companies and organisations referenced throughout this document serve as examples which demonstrate the breadth of activity in each region. They are not intended to be an exclusive list. Given the scale of the sector, many other large companies, SMEs, start-ups and research-intensive organisations are also making significant contributions that may not appear in these snapshots.

The purpose of the map is to give a representative overview which, in turn, will help government, policymakers, industry and the research community better understand the regional distribution of materials innovation across the UK.

Royce is grateful to the many organisations whose work showcase the strength of the UK's materials ecosystem. We hope this overview supports informed discussion, collaboration and future investment through the recently established National Materials Innovation Programme.



**ALLAN COOK CBE, FREng**  
CHAIR OF THE MATERIALS  
INNOVATION LEADERSHIP GROUP



**PROFESSOR DAVID KNOWLES, FREng**  
CEO, HENRY ROYCE INSTITUTE

# INTRODUCTION

Advanced materials are the invisible engines of our modern world.

Many of our biggest technological leaps, from the smartphones in our pockets to the ships and planes that defend our seas and skies, rely on the discovery and application of new materials with advanced properties.

This Materials Map identifies the materials strength in each UK region and showcases some of the businesses that are making an impact.

If you would like more information about this Materials Map and our impact in your region, please contact us at [info@royce.ac.uk](mailto:info@royce.ac.uk).

The Henry Royce Institute is the UK's national institute for advanced materials research and innovation.

Royce was established to ensure that the UK remains at the forefront of materials research and exploitation through collaborations with industry and academia, and by providing access for the UK materials community to state-of-the-art equipment and facilities.

Research undertaken at Royce tackles some of the most pressing challenges facing society, from providing energy for future cities to decarbonisation and new recyclable materials. Our materials research facilities and expertise are available to academia and industry alike.

THE MATERIALS SECTOR IS WORTH **£49 BILLION** TO THE ECONOMY AND DIRECTLY EMPLOYS UP TO **635,000 PEOPLE**



## NATIONAL MATERIALS INNOVATION STRATEGY (NMIS)

The NMIS was developed as a unified call to action to harness the potential of advanced materials. It is the result of 18 months of collaboration involving over 2,000 experts from 271 organisations across industry, academia and government.

Recommendations to support success were set out, and are now underway including:

1. The establishment of a national Materials Innovation Leadership Group (MILG) with the mandate to drive delivery of the strategy, marked by the launch of the £80m National Materials Innovation Programme.
2. Improved connectivity across national materials research and innovation infrastructure, resulting in a more joined-up, coherent and accessible ecosystem.
3. A review of financial incentives, regulation and policy to support increased company investment in innovation and the adoption of new materials.
4. The delivery of mission-focused programmes, including investment in Materials 4.0, with funding directed towards enabling the digital transformation of materials discovery and translation.
5. Optimised international cooperation to address specific infrastructure gaps, and encouraging domestic collaboration to address skills gaps.

“The UK has a world-renowned depth of materials science expertise in academia and industry. It stands uniquely positioned to be a leader in this field. Innovation in materials drives tangible benefits for society and secures our place in the global science and technology landscape.”

**PROFESSOR DAVID KNOWLES,**  
CEO, HENRY ROYCE INSTITUTE



MATERIALS INNOVATION MAP:

# EAST MIDLANDS

**648**

MATERIALS INNOVATION BUSINESSES

**35,750**

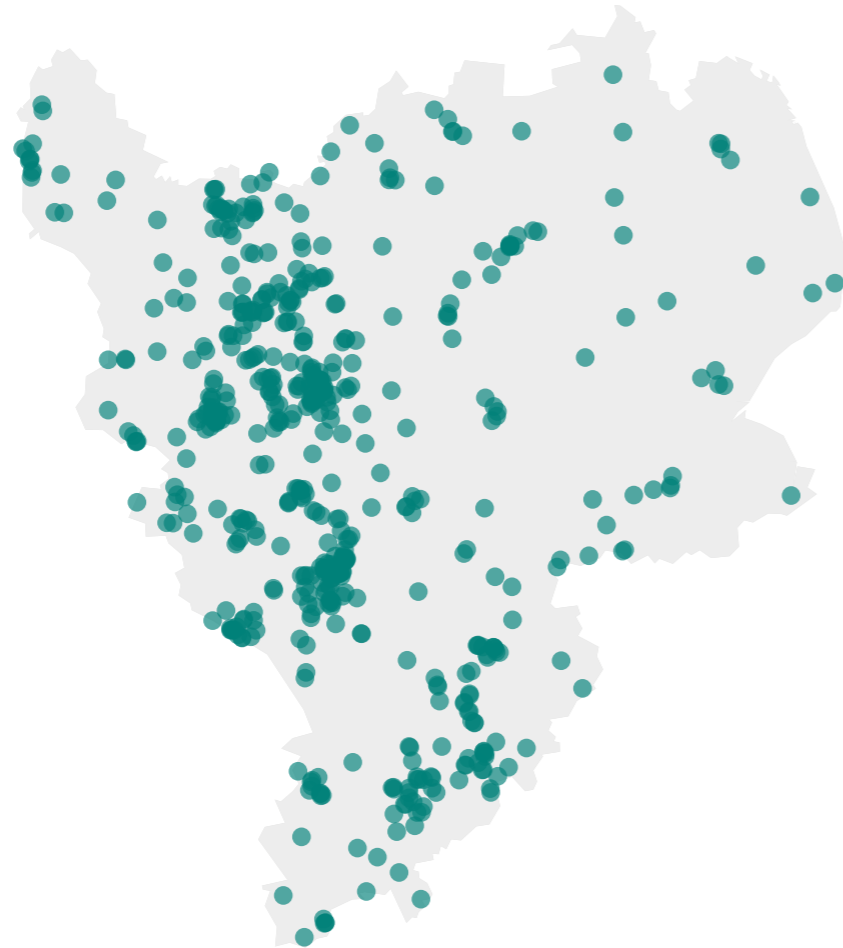
UK EMPLOYMENT

**£3.2bn**

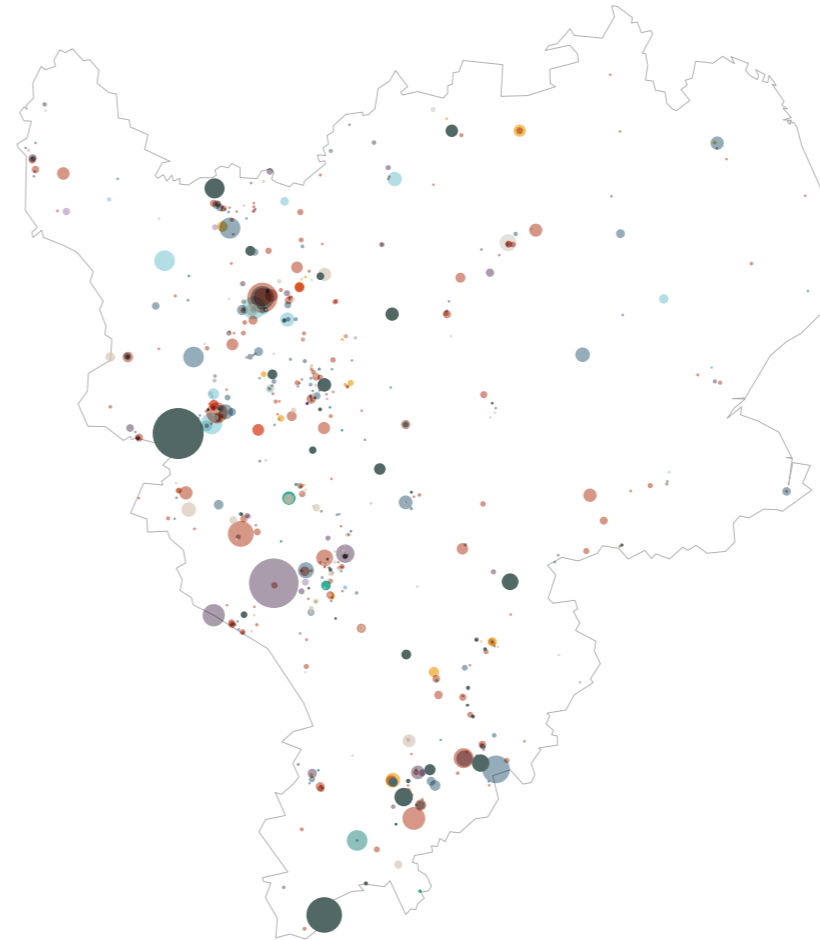
ESTIMATED GVA

**£243m**

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>10,200</b>
	UK GVA	<b>£915m</b>
<b>AUTOMOTIVE</b>	UK EMPLOYMENT	<b>7,350</b>
	UK GVA	<b>£600m</b>
<b>FOUNDATION INDUSTRIES</b>	UK EMPLOYMENT	<b>5,600</b>
	UK GVA	<b>£485m</b>

## STRATEGIC COMPANIES

<b>IBSTOCK</b>	For over 200 years, Ibstock has worked with architects, builders, merchants and the wider construction supply chain to build the “face of Britain”. Described as innovators, designers, makers and engineers, Ibstock provides a diverse range of smart, efficient, and effective building products and solutions.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>TOYOTA</b>	Toyota is the leading company for hybrid vehicle development. Its vehicle manufacturing plant at Burnaston is one of Toyota’s principal European production centres and has produced more than five million vehicles since it opened in 1992.	SECTOR: <b>AUTOMOTIVE</b>
<b>SCOTT BADER</b>	Scott Bader is an employee-owned global manufacturer of advanced composites, structural adhesives and functional polymers, established in 1921.	SECTOR: <b>FOUNDATION INDUSTRIES</b>

## SME ACTIVITY

In addition to the Engineering & Construction, Automotive and Foundation Industries sectors, the East Midlands is home to innovative businesses involved in Equipment Manufacturing, Aerospace and Packaging.

<b>INVESTMENT RAISING SMES</b>	<b>AVANTI CONVEYORS</b>	Avanti Conveyors provides British made materials handling and logistic solutions for the corrugated packaging industry.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>
	<b>ICON AEROSPACE TECHNOLOGY</b>	Icon Aerospace Technology is a world leader in highly engineered polymer-based products used in sealing, containment, propulsion and protection systems worldwide.	SECTOR: <b>AEROSPACE</b>
	<b>INTERFACE POLYMERS</b>	Interface Polymers designs and manufactures a variety of polyolefin plastics used in a range of industries, including packaging, automotive and construction.	SECTOR: <b>PACKAGING</b>

MATERIALS INNOVATION MAP:

# EAST OF ENGLAND

**662**

MATERIALS INNOVATION BUSINESSES

**59,800**

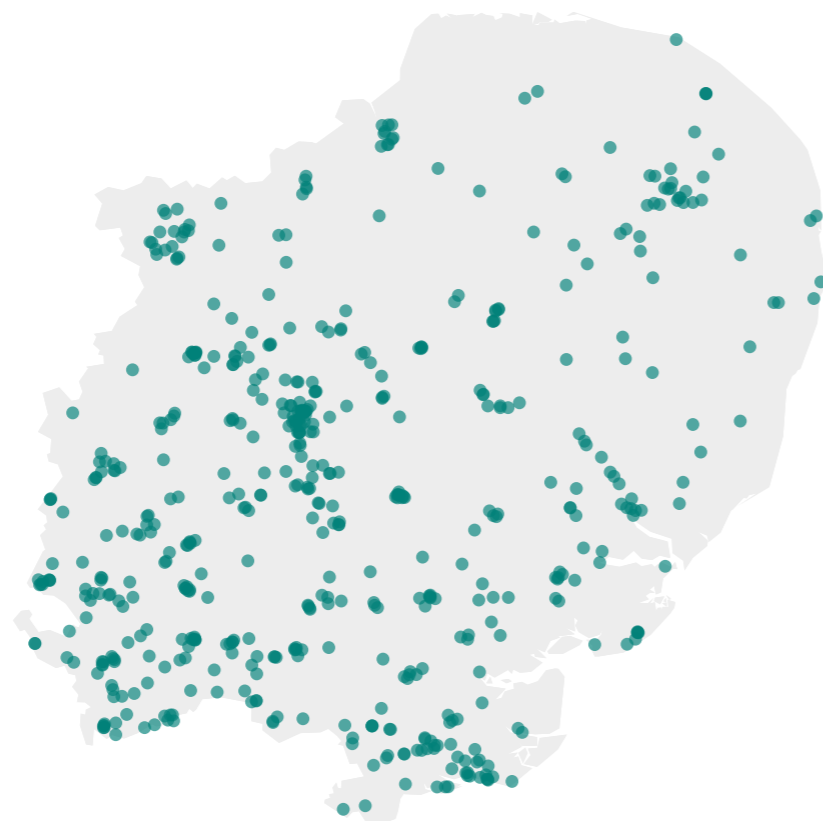
UK EMPLOYMENT

**£5.2bn**

ESTIMATED GVA

**£4.2m**

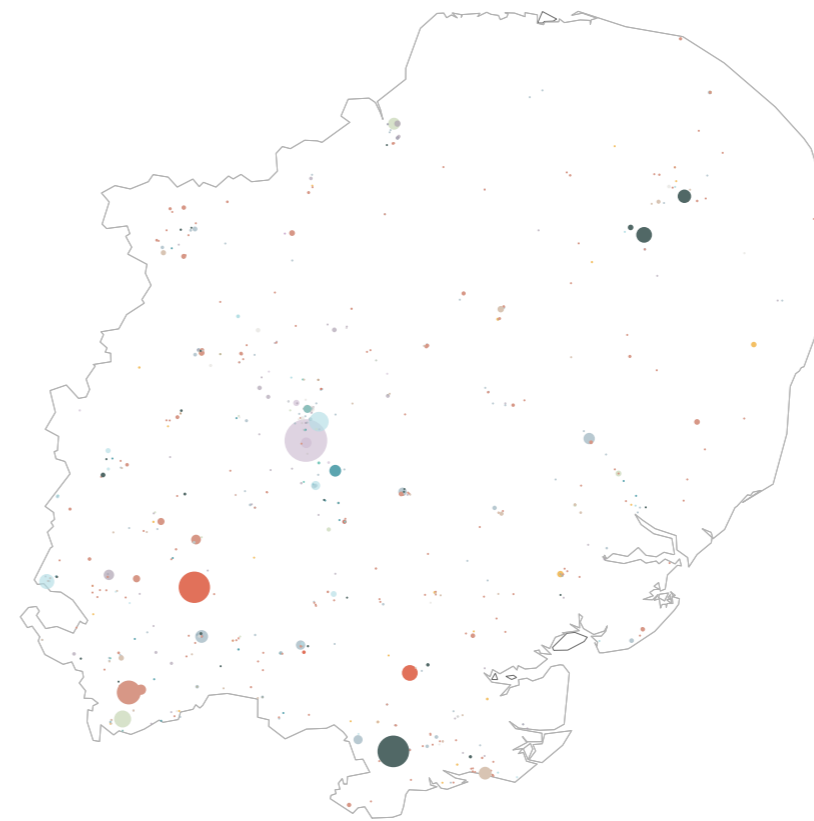
EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES

## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy
- Space



LIFE SCIENCES	UK EMPLOYMENT	<b>11,400</b>
	UK GVA	<b>£1.1bn</b>
ENGINEERING & CONSTRUCTION	UK EMPLOYMENT	<b>9,800</b>
	UK GVA	<b>£810m</b>
AUTOMOTIVE	UK EMPLOYMENT	<b>8,900</b>
	UK GVA	<b>£825m</b>

## STRATEGIC COMPANIES

<b>ASTRAZENECA</b>	AstraZeneca is a global pharmaceutical company working to accelerate the UK's position as a global centre for excellence in life sciences to support a new era of innovative medicines.	SECTOR: <b>LIFE SCIENCES</b>
<b>SKANSKA</b>	Established in the UK in 2000, Skanska has more than 3,300 local experts delivering projects across sectors including real estate, defence, education, highways, rail and water.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>FORD</b>	The Ford Dunton Technical Centre is a premier automotive research, development, and engineering campus in Laindon, Essex, serving as Ford of Britain's headquarters. As the UK's largest automotive technical centre, it focuses on electric vehicle (EV) technology, propulsion labs, and commercial vehicle engineering.	SECTOR: <b>AUTOMOTIVE</b>

## SME ACTIVITY

In addition to the Life Sciences, Engineering and Construction and Automotive sectors, the East of England is home to innovative SMEs involved in Aerospace and Defence, the Foundation Industries and Medical Technology.

INVESTMENT RAISING SMES	<b>HYBRID AIR VEHICLES</b>	Hybrid Air Vehicles develops new approaches to solving some of the toughest challenges facing the aerospace industry. Its flagship product 'Airlander' can take off and land from virtually any flat surface and offers a powerful combination of flexibility, persistence, payload capacity, and efficiency.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>
	<b>LEVIDIAN</b>	Levidian is an advanced materials company helping industries improve performance, cut costs, build resilient supply chains and lower carbon emissions. The company delivers quality-assured graphene at scale, with world-class applications expertise.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
	<b>BIOS HEALTH</b>	BIOS Health is a neural engineering company that combines neuroscience, applied materials, artificial intelligence, machine learning, software engineering, and advanced surgical techniques to solve complex biological integration challenges.	SECTOR: <b>MEDICAL TECHNOLOGY</b>

# MATERIALS INNOVATION MAP: LONDON

**319**

MATERIALS INNOVATION BUSINESSES

**31,800**

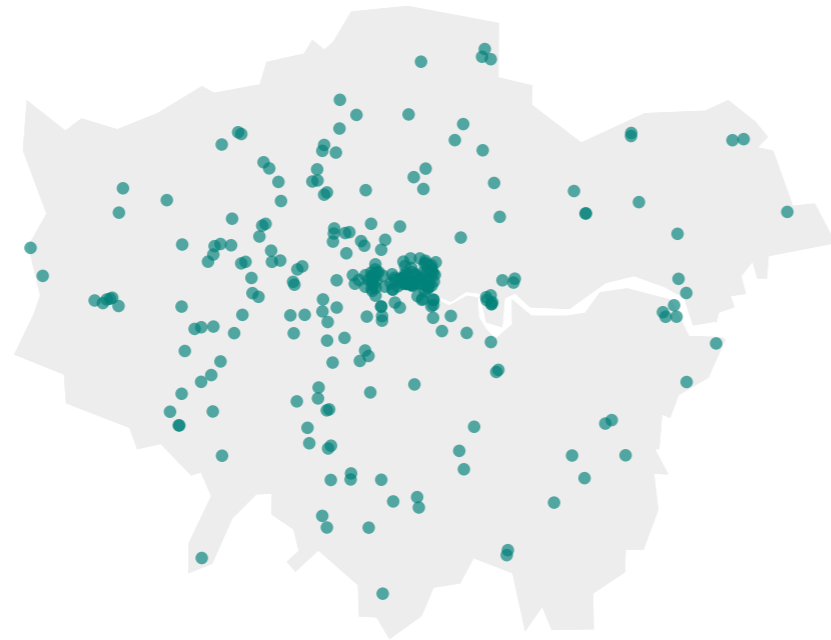
UK EMPLOYMENT

**£2.5bn**

ESTIMATED GVA

**£1.0bn**

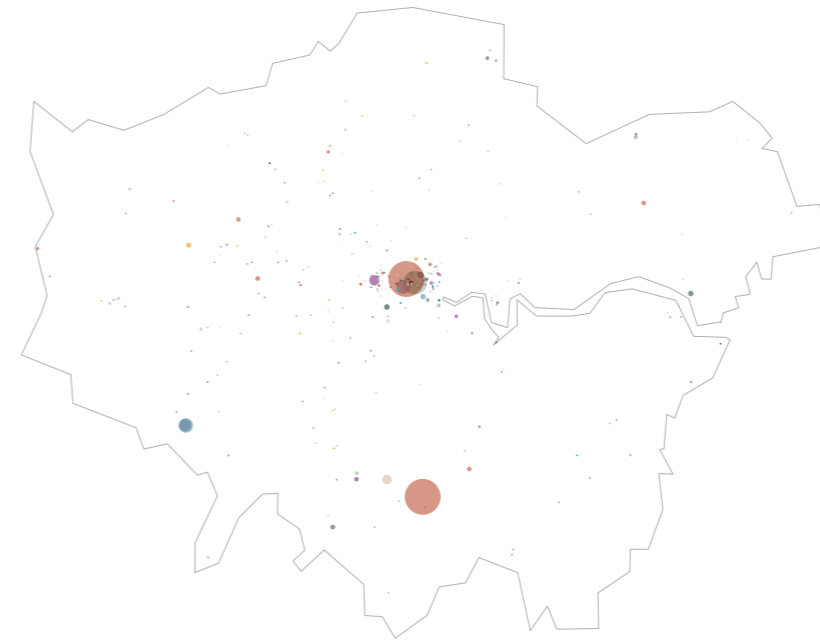
EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES

## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health, Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy



<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>18,800</b>
	UK GVA	<b>£1.4bn</b>
<b>FOUNDATION INDUSTRIES</b>	UK EMPLOYMENT	<b>4,600</b>
	UK GVA	<b>£415m</b>
<b>HEALTH, LIFE SCIENCE &amp; MEDICAL TECHNOLOGY</b>	UK EMPLOYMENT	<b>2,150</b>
	UK GVA	<b>£150m</b>

## STRATEGIC COMPANIES

<b>WSP</b>	WSP is one of the world's leading professional services firms, combining engineering, advisory and science-based expertise to make a positive impact. The firm's London offices are central to UK industrial activity.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>JOHNSON MATTHEY</b>	Johnson Matthey is a world leading developer of platinum group metals (PGMs) with broad-based applications including emission control, electronics, life-saving medicines, and much more. From a single office in London in 1817, JM has built significant operations globally.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
<b>LGC GROUP</b>	LGC Group is a global leader in life sciences, diagnostics, and analytical solutions, partnering with customers to diagnose disease, advance precision medicine, ensure food safety, and protect our growing population.	SECTOR: <b>HEALTH, LIFE SCIENCE &amp; MEDICAL TECHNOLOGY</b>

## SME ACTIVITY

In addition to the Engineering and Construction, Foundation Industries and Life Science sectors, London is home to innovative SMEs involved in materials development for Equipment Manufacture, Consumer Goods and Computing.

<b>INVESTMENT RAISING SMES</b>	<b>RHEON™</b>	RHEON™ is an energy-absorbing super polymer. Born out of NASA and developed for over 15 years at Imperial College London, RHEON™ delivers unique properties now used in products by 30+ brands across protective equipment, activewear, helmets, sports bras, PPE, and industrial applications.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>
	<b>ZOTEFOAMS</b>	Zotefoams is a global leader in the development, manufacture and distribution of supercritical foams aimed at core applications across industry sectors such as Medical, Sports & Leisure and Packaging.	SECTOR: <b>CONSUMER GOODS</b>
	<b>ISDI</b>	ISDI was formed in 2010 in London to provide design services for image sensors for X-ray imaging. The business has expanded to manufacture X-ray detectors and CMOS image sensors for X-ray and other professional markets.	SECTOR: <b>COMPUTING</b>

MATERIALS INNOVATION MAP:

# NORTH EAST

239

MATERIALS INNOVATION BUSINESSES

25,900

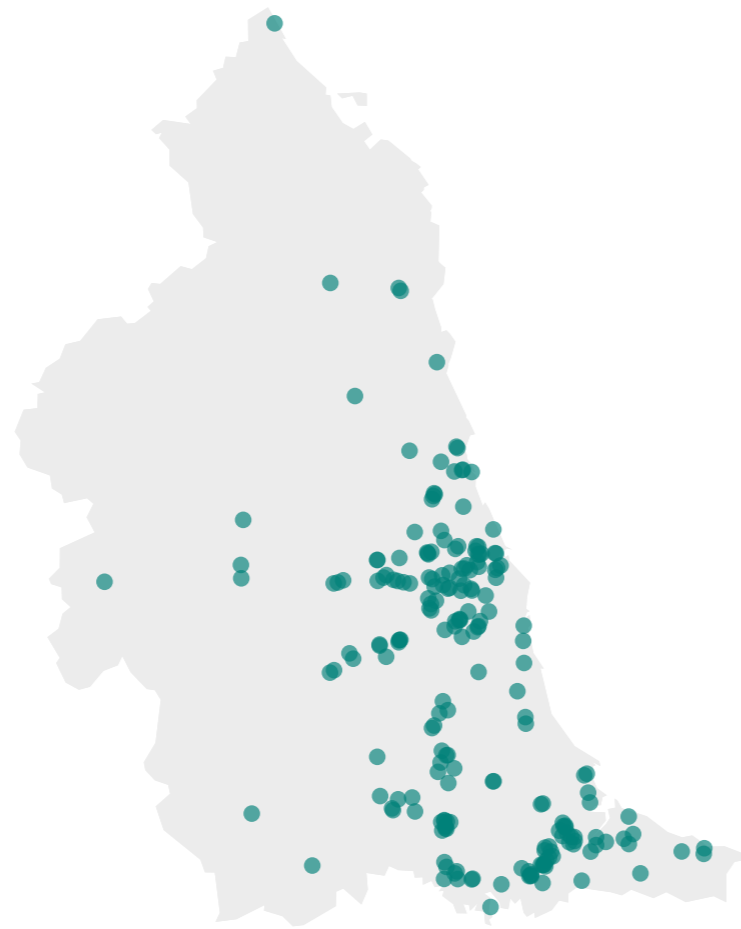
UK EMPLOYMENT

£2.0bn

ESTIMATED GVA

£393m

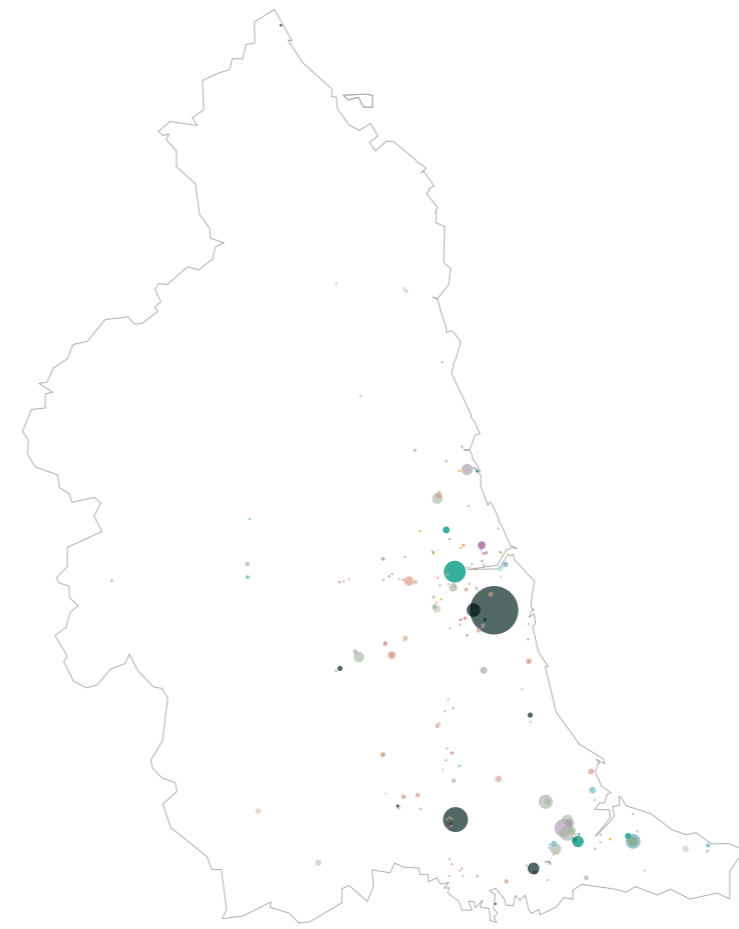
EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES

## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy



<b>AUTOMOTIVE</b>	UK EMPLOYMENT	<b>9,750</b>
	UK GVA	<b>£725m</b>
<b>FOUNDATION INDUSTRIES</b>	UK EMPLOYMENT	<b>5,900</b>
	UK GVA	<b>£340m</b>
<b>RENEWABLE ENERGY</b>	UK EMPLOYMENT	<b>2,700</b>
	UK GVA	<b>£345m</b>

## SME ACTIVITY

In addition to the Automotive, Foundation Industries and Renewable Energy sectors, the North East is home to innovative SMEs involved in Engineering and Construction, Packaging and Computing.

## STRATEGIC COMPANIES

<b>NISSAN</b>	More than 6,000 of Nissan's workforce are based at Nissan Sunderland, across over 362,000m <sup>2</sup> of world-leading manufacturing excellence.	SECTOR: <b>AUTOMOTIVE</b>
<b>MITSUBISHI CHEMICAL</b>	Mitsubishi Chemical is one of the world's largest chemical producers, supplying a wide range of sectors from automotive and electronics to medical and sport.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
<b>SIEMENS ENERGY</b>	Siemens Energy is one of the world's leading energy technology companies, covering almost the entire energy value chain – from power generation and transmission to storage.	SECTOR: <b>RENEWABLE ENERGY</b>

### INVESTMENT RAISING SMES

<b>MONITOR COATINGS</b>	Monitor Coatings is a National Aerospace and Defense Contractors Accreditation Program (NADCAP) and AS9100D accredited provider of thermal spray, slurry and paint coatings for components operating in extreme environments.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>ICON PLASTICS</b>	Icon Plastics is a precision injection moulding and manufacturing company specialising in plastic injection moulding and complex assemblies including 2K injection moulding, in mould decoration, insert moulding, electronics integration, ultrasonic welding, spin welding and heat staking.	SECTOR: <b>PACKAGING</b>
<b>PRAGMATIC SEMICONDUCTOR</b>	Pragmatic Semiconductor designs and manufactures flexible integrated circuits (FlexICs) that enable edge and item-level artificial intelligence at scale and speed for a global customer base.	SECTOR: <b>COMPUTING</b>

MATERIALS INNOVATION MAP:

# NORTH WEST

951

MATERIALS INNOVATION BUSINESSES

74,500

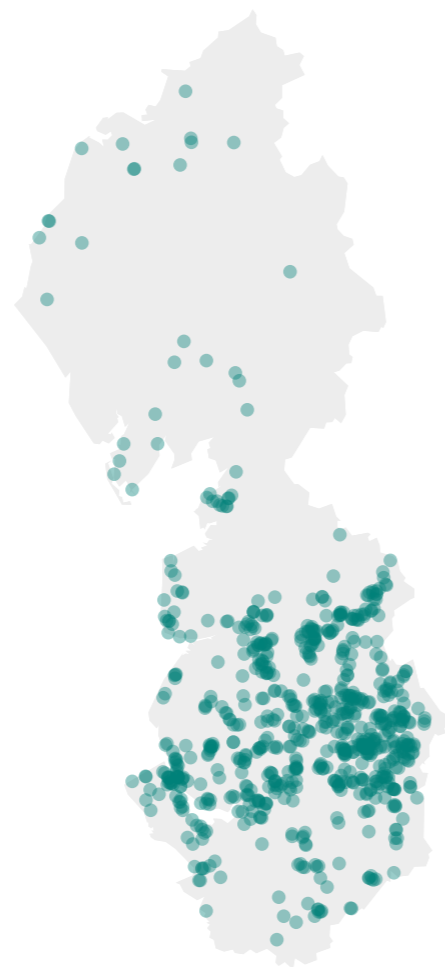
UK EMPLOYMENT

£7.2bn

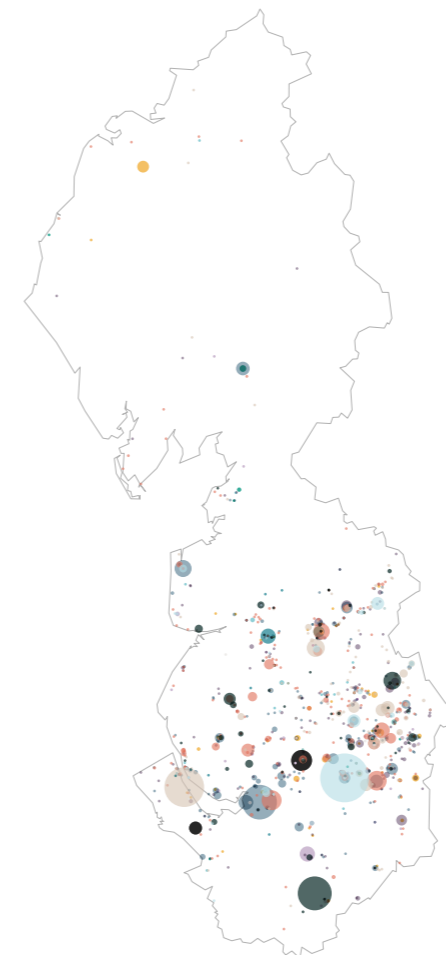
ESTIMATED GVA

£371m

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Nuclear
- Other Sector
- Packaging
- Renewable Energy
- Space

FOUNDATION INDUSTRIES	UK EMPLOYMENT	16,100
	UK GVA	£1.4bn
CONSUMER GOODS	UK EMPLOYMENT	12,900
	UK GVA	£950m
ENGINEERING & CONSTRUCTION	UK EMPLOYMENT	12,100
	UK GVA	£1.1bn

## SME ACTIVITY

In addition to the Foundation Industries and Consumer Goods sectors, the North West is home to innovative SMEs involved in Equipment Manufacturing, Aerospace & Defence and Engineering & Construction.

## STRATEGIC COMPANIES

<b>INEOS INOVYN</b>	Europe's leading producer of vinyls and in the top three worldwide. Operations at Runcorn Site are of strategic national importance to the UK and focus mainly on the production of chlorine, caustic soda and chlorinated derivatives.	SECTOR: FOUNDATION INDUSTRIES
<b>UNILEVER</b>	Port Sunlight is Unilever's largest innovation site in the UK. Alongside two factories and two R&D labs, Unilever has also opened the Advanced Manufacturing Centre (AMC) and the Materials Innovation Factory (MIF), built in collaboration with the University of Liverpool. In May 2025, a further £80m investment in a new state-of-the-art fragrance facility was announced to develop leading-edge digital capabilities.	SECTOR: CONSUMER GOODS
<b>ABB</b>	ABB is a technology leader in electrification and automation. The company's solutions connect engineering know-how and software to optimise how things are manufactured, moved, powered and operated.	SECTOR: ENGINEERING & CONSTRUCTION

INVESTMENT RAISING SMES	<b>HOLIFERM</b>	Holiform develops processes for and manufactures innovative, green and sustainable biosurfactants, with a 1.6 ktonne scale biosurfactant manufacturing plant in Liverpool and a bespoke research and development facility in Manchester.	SECTOR: FOUNDATION INDUSTRIES
	<b>CELLERATE</b>	A global leader in developing and manufacturing advanced automated systems for battery research and technology scale-up. Producing engineering solutions that optimise the quality, performance, and longevity of energy storage technologies.	SECTOR: EQUIPMENT MANUFACTURING
	<b>SIGMATEx</b>	As one of the world's leading independent converters of carbon fibre, Sigmatex supplies advanced composite materials that make a positive difference to people's lives throughout a range of sectors, including aerospace and defence.	SECTOR: AEROSPACE & DEFENCE
	<b>ALUSID</b>	Alusid converts waste and low-value materials destined for landfill into versatile surface materials including tiles, solid surfaces, table tops, wallcoverings, and interior and exterior surfaces – all developed with minimal environmental impact and with 98% recycled materials.	SECTOR: ENGINEERING & CONSTRUCTION

# MATERIALS INNOVATION MAP: SOUTH EAST

939

MATERIALS INNOVATION BUSINESSES

120,750

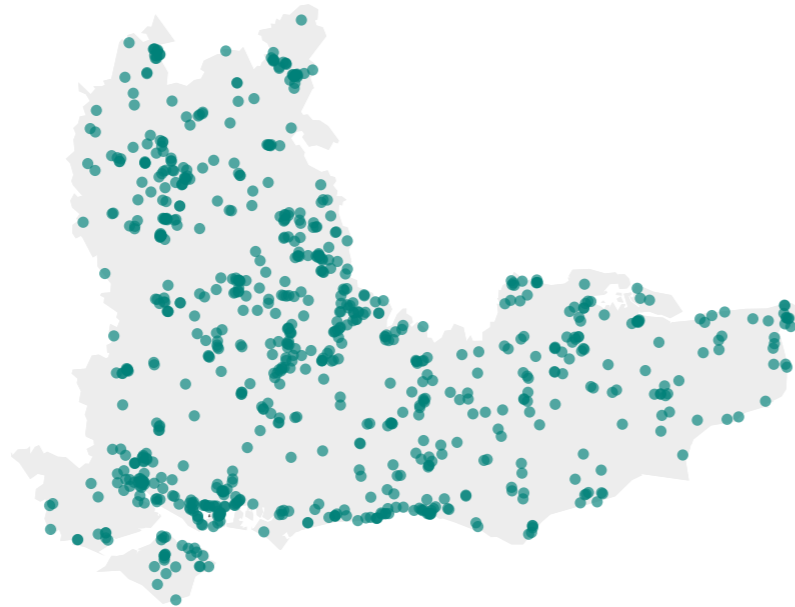
UK EMPLOYMENT

£8.7bn

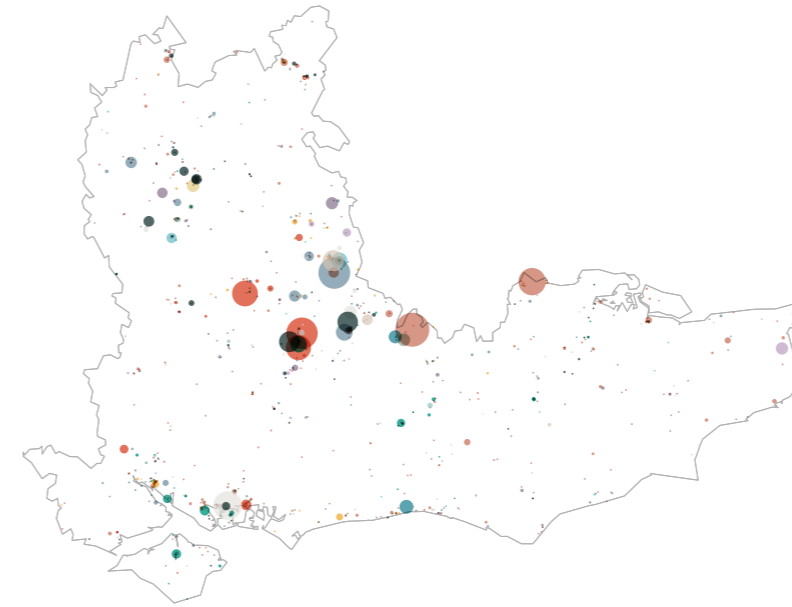
ESTIMATED GVA

£2.6bn

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Nuclear
- Other Sector
- Packaging
- Renewable Energy
- Space

ENGINEERING & CONSTRUCTION	UK EMPLOYMENT	25,720
	UK GVA	£1.9bn
AEROSPACE & DEFENCE	UK EMPLOYMENT	24,550
	UK GVA	£1.7bn
FOUNDATION INDUSTRIES	UK EMPLOYMENT	18,750
	UK GVA	£1.5bn

## STRATEGIC COMPANIES

<b>ATKINSRÉALIS</b>	AtkinsRéalis is a global engineering services and nuclear organisation.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>BAE SYSTEMS</b>	BAE Systems provides some of the world's most advanced, technology-led defence, aerospace and security solutions.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>
<b>MORGAN ADVANCED MATERIALS</b>	Morgan Advanced Materials uses advanced materials to make the world more sustainable and improve the quality of life including an extensive range of specialist carbon and ceramic products.	SECTOR: <b>FOUNDATION INDUSTRIES</b>

## SME ACTIVITY

In addition to the Engineering and Construction, Aerospace and Defence, and Foundation Industries, the South East is home to innovative SMEs involved in Automotive, Computing and Consumer Goods.

INVESTMENT RAISING SMES	<b>PROTEAN ELECTRIC</b>	Protean Electric is a world leader of in-wheel motor technology for passenger cars, light commercial vehicles and future transport solutions.	SECTOR: <b>AUTOMOTIVE</b>
	<b>WAVE OPTICS</b>	Wave Optics delivers world-leading optical engines for augmented reality smart glasses and headset to enable customers to build AR wearables.	SECTOR: <b>COMPUTING</b>
	<b>COVEC</b>	Covec is a British company focusing on technical textiles backed by innovation through research and development.	SECTOR: <b>CONSUMER GOODS</b>

# MATERIALS INNOVATION MAP: SOUTH WEST

432

MATERIALS INNOVATION BUSINESSES

42,170

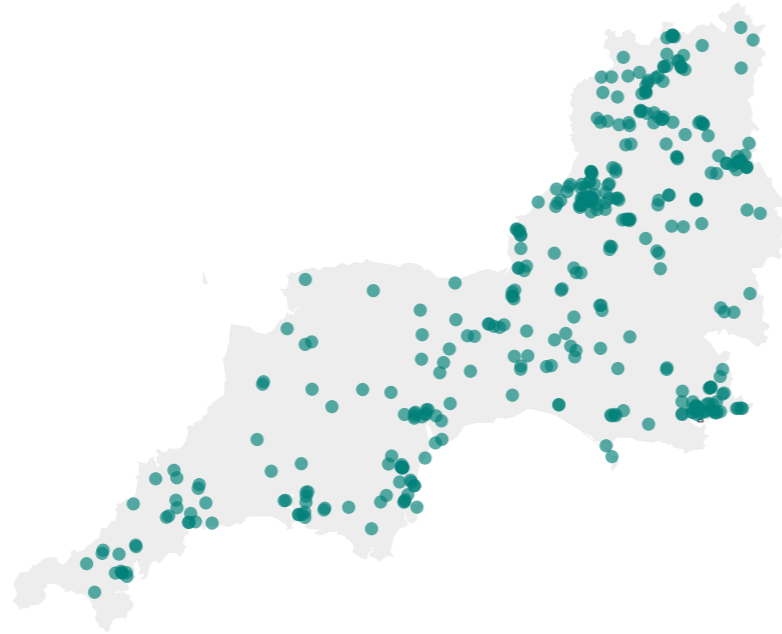
UK EMPLOYMENT

£3.1bn

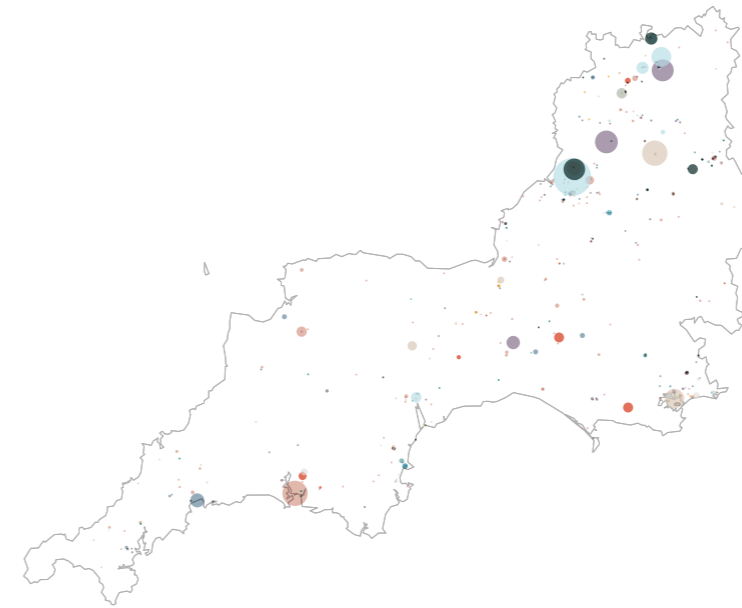
ESTIMATED GVA

£327m

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

<b>AEROSPACE &amp; DEFENCE</b>	UK EMPLOYMENT	<b>13,000</b>
	UK GVA	<b>£870m</b>
<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>8,180</b>
	UK GVA	<b>£690m</b>
<b>EQUIPMENT MANUFACTURING</b>	UK EMPLOYMENT	<b>6,500</b>
	UK GVA	<b>£480m</b>

## STRATEGIC COMPANIES

<b>AIRBUS</b>	Airbus is the UK's largest civil aerospace company and its foremost exporter in aeronautics. As a key supplier to the Royal Air Force, a leader in space satellite technology, and responsible for around half of the UK's civil helicopter fleet, Airbus plays a crucial role across the defence, space and helicopter sectors.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>
<b>PRINCESS YACHTS</b>	Princess Yachts is a leading British luxury yacht manufacturer. Today, Princess is recognised as one of the world's leading boatbuilders, with a reputation for design, engineering and manufacturing excellence.	SECTOR: <b>MARINE &amp; MARITIME</b>
<b>RENISHAW</b>	Renishaw is a global engineering technology group that creates high precision technology for metrology and healthcare.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>

## SME ACTIVITY

In addition to the Aerospace and Defence, Marine and Equipment Manufacturing sectors, the South West is home to innovative SMEs involved in Consumer Goods, Automotive and the Foundation Industries.

INVESTMENT RAISING SMES	<b>TORAPHENE</b>	Toraphene develops a compostable plastic alternative using nanotechnology. Toraphene bags are both eco-friendly, bio-based and compostable and stronger than oil-based synthetic plastics.	SECTOR: <b>CONSUMER GOODS</b>
	<b>CALYO</b>	Calyo develops sensor technology, utilising ultrasound technology to provide perception and vision capabilities. Calyo's compact, all-weather systems ensure safe, reliable imaging and vision perception in even the most challenging of environments.	SECTOR: <b>AUTOMOTIVE</b>
	<b>CORNISH LITHIUM</b>	Cornish Lithium explores and mines for lithium in rock and geothermal waters, with a focus on providing battery components for electric vehicles.	SECTOR: <b>FOUNDATION INDUSTRIES</b>

MATERIALS INNOVATION MAP:

# WEST MIDLANDS

**857**

MATERIALS INNOVATION BUSINESSES

**80,210**

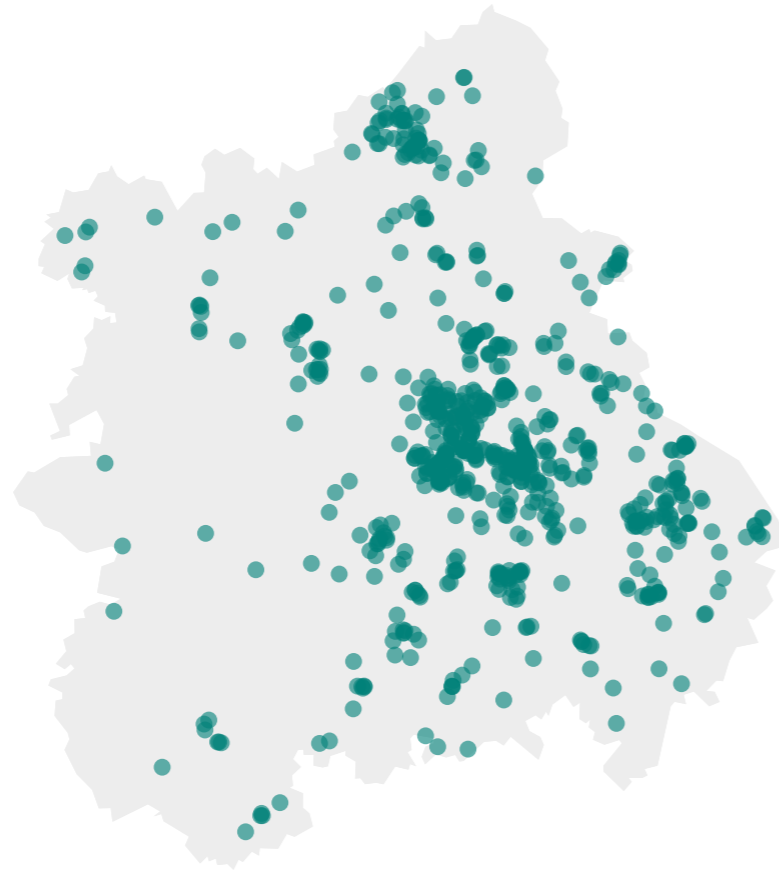
UK EMPLOYMENT

**£7.1bn**

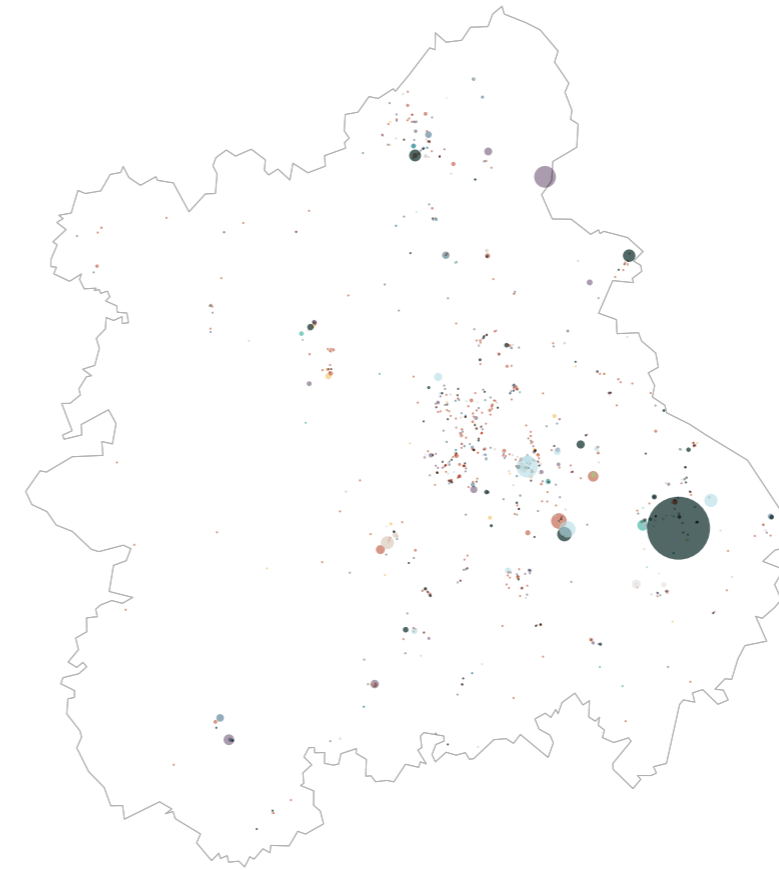
ESTIMATED GVA

**£189m**

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

<b>AUTOMOTIVE</b>	UK EMPLOYMENT	<b>37,290</b>
	UK GVA	<b>£2.9bn</b>
<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>11,750</b>
	UK GVA	<b>£1.1bn</b>
<b>AEROSPACE &amp; DEFENCE</b>	UK EMPLOYMENT	<b>9,500</b>
	UK GVA	<b>£870m</b>

## SME ACTIVITY

In addition to the Automotive, Engineering and Construction, and Aerospace and Defence sectors, the West Midlands is home to innovative SMEs involved in Equipment Manufacturing, Foundation Industries and Consumer Goods.

## STRATEGIC COMPANIES

<b>JLR</b>	JLR is the UK's largest investor in automotive research, development and engineering.	SECTOR: <b>AUTOMOTIVE</b>
<b>EPWIN GROUP</b>	Specialist Building Products (Epwin Group, part of Laumann Group as of 2025) is a leading manufacturer of energy efficient and low maintenance building products with strong sustainability credentials.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>GKN AEROSPACE</b>	GKN Aerospace is a global technology leader in the aerospace industry, with advanced aerostructures and engine systems on board 100,000 flights a day.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>

### INVESTMENT RAISING SMES

<b>EXPERT TECHNOLOGIES GROUP</b>	Expert Technologies Group (ETG) is a leading manufacturer of intelligence technology solutions. The company specialises in delivering world class automation systems, from special purpose machinery to complete construction lines across multiple sectors.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>
<b>ALKALI SOLUTIONS</b>	Alkali Solutions manufactures high strength reactive liquid lime for the drinking water and waste water treatment sectors using patented additive 'Limecure 50'.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
<b>CHROMATWIST</b>	ChromaTwist is a leader in large Stokes shift fluorescent materials for imaging applications. The company's material innovations can be applied in the biological, biotechnological and medical research sectors as well as in medical diagnostics.	SECTOR: <b>CONSUMER GOODS</b>

# MATERIALS INNOVATION MAP: YORKSHIRE & HUMBER

**806**

MATERIALS INNOVATION BUSINESSES

**49,710**

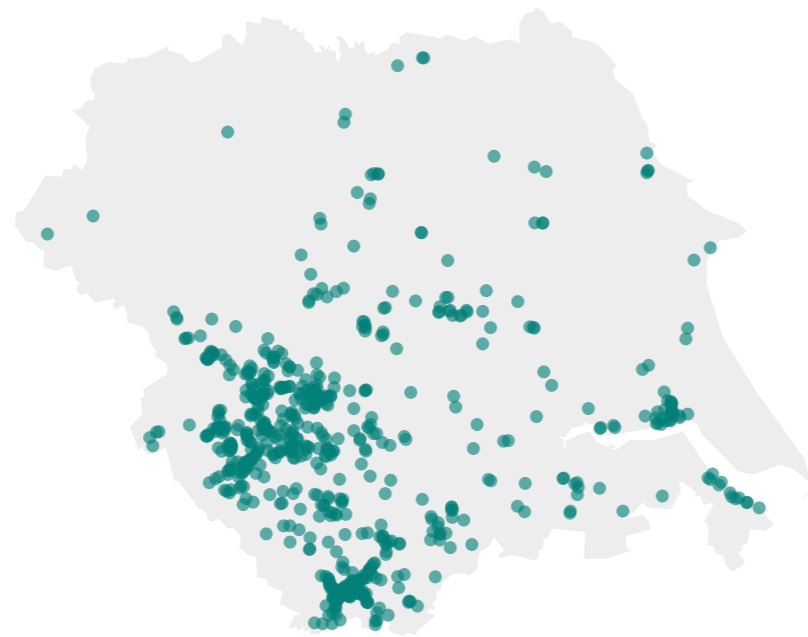
UK EMPLOYMENT

**£4.3bn**

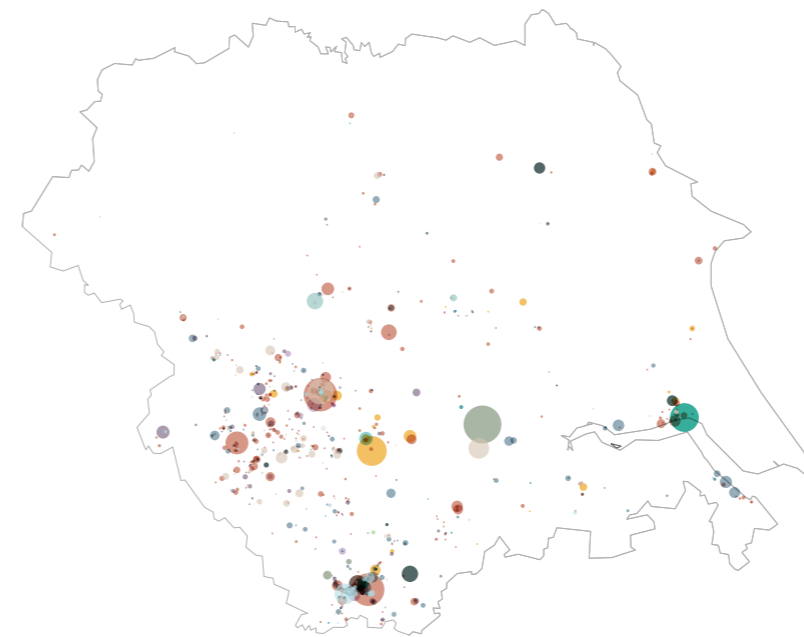
ESTIMATED GVA

**£1.3bn**

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
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- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>17,300</b>
	UK GVA	<b>£1.4bn</b>
<b>FOUNDATION INDUSTRIES</b>	UK EMPLOYMENT	<b>7,295</b>
	UK GVA	<b>£720m</b>
<b>CONSUMER GOODS</b>	UK EMPLOYMENT	<b>5,900</b>
	UK GVA	<b>£520m</b>

## STRATEGIC COMPANIES

<b>SIG</b>	SIG is a leading pan-European supplier of specialist insulation and sustainable building products and solutions, differentiated through specialist knowledge, product mix and end markets.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>SHEFFIELD FORGEMASTERS</b>	Sheffield Forgemasters specialises in the design and manufacture of high integrity forgings and castings offering a 'one-stop shop' for steel production from a single site in the UK. With capacity for castings of up to 350 tonnes and forgings of up to 200 tonnes finished weight.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
<b>JOHN COTTON GROUP</b>	For over a century John Cotton Group have pioneered Home Textile and Nonwoven fibre production from its head office in Yorkshire.	SECTOR: <b>CONSUMER GOODS</b>

## SME ACTIVITY

In addition to the Engineering & Construction, Foundation Industries and Consumer Goods sectors, Yorkshire and the Humber is home to innovative SMEs involved in Computing, Equipment Manufacturing, and Medical Technology.

<b>INVESTMENT RAISING SMES</b>	<b>OPTALYSYS</b>	Through optical computing, Optalysys accelerates Fully Homomorphic Encryption (FHE) beyond the capabilities of electrical computing, making secure data sharing and collaboration a reality for everyone, everywhere.	SECTOR: <b>COMPUTING</b>
	<b>AMT</b>	AMT PostPro is a global leader in automated post-processing for 3D printed and machined plastics. Our technology spans depowdering, vapor smoothing and end-to-end automation, compatible with all major printers and materials.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>
	<b>ARTERIUS</b>	Arterius is a medical technology company specialising in coronary stents. Its biodegradable scaffold is produced using a proprietary method that enhances stent strength and biodegrades to leave no permanent implant.	SECTOR: <b>MEDICAL TECHNOLOGY</b>

# MATERIALS INNOVATION MAP: SCOTLAND

478

MATERIALS INNOVATION BUSINESSES

49,400

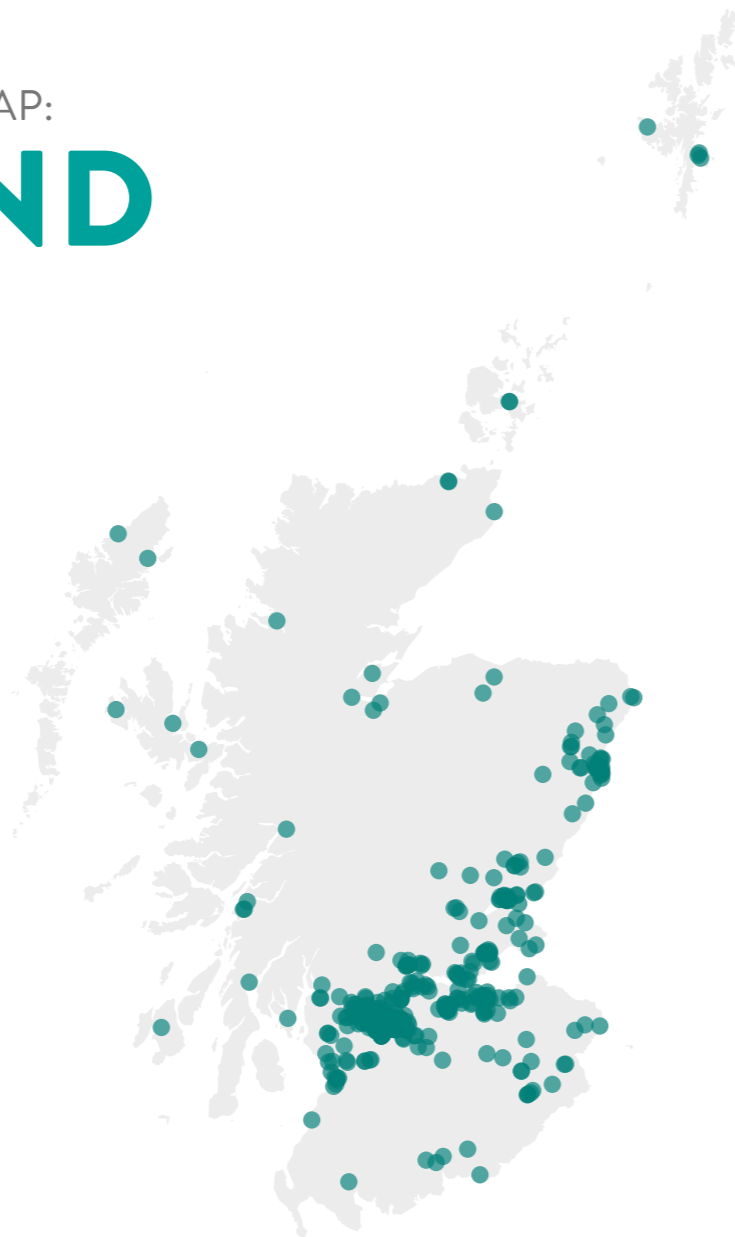
UK EMPLOYMENT

£4.0bn

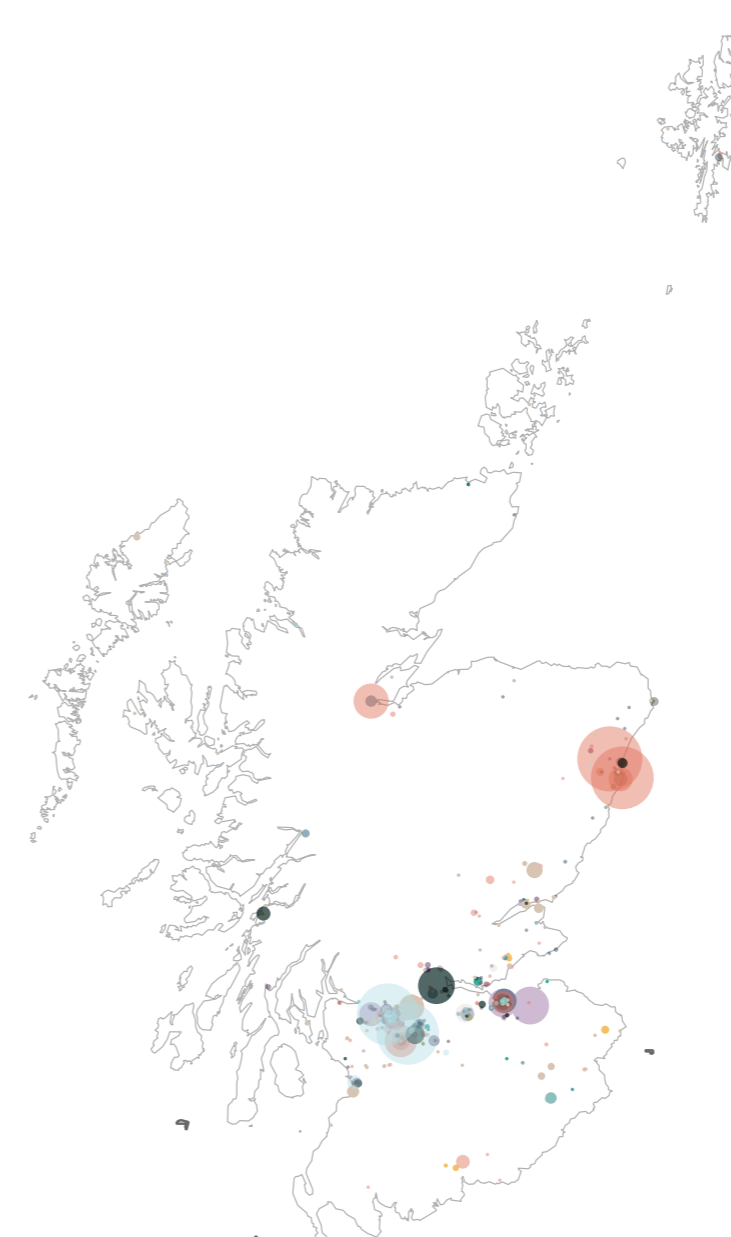
ESTIMATED GVA

£490m

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

ENGINEERING & CONSTRUCTION	UK EMPLOYMENT	18,800
	UK GVA	£1.4bn
AEROSPACE & DEFENCE	UK EMPLOYMENT	11,400
	UK GVA	£860m
LIFE SCIENCE & MEDICAL TECHNOLOGY	UK EMPLOYMENT	4,500
	UK GVA	£390m

## STRATEGIC COMPANIES

<b>WOOD</b>	Global leader in consulting and engineering, delivering critical solutions across energy and materials markets.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>BABCOCK</b>	International defence company providing support and product solutions to enhance our customers' defence capabilities and critical assets.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>
<b>CHARLES RIVER</b>	Charles River provides products and services to help expedite the discovery, early-stage development and safe manufacture of novel drugs and therapeutics.	SECTOR: <b>LIFE SCIENCE &amp; MEDICAL TECHNOLOGY</b>

## SME ACTIVITY

In addition to the Engineering & Construction and Aerospace & Defence sectors, Scotland is home to innovative SMEs involved in Equipment Manufacturing, the Foundation Industries, and Computing.

INVESTMENT RAISING SMES	<b>COHERENT SCOTLAND</b>	Coherent Scotland is a subsidiary of Coherent Corp., a global leader in the manufacture of laser products. Housed in a purpose-built facility with research and development, manufacturing and marketing all on one recently expanded site.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>
	<b>CHEMIFY</b>	Founded in 2022, building on two decades of research at the University of Glasgow, Chemify is creating a new digital foundation for chemistry.	SECTOR: <b>LIFE SCIENCE &amp; MEDICAL TECHNOLOGY</b>
	<b>CELTIC RENEWABLES</b>	Celtic Renewables' mission is to foster a more sustainable chemical industry, converting by-products and waste into high value green chemicals. With its commercial plant operational, the company plans to commence construction of its first industrial scale biorefinery in Grangemouth in 2026.	SECTOR: <b>FOUNDATION INDUSTRIES</b>

# MATERIALS INNOVATION MAP: WALES

**281**

MATERIALS INNOVATION BUSINESSES

**11,100**

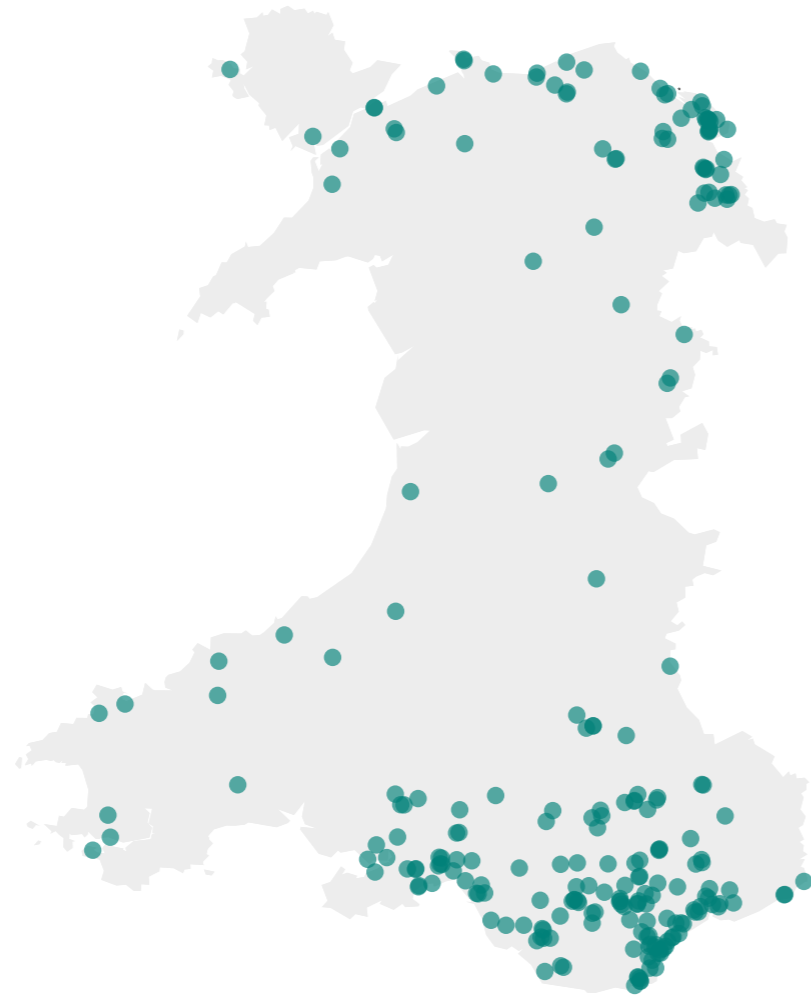
UK EMPLOYMENT

**£950m**

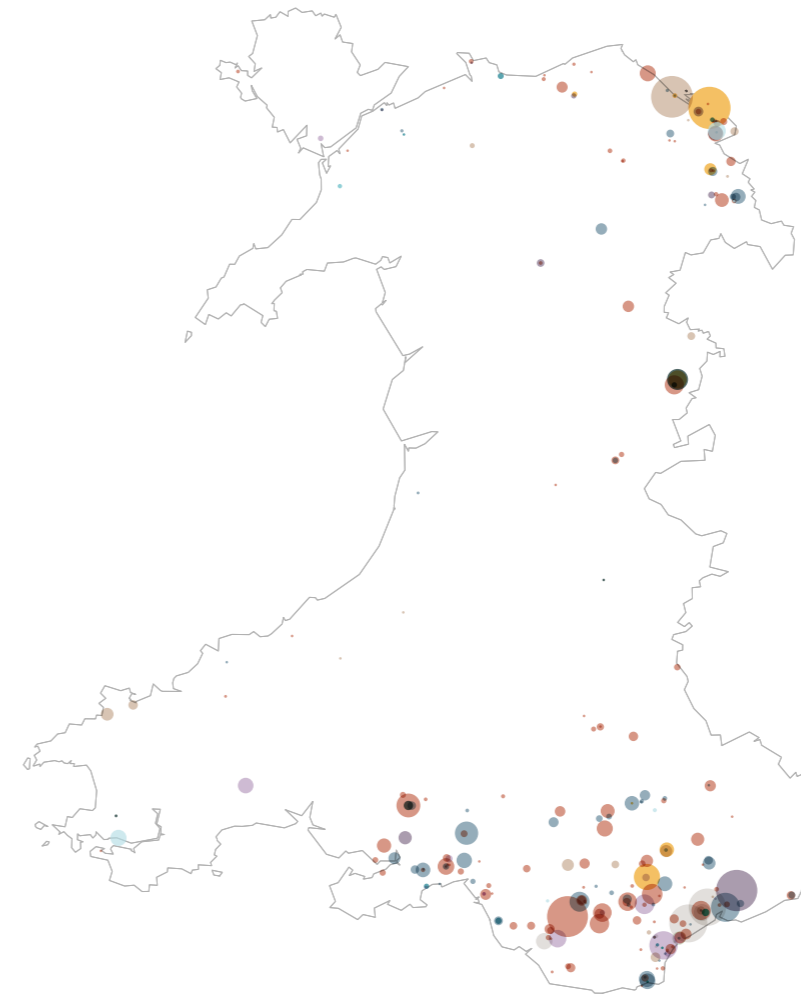
ESTIMATED GVA

**£211m**

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
- Communications
- Computing
- Consultancy Services
- Consumer Goods
- Defence
- Engineering and Construction
- Equipment Manufacturers
- Fossil Energy
- Foundation Industries
- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy
- Space

<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>3,700</b>
	UK GVA	<b>£332m</b>
<b>FOUNDATION INDUSTRIES</b>	UK EMPLOYMENT	<b>1,880</b>
	UK GVA	<b>£164m</b>
<b>COMPUTING</b>	UK EMPLOYMENT	<b>1,230</b>
	UK GVA	<b>£102m</b>

## STRATEGIC COMPANIES

<b>ROCKWOOL</b>	With one factory based in Bridgend, South Wales and over 500 employees across the UK and Ireland, Rockwool is a leading international supplier of high-performing and durable insulation products for the construction industry.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>WALL COLMONOY</b>	Wall Colmonoy manufactures surfacing and brazing alloys, additive manufactured powders and components, castings and precision machined components and provides advanced metal coatings, brazing and heat treatment.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
<b>VISHAY</b>	Vishay is a global semiconductor manufacturer. Its facility in Newport is the UK's biggest semiconductor manufacturing facility, and is currently the focus of a £250m investment that seeks to build a secure and reliable local source of advanced chips.	SECTOR: <b>COMPUTING</b>

## SME ACTIVITY

In addition to the Engineering and Construction, Foundation Industries and Computing sectors, Wales is home to innovative SMEs involved in Packaging, Aerospace & Automotive, and Health and Life Sciences.

<b>INVESTMENT RAISING SMES</b>	<b>TRANSCEND</b>	Transcend develop paper-based packaging solutions that help replace single-use plastic. From cups and cartons to straws and wraps, they design for performance, sustainability, and scale.	SECTOR: <b>PACKAGING</b>
	<b>UNITED AEROSPACE</b>	United Aerospace are designers, manufacturers and finishers of Composite Components for any industry. They are able to complete all aspects of the process from concept to completion. Tooling, moulding, CNC trimming, bonding, assembly and painting/lacquering.	SECTOR: <b>AEROSPACE</b>
	<b>BIODEXA</b>	Biodexa is a clinical stage biopharmaceutical company developing a pipeline of treatments aimed at diseases with high unmet clinical need.	SECTOR: <b>HEALTH &amp; LIFE SCIENCES</b>

MATERIALS INNOVATION MAP:

# NORTHERN IRELAND

145

MATERIALS INNOVATION BUSINESSES

6,285

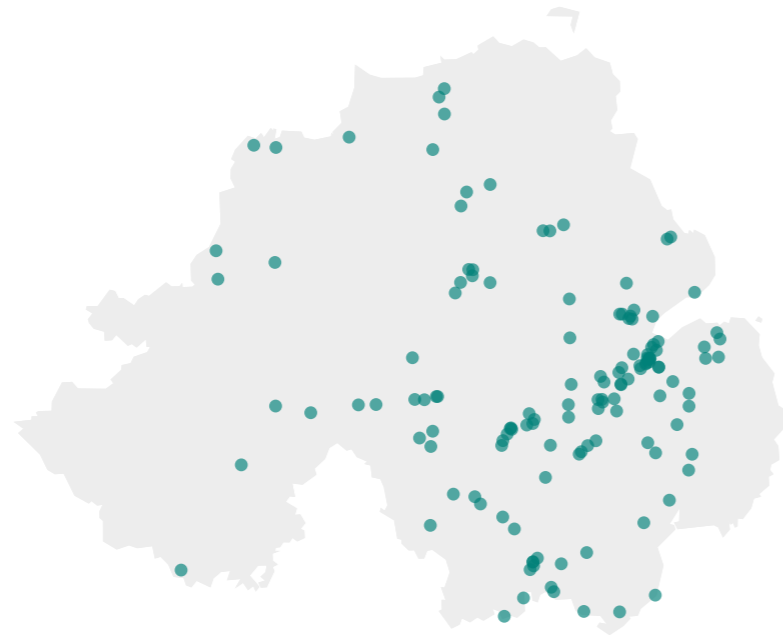
UK EMPLOYMENT

£577m

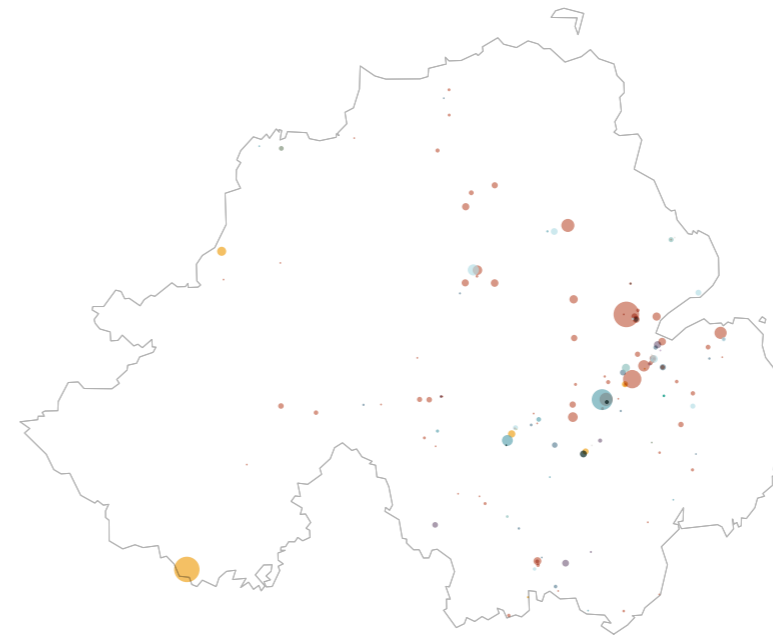
ESTIMATED GVA

£37m

EQUITY FUNDRAISING



● LOCATION OF MATERIALS INNOVATION BUSINESSES



## CLUSTERS

- Aerospace & Defence
- Automotive
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- Defence
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- Genomics
- Health
- Life Science & Medical Technology
- Manufacturing Engineering
- Other Sector
- Packaging
- Renewable Energy

<b>ENGINEERING &amp; CONSTRUCTION</b>	UK EMPLOYMENT	<b>3,475</b>
	UK GVA	<b>£320m</b>
<b>PACKAGING</b>	UK EMPLOYMENT	<b>1,015</b>
	UK GVA	<b>£92m</b>
<b>CONSUMER GOODS</b>	UK EMPLOYMENT	<b>700</b>
	UK GVA	<b>£65m</b>

## STRATEGIC COMPANIES

<b>BRETT MARTIN</b>	Brett Martin is a global and UK supplier of plastic sheets, rooflights and plumbing and drainage products.	SECTOR: <b>ENGINEERING &amp; CONSTRUCTION</b>
<b>ENCIRC</b>	Encirc, part of the Vidrala Group, is a market leader in glass container design, manufacturing, bottling and logistics solutions for the UK and Irish food and beverage industries.	SECTOR: <b>PACKAGING</b>
<b>COCA-COLA</b>	Coca-Cola HBC Northern Ireland operates a production facility in Lisburn, using 100% recycled plastic (rPET) for all plastic bottles as of 2024.	SECTOR: <b>CONSUMER GOODS</b>

## SME ACTIVITY

In addition to the Engineering and Construction, Packaging and Consumer Goods sectors, Northern Ireland is home to innovative SMEs involved in Aerospace and Defence, Foundation Industries and Equipment Manufacturing.

<b>INVESTMENT RAISING SMES</b>	<b>AXIS COMPOSITES</b>	Axis Composites designs a range of 3D woven preforms that are used in a broad base of industries, including defence.	SECTOR: <b>AEROSPACE &amp; DEFENCE</b>
	<b>NUADA</b>	Nuada develops metal organic framework (MOF) technology for its use in gas storage, separation and capture, which can be used in carbon capture and in natural gas vehicles.	SECTOR: <b>FOUNDATION INDUSTRIES</b>
	<b>AB PNEUMATICS</b>	AB Pneumatics manufactures and supplies vibration control products, including air springs, rubber bumpers, and tension bands for various industries.	SECTOR: <b>EQUIPMENT MANUFACTURING</b>

# ROYCE

## ABOUT ROYCE

**The Henry Royce Institute (Royce) is the UK's national institute for advanced materials research and innovation.**

Royce supports world-recognised excellence in UK materials research, accelerating commercial exploitation of innovations and delivering positive economic and societal impact for the UK:

- Enabling national materials research foresighting, collaboration and strategy
- Providing access to the latest facilities and capability
- Catalysing industrial collaboration and exploitation of materials research
- Fostering materials science skills development, innovation training and outreach

Royce research focuses on developing materials that work for society in a more sustainable way, prioritising safety, durability, and minimal environmental impact in order to support clean economic growth. From future cities and their energy systems to computing, manufacturing and medicine, the research enabled by Royce has the potential to significantly improve people's lives.




With its hub in Manchester and capabilities distributed across partner institutions, Royce works collaboratively to deliver real solutions and create positive economic and societal impact across the UK.

Royce is funded by the Engineering and Physical Sciences Research Council, part of UK Research & Innovation.



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