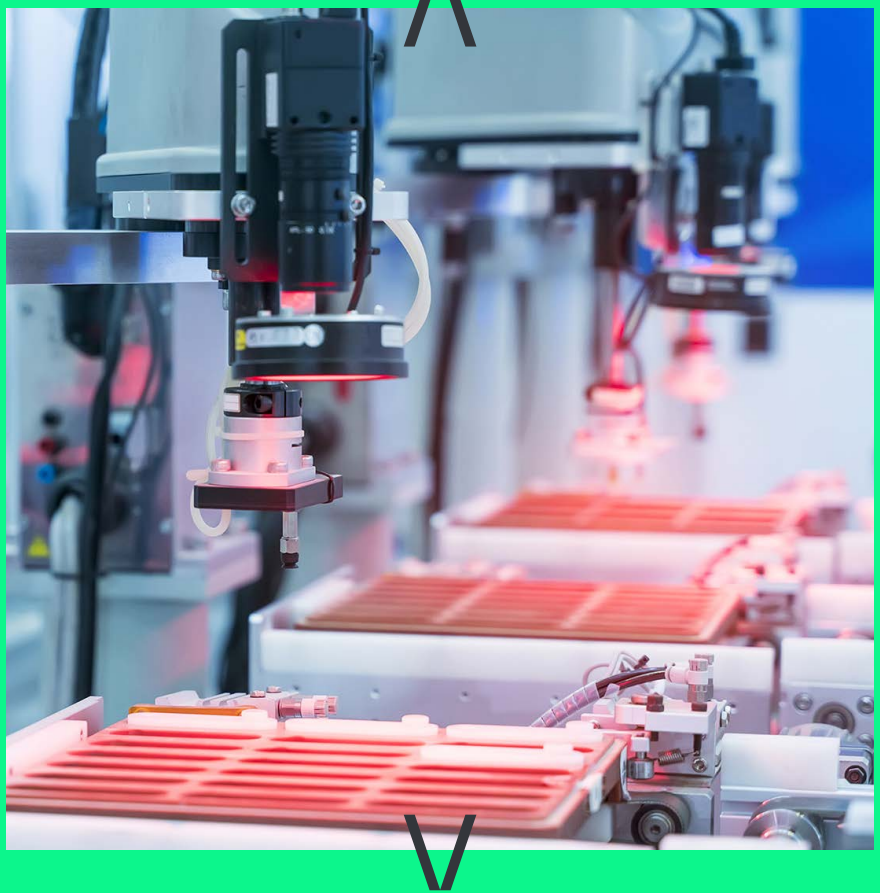
Atom Valley

Greater Manchester
Mayoral Development Zone

Greater Manchester's Advanced Manufacturing Growth Pole

together we are GREATER MANCHESTER

The world's most successful advanced manufacturing and technology clusters are characterised by a vital, synergistic relationship: between urban research hubs, where breakthrough technologies emerge, and industrial growth poles at the urban periphery, where those technologies become profitable products and processes, creating large-scale businesses, skilled employment and shared prosperity.



Focused on the urban core, Manchester is now a science and technology research hub of global standing. But only one location delivers the full range of attributes required to enable regional technology scale-up and industrialisation.

This is the place with the space, people, skills, connectivity and cost-effectiveness to build a globally competitive advanced manufacturing cluster, combined with the expert knowledge needed to transfer innovations seamlessly from the lab to full-scale production. This is the engine of Greater Manchester's equitable growth.

THIS IS ATOM VALLEY.

The opportunity – building shared prosperity

In recent years, Manchester has been a magnet for inward investment, focused on the city centre and service sectors including finance, professional services, and digital tech. But the opportunity now exists to build a more balanced and resilient city region economy, spreading prosperity and opportunity to every corner of the conurbation, including areas that saw fewer benefits from recent, service-led growth.

The key to this transformation will be something more than distributing wealth more equitably, although that will be a likely result. Instead, it will involve harnessing and integrating the unique capabilities of Greater Manchester's wealth-creating communities – its scientists, technologists and advanced manufacturing workers and entrepreneurs.

Manchester's centrally located universities and research organisations are at the forefront of innovation in areas including novel materials, advanced manufacturing and industrial digitalisation. However, the city will only reap the full economic rewards of these capabilities and technologies if they can be translated into large-scale industrial investments *within the city region itself.*

Meanwhile, at the city's periphery, just one location offers all the core ingredients required to make this happen: vast development sites to accommodate manufacturing at scale and a globally competitive industrial cluster; an established, skilled advanced manufacturing workforce; superb connectivity to UK and international markets, as well as the North of England's wider advanced manufacturing corridor; and an advantageous cost base, to win high-value investments in a mercilessly competitive global market.

On top of all this, Atom Valley offers layers of distinctive added value: skills providers focused on the specific needs of advanced manufacturers, R&D organisations specialising in technology commercialisation and scale-up, and the positive agglomeration effects that arise from large-scale industrial clustering, delivering competitive advantage for businesses.

Advanced manufacturing – the prosperity multiplier

To achieve Greater Manchester's goal of shared prosperity, benefiting all its boroughs and communities, rebalancing the economy towards advanced manufacturing will be essential.

This is because manufacturing has a significantly higher *multiplier effect* than the service sectors that have dominated recent inward investment, including financial and insurance, professional services, and information & communication.[1] In short, manufacturing is better at disseminating the wealth it creates into the wider regional economy.

Advanced manufacturing clusters build strong, regional supply chains, creating a powerful ripple effect of business-to-business spending and employment creation. The sector creates stable, skilled and well-paid jobs – with median wages 11% higher than the UK average – stimulating local economies through consumer spending. And manufacturing accounts for almost half (47%) of all UK business R&D investment, presenting the opportunity to supercharge Greater Manchester's science and technology base.[1]

But these aren't the only reasons to make advanced manufacturing a priority. Its focus on exports drives sustainable wealth creation and economic strength in depth. In a fractious international trading and geopolitical environment, it helps to build more robust and secure regional and national economies. And as manufacturing businesses seek to build shorter, more resilient supply chains, the sector presents high-value opportunities for inward investment attraction and cluster development.

The manufacturing multiplier

"For every £1m the manufacturing sector contributes to UK GDP itself, a further £1.8 million is supported across the wider economy… For each job in the manufacturing sector itself, a further 1.8 are supported in other sectors of the UK economy." [1]

The importance of scale

Global competitiveness in advanced manufacturing demands scale, both in businesses and regional industrial clusters.

Within companies, large-scale production enables bulk purchasing, automation and increased output, improving efficiency and reducing costs. And larger businesses typically have the resources needed to invest in R&D and skills, enabling the continuous improvement of advanced products and processes. Beneficial results include the viable commercialisation of new technologies and a competitive edge in international markets.[2]

Industrial clustering occurs when businesses and institutions in a specific industry concentrate in one place and interconnect with each other. Clustering facilitates collaboration, knowledge exchange and innovation. It creates a concentrated, skilled workforce and stimulates training provision. And it supports specialisation in improved products, services and operations. These effects create a positive feedback loop, boosting productivity and competitiveness, and attracting yet more inward investment, further driving cluster scale and business performance.[3]

How industrial clusters make it big

The world's most successful advanced manufacturing and technology clusters combine innovation, focused on urban centres, with large-scale production, at urban peripheries. And scale is vital, because it amplifies the benefits of clustering and enables international competitiveness.

In Boston, USA, technologies developed at Harvard and MIT are industrialised on a string of major sites along the Route 128 Technology Corridor, the city's 35 mile-long beltway. In North Carolina, innovations from the region's universities are scaled-up at the Research Triangle Park, a 7,000 acre site hosting more than 300 companies. In Europe, substantial regional clusters are typically anchored by giant global corporations: BMW and Siemens in Munich, Philips and ASML in Eindhoven, and Mercedes-Benz and Bosch in Stuttgart.

Achieving industrial clustering at scale has proven to be a challenge in the UK. In WIPO's 2025 ranking of the world's Top 100 Innovation Clusters, Oxford and Cambridge both secured top-5 positions for *innovation intensity* (i.e. relative to their populations), but only 77th and 69th positions respectively in the overall ranking.[4] In spite of science and technology excellence, both cities are seriously growth-constrained, with deficits in large enterprises and regional industrial scale-up.

The growth constraints facing these and other UK locations represent a major opportunity for Greater Manchester – a much larger city with both a world-class research base and space for industrial expansion at its periphery.

Manchester is making strong progress, joining WIPO's top-100 innovation clusters in 2025 (in 94th place). But, as the examples above illustrate, scale is a core characteristic of world-class clusters, and must be pursued by Greater Manchester without compromise.

Greater Manchester's only large-scale solution

Within Greater Manchester, only one location can deliver industrial clustering at the scale required to maximise clustering benefits and enable global competitiveness.

Atom Valley provides vast industrial employment sites – around 500 acres overall – with the potential to deliver 17 million square feet of industrial property. Importantly, the main Northern Gateway site is one of very few in the UK with the capacity to accommodate a megafactory, for massive production scale and efficiency.

Atom Valley offers the flexible property solutions required to attract a wide range of advanced manufacturing businesses and institutions: university research teams, startups and spin-outs; research and technology organisations; education and skills providers; indigenous SMEs seeking bigger, more modern premises and R&D collaborations; and international companies investing in large-scale production operations.

ATOM VALLEY – DELIVERING AT SCALE

500 Acres

OF INDUSTRIAL EMPLOYMENT SITES

17M

SQ FT OF INDUSTRIAL PROPERTY

By accommodating diverse, knowledge-based enterprises, Atom Valley offers unique potential within the city region to create a dynamic, advanced manufacturing ecosystem, driving innovation, productivity and competitive edge.

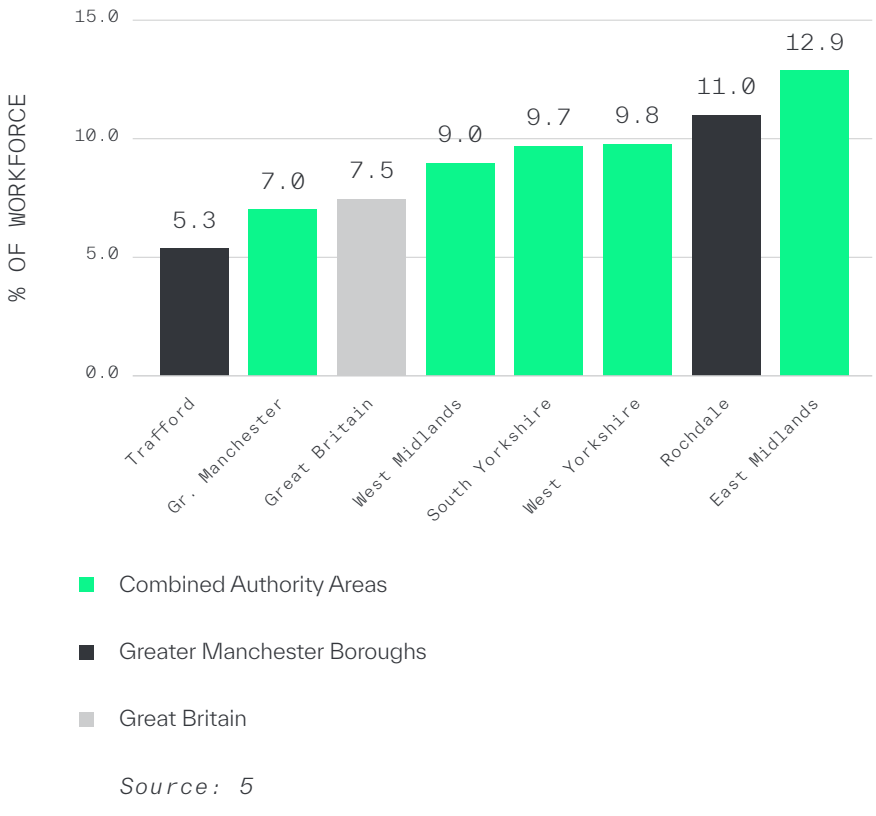
An outstanding advanced manufacturing workforce

Advanced manufacturing businesses require access to a large, technically skilled labour force, to enable recruitment, growth, innovation and high-tech operations. In Greater Manchester only Atom Valley can deliver.

As a whole, Greater Manchester is no longer a UK manufacturing powerhouse, with just 7% of its labour force employed in manufacturing (SIC C). This is lower than the Great Britain average, and lower than the percentages for combined authority areas across the North of England and the Midlands. This highlights the potential for Greater Manchester to expand advanced manufacturing employment, and to benefit from the positive 'prosperity multiplier' effects that are likely to follow.

In parts of Greater Manchester, the percentage of workers in manufacturing is smaller still, just 5.3% in Trafford, for example. But in Rochdale, at the heart of Atom Valley, 11% of the labour force is employed in the sector. This is higher than the percentages for all the manufacturing heartlands of the North of England and Midlands, apart from the East Midlands (home to major Rolls-Royce and Toyota production operations).

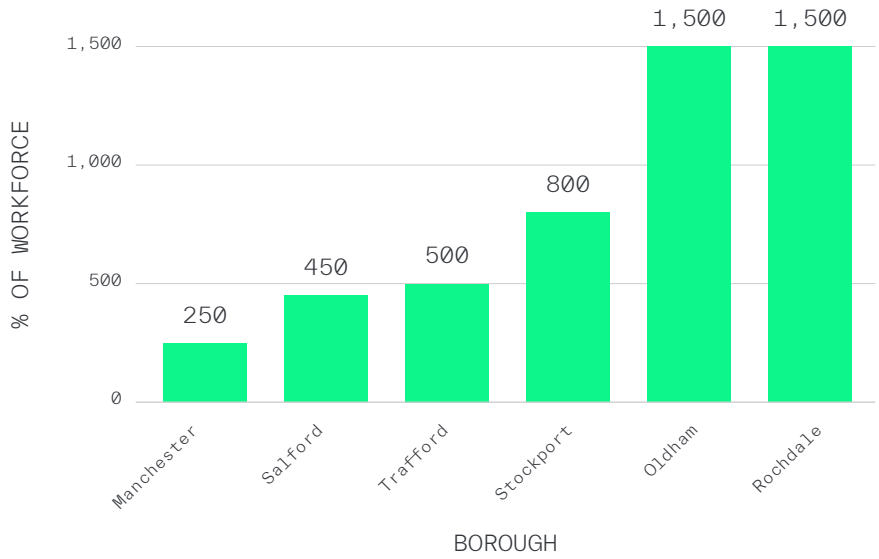
% OF WORKFORCE IN MANUFACTURING (SIC C)



Source: 5

GR. MANCHESTER BOROUGHS – NO OF WORKERS IN SIC 25
MANUFACTURE OF FABRICATED METAL PRODUCTS

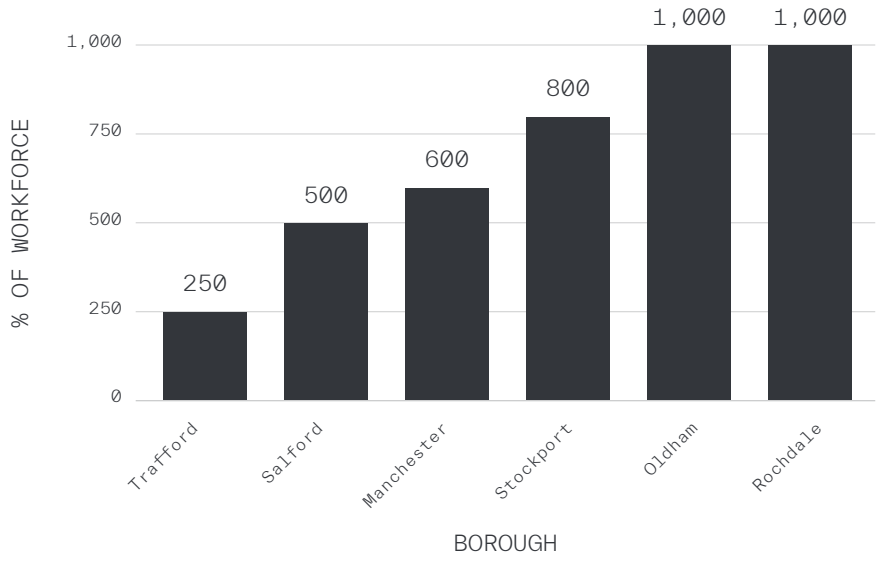
A closer look at Greater Manchester's north-eastern boroughs highlights the area's distinctive strengths. In the key advanced manufacturing sub-classification SIC 25 (manufacture of fabricated metal products), Rochdale and Oldham each have 1,500 workers, numbers that contrast sharply with those for the conurbation's southern boroughs.



Source: 5 (numbers are rounded).

GR. MANCHESTER BOROUGHS – NO OF WORKERS IN SIC 28
MANUFACTURE OF MACHINERY AND EQUIPMENT

The figures for SIC 28 (manufacture of machinery and equipment), another key advanced manufacturing classification, tell the same story.



Source: 5 (numbers are rounded).

Using borough workforce statistics, including those cited above, it is possible to calculate *location quotients,* which describe sector workforce concentrations and are used to identify areas of significant industry clustering versus the Great Britain average (represented by 1.0).[5]

These tell us that the north-east of Greater Manchester is already home to a well-developed advanced manufacturing cluster. Atom Valley represents a unique opportunity to build on this solid, established base, rather than an attempt to create a large-scale industrial cluster from scratch – a strategy which rarely results in success.

2.1X

ROCHDALE VS. GB AVERAGE

Manufacture of fabricated metal products (SIC 25) - industry clustering

For SIC 25,industry clustering is 2.1 X the GB average in Rochdale, and 2.0 X the GB average in Oldham. (In contrast, the figure for Trafford is 0.3 - less than one third of the national average).[5]

2.4X

ROCHDALE VS. GB AVERAGE

Manufacture of machinery and equipment (SIC 28) - industry clustering

For SIC 28, industry clustering is 2.4 X the GB average in Rochdale, and also 2.4 X the GB average in Oldham. (The figure for Trafford is, again, 0.3).[5]

Cost-competitiveness

In the highly competitive world of advanced manufacturing investment attraction, value-adding benefits must be combined with cost advantages, or businesses won't come.

Atom Valley is all about *value added* for advanced manufacturers. But in the real world, UK locations face tough competition from lower cost overseas alternatives. Adding value, therefore, means nothing if the cost base is too high to enable technology scale-up in the region, or to attract relatively footloose international inward investors.

Atom Valley offers a competitive cost base. To take industrial rents as an example, the cluster's out-of-town location translates into more space, fewer development constraints and lower costs. As of July 2025, indicative prime industrial rents in Rochdale were £12 per square foot compared with £18 per square foot in Trafford Park, a potential cost savings of 33% for advanced manufacturing companies.[6]

INDICATIVE PRIME INDUSTRIAL RENTS (£ PER SQUARE FOOT PER ANNUM)

TRAFFORD PARK RENTAL COSTS

ROCHDALE RENTAL COSTS

ROCHDALE VS. TRAFFORD PARK

Turning world-class R&D into thriving businesses

At Atom Valley, R&D solutions focused on technology scale-up and commercialisation add additional value to an already powerful offer.

In recent decades, Manchester has established itself firmly as a world-class centre for university research in engineering, technology and materials, including pioneering work in graphene and nanotechnology.

Today, according to QS, the University of Manchester ranks among the global elite: 35th in the world overall, 30th for engineering and technology, and 51st for materials science. In the UK, only Oxford, Cambridge and London universities (Imperial, UCL and KCL) achieve higher scores.[7] But the challenge for the UK has always been the successful scale-up of novel technologies emerging from our world-class universities, to maximise their wealth-creating potential here, instead of overseas.

UNIVERSITY OF MANCHESTER GLOBAL RANKINGS (QS, 2025)

35th	30th	51st
OVERALL WORLD RANKING	ENGINEERING & TECHNOLOGY	MATERIALS SCIENCE

Based on the range of benefits described above, Atom Valley provides an attractive location for the industrialisation of technologies developed at the University of Manchester and elsewhere. But the project goes much further than this, with on-site R&D organisations supporting firms to enable successful technology implementation.

The Centre of Expertise in Advanced Materials and Sustainability (CEAMS)

CEAMS is a collaboration between leading research and technology organisations and Rochdale Development Agency (RDA).

Functioning as a bridge between academic research, commercial exploitation and scale-up, the centre helps companies overcome challenges to develop and commercialise sustainable materials.

Ultimately, CEAMS enables companies to gain a competitive edge, grow, and create skilled employment in the city region.

FIND OUT MORE

Atom Valley Sustainable Materials and Manufacturing Centre

Atom Valley SMMC supports businesses in navigating the advanced materials, machinery, and manufacturing ecosystem.

The centre supports innovation and rapid growth by helping companies build key relationships, create and commercialise sustainable products, access new markets, and make data-driven decisions.

Working with Atom Valley SMMC, businesses can improve efficiency and sustainability, optimise production and supply chains, reduce costs and develop workforce skills.

FIND OUT MORE

Both the Centre of Expertise in Advanced Materials and Sustainability (CEAMS) and Atom Valley Sustainable Materials and Manufacturing Centre (SMMC) bridge the gap between early-stage R&D and volume production, supporting advanced manufacturing businesses through the process of technology transfer, development and commercialisation. It's a phase that's sometimes called the Valley of Death, highlighting the significant risks and challenges involved.[8]

Through co-location with companies implementing new technologies, CEAMS and Atom Valley SMMC represent distinctive USPs for Atom Valley, and significant added value for businesses investing in the cluster.

Building Atom Valley's Brand Equity

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Since the project's launch in 2021, Atom Valley has become established as a premium advanced manufacturing identity in the city region, the UK, and international markets. The opportunity now exists to further build this substantial brand equity – combining awareness, perceived quality and other positive, value-adding associations – to attract world-class businesses and deliver regional prosperity.

Consistent messaging and use of the Atom Valley brand will therefore be vital, across all aspects of the cluster's physical development and value proposition to inward investors. Examples potentially include industrial property solutions (e.g. business incubation and grow-on space), shared site facilities (e.g. buildings for meetings, networking and conferences), and skills and training centres. Branding the cluster's R&D and innovation centres as 'Atom Valley' will be crucial, because technology commercialisation and scale-up is at the very heart of Atom Valley's promise of value. In the short term, these include the provisionally titled Sustainable Materials and Manufacturing Centre.

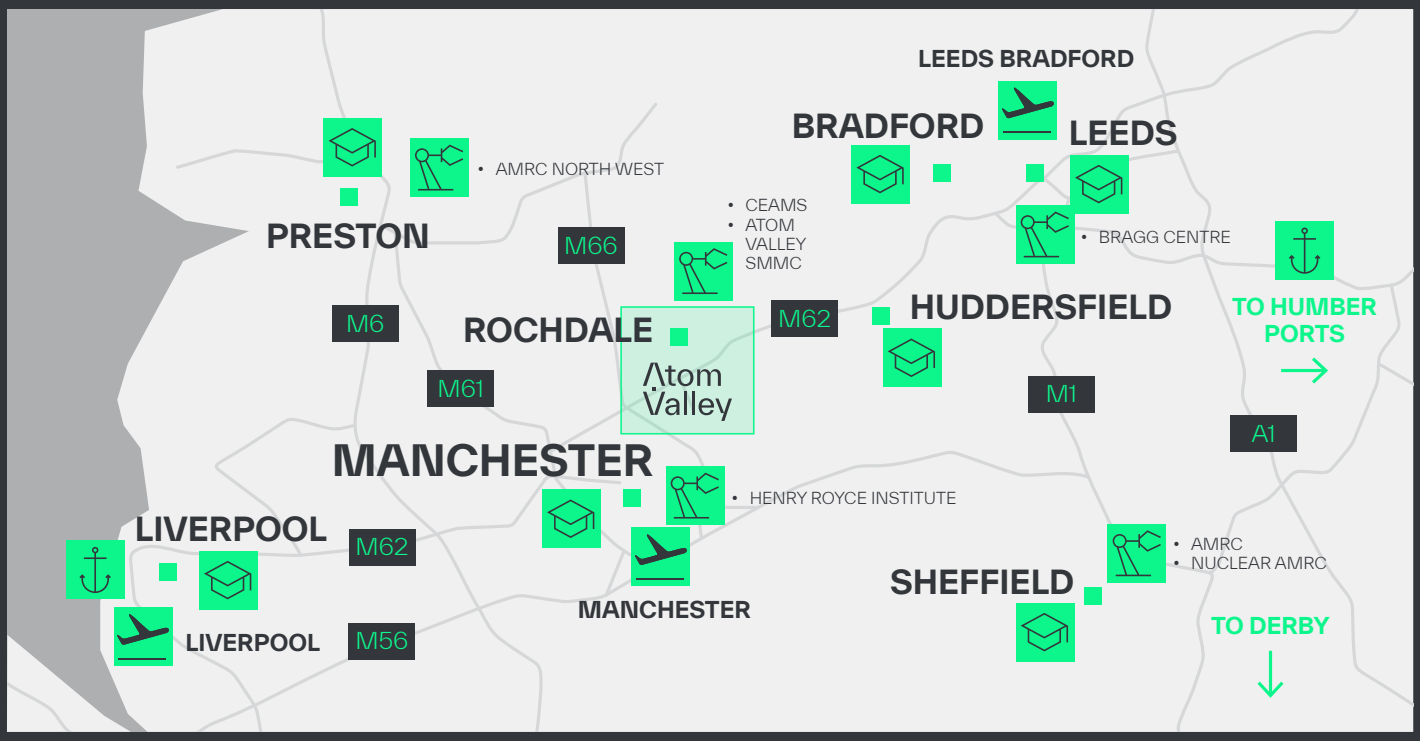
Global connectivity

In addition to an optimal location with global, multimodal connectivity, Atom Valley is positioned at the heart of the northern advanced manufacturing corridor, delivering world-class scale and capability.

Atom Valley's strategic, multimodal transport connectivity is a given. The three sites offer direct links to the M62 and M60 motorways, enabling fast access to markets across the UK, and worldwide via Manchester Airport (for both passengers and freight) and ports including Liverpool and the Humber.

But if we think in terms of truly global scale and competitiveness, Atom Valley's location is optimal for another important reason. Because it's located at the centre of a northern advanced manufacturing corridor that stretches from North Wales and Lancashire in the west (home to clusters centered on Airbus and BAE Systems manufacturing facilities), through West Yorkshire and South Yorkshire (centres of advanced machinery and materials manufacturing), and down to Derby in the East Midlands (home to clusters focused on Rolls-Royce and Toyota production plants).

All of these locations have invested in specialised R&D centres which, in combination, represent a truly world-class advanced manufacturing knowledge base. If you're looking for a definition of the Northern Powerhouse, this is it.



Key

AIRPORTS

PORTS

UNIVERSITIES

ADVANCED MANUFACTURING & MATERIALS RESEARCH CENTRES

A golden opportunity for Greater Manchester

Greater Manchester is now presented with a golden opportunity – to take its place among the leading international technology and advanced manufacturing clusters, creating shared prosperity in the process.

The city's world-class science and technology research base is firmly established. But, as even Oxford and Cambridge show, this alone is not enough to maximise industrial wealth-creation and compete with the global elite. To achieve this, Greater Manchester must translate its innovation excellence into a large-scale advanced manufacturing cluster, creating high-productivity businesses, skilled employment, a more resilient, balanced economy, and multipliers that will disseminate prosperity to every corner of the conurbation. This can only be achieved in one place: Atom Valley.

SOURCES:

[1] Source: Manufacturing Technologies Association (MTA) / Oxford Economics, The True Impact of UK Manufacturing, April 2024
[2] Sources include Investopedia, Economies of Scale
[3] Sources include Harvard Business Review and Michael Porter, 1998
[4] Source: WIPO Global Innovation Index 2025
[5] Source: ONS BRES, 2023 (latest published data). Numbers are rounded.
[6] Sources: B8RE North West Industrial & Logistics Market Report, Jan 2025; Site Property Agents
[7] Source: QS World University Rankings 2025
[8] Sources include: NC Innovation

Making a better tomorrow