



**GREATER MANCHESTER
INNOVATION PLAN -
EXECUTIVE SUMMARY**

November 2022

FOREWORD

For over 200 years Greater Manchester has been the driving force behind new global frontiers in the field of innovation; social and cultural, as well as scientific and technological. Our region played a pivotal role in the first three industrial revolutions, making pioneering breakthroughs and building new industries to harness the power of steam and water, electricity, and information technology.

But like many first movers, we were also among the first to experience the negative forces of disruption. Deindustrialisation took the economic heart out of Greater Manchester, leaving industry, financial institutions, people, and in particular young people looking for better opportunities elsewhere.

So Greater Manchester innovated again, designing the collaborative leadership models that united the public and private sectors, enabling us to rebuild our economy together.

While there is still work to do, we now have a strong foundation on which to build a sustainable future. Productivity still lags behind competitor city-regions in the UK and the wider international economy, but more people than ever before are now living in Greater Manchester. People are staying here, and moving here because they see real potential and want to be part of a future that unlocks it.

The world is now in the foothills of the fourth industrial revolution, with the mass adoption of digital technologies transforming every industry. What follows is our plan to put Greater Manchester, and ultimately the UK, at the forefront of global progress once again.

Learning from the mistakes of the past, this is a plan for a sustainable and inclusive revolution; one that will harness the power of innovation to tackle the global climate emergency and ensure that future-facing ethics underpin the technologies we create and commercialise. Above all this plan will level up the longstanding inequalities of place.

Innovation doesn't happen in the abstract, it happens in places and is generated by people. Therefore, innovation policy needs to work hand in hand with the drivers of people and place success; high quality education and training, good healthcare, affordable housing, spaces to support businesses as they start and scale, and good infrastructure networks to allow people to commute to work and reach customers. Our local Innovation plan is designed to do just this.

Our Plan is designed by Innovation GM - a business-led partnership that harnesses the power of business, universities, and local government to drive productivity and create good quality jobs across all parts of our city-region. Joining up our plan for innovation with Greater Manchester's collaborative governance structures and pro-growth policy framework means that investments into R&D and innovation will drive real change and deliver across all 12 levelling up missions.

Our Plan is not a collection of unconnected, short-term projects; it is a plan to stimulate the whole innovation ecosystem for the long-term. It is not a plan to reinforce concentrations of excellence in the city-region; it is a plan to ensure that the whole of the city-region benefits from the excellence we have created and developed. And it is not the final word; it is a pilot, an innovation prototype, to find newer, better, ways of working that can be refined, scaled, and replicated across the UK.

Finally, it is not a plan just for Greater Manchester; it is a plan to create a new national engine of growth at the heart of the Northern Powerhouse.



Lou Cordwell,
Chair, GM LEP



Bev Craig,
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1. INNOVATION GREATER MANCHESTER

Introduction to Innovation GM

Innovation GM (IGM) is a triple-helix partnership organisation, overseen by an industry-led Board, which brings together businesses, universities, R&D institutions, and public sector agencies. Its goal is to build Greater Manchester's (GM's) innovation ecosystem to deliver local and national objectives, including the Plan for Growth, the Levelling Up Missions and the Innovation Strategy.

It is based on an extensive evidence base, consultation with businesses and business representative organisations, as well as input from local innovation focused bodies such as Health Innovation Manchester, the Growth Company, the Graphene, Advanced Materials and Manufacturing Alliance (GAMMA), and the Energy Innovation Agency.

2030 Vision and Objectives

- IGM's vision is that by 2030 GM will be a **leader of the fourth industrial revolution, known globally for the strength of its innovation ecosystem.**
- By 2030, **dynamic and connected R&D intensive business clusters centred on our frontier sectors** will fuel productivity growth and prosperity across the North.
- The city-region's landscape of R&D intensive businesses will be enhanced by the growth of existing businesses, formation and scaling up of start-ups, and inward investment by firms at the international technology frontier. **Business R&D investment will be up by £500m per year.**
- The city-region's excellent scientific capabilities will be further strengthened and integrated into an ecosystem that will deliver inclusive growth. **Public sector R&D investment will be up by £250m per year.**
- The ecosystem will **have a robust and diverse skills and talent pipeline**, easy access to finance for innovators, and deep business networks that fuel enterprise and entrepreneurship.
- Our innovation ecosystem will connect with partner cities and regions across the UK and internationally and will be a driving force of the UK as an Innovation Nation.
- The growth of GM's innovation ecosystem will deliver **measurable impacts on all Levelling Up Missions**, reflecting more productive and R&D intensive firms, increased skills, higher quality jobs and reductions in health inequalities in all parts of the city-region. **GVA will be up by 5%, compared to business as usual, a prize worth £3.8bn.**



Strengths and weaknesses of Greater Manchester's Innovation Ecosystem today

- GM's innovation ecosystem is underpinned by nationally and internationally significant R&D assets, clusters of innovative SMEs, major global businesses, and highly skilled people concentrated in four complementary and interconnected frontier sectors: sustainable advanced materials and manufacturing, health innovation and life sciences, digital and creative, and net zero.
- GM has strengths in discovery and commercialisation across all seven UK technology families. Within these families, major opportunities exist in Sustainable Advanced Materials and Manufacturing, Artificial Intelligence, Digital and Advanced Computing, and Diagnostics and Genomics. Opportunities arise to benefit from innovation at the intersections of these frontier sectors and cross-cutting technologies, and to diffuse innovations across our very large and diverse economy.
- GM's strategic location creates a platform to be a national innovation-led growth pole. GM is well connected to the rest of the North via rail and road (seven million people live within one hour of the city region), only two hours by train from London's internationally leading innovation districts and connected to the world via its international airport. This is set to significantly improve with the arrival of HS2 and Northern Powerhouse Rail, which will create new connections and growth opportunities.
- The Oxford Road Corridor and Salford Innovation Triangle are highly concentrated innovation zones that play a central role in driving our innovation ecosystem. They both have significant development potential, for example ID Manchester on the Oxford Road Corridor is aiming to create 10,000 new high-quality R&D jobs over the next decade. Innovation-led development opportunities exist in manufacturing technology parks, town centres, and other employment sites across the city-region, enabled through GM's pro-growth planning and policy framework.
- GM has identified six 'growth locations' which represent opportunities for the whole city-region to bring forward development at a scale that can drive transformational change, including Atom Valley in Rochdale and Bury, which is the North West's largest development site focused on high-value manufacturing and R&D, and the Health Innovation Campus in the Wigan & Bolton Growth Corridor. Capitalising on these opportunities and ensuring that the innovation economy benefits all parts of the city-region is a central priority for IGM.
- GM has the ingredients to be a high performing innovation ecosystem, including excellent knowledge assets, a strengthening innovation finance sector, and concentrations of skilled people. GM plays a leading role in many national R&D and innovation programmes, such as Knowledge Transfer Partnerships where GM's universities take up is double the national average. Local solutions have been designed to



fill gaps in the ecosystem such as the Growth Company and Northern Gritstone, which recently raised £215m to invest in early stage, IP rich companies in the North.

- However, despite GM's strengths, not enough businesses benefit from access to local and national assets, networks, and programmes. Businesses tell us that the current innovation support infrastructure is fragmented and complex to navigate. They say that their ambitions to invest in R&D are constrained by a lack of leadership and technical skills, difficulties accessing the right facilities in the right places, and challenges accessing finance. Better coordination and increased public R&D investment are needed to address these weaknesses and crowd in business R&D investment – this has been catalytic in second cities across Europe and the US. As well as developing frontier strengths, it will be important to drive up innovation in all sectors, including the foundational economy, to tackle the issues of low productivity in the city-region and improve the quality of jobs in the sectors that most people work in.
- GM is not yet a 'go-to' destination for international science and innovation investment. More needs to be done to present an attractive package of innovation and skills so that science and innovation sit side-by-side with sport and culture at the heart of GM's global brand.

How we will achieve our 2030 Vision

IGM brings together leaders of businesses, universities, and public institutions, united around a single vision and plan. We will:

- Mobilise investment into existing and new innovation assets and programmes to bridge gaps in the commercialisation journey centred on our four complementary frontier sectors as well as our cross-cutting technology family strengths, coordinating with national activities where appropriate to ensure local impact and national significance.
- Build a connected innovation ecosystem, creating clear pathways for businesses to get the skills and talent, finance and investment, and wider support needed to innovate. This will be underpinned by strong and deep networks across clusters, sectors and places.
- Forge productive R&D collaborations where there are mutually beneficial opportunities with cities and regions across the North of England, UK and world, so that GM's assets and ecosystem play a leading role in driving UK-wide economic growth
- Raise the global reputation of GM as a significant R&D location, reimagining GM as a Science and Innovation Superpower. This will attract innovative businesses, particularly large R&D intensive firms and scale-ups, to locate and grow in the UK.

2. INNOVATION ACCELERATOR PILOT FOCUS AND PRIORITIES

The Innovation Accelerator in the context of the Innovation GM 2030 Vision

- Greater Manchester has been selected as one of three Innovation Accelerators by Government. This Innovation Accelerator plan has been developed in partnership with the Department for Business, Energy, and Industrial Strategy (BEIS), the Department for Levelling Up, Housing and Communities (DLUHC), and Innovate UK
- The Innovation Accelerator will catalyse the many changes needed to achieve IGM's 2030 vision. It is a unique opportunity for local and national government and innovation agencies to work with business to co-design, deploy, and evaluate new approaches to place-based innovation. It will pilot proof of concept solutions to: improve the performance of existing local and national programmes; fill gaps in our innovation ecosystem; help design strong proposals for competitive national funds; and create best practice that can be scaled up in GM and the UK.
- Over the longer-term, GM's share of Innovation Accelerator investment into our balanced portfolio of projects will directly leverage R&D match funding on a 2:1 private-public ratio and support progress against key levelling up missions. We will commit to targets for high quality job creation, productivity improvements, and impacts against levelling up missions after the project selection stage.

Focus for the Innovation Accelerator

- IGM believes the biggest opportunity to fuel innovation-led inclusive growth is by exploiting synergies between cross-cutting technology families and frontier sectors, alongside strengthening the wider innovation ecosystem. Given the limited timescale and budget of the Innovation Accelerator pilot, we have prioritised actions to make rapid progress in key technology families and to address the most critical gaps in GM's innovation ecosystem.

Sustainable Advanced Materials

- GM is home to a globally significant advanced materials R&D asset base – including the largest University School of Materials in Europe, the National Graphene Institute, the Graphene Engineering Innovation Centre, and the Henry Royce Institute. This is at the centre of a large cluster of innovative advanced materials companies in the North West and Yorkshire. The priority for the Innovation Accelerator is to strengthen connections between the R&D base and industry, focused on sustainable advanced materials and overcoming the challenges of the net zero transition.
- IGM is seeking investment and policy support from government to establish a new national R&D asset in Atom Valley, the Sustainable Materials Translational Research Centre, which will accelerate industry-scale commercialisation of IP from existing assets in the city-region and integrate into national translational research networks such as the High Value Manufacturing Catapult.

Greater Manchester Innovation





Artificial Intelligence, digital & advanced computing

- GM is the UK's second digital city-region, with major R&D assets and business clusters focused on MediaCity and the Oxford Road Corridor and growth in the digital sector is booming across the conurbation. The priority for the Innovation Accelerator is to drive investment into R&D in areas where we have distinctive strengths (Artificial Intelligence, digital trust and security, and immersive technologies) and to create the conditions for them to be applied in sectors such as health, creative industries, and advanced machinery. We will also make rapid progress in addressing shortages of critical technical digital skills that threaten to hold back growth.
- We are seeking investment and policy support from government to strengthen R&D assets and industry collaborations, and better integrate national and local activities, in AI, digital trust and security, and immersive technologies, as well as to trial innovative approaches to address short and long-term digital skills shortages.

Diagnostics & Genomics

- GM has the largest concentration of biomedical health research in the UK outside the south east of England and sits at the centre of the North West's dynamic life sciences cluster. The city region's health R&D assets are integrated with its £6bn per annum devolved Health and Social Care system to accelerate research into practice. A priority for the Innovation Accelerator is to maximise the synergies between two complementary goals: improving the health outcomes of GM's population and closing health inequalities, and developing a high productivity life sciences industry, including by attracting major global life science R&D and manufacturing companies.
- We are seeking investment and policy support from government to strengthen R&D assets and industry collaboration in areas where we have distinctive assets (genomic technologies, diagnostics, digital health, and advanced therapies) to drive new industry clusters. We also seek investment and policy support to exploit overspill from our assets in advanced materials and AI, digital and advanced computing.

Strengthening the innovation ecosystem

- To strengthen the wider ecosystem of support for business, we are seeking investment and policy support, aligned to the GM Devolution Trailblazer where appropriate, to:
- Establish new easy to access, business-led networks to drive up demand for existing local and national innovation programmes and facilitate new business-led initiatives.
- Develop new methods to fill the skills gaps which hold back business-led innovation, including through greater collaboration across higher and further education institutions and greater employer involvement in the design of courses and delivery, building on new initiatives such as the Greater Manchester Institute of Technology.



- Facilitate the creation of new early-stage investment funds, and wrap-around support, to meet the huge untapped demand for “first investments” for the most promising IP-rich businesses.
- Align and coordinate innovation activities with other policies and investments to ensure that innovation investments play a key role in driving place-based regeneration and levelling up opportunities across the city region.
- Increase the amount and type of incubator, workshop, and lab facilities across the city-region to increase access to the space businesses need to innovate.
- Work to put GM on the global stage as a Science and Innovation Superpower.

Working in partnership

- Key to the success of the Innovation Accelerator will be a continued process of co-production with national government and its agencies as well as taking an outward facing approach to work with partners across the UK.
- Building on relationships established already with BEIS, DLUHC, and Innovate UK, we want to develop stronger partnerships with HM Treasury, the Department for International Trade, the Ministry of Defence, the Department for Health and Social Care, HM Revenue and Customs, and the National Physical Laboratory
- We will collaborate with other regional clusters in the north of England, and UK centres of excellence more widely, where there are mutually beneficial opportunities, such as life sciences with Cheshire and Warrington, digital security with Lancashire, AI and early stage investment with Cambridge, and sustainable advanced materials and manufacturing with Liverpool, South and West Yorkshire, Bristol and Glasgow.
- It will also be critical for the Innovation Accelerator to have strong relationships with businesses of all sizes, sectors, and R&D intensity. We have an exciting pipeline of business-led investment opportunities coming from the initial public call for ideas and a process proposal development, which will strengthen the role of existing GM businesses in innovation policy and delivery, and will attract new players to the city-region.
- Through this collaborative and co-produced approach, the GM Innovation Accelerator can create a new best practice model for delivering innovation-led, inclusive economic growth that can be replicated.

Any examples included in this plan are illustrative and in no way pre-determine funding decisions.

