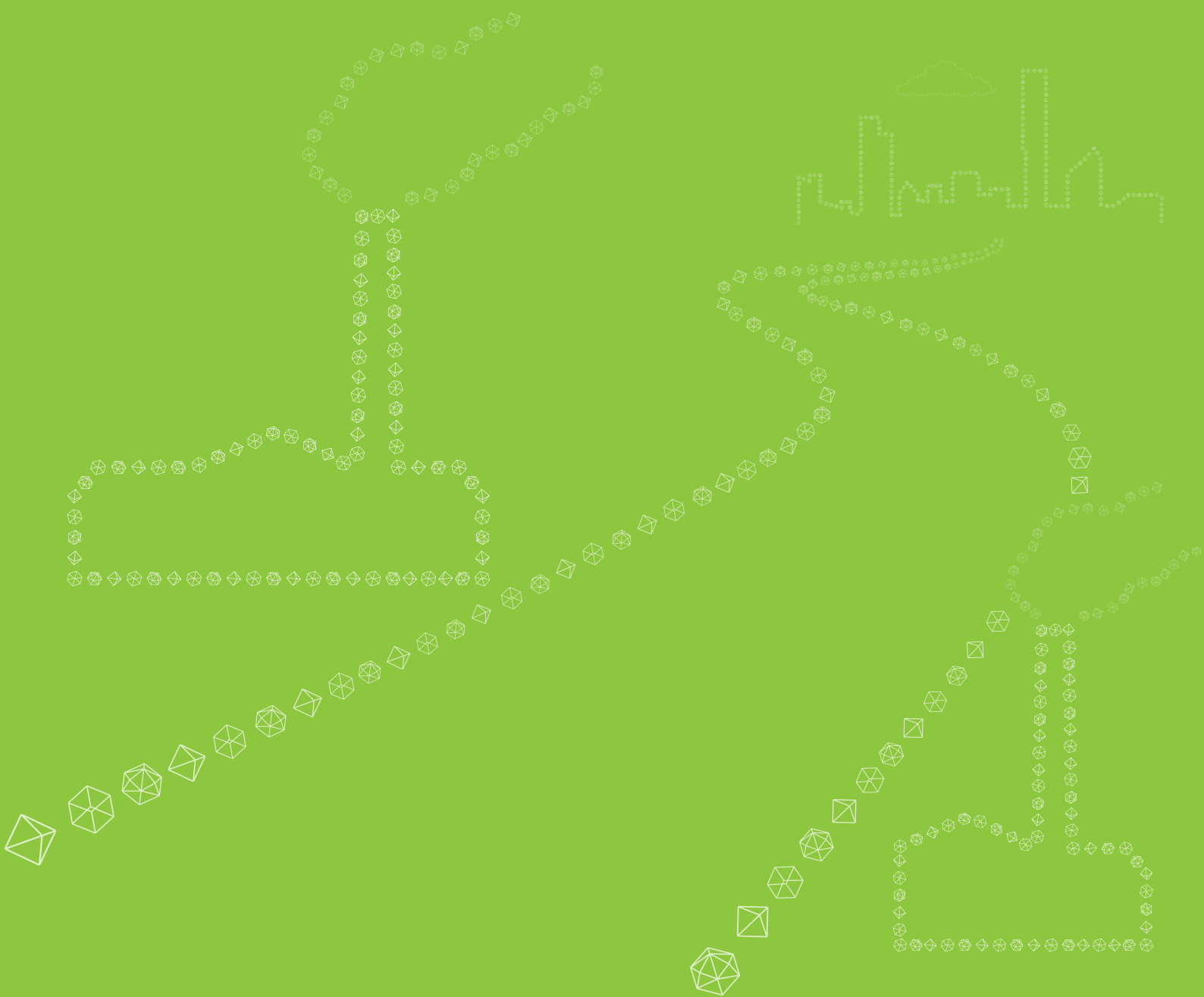


# Driving innovation in cities

Learning from Greater Manchester



## Executive summary

The UK's cities face an unprecedented economic challenge. They need to foster the economic growth necessary to recover from the deepest recession the UK has seen for decades. And they must do this at a time when public spending is dramatically reducing. This is doubly problematic for many British cities. It means far less money will be available to pay for traditional regeneration and economic development projects. But at the same time, it means that cities cannot rely on the expansion of the public sector to provide growth; indeed they will have to rely on the private sector all the more, as the public sector shrinks.

It is no surprise then that cities are looking for cost-effective ways of creating the conditions for economic growth. Encouraging innovation is one way to do this. Previous research has shown that innovation is responsible for the majority of economic growth in developed economies. Innovative places – Silicon Valley being the exemplar – have in the past benefited from rapid economic growth that many cities would love to emulate.

The administrative framework that cities operate in is also changing. The regional approach to economic development is being replaced by a more local one. 'Natural economic areas' are increasingly being called on to take the lead in local economic policy; this policy has found its most immediate expression in the planned creation of Local Enterprise Partnerships (LEPs). These changes give cities and city-regions an important, but time-limited opportunity to shape policy to their benefit.

It is in this context of an urgent need for growth, a desire to foster innovation, and a shift from regional policy to local policy that

the lessons of Manchester's recent experience are especially relevant.

### Background

In the fourteen years since an IRA bomb rocked its city centre, Manchester has transformed its growth prospects, and has become of the few cities outside London with the potential to increase its long-term growth rate. Commonly regarded as a pioneer in cross-boundary working, Greater Manchester has consciously driven a campaign for innovation – ready to make the brave decisions to prepare its economy and communities for the challenges ahead.

NESTA has been working in partnership with Manchester City Council, the North West Development Agency, and across the local economy to learn how to transform cities' capacity to innovate. Through the Manchester Innovation Investment Fund (MIIF), over 25 pilot projects are testing innovative ways to deliver public policy and to overcome barriers to economic growth. Although it is too early to assess the full impact of the partnership, the work so far suggests three important lessons with implications for local and national policymakers.

### Three lessons from Manchester

**The first lesson is that creating the right conditions for innovation and growth requires honest, evidence-based analysis of a city's strengths and weaknesses.**

The partnership to encourage innovation in Manchester was based on high quality evidence

about Manchester's economy, provided by the Manchester Independent Economic Review (MIER). This provided a sound basis for prioritising investments across administrative boundaries within the city region – for example showing how an investment in transport or skills in one area affected innovation and economic growth across the city.

It was augmented by working closely with local businesses, making the process deeply consultative and inclusive. This approach focuses attention on the most promising projects, avoids duplication and thus helps limited resources go further.

**The second lesson is that leadership should cut across administrative boundaries, and draw in and empower local businesses and organisations outside government.**

Manchester has benefited in recent years from collective leadership that has reached across administrative boundaries and embraced the wider city region, particularly through Association of Greater Manchester Authorities (AGMA). Just as importantly, this leadership has been inclusive, for example in the establishment of Innovation Manchester, which gave 70 local business leaders the chance to help shape Manchester's economic future, giving rise to projects such as the *Manchester Masters*, which helps stem the brain drain of creative graduate talent from the city. This leadership role is being sustained by the *Innovation Boardroom*, which gives businesses an ongoing stake in Manchester's innovation strategy.

**The third lesson is that cities can encourage innovation cost-effectively by connecting the 'wellsprings of innovation' with the wider local economy.** Many of projects underway in Manchester have involved plugging in businesses to unusually creative parts of Manchester's economy – for example, its dynamic creative industries, or its world-class universities. A number of these programmes have been enjoying early success: MIMIT (Manchester: Integrating Medicine and Innovative Technology) connected the University of Manchester with the local NHS to design innovative medical devices; Creative Credits links businesses across Manchester with creative firms, encouraging them to develop innovative approaches to everyday business. These projects offer the promise of being good value: by building links, rather than seeking to fund innovation directly, they create an environment where new and existing businesses can help themselves.

These lessons have a number of implications for policymakers:

**Local Enterprise Partnerships should start by creating an honest evidence base of the strengths of the local economy**

MIER provides an example of how analysis can help set priorities and build consensus across administrative boundaries; this was complemented by widespread consultation and engagement with businesses, universities and other organisations. LEPs should seek to develop a similarly accurate perspective of local economic opportunities, both through analysis and by involving local businesses in their strategy.

**Leaders need to help a population converge on a vision for innovation, then distribute capacity for achieving it**

Where a number of local authorities are responsible for an economic area, AGMA demonstrates how joint leadership can overcome administrative boundaries to help develop a shared vision. Other LEPs should consider this governance model as they develop. At the same time, they should consider Greater Manchester's approach to getting wider and deeper participation from businesses and other organisations outside formal governance, by setting up forums like the *Innovation Boardroom* where businesses could get involved in leading projects to overcome barriers to economic growth.

**Supporting networks is a cost-effective way to encourage innovation – but only if they are purposeful**

Supporting networks is a valuable role for LEPs – strong networks are vital to the success of innovative places from Silicon Valley to Shanghai. Without them, costly investments in infrastructure or regeneration will fail to generate the highest possible impact on innovation and economic growth. But creating networks for their own sake can be wasteful. Instead, catalysing networks to tackle specific challenges – as in the case of MIMIT – ensures the networks are purposeful and increases the chance of sustainable success.

# Contents

## Driving innovation in cities

Learning from Greater Manchester

Part 1: Innovation in cities – the new growth challenge	5
Part 2: Manchester’s innovation story	7
Part 3: Three innovation lessons from Manchester	9
Acknowledgements	17

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NESTA is a world leader in its field and carries out its work through a blend of experimental programmes, analytical research and investment in early-stage companies. [www.nesta.org.uk](http://www.nesta.org.uk)

## Part 1: Innovation in cities – the new growth challenge

1. Emergency Budget, 22 June 2010. Available at: [http://www.direct.gov.uk/en/N11/Newsroom/Budget/Budget2010/DG\\_188496](http://www.direct.gov.uk/en/N11/Newsroom/Budget/Budget2010/DG_188496)
2. Larkin, K. (2009) 'Public Sector Cities: Trouble Ahead.' London: Centre for Cities.
3. Webber, C. and Swinney, P. (2010) 'Private Sector Cities.' London: Centre for Cities.
4. NESTA (2009) 'The Vital 6 per cent: how high-growth innovative businesses generate prosperity and jobs.' Policy Briefing. London: NESTA.
5. Mason, G. *et al.* (2009) 'Business Growth and Innovation: the wider impact of rapidly growing firms in UK city regions.' London: NESTA.
6. Hutton, W., and Jones, A. (2010) 'Driving Economic Recovery: The Core Cities – a new partnership with government.' Available at: <http://www.workfoundation.org/research/publications/publicationdetail.aspx?oltemId=237>
7. See emerging policy details at: <http://www.communities.gov.uk/documents/localgovernment/pdf/1626854.pdf>

The recent economic crisis has reignited a debate about how the UK economy can return to growth. Its ability to do so will depend on the capacity of cities outside London to adapt and grow their economies. But UK cities face formidable obstacles in this respect: despite recent progress, many suffer from poor infrastructure, inadequate skills, and an over-reliance on public sector economic activity; this is often compounded by social deprivation. And public spending cannot be relied on for a way out: the public sector faces cuts amounting to £61 billion by 2014-15.<sup>1</sup>

As well as limiting the ability of government to pay for regeneration, these cuts present a direct growth challenge to many cities. Over two thirds of the 1.2 million net additional jobs created in UK cities between 1998 and 2007 were in public administration, education, and health.<sup>2</sup> If, as experts expect, over 600,000 of these public sector jobs (and a further 400,000 jobs in the private sector that depend on public sector contracts) are going to be lost by 2015-16, then the burden of job creation will have to fall much more heavily on the private sector.<sup>3</sup>

Innovation will be a critical part of the solution. Innovation – the transformation of ideas and knowledge into new business offerings – has become a mainstay of competitive advantage in all sectors. Just 6 per cent of companies, who are disproportionately innovative, were responsible for the majority of jobs created between 2005 and 2008.<sup>4</sup> These high-growth companies are found in all sectors, nations and regions in the UK. Moreover, in cities these high-growth companies have an impact over and above their direct impact on employment; they also help reduce inactivity and dependency rates.<sup>5</sup> So getting the right conditions to help companies innovate is

important not just for the economic well-being of cities, but also for its social well-being.<sup>6</sup>

To foster this innovation, cities need to embrace a complex mixture of organisational and cultural change, as well as adopting and developing new technologies. They need to exploit new thinking that gives greater weight to user, consumer and citizen involvement in creating solutions. They need to take advantage of the networks that allow firms to draw on the innovations of others as well as their own research – 'open' innovation. And in straitened times, they must learn how to get the most out of their own unique assets to create the conditions for businesses to innovate and thrive.

Cities must confront these challenges in a rapidly changing policy context, with the new government ending the regional approach to economic development and emphasising a new leadership role for 'natural economic areas.' This has found most immediate expression in the planned creation of Local Enterprise Partnerships (LEPs), new economic development bodies with a greater role for the private sector, and a rebalanced settlement between local and central government. They will set local economic priorities at the level of a 'natural economy' – the areas within which people work and do most local business – and will be able to bid for part of a £1 billion Regional Growth Fund available following the abolition of the Regional Development Agencies. While details were still under review at the time of writing, some responsibilities (like inward investment and venture capital) will be centralised, and others (such as planning and housing, transport, and employment) will be devolved to LEPs.<sup>7</sup> This is part of the government's commitment

to a 'radical devolution of power and greater financial autonomy to local government and community groups.'<sup>8</sup>

To what extent will this new policy framework unleash the capacity of cities to innovate? The answer will depend in part on cities' own ability to shape it. The new framework must be based on their practical experience of what works. For the last three years, NESTA has been working in a unique partnership with Greater Manchester to understand how cities can develop approaches to innovation that make them better placed to face future challenges. The emerging lessons from this experience contain some important design principles for future government support to cities, and for other cities looking to stimulate innovation.

This short report is designed to describe recent initiatives that have taken place in Manchester to encourage innovation and growth, and to draw out lessons for other cities that now have an important, yet time-bound, opportunity to shape government policy.

8. The Coalition: Our Programme for Government, May 2010. Available at: [www.cabinetoffice.gov.uk/media/409088/pfg\\_coalition.pdf](http://www.cabinetoffice.gov.uk/media/409088/pfg_coalition.pdf)

## Part 2: Manchester's innovation story

9. AGMA (2009) 'Manchester City Region Pilot: Delivering Economic Growth with Public Sector Reform.' Available at: [www.agma.gov.uk/cms\\_media/files/4i\\_statutory\\_city\\_region\\_agreement\\_21\\_july\\_2009v2.pdf](http://www.agma.gov.uk/cms_media/files/4i_statutory_city_region_agreement_21_july_2009v2.pdf)
10. Funded from the outset by the North West Regional Development Agency.
11. M:KC (2009) 'Manchester City Region Innovation Prospectus.' Available at: [http://www.manchesterknowledge.com/\\_filestore/mkc/innovation-prospectus-final-draft-pdf/original/Innovation%20Prospectus%20final%20draft.pdf](http://www.manchesterknowledge.com/_filestore/mkc/innovation-prospectus-final-draft-pdf/original/Innovation%20Prospectus%20final%20draft.pdf)
12. Research interview, April 2010.

Manchester's recent innovative phase began with a crisis. The devastating IRA bombing of Manchester city centre in 1996 provoked an extensive programme of urban redevelopment and rallied a powerful and committed civic community. In the fourteen years since then, Manchester has transformed its growth prospects, and has become one of the few cities outside London with the potential to increase its long-term growth rate. What started as a story of physical regeneration is becoming one of learning how to recognise and exploit sources of creativity and growth in new ways.

### Scaling up for economic impact

Greater Manchester is commonly regarded as a pioneer in cross-boundary working. More than most other UK cities, it has developed governance structures that allow it to exploit the economic benefits of policymaking across its 'natural economy.' The Manchester City Region Development Plan in 2006 defined the 'natural economy' of Greater Manchester as the cities of Manchester and Salford, along with the neighbouring boroughs of Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, Trafford and Wigan. These ten local authorities are collectively represented by the Association of Greater Manchester Authorities (AGMA), which provided effective co-ordination of many services after the abolition of the Greater Manchester County Council in 1986.

Building on a history of shared service provision, since 2009 the local authorities have been collaborating through seven strategic commissions (New Economy, Health, Planning and Housing, Transport, Environment,

Improvement and Efficiency, and Public Protection). Elected members are distributed across the commission boards, which include civic representatives and business leaders. Since 2008, there has also been a dedicated Business Leadership Council. Not only are local authorities committed to delegating power upwards for some strategic decisions, but they are prepared to engage the private sector intensively, and early. In April 2009, the Labour government recognised the successes to date, with the announcement that Greater Manchester would be one of two statutory city region pilots. The status provided Greater Manchester with new powers over employment, housing, transport and planning, as well as a greater degree of economic autonomy.<sup>9</sup>

### A campaign for innovation

Alongside such cross-boundary institutions, Manchester's leaders recognised the need to build strategic innovation links throughout the region. Manchester: Knowledge Capital (M:KC),<sup>10</sup> sometimes referred to as the city's 'innovation agency', has been a driving force.<sup>11</sup> Described as *"a 'strategy' more than an organisation"*<sup>12</sup> by Sir Howard Bernstein, Manchester City Council's Chief Executive, M:KC pushed forward Manchester's *Science City* programme and encouraged awareness of the potential gains from innovation and the nature of the challenges that must be overcome to achieve them.

Recently, in recognition of the need to strengthen and consolidate governance, the Innovation sub-group of the Commission for the New Economy and the Board of M:KC have combined into a new Manchester Innovation

Group. This is designed to oversee innovation strategy and its implementation across Greater Manchester

## **NESTA and Manchester**

NESTA has been a part of the Manchester innovation story since 2007 through a unique partnership with Manchester City Council and the North West Development Agency. Each partner committed resources to a jointly supervised central fund – The Manchester Innovation Investment Fund (MIIF) – designed to transform the Greater Manchester innovation system and create a step-change in its capacity for innovation. This enabled the partners to uncover, design and test a range of ways to overcome barriers to innovation, creating a bank of evidence and advice on which others could draw. The MIIF has five broad aims:

- To develop a wider and deeper understanding of innovation and what it can help achieve.
- To inspire and enable innovative activity.
- To embed innovation capabilities in the city region.
- To increase the flow of ideas to investment.
- To develop communities and networks of innovators.

Now in the final months of three years of operation, the partnership has enabled over 25 pilot projects that include a variety of low-cost and original approaches to driving innovation. It has exposed the challenges of working across knowledge boundaries, of creating a shared understanding of innovation, and of putting in place appropriate systems of evaluation for radical new approaches to delivering public policy. The ultimate impacts of the MIIF will be realised over coming years. The city partners believe this approach has seeded a mindset and a movement that will continue to ripple through the area in years to come.

The MIIF was designed not as something to be replicated by other cities, but to create a source of much needed evidence and practical advice. Yet, even at this early stage, three powerful lessons are emerging that could help other cities develop their own innovation assets to leverage new sources of growth and opportunity.



## Part 3: Three innovation lessons from Manchester

### 1) Creating the right conditions for innovation and growth requires honest, evidence-based analysis of a city's strengths and weaknesses

The first lesson is the need for far better, combined assessment of the strengths and weaknesses for innovation across the natural economy. A credible, comprehensive and shared economic evidence base can enable local economies to develop bespoke strategies for innovation – approaches steeped in an awareness of their unique strengths, opportunities and histories<sup>13</sup> – and identify common priorities for investment in innovation, even across multiple jurisdictions and interest groups. Through the Manchester Independent Economic Review, MIIF has helped Greater Manchester to do just that.

#### The Manchester Independent Economic Review (MIER)

The MIER is an ambitious programme of economic research combined with a year-long public consultation. It created a new evidence base for Manchester's economic strategy, and was a key source of evidence for the Greater Manchester Strategy *Prosperity for All* launched in August 2009. The strategy described MIER as a 'baseline, reality check and window into the future' and 'the primary source of intelligence to be used to shape strategic priorities'.<sup>14</sup>

The MIER is composed of a number of studies, conducted following a comprehensive literature review of existing information. Its dedicated website provides a rich and expansive data source on the case for agglomeration economies; innovation, trade and connectivity; inward and indigenous investment; labour market, skills and talent; and sustainable

communities; and a review of a major science facility. While much of the data is specific to Greater Manchester, it offers a useful model for other cities.

MIER's impact has been about more than its content: it has been in the ways in which it has been communicated and adopted. MIER findings are extensively disseminated: over 250 local stakeholders participated in an Economic Development Workshop series, while MIER findings have been presented well over fifty times to local, regional, national and international audiences. The MIER website has been viewed almost 60,000 times.

The studies were overseen by an independent review panel comprising leading global authorities on economic development. This meant it could identify the spillovers and trade-offs of potential investment decisions and communicate these in a neutral and authoritative manner. There was strong appetite for MIER because it examines the natural economy as a whole. Local leaders feel that MIER has transformed the quality of the debate about innovation and economic growth in the city, greatly improving Greater Manchester's capacity to identify and agree on priorities for investment in innovation.

#### The Transport Innovation Fund

This is powerfully exemplified by the experience of the Greater Manchester Transport Innovation Fund. The Fund was a bid by the Greater Manchester Passenger Transport Authority (GMPTA) and AGMA to secure nearly £1.5 billion from a central

13. Athey, G. et al. (2007) 'Innovation and the City: How innovation has developed in five city regions.' London: NESTA and Simmie et al (2008) 'History Matters: Path dependence and innovation in British city regions.' London: NESTA.
14. The strategy is available at: [http://www.agma.gov.uk/cms\\_media/files/final\\_gms\\_august\\_2009.pdf](http://www.agma.gov.uk/cms_media/files/final_gms_august_2009.pdf)

government programme, the Transport Innovation Fund (TIF). A successful bid would have been matched by a loan repaid from congestion charge revenue.

It was decided to hold a referendum of residents across Greater Manchester on the proposals, which would have made significant improvements to bus, rail and tram services. Despite its potential economic benefits, the bid was rejected in a referendum by local people, both because of opposition to the congestion charge and challenges in agreeing where spending should be prioritised.

To rescue the bid, the MIER was used as the baseline for an economic model that broke Greater Manchester into 253 small units, sensitive to various parameters, such as waiting times and length and quality of journey.

From this, the economic value (GVA) could then be calculated as well as the comparative employment return offered by different routes. Through this innovative methodology, Greater Manchester was able to navigate conflicting local priorities to design an investment acceptable to all parties. The subsequent package brought in some £1.5 billion of funding for significant transport innovation, albeit in a less extensive programme than the original proposals, but not dependent on the unpopular congestion charge.

The MIER also overturned a number of received wisdoms about how to drive innovation and local economic development. Two are fundamental to Manchester's approach to innovation.

The first is that despite the size of the Greater Manchester economy, the city region punches below its weight on economic productivity. Firms in the region do not exploit agglomeration economies – the benefits arising from supply chain linkages, labour market interactions and knowledge spillovers – as effectively as firms elsewhere in the UK. Their productivity is lower than we should expect given the size of the agglomeration economy. There is a powerful case for a more connected innovation system that can better draw on the advantages of scale.

The second is that there is little evidence that the clustering of particular sectors is important

for productivity. On the contrary, any co-location benefits relate to being in a large and diverse urban environment, rather than part of a sectoral cluster. Firms' productivity, investment spillovers and innovation all depend on the rest of the supply chain, rather than on competitor firms in the same sector.<sup>15</sup>

## Key recommendations

### **Local Enterprise Partnerships should start by creating an honest evidence base of the strengths and weaknesses of the local economy**

MIER provides an example of how analysis can help set priorities and build consensus across administrative boundaries; this was complemented by widespread consultation and engagement with businesses, universities and other organisations. LEPs should seek to develop similarly accurate perspective of local economic opportunities, both through analysis and by involving local businesses in their strategy.

Solid analysis also helps leaders make difficult trade-offs, and challenge entrenched interests and 'received wisdom' about economic development through innovation. For example, the MIER demonstrated that in Manchester there is likely to be greater economic impacts from investing in improving local, national and international business supply chains than in attempting to grow a particular industrial cluster.

The creation of Local Economic Partnerships provides a valuable opportunity to reform the way business support is provided. Strong local evidence bases, combined with greater involvement from local businesses in shaping strategy would shore up greater local responsibility for designing targeted business support. This could allow investments to be more focused on growth businesses, delivered in more innovative ways, and could ultimately reduce costs. Creative Credits on p15 is one such business support scheme enabled in Manchester.

### **2) Leadership should cut across administrative boundaries, and draw in and empower local businesses and organisations outside government**

Our second lesson is about the identification and exploitation of new sources of leadership for innovation. The importance of leadership

15. The Manchester Independent Economic Review (2009). Available at: <http://www.manchester-review.org.uk/>

is a common refrain in research on innovation and place. But what kind of leadership and governance drives innovation?

Governance institutions that reach across boundaries to the wider economic area present significant opportunities for innovation. While appropriate decision-making institutions like AGMA are of critical importance, cities must recognise that leaders with the capacity and desire to drive innovation also exist outside them. Helping diverse leaders understand the 'mission' and enabling them to contribute to it in flexible ways will multiply a city's capacity for innovation.

### **From maestros to multipliers**

Manchester's Chief Executive and City Council leader have played a central role in building national and international relationships that have helped set global ambitions for the city. MIIF was intended to demonstrate their commitment to innovation. The formal involvement of business leaders in AGMA's business leadership council has undoubtedly been inspired by the vision and commitment of leaders across the public sector in Greater Manchester.

Manchester's leadership and governance must continue to evolve. Research for NESTA has shown that early on in their innovation journey, city regions might need an 'orchestral' approach to leadership with a small central group of conductors driving activity. But for this to be sustainable in the long-run, the aspiration should be to create a larger 'jamming supergroup' of leaders with multiple and complementary visions for innovation and broad and deep capacities for innovation dispersed throughout the city region.<sup>16</sup> Manchester is beginning to work on achieving this ambition.

The challenge is two-fold: first, rather than expect potential leaders in the private sector (and across the wider innovation system) to fit into a predefined structure, enable these leaders to design their own structures and means of contributing to the innovation mission; second, make these structures adaptable as the innovation journey progresses.

### **Innovation Manchester**

Drawing in and empowering new sources of leadership across the natural economy requires new approaches. MIIF's *Innovation Manchester* programme has developed networks among different local business stakeholders, allowing them to develop and deliver radical new

solutions to what they saw as the most serious and urgent challenges. It ensures that businesses and universities are not only advisers on strategy, but a central part of the solution.

Innovation Teams were an important feature of the programme. They brought together 70 of Manchester's most influential business leaders across six growth sectors: Advanced Manufacturing; Biomedical; 21<sup>st</sup> Century Logistics; Creative; Sports; Digital Technologies. An external facilitator supported companies to form teams and generate solutions to what they regarded as the most pressing barriers to innovation in Manchester. The external facilitation brought together examples from all over the world of how other cities had approached their innovation challenges.

Consensus built around a number of issues, particularly: the 'silo' mentality within certain sectors; the acknowledgement that local companies are not positioning themselves well in global markets. From integrated transport ticketing solutions to models of technology support for businesses, the resultant schemes addressed diverse innovation challenges. Restrictions caused by inflexible public procurement processes and regional approaches to business support limited the range of possible approaches and the range of companies who could engage. Demand from within new business communities to play a role in solving these problems could not be met.

A concern among participants about the absence of a sufficiently skilled local workforce led to the development of *Manchester Masters* (see box on page 13).

### **From innovation council to innovation boardroom**

Greater Manchester's efforts to distribute leadership capabilities have proved that there are untapped ideas and motivated leaders throughout the business community who may be a vital source of innovation. Although some business leaders may be happy to engage in formal governance structures like business leadership councils, others would prefer to focus on action rather than procedure. This is what inspired *Innovation Boardroom*, a vehicle for businesses to engage flexibly on the issues that are important to them. Through issue-specific, action-focused events throughout the year, it draws together innovative people from a mix of networks across the city who want to get things done. At the boardroom they identify shared challenges and opportunities

16. Benneworth, P. (2007) *Leading Innovation: 'The role of leadership in promoting regional innovation policies in 'ordinary regions''*. London: NESTA.

## Manchester Masters: Learning how businesses can help stem the brain drain

With four universities, Manchester has one of the largest student populations outside London. Yet the outflow of graduates to the South-East hinders the economic potential of Greater Manchester: – how to ensure that graduates can get that crucial first step on the career ladder within Manchester, even in small companies that are unable to offer graduate training schemes?

*Manchester Masters* – developed and managed by PR company, Tangerine and Manchester Metropolitan University – is designed to inspire businesses to turn this trend around. This highly selective programme gives top graduates exposure to a broad range of marketing career opportunities in Greater Manchester. Successful candidates receive paid placements in local companies over an academic year, giving them the kind of broad work experience that they would normally only find in the graduate trainee programmes of a major corporation. At the same time, they become aware of the great jobs available on their doorstep.



Through discussions with the universities, NESTA and others, this placement scheme has developed into a full-blown professional Masters qualification. As well as testing a way of retaining the best brains, it builds links between companies and universities, and raises the profile of the careers that Manchester has to offer.

Now in its second year, the ten graduates in the first cohort have almost all landed good marketing jobs in the region. ‘Matchmaking’ between graduates and companies as part of the selection process has resulted in another five jobs, exceeding the original ambition. In addition over 30 of the 45 companies that have so far taken part in the scheme continue to do business with each other, with some developing their own graduate training programmes as a consequence. Tangerine now has an ongoing contract with the National Apprenticeship Service because of a new awareness of a whole new range of business opportunities that can help build a better innovation system in Manchester.

based on evidence, help to generate ideas, and mobilise commitment to make them happen. Rather than acting as a ‘talking shop’, the events must deliver a personal pay-off to those attending. Businesses may only engage in the issues that are important to them, but are likely to draw inspiration from the overlapping nature of the interests and issues at stake.

### Key recommendations

#### **Leaders need to help a population converge on a vision for innovation, then distribute capacity for achieving it**

Where a number of local authorities are responsible for an economic area, ACMA demonstrates how joint leadership can overcome administrative boundaries to help develop a shared vision. Other LEPs should consider this governance model as they

develop. At the same time, they should follow Greater Manchester’s approach of seeking wider and deeper participation from businesses and other organisations outside formal governance, by setting up forums like the *Innovation Boardroom* where businesses could get involved in leading projects to overcome barriers to economic growth.

Leaders are all mindful of the cultural barriers to greater collaboration on innovation across the public and private sector that need to be overcome. They should not overlook the practical barriers that inhibit it either. A continuing concern is the incompatibility between onerous public procurement practices and the capacity of small businesses. Recent progress at the national level on using public procurement to drive innovation – such as the reform of the Small Business Research Initiative in 2009 – needs to be sustained and embedded at the local level.

### 3) Cities can encourage innovation in a cost-effective way by connecting the 'wellsprings of innovation' with the wider local economy

The third lesson is about the benefits of a new approach to ensuring that appropriate networks are in place to drive innovation.

#### Access to knowledge is more important than its accumulation

Growing capacity for innovation is not all about accumulating knowledge. Barriers to acquiring knowledge fell away with the arrival of the Internet. Now capacity for innovation has become driven not just by the value of your individual knowledge and capabilities, but by that which is accessible through your networks. We now recognise that innovation arises from collaboration between different organisations – 'open' innovation<sup>17</sup> – through spillovers from investment in innovative sectors,<sup>18</sup> and through higher education and research institutions that are embedded not only in international networks, but in the fabric of the civic community.<sup>19</sup>

A more holistic view of building capacity for innovation is emerging, something NESTA has described as 'total innovation.' In this view, innovation is as much about new services, business models and organisational forms, and occurs in all sectors of the economy and across the private and public sector.<sup>20</sup> Many of these activities are 'hidden' in that they are not

captured by our traditional innovation indicators. NESTA's *Innovation Index* has shown that when you measure innovation 'in the round' in this way – including factors such as product design, training in new skills, organisational innovation, developing new customer offerings and brands, and copyright – it accounts for £133 billion of investment and two thirds of private sector productivity growth.<sup>21</sup>

#### The need for a new innovation policy toolkit

Over the years, governments have developed an approach to innovation based on accumulating and exploiting resources, including technology transfer offices and business parks. But to drive 'total innovation', new policies need to be part of the mix. In particular, increasing connectivity or 'network value' between the different elements of a local innovation system – the universities, businesses, hospitals, schools and communities – can help places build their capacity to innovate and drive growth. However, efforts to support networks through public policy have often foundered because they have treated networks as an end in themselves, rather than as the means to achieving a more productive innovation system.

Manchester has developed three more promising approaches focusing on giving people a reason to collaborate, rather than simply providing a forum and hoping that its rationale will follow.

17. NESTA (2010) '100% Open.' London: NESTA.
18. NESTA (2008): 'Beyond the Creative Industries: Making Policy for the Creative Economy.' Policy Briefing. London: NESTA.
19. Kitson, M., Howells, J., Braham, R. and Westlake, S. (2009) 'The Connected University.' London: NESTA, and Goddard, J. (2009) 'Re-inventing the civic university.' London: NESTA.
20. NESTA (2008) 'Total innovation: harnessing all kinds of innovation to maximise competitive advantage.' Policy Briefing. London: NESTA.
21. NESTA (2009) 'The Innovation Index'. London: NESTA.

#### A) Driving demand for innovation

##### Manchester: Integrating Medicine and Innovative Technology (MIMIT)

The first approach might be characterised as demand-led innovation. Manchester: Integrating Medicine and Innovative Technology (MIMIT) drives demand for innovation by building lasting relationships between clinicians, scientists, engineers and industry that can help identify emergent technology and pull it to market to address urgent, unmet clinical needs. This programme is a collaboration between the University of Manchester and Greater Manchester NHS and Primary Care Trusts, in partnership with the world-leading Centre for Integration of Medicine and Innovative Technology at the Massachusetts Institute of Technology. It aims to capitalise on existing, underexploited strengths in medical technology in the Manchester City Region and to increase significantly the output of commercialised medical technology innovations from Manchester City Region.



MIMIT supports a large team of ‘site miners’ – specialist clinicians and research scientists – in identifying unmet clinical needs and promising technologies, and building productive relationships between them. Short-term impacts are already impressive. Over 40 unmet clinical needs have been disclosed, signalling demand and potential commercial opportunity to businesses. Nineteen MIMIT funded projects are already under development, with five patents already filed and six projects having already secured external follow-on funding worth over £5 million – an impressive ten-fold leverage of investment. MIMIT’s work ranges from developing a better colostomy bag and self-closing curtains to overcoming facial paralysis and addressing prolonged seizures in children.<sup>22</sup>

As vascular surgeons work with space engineers, paediatric neurologists work with electrical engineers, and urologists work with chemical engineers, there are indications that this demand-driven approach to building linkages throughout the innovation systems could result in even more radical innovations in the long term.

## B) Incentivising collaborations that are likely to lead to innovation

### Creative Credits

A second approach focuses on directly incentivising collaborative activities that are likely to lead to innovation.

NESTA’s research has shown that businesses that spend twice as much on creative inputs are 25 per cent more likely to introduce product and process innovations.<sup>23</sup> The more connected small and medium-sized enterprises (SMEs) are to the creative business community, the more innovative they are likely to be. The MIER showed that Manchester’s creative industries, although well connected to markets outside the city region, are poorly integrated into local business supply chains. Correcting this imbalance could have a major impact on local innovative capacity. *Creative Credits* aims to test if it is possible to promote innovation by strengthening supply chain links between Manchester’s creative sector and its SMEs.

Using vouchers to stimulate innovation and behavioural change, this scheme is a world first in supporting knowledge-transfer between commercial businesses. The scheme intends to encourage SMEs to be ‘nudged’ into taking creative risks and working with creative businesses they might not otherwise have considered.

The scheme works by inviting Manchester-based small businesses from all sectors to apply for ‘creative credits’ worth £4,000. These can be used to purchase services from a local creative firm as long as the small business is willing to co-invest £1000. If it works, it will lead to stronger creative supply chains and boosted capabilities for innovation within the small business community.

With 150 businesses already engaged through two waves of vouchers, and many more through the online ‘gallery of creative businesses’ we can expect some powerful primary evidence for other places about the value and cost effectiveness of this kind of incentive to drive innovation.<sup>24</sup>



22. See: [www.mimit.org.uk](http://www.mimit.org.uk)

23. Bakhshi, H., McVittie, E. and Simmie, J. (2008) ‘Creating Innovation.’ London: NESTA.

24. See: [www.creative-credits.org.uk](http://www.creative-credits.org.uk)



## C) Growing the local innovation commons

### Fablabs

A third approach is to focus on helping innovators benefit from knowledge shared by others, while encouraging them to share their own knowledge in return, increasing the value of the innovation 'commons' for all. In Manchester, this approach was exemplified by *Fabrication Laboratories (Fablabs)*: community workshops that provide the space, tools, materials and skilled staff for people to make whatever they want, unlocking their capacity to create and invent.



At first glance, *Fablabs* look like any investment in physical infrastructure. But their novelty comes in the way that they change the incentives for innovators to share their intellectual property with others. Businesses and inventors can pay to use the facilities to make proprietary prototypes, but the

labs are open to anyone who wants to tap into their powers of invention for free – provided they share the fruits of their labours with the public. Manchester's *Fablab* opened in winter 2009, joining a network of over 30 *Fablabs* around the world, from Boston to Afghanistan.

The concept was developed by Neil Gershenfield at the Centre for Bits and Atoms at MIT as an outreach programme to upturn the established understanding of technological development by giving everyone the power to invent. Manchester will work in partnership with MIT on the *Fablab* to build capacity for creativity, to stimulate entrepreneurship and growth in the advanced manufacturing sector. While the in-house technical advisers assist users to develop their ideas, most inspiration and help is drawn from the global network of 'Fablabbers.' Elsewhere *Fablabs* have generated everything from local telecoms infrastructure and prosthetic limbs in Afghanistan to mobile phone sheep-tracking systems in rural Norway.

Since opening in November, 340 manufacturers and 600 web-based businesses have already engaged with the *Fablab*, while over 900 young people and 100 'community users' have also passed through the doors. This has the potential to catalyse a new type of innovation activity in Greater Manchester.<sup>25</sup>

25. See: <http://fab.cba.mit.edu/> for the international network and [www.fablabmanchester.org](http://www.fablabmanchester.org) for more on the Manchester scheme.

### Key recommendation

**Supporting networks is a cost-effective way to encourage innovation – but only if they are purposeful.**

Supporting networks is a valuable role for LEPs – strong networks are vital to the success of innovative places from Silicon Valley to Shanghai. Without them, costly investments in infrastructure or regeneration will fail to generate the highest possible impact on innovation and economic growth. But creating networks for their own sake can be wasteful. Instead, catalysing networks to tackle specific challenges – as in the case of MIMIT – ensures

the networks are purposeful and increases the chance of sustainable success.

Public sector employees often work within complex performance and incentives regimes (such as clinical guidelines and national targets). While these can mitigate risk and create consistency, they can have the unintended consequence of inhibiting the genuinely creative pursuit of significantly better outcomes. Instead, by setting clear and challenging outcomes, public sector workers, organisations and companies can be incentivised to use their ingenuity and work with new partners to solve problems in new ways.

The new localism must not be parochial; these networks must draw on the best possible resources and embed them in the local economy. Over 25 pilot solutions enabled by the Manchester Innovation Fund on issues from securing public access to data to embedding the professional connections created by the prestigious Manchester International Festival into local communities will continue to generate useful evidence. The principles embedded in this type of approach – focusing on a challenging outcome but enabling a wider pool of actors to design and deliver the means of reaching the outcome – will be crucial to thinking about how government stimulates and supports better, cheaper responses to social and economic challenges through innovation.



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