



# INVEST NORTH

Delivering a confident future together

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# INTRODUCTION

The North has world-class economic strengths with global renown and appeal. It is well-placed to continue to play a leading role in the economy of the future.

But it also has long-standing challenges around productivity, a result of its connectivity challenges and lower levels of investment. It often feels as though the voice of Northern businesses is united, but that the Westminster policy establishment hasn't been prepared to be bold or pass down the levers necessary to make the long term decisions needed.

The Invest North project was established to bring together that voice and direct it so that the opportunities and the needs could be better understood both within and beyond the region.

Invest North has taken an unashamedly pro-enterprise approach. From the outset our intention was to focus on Northern leaders and voices who knew the opportunities and challenges from unlocking investment best of all.

That brought together the North's political leaders from metro mayors and the local authorities to political thinkers alongside senior economic and business participants from industry, property, investment and economic development, as well as the education and culture sectors.

Led by TheBusinessDesk.com, it is delivered in partnership with Northern Powerhouse Partnership, Squire Patton Boggs, Phoenix Group, and Lloyds Bank. It has also been supported by the Northern Powerhouse Investment Fund, Curveblock and Influential.

Our report reflects the vision and views of those who gave up their time at the 11 roundtables which took place across the originally-established Local Enterprise Partnership (LEP) areas.

It does not set out to "boil the ocean" and list every policy approach that could improve the lives of 15 million Northerners across our super-region. There are thousands of measures that could do that. Furthermore, as you will read, whilst transport is a significant part of unlocking our potential, it is not by itself sufficient to fully address the productivity challenge.

Instead, our business-led coalition's discussions honed in on measures that set the challenge that if both regional and national decision-makers undertake these certain specific industrial policy recommendations alongside greater access to private capital and key interventions to improve productivity, then that will improve the lives of those in our places, benefitting communities across the North of England.

Therefore, this report will look across six essential elements to deliver success:

	<b>1. Confident North</b> led by the private sector demanding long-term commitments
	<b>2. Devolution</b> with the regions' people and leaders responsible for their own futures rather than Whitehall
	<b>3. Investment</b> to unlock opportunity and a pipeline of investable propositions
	<b>4. Skills and Education</b> to unleash the full potential of all the North's citizens
	<b>5. Connectivity</b> with the right transport, infrastructure and logistics
	<b>6. Prime capabilities of sectors</b> that will drive prosperity: <ul style="list-style-type: none"><li>• Energy and Net Zero</li><li>• Advanced Manufacturing</li><li>• Digital and Technology</li><li>• Health and Life Sciences</li></ul>

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Our deliberations brought a hard-headed focus that ultimately produced 12 specific policy reforms with enterprise at their heart that are necessary to ensure a more interconnected North that can take advantage of the synergies of collaboration between its city regions and wider places.

We are pleased that it aligns with well-established approaches to unlocking the potential of the North West, Yorkshire and the Humber, and the North East, particularly this year's invaluable report by Convention of the North and the updated Northern Powerhouse Independent Economic Review (NPIER) established by Transport for the North.

We look forward to debating both the differences and how our approach fits in.

More widely we look forward to adding pace to the drive for greater equality to opportunities and outcomes across the regions of the UK described variously as "levelling-up" or the redistribution and regeneration of our country.

Because that is the prize. If our country can get things right by accelerating progress and unleashing the full potential of the North of England, then we can rebalance the national economy and change the lives of the people who live and work here.

It is a mammoth challenge but essential and ducking it with faint hearts or letting this once in a century chance slide can no longer be an option.

Let's set to work.





# CONFIDENT NORTH

## NORTHERN LED AND PRIVATE SECTOR LED

Invest North's 11 roundtables embraced the geographic and sectoral diversity of our mega-region but every event witnessed common themes.

Contributors were united by a shared confidence in the North's core assets of people and places.

Every event was clear that this was not a job for government alone. Instead, it is the private sector which is fundamental to unlock the North's full potential.

Our events and participants reflected the headline of "doing it for ourselves" in the Convention of the North's paper launched in January 2023, "Convening the North – Powering Britain's Future Prosperity", that set how "this transformation will be made and developed in the North".

Invest North's participants spoke in the same terms with particular emphases on:

- 1. Ambition** – embracing opportunities for their respective regions, and their respective capacities to transform the North and benefit at a national and international level

Sir Roger Marsh OBE DL, former Chair of the NP11 board of Northern LEPs: "We're doing something right here but there's more to go and that's what excites me. How do we reinvent not only the North, but the North reinvent UK PLC? We want to demonstrate realistic long-term ambitions, but also deliver short-term gains." (Leeds event)

- 2. Self-Responsibility** – not waiting for central government or others to tell the North and its regions what to do, but to decide ourselves

Jon Cowan, Chief of Staff, Sage: "It's incumbent on us all, to create the unified value proposition for this region. It's as simple as that. We shouldn't be asking for others for support. We should define what it is that we want, and make it happen. That's my ask: to take some risk." (North East event)

- 3. Strike Now** – the North has more focus on it than in recent decades so we need to make the most of it

Amul Batra, Co-Founder and CPO, Northcoders: "Our time is now. But we do have to execute, we have to deliver. I think we will have a lot of fun trying, but we need to make sure we keep our eyes on the prize." (Greater Manchester event)

## Pipelines of Investable Propositions

With that spirit of optimism and belief in the capacity of finance and industry to drive long-term improvements, Invest North focused on seeking out investable propositions.

With financial investors attending every roundtable, there was a clear enthusiasm for uncovering opportunities which exist within the various regions across the four prime capabilities. As one representative in the North West said: "we're in the business of trying to deploy capital so I'm really intrigued about how we as financial services businesses can help generate a pipeline of investable opportunities? That's really the key here."

Economic return for both entrepreneurs and investors were central considerations to maximise the benefit for financial institutions and the savers on whose behalf they were dedicating the money. There were also consistent messages about the importance of forging trusted, long-term partnerships with the social purpose.

The roundtables were left in no doubt about the importance of mutual relationships between companies and innovators when discussing options for interesting new start-ups, but also how this is greatly enhanced when investors saw commitment from mayors and leaders across city regions.

Significant emphasis was placed on the importance of policy stability, predictability and general political consensus about the long-term strategic focus for a region when decisions are being taken to make investments. Head of Private Markets at Phoenix Group, Tom Sumpster, reflected the view expressed at multiple events: "we need to know that positive economic and social developments are supported in a region with a long-term commitment attached. That's the biggest issue we're facing today – the ability for politicians to change their minds, and instead gain confidence from cross-party consensus for the way ahead."

We witnessed such cross-party agreement on this approach. The Conservative Leader of Lancashire County Council, Cllr Philippa Williamson, was explicit about how "we really see our role as key enablers to business and we put a lot of effort into understanding how we can do that well. Not just say the words we say but how we deliver.

Equally, in Liverpool City Region, Labour Metro Mayor Steve Rotherham emphasised the role of both government and local enterprise working together to encourage ambitious individuals to build successful lives and careers on Merseyside: "we want to harness the ability for university graduates and all those people who've got an entrepreneurial bent to provide them with the best infrastructure in the country to say, 'stay here when you graduate and develop your idea, do R&D, and spin it out!'"

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## Long-Term Certainty to Realise the Pipeline

Pipelines naturally are long-term projects and both political leaders and business emphasised the importance of certainty and planning.

Whether combined authority investments put taxpayers' money on the line or fund managers and banks are weighing the private contribution of investors and savers, public and private infrastructure investments can run into the billions.

There is political will. Elected in 2021, Mayor of South Yorkshire, Oliver Coppard, explained that he was working to put in place the foundations for a 20-to-30-year regional vision focused on the Innovation Corridor connecting Sheffield and Doncaster and drawing in surrounding towns: "Longer term political horizons are incredibly important. I'm always drawn to that quote about civilisation being the planting of trees, under the shade of which you will never sit. That's the way we have to think of this."

The private sector is clear that it can respond accordingly in such cases. In East Yorkshire, Managing Director of developer Wykeland Group,

Dominic Gibbons, has helped regenerate the area around the Fruit Market in a public-private partnership with Hull City Council: "It's getting the best out of the public sector and the best out of the private sector, where the private sector can be innovative, creative, and gets on with putting investments in. We're taking the long-term approach. We aren't going to regenerate it tomorrow, it's going to be a number of years."

However, to emphasise the challenges for Northern productivity, why it currently underperforms collectively, and why change is needed, one local authority director warned how "the private sector needs some assurance of sustainable infrastructure investment from national government, from devolved government, from local government, in order to get proposals through its investments committee. We don't have that."

Delivering that capacity for certainty explains why reforming the barriers to prosperity are so important for Invest North.





# DEVOLVED NORTH

By May 2024, some 74 per cent of voters across the North of England will have had the opportunity to vote for one of six Metro Mayors to head up their combined authority. In Liverpool City Region, Greater Manchester, South Yorkshire and Tees Valley, the mandate will be maturing into third terms. The extension of the North East combined authority south of the Tyne through County Durham will mean that the full region will finally secure the benefits of devolution.

At the last set of elections in 2021, rising turnouts reflected both greater awareness of the role of mayors and the combined authorities, and also recognition of delivery. Perhaps the two most high-profile mayors in the country for their respective parties, Andy Burnham and Ben Houchen, secured the support of more than 7 out of 10 voters casting a preference.

Strong local leaders have been at the forefront for change in their regions and driving progress from east coast to west. Across Invest North's roundtables, political leaders set out their stall for what mattered most about their unique positions:

- **Andy Burnham:** "I think we do need to hold to that Northern Powerhouse vision because it remains true that if you bring these Northern cities closer together – if they collaborate more – then we'll more than punch our weight on the world stage."
- **Jamie Driscoll:** "My job is to get everybody earning good money, basically. That includes SMEs, large companies, but particularly people who aren't earning any money at the moment."

As the Convention of the North's report stated, "the North has a unique capacity to deliver change at depth and scale" and Invest North's roundtables demonstrated how the business community has taken advantage of the reforms.

Lou Cordwell, Chair of Greater Manchester LEP, highlighted greater clarity of what the region had to offer nationally: "We've got a really good line of sight now about our own assets and opportunity to drive economic growth and where that fits in the UK picture."

In North Yorkshire, the chief executive of the LEP, James Farrar, explained how the "cross-regional narrative is important" as it prepares to exit the devolution waiting room with a deal signed and awaiting delivery because "the chemicals industry in Teesside and the biorenewables industry in Humber is as important to the bioeconomy of York as anywhere else."

## Catching Up and Missing Out

As three-quarters of Northern citizens benefit from the mayoral model, the question becomes sharper about the experiences of those travel to work areas in the North without it. Local leaders wanted to get the model right for their region but were clear about the impact of catching up and also missing out.

Fragmentation has set regions back and those areas without powers devolved to the Metro Mayor acknowledged a feeling amongst business, voters and decision-makers that they are missing out.

In Cumbria, Carlisle has seen the Borderlands Growth Deal alongside neighbouring areas of Northumberland, Dumfries and the Scottish Borders, but a devolution deal has not yet been agreed for the whole of the county. So there, like Lancashire, the roundtables saw voices speak out in favour of potential deals waiting to be signed.

In Cheshire, Warrington Borough Council Chief Executive, Professor Steve Broomhead raised how local councils were continuing to weigh the options: "so the price is to have an elected mayor but the prize, of course, is additional resources devolved from government and additional powers."

In Hull, there was a vocal sense that missing out on devolution was holding the Humber back in terms of powers and voice. One business participant raised the power of the Energy Estuary "driving the Humber brand ... that's recognised in Westminster" but was concerned that "the lack of political clarity in the area is working massively against us". Indeed, another private sector participant contrasted the area's local experience negatively against a comparable region like Tees Valley's push into Net Zero and advanced manufacturing industries: "we need a Ben Houchen on the Humber, in my view."

## The Benefits From Greater Powers Are Clear

Mayors as figureheads have changed the political landscape regionally whilst casting these leaders as national voices for their cities, regions and the North more widely. Yet it is enhanced powers that have given the model its value which is recognised and advocated by elected representatives, business leaders and regional champions alike.

As well as education and innovation, Invest North engaged key sectors like culture which have shared the benefits. The Piece Hall is a unique Northern institution located in Halifax. With its architectural heritage rooted in West Yorkshire's materials trade, today it attracts millions of visitors to the town with concerts and cultural events.

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Chief Executive Nicky Chance-Thompson makes the link between pushing powers out of Whitehall today with the self-determination that drove the first industrial revolution across the North: "Regions know what's best for them, rather than Whitehall knowing what's best for the regions. With metro mayors representing businesses and people, decision making can be made faster and we can be more agile and really accelerate growth. Let's make devolution faster by handing over bigger budgets and allowing Mayors to do their jobs. Allowing regions to thrive is the catalyst for growth."

Greater control over budgets is justified according to Mayor Steve Rotherham by the increasing evidence of combined authorities "using the limited funding and resources that we get from national government better than they could do for us."

This matters to institutional investors. Managing Director for Levelling-Up at the UK Government's Office for Investment, Tim Newns, notes the importance of devolution as "the absolute key" in attracting foreign direct investment to the North of England: "I find using the convening power of the Metro Mayor role is completely transformational in conversations with government, and for international investors as well because they just get the role. They get the power of that point of contact both from a strategic and an implementation perspective."

## Putting Place Back at the Heart of Industrial Strategy

As the Metro Mayoral model has gained maturity and business and community leaders accept the legitimacy and capacity of the combined authority to set regional priorities, this now offers the opportunity to fill the gap and deliver a more integrated approach to improving productivity, prosperity and to deliver for the long-term.

In Transport for the North's update to its Northern Powerhouse Independent Economic Review launched in Newcastle in March 2023, it reiterated its argument about the "persistently weak productivity growth in the UK" as gaps widen with the rest of the UK even despite the commitment to "levelling-up" included in the Conservatives' winning manifesto in 2019.

The UK has witnessed repeated and significant policy churn in this area that makes consistent decision-making and risk evaluation difficult, even in the brief period since the referendum on membership of the European Union in June 2016.

The national Industrial Strategy launched by former Prime Minister Theresa May in 2017 set a framework for Local Industrial Strategies which were adopted, or close equivalents, by all 11 Northern LEPs and combined authorities. This was subsequently added to by her successor Boris Johnson's 12 Point Plan for a Green Industrial Revolution which prioritised industries – many of which are driven from or located in the North – requiring long-term investment and planning by both the private sector and the state.

However, HM Government's abolition of industrial strategies in 2021 – formalised in its removal from the title of the Business Department earlier this year – has kicked away this part of long-term regional planning, and raised questions about Britain's capacity to compete with President Biden's Inflation Reduction Act or major post-COVID industrial interventions by the EU.

In our view, place has a proper role in the strategic development of priorities for regions and for the country. We support the clarity of purpose within the Levelling Up White Paper launched by Secretary of State Michael Gove last year seeking to "boost productivity, pay, jobs and living standards by growing the private sector, especially in places where they are lagging."

Equally, on the other side of the political spectrum, Shadow Chancellor Rachel Reeves and Shadow Business Secretary Jonathan Reynolds have confirmed that the Labour Party remains committed to industrial strategy with the launch of their own plan in September 2022 titled "Prosperity Through Partnership", and have included the concept of place for rebalancing Britain's regions.

Invest North's contributors were clear about the vital role of longer-term certainty for business and investors seeking the confidence to manage risk when choosing whether to back new infrastructure or innovations, and persuade investment committees.

### Recommendation

We therefore recommend that it would enhance confidence to invest through place-based industrial strategy, supported by four further innovation accelerators across the North of England and extending the one being rolled out in Greater Manchester.

The ambition of the Levelling Up White Paper to rebalance R&D investment around the country is to be welcomed but now requires real long-term action to enable business leaders and private investors to deliver on their commercial strategies with greater confidence that would come with policy consistency across the North and its regions.

Locally-defined, place-based industrial strategy to better leverage R&D through commercialisation is critical, and this should be partnered with the investment zones already being brought forward in locations across the North of England.

From health innovation to digital, energy to advanced manufacturing and materials, and everything which intersects them, this is the right approach to deliver the transformation in productivity that the North needs. Examples include the private sector leadership being shown by Greater Manchester universities working alongside co-located businesses like Bruntwood in the Oxford Road life sciences corridor, and in manufacturing sectors at sites like Northern Gateway within the wider Atom Valley.

At our South Yorkshire roundtable, chief executive of specialist steelmaker Sheffield Forgemasters, David Bond, contrasted how "the one thing that sets our European counterparts apart from the UK is they have long term industrial strategies that really are almost culturally embedded in their political system".

The leadership of Metro Mayoralities are rightly within the democratic control of voters. Ultimately it is their choice who will head up their respective combined authority every four years. But we believe that this additional delegation of powers can deliver a substantive benefit by reassuring business and financial decision-makers about long-term strategic priorities and consistency of focus within a region that even changes in administration are unlikely to disrupt.



# INVESTABLE NORTH

The UK is one of the world's leading financial centres, with pension and insurance wealth standing at £4.6 trillion, the second largest after the United States. Finance and investment companies are core to Britain's financial and professional services (FPS) sector and a key enabler for the North of England's future prosperity.

Both Greater Manchester and the Leeds City Region are home to significant institutions from finance to pensions, insurance, accountancy, real estate and law firms. The North's banks and building societies boast names synonymous with the founding histories of their cities and towns. The sector generates wealth through jobs and income directly, and as a multiplier for wealth and employment with new investment projects.

## Investor Engagement with Regional Strategies and Social Purpose

The enabling role is laid clear as investors at our roundtables discussed how investment strategies are meeting a positive reception across the North.

"The city is thriving but where does it go next?" asked Tom Sumpster, Head of Private Markets at the UK's largest institutional investor, Phoenix Group. "We heard from Andy Burnham whose latest focus is on skills and a fit-for-the-future labour force. Match this ambition up with industries the UK excels in – life sciences, tech, the green revolution – and pension money providers like Phoenix Group can play a huge and meaningful part in accelerating that investment opportunity and the continued growth potential within Greater Manchester. We can see this already happening."

Other participants like Dean Cox, fund manager at Maven Capital Partners, enthused that "as an investor, Liverpool and the North generally are an extremely attractive parts of the UK to deploy capital and to support entrepreneurs."

### Traditional Lenders With Untraditional Strategies

Institutional investors stressed the work that goes into responsible investment asking how to support:

- Locally-based businesses – both SMEs and significant global organisations
- Employment opportunities and maximise jobs
- Infrastructure delivery
- Projects with positive social impact like decarbonisation, clean air and city congestion

As the only Northern city to be a net contributor to the Exchequer, FPS is especially important to Leeds where its Mayor Tracey Brabin, first elected in 2021, challenged financial institutions to base themselves in the region: "we need all those venture capitalists to have a northern office. We need more people here in the satellite offices that are coming to see the work that we're doing face to face."

One strong message is how traditionally-trusted lending institutions are developing North-focused investments in a new way. The priority for growth-focused SMEs and startups is leading to banks and pension funds reorienting investment strategies to coordinate with the new devolved institutions and to achieve social purpose.

Attending the roundtables, Natalie Boswell, Regional Development Director for Lloyds Bank in the North East, Yorkshire and Lincolnshire observed that "regional development is all about having an impact in a place". From Newcastle to Sheffield in her region, she says Lloyds Bank has "worked collaboratively with proactive mayors and mayoral combined authorities. Supporting regional development is fundamental to our purpose of helping Britain prosper. By working directly with local and national authorities we can see the really positive impact of bringing the right type of support and funding to the right places. That's good for local communities, and it's good for finance providers."

### New Funds Focused on Northern Growth and Innovation

New types of investment are making a significant difference too. The Northern Powerhouse Investment Fund (NPIF) was established as a collaboration between the British Business Bank and 10 of the LEPs across the North West, Tees Valley, Yorkshire and the Humber. It delivered £500 million in its first round for start ups through microfinance, for SMEs looking to grow through debt finance, and also equity finance options. It recently announced its second funding round starting in 2024 which will provide £660 million of support.

At Invest North's roundtable hosted in Darlington, the British Business Bank North East-based senior manager, Shaun Fooy, emphasised the collaborative approach needed to improve the access to finance: "we are trying to draw in the private capital, it is bread on the water ... It is always SMEs that we're trying to support and encourage, but it is also about being a catalyst."

Northern Gritstone is another new entrant to the investment landscape with the goal of helping Northern industries achieve world-class leading potential and enhance the regions' productivity and prosperity. The North is unusual in global terms to have eight established world class research intensive universities, and a number of others including Northumbria developing their research strengths with intent, but not have a more successful economy than it does today in productivity terms. In order to help address this mismatch, Northern Gritstone was established to invest in the early stages of some of the spin outs of businesses with cutting-edge research, especially from its anchor universities at Leeds, Manchester and Sheffield.

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## Need for Reform

Whilst there is an undoubtedly vibrant investment landscape, the North's businesses still experience real challenges unlocking funding, especially compared to competitors in London and South East England.

As the Convention of the North made clear, "too few of our entrepreneurs are able to secure access to finance which is holding them back from getting ventures off the ground", and this poses a long-term risk to innovation necessary to decarbonise the North.

Despite the UK's £4.6 trillion pensions and insurance assets, the country still only deploys 9% of our pensions into alternative investments (beyond public bonds, public equities and cash) that would enable the North and the wider UK to grow. Compare this to the 23% average across the world's seven largest markets that include comparable economies like Canada, the United States and Australia, and the gap is getting wider.

The Convention of the North argued that there needs to be a concerted effort to attract more private investment in new businesses – angel investment – and venture capital to the North in high-growth sectors like digital and tech. Innovative firms like the fintech and property investment start-up Curveblock, pointed to how disruptive innovation often worried both funders and regulatory bodies, and references the value of sandbox type approaches to help innovators demonstrate their products, similar to the FCA's fintech sandbox.

Invest North recognises that the UK Government has acknowledged this disadvantage and is committed to reforming Solvency II. The repeated message from our contributors suggests there is a significant prize for getting this right. It is estimated that the right reforms have the potential to release £100 billion for big transformational projects to invest in city region visions.

The recent Mansion House 'Compact', which has been agreed between nine of the UK's largest pension providers, including our partner Phoenix Group, is a voluntary commitment to allocate 5% of their pension assets to unlisted equities and is a major stepping stone in unlocking investment for growth companies. It is critical that governments continue to work with industry to make the necessary reforms over the medium-to-long term and address the regulatory and non-regulatory barriers that prohibit increased investment in our high growth companies.

### Recommendation

We therefore recommend the unlocking of the transformative potential of Britain's investment capital through a committed programme of policy and regulatory reform plus support for Northern Gritstone and comparable funds in order to enable private and local government pension fund investors to back more fast-growing businesses across the North towards reaching scale.

We must capitalise on opportunities for Britain's private and local government pension funds to invest to the benefit of savers in the many investable propositions across the North of England.

New North-focused investment funds offer significant opportunities, for instance, with the local government pension scheme in Liverpool City Region backing Gritstone. Significant untapped projects offer a variety of risk profiles for fund managers, for example, with high-quality office and lab space required by industry across the four primes to create jobs, and raise productivity.





# SKILLED NORTH

Higher and Further Education also provides another enabling role underpinning the North's Prime capabilities.

In addition to the role of universities equipping learners for successful careers and as the backbone for established and new employers, Northern universities attract talented UK students to the region. Recent years have seen these institutions become magnets for foreign students bringing in billions of pounds in export income for HE, plus the services they demand across university towns and cities from Middlesbrough and Preston to York and Chester.

The N8 Group of research-intensive universities stretching from Liverpool to Newcastle are recognised for innovation that underpins development of growing sectors. The Henry Royce Institute at the University of Manchester collaboratively with Liverpool and Sheffield and the Advanced Manufacturing Research Centre attached to the University of Sheffield amongst others, have cross-cutting importance across the Prime Capabilities.

Invest North business contributors in sectors across the prime capabilities stressed how heavily their firms drew upon PhDs and graduates given the complexity of modern technology from engineering to digital and the life sciences.

## Matching the Opportunity

The challenge recounted from the factory floor to the laboratory floor across our 11 roundtables, however, mirrored the Convention of the North's call that every major sector in the UK "needs to close a significant skills supply gap". Indeed, its report stated that the North like the wider UK has a deficit in the number of people with even "adequate digital skills," which the academic literature including the paper by Stansbury, Turner and Balls<sup>1</sup> (2023) supports in terms of higher skills by highlighting the high STEM graduate premium in their work.

This undermines the North's capacity to develop what COTN describes as "a model of inclusive growth that unleashes the potential and talent of all our people, with a highly skilled, healthier, and more productive workforce."

## Business knows there's a shortage

Cat Smith, senior manager with the British Business Bank, said she had recently returned to Hull to find the same issues she had dealt with six years earlier. "The same problems in skills and resources are very prevalent. It's the main feedback I've had from every business across Yorkshire."

Demonstrating how a shortage of skills will limit growth in the prime capabilities, Jason Speedy, COO of Groupe Atlantic, warned at the Humber event about the reskilling issue for meeting the challenge of Net Zero: "talking about decarbonisation and heating, government are going with heat pumps and probably hydrogen. They've got an aspiration of 600,000 installs by 2028. Who on earth is going to install them?"

1 <https://www.hks.harvard.edu/centers/mrcbg/publications/awp/awp198>

It is clear that new opportunities demand a significant skills uplift to maximise the potential of initiatives such as the freeports. Charlie Nettle, Group Managing Director of AV Dawson which operates Port of Middlesbrough as a constituent part of the Teesside Freeport, highlighted how the promise of 18,000 jobs on the former Redcar-steelworks regeneration project would mean "one in 15 people of working population across the whole of Tees Valley employed on the Teeswork site, so it is going to have to be a combination of attracting those people in and training the people."

Industry-focused education providers like the University Technical Colleges (UTC) have connected local businesses with students and the universities, and provide a more direct link between young people approaching the workforce as well as older employees updating skills through retraining.

Ron Dearing UTC in Hull's senior assistant principal for employer engagement, Glenn Jensen emphasised the importance of meeting regions' skills demands for today and tomorrow: "we've tried to ensure that students with the companies that partner with us have an understanding not only of the companies within our region but of the types of skills and opportunities they're going to need in the future."

## Combined Authorities taking a long-term view

The Metro Mayors made clear that skills are at the heart of how to maximise opportunities and meet challenges of long-term industrial transition.

Andy Burnham told the Invest North roundtable about Greater Manchester's "big opportunity" deriving from the new Trailblazer deal signed with the government that secures his region's ambition to deliver "high quality pathways for all young people, and particularly those at 16 who want to go on a technical qualification journey and work-related opportunity".

Addressing issues of T-levels he opened up about the thinking behind a Greater Manchester-designed baccalaureate "which is really future facing, locked on to the needs of the economy" for the city and surrounding boroughs: "if we crack this, it gives people a real opportunity to invest here. The next chapter of GM's development should be to mobilise young people from all 10 boroughs with a clear pathway. We'll have a head start for a decade."

Across the Pennines, Mayor Tracey Brabin made a similar pitch: "As the mayor, I want more powers over skills because I want to be agile, to deliver for you the skilled workforce that you need so I can say to an inward investor 'come to our region and I will provide you with data wranglers or location finders' or whatever it is that you're looking for. I can make sure you've got that skill pipeline."

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## Regional Leaders Taking Responsibility for the Solution

Many of the contributions from industry, education and political leaders alike at Invest North's roundtables aligned strongly with the case put by the Convention of the North that "the business community and local government across the North have been at one in arguing for much greater devolution of skills funding and policy, so that local employers and local leaders can collectively plan and provide for the skills their economies need now and for the future."

### Recommendation

We therefore recommend the devolution of responsibility for skills and further education to combined authorities by offering Trailblazer deals to enable all Metro Mayors to deliver skills strategies aligned with local industrial strategies.

Before the end of 2024, the trailblazer devolution deal template needs to become the minimum framework of powers available across the North's combined authorities which can meet the governance requirements and safeguards.

Aligned with place-based industrial strategies, these new powers will maximise the return on investment for regional public and private spend on vocational learning, and help leverage greater investment from employers in areas where the skills demand is now rapidly outstripping supply in the North of England's prime capabilities, in particular for digital and tech.

Whilst Greater Manchester is keen to take advantage of its new powers, a multi-speed approach would negatively impact other regions by disadvantaging local workers from taking up the new opportunities.

Henri Murison, Chief Executive of our partner the Northern Powerhouse Partnership, was clear that with Pathfinder devolution only going to Greater Manchester and the West Midlands then others are in the second tier: "it's the wrong approach because, if we can't retrain people who are already here and get young people who are wanting to work in those sectors into those opportunities, then they will go to higher skilled people who will often come from outside the area. That's not good enough. We've got to have the jobs and skills offer to match the scale of industrial ambition. And that's where I think the devolution picture falls into place."



## INCLUSIVE NORTH

Throughout Invest North's 11 roundtables, the diversity of the super-region was raised as a strength but so were questions of inclusion and under-representation across the prime capabilities.

Contributors agreed that inequality were about basic standards of fairness, but also observed how engaging all the talents of the North was necessary to create truly inclusive growth: "you've got skill shortages yet also pockets in the community which are underemployed - people with disabilities, disadvantaged people, people with low aspirations - all with great skills. We just don't tap into them."

### Gender and ethnicity

In 2022, Engineering UK showed that that only 16.5% of those working in engineering are women, with employees from Black, Asian and minority ethnic backgrounds comprising just 10% of those in engineering occupations compared with 13% of the total labour force<sup>2</sup>.

Given the prominence of STEM subjects as the foundation for a career in the prime capabilities, women are under-represented in STEM subjects from school onwards through to higher education where they comprise 10% of students studying engineering, 20% in computing, and 39% for both design and technology, and ICT.

Mayor Tracy Brabin described how women found venture capital harder to unlock than than men, pointing out that for every pound of investment capital, female-led start-ups attract just 1.6 pence in the pound, compared to 12 pence for men. She highlighted the purpose of Enterprise West Yorkshire initiated since her election in 2021 with a £6m investment budget that allocates 50% of its money to women entrepreneurs, 20% to people of colour and 3% to people with disabilities.

"My goal is widen the remit of who is allowed to have the ideas and who is allowed to have the money to scale up those ideas. We wanted to disrupt things .. and we're smashing our targets already."

Business and financial institutions are also focused on the challenge. Lloyds Bank's regional development director, Natalie Boswell, shared the bank's experience that lenders could help female and minority ethnic-led businesses unlock funding, assist with more inclusive networking opportunities and create platforms where such businesses could put themselves in the best position to access funding: "our 'Black, British. In Business and Proud' reports support this and underpins our Black Entrepreneurs Programme, focused on helping entrepreneurs across these unique challenges".

Sharon Jandu, founder of the Yorkshire Asian Business Association (YABA) discussed how the UK's Black, Asian and minority ethnic population currently contribute £25 billion to the economy enhanced by diaspora relationships, but how investment, support and taking greater advantage of connectedness across the North could quadruple its output: "how do we unlock that potential? Business is about relationships and it fits in really nicely having the connectivity of the Northern Powerhouse."

<sup>2</sup> <https://www.engineeringuk.com/media/318537/engineeringuk-response-stem-diversity-final-jan-2022.pdf>

## Social deprivation and the role of education

The lack of opportunities associated with social deprivation also drives inequality across the North with particular problems caused by the lack of private and public transport options to connect workers with potential jobs and poor health that forces the sick to withdraw early from the labour force and restrict academic options.

One of the North's most innovative new higher education providers, UA92 based in Old Trafford in Manchester, was founded in 2017 by Lancaster University and Manchester United's Class of 92. Its CEO, Sara Prowse, was clear: "I'd like to see education really driving social mobility for people from more disadvantaged communities. Today, the education system reproduces rather than counters economic and social disparities. I'd like to see the education attainment gap that is currently widening to be closed."

Tackling disparities in education is essential for growth, with three-in-ten (29%) of long-term disadvantaged pupils receiving workless benefits at age 22, according to new research from the Northern Powerhouse Partnership (NPP) and FFT Education Datalab.

These young people were around five and a half times more likely to be in this position than those who had never been eligible for free school meals (5%).

Nearly seven-in-ten (69%) of long-term disadvantaged pupils in London went on to long-term education or employment, compared with just over half (54%) in the North East, which has the second highest level of long-term disadvantage (12%) as a proportion of the overall school population.

Carla Yearsley, Regional Development Director, Lloyds Bank stressed the importance of collaboration between public, private and academic sectors: "Inclusivity matters but no one organisation can tackle it alone. It's how we can work with different organisations to take some of the skills from the universities and actually deliver the bits that are needed into areas of deprivation as well, rather than just relying on combined authorities and local enterprise partnerships."



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# CONNECTED NORTH

Connectivity and transport infrastructure featured regularly in Invest North's discussions and are closely related to logistics which the NPIER included to enable the prime capabilities to realise their full potential.

Throughout our roundtables, logistical logjams for freight and the relationship with passenger transport more widely were a significant topic of conversation that demonstrated everyday consequences to the widening investment gap as measured by fixed capital expenditure per head of population since the financial crash in 2008.

We considered the impact of transport and wider infrastructure on the North's capacity to meet its potential. The NPIER offered the prospect that improvements in Northern transport connectivity could unleash a 15% increase in GVA by improving business productivity, competitiveness and the ability to better match skills with labour supply – in addition to the obvious social benefits to improving reliability and cutting congestion.

TFN's assertion in the report that "it will take time to put into place the substantial scale of investment in pan-Northern transport infrastructure required to support a change in the North's economy" is undoubtedly true. But it is necessary, as it is a binding constraint on addressing the North's productivity challenge.

## Making the case for Infrastructure

Business is making the case for intervention that supports the North. Whilst talking about current activity and potential investable propositions, Nick Helm, former Partner at Squire Patton Boggs, observed: "it's great to hear about these fabulous enterprises but we still need to underpin all that with decent transport connectivity ... That's a must for the region so we can allow our people to move around to take up those jobs and set up their enterprises and develop."

Financial institutions are already putting their support behind necessary logistical assets too. Gary Chapman, Co-head North Region and Director at Lloyds Bank spoke in North Shields about the bank's strategic priorities: "We fund significant infrastructure development on the North East coast. This infrastructure investment is aligned with our purpose of helping Britain prosper, and we want to be at the heart of these projects in the regions."

Further inland, Nicky Chance-Thompson of The Piece Hall in Halifax discussed the infrastructure necessary to support organisations that attract tourism and cultural visitors: "the key thing for the town and for the region is investment in transport, infrastructure and good hotels."

## Transport

Invest North's participants are clear about the importance of connectivity although our business focus means that we have not made a separate formal recommendation on transport, with the North of England's strategic transport plan at consultation stage.

However, there is unity of agreement in the region about the vital role of transport infrastructure so we add our support to the call by the Convention of the North to deliver Northern Powerhouse Rail in full in addition to the Transpennine Route Upgrade, in addition to the recommitment to HS2 including the Eastern Leg identified as essential infrastructure requirements in order to unlock the economic potential identified by the NPIER. We also agree with the Convention's proposition for continued devolution to deliver high-performing local public transport, with key specific schemes such as West Yorkshire mass transit, discussed in the round tables.

## Logistics

Transport logistics matter given how they hamper trade and business activity, with the poor provision of public transport having an impact on trade, which was captured in the reflections on the lack of capacity for both freight and passengers on the existing network from one participant at the Humber round table.

Tim Rix, Chairman of the six-generation Hull family firm JR Rix & Sons echoed the sentiment: "We need to have an infrastructure which delivers on a number of fronts, particularly with regard to transport east and west, and expansion of the port, which I think is going to be very important for the offshore wind industry. Because if we don't have the right infrastructure in place, you're going to find somebody building an island on the Dogger Bank and it'll have a Danish flag on it."

Hull needs its railway link upgraded as part of the Northern Powerhouse Rail core network, agrees Andrew McPhillips, Chief Economist with the Northern Powerhouse Partnership: "it's a long-term project, but it's the one that carries the most potential for transformation of the city in terms of connectivity – connecting it to the economy of Leeds."

## Integrated Transport Systems

We support the Convention's proposals because NPIER has clearly demonstrated how improved transport infrastructure for the North would focus on reducing rail journey times between cities and improving commuting into cities. This would make it easier for firms and their employees to interact and hence enjoy the productivity benefits associated with agglomeration, allowing more workers to work in city-centre locations where higher-paid jobs are available and better matching between skills and jobs.

Mayor Andy Burnham has used his devolved powers to introduce the new integrated Bee Network which will deliver "London-style", high volume transport from September 2023. He is clear that "places that have good connectivity are the ones that are moving, and it's why that transport infrastructure is absolutely critical", citing Stockport and Farnworth's advantages from good links to Manchester city centre in particular.

The comprehensive approach is supported by analysts like Urvashi Parashar, chief economist with the UK Infrastructure Bank, who says that transport infrastructure must be looked at holistically: "we know that 70% of commuters in West Yorkshire live and work in their home districts, and yet the region has some of the lowest investment levels. We have some capital to deploy with the private sector and local authorities to address that problem. But we can't look at it in silos. Transport isn't about a bus network here, a tram there. You have to look at how they connect people to places and businesses. It's ultimately about connectivity."

## The challenge of dispersed populations

The roundtables accepted that the challenge was complex, especially for regions with poor connectivity servicing small and atomised labour markets. In Cheshire, for example, LEP CEO Philip Cox talked about the transport challenge posed by one-third of Cheshire and Warrington's workforce arriving daily from beyond its borders, including Manchester and from Liverpool, heading to multiple places of work across a 1900 square mile area without a single centre of population. Solutions are still required though because whilst "public transport networks would be challenging regardless of current provision, this particularly impacts on the young", citing how 30% of under 30s do not drive.

In counties like Cumbria, it was observed that inward investors struggle with recruitment challenges given the topography of the region with settlements dispersed around the coast and separated by beautiful but challenging terrain. Whilst the Lake District and routes between Barrow and Carlisle may never benefit from integrated transport to rival the capital, however, improving public transport provision and modern and reliable road and rail links still remains vital for improving productivity for all the North's population.

## Impact on disadvantaged groups' economic participation

Convention of the North cites TFN evidence that an unequal public transport system is creating a high risk of social exclusion for more than one-in-five Northerners (21%, 3.3 million people) compared to 16% across the rest of England.

Invest North's participants highlighted how transport infrastructure imbalances are especially problematic for young and socially disadvantaged employees trying to access job or apprenticeship opportunities.

In West Yorkshire, President of Leeds Chamber of Commerce, Mike Briffett, said unlocking the region's growth involved a number of major challenges and required long-term solutions: "when do we get to the point where we've got the right transport infrastructure to allow social mobility to find access to education and jobs? Unless we do that, all the talent that is over our region is never going to find opportunity."

The impact of poor connectivity has an early impact with young people seeking qualifications finding it hard to access learning as Karen Mitchell, Chief Executive of Cumbria Action for Sustainability, observed: "they're excluded from getting qualifications because the cost of getting to school once they've turned 16 is not subsidised, so they're underpaid. Which may contribute to why we have a lower level of qualification. So sorting out public transport is critical."

Mayor Steve Rotherham of Liverpool City Region says there needs to be significant action from HM Treasury: "the Green Book has to go or put some social deprivation clauses into the formula and then we'll get a fairer share."



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# THE NORTHERN PRIMES

The North has many strengths but the four "Prime Capabilities" are especially productive and demonstrate where Northern business is competing on a national and international stage.

With Invest North's enterprise-focus, the Primes formed the basis for our roundtable discussions of sectoral opportunities and challenges facing the North in order to maximise focus for the initiative, and complement our work with insight direct from Northern England's business community.

Deemed to be genuinely distinctive, the Primes were set out in the Northern Powerhouse Independent Economic Review in 2016 and comprised: advanced manufacturing, energy, health innovation and digital.

Accounting for over 2.1 million jobs across the North in 2016 – some 30% of the total – the Primes' £100 billion revenue GVA represents just over one-third of the North's total, and their role was deemed "strategically significant" given the ability to unlock potential and multiply jobs and growth in other sectors.

Similarly, this year's report from the Convention of the North reinforced such an approach by focusing on where the Primes could power Britain's future economy "developing the key assets to lead Britain's economic future and drive decarbonisation from the North, with major clusters of life sciences innovation, the UK's largest network of renewable energy capacity, ... advanced manufacturing specialisms, ... a fast growing digital and tech economy, and world class natural, cultural and heritage assets".

Our recommendations below are particularly drawn from the lessons and challenges highlighted by our business, education and culture sector contributors to the roundtables.



## PRIME 1 – ENERGY AND NET ZERO

The North's natural assets and industrial expertise make Energy a prime capability with leadership on delivering Net Zero technologies from the North of England demonstrated across Invest North's roundtables.

Northern energy expertise is formed in clusters that genuinely compete on an international level and embraces generation, storage, and low carbon technologies and processes. Its regions offer a proven track record in Nuclear Energy, particularly led from Cumbria, with more recent innovation in decommissioning. Over half of England's renewable energy output is generated in the North, benefitting from onshore and offshore wind energy assets in the North Sea and Irish Sea, alongside the potential for tidal energy on the Mersey.

Growing expertise in new technologies embrace new battery technologies, waste to energy, biomass and small hydro, in addition to the process industries generating the UK's sources of industrial hydrogen from the Teesside, Cheshire and Warrington, and Humber-based chemicals clusters.

### Net Zero as Gamechanger for the North

Invest North participants were given a stark reminder of the pressing climactic and moral challenges of climate change for our region and wider world by Co-Founder of MetroDynamics, Mike Emmerich: "if we don't fix these things, within 50 years it's likely that large parts of coastal Lancashire will be underwater ... and the Mersey will continue to flood".

Across our roundtables, Metro Mayors were clear about how their capacity to convene leaders to take action on decarbonisation from business, academic and innovation institutions both nationally and internationally was a benefit to fully explore the economic and social potential of Net Zero.

Given the North West's exceptional natural assets, both Manchester and Liverpool roundtables latched on to the possibility that the region might be able to generate double its total energy consumption requirement from renewable sources, offering the potential to become a net exporter of green energy generating both income and high quality jobs.

"What is the future of the north of England in the 21st century? A net exporter of green energy sounds like a great place to be to me" enthused Greater Manchester Mayor Andy Burnham. He followed this up with a warning about the need for urgent action from Whitehall: "it will require the backing of UK government to say 'OK, we buy that vision for the North of England - let's do it and do it now' because others are starting to crowd out this market. We're in a really pivotal moment."

His neighbour Steve Rotherham shared similar opportunities for Merseyside and equated the Net Zero revolution with the North's global engineering and technological leadership in the 19th century which has defined so much of its identity since: "where do we go and what are we for?"

"We built the likes of docks, canals and railways that made us the gateway to the first industrial revolution, and we've got these things in renewables. We've got hydrogen, wind at Burbo Bank, and tidal hopefully: all the big things. So what can we do to forge that identity and make everybody buy into the vision."

### Business Already Bought in to the Vision

Northern business leaders participating in Invest North praised the UK's early support for meeting the challenge of climate change through legislation that started under the last Labour government and has continued through the Conservatives plan for a Green Industrial Revolution and hosting COP26.

Cheshire and Warrington LEP chief executive Philip Cox was clear about the business opportunity that accompanied ministers' legislation to be net zero by 2050: "we get first mover advantage as a nation. I think the government has put some big bets behind it and now it's got to keep up support and mustn't let the deadline slip because that will start to undermine confidence."

This is where Northern firms are already embracing the challenge to meet Net Zero with Lloyds Bank research finding 93% saying that it's important and even 64% of SMEs have now got a plan in place to reach net zero by 2050. The bank's Natalie Boswell is seeing deals on the ground: "Yorkshire and the North East have continued to cement their reputation as an emerging regional powerhouse in renewable energy production, and the devolution deals are helping bring much needed investment into the region."

Roundtable participants from SMEs to the LEPs to global operators enthused over diverse opportunities from renewables and the green energy transition. Managing Director of North East internationally-exporting engineering firm Tees Components, Sharon Lane, was clear: "for Teesside, it's the Net Zero prospect. We just have a huge opportunity. We're ahead of the curve already." Phil Glover of Hull and East Yorkshire LEP talked about the long-term potential of recycling: "whilst we're building all these wind turbines at some point they'll need decommissioning and recommissioning. So there is real opportunity there."

Nick Helm, former Partner at Squire Patton Boggs, said it was a clear benefit to the North: "looking at this part of the UK, we are very excited by the prospects for renewables, offshore free ports, opportunities, and hydrogen, all areas that we're active in."



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## Technologies that will make the difference

Three technologies stood out across Invest North's discussions on Energy and Net Zero that could make a transformative difference for the North of England.

### Small Modular Reactors – the nuclear opportunity

SMRs could be vital for delivering UK Net Zero commitments by increasing electricity generation whilst decarbonising the grid. Providing baseload power to back-up renewables when the wind isn't blowing, they can support the move away from hydrocarbon imports and risks to sovereign capability. For these reasons at our Sheffield roundtable, Head of Communications for Rolls-Royce SMR, Dan Gould, described this as "an absolute game changer for the UK - they are the key to our Net Zero aspirations".

Additionally, the unique and pioneering nature of this British technology will also provide significant employment and regional growth drivers through high-skilled, well-paid jobs with world-class North-located manufacturers, in the supply chain and offsite local assembly, with huge potential for new exports.

Institutional investors we spoke to cautioned that while they recognised the importance of nuclear in achieving net zero, the financial, regulatory and political environments needed to be conducive to making investment at scale, given any possible perceived risks with these types of investments. The frameworks had to be strong.

Rolls-Royce cites the construction of SMR power stations with at least three factories making components requiring skills, supply chain connectivity and logistical positioning with 80% of content manufactured in the UK. Within the supply chain, CEO David Bond at Sheffield Forgemasters anticipates a transformative "increase in capacity and outflow from the business" required to make up to four power stations annually currently being discussed by potential customers, with accompanying productivity increases associated with the modern technologies required.

Cumbria is the obvious location for first of a kind deployment, with the Solway Community Power Company advanced as a developer able to build it alongside a commitment to the wider fleet to be located across the North, the wider UK and globally.

#### Recommendation

Therefore, we recommend harnessing UK leadership in Net Zero and energy security by delivering the first-of-a-kind Small Modular Reactor (SMR) deployment to West Cumbria led by Great British Nuclear in Manchester, before rolling out a fleet of SMRs across the UK and for export built at world-class manufacturing factories across the North of England within strong financial and regulatory environments.

### Carbon Capture – no time to waste

In the face of the United States' Inflation Reduction Act and EU competitors' response, it is critical that Britain supports the regions and industries facing the greatest challenge on Net Zero and decarbonisation in the coming months, not years.

The Humber region has access to 80% of the UK's carbon storage. It has six offshore wind farms, including the world's largest hydrogen storage and numerous alternative energy plants operating or in development.

Building on the projects already funded as part of Hynet in Cheshire and Net Zero Teesside, we must bring forward projects on the Humber to ensure that the region can secure the potential £15 billion of private investment available.

#### Recommendation

Therefore, we recommend that we defend and decarbonise Northern industry by accelerating the Carbon Capture and Storage programme to meet the full capacity government committed to across the North West and East Coast, expediting support for those projects on the Humber which have already been judged to meet the criteria.

### Hydrogen – building on unique expertise and assets

The opportunities for the use of hydrogen in industrial decarbonisation, and in the rail and road transport sectors including for buses, is a unique Northern opportunity thanks to the hydrogen-producing potential of process industry clusters in Teesside and the North West, plus the North's wider renewables capability to produce green hydrogen.

As the UK's largest industrial producer of the gas, the Tees Valley's roundtable saw outspoken support for accelerating the hydrogen economy. Then Teesside Freeport Director, Nolan Grey, wanted to see the UK backing winners: "certain regions are good at things and other regions aren't. In Tees Valley, we are really strong in the hydrogen economy and we need to stop having competitions all the time around where the next hydrogen place should be and just need to focus on the region that can deliver it successfully".

The North West's chemicals cluster also raised the prospect of how the expertise and byproducts that derive from existing world-class industries can accelerate wider decarbonisation efforts. Progressive Energy's John Egan, who is regional lead on HyNet told Invest North: "It's a big ambition, it's a big project and a multibillion-pound investment, to transform the energy system of the North West focused primarily on industry."

To ensure that Britain's comparative advantages in the hydrogen economy are not slowed by decisions taken far from the regions currently leading in the technology demands collaboration between Metro Mayors with place-based industrial strategies giving confidence to investors and local industrial suppliers, backed up by effective, timely and consistent policy support from UK Government.

#### Recommendation

We recommend backing the North of England to become a global leader in hydrogen through innovation and scale-up support for energy, industry, and transport projects.

## PRIME 2 – ADVANCED MANUFACTURING

Throughout Invest North's deliberations, the super-region's role as trailblazer driving the first Industrial Revolution alongside the West Midlands was cited both as a foundation of its strengths in manufacturing and equally for the identity which it still gives to the North.

Whilst the level of jobs and economic output gained from the manufacturing sector is lower than the period to the end of World War Two due to deindustrialisation and diversification, descriptions of the North and UK as "post-industrial" are lazy and ill-informed.

Instead, advanced manufacturing, with its associated capabilities in materials and processes, retains both broad and deep sectoral specialisation across the North, enhanced by its own historic strengths, and continues to benefit from a legacy of experience and expertise across both the workforce and from education institutions at university and college level.

Manufacturing across the North of England is a disproportionately significant part of the UK's production of goods which remains the ninth largest in the world by output<sup>3</sup>. High-skilled industrial jobs in regions like Teesside pay 45% more than the services sector, and whilst manufacturing now comprises 11% of national GVA directly compared to the 1970s, when we include associated services like accountancy, logistics, catering and security reliant on the sector (and which were often included in sector statistics previously), then manufacturing today still accounts for just under a quarter of national output (23%).

Our experience of shortages of essential goods driven by COVID-19, disruption to the Suez Canal and supply-chains cut-off by conflict and international tensions demonstrates that foreign supply of essential goods cannot be taken for granted so advanced manufacturing remains a vital part of Britain and the North's sovereign capability. As Chair of the national steel innovation research centre at the Materials Processing Institute in Redcar, Jon Bolton, put it "the pandemic and war in Ukraine demonstrate the need to have security of resources here in the UK, particularly foundation industry materials and resources, energy and skills."

### Legacy strengths as springboard for the future

"Our work is about the focus of the strategic direction in our area and, in our city region, it's genuinely not the Beatles. It has to be about the Green Industrial Revolution and the Fourth Industrial Revolution."

Mayor Steve Rotherham's strategic priorities for Liverpool City Region put advanced manufacturing in the lead, in collaboration with its interaction with the Energy and Net Zero capacities of Merseyside.

Across the North, the industrial heritage of the regions has bequeathed a legacy of assets, facilities and a trained and engaged workforce that enhance associated projects which draw upon advanced manufacturing.

"The infrastructure is already in place", said Tom Sumpster of Phoenix Group, at one of our roundtables debating the future of advanced manufacturing: "that is perhaps the most competitive edge this region has because the investment has already been made over decades and, when we think about decarbonisation, we can move from steel and chemical industries into offshore wind, solar and hydrogen as examples, sustainable investments such as these are hugely attractive investments for long term pension capital."

There is significant economic opportunity. Advanced manufacturing disproportionately drives foreign income accounting for 45% of UK exports – worth £275 billion in 2020 – despite only accounting for a direct 11% national GVA.

Indeed, the maintenance of Northern manufacturing products like engines and turbines are now a significant export market from OEMs like Rolls-Royce to SMEs like Tees Components.

Enhanced automation and technology explains why manufacturing is disproportionately innovation-intensive, responsible for 69% of the UK's business R&D.

Participants called for greater awareness of the success of manufacturers across the North. In Cumbria, Chief Infrastructure Officer and Improvement Director at BAE Systems' Maritime and Land division, and Deputy chair at Cumbria Local Enterprise Partnership, Steve Cole, said "we already have some of the best advanced manufacturing capabilities on the planet and I don't think anybody knows about it. Even government colleagues that we trade with, we have to educate them every time we get a new minister".

More widely, roundtable contributors shared their experience of how the North's manufacturing industries are working in collaboration with broader industries around the UK and around the globe. But more can be done.

### Supporting industrial digital technology adoption – Made Smarter

The Made Smarter initiative was established by the UK Government in 2017 to demonstrate how UK manufacturing can be transformed through the adoption of industrial digital technology that could increase "manufacturing growth" by 1.5%-3.5% per annum.

The success of this pan-Northern initiative, first developed in the North West, cannot be underestimated. The continued modernisation and shared collaborations of the Advanced Manufacturing Prime demands that continued support for the North's businesses to adopt the Fourth Industrial Revolution and continue to raise productivity in SMEs across the North of England's supply chain.

#### Recommendation

We therefore recommend driving Northern industry into the Fourth Industrial Revolution by doubling Made Smarter funding from £14m to £28m following its successful pilot in the North West and extension across to the East of the Pennines.

<sup>3</sup> <https://www.themanufacturer.com/uk-manufacturing-statistics/>

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## Innovation clustering and partnership

Our discussions reinforced the Convention of the North's findings that moving to a pan Northern assets approach will enhance innovation cluster benefits by ensuring places in proximity are accessible, even if in a different political geography.

The innovation accelerator models is permeable and should align with well-established economic corridors including the M62 and A19 which extend beyond single travel to work areas. Accelerators will ensure the innovation ecosystems can secure agglomeration benefits over and above the labour market changes which will ultimately follow.

### Recommendation

We therefore recommend the unleashing of innovation by building on the network of Catapults and North of England's wider network of Research and Technology Organisations (RTOs) to deliver a step change in the commercialisation of Northern ideas and spin-outs, and develop better use of assets beyond research centres' immediate local areas.

To ensure new fairer R&D funding streams deliver value for money instead of crowding out, there should be a commitment from government and Metro Mayors not to set up competing assets but to instead draw on and extend existing capabilities, as Lancashire did when South Yorkshire expertise from AMRC spread to the North West.

The Northern Powerhouse Partnership's Henri Murison lauded collaboration and complementarity between the two regions, instead of crowding out existing activity: "what the AMRC has done looking to Lancashire, its nearest neighbouring cluster, is to see how it can continue to project its ability to help improve innovation and deliver higher productivity in another place, and to then deploy assets outside of South Yorkshire to really enable this part of the country to grow and thrive."

Contributors like Manesh Pandya, Chief Executive of ELE Advanced Technologies based in Colne, recognised the wider impacts this would have around the region both for the supporting industrial ecosystem and local communities through retention of local skills: "Getting AMRC to establish themselves in the North West will be a very positive step. We have lots of good universities around us but we have to try and get home students to remain within Lancashire after they qualify and remain within the engineering and technology sector rather than being attracted to the South".

## Building blocks for the advanced manufacturing – green steel

Steel remains a key building block for economic output and to take advantage of the Green Industrial Revolution. In January 2022, McKinsey reported that steel is "crucial as an infrastructure for all technological transition" and "critical" for 10 technologies necessary to deliver a low-carbon economy<sup>4</sup> that are also needed for key infrastructure and industrial projects in the North like High Speed 2, Northern Powerhouse Rail, SMRs and renewable energy projects from offshore wind to tidal.

The current method of UK steel production through the blast furnace method makes the sector the largest single industrial emitter of carbon dioxide in the UK and second largest on the planet behind concrete production. The Green Industrial Revolution and essential renewables require lower-carbon emitting, specialist green steels produced in the UK by the Electric Arc Furnace (EAF) method.

There are significant green benefits to maintaining and reshoring UK steel production, as steel sections produced domestically result in 50% less CO<sub>2</sub> emitted than steel sections sourced from the EU<sup>5</sup>. Delivering steel capacity requires an interventionist approach, ensuring effective competition between incumbents and new entrants to meet the UK's industrial needs.

### Recommendation

We therefore recommend support to decarbonise the North's industrial supply-chain by backing the transition of UK steel-making to EAFs, with a commitment to increase production capacity for in the North at existing and new sites, with mapping of steels required in the UK supply chain for technologies necessary to deliver Britain's Net Zero commitments and advanced manufacturing opportunities.

4 <https://www.mckinsey.com/industries/metals-and-mining/our-insights/the-raw-materials-challenge-how-the-metals-and-mining-sector-will-be-at-the-core-of-enabling-the-energy-transition?cid=other-eml-alt-mip-mck&hdpid=7236476e-7fa1-41ea-84f8-6fg23bcde51b&hctky=11774778&hlkid=ac3790c29bd84c798f37850b8edb72fb>

5 <https://www.mpiuk.com/downloads/industry-papers/SI-Series-Paper-05-Decarbonisation-of-the-Steel-Industry-in-the-UK.pdf>



## PRIME 3 – DIGITAL AND TECHNOLOGY

The North's third Prime Capability, Digital and Technology, is rooted in our early history in computing and evident across clusters of excellence that embrace high performance computing, cognitive computation, data analytics, simulation/modelling, and machine learning.

Hosting our North of Tyne roundtable at FTSE 100-listed Sage, its Chief of Staff Jon Cowan set out how the company views "digitisation as the key driver of business growth in support of SMEs" and its work to ensure small businesses can continue to invest in productivity enhancing technology.

Firms across this Prime capability employ some 250,000 people, many at world-leading projects, with more than 37,000 digital economy businesses turning over £16 billion every year according to the Convention of the North.

### World Class Infrastructure and Support

In his region, Mayor Andy Burnham told Invest North: "I just say to people that Greater Manchester is the fastest growing digital and tech hub in Europe and immediately you've got people's attention. It's digital and tech in all of its forms: fintech, cyber, AI, creative, digital. People are interested in that success story."

On the Mersey, Mayor Steve Rotherham shared that its digital conductivity will soon be the fastest in the UK and how this creates the capacity for big data analytics with the world's 30th fastest supercomputer located at The Hartree Centre for High Performance Computing at Daresbury. Determined to attract entrepreneurs, he wants to use the region's lead to drive tech growth to sit alongside companies invested in Net Zero and Advanced Manufacturing industries: "that's the big thing with digital connectivity at ultra fast speeds that sets us apart from the rest of the country ... Why can't somebody in one of our great universities be the next Google or Microsoft?"

The roundtables were reminded how funding is integral to success. Looking to potential in quantum computing, Tim Newns of the Office of Investment said: "There are a number of companies globally looking at quantum at the moment, a number of them looking at the UK and interested but not having quite worked out yet what the funding proposition is. So we've got to push to make sure that the infrastructure investment is going in ... so that propositions that are here can absolutely thrive."

The North is also home to an ecosystem of organisations helping companies to make sense of the new access to big data. Paul Watson, Director of the National Innovation Centre for Data shared the problem-solving potential of his team of data scientists in Newcastle-upon-Tyne: "lots of companies and public sector organisations are drowning in data and they can see that must be some potential to use it to transform what they do to improve the productivity to launch new products and services, but they don't have the skills within their organisation to achieve that".

### Skills Shortages – harming the North's opportunity

The challenge clearly set out by Invest North participants was about skills to keep up with the demands of the sector. The Convention of the North's report found that "the North and the wider UK has a deficit in the number of people with adequate digital skills, resulting in a large number of hard-to-fill jobs in sectors that could make a meaningful contribution to economic growth."

TFN's NPIER refresh in March cited the 2021 DCMS report, UK Quantifying the Data Skills Gap, that found "between 178,000 – 234,000 data-related roles in UK companies to be filled, but graduate supply is likely to be limited to around 10,000 per year, and about half of all relevant workers report no data skills training in the past year".

Invest North's roundtables reported the same. Mark Roberts, Chair, Leeds City Region Enterprise Partnership said "we still do have a skills shortage, especially in certain tech enabled and digital sectors".

Challenges for SMEs are acute especially as staff are looking to progress. Rik Barker, COO of X Design told our West Yorkshire meeting that "one of the challenges that I think anyone in a fast growing digital business will face at the moment is impatience in people's progress." He went on to share good practice about how the company empowers staff whilst ensuring talent is working at the right level with investment in middle management, increasing technical skills and significant focus on mentoring and coaching.

A consistent approach was vital as the demand to fill the data skills gap methods meant current processes are under the microscope. Reputable providers are certainly in demand across the Northern education system, with Sara Prowse, chief executive, UA92 explaining how the disruptor university was offering digital apprenticeships and bootcamps as there is "an absolute race against time to provide people with the skills required in the digital space."

However, Katie Gallagher, managing director of Manchester Digital issued a friendly word of caution to contributors about initiatives elsewhere: "we have to be really careful with some of the skills programmes that are out there."



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## Recommendation

Therefore, we recommend co-ordinating business efforts to train and recruit talent across the North with devolved skills systems empowered through Metro Mayor trailblazer deals, drawing on a more flexibly governed apprentice levy.

Meeting vibrant Northern industries' demand for skilled human capital and ensuring an inclusive pool of talent drawn from across the North's full diversity requires collaboration between combined authorities and business. There is the potential to learn from models already developed and applied by leading employers such as TalkTalk and GCHQ regionally.

Improving skills will ensure that fast growing businesses and inward investors can utilise collective infrastructure and invest in training with confidence, rather than each business needing to replicate what they may need from scratch or being disincentivised by poaching.



## PRIME 4 – HEALTH AND LIFE SCIENCES

Like elsewhere in Britain, the North's health and life sciences sectors benefit from NHS, industry and academia working together to provide a base for developing new research and the potential for commercialisation.

Elected officials are now playing a more significant role thanks to devolution which has granted Greater Manchester influence over its health and social care budget, with further devolution plans for Mayors across Yorkshire. Convening powers give the combined authorities particular opportunities to effect change.

What makes Health Innovation another Prime Capability for the North lies in its strengths in health and life sciences highlighted by the NPIER as medical technologies and devices, plus growing competence in new and efficient service delivery models brought about by e-health developments.

Across the North, the seven Integrated Care Systems are leveraging connections in the context of the relationship between health and the economy. The ecosystem is supported by renowned academic institutions such as the NHTA, the National Centre for Ageing in Newcastle, the Centre for Public Health at the University of Liverpool, the Healthy Lifespan Institute in Sheffield, and N8 Universities.

### Confidence across the North

Invest North's contributors made the importance of collaboration clear and discussed how established comparative advantages are giving the North the lead today. Frank Miller, CEO of CPI which is a member of the High Value Manufacturing Catapult, hosted our roundtable at its new world-class life sciences office and laboratories in Darlington: "we are looking at biomanufacturing where Tees Valley's got a long history back to the 1950s. There are genuinely unique skills and understanding of biomanufacturing in this region, and we are able to deploy those into growing spaces like the future of food, agritech, biopharmaceuticals. They are genuinely long-term global opportunities for Tees Valley."

Collaboration across regions was clearly a strength. Chair of Leeds City Region Enterprise Partnership, Mark Roberts, described how "in the innovation arc in Leeds we've got this amazing collection of universities, NHS Trusts and great businesses getting together to do some amazing things".

These wider benefits are also being felt beyond Leeds with connections to Huddersfield and Bradford that would benefit from additional investment: "we almost talk about creating our own little golden triangle outside of the South. That's a real opportunity for us if we put in the investment behind it."

The coming together of unique assets means that global companies can make investments with confidence. Posing the question about how Leeds has attracted global life science investments, Sir Roger Marsh was clear that the North's capacity to look to the future makes the difference "because [companies] are thinking about clinical trials that are not just in person anymore, but in patient. So when people ask me what do I mean about life sciences in the Leeds city region, I talk about the three Ds, data, devices and diagnostics."

Participants were ambitious sharing investable opportunities that can drive the health and life sciences opportunity in the North. In Liverpool, Professor Janet Hemingway of the Liverpool School of Tropical Medicine threw down the gauntlet: "nobody's thinking small. We are globally leaders in infection control R&D. We do that in digital. We do that in the lab side. I think there is the opportunity to take that next big step and have something that is sitting around an infection R&D Super Cluster that has a nucleus, sitting here, but actually brings in a lot of the North West".

Mayor Steve Rotherham took up the challenge of advances in health technology offering the potential for algorithms and artificial intelligence to assist diagnosis and treatment and how Merseyside could play its role in accelerating progress with the right approach "that could happen as part of a real strategic health innovation in the city region: all of the different bits could come together." He continued to explain how the gains from regional collaboration supported by devolved governance would be a benefit again to Whitehall: "Government would be interested in that because it takes pressure off the NHS at the moment, using data in a different way so that we can predict some of these things and prevent it, and that will take the pressure off the NHS."

### Unlocking Investable Propositions beyond seed funding

Better leveraging Northern assets requires long-term commitments guaranteed by Metro Mayors' respective place-based industrial strategies plus connected health infrastructure government already promised by national government, to give industry and investors the confidence to move on from allocating seed funding to taking significant long-term investment.

#### Recommendation

Therefore, we recommend the enhancement of the commercial potential of the North of England's investable life science propositions by drawing on further innovation accelerators underpinned by co-ordination across the North.

The business demand is there as explained by Neil Murray, chief executive of Impact Data Metrics, who also heads a biotech and infectious disease company and stressed the importance of growth funding: "getting seed capital is easy. It's the next stage that enables companies to grow and prosper and develop into businesses that will employ hundreds of people, not the two or three or four or 10. And that's the real challenge that we have."

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## Increasing laboratory space and facilities

Contributors discussed the potential to maximise mixed developments with strong health focus from Alderley Park in the North West to the Helix in Newcastle upon Tyne, alongside new opportunities such as that created by the assets in Liverpool's health cluster and those released by the New Hospitals Programme in Leeds.

Health innovators are looking at how to enhance facilities through AI and robotics and the importance of institutional investors and government commitment. Prof Janet Hemingway said: "it needs a lot of the people around this room to sit down and say let's turn this into that big investable proposition. Let's make sure that we've got the commercial proposition because we've got the industry behind it, because we've got the the academic base behind it, because we've got the NHS behind it."

### Recommendation

We therefore recommend to increase the supply of lab space and facilities across the North, focusing innovation zones on these areas where possible, specifically to attract further Foreign Direct Investment and allow fast growing businesses spinning out of our universities to expand.

## Health Inequalities

### Inequality

Whilst the North benefits from health and life sciences offering economic benefits, Invest North's contributors equally shared how vital it is both for equity and economic benefits that Britain closes its significant gap in personal health outcomes.

Mayor Jamie Driscoll shared with the North of Tyne event how North Easterners in their fifties "are statistically on average, likely to come to the end of your healthy life expectancy. After that you are likely to have illness, or disability affecting your capacity to work. That's preventable."

Life expectancy is lower in the North than the rest of the UK. Northern workers are more likely to lose their jobs after ill health than elsewhere in England, and if they find work again then pay is two-thirds lower than counterparts elsewhere. Even within regions across the North there are significant variations, for example, the 20-year healthy life expectancy gap between the wealthiest and least well off parts of South Yorkshire.

New devolved arrangements are witnessing elected leaders using convening powers to inspire change. Mayor Oliver Coppard described how, as Chair of NHS South Yorkshire's Integrated Care Partnership, "I have been focused with health leaders looking at health inequalities and how we can drive a step change in our approach because it is such a drag on our growth prospects and economic performance ... We're working to try and address that challenge. Some of those people have never been in a room together."



# Invest North Summary of Recommendations

## Cross-Cutting Proposals

1. **Enhance** confidence to invest through place-based industrial strategy, supported by four further innovation accelerators across the North of England and extending the one being rolled out in Greater Manchester.
2. **Unlock** the transformative potential of Britain's investment capital through a committed programme of policy and regulatory reform and support for Northern Gritstone and comparable funds in order to enable private and local government pension fund investors to back more fast-growing businesses across the North towards reaching scale.
3. **Devolve** responsibility for skills and further education to combined authorities by offering trailblazer deals to enable all Metro Mayors to deliver skills strategies aligned with local industrial strategies.

## Energy and the Net Zero Economy

4. **Harness** UK leadership in Net Zero and energy security by delivering the first-of-a-kind Small Modular Reactor (SMR) deployment to West Cumbria led by Great British Nuclear in Manchester, before rolling out a fleet of SMRs across the UK and for export built at world-class manufacturing factories across the North of England within strong financial and regulatory environments.
5. **Defend** and decarbonise Northern industry by accelerating the Carbon Capture and Storage programme to meet the full capacity government committed to across the North West and East Coast, expediting the support for those projects on the Humber which have already been judged to meet the criteria.
6. **Support** the North of England to become a global leader in hydrogen through innovation and scale-up support for energy, industry, and transport projects.

## Manufacturing & Materials

7. **Drive** Northern industry into the Fourth Industrial Revolution by doubling Made Smarter funding from £14m to £28m following its successful pilot in the North West and extension across to the East of the Pennines.
8. **Unleash** innovation by building on the network of catapults and North of England's wider network of research technology organisations to deliver a step change in the commercialisation of Northern ideas and spin-outs, and develop better use of assets beyond research centres' immediate local areas.
9. **Decarbonise** the North's industrial supply-chain by backing the transition of UK steel-making to electric arc furnaces (EAF), with a commitment to increase production capacity for in the North at existing and new sites, with mapping of steels required in the UK supply chain for technologies necessary to deliver Britain's Net Zero commitments and advanced manufacturing opportunities.

## Digital and Culture

10. **Co-ordinating** business efforts to train and recruit talent across the North with devolved skills systems empowered through Metro Mayor trailblazer deals, drawing on a more flexibly governed apprentice levy.

## Health Innovation

11. **Enhance** the commercial potential of the North of England's investable life science propositions by drawing on further innovation accelerators underpinned by co-ordination across the North.
12. **Increase** the supply of lab space and facilities across the North, focusing innovation zones on these areas where possible, specifically to attract further Foreign Direct Investment and allow fast growing businesses spinning out of our universities to expand.

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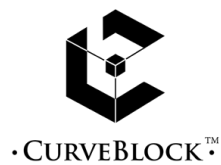


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