

EXECUTIVE SUMMARY

During the last General Election, the Prime Minister set out an agenda for levelling up every part of the UK - including the Northern Powerhouse. When he spoke at the NP11 and Convention of the North Summit in Rotherham, he said that he wanted “to make sure our great Northern Powerhouse was firing on all its cylinders”.

Since the Government announced the creation of the NP11 – the group of 11 Northern Powerhouse Local Enterprise Partnerships – back in July 2018, we have been focussed on laying the groundwork required to transform the North’s productivity, economy and life chances for its people. We have built trusted relationships with institutions and leaders across the North – including the Convention of the North, with whom we produced the 2019 Manifesto for the North, and the subsequent update we have submitted to this Spending Review alongside the below.

We have also completed critical economic research which shows where the greatest opportunities lie. This is a moment of great opportunity, and also vulnerability for the Northern economy. The North has evidenced strengths although it has been hard hit by COVID-19, suffering a harsher health and economic impact. Metrics covering furlough, unemployment, footfall, and mortality support the case that the pandemic could exacerbate existing Northern economic challenges, jeopardising the UK’s future wellbeing and prosperity.

However, whether it has been the success of the Key Account Management and International Trade Advisor programmes being delivered jointly with the Department for International Trade; the Made Smarter Programmes being led by local business; or the internationally leading wind industry, the North has demonstrated the value of meaningful investment made with, rather than to, local places.

It is crucially important that moving forward, investment is done in a collaborative way. Collaboration between public and private sectors to maximise impact in the real economy. Collaboration between places, to ensure the levelling up “prize” is greater than the sum of its parts. And perhaps most importantly, collaboration between both local and national Government and local and regional partners, focused on a place-based approach, done ‘with’ the North rather than ‘to’ the North.

There is now an opportunity to introduce the policy and investment interventions to capitalise on the North’s strengths and address vulnerabilities, thereby levelling up the North to its full potential.

To this end, the NP11 proposes that Government:

1. Ensure **Levelling Up** becomes a reality by strengthening in-place capacity building, giving local and regional partners the resources and mandate to deliver p3-6
2. Back the transition to **Net Zero** by putting in place a framework for coordination and collaboration between the North’s clean growth p7-11

assets and clusters, focused on establishing a jointly-owned pan-Northern investment pipeline and establishing a Delivery Plan with BEIS Local Energy Hubs

3. Strengthen **Global Britain** by recommitting to and extending the DIT's place-based programmes, including taking forward a review of the UK's incentivisation framework, attracting "Apex" firms, and scaling up overseas activity p12-15
4. Build the **innovation** necessary to making the UK a **Science Superpower** by levelling up R&D funding, enabling innovation across all areas of the North, decentralising innovation delivery structures, and investing in innovation strengths that address wider societal challenges p16-21
5. Commit to a **Northern Life Sciences Supercluster with an initial £9m**, strengthening the UK's global offering in the field, building resilience in the UK's health system, addressing the health productivity gap, and driving innovation-led growth p22-28
6. Work with local and regional partners to deliver a **place-based digital growth programme** p29-30
7. Fund a **Northern Evidence Network with £2.85m** to ensure that local, regional, and national decision makers and leaders have the best possible evidence about the economy and potential future growth areas p31-33
8. Support LEPs and Growth Hubs to deliver best-in-class **skills** provision p34
9. Strengthen LEPs and Growth Hubs capacity to scale up **business support** provision p35-36
10. Invest in the North's **transport** infrastructure, starting with commitment schemes through High Speed 2, Northern Powerhouse Rail, and the Transpennine Route Upgrade p37

We will only build back better from the current crisis by ensuring that places across our country have the pounds and powers to fulfil their potential. Having a clear plan to unlock the North's potential is critical to delivering on the Government's levelling up ambitions, giving the 15 million people who live in the North hope for the future and benefiting the whole of the UK.

The NP11's 10 Point Plan for the Northern Powerhouse is that plan.

LEVELLING UP THROUGH PLACEMAKING

The Plan for Growth's first priority is to "Level up the whole of the UK", and Government has further committed to a Levelling Up White Paper as well as recently creating the Ministry for Levelling Up, Housing & Communities.

This priority speaks to all of the NP11's work and mission, and we have identified the key pan-Northern investments and interventions needed to strengthen and improve local places.

This applies across the NP11's programme. Whether it has been the success of the Key Account Management and International Trade Advisor programmes being delivered jointly with the Department for International Trade; the Made Smarter Programmes being led by local business; or the internationally leading wind industry, the North has demonstrated the value of meaningful investment made with, rather than to, local places.

However, there is much further to go. This is a moment of great opportunity, and also vulnerability for the Northern economy. The North has evidenced strengths although it has been hard hit by COVID-19, having to bear longer periods of localised restrictions, and as research such as the Marmot Review has demonstrated, suffering a harsher health and economic impact. Metrics covering furlough, unemployment, footfall, and mortality support the case that the pandemic could exacerbate existing Northern economic challenges, jeopardising the UK's future wellbeing and prosperity.

There is now an opportunity to introduce the policy and investment interventions to capitalise on the North's strengths and address vulnerabilities, thereby levelling up the North to its full potential. This must start on the ground, in local places, building local capacity, and improving the quality of local spaces.

Place and Culture

The North of England has an exceptional culture, landscape, and people. This makes it a great place to live, work, visit, invest, and study. It is full of creativity, diversity, and innovation, from World Heritage Sites to international festivals and world-leading cultural venues, and from National Parks to the textile mills which powered the Industrial Revolution.

The arts, culture and heritage sectors play a vital and growing role in boosting the North's economy, contributing a combined £11.4 billion GVA in 2019.¹

The COVID-19 pandemic and associated lockdowns have had an acute impact on the sector's economic performance (resulting nationally in a £3.3bn loss on projected GVA in 2020²), but have served at the same time as an emphatic

¹ Nicol Economics for NP11, 2021

² CEBR for ACE, 2020

restatement of the criticality of culture, community, connection to place and access to green space and the natural environment.

Arts, heritage, museums, libraries and natural landscapes are intrinsic to developing the local economy and in regenerating our places. We cannot have a truly successful economy without a strong cultural sector, and a levelled up economy will not be achieved without strategic investment in culture and landscapes, which in turn play a vital role in regenerating places and providing a voice and identity to our towns, cities and villages.

The NP11 has convened a pan-Northern Place and Culture partnership which seeks to bring forward evidence of how the North's quality of place – encompassing arts, culture, heritage, and nature assets – can not only drive economic growth, but can contribute to wider outcomes including health and wellbeing, inclusion and diversity, skills and creativity, and quality of life.

The Place and Culture partnership brings together The NP11, Arts Council England, the Heritage Fund, Historic England and The Environment Agency, with steering group representation from Nature North and the Northern Culture Network

A place-based framework offers the opportunity to invest in priorities which can deliver against multiple objectives and support enhanced resilience against future crises, driving far greater value for money and strategic impact from individual funding streams (including the Community Renewal Fund, Stronger Towns Fund, Future High Streets Fund, Shared Prosperity Fund, and Levelling Up Fund).

This co-ordinated, place-based approach could be supported and taken forward by both the Spending Review and the Levelling Up White Paper. The NP11 Place & Culture partnership has identified key strategic areas where adoption of a pan-Northern approach to Place can create economies of scale, maximise current and emerging opportunities, address shared challenges and add value across partner and stakeholder programmes, including:

- A pan-Northern **Live, Visit, Work, Study and Invest** narrative which promotes the North as a pioneering, innovative and enterprising region at the forefront of economy 4.0 and the green revolution
- **Attraction, retention and development of people** as the North's talent, artists, creators, entrepreneurs and innovators, with a focus on cross-sector skills development
- Investment in the North's diverse **urban, rural, coastal spaces**, maximising the value of local assets and enhancing the complementarity of landscapes
- Strengthened **in-place capacity building** as a foundation for longer-term collaboration, enhanced data and research, more effective administration of strategic funds, and delivery of the above elements

Recovery and Resilience

Research by the NP11 has indicated that as a result of COVID-19, while there is an obvious overall impact in the reduction of economic activity, spending in hospitality and retail, and use of arts and culture in particular – there have been different impacts across different places in the North. There is huge potential to build on these differences as being complimentary. Taking this view highlights the opportunity for increased collaboration between urban and rural places across the North.

Cities have seen a large loss from both tourism and day-to-day activity – and it is not yet clear the extent to which this is a permanent shift – in workers and their spending on goods and services in their local economies. At the same time, they have seen reduced footfall, and demand for retail and hospitality. While we would expect tourism from both domestic and international tourists to return, it is difficult to approximate when we will see this bounce back, and what the knock-on impact of the potential permanent shift in behaviour of previously city-based workers might have.

Suburban areas as well as towns and rural areas with high levels of workers commuting into cities pre-pandemic have generally seen an increase in economic activity located there. This has resulted in a slightly smaller decline in retail footfall in comparison to cities, but there is evidence that a less dense service offer does not allow places to fully capture the relocation of activity to working from home.

Rural areas, particularly with environmental and heritage assets, have seen increased interest and footfall from the public. While these areas could benefit from an increase in domestic tourism, especially if people avoid densely populated places in a post-pandemic environment, this could also bring about new challenges related to managing the balance between residents and tourists, alongside the potential problems that an influx in tourism is likely to bring.

The recovery of international tourism – and therefore places which depend upon it to a significant extent – is likely to be lengthy. The UK Tourism Recovery Plan aims for a 'full return to pre-COVID [visitor] numbers by 2023' which, while ahead of independent forecasts, is still a significant period for places and businesses that depend on international tourism.

All local places have their own distinctive strengths, offer, and challenges which interact with these general trends and the economic environment during this recovery period. An understanding of these localised attributes is crucial to marshalling successful recoveries across a diverse region like the North.

Throughout the pandemic there has been a huge demand for access to green spaces, something closely linked with maintaining good mental and physical wellbeing. Arts, cultural and heritage attractions, meanwhile, offer environments for learning and linking to our own sense of identity.

As hospitality has started to re-open there has been a renewed appreciation of the value of these spaces, alongside arts, cultural, heritage and environmental

attractions for practical applications such as work or learning, but also as places to socialise with loved ones. The presence of these kinds of spaces improves the quality of places and makes them more attractive to live, work, visit, study and invest in.

The NP11 has identified a number of themes which could help to mitigate these challenges and support the role of these sectors, which are key to the economic recovery and core to building a high quality of place offer. These represent an opportunity for Government, regional, and local partners to work together. These themes are:

- Stimulate demand for heritage, nature, culture, hospitality and retail.
- Improve the attractiveness of places to encourage people to return to town and city centres. This includes repurposing vacant spaces, reimagining public spaces, and “digital high street” initiatives.
- Ensure economic value is circulated in local communities. This includes increasing fiscal devolution for local and combined authorities.
- Take advantage of the likely increased propensity to day trip/holiday in the UK and promote the North as a destination. This includes joined up marketing, ticketing, and transport.
- Offer direct support to heritage, arts, cultural and environmental organisations. This includes developing higher-skilled, higher-wage jobs.
- Be more data driven. This is detailed further in our Evidence Base section below.

NET ZERO NORTH

The Plan for Growth's second priority, "Support the transition to Net Zero", strongly aligns with the NP11's clean growth activity.

The Powerhouse

The North is the UK's Powerhouse: it generates over 40% of the UK's electricity, and almost a fifth of the electricity produced is exported to the rest of the UK. However, the North generates over 90m tonnes of CO₂ per annum - a quarter of the total. This reflects the significance of manufacturing and energy to the Northern economy.

Failure to capitalise on the Northern Powerhouse's clean growth opportunity will mean that the UK will fail to achieve net zero. Existing analysis by the NP11 shows the potential to **deliver a 50% reduction in carbon levels by 2032, and 100,000 new jobs and £2bn pa to the economy by 2050**. Exploiting this opportunity will cement and extend the North's nationally and internationally competitive position in the field – fuelling industries of the future where the North is already a leader, such as digital and advanced manufacturing, unlocking economic regeneration by facilitating a just industrial transition, and generating huge export opportunities for clean energy generation, energy efficiency, and low carbon products and technology.

Three of the six largest UK industrial clusters by emissions are in the Northern Powerhouse. Supporting these clusters to transition to a net zero position, whilst maintaining competitiveness and maximising clean growth across the North, is a significant challenge. A piecemeal, project-by-project approach to problem solving will not help. Coordinated, systematic action across the North, between public and private sectors, and with Government is needed if this challenge is to be addressed effectively. At the moment, this joined up approach is not always evident. Several of the pieces of the 'jigsaw' exist, but these projects are too often regarded in isolation or competition rather than as complementary elements contributing to a larger ambition across boundaries. The challenge is therefore to bring coordination and collaboration to these projects together that can maximise impact and effectively deliver more than the sum of its parts.

NP11's Northern Powerhouse Clean Growth Proposition (Annex 1) has set out the areas where there is a pan-Northern opportunity, to secure collaboration across local and central government as well as industry and LEPs on a Net Zero North programme.

10 Point Plan for a Green Industrial Revolution

Early work has indicated the potential for significant economic, environmental and health benefits of joining up the North's world-class clean growth assets, rather than an exclusively competitive approach between different clusters.

Across the areas identified in the Government's 10 Point Plan for a Green Industrial Revolution, these will include:

1) Advancing Offshore Wind

This is a significant sector that will remain a priority for the low carbon energy development for the Northern Powerhouse. The maintenance of an effective policy regime at a national level to support offshore wind remains crucial and should continue as a focus area for national government. Already, the North is leading the way in the development of new sites off the North West and North Sea coast. To make the most of this potential, planned offshore wind developments should be connected to emerging projects that will benefit most. This doesn't just mean the energy grid across the North, it means developing a plan for **how emerging projects will capitalise on the energy generated from offshore wind in the North and maximise supply chain opportunities** across the North and beyond.

2) Driving the Growth of Low Carbon Hydrogen

There are opportunities to work together to find synergies between hydrogen for industry, transport and heating, and wider investment in hydrogen in the region. Finding these synergies will require cooperation across the region. For transport in particular adequate fuelling stations will be key to encouraging uptake. Further, low carbon hydrogen can be deployed for industrial processes and could represent a low carbon source of energy for domestic space heating. The viability of hydrogen as a low carbon fuel source will depend on the deployment of carbon capture, use and storage (CCUS) as a means of reducing the emissions from hydrogen production processes at scale, as well as the production from renewable energy. The North is in a prime position to drive growth of the hydrogen economy building on CCUS options and strengths in wind energy. As with offshore wind, the key here is **support for industry infrastructure and supply chain development alongside energy generating potential.**

3) Delivering New and Advanced Nuclear Power

A vibrant nuclear industry will be crucial to realising the scale of low carbon electricity production recommended by the Climate Change Committee. There are nationally significant assets in the region which, if successfully supported by government policy, could provide the bedrock for new nuclear generation in the North. There are also potentially significant export opportunities. Cooperation across the NP11 is harnessing this Northern strength as an economic driver for the region as a whole. The North of England has led the development of the UK's nuclear industry, but this requires both regulatory and financial intervention from Government. Potential sites in the North of England need to be supported with future nuclear development. Cumbria represents a natural home for this, with Sellafield having the expertise to both operate existing and develop new nuclear power. Understanding where new nuclear capability can be developed in the region, drawing on the expertise of Sellafield, and establishing collaboration with the Nuclear Advanced Manufacturing Research Centre, to understand where the opportunity lies for new Small Modular Reactors will help the Government maximise the outcomes from the sector.

4) Accelerating the Shift to Zero Emission Vehicles

The North of England is a leading centre for car manufacturing. Sites such as Nissan in Sunderland are already making the shift and producing more and more electric vehicles. However, increasing the uptake of EVs isn't just about building cars, it's also about building EV infrastructure. This must be done in a joined up way: increased uptake will have a significant impact on the energy system and will require new ways of managing energy demand across the grid. Working with regional DNOs, Transport for the North, Local Energy Hubs, LEPs and other partners will be crucial for ensuring we have an adaptable future energy system that can support the demands of widespread EV use. We are working **with Transport for the North to develop proposals and projects to improving the North's highway network and EV charging infrastructure**. This is crucial for accelerating uptake.

5) Green Public Transport, Cycling and Walking

Decarbonising transport is not just about accelerating the uptake of EVs. Modal shift will be the most significant aspect of our drive to reduce emissions from surface transport. Transport for the North's Strategic Transport Plan provides an integrated transport vision and demonstrates how joining up active travel, public transport and EV can be used to deliver vital net zero gains. Further, Transport for the North's Decarbonisation Strategy has established an evidence base for how the North's transport system can be decarbonised. Bringing together key stakeholders in the North and **developing a place-based and sequential plan to decarbonise transport will be crucial** for both decarbonising and improving the North's transport system. These represent obvious starting points for the transition.

6) Jet Zero and Green Ships

The NP11 is working with Transport for the North **on low carbon transport connections and infrastructure deployment, and identifying transport hubs** which could link decarbonised rail, air, road or marine transport. The North has a number of significant airports, and these should be at the forefront of both technological innovation and policy delivery. Similarly in terms of shipping, the North's ports – including but not limited to three of the six designated freeports – are among the busiest and most innovative in the UK. Early efforts should focus on how the North's infrastructure should be expanded to accommodate integrated infrastructure that improves the efficiency and reduces the emissions of transport from sites to ports. This will drive early emission reductions, as well as **maximise the trade and investment opportunities arising from freeports**.

7) Greener Buildings

Partners such as the N8 Research Group, the Northern Housing Consortium, and the Convention of the North have established a strong evidence base and policy proposals for delivering the benefits of retrofitting the North's housing stock and other buildings. The economic, environmental, and health outcomes are substantial. Decarbonising the North's housing stock could support over 70,000 direct jobs and over 100,000 indirect jobs. The job generating potential mitigates most of the

decarbonisation costs in terms of the wider value that derives from retrofit activity. Focus in the North should switch from identifying the benefits that we now know come from retrofitting our homes to ensuring businesses, housing providers and local government work together to start driving action. This is even more pivotal in a context where fuel poverty will likely rise this winter. The NP11 is keen to work with BEIS Local Energy Hubs on approaches to energy reduction and **opportunities for pan-Northern development and delivery, along with work focused on heat and buildings.** Ensuring that industrial clusters benefit from improved port infrastructure and can access investment opportunities made available by free ports will be crucial for ensuring their growth and encouraging business investment.

8) Investing in Carbon Capture Usage and Storage

CCUS is essential to the decarbonisation of heavy industry in the region. The North already has advanced plans in places to develop CCUS infrastructure in the North Sea and Irish Sea. However, businesses leading these efforts need support and certainty. Clear long-term support should now come from **Government to back the development and crucially, joining up of CCUS clusters,** with the North East, Humber and North West leading the development of the UK's CCUS industry.

9) Protecting our Natural Environments

The North of England is home to some of the UK's most important natural assets, including several National Parks. Nature is often forgotten in the wider discussion on the drive to net zero. The NP11 is working with the Nature North partnership, who are taking forward crucial **initiatives that need Government support such as the Great Northern Forest, Great Northern Bog, and Eden North.** These should be taken forward alongside efforts to further quantify and advocate for enhanced investment to protect and grow the North's natural assets. The partnership is committed to adding value to the Nature North programme through its proposals for cross-partner investment in place, particularly in drawing out the complementarity of the North's urban, rural and coastal landscapes. There are significant circular economy opportunities relating to land use, agriculture, and biomass.

10) Green Finance and Innovation

Finance, innovation and skills will support the transition by ensuring private as well as public funds are leveraged. The British Business Bank, the Northern Powerhouse Investment Fund, and the UK Infrastructure Bank in Leeds, and new economic campus in Darlington will help deliver **a more effective, place-based approach in partnership with private banks.** It is vital that all Northern businesses, not just those in environmental sectors, can unlock the finance they need to decarbonise and grow the green aspects of their business. For example, existing microfinance initiatives should be scaled up and developed to incentivise green growth among SMEs, in turn helping catalyse business growth across the North. More broadly, more needs to be done to accelerate the excellent innovation that is taking place in the North. This includes developing new R&D strategies that have a regional focus; building the innovation ecosystem between Catapults, academic institutions and industry

(including the N8 Research Partnership’s Net Zero North proposals); and powering pioneering green industries across the North – this is detailed further in our Innovation section below.

To support the above, the NP11 will review the current state of sector deals and developments relevant to the North – onshore and offshore wind, nuclear, hydrogen/CCUS, circular economy/waste etc – and identify scalable opportunities for pan-Northern supply chain development. Mapping and gapping projects and supply chain opportunities from emerging technologies will be particularly important.

Strengthening the relationship between LEPs, BEIS Local Energy Hubs, and industrial clusters will be crucial for delivering the project partnerships, business models, investor interest and funding mechanisms needed to develop a robust evidence base, remove policy barriers, and identify and coordinate strategic infrastructure investment.

GLOBAL BRITAIN, GLOBAL NORTH

The Plan for Growth's third priority, "Support our vision for Global Britain", strongly aligns with the NP11's trade and investment activity.

The North has great potential to grow, with much to offer investors, and therefore needs to better capitalise on its assets to fulfil its ambitions. The NP11 has previously created a Trade & Investment Proposition, which identified that exports accounted for 24% of Northern GDP compared to a UK average of 30%, and only 7.5% of businesses in the North exported, relative to a UK average of 9.5%. Foreign Direct Investment (FDI) projects created/safeguarded just 90 jobs per 100,000 population in the North, compared to a UK average of 180 per 100,000.

The Proposition set out partnership, strategic and operational initiatives that would generate net additional £375m GVA for the North (with an ROI of 5.5:1) on the back of a £67.4m investment over three years (in addition to existing DIT commitments). An Addendum was produced in August 2020, which updated the original Proposition given the substantial changes arising from the COVID-19 pandemic and the evolution of the EU Exit process.

Since the Proposition was produced, an additional £3m was allocated to the North, for the period 2020/21 with some funding stretching to 2022. This welcome funding was for:

- 16 additional specialist International Trade Advisers (ITAs), including ten Sector Specialists, three Digital Advisers and three Regional Growth Service Advisers;
- 14 additional Northern Powerhouse Overseas Champions in HMTC regions; and
- Additional ITAs based in the Northern LEPs (11 individual LEP-based ITAs and three cross-LEP ITA roles).

The benefits from some of these Northern Powerhouse specific programmes are very clear, for example the Key Account Management, which we would like to see expanded. Others are less so, either due to them having only been running for a short period of time, such as overseas officers, or due to a lack of a shared metrics as to their performance. There also remains a strong need for the North to be more involved in national strategy development and determining prioritisation of available funding in order to ensure this delivery is done with, rather than to, the North.

The North is therefore keen to review activities to date and develop a deeper and more strategic partnership approach with DIT. This would also obtain a clearer view on the cost benefit metrics that support prioritising activity, maximising impact, and joining up national programmes with local activity, to ensure improved outcomes for exports and investment that are central to achieving Government objectives.

This is a moment of great opportunity, and also vulnerability for the Northern economy. The North has undoubted strengths in its Prime Capabilities although its economy has been hard hit by COVID-19, having to bear longer periods of localised restrictions, and as research such as the Marmot Review has demonstrated, suffering

harsher health and economic impacts. Metrics covering furlough, unemployment, and footfall, support the case that the pandemic could exacerbate existing Northern economic challenges, jeopardising the UK's future wellbeing and prosperity.

The COVID-19 pandemic and its economic impacts have increased the rate of global economic change, accentuating and accelerating trends already in-play as well as introducing new drivers. This is not unexpected as innovation accelerates dramatically during crises, and therefore investments must look forward to a changed world rather than backward to address features that the crisis has made less relevant.

During this period, the North has sought to realise its opportunities being at the forefront of supporting high export potential areas such as digital and life sciences. Significant developments have also taken place across the environmental goods and services sectors. Initiatives to capitalise on increased virtual/home working and support domestic tourism based on a quality of life offer designed to attract and retain talent and investment have also been undertaken. Additionally, changes to supply chain dynamics and increased interest in ESG agendas have all been reflected in the North's activities to increase inward investment. A significantly enhanced focus on existing inward investors to retain and expand their operations has also been particularly beneficial.

There is now an opportunity to introduce the policy and investment interventions to capitalise on the North's strengths and address vulnerabilities, thereby levelling up the North to its full potential in Global Britain.

Trade & Investment Proposals

The NP11's updated trade and investment proposal (see Annex 2), based on the North's Prime Capabilities, will assist in the achievement of the Plan for Growth, in a COVID influenced and new trading environment world:

- Advanced Manufacturing Processes and Materials - re-shoring core industrial capability to maximise domestic economic benefits and security of supply whilst also exploiting export opportunities.
- Energy - decarbonisation and energy efficiency, addressing climate change, the journey to Net Zero, boosting energy security and creating new export opportunities.
- Health innovation – creating a second life sciences supercluster to improve workforce health and productivity and create new export opportunities.
- Digital - digital innovation as an all-pervasive change agent, with strong export opportunities for technologies and services.

The transition to net zero and the 10 Point Plan for a Green Industrial Revolution, will be greatly assisted by development of the North's Prime Capability in energy which has major strengths in offshore wind; low carbon hydrogen production; advanced nuclear power; zero emission vehicles; and carbon capture.

These growth opportunities will be enabled through this trade and investment activity. This will enable the North to develop "superclusters" around the Primes which would ultimately drive higher productivity and increased innovation, thus fuelling the levelling up agenda through enhanced export and FDI, fundamentally supporting a more global, competitive, and sustainable UK.

The North has been working together on these activities for the last four years, creating the opportunity for a deeper partnership model between Government and local partners.

This new partnership-oriented relationship sought between DIT and the North, would include greater involvement in strategy development and other key central initiatives such as the Office for Investment, shaping both policy and national delivery. It would also involve greater transparency on services commissioned by DIT, including value for money of such programmes, so all partners can understand which actions will deliver the greatest impact for the North and ultimately the UK. Given limited resources, the partnership approach would afford greater alignment and co-investment in jointly prioritised programmes increasing performance and ROI.

In addition to these 'ways of working' changes the key trade and investment priorities for the North include:

1) Creating a competitive Global Britain:

- Undertake a systematic review of the UK's competitive position in terms of sustainable incentivisation, industry/thematic tax reliefs and industrial subsidy with the potential for a new national framework (with a regional levelling up element) or distinct Regional Investment Funds. This is paramount to attract high-value investment into the North in highly capital-intensive industries which are still influenced by public sector support.
- Review major global capital and drivers including ESG agenda – including location, investment appetite, focus and methods – relayed to the North to create more bespoke competitive propositions.
- Better use of the National Procurement Strategy to create demand via emphasis on social value/economic impact – review of procurement policy required to understand how to stimulate UK supply chains within the guidelines of the Subsidy Control Bill.
- Proactive approach to ensuring the correct/competitive infrastructure exists to attract significant FDI and support large-scale exporters – including sites, power, connectivity, transport, and so on.

- Work with investors across the North and Government to build a globally competitive skills system pipeline in strategic sectors/primes, to support future and sustainable FDI.

2) Enhancing the North's superclusters:

- Work with DIT/Office for Investment to identify and attract 3-5 "Apex" companies (OEMs) to the North in the UK's key growth sectors/North's Prime Capabilities. This would include research and scoping activity to identify the best target companies. (£1.5m)
- Extend and increase Key Account Management across the North, more than doubling current resource, with the potential to combine with BEIS KAM activity for efficiency and a better customer experience. Create thematic focus in KAM driven by UK Plan for Growth and deepen local connectivity into firms based in the North. (£8.4m)
- Extend the additional Levelling Up ITA capacity across the North and the additional Missions budget, in order to further develop the export potential of existing Prime clusters. Also fund an NPH Global Scale Up programmes to target high-growth firms that can make large scale impact on export value. (£15m)
- Build relationships with other significant global clusters that reflect the North's Primes or frontier sectors, including research to identify highest potential clusters and resource for outreach. (£2m)
- Focus on innovation, net zero, inclusive growth and economic/social impact when attracting FDI into the North through greater use of strategic analytics to identify targets.

3) Improving the overseas investment pipeline:

- Jointly develop a significant marketing and promotional campaign for the North, taking the approach of creating an umbrella campaign in which the established Northern brands (city, country, and coastal) can flourish. This would include marketing activity in key markets, but also a fund to attract industry conferences. (£8m)
- Continuation and expansion of Northern Powerhouse representatives to 20 in key markets, increasing capacity in mature markets such as the US to take advantage of the global recovery, whilst also looking towards growth markets aligned with FTAs such as Japan. (£9.7m)
- Creation of strategic or supercluster propositions around Primes and frontier sectors and technologies, supported by industry experts and additional research and benchmarking to ensure competitiveness. (£3m)
- Involvement of Northern business and civic leaders in national investment and export policy and strategy (including Sector and Trade Deals).

INNOVATION

The Plan for Growth identifies innovation as one of its core pillars for growth, essential to making the UK a Science Superpower, and again, this aligns with the NP11's innovation programme. To realise industry-led development, with innovation taking place across the real economy, both a place-based and a levelled up approach is essential.

The Government's recent Innovation Strategy identified four pillars for action to make the UK a global hub for innovation by 2035. The NP11 has developed proposals for how the Government and partners across the North could work together to support the North to fulfil its potential to contribute to this goal.

It is worth highlighting the scale of the investment needed to meet this levelling up challenge: a crude analysis of where the public sector and businesses invested in R&D shows that to 'level up' the North to meet the highest performing areas of the UK to where they were in 2016, it would take an additional £1.6bn of additional public sector investment, to help lever in an additional £3.9bn from businesses³.

This will take a major shift in the geography of Government spending on R&D, and the Government's commitment to the 2.4% R&D intensity target and to raise the public budget for R&D to £22bn offers the opportunity to do things differently. Businesses have already spotted that there are significant opportunities for innovation-led growth across the North, but they are currently being under-supported by the public sector. For example, businesses in the North invested over £223 per head, higher than in London and Scotland, but public sector investment was only £115 per head – compared to £275 per head in London and £227 in Scotland.

By not investing public money where businesses are investing, we are missing an opportunity not just for the North, but also for the UK. In 2018, London and the South East received 49% of the Government and UKRI's total R&D spending, despite these regions only containing around 20% of the population. And this has consequences for the economy in the North. There are twice as many R&D-intensive jobs located in London, the South East and the East of England combined (46%) as in the North of England (20%)⁴.

The North's Independent Economic Review in 2016⁵ identified a 'transformational scenario' that forecasted by 2050 the North could have 850,000 more jobs than under the 'business as usual' scenario, with 1.5 million new jobs in total. If this vision is realised, by 2050 the North's GVA was projected to be £97 billion higher than if there was 'business as usual'. As part of achieving this, there is significant potential in supporting the development in the North's innovation clusters in clean growth and health innovation.

³ [The Missing £4 Billion: Making R&D work for the whole UK \(nesta.org.uk\)](https://www.nesta.org.uk/publications/the-missing-4-billion-making-rd-work-for-the-whole-uk)

⁴ [Microsoft Word - Levelling Up Innovation \(7\).docx \(ukonward.com\)](#)

⁵ [NPIER-Core-Messages.pdf \(transportforthenorth.com\)](#)

We are making the case that the UK has under-invested in innovation in the North and that there are significant opportunities to be capitalised on in the future. Our response covers the following objectives:

- Increasing business innovation in the North
- Increasing capacity for local leadership and convening power, particularly private sector leadership, and removing barriers to collaboration across administrative boundaries
- Moving to a decentralised, co-produced model of delivery of innovation activity
- Investing in the North's innovation strengths through supporting a mission-based cluster approach

The NP11 welcomes the steps taken by the Government towards a better co-ordinated innovation support system across the UK, but to realise the ambition of the Innovation Strategy, local partners now need the ability to deliver a place-based, industry led approach to supporting innovation-led growth.

By increasing the capacity to link up where innovation is happening on the ground with local innovation support and other important policy levers for growth, such as workforce skills, infrastructure and inward investment, we can generate wider benefits for places and the people who live and work in them.

Pillar 1: Unleashing Business – We will fuel businesses who want to innovate.

The Government's renewed commitment to significantly increasing the UK's public spending on R&D to £22 billion a year is welcome, alongside the recognition of innovation as the key driver of growth, prosperity and societal progress.

In the UK, the bulk of public support for R&D is focused on basic and applied research through our excellent HE institutions. Whilst this generates significant opportunities for the UK, we invest less than our competitor countries do in wider innovation by supporting businesses to innovate, resulting in poorer performance for our overall innovation system. To hit the 2.4% target for R&D intensity, it is essential that this increase in public support for innovation is targeted at supporting business to innovate.

However, it will not be enough to support those firms who already consider themselves innovative, who already access finance and support and are on the 'radar' of institutions such as Innovate UK. We also need to encourage more businesses of all sizes to innovate, beyond frontier firms. It is helpful to see Innovate UK given additional responsibility for adoption and diffusion of innovation throughout the UK's business base, but this substantial departure from Innovate UK's previous remit will need careful thought to ensure it effectively reaches those businesses. This is where knowledge of local economies would add significant value to existing and planned national programmes of support.

We ask the Government to work with the North's partners to support this objective by:

- Committing to raising public expenditure on R&D in the North, initially towards the additional £1.6bn needed to meet 2016 benchmarks, throughout the innovation pipeline including discovery research, applied research in both HE & research institutions and businesses based in the North
- Creating dedicated funding streams for innovation diffusion, taking advantage of Growth Hub knowledge of local economies and businesses, and tasking Innovate UK with co-designing these with local partners such as LEPs, CAs and Growth Hubs to deliver these effectively
- Working with the British Business Bank and others to create a holistic approach to access to funding for different stages of the innovation life-cycle, from early stage through to commercialisation
- Resourcing local partners to develop analytical capabilities, to more quickly spot where new industrial strengths and clusters are emerging and to allow these to be nurtured more effectively from an early stage

Pillar 2: People – We will make the UK the most exciting place for innovation talent

It is helpful to see the recognition of developing innovation skills and talent in the UK in this chapter, to support businesses to innovate and grow. Creating a highly skilled workforce to fuel the UK's innovation system has to be a key priority across national and local institutions. It is also useful to see wider recognition of the need to increase diversity in the UK's innovation system, both in terms of people and places, and to make innovation open to everyone.

We welcome Innovate UK's new leadership role in identifying critical innovation emerging skills gaps and in developing and scaling targeted programmes to address the commercial and leadership skills needed to increase innovative business capabilities.

However there is also a key role for local partners and we believe there is potential in a wider 'place' approach which would be helpful supporting local areas to:

- Identify the current and future skills needs of local businesses to connecting these to HEIs and training providers
- Foster and retain homegrown talent
- Attract innovation talent from beyond the UK's borders to support the North's innovation clusters

The NP11 Place & Culture partnership has identified significant scope in the nexus which exists between culture, creativity and innovation and aims both to support advocacy for the North and its innovation strengths through its development of a

strengthened pan-Northern narrative, and to integrate opportunities to enhance place-level innovation capacity through its proposals for place-level, cross-sector partnerships.

We look to work in partnership with the Government to join up national and local support for innovation skills and talent.

Pillar 3: Institutions & Places – We will ensure our research, development and innovation institutions serve the needs of businesses and places across the UK.

We welcome the inclusion of this chapter on institutions and place-based innovation policy. Although much of the detail of delivery will be fleshed out in the Levelling Up White Paper, there are some helpful indications that Government recognises the challenges faced by local partners in delivering growth through innovation in the existing landscape of nationally driven institutions.

Funding streams such as the Strength in Places fund have been well-received (and over-subscribed) as a way of testing out a more place-based approach to supporting the UK's research and innovation strengths. However these have not been at a scale that is sufficient to support the opportunities outside of the UK's more established strengths, and are traditionally thought of as being based in the Golden Triangle. There have also been missed opportunities to link up with other funding streams for skills development and infrastructure to support a holistic approach to developing innovation clusters.

We ask that the Government:

1) Increase **capacity for local private sector leadership** and convening power

In order to support more innovative, dynamic local economies it will be essential to develop a more responsive and locally connected innovation support system that can link up with programmes to support workforce skills, FDI and place-making policies. Building on their role in understanding their economies and supporting businesses, locally based private sector led institutions such as LEPs and CAs are ideally positioned for a place-based approach. Such an approach would support their existing strengths as well as identify and scale up future industries. However, much closer alignment between national innovation funding and local support is needed. The current patchwork of funding streams for supporting innovation is hindering the ability of local areas to join up policy interventions across skills, inward investment and business support.

To do this, we ask that the government to work in partnership with LEPs/CAs to grant them greater autonomy over time to prioritise resources towards the strengths identified in their Local Industrial Strategies and Economic Plans by:

- Testing decentralised models of delivery, including but not limited to Innovation Deals, to coalesce strategic focus and resources towards underpinning innovation ecosystems that can help clusters achieve their full potential. These

would combine funding streams across policy areas with places that have strong innovation capabilities, to deliver a more holistic approach to local economic development

- Establishing at least one of these pilots in the North
- Using the learning from these as a blueprint for developing stronger capacity across all areas of the North to deliver innovation programmes

2) Task UKRI and Innovate UK with moving to a more **decentralised operational model**

UKRI through Innovate UK play a valuable role in the business innovation support system and has made progress in recent years towards tailoring its support for local economies. However, to create responsive, agile support for businesses we need to combine this with 'on the ground' intelligence, leadership, and relationships through LEPs and CAs. The current structure of UKRI regional representation now needs to move beyond stakeholder management to a model of co-design of innovation programmes and meaningful involvement in investment decisions. This can be achieved by:

- As a minimum, remodelling the current role of Innovate UK and the Research Councils with a strengthened presence in the North, creating stronger partnership arrangements with institutions across the North with opportunities for co-creation of priority R&D programmes
- Strengthening the level of business and industry representation in the UKRI governance structure
- Engaging with LEPs/CAs to identify the most effective mechanisms for additional funding to provide direct, agile support to businesses based on intelligence of local economies
- Giving the Catapult network a specific mandate to work more closely with partners across the North
- Over the longer-term, consulting on the options for the creation of Innovation North, a physical presence for innovation in the North with devolved budget for activity that allows a more geographically granular approach, connected to LEPs/CAs, joining up the link between the North's academic institutions, Catapults and other agencies, and its industrial strengths. This could deliver support for innovation at scale in the North, for example through an innovation mission approach to supporting pan-Northern innovation clusters

3) Support emerging innovation clusters by increasing opportunities for **collaboration across administrative boundaries**

The current funding landscape also disincentives LEPs and CAs to collaborate with each other. Whilst there is a place for competition between places in the UK, the benefits of collaboration across LEP boundaries is being lost, alongside the ability to

support wider innovation clusters of research and industrial strengths. We ask that the Government support collaboration by:

- Endorsing and offering high level support where areas and institutions come together to work collaboratively across boundaries, such as the 11 LEPs/CAs in the North innovation programme delivered through the NP11
- Committing to future funding streams that contain a specific element which incentivises cross boundary collaboration between LEPs/CAs
- Ensuring that innovation is a key component of 'place-based' funding streams, such as the Shared Prosperity Fund, the Levelling Up Fund, and so on to allow local areas to take a holistic approach
- Where innovative approaches are being trialled in LEPs/CAs (such as the Innovation Delivery Partnerships, Made Smarter, Global Innovation Corridor), supporting learning and connection across LEP/CA boundaries

Pillar 4: Missions & Technologies – We will stimulate innovation to tackle major challenges faced by the UK and the world and drive capability in key technologies.

Following the analysis in the NIER, the 11 Northern LEPs/CAs are committed to taking forward a mission-led approach through our prime capabilities to contribute to challenges of clean growth and healthier populations.

The NP11 has identified two innovation missions where the North's Prime Capabilities – where it has nationally leading and internationally competitive industrial strengths – align with national priorities for future prosperity.

The first of these is in clean growth, where our Net Zero North work described above has demonstrated the huge potential for economic, environmental, and social benefit if certain policy and technical barriers are overcome. In particular, the North is extremely well placed to deliver on the need for new and emerging technologies, infrastructure, or applications, including hydrogen, decarbonisation of heat and transport, Small Modular Nuclear Reactors, and CCUS and decarbonisation of industry. Taking hydrogen as an example, if the UK is to realise a national hydrogen economy and become a global leader, the North is home to the ideal combination of research excellence, industrial capability, and testbeds for roll-out at scale.

The second of these is in health and life sciences. The NP11 has worked with the Northern Health Science Alliance (NHSA) to produce a proposition for a Northern life sciences supercluster.

Creating a Northern Life Sciences Supercluster

A Northern health and life sciences supercluster would **strengthen the UK's global offering in the field, address levelling up based on excellence and opportunity, and support a place-based approach to research, skills, and innovation.**

The report by the NP11 and the NHTA (Annex 3) sets out how a second UK life sciences supercluster complementary to that in the South East could in the next 20 years double employment and treble GVA in the sector.

Built on the strengths of the North's £13.6bn life sciences economy, home to 21% of the UK's total life sciences workforce, the supercluster will strengthen the region's LEPs/CAs, research intensive universities, Catapults, NHS Trusts, Academic Health Science Networks (AHSNs), Academic Health Science Centres (AHSCs), Science Parks and other stakeholders, enhancing the UK's global industry offer.

The supercluster would **build resilience in the UK's health system, enabling it to tackle future pandemics and directly aid tackling health inequalities in the region which cost the UK £13.2bn a year in lost productivity.** Levelling up the economy in life sciences research and innovation should be based on the mantra that "if it can be done in the North then it should be done in the North".

The leading LEPs, research intensive universities, NHS hospital trusts and AHSNs across the North have committed to working together to build a life science supercluster.

The North has four globally important areas of opportunity where its research excellence and innovation capacity is matched by opportunity in the market:

- Advanced Therapies
- Infectious Diseases
- Diagnostics and MedTech
- Data and Artificial Intelligence

The North of England also has two challenge-driven areas of opportunity, where its globally important expertise meets growing regional, national and international needs arising from specific challenges to the sector:

- Healthy Ageing
- Mental Health and Wellbeing

By supporting these areas of opportunity as a supercluster through the NHTA and the NP11, the life sciences sector in the North would be doubled over 20 years, **creating an additional 64,600 jobs. The GVA from the sector would more than treble from £5.17bn to £16.52bn** added to the national economy.

A talent pool and world-class infrastructure would be created to attract new companies into the region. Crucially, companies already working in the North would be anchored there and drive innovation-led growth. The creation of a Northern

Supercluster in life sciences would directly benefit patients in the region, build UK resilience through development of assets and excellence in the North and play a role in reducing health inequalities.

Delivering the Supercluster

To achieve the potential economic and health benefits for the whole of the UK through the supercluster, we ask the Government to work with partners by committing to raise public expenditure in the above six key areas of opportunity. These have been identified through systemwide consultation by the NHTA and the NP11 as areas in which there is both a critical mass of excellence in the Northern universities and NHS landscape to offer real potential for system integration. Furthermore, we have confirmed demand from industry to connect up these assets to create greater capacity and skills for collaborative research and innovation, and for real-world evaluation and adoption to be retained at scale in the UK.

- **International Outreach and System Integration**

An investment of **£9m** for core functions, comprising £2m for system integration (delivered jointly by the NHTA and NP11) and £7m for international market outreach (£2m in Year 1, £3.5m in Year 2, £3.5m in Year 3).

The £2m investment in a **system integration** role for the NHTA and NP11 will fund activities to build on existing networks and connect the assets across universities, NHS and the LEPs, to grow opportunities at a pan-Northern scale. This sum includes resource to scope and develop industry-led programmes of work in Infectious Disease and Healthy Ageing (detailed further below). This investment will identify the costs and additional economic benefits of these identified areas of opportunity, shaping future prospects for both improved population health and economic growth.

The £7m investment in **international outreach** will work with DIT, embassies, Science & Innovation networks, and other partners to scale up a successful international programme and deliver the supercluster as a global asset. A specific programme for developing this offers huge scope for inward investment. This will ensure that industry stakeholders, nationally and internationally, have the opportunity to invest in and benefit from the infrastructure that is built in the Northern supercluster.

- **Advanced Therapies**

We will create a Northern Advanced Therapies Accelerator to catalyse development, evaluation, manufacturing capacity and clinical delivery of industry-led innovation. This would provide a lab-to-bedside development, evaluation, manufacturing and delivery vehicle for cutting-edge cell and gene therapies.

The proposed investment of **£50m for Advanced Therapies** (£25m in Year 1, £20m in Year 2, £5m in Year 3) will fund a network of early-stage co-development and Good Manufacturing Practice (GMP) manufacturing facilities, servicing academic and industry demands for translational research, evaluation and adoption of transformative cell and gene therapies. This will help keep the UK at the forefront of the global advanced therapy medicinal products (ATMP) market. Development will include bespoke clinical research facilities for delivery of industry funded ATMP trials (leveraging £84m of industry-funded trials in years one to three – currently the UK loses many of these trials to the US) and a cohort of highly trained technical and professional staff networked across industry, the NHS and academia.

- **Diagnostics and Medtech**

We will host a new national centre of R&D excellence delivered across five sites in the North. The convergence of digital technologies, data analysis including artificial intelligence (AI) algorithms and traditional medical devices requires a platform approach to product development and real-world evaluations, to drive NHS adoption at scale and to attract high-potential innovation from around the world.

The proposed investment of **£45m for Diagnostics and MedTech** (£10m in Year 1, £20m in Year 2, £15m in Year 3) will build on the UK's world-leading competitive edge in evaluation of diagnostic technologies and medical devices, and on the success of the CONDOR evaluation platform for COVID-19 diagnostics. It will deploy rapid development, evaluation and commercialisation infrastructure, delivering services to industry across the region and UK. Its priorities will be based on clinical need to provide market pull at pace and scale and pump prime collaborative partnerships between NHS and industry.

- **Data and Artificial Intelligence**

We will establish a Civic Data Grid as a delivery body for health, pulling through data, data science and artificial intelligence (AI) into ethical, citizen-involved and sustainable innovations. This Northern Grid, comprising a number of Civic Data Co-operatives (CDCs), based on the Integrated Care System (ICS) footprint, will feed sub-regional and pan-regional data science and AI developer demands, boosting research and innovation in advanced therapies, diagnostics and medtech. The investment opportunity is in two parts:

£80m for a network of Civic Data Cooperatives (£20m in Year 1, £30m in Year 2, £30m in Year 3) offers transformative opportunities of itself and adds value at scale to the investments proposed for other key areas of opportunity. These CDCs will focus on health and social care system integration, extending to local authority education, housing, environmental and other civic data, enabling hybrid AI advancement across the smart cities and predictive healthcare sectors. The network of CDCs across the North will link activity and excellence in

large centres with problems to be addressed and reach out to towns, rural and coastal areas to help meet their health and economic challenges.

£51m for Artificial Intelligence (£11m in Year 1, £22m in Year 2, £18m in Year 3) will deliver expanded digitisation and linkage of data in areas such as digital pathology, radiology, and 'omics' to the electronic health record to create a globally unique offer to industry for the development of AI applications, as well as therapeutics and diagnostics development. The creation of a dedicated commercial development team will engage with industry partners, and guide them through the process of clinical engagement, product development, evaluation and regulatory approval. In doing so we will accelerate AI adoption within the NHS. This will help NHS trusts support introduction of AI and digital health in daily care, creating wealth and contributing to health.

- **Mental Health and Wellbeing**

We will establish a Northern Mental Health Innovation Accelerator for developing, testing and deploying mental health interventions to support large corporates and SMEs based in the North as they seek to maintain healthy and productive workforces amidst the fall-out of the COVID-19 pandemic. The pandemic has had a disproportionately negative impact on mental health across the North and there is a strong industry interest and need across all sectors, not only health, to find new ways to support the mental health of their workforce and to reduce the impact on productivity.

The proposed investment of **£25m for Mental Health** (£7m in Year 1, £9m in Year 2, £9m in Year 3) will fund the Accelerator and a supporting challenge fund. The Accelerator will be a partnership between the NHS and industry for mental health solutions for employers, identifying common mental disorders at an early stage, and supporting those in work experiencing mental health problems. It will generate evidence around mental health and wellness interventions, and establish an infrastructure for real-time and real-world evaluation across the North. It will draw on the region's unique and long-standing mental health electronic data assets, and include dedicated staff in the NHS, deploy expertise from leading Northern academia, and be powered by real-time data from the Civic Data Cooperatives.

- **Further Development**

Infectious Disease is one of two key areas of opportunity that will benefit from further work. The identified industry needs are to develop a series of specialist research platforms for infectious diseases therapeutics and scale up and extend the infection innovation CONsortium (iiCON) approach of public private partnership to pan-Northern level. This would enable further partnerships between SMEs, research institutions and large-scale industry to drive adoption at scale. It will also leverage the Data and Artificial Intelligence investment to instrument infection dynamics and measure the systemwide impacts of

interventions. There is also an identified opportunity to build capacity in Phase 1 vaccine trials to harness the clinical excellence and capabilities in the NHS.

The NHSA and NP11 will work across the system to develop an investable proposition to connect assets and increase capacity and capability in the Northern Biopharma manufacturing cluster, to deliver the UK vision to be a global centre for the development, manufacture and use of cancer vaccines and immunotherapies.

Healthy Ageing is the second of two key areas of opportunity that will benefit from further work. Although life expectancy has been increasing, the associated increase in healthy life expectancy has not kept pace. Between 2009-2011 and 2016, the proportion of life spent in good health in the UK has decreased from 79.9% to 79.5% for males, and from 77.4% to 76.7% for females. Significant disparities are also evident across the UK with the difference in healthy life expectancy between the most and least deprived places being 18.9 years for males and 19.4 years for females. Supporting an ageing population to lead healthier lives for longer can contribute to an extended working life, with economic gains and cost savings for the NHS. The prosperity of the North will become increasingly linked to the economic engagement and productivity of its ageing workforce. Health innovation and skills development have central roles to play in supporting the healthy ageing agenda.

The NHSA and NP11 will work across the system to develop an investable proposition to connect assets and bring in industry partners, such as a challenge fund that tackles health inequalities by supporting the transition to a life course approach to healthy ageing, following the national government priority of prevention over intervention; expanding ageing specialist research centres and providing pump priming funding to support the development of the next generation of therapeutics, medtech, diagnostics and digital health products that support the management of long-term conditions; and investing to add supply chain and service resilience in areas found wanting in the pandemic response.

We note and welcome the recent Life Sciences Vision and its aspirations to level up and make the UK the leading global hub for life sciences. The North of England can play a central role in realising this vision. Our report sets out the potential within the North to contribute to the UK's ambition to grow and prosper as a research and innovation powerhouse. It also sets out how the UK can position itself as the high-value, high trust, centre of excellence that the global health system needs. It can do this by building a system and culture that are focussed on real-world evaluation and partnership with innovative UK and global companies. To do otherwise would risk being outpaced by the established competitors – the USA, Europe and China – or by rapidly emerging new players across Asia, Latin America, and Africa.

Our proposed, modest investment, **totalling £260m**, will enable the NHSA and NP11 to fulfil the promise of this new paradigm of cross-boundary working. It will fund activities to build on existing networks and connect the assets across universities, NHS

and the LEP landscape, to deliver newfound efficiencies at a pan-Northern scale. The NHS and NP11, working in partnership, will harness the potential of a second life sciences supercluster in the UK and leverage industry investment at a previously unmatched scale: regionally, nationally and internationally.

Realising this opportunity is dependent upon working at a scale that goes beyond existing administrative boundaries in the North of England. We intend that the 11 LEPs of the NP11 and the 24 member organisations of the NHS, plus strategic partners in our network of networks, will work together to deliver a pan-Northern, systemwide approach that brings together university and NHS expertise with national and local government, universities, innovators and financial capital, to address industry need. We will work with national government to put in place industry-led partnerships and greater connectivity between academic and NHS assets in the life science sector and between the public sector and the North's manufacturing and industry assets.

Our extensive consultation work to date identifies specific barriers to the growth of the life sciences industry in the North, which will need to be overcome for the second supercluster to reach its full potential. We will work with partners, including OLS, Innovate UK, UKRI, BEIS and DIT to become industry-led in terms of addressing the current market failures that will realise vast economic potential, such as:

- Develop dedicated pan-Northern support for innovative SMEs to flourish and scale.
- Invest in the people, skills and talent needed to grow the life sciences workforce through developing a life sciences skills action plan that addresses both national and regional needs.
- Support the NHS and universities to work with businesses within the life science sector to bring innovative products to market more quickly; and crucially, build capacity and skills across the North to do this at scale.
- Improve access to finance for innovation for companies within the North.
- Increase the international visibility of the Northern life sciences supercluster and drive foreign direct investment (FDI) in the North by better co-ordination of the existing and future innovation pipeline infrastructure.

By addressing current market failures in business support for Advanced Therapies, Diagnostics and MedTech, Data and AI, and Mental Health, over a 12-year period, these four proposed government investments will deliver the following benefits, as detailed and evidenced in the **NHSA's full Connected Health North submission** to the Spending Review:

- A new paradigm of cross-organisational collaboration at scale in support of industry
- Over 2,000 jobs created, and 3,000 jobs safeguarded, with a £420m increase in GVA

- Over £500m in investment leveraged by companies as a result of NHS partnerships
- At least 50 companies fast tracking their growth from small to medium sized
- Facilitated international market entry at scale
- £5.7bn to the NHS in cumulative efficiency savings and additional clinical trials
- Enhanced coherence and visibility of UK excellence to international investors

DIGITAL

The Plan for Growth identifies digital as both an important enabler of connectivity, and a growth sector in its own right, linked to both improved productivity and increased commercial innovation.

The NPIER identified digital as a Prime Capability, stating that:

“The North has a proud history of computing, with Manchester being the birthplace of ‘baby’, the world’s first stored-program computer. The region has built on this history and has nationally and internationally significant assets underpinning its digital capability. One of the UK’s three standalone internet exchanges is in Leeds, and The Hartree Centre for High Performance Computing at Daresbury is home to the world’s 30th most powerful computer. There are also clusters of tech expertise across the North, including DigitalCity in Middlesbrough, the Baltic Triangle gaming hub in Liverpool, the Yorkshire and North East & Tees Valley Digital Catapults and MediaCity in Salford.

“Big data and data analytics, in conjunction with other capabilities such as advanced manufacturing and the opportunities being created in health devolution, will drive fascinating new innovations and service delivery models. These cross overs and synergies will generate cost efficiencies in design/modelling/prototyping and delivery, and promote increased productivity in a range of sectors.”

The NP11 has undertaken initial research into the opportunities and challenges around digital. As with other areas, there are strong linkages between the place and digital agendas, both of which feature as strategic priorities and cross-cutting areas of opportunity. Both priorities are serviced and enhanced by creativity and innovation. Challenges include ensuring support for SMEs, infrastructure, skills, and access, which need to be overcome to support the economy as a whole.

These opportunities and challenges have both been foregrounded by the COVID-19 pandemic and lockdowns, not only as remote working becomes more prevalent but also as digital-intensive sectors where the North has leading strengths such as fintech; advanced manufacturing; health; cybersecurity; creative; and computing responded to changing market conditions.

The Roadmap for Recovery by the UK Tech Cluster Group⁶ made a number of specific recommendations in response to these issues, including:

- There should be a concerted effort to build programmes which will help to establish new product-led tech startups across the country. This will drive a new flow of innovation from across the UK’s nations and regions into the pipeline of existing ‘scale-up’ programmes, while providing opportunities for people who have lost jobs due to COVID-19.
- New schemes must consider the local nuances of the nations and regions to ensure successful engagement and impact across the UK. It is essential that new

⁶ <https://uktechclustergroup.com/the-recovery-roadmap-report/>

skills, startup, or digital adoption schemes be sensitive to the needs on the ground in the local economies where they are being delivered, as well as the diverse backgrounds of their participants and trainees.

- There needs to be greater emphasis on providing “testbeds” to facilitate close-to-market digital innovation. Giving tech businesses more opportunities to test, trial and showcase their ideas will provide a gateway to help digital start ups and SMEs connect to their customers. It can also provide use cases of the ways that digital technology, built in the UK, can impact industries around the world.

The TCG also recommended creating a specific tax incentive to encourage collaboration between SMEs and corporates at a local level and drive up regional and national R&D investment.

It is worth noting that of the ten TCG founder organisations covering England, five are based in the Northern Powerhouse.

The NP11's early research has come to similar conclusions. To grow the digital sector, we have identified the need to connect the North's many technology centres of excellence, and unlock the North's technology assets by connecting corporates with SMEs in order to build robust regional supply chains.

To support business and drive adoption, there is a need to develop innovation funding that works on the ground and is appropriate for SMEs, and invest in a pool of experienced and specialist advisors who can work with businesses to identify areas for digital adoption/transformation and also work with them through the process and help upskill their teams.

To maximise impact and value for money, there is a need to support regional tech industry networks and join up local initiatives to share best practice. Policy and decision makers need reliable, up-to-date evidence on digital skills, jobs and assets, detailed further in our Evidence Base section below. Investment in broadband infrastructure needs to be future-proofed.

Digital skills programmes, including advice and guidance, need to be localised to reflect specific needs and opportunities. Both basic digital skills and more advanced digital skills will allow the digital economy to thrive. Provision of basic professional digital skills will ensure the workforce is equipped to take on future office-based roles, while the provision of digital life skills will open up the region, connecting citizens and in turn growing the audience of the online marketplace. It is also essential that the advanced skills necessary for digital-intensive sectors are disseminated outside of key incubators and accelerators. As advanced digital technologies are likely to be integral to the enhancement of the North's economy, these high level digital jobs will be central to this.

The NP11 is undertaking further work to identify the scale of the potential benefit of a connected, innovative, and productive digital Northern economy, the interventions and activities that can be shared and scaled up to realise this, and where Government support in the development and delivery of this work is needed.

EVIDENCE BASE

Having robust data and evidence is an essential enabler to the priority growth areas identified in the Plan for Growth and being developed by the NP11 – vital to delivering the recovery, long-term growth and transformation the North needs.

There are many examples of the North already leading on data and evidence best-practice:

- TfN's Northern Evidence Hub, Academic Forum, and Analytical Framework
- Greater Manchester Combined Authority's (GMCA) Office of Data Analytics
- North East Data Hub
- Sheffield City Region Intelligence Hub
- Open Data Institute, Leeds

Bringing these projects and programmes together around a pan-Northern approach can therefore have an impact greater than the sum of its parts, and support long-term growth and transformation of the North's economy.

This is the right time for a Northern Evidence Programme:

- Nationally, the Levelling Up agenda creates the need for stronger local and regional data to effectively identify challenges and solutions.
- Regionally, the themes of innovation, low carbon, inclusive growth, digitisation, and economic recovery require robust evidence and analysis to inform funding bids to government and provide insight into how to solve these challenges.
- Locally, COVID-19 has increased the need to innovate in order to access more timely and granular data that can support delivery.

The North is fortunate to already have a base of strong evidence, not least the NPIER. What is needed now is a vehicle to support improved collaboration across the North and provide the local and pan-Northern evidence we need.

A Northern Evidence Network

Accordingly, the NP11 will work in partnership to create a Northern Evidence Network (see Annex 4) to help support the long-term growth of the economy of the North, by ensuring that decision makers and leaders have the best possible evidence about the economy and future potential growth areas. It will act as a voice for the North on all issues concerning data and evidence and be integrated into existing Northern governance.

The Network will have a membership of all Northern LEPs/CAs. It will have the potential to draw together wider partners such as think tanks, academic networks, and other local government partners.

The Network will support the North's civic, political, and business leaders, with the focus of initial workstreams including supporting the aims and development of the NPIER, including supporting the evidence base for the key priority themes and empowering member LEPs/CAs to better understand their local economies; and providing insightful information to, and requesting useful data from, Government departments and data producers (eg. ONS).

Overarching mission	<i>The Northern Evidence Network's goal is to help support the long-term growth of the economy of the North – in an inclusive and sustainable way that builds resilience - by ensuring that decision makers and leaders have the best possible evidence about the economy and future potential growth areas. It will act as a voice for the North on all issues concerning data and evidence, and integrate into existing Northern governance.</i>		
Thematic objectives	Productivity and Employment		
	Inclusivity	Sustainability	Resilience
Practical activities	Short term:	‘Do it once’ analysis and presentation for standard indicators; Sharing best practice and relevant research	
	Medium term:	Deep dives for specific topics; Purchasing commercial datasets; Horizon scanning for future opportunities	
	Long term:	Using more innovative data; advocate for the North on evidence-based issues; offer advice on interpretation of data	

The Northern Evidence Network will work in partnership with, and disseminate the findings of, existing organisations from across the North, working with partners to access innovative data sources to better support policy and understand ongoing challenges in a way that sums local data to a pan-Northern view.

This work will in turn support the other key aspect of the Evidence Programme, which is the NPIER. By bringing together a wide range of research and evidence elements from across the North, the Northern Evidence Network will enhance the effectiveness of the NPIER work.

We propose that the resourcing of network will be composed of three elements:

- A central coordination team to drive the agenda of the network. This function, including three roles (plus on costs), would be £200k per annum. This team would be made up of:

A lead coordinator who can manage the agenda and key actions for the network, talk knowledgeably about data and research, and is comfortable presenting back key points to members.

A supporting analyst to help identify areas of focus and contribute to the completion of specific tasks or actions.

An administrative assistant to organise meetings, prepare reports, and maintain appropriate records.

- A research and analysis budget of £750,000 per annum to pursue research in the identified priority areas (eg. purchasing data, commissioning third party research, purchasing data tools and software, primary data collection). This would be over and above the investment in developing the NPIER, rather than replacing it.
- Leveraged support from partner organisations. This might consist of contributions in kind (i.e., time devoted to shared analytical objectives), or potential contributions of time and money from members and wider partners (e.g., universities and think-tanks) including academic projects or secondees from research institutions.

In order to ensure the future sustainability of the evidence network, we recommend looking to secure a three-year settlement in the first instance, reflecting the long-term nature of the research in question.

SKILLS, INFRASTRUCTURE, AND BUSINESS SUPPORT

Along with innovation, skills and infrastructure are identified as the core pillars in the Plan for Growth. Similarly, business support is a crucial enabler that runs through all of the above priorities. There are huge opportunities for all in the North.

Skills

As demonstrated above, skills, inevitably, cut across the NP11's work, from ensuring we have an appropriately skilled workforce to take on roles in high-value high-growth areas, through to ensuring that skills development programmes are available and accessible to all, to ensure a diverse workforce across a range of sectors. This works towards the ambition not only of having a highly skilled workforce fuelling a strong economy, but also ensures that skills programmes are responsive to the needs of business at a local level, meaning that there is a greater guarantee of a job because the skills provision and job market are more aligned.

The focus is on the development and implementation of future skills provision; recognising the potential of growth sectors in the region and the need to equip people with the skills for the jobs of the future is essential to a thriving, levelled up economy.

There is a need to strengthen the link between industrial strengths and the wider business community, and innovation agencies and research institutions, to ensure that skills are not just developed in academic institutions. For example, in clean growth, in practice this means equipping large numbers of people with the 'green skills' needed to decarbonise at speed, both at a consumer level with activities like retrofitting homes, as well as at an industrial level as we look to transition carbon-intensive industries over to zero-emissions. LEPs have been very active in this space and must be supported to continue this role.

There is a strong focus on harnessing the creative talent across the region and ensuring that this talent is not lost through "brain drain". This can be supported through the provision of apprenticeships covering a range of roles. Recognising that these sectors are characterised by organisations of varying size and capacity, skills programmes that specifically focus on early stage business support would enable support for smaller enterprises and freelancers. Again, LEPs and Growth Hubs are central to the success of these programmes.

Business Support

Supporting business growth and increased productivity is the key to the creation of good jobs and sustainable economic growth. For this reason, through LEPs Government invested in the creation of a Growth Hub network, which encompasses some core universal principles to:

- Improve the awareness and coordination of local and national business support
- Provide clear signposting and diagnosis to help businesses find the right support easily
- Improve the impact and value for money of business support

Working on behalf of both LEPs and Government, the network is collectively supporting economic development across the urban and rural geography of the Northern Powerhouse, translating local and national policy into business support services, and delivering practical assistance uniquely shaped to meet local needs. This is enabling entrepreneurs and businesses to develop the capacity and capability to become more productive, create new employment, internationalise, and achieve clean growth.

The need to support businesses to start and grow is a key element of Government's Plan for Growth, and Growth Hubs organised now in clusters are uniquely placed to engage those with the potential for growth and help unlock this, supporting the plan by:

Business innovation – Partnership working with Innovate UK should be further strengthened to reach, inspire and support more businesses, from start-ups to scale-ups. There is a need to provide advice, access to finance, and technical expertise. With the right know-how, capabilities, and confidence, businesses will be able to innovate successfully, adopt new technologies and build innovation leadership and management capabilities.

Developing skills – The business engagement reach of Growth Hubs and their local partners should be expanded to further address skills needs by proactively identifying opportunities for businesses to invest in upskilling the leadership and management capabilities (eg. Help to Grow, peer networks, wider local provision), as well as the skills of individuals in their existing wider workforce. Growth Hubs can connect businesses with higher skills provision from universities, colleges, and business schools, and address recruitment issues including the take up of apprenticeships in SMEs.

Infrastructure supply chains - The roll out of major infrastructure projects such as HS2, Dogger Bank, and superfast broadband and 5G in the UK presents businesses with new supply chain opportunities. Growth Hubs can help exploit opportunities locally, by working with commissioners to support businesses secure new opportunities and grow their customer base.

Levelling up – Growth Hubs address the importance of place, whether urban or rural by recognising that different places require different approaches in order to build on opportunities and address the challenges they face. Working with Government the network can deliver tailored approaches that address differing business needs by rationalising access to business support at a local level. This simplifies the business experience, as well as supporting increased inclusivity.

International trade – Growth Hubs have the opportunity to help to mainstream the international trade message to a wider audience. The Growth Hub network could expand engagement with and deliver targeted support for those businesses who could trade internationally. Growth Hubs have a particular role to build the pipeline of potential exporting businesses by ensuring that all clients consider international opportunities whether starting, growing or scaling their business. Through locally delivered events and cohort programmes, Growth Hubs can integrate trade expertise into existing programmes. Growth Hubs can also work with local partners to created tailored provision for high export potential scale ups and priority for key sectors at a place level.

Clean growth – Practical support for businesses is required to transition the economy to Net Zero. Motivational communications and tools need to be translated into clear actions businesses can understand and implement. Growth Hubs can help businesses understand the bottom-line benefits that can be achieved through product innovation, process improvements and resource efficiency.

To deliver this activity at scale will require further strengthening of the network and LEPs in order to make the most of opportunities, leveraging both public and private sources of funding to support the further development of Growth Hubs. A stable, long term commitment from Government is needed. Core funding should therefore receive an uplift to support increased demands on Growth Hubs to service stakeholder needs across Government with these objectives. This will need to be complemented by access to UK SPF funds to replace ERDF from April 2022, as Growth Hubs have utilised some £178.5m of European funds as part of an overall investment of £371.6m in projects and programmes nationally.

Transport

On infrastructure, in addition to the other areas identified in this submission, the NP11 endorses the work and proposals set out by Transport for the North.

We would like to emphasise the importance of the Government's commitments to investment in the region when it comes to the Integrated Rail Plan (IRP), particularly in relation to Northern Powerhouse Rail (NPR).

The release of the IRP will have a drastic effect on the level of investment and regeneration we will see in the North. There would clearly be huge benefits of Northern Powerhouse Rail and related connectivity. The Transpennine Route Upgrade, for example, will correct poor performance on existing lines and give us the railway we need for existing business, passengers and freight; NPR will ensure we are prepared for the future, bringing all corners of the North together as a single economic powerhouse. We also recognise that NPR is not just an important investment for the North, but for the country, and other national schemes are hugely important to its success, connecting the North together and with the rest of the UK.

From a business perspective, improved connectivity gives us longer, faster and more frequent train services which has a vast array of benefits. It will give employers access to a deeper pool of talent across the North; and open up access to new customers for existing businesses, encouraging them to expand, innovate and take more risks. Just as importantly, it will also help to attract and boost investment, both from at home and abroad.

The NPR will generate £14.4bn GVA uplift by 2060, and jobs during design and construction could reach 20,000 directly employed at its peak, with 77,000 positions created in the North and a further 54,000 across the UK once complete. We also know how important decarbonisation is for the Government and the country, and the electrification of the NPR network and beyond, will go a significant way to supporting our journey to net zero.

In short, this strategic rail investment is essential to realising a North of England that is productive, competitive, and on the path to net zero. On behalf of the business community across our region, we would therefore like to strongly express the need for rapid progress on the Integrated Rail Plan and Northern Powerhouse Rail and, once the Plan is published, for it to match the aspirations of the North, and the Government, for levelling up our country.