THIS IS NOT A PUBLIC MEETING

North East Local Enterprise Partnership Board

Thursday 28 January 2021

17.00 – 19.00

Zoom Meeting

AGENDA

1. **Introductions and apologies** (5.00pm)

2. **Declarations of interest** (5.00pm)

3. **Minutes of the last Board meeting held on Thursday 3 December 2020** (5.05pm).
   Board will be asked to agree the Minutes.

4. **Freeports Bid** (5.10pm)
   Helen Golightly, Janice Gillespie and Richard Baker to present to the Board.

5. **SEP update** - paper attached (5.55pm)
   Helen Golightly to present to the Board.

Items 6 is confidential as it contains commercial information relating to the financial or business affairs of a particular person or organisation and is not for wider circulation.

6. **Investment update -** confidential paper attached (5.25pm)
   Paul Woods to present to the Board.

7. **LEP Budget – indicative outturn 2020/21 and draft budget for 2021/22** – paper attached (5.35pm)
   Katy Laing to present to the Board.

8. **Innovation Delivery Partnerships** – paper attached (6.40pm)
   Alan Welby to present to the Board.

9. **Health and Life Sciences Strategy** – paper attached (6.50pm)
   Richard Baker to update the Board.

10. **Chair and Chief Executive update** (5.10pm)
    Lucy Winskell and Helen Golightly to update the Board.

11. **Any Other Business** (6.55pm)

12. **Date and time of next meeting – Thursday 18 March 2021 from 5 - 7pm**

13. **Additional paper for information - Covid 19 Intelligence report January 2021**

North East Local Enterprise Partnership Board

28 January 2021

ITEM 5: SEP Programme Delivery Update

1.0 Purpose of Report

1.1 This report provides a summary of the details given in the SEP Programme Delivery report, which is attached as *Appendix 1*.

2.0 Highlights and points to note since the last meeting

Business Growth

- Kickstarting Tourism and Restart and Recovery Grants (£2.4m fund): 570 businesses contracted to a value of £1.56m with another 34 at contracting stage and 25 at eligibility stage. The average grant size stands at £2,730. Since the second national lockdown was announced there has been a huge increase in the number of businesses requesting extensions as delivery is delayed.
- North East Growth Hub continues to deliver ahead of target in most areas. Performance to 31st December 2020; high intensity interventions delivered = 636 (145% of target), medium intensity interventions delivered = 1,264 (119% of target), light touch interventions delivered = 36.3k (203% of target), customer satisfaction 98%.

Innovation

- The Covid-19 Innovation Challenge pilot is in delivery phase, and engagement from the North East business community has been very good. The pilot was launched in December 2020 with two challenges: the delivery of home-based services and safe in-person events. The call for expressions of interest for the two pilot challenges closed on 15 January 2021 with a total of 63 applications received. The applications will be evaluated by a panel on 19 January 2021.
- 11 Innovation Delivery Partnerships (IDPs) were endorsed by the Innovation Board at its meeting in December 2020 for consideration at LEP Board 28 January 2021. The IDP pilot programme's inaugural workshop to develop the IDP framework and the benchmark approach takes place on 22 January 2021.

Skills, employment, inclusion and progression

- In response to feedback from careers leaders and employers a Work Experience framework is being developed to support schools, colleges and employers to support meaningful encounters both virtually and in a blended approach once Covid related restrictions allow. The framework will include employability skill activity as well as 360°workplace tours and employer talking head videos.
- Through our College Hub, the LEP supported the Gatsby Foundation to produce a video resource for World Skills that highlighted the benefits of Higher Technical Qualifications. In addition, we have led on other initiatives that have linked curriculum staff from the region's FE colleges to employers in sectors where there are currently skills shortages. The most recent of these was an Industry Insight event, which involved Ryan Maughan from Avid Technology, discussing and answering questions on the electrification agenda. A second session, which will focus on life sciences, is planned.

Transport

- The initial design phase of the Metro Fleet replacement project has been successfully completed ahead of the programme and it is anticipated that Covid-19 will not impact on the new trains entering service in 2023. The final cab mock-up is being manufactured and will be delivered to Gosforth Depot in February 2021 for driver consultation. The new Howdon satellite depot is now in operational use.
- Progress on the development of the EV chargers for the Taxi trade has been steady, with orders placed and the first chargers are being installed; four of the ten are now online.

Investment and Infrastructure

- Package of measures agreed at previous LEP Board for £5m of Covid-19 related support are progressing; Patent Protection Scheme has provided grants to 12 Health and Life Science focused businesses; Health and Life Science Development Fund has led to seven projects being take forward; Cluster Development Fund has made 12 awards; VCS Capital Fund has made grant awards totalling £1.2m.
- More than £31m of grant awards from the Getting Building Fund programme have been approved by the Investment Board since the £47m was allocated to the North East LEP in July 2020.

Strategy and Policy

- Substantial work undertaken to support the development of a regional bid to respond to the Free Port opportunity. Bid is to be submitted by 5 February 2021, separate paper detailing the bid contents will be presented to the LEP Board for sign-off.
- The North East has been successful in securing a Round 2 'Healthy Ageing' High Potential Opportunity which will result in specific commercial opportunities in the North East being promoted and actively marketed by the Department for International Trade to encourage inward investment.

Communications

- There continues to be growth in the number of followers across LEP's social media (0.4% on Twitter and 2.6% on LinkedIn since March). The North East LEP remains the most followed LEP in the country on Twitter.
- The stories with the most views on the LEP website related to the £1.2m of LGF grant support awarded to Voluntary, Community and Social Enterprise projects.

3.0 Recommendations

3.1 The Board is recommended to note the contents of the report and *Appendix 1*.

Appendix – North East Strategic Economic Plan Programme Delivery update, January 2021

Item 5 – appendix 1

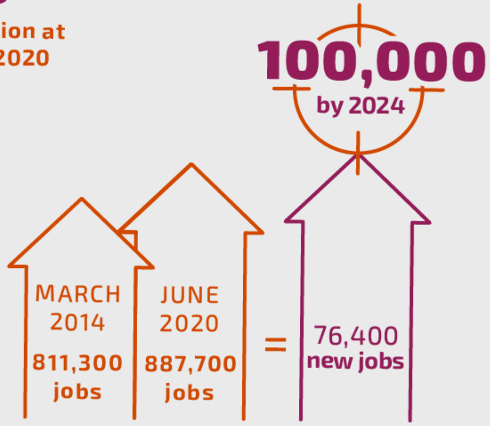
North East Strategic Economic Plan

Programme Delivery update

January 2021

Target Increase the number of jobs in the North East economy by 100,000 by 2024

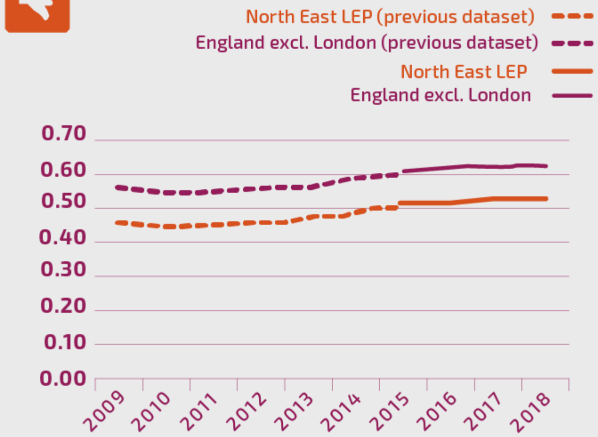
Position at June2020



Target 70% of all jobs created from 2014 will be will be better jobs

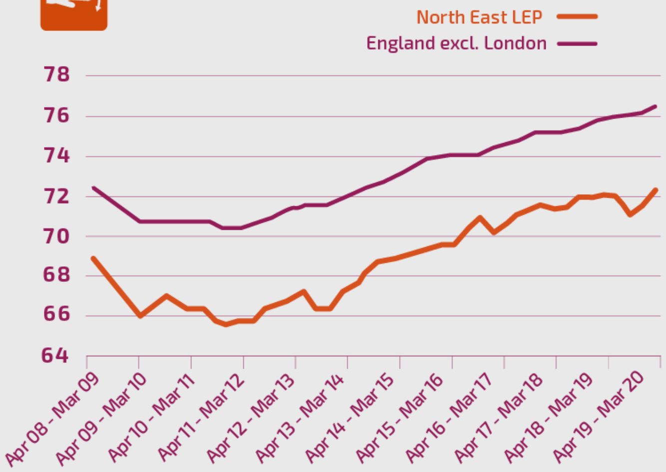
Reduce the gap in private sector employment density
Target 50% reduction in gap by 2024

Position at 2018: 17% increase (compared to 2015)



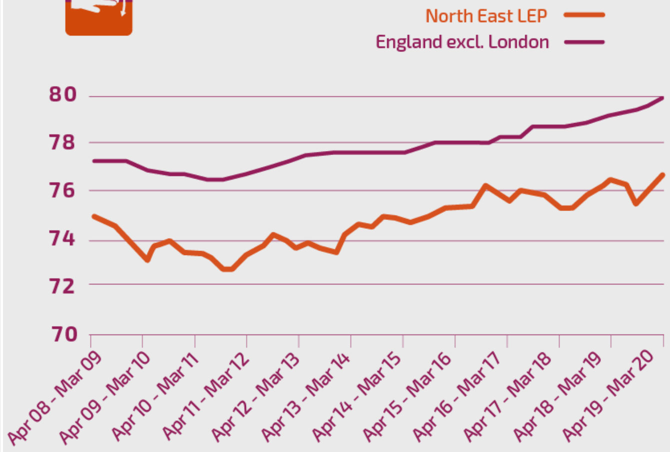
Close the gap in the employment rate for people aged 16-64
Target 100% reduction in gap by 2024

Position at June 2020: 20% reduction



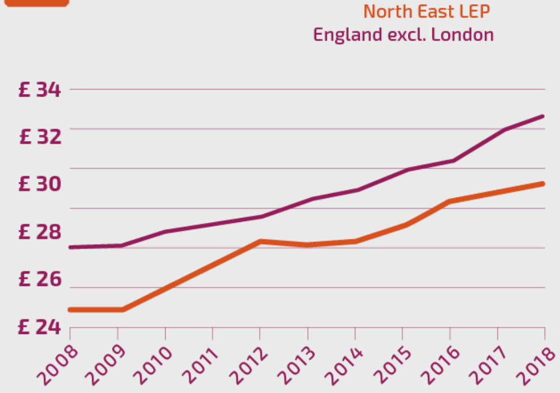
Reduce the gap in economic activity for people aged 16-64
Target 50% reduction in gap by 2024

Position at June 2020: 9% increase



Reduce the gap in GVA per hour worked
Target 50% reduction in gap by 2024

Position at 2018: 19% increase



Business Growth | Lead: Colin Bell

Ambition by 2024

To be a growth orientated, dynamic and productive environment where businesses invest, grow and thrive. At a time of change, we want business leaders to be inspired and supported to achieve their goals through strengthened leadership, innovation and trade, resulting in:
- An increase to the density of scaleup businesses in the North East by 50% from 2014 to 2024. These businesses will deliver 6,000 new jobs into the North East economy
- The attraction of new businesses who invest in the North East and create 4,000 new job per year between 2014 and 2024

We want more businesses to actively seek, and find with ease, the support and finance they need to grow and to strengthen the visibility of opportunities for investment in our economy.

What we will deliver	Progress update and current position	Lead	Progress Status
Raise levels of business growth ambition			
· Research, develop and implement a strategy designed to increase businesses' ambition to start up, grow, scaleup and improve · Develop relationships with intermediaries to reach a larger proportion of the region's businesses, with a particular focus on improving awareness amongst under-represented groups, such as women, ethnic minorities, rural areas and social enterprises	· No significant updates since the last board meeting. Progress on areas of research, such as exploring the causes of enterprise cold and hot spots, is not possible during lockdown. · The team continues to engage in the MIT REAP programme. The project focus has narrowed to focus on attracting Graduates back to the North East to start a business. Covid19 Response Plan Growth Hub 2.0 proposition is prioritising increased start up support capacity as a priority.	Colin Bell	A
Increase demand for external business support and finance			
· Provide access to business start-up support, finance and information through the North East Growth Hub online portal and the national Business Support Helpline · Provide one-to-one impartial brokerage to established businesses and high potential start-ups through our Growth Hub Connectors · Provide intensive account management and managed brokerage to businesses that are scaling up or have the potential to do so · Work with high quality private and public partners to ensure business support and finance are accessible to rural businesses, social enterprises and business leaders from different gender and ethnic groups	· North East Growth Hub continues to deliver ahead of target in most areas. Performance to 31st December 2020; high intensity interventions delivered = 636 (145% of target), medium intensity interventions delivered = 1,264 (119% of target), light touch interventions delivered = 36.3k (203% of target), customer satisfaction 98%. · The BEIS Peer Networks completes recruitment 31st January and delivery by 31st March. We are forecasting recruitment of 32 cohorts by end of January. · Demand for EU Transition support is low, many businesses do not think that they will be effect and/or perceive that as a deal had been reached that they do not have to make any changes. The North East LEP has been awarded £181k to raise awareness and to support businesses. In addition, we have been awarded £40k for collaborative activity across the North East Growth Hub Cluster (North East LEP and Tees Valley CA). · We expect further funding from BEIS to increase Growth Hub capacity to support businesses through EU Transition – we are awaiting confirmation of funding.	Colin Bell	G
Ensure the support of external business support and finance matches the needs of businesses and the economy			
· Review business support and finance provision to ensure that the region's ecosystem provides a ladder for business growth from start-up to scaleup and continuous improvement · Introduce a quality assurance system through the North East Growth Hub that assess the quality of support offered to businesses by external business support and finance providers · Work with private and public partners to design and develop a range of interventions to drive productivity improvement and the adoption of digital technology · Ensure peer mentoring and peer-to-peer leadership development is available to support businesses to scale and improve productivity · Work with partners to increase the density of high potential start-ups in the North East · Continue to develop the North East Growth Hub Business Support Provider Network to encourage collaboration and the sharing of good practice	· £2.4 million Kickstarting Tourism and Restart and Recovery Grants: 570 businesses contracted to a value of £1.56m with another 34 at contracting stage and 25 at eligibility stage. The average grant size stands at £2,730. Since the second national lockdown was announced there has been a huge increase in the number of businesses requesting extensions to their Contract End Dates as project delivery is delayed due to the lockdown · Scaleup North East: work has commenced with RTC on the new £4million Scaleup North East 2 programme which will use an integrated delivery model with the North East Growth Hub will increase the intensity of delivery. · Start-up support capacity: no significant options have been identified to boost start up support capacity. Concerns remain that demand will continue to increase through lockdown and as Government support measures (such as the Job Retention Scheme) are removed. Partners are adapting their delivery models to deal with higher volumes although fears are that in doing so the impact of support will reduce and suppress survival rates. It should be noted that supporting a proportion of the self-employed to move on to develop and grow a business could help to address the regions enterprise deficit – this is a time limited opportunity (as many will choose to return to employment once demand returns) so work continues to lobby for increased levels of business start up support.	Colin Bell	A

What we will deliver	Progress update and current position	Lead	Progress Status
Improve the region's economic resilience			
· Use the North East Growth Hub to distribute up-to-date information on business support and finance options available to support Brexit preparations · Work with partners to develop programmes and solution designed to help businesses to diversify into new markets, supply chains and geographies, including through Supply Chain North East · Work with partners to inform the business support and finance funding mechanisms that will replace the European Structural Investment Funds · Work with partners to set up task forces, when appropriate, to prepare for, to mitigate the effects of and to deal with the fallout of economic shocks	· Cluster Development Fund: 12 projects have been awarded a total of £283k LGF funding to support cluster developments aimed at supporting Covid19 recovery: 1. Advanced Manufacturing Forum – Advanced Manufacturing 2. Northern Film and Media – Creative Industries 3. Durham Culture Partnership – Creative and Cultural Sector 4. Entrepreneurs Forum – Enhancing Digital Delivery to members 5. Food & Drink North East – Food & Drink 6. North East Automotive Alliance – Electric Vehicle Supply Chain 7. North East Process Industries Cluster – Pharmaceutical Manufacture 8. Newcastle Gateshead Initiative – Tourism Industry 9. Dynamo – Cyber Security Cluster 10. REHTECH Ltd – Resilient Communications 11. Collinwood Solutions – Semiconductor Cluster 12. Sunderland Software Centre – Digital Sector	Colin Bell	A
Grow inward investment in the region			
· Combined and local authorities, the LEP, the Department for International Trade and private sector will work together with a shared ambition of securing maximum inward investment into the North East · Establish and follow a clear target driven, lead generation model that is focused on the SEPs areas of strategic importance and support service sectors · Have a robust account management system, led by local authorities, to chare knowledge and investment opportunities with key partners · Develop and deliver an integrated marketing plan to raise the profile of the North East as a place to invest and locate	· To date in 2020/21, due to Covid-19, there has been a significant decrease in active inward investment project numbers and a very difficult environment in which to attract new investment. The Q1&2 success totals show that in the NE LEP area there have been 23 inward investment project successes resulting in 1,230 new jobs. The Q 3 figures are being collected in January 2021. · INEE continues to deliver the DIT Key Account Management Programme (KAM) in partnership with local authorities. An addendum to the original contract has just been signed which reflects the challenges that operating during Covid-19 – reducing some hard project success targets and introducing some additional softer activities. · The Team continues to develop its pipeline through proactive lead generation and other activities including: servicing existing clients on the INEE project pipeline (one very significant investment expected shortly); reviewing and updating its marketing and communications strategy; developing its strategic approach to inward investment attraction in a post-COVID-19 world including developing the North East North Shoring Plan and a strategy to attract new electrification projects; working with partners on some very significant new projects in a variety of sectors which involve billions of pounds of investment and many thousands of new jobs; integrating the emerging Freeport proposals into INEE's propositions once these become clear. The Freeport will be a significant lever for inward investment activity.	Guy Currey	A

Programme Risks

Risk Description	Cause description	Likelihood	Impact	Overall	Actions to avoid/reduce impact
Programmes do not match the needs of businesses	Lack of control over current funding landscape	M	H	MH	Liaison with BEIS, LEP taking a thought leadership role.
Future ecosystem deployment is delayed	SPF or EU funding successor is delayed	M	H	MH	Financial input/output model being tested and embedded within recovery planning
Business downturn and/or closure	Brexit process/outcome causes economic shock National resources are not secured or directed to deal with significant shocks Regional partners are uncoordinated and unable to draw down Government resources	M	H	MH	Engage with business and gather intelligence about business impacts of Brexit.
Covid-19 impacts coupled with EU Exit processes and timescales significantly impede ability to attract new FDI with resultant economic impacts to North East LEP area's economy.	Covid-19 and EU Exit processes and timescales cause uncertainty and deter or defer investment decisions.	H	H	HH	Continued liaison and dialogue with partners to develop contingency plans.

Innovation | Lead: Alan Welby

Ambition by 2024

Innovation is central to our long-term aim to build a more productive North East, fostering a competitive and embedded business base and solving social and economic challenges in the region and beyond. It is a tool for internationalising our economy, particularly in areas of specialisation, by attracting partners and investors to engage in our science, research and business base and for strengthening the competitiveness of businesses and creativity of communities.

We have an ambition of a collaborative and open innovation eco-system that enables the matching of what is needed to what is possible to drive economic or social value, or both.

We aim to increase the number of innovation active businesses by 550 and increase investment in business research, development and innovation by 50% between 2014 and 2024.

What we will deliver	Progress update and current position	Lead	Progress Status
Stimulate new business opportunities through the North East Open Innovation Challenge			
· Stimulate new business opportunities through the North East Open Innovation Challenge · Support the alignment and communication of open innovation and challenge events and programmes to create critical mass and deepen engagement with regional businesses in events · Support best practice for open innovation events	· The Covid-19 Innovation Challenge pilot is in delivery phase, and engagement from the North East business community has been very good. The pilot was launched in December 2020 with two challenges: the delivery of home-based services and safe in-person events. The call for expressions of interest for the two pilot challenges closed on 15 January with a total of 63 applications. The EoIs will be evaluated by a panel on 19 January, and due to the high numbers a planned third call may be halted in favour of focussing on the existing EoIs. · Work continues to develop a North East Open Innovation Challenge with communications focusing on stimulating interest amongst regional businesses through the Covid-19 challenge. Work is continuing to develop a set of materials to support region-wide engagement and appetite for OI challenge activities. https://challenge.northeastgrowthhub.co.uk · The INVITE project was successfully completed and the lessons learned were communicated in a blog. The development of the Covid-19 Challenge and the future North East Open Innovation Challenge are both utilising the good practice and lessons learned from INVITE.	Alan Welby	G
Prioritise a regional pipeline of projects to form a Strategic Investment Programme			
· Develop a prioritised list of regional, large scale pipeline projects · Align with activities undertaken by our Combined Authorities · Focus on large-scale collaborative projects that have the capacity to have significant impact for the regional economy and create jobs · The North East LEP's Innovation Board will play a challenge and support role, holding regional partners to account for progress in developing the evidence base and business plans, securing funding and delivering pipeline projects · Develop a programme to address identified place-based gaps to supporting business growth · Coordinate an approach to securing funds for pipeline projects, including from the National Productivity Investment Fund (NPIF) and Grand Challenges	· The number of projects on the innovation pipeline has reduced following the transfer of several projects into the Innovation Delivery Partnership (IDP) pilot in December. Activity to identify new projects of regional significance will be undertaken in Spring 2021. · A review of Innovation Board membership and terms of reference is planned which will ensure continuing alignment of innovation activity through appropriate representation from both the North East Combined Authority and North of Tyne Combined Authority. Both Combined Authorities are involved in MIT-REAP Team North East and in both the development of the IDP process and the assessment of Expressions of Interest. Relationships with local planning authorities are emerging regarding the Economic Markets Foresight Analysis. · Alignment will be retained between the Innovation pipeline and the LEP regional priority project pipeline during future calls to ensure focus remains on projects of strategic importance. · Durham University have secured funding to take forward the Place Based research piece on behalf of the LEP with work underway to define research parameters. This will be the first phase of this work.	Alan Welby	G
Support our businesses to capitalise on local research and innovation capability			
· Strengthen collaboration between businesses and innovation assets such as universities, catapults and national centres of excellence · Enhance the co-ordination between businesses, sectors and innovation assets · Support our innovation assets to successfully secure national funding to run regional programmes · Work with service delivery partners such as the NHS and local authorities to take-up and roll-out new delivery approaches ·	· Ongoing activity continues with focus on the NE Covid 19 Challenge programme. The LEP contacted to 12 businesses participate in the Intrapreneurship programme plan as part of High Potential Startups. · Coordination between sectors continues to take place through the IDP process and through the Economic Markets Foresight Analysis that is being procured. · The 12 projects supported through the Innovation Project Development Fund are progressing with business case development. IC3 (the International Centre for Connected Construction) is awaiting the outcome of a Strength in Places Fund bid. · The Covid 19 challenge programme will engage with service delivery partners to apply new models of collaboration to address issues thrown up by Covid - Local authorities, NHS, Transport organisations and utilities have engaged in the process as challenge sponsors. We have also been very successful in engaging private sector organisations to sponsor challenges.	Alan Welby	G

What we will deliver	Progress update and current position	Lead	Progress Status
Increase private sector investment into growing innovation businesses			
· Support VentureFest and FinanceCamp · Develop new approaches to lever private funding from outside the region · Develop an open innovation challenge to drive increased collaborative investment · Work with universities to continue to grow spin-out success, including through Northern Accelerator	· The team continues to engage with the Innovation SuperNetwork and is looking towards the new date agreed for VentureFest (17 March 2021). · The Finance Task and Finish Group's recommendations are now built in to a corporate action plan for further consideration. The Group met on 14 January to take forward demand-side actions. A finance and funding toolkit is proposed for the North East Growth Hub as the first deliverable of the roadmap. Discussions continue regarding the successor to North East Fund and with Venture North, and the team is engaged with the Corporation of London regarding finance for sustainable growth. · The MIT Regional Entrepreneurship Acceleration Programme (MIT-REAP) is focused on retaining graduate talent and will be mobilised in the new financial year through the stakeholder group. Activity proposed to support the retention of graduates compliments other graduate enterprise activities underway and supports the aims of the Recovery and Renewal Deal. To date, 29 survey responses have been received.	Alan Welby	A
Engage partners to identify and drive business growth through an Innovation Sectors and Competencies Programme			
· Identify and prioritise regional innovation sectors and competencies, including assessing where these align with the Industrial Strategy and North East Local Industrial Strategy · Put robust governance in place to identify priority areas · Ensure buy-in and engagement with private sector · Develop a portfolio of projects and programmes · Identify leads and capacity to drive activity · Improve alignment of innovation activities to skills and business growth programmes	· 11 IDPs were endorsed by the Innovation Board at its meeting in December 2020 for consideration at LEP Board 28 January. The IDP pilot programme's inaugural workshop to develop the IDP framework and the benchmark approach takes place on 22 January 2021 with lead and core partners. · The IDPs are divided into Pathfinder (Wave 1) and Development (Wave 2) partnerships, the main distinctions being market identification and strategic intent. The pilot IDPs are in the following emergent markets: Pathfinder (x7): aging, battery materials, electric drives, immersive technologies, integrated construction, offshore robotics, space; Development (x4): cybersecurity, fintech, surfaces and interfaces, water resource management. · The tender deadline for the Economic Markets Foresight Analysis was extended to 15 January 2021. Tenders will be evaluated on the 20/21 January, with the contract due to commence w/c 15 February, running through to mid-September 2021. The Government's Open Innovation Team has been procured to provide validation capacity to the project and will bring international and national market and sector experts together to test, challenge and peer review findings at two critical stages in the contract. · The framework for evaluating and reporting on IDPs will be developed through engagement during the pilot process. A co-creation approach is being taken to developing a benchmarking framework with agreed measurable standards for the components of an innovation ecosystem. The benchmarks align with the innovation KPI framework and support key elements of the IDP concept. Good practice is integral to the design of the framework.	Alan Welby	G
Coordinate regional partners to provide enhanced innovation support activity			
· Supporting the delivery of a programme of innovation support for regional businesses · Ensure activity is aligned through successful partnership brokered by the Innovation SuperNetwork · Support businesses to increase their investment in RDI · Strengthen our links with national and international hubs and networks to generate commercial returns for local businesses	· The Business Growth and Innovation teams continue to build the ecosystem model by exploring the data requirements to fully populate the financial input-output model that will inform potential investment decisions along with several partners. · LEP team continues to work closely with the SuperNetwork through the Open Innovation Challenge and participation in the SuperNetwork Partner Group. · Alan Welby is chairing the Northern Powerhouse innovation leads and has lead a review of activity. The LEP has also facilitated the recruitment of a NP11 Innovation Director who will report to Alan Welby with 5 applications at the deadline close of 14th Jan with interviews later in January.	Alan Welby	G

Programme Risks

Risk Description	Cause description	Likelihood	Impact	Overall	Actions to avoid/reduce impact
Innovation budget insufficient to cover all activities - namely Places and Communities study	Broader budget pressures	H	M	HM	Investigating other approaches to delivery with reduced cost and reprofiling activity
Uncertainty over funding direction of key national competitions	Pre-budget period lack of clarity	M	H	MH	Keeping up to date with development and developing strong project irrespective of details of investment stream
Capacity to address key activities particularly IDP	Required resourcing for IDP development	H	M	HM	Considering options for additional focused resource to provide capacity

Skills, employment, inclusion and progression | Lead: Michelle Rainbow

Ambition by 2024

Our long-term ambition in the North East is that demand for skills and the quality of jobs continue to improve, leading to higher productivity. To delivery this, the North East must be a place where:

- Individuals, regardless of age or employment status, have a good understanding of the employment opportunities available in the North East and the pathways to access them
- Employers have strong links with education and training providers leading to responsive provision that meets local needs
- All patterns understand the importance of skills in improving productivity and living standards, with commitment to delivering good working environments for residents

This is an ambition vision that will require substantial changes to deliver. By 2024, our ambition is that these principles are understood across the region and that there has been significant progress made towards their achievement, providing a strong base to build on in future years.

What we will deliver	Progress update and current position	Lead	Progress Status
1. Deliver North East Ambition			
· Develop a primary school benchmark pilot that could influence the national careers strategy · Adoption of the Gatsby Good Careers Benchmarks by all secondary schools and colleges · Secure and deliver a £3.4million North East Ambition programme that ensures our education system provides young people with the skills to meet the long-term needs of the North East economy	· As part of the Career Benchmarks: Primary Pilot, we recently commissioned an external organisation, Learn by Design, to develop some resources for our primary schools – to support them with aspects of the benchmarks that, collectively, they find the most challenging. The resources that we are developing will be focussed on LMI that can be delivered through the curriculum, for teachers as well as parents/carers. These resources will also make reference to the SEP. In addition, we're developing a further piece of work linked to transition, which will add value to the school's current processes and better connect primary and secondary schools in terms of Careers Related Learning, with each other. · Working with partners from across the region, we delivered two live My North East Choices broadcasts through the Learn Live platform. These broadcasts were designed to highlight the full range of options for young people who are completing Year 11 this year, as well as 17-19 year olds who also have decisions to make in terms of their next steps in education, employment or training. · Through our College Hub, including by engaging a number of Vice Principals from FE partners across the region, we supported the Gatsby Foundation to produce a video resource for World Skills that highlighted the benefits of Higher Technical Qualifications. In addition, we have led on a number of other initiatives that have linked curriculum staff from the region's FE colleges to employers in sectors where there are currently skills shortages. The most recent of these was an Industry Insight event, which involved Ryan Maughan from Avid Technology, discussing and answering questions on the electrification agenda. A second session, which will focus on life sciences, is planned.	Michelle Rainbow	G
2. Deliver Education Challenge			
· Partner with the Department for Education and others to consider the allocation of the £24 million Opportunity North East funding to improve prospects for young people in the North East. Boost social mobility and raise aspirations for children · Expand delivery of the Next Generation learning pilot focussing on school leadership, high quality CPD, rich employer engagement, early preparation for next stage, a focus on wider skills, a focus on student well-being and teaching and learning through applied learning, project based learning and oracy skills	· Opportunity North East continues to delivery in line with the project delivery plan. Significant challenges have been faced during the last academic term, 74% of students were able to access virtual Cycle 2 advice and guidance and career related activity and interventions. The data evidences positive direction of travel against a number of assessment criteria following interventions and interviews between Cycle 1 and Cycle 2. · Partnership work with Ford Next Generation Learning has commenced with an additional Further Education College with a focus on Health pathways. Stakeholder and community groups are being convened in preparation for initial engagement workshops. · In response to feedback from careers Leaders and employers a Work Experience framework is being developed to support schools, colleges and employers to support meaningful encounters both virtually and in a blended approach once restrictions allow. The framework will include employability skill activity as well as 360°workplace tours and employer talking head videos. The framework will be tested with pilot schools and employers.	Michelle Rainbow	G
3. Improve skills progression			
· Develop a list of the region's assets within FE, HE and other providers to inform future investment provision · Promote the North East as a potential location to pilot a system to help individuals recognise and record their transferable skills · Work with the Apprenticeship Growth Partnership and other partners to increase the number of apprenticeships available at all levels within growth and labour-intensive sectors · Support partners to implement good quality T-levels and specialist technical education to widen choices for young people · Secure funding to deliver a university pilot project focussing on careers and opportunities	· No significant updates since the last board meeting. · The LEP and other partners are scoping the pilot programme for transferable or fusion skills. The pilot will be influenced by the findings in the Taylor Review. A proposition for a pilot was included in the draft local industrial strategy. · The Skills Advisory Panel has identified the impact on Covid-19 on apprenticeship delivery as a priority. This is now part of an overall ask around Jobs Recovery in the regional Economic Response to C-19 · A LEP proposal to hold a series of targeted events to promote T-levels placements was approved by ESFA, an a series of events is underway with employers and with educational organisations to promote	Michelle Rainbow	G

What we will deliver	Progress update and current position	Lead	Progress Status
4. Increase youth employment			
· Continue to deliver Generation North East and the model to prevent youth unemployment · Provide specialist intensive support for those most distant from the labour market because of disadvantage, poverty, poor physical and mental health · Grow the number of apprenticeships by developing access courses · Ensure young people are able to develop their digital skills. This required digital skills to be build into school, FE and HE courses, exploring new models of delivery including working to secure an Institute of Technology in the region and ensuring that support for young people not in education, employment or training includes digital skills training	· Generation North East has adapted extremely well under Covid-19 restrictions by delivering digitally to young people. Currently they have on register 1,185 young people and support 414 into work since April 204. The contract is now preparing to end in March 2021 and partners are reviewing the legacy and lessons learnt to inform any future funding opportunities or programmes. · DurhamWorks has now supported 8,231 young people since its commencement in January 2016. 4,838 have completed the programme and of those 4169 (86%) have progressed into employment, education or training or gained a qualification. · The National Careers Service (NCS) is currently being provided by telephone or other digital platforms which provides the customer still with a full Information, Advice and Guidance session; and demand is rapidly increasing - total customers seen in this period in the NE LEP area are 9,688 this equates to 1,076 customers per month;	Michelle Rainbow	G
5. Improve labour market activation			
· Continue to develop holistic package of support for people facing health barriers to employment, building on successful projects such as Mental Health Trailblazer and Working Links, showcasing the benefits of collaboration · Ensure support is in place for those that have moved from unemployment or inactivity into work to help them progress and acquire further skills · Increase take up of Better Health at Work Awards and similar schemes to employers, to share employment and human resource best practice	· No significant updates since the last board meeting. · The National Careers Service has been working with local authorities to roll out the Jobs Fuse programme. This is a new programme that supports workers impacted by the Covid-19 crisis to return to work and help employers fill vacancies. The programme has been launched in Durham and South Tyneside (at the time of writing) and planning was underway in the rest of the North East LEP region. The programme is flexible and will be integrated into existing services where appropriate. The programme also provides direct support for furloughed workers, it also provides information and support to employers to plan for their furloughed employees. · The North East LEP is developing a partnership project with Durham University to develop a series of case studies looking at good work. The proposal has been approved for funding and first inception meeting are underway.	Michelle Rainbow	A
6. Ensure connected communities			
· Provide targeted support for communities and individuals, focusing on those with multiple barriers or protected characteristics, and ensure this is a strategic funding priority · Work to secure funding and other resources to ensure that all North East residents are able to develop their digital skills regardless of their age, location or economic status · Consideration of digital skills provision and local digital infrastructure must be prioritised	· No significant updates since the last board meeting. Over £70m of ESF projects are currently live, with 21 projects currently in the appraisal process. The ESF regional coordinator has collected information on the impact of covid-19 on delivery across the North East programming and is in touch with the managing authority to mitigate the impact. · Digital Skills is part of the overall ESIF strategy and will be a priority in the development of future provision. The SAP will provide the start of the detailed analysis of the requirement.	Michelle Rainbow	G
7. Help deliver Fuller Working Lives			
· Continue to develop and implement the North East's Fuller Working Lives strategy with a supporting communications plan that targets employers and addresses the challenges and opportunities around this agenda	· No significant updates since the last board meeting. Work has commenced the development of a series of activities focussed on the 3 R, re-train, retrain and regain. Development of the FWL strategy is being developed as a key part of local industrial strategy. The LEP is working with regional universities to explore innovation in healthy aging, aligned with the Aging Society set out in industrial strategy.	Michelle Rainbow	G

Programme Risks

Risk Description	Cause description	Likelihood	Impact	Overall	Actions to avoid/reduce impact
Fusion Skills Pilot: Lack of funding	No confirmed funding source for the employability framework	M	H	MH	Sources of funding is being sought
T Levels: Emerging government policy on T-Levels placements	Emerging government policy on T-Levels placements may result in reluctance from employers to provide apprenticeships.	M	H	MH	Regular communication with ESFA/partners to ensure clear messages to employers on reforms.
Apprenticeships: regional delivery impacted by covid-19	Early indications are that covid-19 is having a impact on apprenticeship delivery country-wide	M	H	MH	Working with regional partners to draw up an action plan to support delivery.
Youth Employment: programmes face uncertainty around delivery	The sector is reporting financial uncertainty with many grant funding streams uncertain and delivery halted.	H	H	HH	Working closely with partners to assess the impact of covid-19 on the sector and draw up a response.

Transport connectivity | Lead: Philip Meikle

Vision Statement

Our ambition is once of improved, greener and more sustainable transport options, including public transport, cycling and walking.

New mobility solutions will make travel simpler and affordable across our distinctive local economy. Quality infrastructure will make for reliable, fast journeys with connectivity into national and international freight and passenger networks. This network will be the enabler to sustainable growth and opportunity, and to the North East being an outward looking economy attracting trade, investment and visitors from across Europe and the world.

Through the Strategic Economic Plan we have established a strong investment pipeline. Our aim is to continue to deliver continuous improvement in a modern, integrated transport system that underpins our economic ambitions.

What we will deliver	Progress update and current position	Lead	Progress Status
Ongoing transport project delivery			
· Continued infrastructure renewals on the Metro system to promote system reliability · Further roll out of electric vehicle charging points through the Go Ultra Low North East programme to encourage the uptake of Ultra Low Emission Vehicles in the region · Delivery of the Local Growth Fund transport programme and the Local Sustainable Transport Fund capital programme	· Project and Programme Management of circa 300 individual projects within the Metro Asset Renewal Programme and development of 30 new projects for delivery under the subsequent Essential Renewals Programme. £341m of the £350m ARP funding has now been invested. A further £20m 'Essential Renewals Funding' is confirmed for 2021/22. 231 Projects have been completed and closed out with 62 live projects in progress at 8th January 2021. Programme delivery is continuing to be impacted by Covid working restrictions with some managed budget pressures, delays and disruption to site works. · Transport North East Strategy Unit has procured Swarco UK Ltd to progress the development of the EV chargers for the Taxi trade. Orders have been placed and the chargers are being installed. Four of the ten are now online with a further five to be delivered by early February 2022. Delays have been encountered due to unexpected wayleaves but are now being progressed.	Philip Meikle	G
Secure funding from Transforming Cities Bid and commence delivery			
· A high-quality bid, that secures significant funding for the sustainable transport network · Begin a programme of sustainable infrastructure interventions in public transport, walking and cycling · Develop the foundations of an innovative new mobility ecosystem with digitally based ticketing	· An excellent funding settlement has been achieved, with both rail schemes funded and a £104m Devolved Pot established for local schemes. A delivery team has now been recruited and the programme will start in 2021. · A plan for new mobility has been prepared (this formed the basis of our FMZ bid). Exploration continues to find potential sources of funding for new mobility interventions.	Philip Meikle	G
Deliver better connectivity through improved infrastructure			
· Interventions on the local Strategic Highways Network, including major junction projects and commencement of A1 improvements · Roll out of the first trains in the Metro fleet replacement programmes · Commissioning of electric vehicle filling stations and charging clusters	· Highways England (HE) current work programmes for strategic highways improvements is on schedule: A19: Construction on Testos/ Downhill Lane continues through the period, which will create a free flowing A19 between North Yorkshire and Northumberland. A69: Work has continued on the two junction schemes in the Hexham area to improve flow - Due for completion in March 2021. A66: Planning for the dualling scheme is progressing and HE with the commitment in the Spring Budget that the scheme will commence within the RIS2 period (2020-2025). An exercise is currently live showing the latest designs, before a formal engagement exercise next year. A1: Western Bypass improvements at Scotswood-North Brunton commenced in March 2020, Birtley to Coalhouse: due to start in 2020-2021. A1 in Northumberland, schemes at Morpeth to Felton and Alnwick to Ellingham merged to now be called Morpeth to Ellingham. DCO consultation has closed and the application is being considered by the Planning Inspectorate with a decision expected in July 2021. · The initial design phase of the Metro Fleet replacement project has been successfully completed ahead of the programme deadline of 6th January 2021. Stadler have advised that any impact COVID 19 will have on the Fleet Replacement Programme will be clearer by summer 2021 but advise at present it has not impacted on the new trains entering service in 2023. A decision was taken to cancel the manufacturing of a full size saloon mock up on the basis that it is unlikely that Covid restrictions will be sufficiently lifted to allow for a public exhibition to take place during April 2021. The final cab mock up is being manufactured and will be delivered to Gosforth Depot in February 2021 for driver consultation. Howdon satellite depot is now in operational use. · The Go Ultra Low North East programme has made significant progress during the project period, notably the opening of the UK's first EV filling station. There has been some delay to the delivery of the hubs due to COVID 19 therefore a further extension until April 2021 has been granted. The project will then close.	Philip Meikle	G

What we will deliver	Progress update and current position	Lead	Progress Status
Develop a future transport investment pipeline			
· Development of the North East Transport Plan including supplementary thematic strategies designed to support our economy · Continued participation in Transport for the North and Rail North to identify pan-Northern connectivity priorities · A pipeline of schemes matched to targeted funding solutions	· The development of the North East Transport Plan continues · The Transport North East Strategy Unit and Nexus are engaged with TfN on current projects covering the Major Roads Network, Strategic Development Corridors (road and rail) and the Long Term Rail Strategy line of route audits. TfN preparing a Covid response plan (TfN Economic Recovery Plan) and preparing for a potential stimulus budget. · Project pipeline for inclusion in the Transport Plan is being developed, these will be projects which are regional priorities and meet the objectives and targets within the Transport Plan. The pipeline will be run as a live programme. The initial draft project pipeline is included in the consultation draft of the North East Transport Plan. Funding solutions have not been identified for most schemes in the pipeline.	Philip Meikle	A
Improve national and international connectivity			
· Delivery of the programme of interventions outlined in the Newcastle Airport Masterplan to grow routes and foster wider business growth in associated sectors · Agreement with Northern Powerhouse Rail and others on approach to East Coast Mainline improvements · Ongoing augmentation or port capability to support trade and investment and to foster growth in key regional areas of opportunity including energy and advanced manufacturing	· Work is ongoing and we continue to liaise with local ports. A Free Port bid is being developed for submission to government, led by Port of Tyne with input from a range of relevant stakeholders including NELEP, Newcastle Airport and Transport North East · Nexus are engaged in development work with Network Rail and TfN. TfN Board approved on 18th November the initial preferred network and phasing strategy following the intermediate sifting of options; for Leeds to Newcastle corridor the preferred option includes Full reopening of the Leamside Line for Freight traffic, enabling an uplift of passenger services on the ECML.	Philip Meikle	A
Use transport to drive innovation and business growth			
· Joint work across all transport modes to identify opportunities for innovation areas including energy, fuels, digital mobility and the development or the Centre for Connected Autonomous Vehicles · Collaborative work with tourism agencies to strengthen the offer for business and visitor tourism · Collaborative work to develop supply chain and skills development programmes linked to transport and logistics	· Future Mobility Zone Project closed - DfT did not shortlist the North East FMZ proposition. · The Airport is working with other members of the Northern Tourism Alliance, including DMO's and LA's on the Visit North East England project. NTA members are providing content for the new website and the Airport is driving traffic to the site via overseas digital campaigns · The North East Freight Partnership's Skills Working Group engages with the logistics sector, training providers and other agencies to examine ways of addressing skills and labour shortages. The next meeting was to have been held in mid-2020, however meetings have been on hold due to COVID-19. An online NEFP meeting took place on 8th December and we are looking to hold an online Skills Group meeting in the early months of 2021.	Philip Meikle	G

Programme Risks

Risk Description	Cause description	Likelihood	Impact	Overall	Actions to avoid/reduce impact
Affordability of Metro Asset Renewal Programme - Delivery of required outcomes within the £352m available funding.	Multiple project risks, contractor risk pricing and inflationary pressures. Covid-19 impact on working arrangements and supply chains. EU supply chain risks (inc' Brexit related).	H	M	HM	Re-prioritisation and allocation of risk contingency. Periodic (4weekly) programme reviews and quarterly 'affordability' reporting.
Beyond 2020/21, funding for Metro Infrastructure renewals remains unconfirmed. Metro Infrastructure investment unfunded beyond 31 March 2021	Business Case submitted - still awaiting DfT / Treasury approval	M	H	MH	Continue to engage with DfT / Treasure. DfT Nexus Programme Board and direct communications.
Funding not available for new mobility interventions	No funding can be identified from internal or external sources to develop new mobility trials	H	M	HM	Continue to explore funding opportunities.
Pipeline of schemes for Transport Plan is not agreed and funding is not secured	Unable to reach consensus on which schemes are included in the pipeline and Funding is not available	M	H	MH	The interventions will be as a result of working in partnership with each local authority.

Investment and infrastructure | Lead: Helen Golightly

Ambition by 2024

Through focussed and coordinated investments we will address market failures and competitive weaknesses. We will work with partners to quicken the pace and scale of investment across the North East, focusing on our business and infrastructure investment opportunities and needs. Opportunities for job and productivity growth on strategic employment sites, in town and city centres, along strategic transport corridors, in our culture and tourist hubs and in the rural economy will be prioritised.

What we will deliver	Progress update and current position	Lead	Progress Status
Manage the already secured North East LEP funding effectively			
· Invest the £270m of Local Growth Fund (LGF) grant into transport, infrastructure for strategic science parks and employment sites, plus skills and business growth activities · Maximise the loan investment opportunity for the £55m North East Investment Fund (NEIF) · Progress delivery of the 21 Enterprise Zone sites' infrastructure programme	· Package of measures agreed at previous LEP Board for £5m of Covid-19 related support are progressing; Patent Protection Scheme has provided grants to 12 Health and Life Science focused businesses; Health and Life Science Development Fund has led to seven projects being take forward; Cluster Development Fund has made 12 awards; VCS Capital Fund has made grant awards totalling £1.2m. · Grant Offer made for project on Team Valley, but applicant has declined. Options for alternative utilisation being considered. · 31 projects have now received NEIF awards. · An application to Getting Building Fund grant suport towards infrastructure works on Wallsend EZ site is expected to be considered during Q4 2020/21.	Helen Golightly	G
Coordinate partners to develop a regional project pipeline based on spatial economic priorities			
· Produce a regional project pipeline based on agreed spatial economic priorities through effective partnership working with the two combined and seven local authorities, business and education partners and government	· Work continues with Local Authorities to pull together a comprehensive pipeline list, including those forming part of the Covid-19 recovery plan. Expected that draft pipeline will be presented to Investment Board meeting in coming months. · Further options around providing development/feasibility funding for pipeline projects being developed in order to ensure the region is in the best position for any funding opportunities.	Helen Golightly	A
Secure additional investment into the North East			
· Secure UK government funding linked to delivering the Industrial Strategy into the region · Secure the notional allocation of European Structural Investment Funds into the region with partners · Work with public and private sector partners to develop and secure funding for strategic projects	· £47m allocated to region through the Getting Building Fund (GBF) with programme of applications coming forward over the coming months to the LEP Investment Board. 14 projects with £31.2m of GBF grants already approved, and strategy has been considered by the North East LEP Investment Board to ensure spend target for 2020/21 (half of total allocation) is met. · Details awaited from Government on the UK Shared Prosperity Fund (UKSPF) · Significant work underway to support bid for Free Port status in the North East, including financial modelling that will underpin an investment programme if bid is successful · Addtional £19.6m ESF funding across 9 projects has now been approved through ESIF Committee.	Helen Golightly	G
Increase access to finance for business to invest			
· Effectively deliver the North East Fund · Identify gaps and market demand for new business finance models · Develop business finance mechanisms to meet the need of North East businesses	· There has been a steady increase in investments since the start of the pandemic, with £2.3m invested in Apr-Jun, £4.3m Jul-Sep, and over £6m invested in the quarter to December. The fund has recently achieved another significant milestone, having passed the £50m investment figure, which invested in almost 350 transactions. Demand (particularly sub £50k loans) continues to be affected to a degree by the availability of the government support schemes, which have now been extended to the end of March. Positively, the availability of the Future Fund has allowed several co-investment opportunities to be completed · Review of the NEIF has resulted in development of Commercial Property Investment Fund, with market engagement activities having been completed with potential fund managers to refine the investment strategy.	Helen Golightly	G

Programme Risks

Risk Description	Cause description	Likelihood	Impact	Overall	Actions to avoid/reduce impact
Delays to project completions and KPI achievement	Covid-19 related restrictions reduce ability of funded projects to complete in good time and delay achievement of KPIs	H	M	HM	Ongoing dialogue with project sponsors to understand impact
Timely conclusion of Grant Funding agreements	Including assessment of new subsidy rules (relacing State Aid) and how these may impact on finalising the contracts required to spend grant budgets	M	M	MM	Work ongoing with NTCA and grant recipients to ensure progress is made
Unable to fully defray GBF and LGF budget allocations during 2020/21 financial year	With half of the £47m allocation being provided in the current financial year, impact of due process in approving grants means that there will limited capital works undertaken in the eight months of the financial year between award and year end.	M	M	MM	Funding strategy developed and considered by Board in January and March 2021

Strategy, Policy and Analysis | Lead: Richard Baker

Vision Statement

The North East LEP will be recognised locally and nationally as an exemplar for driving evidence based economic strategy, public policy and programme delivery.

What we will deliver	Progress update and current position	Lead	Progress Status
Strategic Economic Plan (SEP) development and delivery			
· Delivery of external interim evaluation over period 2018-2021 · Establish processes for embedding lessons from monitoring and evaluation into LEP decision making · Development and delivery of comprehensive SEP communications plan · Prepare for next scheduled review in 2021 · Secure alignment with other regional plans	· The evaluation and monitoring arrangements are in place and active with a full interim evaluation report due in 2021. A forward plan for 2020-21 is in place and will include LGF content aligned with requirements of Investment Team. · Discussion has begun about the forward progress for the SEP update, planned for 2021 informed by the evaluation and taking into account wider policy changes such as the Local Industrial Strategy and Transport Plan. Initial work to frame the post Covid evidence base has been begun by the Research and Analysis team · The SEP has been used as a framing document for the Recovery Plan and the Transport Plan and project 1.4.2 will aim to consolidate that at that the point of the 2021 update	Richard Baker	A
Local Industrial Strategy (LIS) development			
· Agree and develop a vision and objectives for LIS · Develop a robust and open evidence base · Identify and develop core propositions · Pursue dialogue with Government regarding the LIS propositions · Delivery of the engagement plan. Ensuring that it is co-produced with government and partners, and according to the government time table · Approval of the LIS, taking through the required governance mechanisms · Manage the various governance mechanisms including LIS Steering Group, Working Group and papers that are required	· No significant updates since the last board meeting. Propositions that were developed as part of the LIS have informed the Covid-19 Response Plan	Richard Baker	A
Economic analysis and commentary			
· Provide timely, accurate and appropriate analysis of data · Effectively communicate key messages from data using the most suitable mode of dissemination · Develop new methods of accessing, collating, analysing and presenting data · Identify opportunities to work with or provide guidance and training of other people	· Produced a comprehensive summary of the latest economic and labour market datasets relating to the impact of COVID-19, including identifying the most up to date information and potential new sources · Provide monthly report of COVID-19 related data to feed into SAP meeting. Final report from consultants on new methods for understanding future employment and skills needs for specific sectors is currently being drafted. · COVID-19 indicators have been added to the Data Hub, with more to follow. These have different timescales to other hub content, focussing on 2020, and include administrative data. · Have developed the use of new COVID related data from Google and Government data about business support.	Richard Baker	G
Delivery of research and evidence programme			
· Develop a centrally co-ordinated research programme · Establish a collaborative research programme with NE universities · Maintain the North East Economic Evidence Forum and continue to strengthen its role and remit · Increase visibility of our analysis. research, and evaluation activities	· The team continue to support programmes with research activities including writing and reviewing tender specifications, supporting on procurement processes and providing critical friend support. · The team is working across all delivery teams in developing a number of research projects including: emerging global market opportunities with Innovation; Heat decarbonisation and NE Air Freight Connectivity. We have also successfully commissioned a pilot study with the Skills Team to determine future skills needs within specific North East sectors. · The Good Work project and one looking at spatial trade and investment are both progressing, with initial phases complete. · The North East Evidence forum are engaged regularly regarding research and opportunities for collaboration. This will be built upon in the coming year.	Emma Ward	G
Informing and influencing public policy in priority areas			
· Confirmation of scope and activity of LEP public policy action · Implementation of EU Exit work programme · Strengthen and co-ordinate engagement with the northern powerhouse and its constituent activities · Support and promote approaches which can deliver enhanced devolution to the region to support the economy · Move forward a co-ordinated approach to public policy development related to infrastructure · Develop and deliver a public affairs strategy focus on parliament and the senior civil service · Co-ordinate and support the public policy response to Covid-19 through LEP teams and the Economic Response Group	· The EU Exit Implementation Group continues to meet monthly. The Infrastructure Subgroup meets on an ad hoc basis to advise on the development of the Free Trade Zone proposal. · A response to the Freezone consultation was submitted in July, following discussions with the Implementation Group, Infrastructure Subgroup, and LA Economic Directors. A Steering Group has been established to prepare for the bid and the framework agreed by the Board in October 2020. A full report on the proposal will go to Board in January 2021. · Ongoing monitoring of policy developments with respect of planning and infrastructure. Prepared summary of proposals in the Planning White Paper. Arranging further discussions with a view to co-ordinating a regional response to the proposals	Richard Baker	G
Energy for growth programme			

What we will deliver	Progress update and current position	Lead	Progress Status
· Maintain active regional governance and profile for energy · Support the growth of an active Offshore Energy Cluster to promote growth working with TVCA & other partners · Develop the NE Energy Catalyst partnership and its programme of work · Accelerate delivery of regional energy initiatives, linked to the BEIS Local Energy programme · Engage actively with wider governance and political structures to embed Energy for Growth strategy · Integrate Energy for Growth and its priorities with wider LEP strategies and delivery programmes	· Offshore and subsea technology working group providing guidance on regional sector support and development issues, including positioning in Subsea UK Global Underwater Hub proposition which is moving to implementation in 2021. · NEYH Hub board has signed off on supporting development of an NE-led energy skills academy with £50k funding. North East led mine energy white paper project at final draft stage. Strong representation of North East projects in the NEYH hub project pipeline. NELEP supporting delivery of the LAD2 retrofit funding scheme via the Hub, with NE allocation of c£16m. · Energy Lead part of the initial scoring panel for NTCA Offshore funding call. Ongoing support for regional offshore infrastructure priorities, including relating to portside hubs funding competition nationally. · Phase 0' initiatives underway utilising existing assets, examples include: World's first 'Integrated Smart Energy Lab' (OREC, Durham and Newcastle University) press release and social media released. Project initiation document circulated to consortium, shortlisting priority areas of focus. Energy Partnerships Manager assisting with 3 GBF applications with Catalyst partners (1x OREC) and (2x InTEGReL). Energy Innovation Challenge Programme continues to link SMEs with Catalyst partner expertise and assets. · The Energy Catalyst is providing a regional partnership to identify and support IDP's in the energy sectors. The Catalyst is being actively used as a network to help develop IDPs such as Battery Materials, and to explore linkages into the energy sector for other IDPs such as IC3. · Energy Innovation Challenge Programme is driving engagement with SMEs. SMEs making contact directly with North East Energy Catalyst illustrates this engagement is working. An asset map showcasing innovation and demonstration assets has been created and is being digitalised. · Mine energy white paper now at final draft stage, plans to publish, publicise and use in strategic influencing activities in Q4 are being developed. · Draft HPO on heat networks now received from the DIT which will be used to inform regional strategy to develop this sector. · Two stage1 North East projects were awarded funding in the latest round of RCEF to a value of £68,670. Six projects are currently receiving pre application support ahead of the 1st February deadline. · The accelerator business case has been approved by the LEP investment board, and is now moving into implementation. · Community energy study is ongoing, and the second steering group meeting has taken place. The consultant has been collecting evidence and data through a survey, focus groups and 1 to 1 interviews. · Key Energy for Growth propositions identified within the draft LIS, and subsequently informing Covid recovery planning. Energy interventions forming a central part of emerging Freezones bid. · Ongoing ERDF funding secured for the EIPM role. Getting building fund allocated funding for two Energy for Growth pipeline projects. Ongoing utilisation of LGF and alignment to Energy for Growth strategy.	Andrew Clark	G
Digital programme			
· Create a governance structure to oversee delivery of the work programme · Develop an agreed communications plan to promote NE Digital development · Develop and begin delivery of an active pipeline of projects under theme: data · Develop and begin delivery of an active pipeline of projects under theme: workforce · Develop and begin delivery of an active pipeline of projects under theme: digital collaboration and enterprise · Develop and begin delivery of an active pipeline of projects under theme: infrastructure and connectivity	· Digital skills development embedded in Covid response and recovery planning across workstreams, focus on: training provision; upskilling of existing workforces; digital inclusion; hardware distribution; digital adoption; supporting remote working and remote learning. Specialist tech skills identified by steering group as a gap to be addressed in early 2021. · Internal report on Tech Start Up authored by Digital Lead with input from task and finish group. Sets out suggested delivery mechanisms and activities against an evidence base. Workshop with LEP colleagues held to determine activity in the short term and inform longer term plans. Findings presented to steering group, draft blueprint for start-up support programme in production in collaboration with partners to identify short, medium and long term activities. · Covid Future Fund/Innovate UK funding-initiated events series with webinar. Key tech stakeholders engaged to generate NE submissions to the call in the short term, identify priorities for digital strategy in the mid-term and inform UKSPF development in the long term. Alignment with Business Growth and Innovation programmes. · Work ongoing with LA7 digital leads group to map regional infrastructure and connectivity demand and supply. Exploring pilot study with some LAs. Significant piece of work undertaken with the Transport team to create new Connectivity manifesto · Three bids from across the region submitted to DCMS 5G Create call, Sunderland bid on Connected and Automated Logistics successful. "Connected North East" digital and transport submission to government for CSR in Covid Connectivity workstream. Digital-specific aspects of bid to be presented to steering group in November to identify priorities and governance plans for 2021. · Refreshed Made Smarter outline bid submitted to BEIS in advance of CSR in partnership with TVCA, developed with input from CPI, Digital Catapult NETV and NEAA.	Richard Baker	A
Health and life sciences programme			
· Develop and update health and life sciences evidence base to inform the Economic growth strategy for Health and Life Sciences · Develop and launch an Economic growth Strategy for the Health and Life Sciences sector in the North East · Working with the Steering Group refresh and develop the project pipeline (based on evidence, and aims and objectives of the Strategic Economic Plan and Local Industrial Strategy · Support the development of the North East Health and life sciences eco-system- and raise the profile · With partners, develop and deliver a communications strategy to raise awareness, promote and develop the reputation of the NE Health and Life Sciences Sector · Identify who we can work with/ other clusters with complementary assets and capabilities to the North East in order to maximise collaborative opportunities from which the region will benefit	· A draft Health & Life Sciences ten year growth strategy was presented to the North East LEP Board in December 2020 and a final version will be presented in January 2021 following targeted amendments. Other sub-Boards were engaged in the process of finalisation. · £300k of LGF funds was secured for a project development fund and 6 awards have been made. Work is being monitored and expected to be received by March 2021. · The North East has been successful in securing a Round 2 'Healthy Ageing' HPO- which will result in specific commercial opportunities in the North East being promoted and actively marketed by DIT to encourage inward investment. The first stakeholder workshop will take place in February 2021- work is underway with partners to prepare for that. · Work is underway to map out the potential campaigns and opportunities to support HLS as a sector and define a work programme over coming months. This will directly support the delivery of the Strategy. · Priority opportunities have arisen around Medicines supply base/ Supply Chain security. Proposals to build this programme of activity are in place as part of the Covid Recovery Planning Process (which will focus on the Pharma sector primarily, but also benefit process industries and other advanced manufacturing sectors). This is ongoing with resourcing through LGF	Richard Baker	G

Communications update

25 November 2020 – 14 January 2021

Highlights from the past two months

Below is a summary of the content we have issued to support projects and initiatives since November 2020

Strategic announcements and update

Statement from Lucy Winskell OBE, Chair of the North East LEP, on the EU trade agreement

The Government has announced a trade agreement between the UK and the EU. Lucy Winskell OBE, Chair of the North East Local Enterprise Partnership, commented: "We welcome the news of the deal between the UK and the EU and hope that it will provide clarity for businesses, and a continuation of trade between the North East and partners in the EU, and beyond. As details of our new trading relationship become clear we will continue to work with businesses and partners across the region, helping businesses to take advantage of opportunities and building a bright future for the North East."

North East Local Enterprise Annual General Meeting

This year's North East Local Enterprise Partnership Annual General Meeting was held online on Tuesday, 24 November 2020. During the meeting, our Chief Executive, Helen Golightly, gave an update on our work and our on-going priorities. The Chief Financial Officer, Paul Woods gave an update on the funding programmes managed by LEP. We were joined by an audience of over 250 people and questions were taken from Sli.do

Reaction to Spending Review – 25 November 2020

Lucy Winskell, Chair of the North East LEP gave her reaction to the Spending Review: "Today's Spending Review has set out the scale of the challenge we face to recover from the economic impact of COVID-19. The Chancellor is expecting to see a decline in economic activity and rise in unemployment with a long-lasting impact for many years. He is therefore right to focus on the recovery of the labour market with support for those who lose their jobs or need to retrain and to focus on the levelling up of the UK economy. We look forward to more details about the Levelling Up Fund and the early stages of the UK Shared Prosperity Fund. We welcome the confirmation of the financial package to support the 10-point plan for a green industrial revolution. The North East has a strong role to play in delivering this plan. The proposed recovery and renewal plan set out by the North East COVID-19 Economic Response Group sets out our plan to address the challenges we face in our region and we will work closely with government to seek the best outcomes for our residents and economy."

Business growth

Funding awarded to help North East businesses recover from COVID-19 impact

More than £235,000 in funding has been awarded to help North East businesses in a range of sectors recover from the impact of the COVID-19 pandemic. The funding will result in the creation of 12 different business support projects, for North East businesses operating in areas including the cultural sector, food and drink, digital and manufacturing. Read more here

Applications for High Potential Startups open

High Potential Startups accelerator programme, which helps entrepreneurs bring their idea to life, have reopened. The programme helps people to test their idea, understand customers, fill skills gaps, explore how to access finance and find co-founders. Read more here

Skills, employment, inclusion and progression

Newcastle College takes on a creative approach to careers education in 2020

The coronavirus pandemic has forced schools, colleges and universities to find new, creative ways to engage learners; particularly around areas such as careers education, where it's been very difficult for young people to experience meaningful encounters with employers because of COVID-19. The North East LEP's recent collaboration with Newcastle College to bring theatre to audiences in the North East, whilst at the same time giving students a valuable live work experience brief in a safe and secure way, is a great example of the creative approach that has characterised teaching this year. Students studying Performing Arts and a range of other courses in the creative industries at Newcastle College were invited to work alongside local media company The Social Co. to create and record 12 festive performances to screen to primary schools across the region during December.aspirations and broaden the horizons of North East primary school pupils. An independent audit commissioned by the North East Local Enterprise Partnership (LEP) and the EY Foundation has found in its first year of activity, the pilot has achieved its aims of translating and embedding the career benchmarks within primary school settings.

Innovation

North East businesses awarded funding to develop new energy products

£100,000 of funding has been awarded to help five North East energy businesses bring new products to market. The five SMEs all entered the Energy Innovation Challenge which was launched by the North East Energy Catalyst as a way of supporting businesses in the region to develop solutions to global energy challenges. The five businesses awarded funding are DLAW Contractors, The Energy Workshop, Otaski Energy Solutions, Power Roll, and Solar Capture Technologies.

North East leading on UK plan for a Green Industrial Revolution

Globally significant work being carried out within the North East's energy sector is leading the way on delivering the government's Green Industrial Revolution plan which was announced in November, reinforcing the region's position to lead delivery on the UK's Net Zero agenda. The plan announced by Prime Minister Boris Johnson includes 10 key areas of focus, which correspond with initiatives already being delivered in the North East and bring opportunities to create more and better jobs in the region. Read more here

Challenge North East launched to fund solutions to solve COVID-19-related issues

The North East LEP is calling on the regional business community to help it solve some of the biggest Coronavirus-related problems. Through Challenge North East, a new open innovation programme, the LEP is offering support to SMEs as it seeks to address critical issues facing the North East marketplace while it adapts to a COVID-19 world. SMEs will be given up to £5k grant funding between January and March 2021 to develop solutions to specific challenges, with the possibility of being in the running to win a grant of up to £40k to scale the most impactful solution in each area. 63 submissions were recieved and currently being reviewed.

Funding

More than £1.2 million awarded to North East voluntary, community and social enterprise projects

More than £1.2 million has been awarded to voluntary, community and social enterprise (VCSE) organisations in the North East to fund projects that support young people in the region and that contribute to a green economic recovery. The funding has been awarded by the North East LEP from its Local Growth Fund VCSE Capital Grant programme, which aims to help communities across the North East recover from the impact of the COVID-19 pandemic. Projects awarded funding range from the regeneration of a community garden in Meadow Well, North Tyneside; the creation of a 'social kitchen' in Hendon, Sunderland; and the development of a new learning facility and 20 hectares of improved green space for public use in Newcastle.
Read more here

North East LEP website performance summary:

Audience		
Visitors	12,543	(+9.86%)
Total page views	28,502	(9.84%)
Average session duration	1m 18s	(+27.7%)

Traffic source	views
Organic	3,023
Direct	3,478
Email	28
Social	580
Referral	289
Other	28

Top five news pages	views
More than £1.2 million awarded to North East voluntary, community and social enterprise projects	473
Challenge North East launched to fund solutions to solve COVID-19-related issues	468
Could you help the North East LEP deliver careers-based best practice resources and videos for use in primary schools?	416
Reaction to today's Spending Review – 25 November 2020:	259
North East leading on UK plan for a green industrial revolution:	195

Top five pages	views
Home	5,864
About/executive-team	2,089
The-Plan	1,789
Projects	1,753
About	1,384

Social media

	Total followers	Impressions
Twitter	12,176 (+0.4%)	156,732
LinkedIn	7,675 (+2.6%)	25,145

Top performing LEPs on Twitter:

1. North East LEP	2. Leeds LEP	3. Liverpool LEP	4. Black Country LEP
12,176	11,304	10,035	9,243

Best performing organic posts: Twitter and Linkedin

Twitter 1

Impressions	Engagement	Clicks	Retweets
5,476	121	43	12

Twitter 2

Impressions	Engagement	Clicks	Retweets
3,249	67	26	7

Twitter 3

Impressions	Engagement	Clicks	Retweets
2,794	51	43	13

Twitter 4

Impressions	Engagement	Clicks	Retweets
2,360	72	30	4

LinkedIn 1

Impressions	Engagement	Clicks
1,811	85	64

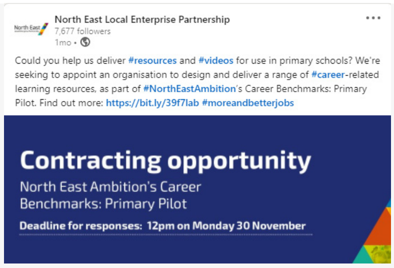
Twitter 5

Impressions	Engagement	Clicks	Retweets
2,207	52	10	19

LinkedIn 2

Impressions	Engagement	Clicks
1,599	118	103

LinkedIn 3



Impressions	Engagement	Clicks
1,269	96	60

Priorities for the next two months

1. Support the development of the Health and Life Sciences strategy and develop a communications plan to announce its publication.
2. Continue with web development projects including:
   – New North East LEP website
   – Replatfroming North East Growht Hub from October to Wordpress CMS
   – Introduce business focused area of North East Ambition
3. *Forward plan for the North East Datahub
4. Refresh our airport advertising, scheduled to go to print in February 2021.
5. Support the development and submission of the North East England Freeport bid.

Forward plan of content

Topic	Programme	Description	Type	Estimated date of issue
Health and Life Sciences Strategy launch	Corporate	Publish the approved Health and Life Sciences strategy	Press release and supporting blogs	WC 5 Feb (if approved)
North East England Freeport	Corporate with partners	Supportive PR as appropriate	Press releases, blogs, social media, pending sign off of bid details	TBC
Role of education in COVID-19 recovery	North East COVID Economic Response Group	Highlight the role of Universities and colleges in supporting the North East's economic recovery from COVID-19 by working with the business community in the region. Pipeline includes: **Newcastle University** A case study exploring the START UP programme, and the impact the student and graduate businesses it supports are having within the region. **Durham University** A case study about Durham University's role in the international entrepreneur competition, just IMAGINE if… **Northumbria University** A case study about Northumbria University's new Restorative Just Culture programme - delivered in partnership with Mersey Care NHS Foundation Trust – which aims to improve workplace wellbeing and cut business costs. **Liz Bromley - NCG** Thought leadership in role of colleges working with business as part of the recovery	Case studies, News releases, Social media	Ongoing
MIT Reap	Business Growth	Profiling the LEP and partners involvement work of the stakeholders with a blog from Dr Phillip Budden from MIT REAP	Blog and social media	W/c 18 January 2021
Digital Adoption Toolkit	Business Growth	Campaign promoting the Digital Adoption to businesses via the North East Growth Hub	Social media, Partnership with Bdaily, Owned media channels	Ongoing to February
High Potential Startups	Business Growth	Campaign driving recruitment for the fifth round of High Potential Startups	Social media, Owned media channels, Digital marketing	Ongoing to February (or until cohort is complete)

COVID-19 Toolkit	Business Growth	Regular updates of COVID-19 Toolkit on the North East Growth Hub to ensure businesses have access to the most up to date guidance and support	Social media, Owned media channels	Ongoing
Growth Hub Connect	Business Growth	Campaign to promote the Growth Hub Connect service on the North East Growth Hub	Campaign currently in development	February
Business Growth Board Ambassadorial campaign	Business Growth	Highlight the role and contribution of the Business Growth Board members in supporting the delivery of the Business Growth programme and Strategic Economic Plan	Various	Ongoing
Brexit	Business Growth	Ongoing content based on government guidance for businesses	Insight articles and social media content (to be added to the North East Growth Hub Brexit toolkit)	Ongoing
Energy Catalyst	Business Growth	Blog post on North East Energy Catalyst plans for 2021	Blog post	Late Jan/early Feb
Restart and recovery grant case studies	Business Growth	Case studies on businesses receiving funding from the ERDF restart and recovery grant	Case studies published via the North East Growth Hub	Ongoing
Challenge North East	Innovation	Announce companies who have won funding to take their business continuity idea forward	Press release and supporting social media	March 2021
LEP's investment portfolio	Investment	A look at the investment portfolio of the North East LEP and its aims & achievements to date	Press release and supporting social media	Feb 2021
Enterprise Zones	Investment	What is the role of the Enterprise Zones and how to they fit into the Strategic Economic Plan?	Blog post and supporting social media	Feb 2021
Getting Building Fund	Investment	News releases and case studies about the 18 projects In the North East LEP region awarded funding from the Getting Building Fund	News releases, Case studies, Social media	January 2021 - onwards
Local Growth Fund	Investment	News releases, case studies and supporting social media about the progress of LGF projects in the North East LEP region	News releases, Case studies, Social media	January 2021 - onwards
Skills	Skills	Monthly thought leadership column from Michelle Rainbow in Northern Insight magazine	Article	Monthly
Careers in electrification	Skills	Video project aimed at inspiring secondary pupils to pursue a career in the electrification industry in the North East	Video	End of March

Please note, where content is owned as oppose to media relations, audience profiles are in place to ensure the content is targeted at the most relevant audiences as well as the LEP's general followers.

Any feedback on input into our content plan, please email jen.robson@nelep.co.uk

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North East Local Enterprise Partnership Board

28 January 2021

ITEM 7: Update on 2020/21 Revenue Budget; and a Provisional Estimate for the Revenue Budget for 2021/22

1. Introduction

1.1 The purpose of this report is to provide an update to the Board on the North East Local Enterprise Partnership (North East LEP) Revenue Budget position for the current financial year (2020/21), and to provide an indicative Budget for next financial year (2021/22). This report also provides an updated Budget position in relation to the Enterprise Zone account, and an update on the Local Growth Fund (LGF), the new Getting Building Fund (GBF), and the North East Investment Fund (NEIF).

1.2 As in previous years it is intended to provide an outturn report for 2020/21 and an updated indicative Budget for 2021/22 with latest information about funding and a three-year Budget projection at the May Board.

1.3 As of 1st April 2020, the North of Tyne Combined Authority became the new accountable body for the North East LEP, the 2020/21 indicative outturn and 2021/22 indicative Budget position reflects this.

2. North East LEP 2020/21 Revenue Budget

2.1 During 2020/21 there has been a significant increase in funding on specific programmes, in particular Government funding, which has resulted in additional activity in the year, resulting mainly in increases in operational cost (including the costs of short-term secondments) and an increase to the staffing budget.

2.2 The North East LEP (LEP) core Budget covers LEP operational activity and also management of the Local Growth Fund, NEIF and Enterprise Zone programmes. Table 1 provides a summary of the Revised Revenue Budget for the year compared with the Revenue Budget reported in January 2020, and the subsequent updated Revenue Budget reported in May 2020, with supporting notes provided below.

2.3 The North East LEP Board agreed a provisional Revenue Budget for 2020/21 of £4.909m in January 2020 and an updated Revenue Budget of £5.368m in May 2020. With a higher Gross Income estimate of £5.211m in May, the projected drawdown from the LEP reserve had reduced from £0.327m in January to £0.157m, leaving an estimated reserve of £0.500m at the end of the year, in May.

2.4 Total revenue expenditure in 2020/21 is now estimated to be £7.097m, which is £1.729m higher than estimated in the May. However, this increase is funded by matched income streams of £1.796m increasing the Gross Income Budget to £7.107m. The additional funding streams relate primarily to the Getting Building Fund, supplementary Growth Hub funding, Skills and Business advice and Brexit preparation activity. The net effect was a reduction in a net cost for the year from £0.157m in May to (£0.010m) net income position.

2.5 This follows the pattern in previous years, where a cautious view on income and a prudent provision for costs, results in an estimated call on reserves at the start of the year, and additional income or lower costs in the year reduces the call on reserves at the year end. The estimated level of North East LEP Reserve to be carried into 2021/22 is estimated to be £0.613m.

2.6 In terms of grant income, many of the specific grants are subject to claims for actual expenditure in the year. If eligible expenditure is lower in the year, then the amount of grant receivable for the year will also reduce to reflect the actual level of eligible expenditure that has been incurred.

2.7 The main budget variations are summarised below.

Employee Costs

2.7.1 In relation to employee costs there is an estimated increase of £0.136m when compared with May 2020 Budget Update. This is due in the main to the extension of fixed term contracts and recruitment in relation to continuation of existing as well new funding streams. There was also a 2.75% national pay award agreed for 2020/21, this increased the overall staffing budget by approximately £0.030m. A budget for staff allowances is also included in the budget total of £0.020m.

Other Costs

2.7.2 Other operational cost budgets reflected in the 2020/21 Revised Budget relate to new grant income streams, including the Innovation Challenge COVID (£0.464m), Peer Networks (£0.510m), Skills funding, DfE (£0.158m) and EY Foundation (£0.135m). Getting Building Fund was awarded in 2020/21 providing £47.000m funding over two years to deliver 'shovel ready' capital projects to support the economic recovery from the impact of COVID-19 pandemic. A percentage of the grant can be used to fund programme management costs (£0.205m), this includes the requirement for Legal and Financial advice.

Table 1: North East LEP 2020/21 Revenue Budget	2020/21 TOTALS			
	Original Budget 2020/21 (January '20)	Updated Budget 2020/21 (May '20)	Revised Budget 2020/21	Variance
	£'000	£'000	£'000	£'000
Employees	2,624	3,084	3,220	136
LEP Chair Renummeration	-	20	20	-
Premises	190	190	207	17
Communications	252	250	250	-
Transport LGF Monitoring	72	20	26	6
Growth Hub Operational Costs	93	74	74	-
Growth Hub Supplementary Funding (COVID-19)	-	290	309	19
Invite (Horizon 2020) Operational Costs	23	60	72	12
Innovation Challenge - Covid	-	-	464	464
Other Operational Costs	626	600	636	36
North East Ambition Operational Costs (ESF)	312	165	144	(21)
Peer Networks	-	-	510	510
Covid Intelligence	-	-	40	40
LGF High Potential Operational	319	189	164	(25)
Brexit Policy Work Programme	110	109	73	(36)
Energy Programme Operational Costs	23	23	23	-
Skills Operational Costs (DfE/CITE /EY)	-	109	364	255
Inward Invesment Contribution	140	140	140	-
LGF Programme Manangement Costs	125	45	78	33
Getting Building Fund Project Management	-	-	205	205
GROSS EXPENDITURE	**4,909**	**5,368**	**7,097**	**1,729**
LEP Core & Strategy Grant from DCLG	(500)	(500)	(500)	-
GBF Capacity Funding	-	-	(100)	(100)
Local Authority Match Contributions	(250)	(250)	(250)	-
CORE FUNDING	**(750)**	**(750)**	**(850)**	**(100)**
Local Growth Fund (Programme Mgmt)	(850)	(768)	(747)	21
Getting Building Fund (Programme Mgmt)	-	-	(357)	(357)
Interest Generated on Funds to fund INEE	(80)	(140)	(140)	-
Growth Hub	(410)	(410)	(410)	-
Growth Hub Supplementary Funding (COVID-19)	-	(370)	(370)	-
Peer Networks	-	-	(510)	(510)
Enterprise Adviser grant - CEC	(150)	(239)	(279)	(40)
Education Challenge	(97)	(144)	(144)	-
European Social Fund North East Ambition	(620)	(618)	(547)	71
LGF match North East Ambition	(472)	(389)	(314)	75
Skills Funding (DfE/CITE/EY)	(65)	(162)	(577)	(415)
Invite (Horizon 20/20)	(63)	(74)	(74)	-
Innovation Challenge Covid	-	-	(464)	(464)
Innovation Development funding (LGF)	-	-	(79)	(79)
Academic Health Science/Digital/ERDF	(75)	(80)	(80)	-
NEIF Contribution to cover activity costs	(125)	(124)	(124)	-
EZ Contribution to cover activity costs	(160)	(139)	(139)	-
LA Contributions re ESIF Co-ordinator	-	(20)	(20)	-
LGF High Potential	(336)	(237)	(211)	26
Brexit Policy Work Programme	(121)	(146)	(146)	-
Energy Programme BEIS/TVCA/RCEF/Misc. Contributions	(129)	(251)	(277)	(26)
Contribution Pension - NTCA	-	(140)	(147)	(7)
Other Income	(79)	(10)	(23)	(13)
EXTERNAL FUNDING	**(3,832)**	**(4,461)**	**(6,257)**	**(1,796)**
GROSS INCOME	**(4,582)**	**(5,211)**	**(7,107)**	**(1,896)**
NET BUDGET	**327**	**157**	**(10)**	**(167)**
Increase in LEP Reserves/(Contribution from Reserve)	**(18)**	**(103)**	**10**	
EZ Reserve (Contribution)	**(309)**	**(54)**	**-**	
RESERVES INCREASE/(DECREASE)	**(327)**	**(157)**	**10**	
FUNDING GAP	**-**	**-**	**-**	

B/F LEP RESERVE	**(550)**	**(603)**	**(603)**
C/F LEP RESERVE	**(532)**	**(500)**	**(613)**

3. LEP 2021/22 Revenue Budget

3.1 The indicative revenue Budget for 2021/22 reflects the latest known information of income for 2021/22 with the employee and operational costs required to meet the delivery associated with the individual income streams.

3.2 The estimates in this report are an indicative estimate, which will be refined in March and it is intended that a three-year Medium Term Budget is again presented in May, when the outturn position for 2020/21 is clear and more information about grant income available for 2021/22 should be known.

3.3 A summary of the indicative Budget for 2021/22 is set out in the table below. The indicative figures show a 23% decrease in Gross Expenditure from £7.097m to £5.462m matched with a 27% decrease in Gross Income from £7.107m to £5.177m. The overall effect is an indicative net cost of £0.285m. This is less than the original net cost of £0.327m illustrated for the 2020/21 Budget in the January 2020 Budget Report and less than the net cost estimate of £0.554m for 2021/22 that was illustrated in May 2020 Budget Report.

3.4 In terms of employee costs there is an increase of £0.293m (9.1%) when compared with the Revised Budget for 2020/21. The estimate takes into account the full year effect of new posts appointed at the end of 2020/21 and incremental increases through the pay scales, however, does not reflect any inflationary increase due to the announcement of a pay freeze in the spending review. This assumes the continuation of a 0% employers' contribution that the LEP would have received had it remained with the North East Combined Authority (NECA) this is reflected as an income contribution from the North of Tyne Combined Authority (£0.147m and £0.156m in 2020/21 and 2021/22 respectively).

3.5 The main changes in income reflect reduced short-term grant income from BEIS, DfE and Brexit Grant income; and a reduced contribution for LGF Programme management as we near the end of the programme. The North East LEP is bidding for additional grants and any grants secured will be included in the Budget as they are announced.

3.6 Other significant changes in the estimates are summarised overleaf:

Table 2: North East LEP 2021/22 Revenue Budget

	Revised Budget 2020/21	2021/22 Indicative Budget	Variance
	£'000	£'000	£'000
Employees	3,220	3,513	293
LEP Chair Renummeration	20	20	-
Premises	207	207	-
Communications	250	250	-
Transport LGF Monitoring	26	-	(26)
Growth Hub Operational Costs	74	60	(14)
Growth Hub Supplementary Funding (COVID-19)	309	222	(87)
Invite (Horizon 2020) Operational Costs	72	-	(72)
Innovation Challenge - Covid	464	-	(464)
Other Operational Costs	636	600	(36)
North East Ambition Operational Costs (ESF)	144	192	48
Peer Networks	510	-	(510)
Covid Intelligence	40	-	(40)
LGF High Potential Operational	164	99	(65)
Brexit Policy Work Programme	73	-	(73)
Energy Programme Operational Costs	23	-	(23)
Skills Operational Costs (DfE/CITE /EY)	364	10	(354)
Inward Invesment Contribution	140	140	-
LGF Programme Manangement Costs	78	55	(23)
Getting Building Fund Project Management	205	94	(111)
GROSS EXPENDITURE	**7,097**	**5,462**	**(1,635)**
LEP Core & Strategy Grant from DCLG	(500)	(500)	-
GBF Capacity Funding	(100)	-	100
Local Authority Match Contributions	(250)	(250)	-
CORE FUNDING	**(850)**	**(750)**	**100**
Local Growth Fund (Programme Mgmt)	(747)	(447)	300
Getting Building Fund (Programme Mgmt)	(357)	(298)	59
Interest Generated on Funds to fund INEE	(140)	(140)	-
Growth Hub	(410)	(410)	-
Growth Hub Supplementary Funding (COVID-19)	(370)	(370)	-
Peer Networks	(510)	(100)	410
Enterprise Adviser grant - CEC	(279)	(279)	-
Education Challenge	(144)	-	144
European Social Fund North East Ambition	(547)	(1,310)	(763)
LGF match North East Ambition	(314)	(43)	271
Skills Funding (DfE/CITE/EY)	(577)	(121)	456
Invite (Horizon 20/20)	(74)	-	74
Innovation Challenge Covid	(464)	-	464
Innovation Development funding (LGF)	(79)	-	79
Academic Health Science/Digital/ERDF	(80)	(76)	4
NEIF Contribution to cover activity costs	(124)	(110)	14
EZ Contribution to cover activity costs	(139)	(110)	29
LA Contributions re ESIF Co-ordinator	(20)	(20)	-
LGF High Potential	(211)	(148)	63
Brexit Policy Work Programme	(146)	-	146
Energy Programme BEIS/TVCA/RCEF/Misc. Contributions	(277)	(189)	88
Contribution Pension - NTCA	(147)	(156)	(9)
Other Income	(23)	(100)	(77)
EXTERNAL FUNDING	**(6,257)**	**(4,427)**	**1,830**
GROSS INCOME	**(7,107)**	**(5,177)**	**1,930**
NET BUDGET	**(10)**	**285**	**295**
Increase in LEP Reserves/(Contribution from Reserve)	**10**	**(113)**	
EZ Reserve (Contribution)	**-**	**(172)**	
RESERVES INCREASE/(DECREASE)	**10**	**(285)**	
FUNDING GAP	**-**	**-**	

B/F LEP RESERVE	**(603)**	**(613)**	**(10)**
C/F LEP RESERVE	**(613)**	**(500)**	**113**

LGF Funding

3.6.1 This remains a significant funding stream (£270.1m over six years) but is declining due to completion in March 2021. Swap funding will be available beyond this to cover necessary continued monitoring and evaluation. This has enabled local project priorities to be supported over the longer-term, including revenue projects, and also helped to attract matched funds. Consequently, there will be a tail of funds to support existing project funding agreements and necessary ongoing monitoring and evaluation plans through to 2024.

Getting Building Fund

3.6.2 A revenue stream to fund programme management costs on Getting Building Fund is reflected in 2020/21 (£0.357m) and reducing in 2021/22 (£0.298m), in line with delivery on the programme.

BEIS Funding

3.6.2 BEIS has provided funding in respect of Peer Networks (£0.510m) in 2020/21 which is assumed to reduce to £0.100m in 2021/22. Growth Hub Supplemental funding in relation to COVID-19 has been received from BEIS of £0.370m in both 2020/21 and 2021/22. New posts have been appointed in January 2021 in relation to this funding although the full year cost of these posts in 2021/22 is met by a reduction in operational costs on the programme.

Brexit Funding

3.6.3 This is one off funding included in the 2020/21 forecast but not confirmed to be available in 2021/22.

LGF High Potential

3.6.4 The reduced income stream (£0.148m) is matched with a reduction in operational costs.

LGF Innovation Pipeline

3.6.5 This is a one-off project grant for 2020/21.

North East Ambition (ESF)

3.6.6 An extension to North East Ambition (NEA) 1 has been applied for and is waiting to be confirmed, however, NEA 2 funding has been confirmed which will allow existing fixed-term posts to be extended through to August 2022.

4. North East LEP Revenue Balances

4.1 The estimate for 2020/21 and 2021/22 shows that the North East LEP revenue balance as at 1 April 2020 was £0.603m and this is shown as increasing slightly to £0.613m at 31 March 2021. It is important to maintain a reasonable balance to deal with future uncertainties.

4.2 The balancing figure of £0.172m in the indicative 2021/22 Revenue Budget is a call on the Enterprise Zone surplus from the previously agreed £0.5m per annum budget.

4.3 In November 2014, the Board agreed that Enterprise Zone Business Rates Growth Income surplus of up to £0.5m per annum could be utilised to support the Revenue Budget if required. To date there has not been a requirement to use this facility and therefore in effect saving £2.0m of potential spend from the EZ account. The intention is to reduce the call on the EZ account by the year end though additional income and cost savings.

4.4 The balance on the Enterprise Zone account is estimated to grow from £3.047m to £3.347m this year and £3.779m next year, as illustrated in section 5 below.

5. North East Enterprise Zones

5.1 Ten Round 1 Enterprise Zones are located across four local authority areas: Newcastle, North Tyneside, Northumberland and Sunderland. In April 2017 these were joined by a further ten Round 2 sites across, Durham, Gateshead, Newcastle, Northumberland, South Tyneside and Sunderland with the International Advanced Manufacturing Park (IAMP) site launched on the 1st April 2018 to complete the coverage of our 21 Enterprise Zones.

5.2 Business rates growth generated on Enterprise Zones accrues to the North East LEP for a 25-year period, in accordance with national regulations. This income is used to fund the capital financing costs of approved Enterprise Zone capital infrastructure, revenue administration costs, and a contribution towards Inward Investment activity. The financial administration of Enterprise Zones is managed in accordance with the local Enterprise Zone Business Rates Income Pooling Agreement. This agreement helps to pool and manage risk relating to borrowing undertaken by councils to fund Enterprise Zone capital works; helps to minimise costs and to helps to avoid additional revenue costs for council. The administration of the agreement has succeeded in achieving a positive cash flow on the Enterprise Zone account, which has enabled a cumulative surplus to be generated. This acts as a contingency to help mitigate the risk of income shortfalls.

5.3 Table 3, below, provides a summary of the Enterprise Zone account income and costs for 2019/20 (actual) and the estimated income and expenditure figures for 2020/21 and 2021/22. The Business Rate Income figures includes an element of contributions from the Section 31 grant provided by MHCLG to compensate for the under-indexation of the business rate multiplier, which should have been increased by the Retail Price Index. This grant has been confirmed as 20/499th of rates in 2020/21 and 26/499th in 2021/22.

Table 3: Enterprise Zone Account

Enterprise Zone Account	**2019/20**	**2020/21**		**2021/22**
	Actual	**July 2020 Estimate**	**Latest Estimate**	**Estimate**
Business Rate Income	**£000**	**£000**	**£000**	**£000**
Round 1 Sites				
Newcastle (Neptune)	508	463	483	489
North Tyneside (Swans)	160	188	138	161
Northumberland (Blyth)	308	282	309	308
Sunderland (A19)	752	724	754	763
Round 2 Sites				
Northumberland	40	37	38	63
Sunderland (Port)	0	0	0	0
Gateshead (Follingsby)	242	221	217	346
IAMP	0	561	667	674
Durham (Jade)	0	0	46	108
Newcastle (Airport)	0	0	51	126
Business Rate Income	2,010	2,521	2,703	3,038
Interest of Account Balance	20	20	15	17
Total Income	**2,030**	**2,541**	**2,718**	**3,055**
Expenditure				
Capital Financing Costs	1,696	2,101	2,101	2,300
INEE Team Contribution	66	170	170	170
EZ Account Operation	128	144	150	150
Total Costs	**1,890**	**2,415**	**2,421**	**2,620**
Annual Surplus	**140**	**126**	**297**	**435**
Cumulative Surplus	**3,047**	**3,173**	**3,344**	**3,779**

5.4 The increase in income in 2020/21 is mainly due to the completion and occupation of 3 buildings on the IAMP site and income from the Durham (Jade) and Newcastle Airport EZ sites being received earlier than planned. Forecast income increases for 2021/22 primarily come from full year rates being payable for occupiers on Durham (Jade) and Newcastle Airport and the Gateshead (Follingsby) Enterprise Zone sites.

5.5 While income in 2020/21 is expected to be slightly higher than the prudent estimate made in July 2020, it is still significantly lower than the projections made in May 2018, when income was estimated at £6.9m for 2020/21 and £8.4m in 2021/22. The lower estimates of income were reported in July 2020 and it is currently estimated that income will grow significantly from 2022/23 onwards as new buildings are constructed and occupied on the Follingsby and other Enterprise Zone sites.

5.6 The costs mainly relate to capital financing costs including borrowing costs (which includes interest) and the repayment of previous interest free loans from the LEP's North East Investment Fund (NEIF) and the repayment of LGF funding swaps. Capital financing costs are lower than previously estimated in 2021/22 due to the potential impact of Getting Building Fund swaps, which will reduce interest costs on borrowing that will now be undertaken later than previously planned.

5.7 The cumulative surplus is expected to increase both this year and next, with increasing surpluses in future years. In July 2020 the lifetime surplus was estimated to be £270m, which after performance incentive reward payments was estimated to be £232m. The growing likelihood of a significant annual surplus from 2023/24 gave some confidence that the LEP could allocate £8.000m of its North East Investment fund to expand the Getting Building Fund programme from £47m to £55m. The £8m initial allocation from the NEIF is intended to be repaid from annual EZ surpluses generated from 2024/25 onwards. This use of £8m of the potential future years EZ surplus was agreed by the LEP and the seven councils that are party to the EZ BRGI pooling agreement in July 2020. This early boost to the Getting Building Fund activity was considered to have significant regional economic benefits.

5.8 One of the agreed uses of the Enterprise Zone surplus is to underwrite the costs of the LEP Team budget of up to £0.500m each year. The original 2020/21 LEP Team budget, agreed in January 2020, envisaged a potential call on the EZ surplus of £0.309m. This was reduced in May 2020 to £0.054m and the latest estimate is that no contribution will be required in 2020/21. This follows a similar pattern to previous years, where the use of the EZ surplus was not called on at the year end. In the latest draft 2021/22 Revenue Budget, a potential contribution of Enterprise Zone Surplus of £0.172m is required. It is envisaged that this contribution will fall as additional income or cost savings are identified during 2021/22. In the event of a contribution actually being required, this will reduce the Enterprise zone cumulative surplus, estimated to be £3.979m by the end of 2021/22. More information will be reported in March and a detailed report on the projected lifetime surplus on the account, which is still estimated to be over £200m will be presented to the May Investment Board and the full Board.

6. North East Investment Fund (NEIF)

6.1 The North East Investment Fund (NEIF) was set up using £25m Growing Places Fund (GPF) and Regional Growth Fund (RGF) £30m. It is used to fund Enterprise Zone projects as noted above in paragraph 5.6. There have been £78.m loans made to date with reinvestment of repayments. No write offs have been made to date. The current available balance on the NEIF is approximately £20m plus future repayments. The intention is to use NEIF balances to launch the Commercial Property Investment Fund. A full update on the NEIF position will be brought to the May LEP Board as part of the 2020/21 Outturn position and 2021/22 Budget and 3-year Medium Term Report.

7. Recommendations

7.1 The Board is requested to:

i. Note the positive Budget outturn position for 2020/21.
ii. Note the indicative Budget for 2021/22, with an update on the 2021/22 Budget being reported to the LEP Board in May along with a three-year estimate.
iii. Note the estimated end of year position of the Enterprise Zone account.

North East Local Enterprise Partnership Board

28 January 2021

Item 8: Innovation Activity: Innovation Delivery Partnerships and Economic Markets Foresight

1.0 Purpose of report

1.1 To update the Board on the innovation framework and economic markets foresight activity and to ratify the Innovation Board's endorsement of eleven pilot Innovation Delivery Partnerships (IDPs).

2.0 The Innovation Delivery Partnership approach

2.1 The North East LEP's Innovation Framework, approved by the Innovation Board, has three substantive components, one of which is the development and delivery of a proposed action learning [1]pilot of Innovation Delivery Partnerships (IDPs).

2.2 IDPs are new partnership structures that will form the core of a new approach to innovation in the North East LEP region, an approach approved by the Innovation Board. With their own specific operational model, IDPs will accelerate growth in defined markets in a structured, systematic, collaborative and open way. They will be delivery focused on where our capabilities give us a genuine (actual or potential) advantage in new global value chains. This approach represents a departure from conventional innovation programme activity and is leading the way nationally.

2.3 The IDP approach aims to accelerate the innovation cycle and to make progress in establishing new ideas into commercial opportunities in new or nascent markets. IDPs provide a framework to help the region to focus on its productive capabilities in a way that embraces **knowledge complexity** i.e. how difficult it is to make the leap in to the new market and **relatedness** i.e. how dense the region's capabilities are and how sticky the skills, knowledge and asset base are in relation to the emergent market opportunity.

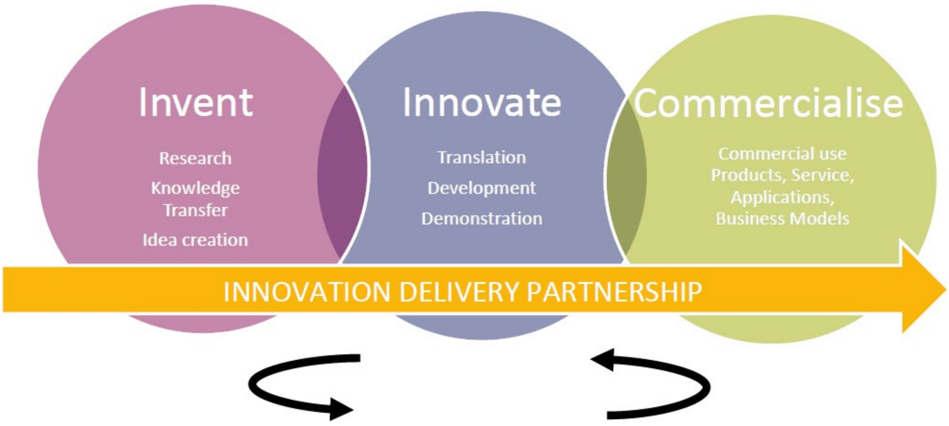
2.4 Through embedding some key principles, the structured approach will achieve the following outcomes:

- Create new partnerships which develop new ideas to address market opportunities linked to global trends
- Develop new facilities for businesses that enable the test, demonstration and delivery of new ideas preparing for the market
- Adopt new ideas in North East businesses focused on areas of local advantage
- Develop market-ready and valued research that addresses commercial challenges

[1] Action learning is a process that involves a small group working on real problems, taking action, and learning as individuals, as a team, and as an organisation. It helps organisations develop creative, flexible and successful strategies to pressing problems.

- Create deeper knowledge and expertise in the North East around key areas of activity making the North East the hotspot for activity
- Develop a global reputation for delivery in the particular themes
- Develop a programme of activity that has noticeable benefit to North East communities and businesses.

Figure 1. The innovation cycle



3.0 Progress

3.1 Partners were invited in autumn 2020 to submit Expressions of Interest (EoIs) to participate in a pilot phase of IDPs. The pilot phase will develop and test the IDP approach, examining both innovation ecosystem characteristics and partnership models in the context of accelerating market growth at scale and ultimately creating more and better jobs.

3.2 Eleven out of twelve proposals were endorsed by the Innovation Board on 8 December 2020 following a robust internal and external assessment to form the pilot in two waves, Pathfinder and Development IDPs. The EoIs were submitted from a variety of partners, showing a breadth of partner interest in terms of lead and core partners and covering diverse markets.

3.3 The 12 expressions of interest and their endorsement by the Innovation Board are as follows:

URN	Innovation Delivery Partnership	Wave
IDP001	CyberNorth Cybersecurity	Development
IDP002	Design-Led	Not accepted
IDP003	Battery Materials	Pathfinder
IDP004	International Centre for Connected Construction (IC3)	Pathfinder
IDP005	FinTech	Development
IDP006	Immersive Technologies	Pathfinder
IDP007	North East Drives	Pathfinder
IDP008	Surface and Interfaces	Development
IDP009	Ageing innovation	Pathfinder
IDP010	Space Hub	Pathfinder

IDP011	Water resource management (The Water Hub)	Development
IDP012	(Offshore) Robotisation Alliance	Pathfinder

3.4 The Innovation Team and the pilot IDPs are co-creating benchmarks against which the partnerships will self-assess achievement against certain ecosystem and partnership standards or conditions. The benchmarks reflect 'what good looks like' in terms of the operation of the innovation ecosystem and partnership working and align with the innovation KPI framework.

3.5 IDPs will report against the benchmarks to the Innovation Board at quarterly or biannual intervals, according to their status as Pathfinder or Development respectively. The benchmark framework and reporting process will assist the pilot IDPs to become operational. The framework is based on best practice and critical success factors and embraces the principles of the 'best in class' benchmarking approach pioneered through the North East LEP's North East Ambition initiative.

A summary of the IDPs is presented in Appendix 1.

4.0 New market opportunities

4.1 The IDP process is a mechanism for accelerating growth in new, niche economic markets and the pilot phase dovetails with the substantial Economic Markets Foresight Analysis project. The aim of which is to investigate how global drivers of change and future trends will dominate national and international economies and to examine how our region can prosper from innovation and economic activity in associated new or nascent markets. The published specification is attached at Appendix 2.

4.2 We will use the project to understand further, and as far as possible within time and budget constraints, which industrial or economic markets to prioritise in the short, medium and longer-term, how to realise such growth opportunities, and the critical threats that could be avoided through action in the present. Five tenders were submitted in response to the ITQ which closed on 15 January. The procurement evaluation is ongoing and will complete in early February.

5.0 Recommendations

5.1 The LEP Board is asked to:

i. Approve the eleven Innovation Delivery Partnerships endorsed by the Innovation Board on 8 December 2020
ii. Note the progress to identify future market opportunities through the Economic Markets Foresight Analysis project.

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URN	Innovation Delivery Partnership	Wave	Description	Elevator	Lead partner(s)
IDP001	CyberNorth Cybersecurity	Development	Cyber North is the cybersecurity cluster for the North East region. Cybersecurity is an enabling technology that supports all digital technologies, in all sectors that require the movement of data across external networks. The lack of cybersecurity is a growing existential threat to the economy and democracy. The IDP will bring representatives of the whole cyber security ecosystem together, hardward, software and services. CyberNorth's cybersecurity strategy for the region is based upon 3 aspects: The partnership will raise the profile of the region's cybersecurity strengths and capabilities through a range of events and promotional tools, including #CyberFest, a month-long celebration of the region during September. CyberNorth is recognised by DCMS as the cybersecurity cluster for the region and the cluster is represented at the National Cyber Cluster Steering Group. The IDP will support existing businesses by working to develop an online tool that encourages the region's businesses to promote and sell their services in a competitive and collaborative framework, allowing regional companies to combine their strengths and compete for national and global contracts. This approach will also raise awareness of the region's capability amongst its potential client base. It will enable new cybersecurity businesses and high-quality cybersecurity professionals by working with education and learning establishments and the creation of ORCANE. This will allow a significant number of the students graduating from the region's universities to find meaningful and rewarding employment without leaving the region, further strengthening its expertise.	Bringing the cybersecurity ecosystem together to enable software, hardware and service delivery products	Dynamo North East

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IDP003	Battery Materials	Pathfinder	Collaboration to create market advantage by adopting leading technologies across the supply chain and to localise chemicals manufacture to enable security of supply for next generation rechargeable batteries in the region and nationally. Secondly to support the automotive, construction, and niche battery industry's adoption of electrification. A £4.8bn/year opportunity by 2030 for UK chemical companies. The largest cost of battery cells is the chemical components (56%). The North East consists of significant number of Chemicals and Materials suppliers (e.g. Johnson Matthey, Mitsubishi Chemicals, Venator etc.) with the only existing Gigafactory in the UK located in Sunderland (Envision AESC), and it is the preferred location for inward investment by British Volt. Most of the supply for materials to the AESC battery plant is being imported from the Far East, hence the total impact is not fully derived within the UK – this is an issue under both Brexit and WTO rules-of-origin for future tariffs. The IDP will create market advantage through coordination, strategy and filling gaps in supply chain and competence for large enterprises and SMEs.	Enable security of supply of chemicals for next generation rechargeable batteries and support UK industries towards electrification.	CPI
IDP004	International Centre for Connected Construction (IC3)	Pathfinder	Updated 22 Dec: IC3 will leverage regional strength in digital construction to capitalise on a timely £13billion global market opportunity that will drive long-term economic impact in the Northeast. Construction has never undergone a major transformation. As a result, the industry is one of the least efficient and most wasteful sectors, experiencing just 0.4% growth in productivity year on year (manufacturing averages 3.4%), and accounting for almost 60% of waste generated and 40% of CO2 emissions globally. The North East has significant research and enterprise strengths, world-class products, services and knowledge and IP assets. IC3 will leverage these strengths to grow innovation across its significant business community in the region, enhancing the North East's reputation for excellence in digital transformation of the construction industry.	Dedicated to supporting digital transformation across the construction industry to create built assets that better serve the industry, the economy, the environment and society.	Northumbria University

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IDP005	FinTech	Development	The digitalisation of the financial services industry and specifically payment technology which centres around Dynamo's role to convene regional activity in the sector and hinges on the development of a Fintech Live Lab as an asset to use to develop the establishment and stickiness of the fintech cluster in the region. The resources of the lab would be used to address shared challenges across subjects that include skills and talent, capital and investment, and diversity.	The digitalisation of the financial services industry and specifically payment technology.	Gateshead Council/Sunderland Software City/Digital Catapult NETV
IDP006	Immersive Technologies	Pathfinder	The primary focus of the Immersive Technologies Delivery Partnership is to grow the market in the North East for Immersive Tech and increase the North East's share of the UK immersive technologies market.	Growth of the North East Immersive Technologies Sector and promoting the adoption of Immersive Technologies across wider industry to enable innovation.	Newcastle University
IDP007	North East Drives (Driving the Electric Revolution – Power Electronics, Electric Machines and Drives)	Pathfinder	Focus on the drive as the highest value component in the value chain to grow market share in the megatrend towards electrification. The assets of the North East mean that the region is set above the rest of the UK in terms of development and provision of power electronics, machines and drives and currently supplies cross sector including automotive, rail and energy. The IDP is positioned to compete with the West Midlands with respect to investment and business support for electrification with a strong focus on the commercial sector supported through research and knowledge institutions.	Focus on the Drive as the highest value component of the value chain to drive market growth in the electrification megatrend.	Newcastle University and the North East Automotive Alliance
IDP008	Surface and Interfaces	Development	A partnership to deliver innovation from the cross-cutting discipline of surface and interface science to applications in extensive range of emergent and existing growing markets such as manufactured products and food, biomaterials or performance coatings. The emerging concept is for a hub and spoke National Centre building upon the research facilities at Durham University and the region's universities and translating research in to commercial opportunity in value chains across a range of sectors where there is ready competency and market potential in the North East through processes that link into facilities at core partners CPI, P&G and Akzo Nobel. The focus is on the provision of expert research support across the region, aligned to 'state of the	To deliver innovation from the cross-cutting discipline of surface and interface science to applications in extensive range of emergent and existing growing markets such as manufactured products and food, biomaterials or performance coatings.	Durham University

			art' surface and materials science facilities, to create and supply new markets for a range of often highly sophisticated products.		
IDP009	Ageing innovation	Pathfinder	A partnership to establish the North East as a national living laboratory for developing products and services for the ageing sector placing it at the centre of the UK's efforts to find innovative solutions over the next two decades. NIC-A will sit at the heart of the ecosystem that will be designed to bridge the innovation gap between academic research (for example at the world-renowned Newcastle University Institute for Ageing - NUIA) and industry. The long-term objective is to establish a series of innovation platforms and test-beds that will bring together academia, research and technology organisations, industry, healthcare providers and the public to accelerate the development of solutions for the challenges associated with our ageing society, thereby incentivising commercial companies to interact and take advantage of the "ageing" market.	Grow regional share in the global healthy ageing and longevity market through product and service innovation to help us live, work and age well; enabling us to better care for ourselves and others, to enjoy a better quality of life, for longer.	Newcastle University
IDP010	Space Hub	Pathfinder	A partnership for the space and satellite sector, focused on supply and/or making use of space or satellite services from upstream manufacturing right through to downstream satellite-enabled applications, including both commercial and non-commercial activities (e.g. fundamental research, space science). The goal for the North East can be ambitious as it has the potential to create world leading space technology and applications businesses. Space is a key enabler for global economy, and the region has a head-start on many other UK regions to deliver on UK's space ambition. The sector is increasingly important in the delivery of the next generation digital technologies and products with new countries and private players entering the market in recent years. It has an integral role in solving some of global challenging problems; health, defence, climate change, disaster management.	Supply and/or make use of space or satellite services, from upstream manufacturing right through to downstream satellite-enabled applications, including both commercial and non-commercial activities (e.g. fundamental research, space science).	Business Durham

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IDP011	Water resource management (The Water Hub)	Development	The Water Hub IDP will focus on exploiting opportunities for growth for the North East LEP area from within the emerging UK and global green technology and finance and water technology markets. Water utilities and their supply chain are facing unprecedented challenges ranging from population growth and climate change, to regulatory pressures and delivering a better customer experience, alongside adapting to technological advances and embracing digital transformation. These societal, regulatory, and technological drivers are all converging and in turn causing a fundamental shift in the current and future state of the UK water market. This is both creating new market opportunities and shifting operational practices. Evidence is widely available which documents the scale and impact that emerging digital technologies and digital transformation is having on the water industry. Of particular note are the increasing impact of extreme weather events, shirt towards a customer-led landscape, and emergence of smart and intelligent network technologies which are driving cross-sector collaboration and the development of new products and services.	The Water Hub targets the emerging UK and global green technology and finance market and the UK and global water technology market.	The Environment Agency
IDP012	Robotics Alliance	Pathfinder	The region's subsea industry accounts for the design and build of over half of the world's subsea robots, primarily for construction and we have presence of global leaders in the SME business base with a relatively high R&D spend compared to other sectors. Innovation activity is being focused on offshore renewable energy as a sector and specifically the niche sector of robotic innovations for offshore renewable energy. North East-based companies are already investing in R&D to meet this opportunity, and the Robotisation Alliance will allow for accelerated development of these technologies to commercialisation to capitalise and grow the market share, whilst assisting the translation of innovations in to other nice sectors, namely water.	Accelerate the development of smart robot technologies to commercialisation to grow global market share for subsea and subterranean high value robotics design, manufacture and application.	Offshore Renewable Energy Catapult

Item 8 appendix 2 - Economic Markets Foresight Analysis

1. Specification

1.1 Scope

The North East Local Enterprise Partnership[1] (North East LEP) is committed to creating competitive advantage and improving productivity for the North East region by developing and realising the potential of its strengths and assets in relation to changing global markets (emergent industries, sectors, and cross-sector technologies and other capabilities).

Global economic, technological, social, environmental, political and legal drivers of change and global trends have accelerated industrial, economic and social shifts across the world in recent years. In addition to the long-term market changes which are being inculcated in response to drivers such as climate and demographic change and the longer-term disruption that is anticipated by EU transition, the pace of change has rapidly increased during 2020 in response to the coronavirus pandemic.

There is now a discernable rethinking of the roles of localisation and internationalisation of economic activity and this is affecting the structure of global value chains and the roles and economies of places. Economic growth is faltering. Climate change concerns are keenly felt. There has been significant and accelerated change in the adoption of digital technologies, in health and wellness. Attitudes and individual behaviours have shifted with respect of working and social activities.

We believe that these and other changes bring significant opportunities for innovation and growth in North East England's economy. Preparation and action for such opportunities require us to:

- Understand how well the region's industries, research assets and technologies are positioned in relation to new or nascent market opportunities that emerge from these drivers
- Identify key actions and approaches to innovation and transformation that should be deployed in order to maximise the economic prospects arising from emergent market opportunities
- Consider the potential role of the wider regional eco-system in supporting transformation with respect of these opportunities.

1.2 Purpose of the project

The North East LEP wishes to appoint an appropriately qualified Contractor to undertake an independent Economic Markets Foresight Analysis (the Project) in the context of the North East LEP region of North East England, UK.

The project is focused on the evolution of the North East LEP economy in the context of changing global markets and trends. It will probe deeply into how the global drivers of change and future trends will dominate the national and international economies and to examine how our region can prosper from innovation and economic activity in the associated new or nascent markets.

[1] The North East LEP area comprises the local authority areas of County Durham, Gateshead, Newcastle upon Tyne, North Tyneside, Northumberland, South Tyneside and Sunderland in the North East of England.

The project will be used by the North East LEP to understand further, and as far as possible within time and budget constraints, which industrial or economic markets to prioritise in the short, medium and longer-term[2], how to realise such growth opportunities, and the critical threats that could be avoided through action in the present.

Please refer to Appendix A: 'Background' on pages 15-17 for further information.

1.3 Project outcomes

This project is a forward-looking and action-orientated foundation piece that will make sense of global drivers and trends, related to the North East LEP region's capacities, capabilities and assets, and identify the market growth opportunities that are available to the North East LEP economy, giving a clear focus on the areas where there is potential for us to enter and grow in global supply chains.

Rather than using the North East LEP's current knowledge of focus areas as the determining factor, the project will point to how the region could or should respond to and exploit identified market opportunities in order to explore alternative futures.

We will use the outputs of the project to inform our strategy. The findings of the project will evolve into a programme of future-facing economic development activity that drives economic growth as a result of potential significant growth in our market share in notable global markets.

We will use the project:

- To establish where North East England is competitively positioned with respect to global economic opportunities and identifiable markets such that our potential to be at the forefront of new economic frontiers can be the subject of future strategy work.
- To shape clear and timely strategic interventions that transition the region into new economic markets (emergent industries, sectors and cross-sector technologies and other capabilities) and growth curves.
- To consider future options for investment in the expertise, facilities and conditions needed to accelerate the emergence, transformation or commercialisation of capabilities, capacities and assets that maximise our economic growth, and the potential to build inward investment interests.

1.4 Research questions

This project is expected to consider, as a minimum, the following six research questions:

1. **What are the major global drivers and current and future trends that are most relevant to the North East's economic capabilities, capacities and assets, and which could plausibly and probably drive economic growth (GVA generation and job creation including 'better jobs'[3])?**

   Markets may already exist globally, may be developing, be nascent or be future based. We envisage the project to identify which are the plausible and which are the probable emergent markets (industries, sectors or cross-sector technology or other capabilities) for the region.

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[2] Short-term, up to 5 years; medium-term, 5 to 10 years; long-term, 10 years+

[3] Standard Occupational Classification Major Groups 1-3, Managerial, technical, professional roles

We expect the project to analyse and describe the strategic opportunities and the specific areas of competitive advantage that relate global drivers and trends to our region's assets and capabilities.

2. **Who are the main national and international players (industry, universities, research institutions, policy makers and other relevant stakeholders) from up and down-stream sectors relative to each market identified?**

   We envisage this exercise to identify key players including national or international structures and/or networks that the North East should initiate or strengthen in order to capture emergent and future market opportunities.

3. **What is the likely market composition, global value and volume of each emergent market opportunity (and their associated components/market segments) and how are these forecast to change over time?**

   The analysis will include details of the likely rate of annual growth, changes to market composition and changes to identifiable market segments.

4. **Does the North East's have a current market share for each market identified and if so, what is it? What is the North East's emerging potential share for those markets we are yet to enter?**

   The assessment of market share should consider how the global drivers and trends identified will impact upon existing cross-sector industrial components, sectoral assets, and market segments in the North East region over the short, medium and longer terms. Cross-sector markets may be unexploited at this stage.

5. **Based on our regional strengths and our potential to innovate and transform, what are the various circumstances that will lead to cross-sector market growth for the North East region, relative to the direction of global drivers and trends?**

   We expect the project to consider the headwinds and tailwinds that are most likely to assist or constrain the region. What are the early market entry prospects for the North East LEP? Are there any significant barriers that could hinder our potential for growth?

   The project will create a framework which identifies global drivers, trends and proposes specific plausible and probable market opportunities for the North East LEP economy. This framework will present a portfolio of emergent (developing, nascent or new) economic opportunities that reflect where the North East's capabilities and capacities for innovation and transformation have real potential to supply into global cross-sector markets and industries and to create regional gains in competitiveness and productivity.

   We expect the portfolio to set out an appropriate timeline for each market identified that considers the factors (existing and potential) that either accelerate or constrain the North East region's uptake in each global market identified.

For each emerging market identified, the portfolio will establish:

- Whether we have a 'USP'[4]
- How we compare to competitive regions in terms of our 'offer'
- What specific strategies or interventions relevant to the North East could feasibly accelerate the growth of our innovation potential and market share.
- Whether there are ingredients that we should support in the North East to stimulate growth and to encourage investment (domestic and FDI)

The North East LEP will work closely with the appointed Contractor to consider, challenge and validate the plausibility, probability and actions required to secure the market opportunities identified.

6. **How might our business base need to adapt or change to secure our competitiveness in the specific global markets identified?**

   This is likely to include insights into how we de-risk and enable innovation in certain parts of our economy

1.5 Approach

In order to deliver the project, we expect the following requirements to be met as a minimum. We would welcome reflections from contractors on where they could add value to our requirements.

The project is expected to result in a series of phased outputs. The precise format and composition of these is for the appointed Contractor to propose. However, outputs are anticipated to include all those stated in the following table, see Figure 1.

[4] USP: unique selling point

Figure 1: Approach and outputs

Phase and activity	Output	Description of Output	Milestone
Phase 1: Establishing market definition, drivers and trends			
a. Define • Develop a clear and agreed definition of what we mean by a 'market' with respect to emergent industries, cross sector capabilities, technology and other phenomena, capabilities or economic or socio-economic enablers. • The definition should explore *across* and *within* sectors rather than taking a vertical (sector) approach. • It should explore markets such as consumer, b2b, and technological and other markets and will likely reference both COVID-19 and non-COVID-19 markets. • The definition should be presented in the form of a briefing note that explains relevant terminology and aims to develop consensus amongst different stakeholders. Visual representation is welcomed	Briefing note	The briefing note will define what is meant by emergent 'market' and which encapsulates the scope of the project, the framework for analysis and identification of how markets are selected and categorised. The definition must demonstrate rigour and robustness. This can be provided as a standalone output or could form part of the literature review and data analysis report (see bullet below). Contractors should note that the definition is intended to be shared with regional partners.	12 March 2021
b. Describe global drivers of change and trends • Identify the global drivers and related trends, technological capabilities and other developments, and new phenomena in industries, sectors and society including the climate crisis, the impact of COVID-19, an aging population, the climate crisis and EU transition and their potential short, medium and long-	Literature review and data analysis report	An accessible and concise literature review and data analysis report that, using the definition above, identifies emergent global markets and identifies which could be of greatest significance or importance to the North East.	16 April 2021

term impacts in the context of the context of global volatility, uncertainty, complexity and ambiguity. • Analyse how trends or new phenomena in industries, sectors and society will be affected by these global drivers and the extent of their inter-connectedness. Reference should be made to those drivers and trends that have the potential to be the most surprising and significant. • The appointed Contractor will need to use their understanding of global drivers and trends, of wider market insight analysis and potentially of specific technology applications and other developments to consider, expand and reframe the range of future - plausible - economic market opportunities that present some degree of growth certainty – probable - for the North East LEP's economy given the region's economic capabilities, capacities and asset base (technological, industrial, skills, infrastructure and business profile).			
Phase 2: Identifying and prioritising global emergent markets			
c. Identify and prioritise global emergent markets • Conduct a rapid assessment of regional evidence, data[5], our industry and other assets, and our sector, technology and other competencies, and a high level literature review that should include the policy framework developed to support the North East Local Industrial Strategy, the North East Strategic Economic Plan and relevant sector strategies such as Energy for Growth, Digital for Growth. The regional evidence base should be drawn from state of the region reports such as Our Economy 2020 and national datasets such as ONS.	Literature review and data analysis report	An accessible and concise literature review and data analysis report that, using the definition above, identifies emergent global markets and identifies which could be of greatest significance or importance to the North East.	16 April 2021

[5] See Further Information at Appendix A

• Bring this assessment together with the global drivers of change and trends to identify the most plausible and probable 'futures' with which the North East economy is, or could be, associated, indicating the scale of the potential for growth and over what timeframe i.e. those market opportunities most likely to come about subject to:
  ○ Where the region is relatively proximate to these opportunities, assessed from a breakdown of the components that form the market / market segments and the extent, depth and stickiness of our existing capabilities, capacities, asset base and economic strengths.
  ○ Whether innovation and transformation in the North East can enable the region to capture significant market share (value and scale).
• The analysis is likely to include a SWOT analysis or similar appraisal of the North East current state of play in each market area and its associated components.			

Phase 3: Creating a portfolio of emergent market opportunities			
d. Critique • In order to assist the prioritisation of market opportunities, the appointed Contractor should undertake a reality / sensitivity check and is likely to involve tools as an Ansoff matrix or variation thereof, the purpose being to identify how easy it would be to connect North East existing capabilities, capacities and assets to emergent markets and/or a competitiveness matrix to assess the competitive advantage of the North East region in specific markets. Further methodological examples that could be considered as part of this activity are presented in Appendix B: 'Methodological tools' on pages 18-20. We welcome suggestions from suppliers about the best approach(es) or model(s) for this activity.	Reality / sensitivity check and/or competitiveness matrix	Use of specific tools to undertake a reality or sensitivity check to identify how easy it would be to connect North East existing capabilities, capacities and assets to emergent markets and/or a competitiveness matrix to assess the competitive advantage of the North East region in specific markets.	21 May 2021

• This reality / sensitivity check will be complimented by an external critique. Working with government colleagues, the North East LEP will work with the appointed Contractor in a facilitated critique process designed to 'sense check' the project's early stage and big picture findings. The critique will be facilitated by government colleagues and will comprise dialogue with the leading international experts from the global university sector. This activity will be provided via the North East LEP. Please note, the cost of this activity is **OUTSIDE THE SCOPE OF THIS CONTRACT**. • The appointed Contractor will be expected to feed initial findings into the critique process and should be prepared to answer queries about the work undertaken so far.			
e. Identify opportunities and challenges, rewards and risks for the North East LEP region • Develop trajectories of the future opportunities and challenges of each economic market identified as plausible and probable for the North East. The trajectories will include reward and risk levels i.e. high risk/high reward, low risk/high reward, associated with how the North East economy could pivot, adapt, innovate or grow to capture the associated up- and down-stream value chains of the global emergent markets identified. • The individual economic market descriptions, analysis and trajectories will form a portfolio of the emergent (developing, nascent or new) economic market opportunities that appear, from the analysis undertaken in phases 1 and 2, to present futures of significance to the North East LEP region. • Deliverability will be considered, from the perspective of what is realistic and what is possible for our economy. Whilst we do not expect the appointed Contractor to be North East experts, the concepts put forward must be rooted in the context of the North East's capabilities, capacities and assets in order to provide a mechanism to validate (reality and sensitivity check) the portfolio and to suggest the likelihood of activity. This is likely to include	Portfolio of emergent global markets including market analyses and trajectories Methodology summary report(s) and Interim progress report	A <u>portfolio</u> of emergent global markets of significant interest and relevance to the North East LEP region. The portfolio should comprise a series of summaries of each emergent global market. It will be considered by the project steering group but should be provided in a format that could be shared with both North East LEP governance structures and wider stakeholders. <u>Methodology summary report(s)</u> as necessary that describe the tools employed and their results. An <u>Interim progress report</u> that updates on the work undertaken to date and sets out next steps for the project. The interim progress report will provide a clear indication of the emergent	25 June 2021

identification of the inputs and levers needed to take advantage of the market and/or strategic opportunities within the market. For example, business base, supply chains, skills and workforce, access to finance, infrastructure (e.g. digital and physical). • Set out trajectories and timescales for opportunities and growth. This will include immediate or short-term opportunities that arise from COVID-19 management or recovery but range into the future (10+ years). We recognise that trajectories will vary between economic markets. • Therefore, the methodology and tools used, and the presentation of each market analysis and trajectory should reflect: ○ What is the overall timescale for the opportunity? ○ When do we need to move to be 'first mover'? ○ When will the opportunity peak? ○ What does short, medium and long-term mean in terms of time horizon for each market identified? ○ What actions should we be taking in the short-medium and-long term and who should take them? ○ What are the pointers for how work will likely be won in that market? ○ What investment asks might we need regionally to be ready for that market opportunity (infrastructure, skills provision etc)? ○ Are there any significant implications to our internationalisation strategy? ○ Are there any significant implications to our inward investment approach? ○ Who are likely to be the main players/top tier organisations? This should be included as visual map and list of key stakeholders.		market opportunities identified in Phase 3. The report should include accessible visual representation of key findings. The interim progress report will be considered by the project steering group but should be provided in a format that could be shared with both North East LEP governance structures and wider stakeholders to illustrate and demonstrate findings as clearly.	
Phase 4: Validate and propose actions			
f. Validation and peer review	Draft version of project report	A <u>draft version of the project report</u>, for internal review and to	23 July 2021

• The appointed Contractor's proposed findings of the project will be validated. Therefore, the appointed Contractor is requested to work with the North East LEP in a facilitated peer review designed by the North East LEP, working in partnership with Government, to validate their project findings and to evaluate the robustness of the emergent economic markets portfolio. The independent and external review will assist the appointed Contractor to arrive at and validate their concluding recommendations. Ultimately, peer review will enable the North East LEP to prioritise future markets based on the proximity or the potential for innovation and acceleration of the North East's current capabilities, capacities and assets. • The peer review will be facilitated by government colleagues. It will comprise dialogue with the leading national experts from the UK's university sector to test findings and to gain further in-depth insight into the specific markets areas identified. The cost of arranging, facilitating and concluding the peer review will be met by the North East LEP and is **OUTSIDE THE SCOPE OF THIS CONTRACT**. • The appointed Contractor is expected to feed findings into and participate in the peer review process and should be prepared to answer queries about the work undertaken so far and to provide the interim progress report for information. This activity should be priced accordingly. • We welcome suggestions for how contractors might add value to this peer review process, for example by encouraging leading market players such as businesses, research institutions and national sector bodies/cluster networks to become engaged in peer review in a specific way. • On the conclusion of the validation and peer review process, the appointed Contractor will provide a draft project report that includes indicative recommendations for strategic interventions in the short, medium and longer-term to capture future global economic opportunity in relation to each element of the portfolio	and Draft version of PowerPoint slide deck	inform and be shared with the validation and peer review process. The draft report will detail the project in full and provide indicative recommendations for future interventions that describe 'what we will do, how we will do it and to what end'. The draft project report should be accompanied by a draft executive summary that provides a complete but brief synopsis of the project and indicative plan of actions. The report should include accessible visual representation of key findings that could be used by the North East LEP to illustrate and demonstrate findings to the North East LEP governance structure and key partners. We expect to work with the appointed Contractor to develop and co-design the visual representations of data and analysis for inclusion in the draft final report. A draft PowerPoint slide deck that reflects the findings and	

of emergent markets. This will be supported by a draft PowerPoint slide deck.		recommendations contained in the final report. This is intended for the North East LEP's use, for example, to be used to present the project's analysis and findings to our governance structures, in future engagement with regional and national partners, and / or in support of funding bids.	
g. Recommendations • From the economic market opportunities validated by sensitivity checking, critique and peer review, the appointed Contractor will compile a final project report with executive summary and recommendations. • The report should include a clear and time-bound plan of action that sets out possible strategic interventions in the short, medium and longer-term to capture future global economic opportunity in relation to each element of the portfolio of emergent markets. • The appointed Contractor will present the findings and recommendations within the final project report to North East LEP governance structures.	Final report and PowerPoint slide deck	A final version project report, as output under activity f above. A final version PowerPoint slide, as output under activity f above .	25 August 2021 25 August 2021
Contract close			**17 September 2021**

We expect to work with the appointed contractor to develop the visual representations and to co-design outputs in order to ensure that they:

- Are written in an accessible format, are high on visual representation of information and are easy to use
- Provide intelligence, data and analysis that can be used corporately across the North East LEP and which can be translated by the North East LEP with specific audiences in mind, such as the North East LEP's Strategic Management Team or Innovation Board
- Provide useful, insightful and actionable findings that can be articulated to a variety of audiences including regional partners and stakeholders

1.6 Skills, knowledge and expertise of the contracted team

Tenderers will be expected to set out how they will deliver the contract effectively and efficiently. Contractors must demonstrate the following skills, knowledge and expertise:

- Ability to address and answer the research questions stated in Section 2.4
- A proven knowledge and understanding of global economic, technological, social, environmental, political and legal global drivers and trends
- Economic foresight expertise and practised in the discipline of strategic foresight coupled with expertise in trends analysis
- Wider market insight analysis skills and market analysis expertise
- Knowledge of specific technology and other capabilities and phenomena
- Ability to interpret complex information and to provide comprehensive and visual reports, presentations and documents that summarise often difficult findings for the client
- Demonstrable team, project and risk management acumen, with the ability to collaborate and project manage effectively in order to achieve milestones within a short timeframe
- Ability to work in a collaborative and partnership way with the contracting organisation to deliver the project
- An understanding of the North East LEP area its communities, specifically with respect to the innovation agenda
- An understanding of the current economic policy environment

We are looking to appoint one contractor, but we welcome submissions from collaborations between organisations to deliver the contract that ensure the best mix of skills, knowledge and expertise is provided by the project team.

1.7 Contract management

To deliver this contract, the appointed Contractor will be expected to work closely with the North East LEP executive team. The key contacts at the North East LEP are:

- Project director – Alan Welby, Innovation Director
- Project manager – Dinah Jackson, Programme Manager

The appointed Contractor shall nominate and provide details of the person who will be the main point of contact and project manager responsible for contract delivery. This should be clearly set out in submissions.

Contract management will comprise scheduled reviews of progress against the agreed delivery plan to ensure that the contract is proceeding on time, on budget and in line with project objectives and key results.

1.8 Project management

Project management will include:

1. Inception meeting: To kick off the project and agree milestones and delivery plan. This will be conducted virtually.

2. Project management meetings: Regular progress updates to include findings, key questions, challenges faced in delivering the contract and opportunities for innovation, creativity and added value. Schedule of project management meetings to be agreed at inception. These meetings will be conducted virtually.

3. Risk management framework: Risk management framework agreed at inception and updated by the supplier's project manager, with risks identified and mitigation measures clearly articulated and actioned.

1.9 Project reporting

A North East LEP Steering Group will oversee and guide the project. The appointed Contractor is expected to report the project's findings after inception and to present both the interim and draft final reports to this internal Steering Group for review.

In addition to working closely with the Steering Group, the appointed Contractor will be required to present the final agreed report to the North East LEP's innovation board and the main LEP Board.

Other meetings: We expect to include up to two working days for engagement purposes as a part of this contract to take place after submission of the final report. For example, to present findings to other groups which either form part of the North East LEP's wider governance structure or are part of our collaboration mechanisms that include the Covid-19 Regional Response Group and the North East Economic Evidence Forum.

As referred to as part of Phase 4 of the project, the North East LEP will establish a critique and peer review process which will be externally facilitated to inform the development of this project. The appointed Contractor is expected to engage with this process on the summary findings and opportunities as part of phases 3 and 4 of the project, and specifically to validate the project and its findings.

1.10 Budget

The maximum budget available for this contract is £95,000.00 excluding VAT and including all expenses.

We expect submissions to be competitive and reasonably budgeted with respect to outputs and outcomes and to demonstrate value for money for public expenditure.

Tenders exceeding the maximum budget will be deemed non-compliant and will not be considered.

1.11 Contract Timescales and Reporting

It is the appointed contractor's responsibility to ensure full compliance with key contract dates. Key contract dates will be agreed with the appointed contractor at the inception meeting.

See also Figure 1 above for output milestones.

1.12 Procurement Timeline

The key dates for this procurement are currently anticipated to be as follows:

Key dates as follows:

Stage	Date(s) and Time(s)
Issue of Invitation to Tender	Friday 20 November 2020
Deadline for receipt of clarifications	Friday 08 January 2021
Deadline for submission of Tenders	12:00 Noon on Friday 15 January 2021
Evaluation of Tenders	18 January 2021 - 21 January 2021
Notify Tenderers of Presentation Stage	Friday 22 January 2021
Presentations	Tuesday 02 February 2021 or Wednesday 03 February 2021
Final Evaluation	W/C 08 February 2021
Expected date of Contract Award	W/C 15 February 2021
Contract start date	W/C 22 February 2021
Inception meeting	10:00-13:00 on Wednesday 24 February 2021
Contract End Date	17 September 2021

The Contracting Authority reserves the right to change the timeline set out above at its discretion. Any changes to the timeline shall be notified to all Tenderers as soon as practicable.

1.13 Intellectual Property and copyright

All Intellectual Property Rights in the Specification, any other specifications prepared by or on behalf of the Contractor for the Authority in connection with the Contract, and the Contract Generated Materials (including without limitation all Special Deliverables) shall vest in and remain vested in the Authority absolutely immediately upon creation and be the exclusive property of the Authority. Please refer to North of Tyne Combined Authority General Conditions of Contract for the Supply of Services for further details.

Any data or intelligence gathered should be made available to the North East LEP in Excel or Word format and should be fully compatible with Microsoft Office 365.

Where appropriate, the North East LEP will publish reports or analysis of findings on the North East LEP website and/or North East Data Hub.

Appendix A: Background and further information

Fundamentally, economic and industrial foresight is required so that the North East LEP can anticipate the main agents of change, both opportunities and threats, and prepare and plan towards long-term growth objectives from highly informed decisions that are based on carefully analysed views of alternative future market/industry/sector scenarios.

The North East LEP region's current regional economic context includes:

i. Post COVID-19 Response and Recovery

The Covid-19 crisis has hit the region hard. But it has also created an unparalleled opportunity for us to look at the region through a new lens and reimagine our way of life and work. We believe that our response and recovery to the economic and social shocks created present a once-in-a-lifetime chance to determine how we will build resilience to mitigate the impact of economic future shocks in a volatile world. This project will assist us to plans for how we ensure that our global profile flourishes and that we develop and enhance connections to a post-COVID global economy.

Our goal is to rapidly create 100,000 jobs and ensure that the jobs that have been lost are replaced with good quality and secure jobs. The emerging regional recovery and renewal plan sets out our continued focus to create and safeguard jobs in data, ageing, low carbon, life sciences and pharma, areas of strategic importance, already called out in the North East Strategic Economic Plan (see below, Areas of Strategic Importance at section xx), which will help us transition to a stronger, higher productivity and higher wage economy, with people primed to adapt to challenges and new opportunities.

We are also committed to 'levelling up' to the rest of the UK. This is a levelling up of innovation, of business creation and growth, of skills, infrastructure investment and so on, with sustainability and decarbonisation at its core.

This Regional Recovery Plan calls out five specific opportunities of specific relevance to this project.

They are:

- **Job recovery**: Rapid and sustained interventions to help people into jobs and training. Maximising the impact of local and national resources and programmes to keep people in jobs and training.
- **Building the economy of the future**: Maximising the potential or our existing assets and exploring opportunities to enter new markets and supply chains, powered by innovation. Accelerating the transition to a digital, green and more resilient economy.
- **Supporting businesses**: Rapid recovery of businesses and sectors. North East Growth Hub, North East Free Zone, North East North Shoring
- **Community and place**: Create resilient places and strong communities that are continually improving and provide a strong offer for people to live, work, study and visit; adapt to challenges and new opportunities; support the culture recovery. A series of new projects to empower our rural and coastal areas and reinvigorate our town and city centres.
- **Connected North East**: By uniting the potential of transport and digital, we will build a better-connected region. Step changes in the transport network and leverage the significant assets and potential of our regional digital economy.

The recovery from COVID-19 is likely to be over medium term but we know that there are longer term drivers that will need to be considered in relation to this contract. This includes the net zero and clean growth agenda, demographic ageing and EU disruption for example which will be a longer-term influence on market structures, and we know are impacting now.

ii. Areas of Strategic Importance

As set out in the North East Strategic Economic Plan, there are four core strategic areas of the North East economy – digital; advanced manufacturing; health and life science and energy – and the sectors they cover give our region a degree of specialisation and, at least in some instances, competitive advantage. They are supported by several cross-cutting and enabling areas: education; financial, professional and business services; transport and logistics; and construction, with digital transformation as a cross-cutting 'enabler' for all sectors.

iii. North East assets, competencies and intersections

We have produced a considerable evidence base that positions our Areas of Strategic Importance and Enabling Sectors and assets in relation to the UK's Industrial Strategy[6]. This evidence base brings together primary and secondary research including detailed stakeholder consultation and provides a useful summary of physical assets and less tangible assets such as networks and capacities for collaboration and begins to outline competencies and intersections between our key sectors which present opportunities for future growth.

We anticipate that our evidence base will provide a useful starting point for this contract. However, more could be done to draw out fully specialised interactions, competencies and other agents of change that could be capitalised upon and play into new or emergent industries, sectors, technological and other capabilities. Furthermore, this will need to be considered in relation to COVID-19, where new intersections and competencies may have appeared to address national or global challenges.

iv. Trade and Export

The North East LEP region is integrated strongly into global markets:

- 4,300 businesses in the North East region exported £12.9 billion of goods in 2017
- 6,000 businesses imported goods valued at £13.2 billion in 2017
- Businesses in the North East region exported £4.2 billion of services in 2016
- Foreign owned businesses play a key role in the North East economy, accounting for 5% of businesses in the North East region and 27% of Gross Value Added (GVA)

The global economy has been growing, with a strong growth in global trade being the main contributor over the last two years. However, global politics are becoming more volatile, which is undermining confidence with trade patterns across international boundaries. Increasing trade protectionism poses a particular threat to the global economy, which is a key risk for the North East because trade plays such a fundamental role in our economy. Almost 4,300 North East businesses export, with almost 6,000 having supply chains outside the UK. It will be important, going forward, that North East businesses are supported to continue to grow and develop their international markets.

[6] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

Government's Export Strategy aims to increase exports as a proportion of Gross Domestic Product (GDP) from 30% to 35%. This provides an opportunity for us to work with the Department for International Trade and local partners to build a strategy for strengthened internationalisation, supporting more businesses to expand into new geographies, markets and supply chains and to secure investment into the North East.

We are therefore currently preparing a Trade and Export Strategy for the North East. Appropriate links to will be made relating to this contract.

v. Inward Investment

One of the region's strategic commitments is to grow inward investment in the region. We aim to maximise North East job growth from regional, national and international businesses investing in the region and are working with a range of partners to secure this growth through lead generation, account management, marketing and other activities. Combined, these activities, which are focused on the Strategic Economic Plans' areas of strategic importance and support service sectors, enable us to share knowledge and investment opportunities with key partners and raise the profile of the North East as a place to invest and locate.

Further information

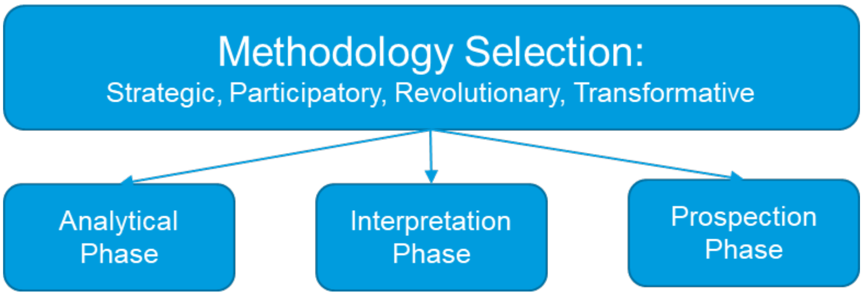
The following information relating to this activity may assist suppliers interested in this contract:

- North East Strategic Economic Plan, January 2019 and relevant delivery strategies:
  - North East Energy for Growth
  - Digital for Growth: The North East's Digital Strategy
  - Excelling in Health and Life Sciences
- Our Economy 2020
- North East Recovery and Renewal Plan, 2020
- https://investnortheastengland.co.uk/downloads/north-east-england-works/
- 'Methods to assessment future skills needs', Draft Report v1.0, August 2020, RSM Limited for the North East LEP Future Skills report - **Please refer to Annex 1 - North East LEP Skills Draft Report**
- Innovation Dashboard report (2019) completed by the Innovation Observatory - **Please refer to Annex 2 - North East LEP - Innovation Dashboard Report**
- Pre-market engagement slide deck - **Please refer to Annex 3 - Pre-market engagement slide deck**

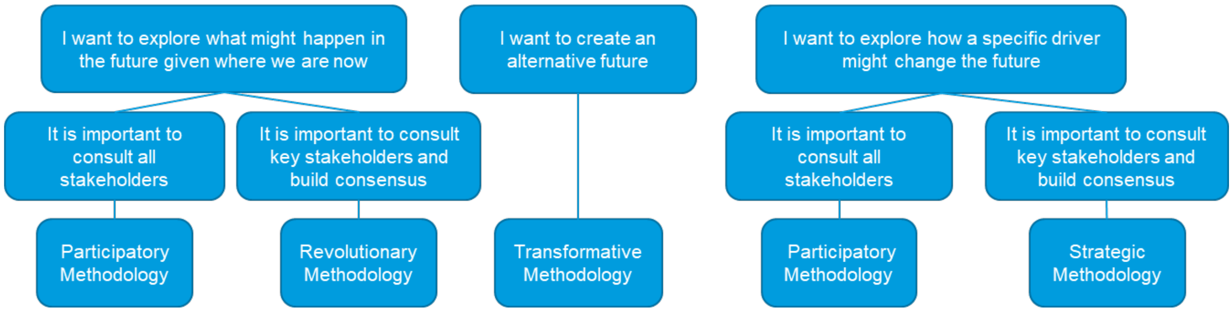
Appendix B: Methodological tools - Sample

Suppliers may wish to consider specific methodology tools to use in developing their approach and should articulate the reasons for decisions around the chosen approach. A few examples are listed.

(Ref: Methods to assessment future skills needs, Draft Report v1.0, August 2020, RSM for the North East LEP - Annex 1)

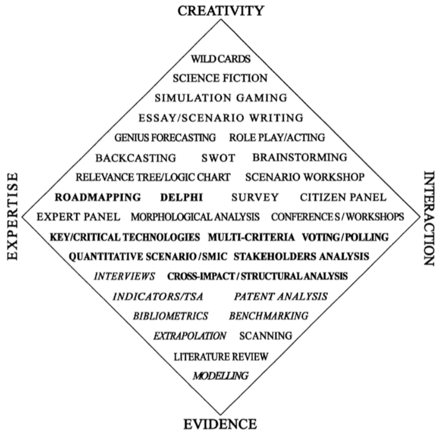


Methodology selection (Ref: Methods to assessment future skills needs, Draft Report v1.0, August 2020, RSM for the North East LEP - Annex 1)



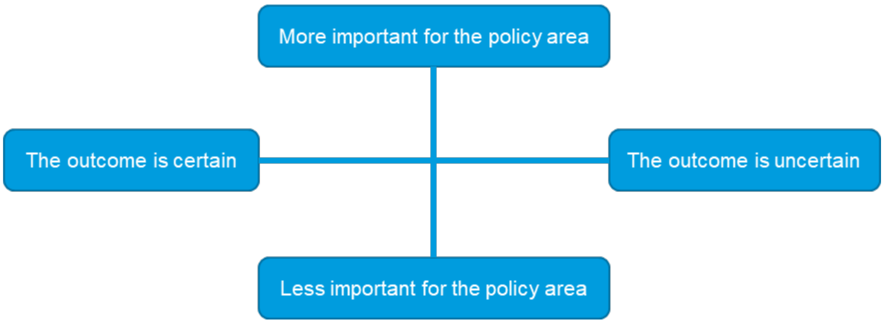
Foresight diamond (Source: The Handbook of Technology Foresight[7])

7 https://books.google.co.uk/books?id=3SxmAwAAQBAJ&pg=PA69&lpg=PA69&dq=revolutionary+foresight+methodologies&source=bl&ots=7FBmM7Rht3&sig=ACfU3U1M0fuoYtrkK5ZvvL6mcShjh0nMCQ&hl=en&sa=X&ved=2ahUKEwi2pOHbmsrpAhXTkFwKHTN8DH4Q6AEwEXoECAkQAQ#v=onepage&q=revolutionary%20foresight%20methodologies&f=false



Mapping (also risk / reward matrix)

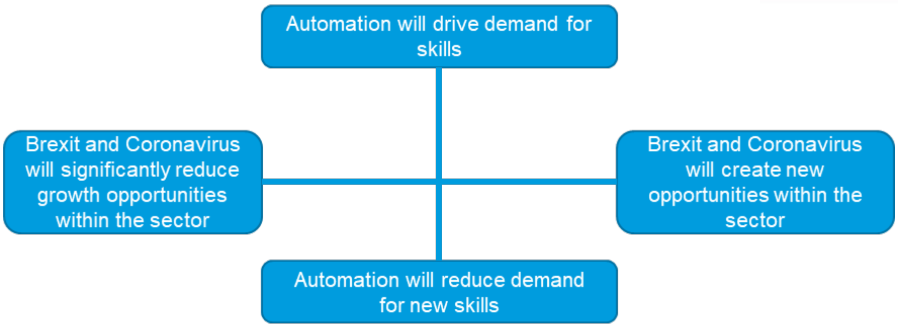
To identify drivers within the top left quadrant (predetermined elements[8]) which should be prioritised and acted upon; and top right quadrant (critical uncertainties[9]) that should inform scenario planning. Drivers in the bottom left quadrant should be parked as low priority, while those in the bottom right quadrant should be tracked to ensure they do not become more important to the research question over time.



Scenario planning

An opportunity to explore what the future might be like (given the impact of identified drivers), consider what decisions/trade-offs may need to be made and think through potential opportunities and threats in different futures.

[8] Have a high impact on the research question and a certain outcome. These are drivers that are already impacting in a clear and predictable way and must be acted upon.
[9] Strategically important and have a high impact on the research question but an uncertain outcome.


Automation will drive demand for skills
Brexit and Coronavirus will significantly reduce growth opportunities within the sector
Brexit and Coronavirus will create new opportunities within the sector
Automation will reduce demand for new skills

North East Local Enterprise Partnership Board

North East Local Enterprise Partnership

Thursday 28 January 2021

Item 9: Health and Life Sciences Strategy

1.0 Background

1.1 Health and Life Sciences is one of the four areas of opportunity identified in the Strategic Economic Plan (SEP). The SEP sets out the need to develop a strategy to optimise the opportunity to grow the health and life sciences economy within the region.

2.0 The Strategic Economic Plan - Health and Life Sciences

2.1 The SEP states:

'As global health services and markets are changing and being shaped by rapid development of healthcare technologies, resulting in more personalised treatments and the need to respond to the health and social care implications of an ageing population, the North East offers a unique environment for innovation in health and life sciences and medicines manufacturing. Our combination of skills, physical assets, capabilities and networks can support the delivery of the UK's response to this challenge through the ongoing development of our key capabilities and their strategic co-ordination. These include excellence in the quality of care and a focus on health innovation and partnership between the health system, science and business.'

2.2 The Health and Life Sciences Steering Group have worked together to produce this strategy to seize the opportunities we have in the North East.

2.3 Appended to this covering report is the summary (appendix 1) of a more detailed technical version of the strategy document (appendix 2).

3.0 Recommendation

3.1 The Board is recommended:

a) To discuss and approve the appended Health and Life Sciences Strategy documents in appendix 1 and 2;

b) To delegate any minor amends and updates to the document to the Chief Executive to make ahead of publication.

North East
Local Enterprise Partnership

Health, life sciences and medicines manufacturing: A growth strategy for the North East

January 2021

DRAFT

Contents

Would you like more information?

If you have any questions or would like to discuss this strategy further, please contact Richard Baker:

Email: Richard.Baker@nelep.co.uk
Phone: 07900 226154

Richard Baker
Strategy and Policy Director
North East Local Enterprise Partnership

Foreword

This strategy has been finalised at a time when the world is grappling with the social and economic consequences of COVID-19. The pandemic has challenged policy makers, health professionals and manufacturers to deliver immediate responses to the health challenges and to build a more resilient health environment for the future.

The North East has made an active contribution to the immediate response, both regionally and nationally through our manufacturing and innovation strengths, our public health and care services, and in the development of testing. This has utilised the best of our diverse life sciences, health innovation and medicines manufacturing capabilities - capabilities that are established and identified as an area of growth in our Strategic Economic Plan.

We have opportunities to strengthen regional growth in pharmaceuticals which is valued at over $1.25 trillion per annum globally, and to improve the performance of our health care system, which accounts for 10% of GDP, through new technologies and treatments that will have a positive impact on business growth and the quality of people's lives.

Both of these areas are recognised by government as national strengths and a focus for investment, innovation and growth through the UK Life Sciences strategy, and this strategy demonstrates how the North East can be positioned as being central to this part of our country's economic future.

The health and life sciences industry generally is experiencing significant change.

For our manufacturers, digitalisation is resulting in new methods of production and packaging. New methods of formulating drugs and new therapies are leading to new treatments being trialled, developed and made.

For health services, technologies like data and genetics are creating new opportunities to diagnose and target treatments. Digital communications are creating new possibilities to communicate between patients and practitioners. Each of these trends has been accelerated by the COVID-19 pandemic.

Looking forward, in a world increasingly characterised by population ageing, the countries and businesses that can add quality of life to these extra years will generate high levels of personal wellbeing, higher workforce productivity and new opportunities for economic value from these developments. The focus has to be on integrating care and the development and production of more targeted and personalised medicines.

For these reasons our vision for this strategy is clear:

"To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change."

It sets out the ambitious but realistic aims of doubling both the number of jobs and the number of businesses active in this area of our economy over the next decade and identifies priority interventions that will improve global health from the North East.

The strategy has been developed by the North East Life Sciences steering group which brings together leaders from all parts of our health, life sciences and medicines manufacturing ecosystem to work together to drive forward the interventions.

I would like to thank the members of the steering group and pay tribute to the Chair, Professor Michael Whitaker for his personal commitment and excellent leadership.

It provides a platform for collaboration with partners in government and other parts of the country, which I look forward to and I am delighted to see it come to fruition.

Lucy Winskell, OBE
Chair, North East Local Enterprise Partnership

Support for our strategy

The North East has a diverse and vibrant clustering of life sciences, manufacturing and health services.

I believe that the work that is being done in the North East can support more growth in the region and make a strong contribution to our wider UK initiative to promote research collaboration, partnership and investment globally as part of government's strategic national approach to Life Sciences.

Sir John Bell
Regius Professor of Medicine, University of Oxford and champion and sponsor of the UK Life Sciences Industrial Strategy

The North East is home to international academic research expertise in health and life sciences which not only provides competitive advantage but creates significant regional benefits. Our growing reputation as a testbed and living lab is enabling us to accelerate innovation as well as attract investment and skills.

This Health and Life Sciences Strategy will enable us to further strengthen the excellent partnerships in place between industry, the public sector and our universities to grow the economy and improve health outcomes.

Professor Chris Day
Vice Chancellor, Newcastle University and Chair of the Office for Strategic Co-ordination of Health Research

One of the North East's great strengths is its ability to collaborate to deliver strategic goals and nowhere is this more evident than in the health and life sciences industry. Partnership between the public and private sector is more crucial than ever to ensure we form a core part of the UK's Industrial Strategy and to allow our capabilities to be recognised on a global stage.

We have a fantastic innovation ecosystem supported by an incredible translational environment where healthcare technologies and medicines are being constantly developed. Forward thinking leadership here in the North East is helping to drive forward global health services and markets – something of which we should all be very proud.

Professor Michael Whitaker FRSA FRSB FMBA FMedSci
Chair, Health and Life Sciences Group

Executive summary

Our vision

"To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change."

Objectives

By 2030, we will have:

- Doubled the number of businesses active in the health and life sciences community in the region from 150 to 300
- Doubled the number of jobs in the health, life sciences and pharmaceuticals businesses and the research and development community in the region from 12,000 to 24,000

Opportunities and challenges

Opportunities

- Growth and modernisation of manufacturing and the supply chain
- Development of new services and treatments
- Collaboration with the NHS to adopt and commercialise drugs and treatments
- Inward investment
- Growth and investment in life sciences SMEs
- Strengthening our cluster and networks

Challenges

- Overall size of the economy
- Brand and awareness
- Connectivity
- Aspects of the business environment

What the data tells us

£1.7bn

In 2019, health and life sciences in the North East region had a turnover of £1.7bn.

Overall employment in the sector increased by

1,400

(from 2010-2019)

↓

This represents an equivalent increase of:

22%

compared to nationally:

9%

We expect this employment trend to continue.

7,680

Total North East regional employment in the health and life sciences sector in 2019

(3.0% of UK total)

Our framework

Phamaceutical Manufacturing

Market requirements

- Onshoring
- Manufacturing of advanced therapeutics
- Continuous manufacturing
- Manufacturing automation
- Pharma and medi tech on demand
- Sustainability

Access to NHS as a market and trsuted research environment

Collaboration between pharmaceuticals SMEs and science

Regional communications and coordination

Supporting SMEs advancing science

Market requirements

- Translation environment
- Innovation to adoption clinical pathway
- Life sciences business facilities
- Drug discovery and development innovation
- Ageing and health innovation
- Digital health innovation

North East Ecosystem Enablers

- Centre for Process Innovation

North East Enabling Opportunities

- Lower Capital requirements
- Access to finance
- Development space and infrastructure
- Manufacturing, engineering, healthcare and life science skills and expertise
- Logistics and connectivity

North East Ecosystem Enablers

- Academic Health Science Network
- The National Healthcare Photonics Centre
- Campus for Ageing and Vitality
- The National Innovation Centre for Ageing
- Northen Alliance
- Academic Health Science Centre

Introduction

Health and life sciences form one of the four areas of strategic importance set out in the North East Strategic Economic Plan, due to our exceptional health and life sciences assets and strengths in medicines manufacturing.

COVID-19 has disrupted global healthcare systems and the human and economic cost has been far greater than anyone could have predicted. The North East is set to help lead the economic recovery, with health and life sciences playing a critical role.

Responding to the challenge of demographic change and the economic impact this has on health services will be crucial. As people are now living longer, the North East requires a health and life sciences strategy that demonstrates how we can develop solutions and processes that help people achieve a better quality of life, stimulates new businesses and business growth, reduces pressure on health services and as a result, creates more and better jobs for the region.

Growth and change in medicines and therapies

A rapidly developing area of the economy, the global pharmaceuticals market has a total annual value of $1.25 trillion. Changing processes in the delivery of medicines, and the development and production of new pharmaceutical therapies and treatments all offer huge opportunity as changes in technology, demography and markets interact. Manufacturing and delivery processes for existing drugs are being modernised through automation and digitalisation and new types of treatments and novel therapies continue to be launched.

Directions in health and care policy and services

Globally, health care policy is changing to meet the needs of an ageing population. New drugs, treatments and interventions are helping to extend life expectancy and deliver a higher quality of life, enabling people with diverse needs to stay physically and mentally healthy and productive. More integrated care systems offer a range of opportunities for innovation in services and in digital application.

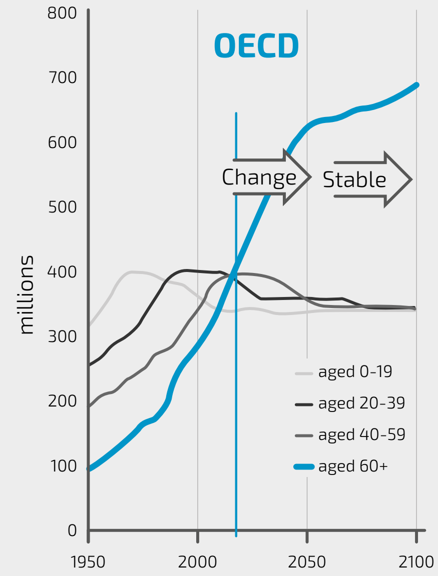
Detailed patient data mapping and artificial intelligence are helping to provide more personal, individually tailored services, from consultation and prescribing, through to drug tracing and delivery. COVID-19 has accelerated the potential for new models of treatment and care.

The use of personal data and the relationship between patients and professionals offers multiple opportunities for research and science, testing, collaboration and innovation in delivery. The UK government has highlighted digital health as a priority within the NHS Plan that can deliver both service and commercial improvement.

Social and demographic changes: population ageing and diversity

The global population is projected to make a fundamental age shift to an older population by 2050, when it is expected there will be 2.1 billion people over the age of 60 globally, double the current total.

Population ageing is the world's dominant demographic trend. Most people in most countries can expect to live longer and healthier lives than previous generations, and the balance of our population is being transformed as extended life expectancy combines with declining birth rates.



What the data tells us

There is a range of data which illustrate the current profile of health, life sciences and medicines manufacturing in the North East.

Employment and economic value

Economic value

£1.7bn In 2019, health and life sciences in the North East region had a turnover of £1.7bn

Employment

Overall employment in the sector increased by **1,400** (from 2010-2019)

This represents an equivalent increase of: **22%**

compared to nationally: **9%**

We expect this employment trend to continue

7,680 Total North East regional employment in the health and life sciences sector in 2019 (3.0% of UK total)

2,060	Biopharma core (3.2% of UK total)
2,180	Biopharma service and supply (3.6%)
2,150	Med-tech core (2.1%)
1,290	Med-tech service and supply (4.5%)

300 new jobs An additional 300 jobs were reported in the pharmaceuticals sector during the COVID-19 pandemic

48% 48% of spinouts from the Northern Accelerator Programme came from life sciences businesses

4,300 4,300 related research and science activities in the NHS , education and business

1,000 new jobs The new COVID-19 Lighthouse project in Gateshead and Newcastle is expected to deliver 1,000 new jobs in research and testing

40,000 university students 22,000 of which are studying health and life sciences

Trade and exports

The region exported £13.3 billion of goods in 2019, including £2.8 billion of chemicals and pharmaceuticals.

86% of North East pharmaceutical production is exported

64% of finished products go to the United States

Inward investment

The North East attracted 4.2% of all life sciences projects into the UK between 2013 to 2017

Pharmaceuticals and advanced manufacturing

£868 million The North East hosts a significant cluster of the global pharmaceutical industry, generating £868 million for the regional economy in 2017

73 pharmaceuticals and biotechnology supply chain companies

4,100 people employed

£601m annual turnover

Its wider impact is estimated at

£1.5 billion

supporting between

18,800 and 23,500 jobs

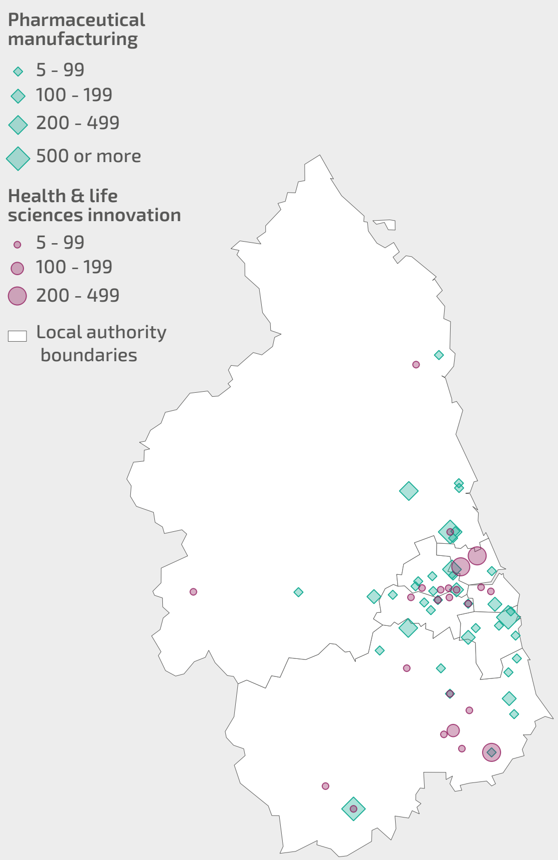
Wider advanced manufacturing footprint (chemicals and automotive)

15.3% of the North East LEP area's GVA

11.3% of employment

Our assets

When mapping our assets in the North East, it's is clear that the health and life sciences economic activity here falls into two main categories that are spread across the entire region. We have pharmaceutical manufacturing and health and life sciences innovation, represented on the map below.



Our life sciences and pharmaceuticals industries by employment

We are home to many world class businesses in these areas:

Companies who create and manufacture pharmaceuticals and biotechnology

gsk, MSD, Recipharm, FUJIFILM Diosynth biotechnologies, accord, Sterling, CLINIGEN, Piramal Healthcare

An emerging biotech cluster of businesses driven by corporate and university spinouts

Newcells Biotech, IKSUDA Therapeutics, atelerix, AMLo Biosciences, 3D Bio-Tissues, SHIELD Therapeutics

Companies developing clinical diagnostics, medical devices and equipment, and digital health applications to diagnose and deliver care

biosignatures, Rocketmedical, QuantuMDx, Femeda, northgene, into/gral, atelerix, helena, MDNA Life Sciences

Supporting all of these businesses is an evolving ecosystem of innovation centres and supply chains:

A broad ecosystem

A broad spectrum of institutions, innovation centres and networks that support the functioning growth and development of the sector.

The AHSN Network, cpi, bionow, nepic, Durham University, Newcastle University, Northumbria University Newcastle, University of Sunderland, NIHR Children and Young People MedTech Co-operative, DNE Diagnostics North East

Our two science parks at Newcastle Helix and NETPark host a number of our key facilities.

Newcastle helix, NETPARK

Support services and value chain – including specialists in the engineering and equipment supply chain and construction of facilities

HFR High Force Research, Datatrial, ARCINOVA, Alcyomics, Magnitude Biosciences, WHP, Parker, ThermoFisher Scientific

Our assets

The NHS

Our four Hospital Trusts and the wider commissioning and public health systems are one of our biggest assets. The NHS:

- Supports SMEs and spinouts to commercialise products and services
- Conducts real world evaluation and clinical research and trials for product development
- Acts as a testbed of technology innovation and accelerates the commercialisation of products
- Offers a significant health market – healthcare spending in the UK totals about £200 billion annually, equivalent to 10% of GDP.

Newcastle-upon-Tyne Hospitals NHS Foundation Trust is consistently one of the highest performing and ranking Trusts for clinical research and clinical trials:

500 clinical trials per year

1.72m patient contacts per year

14,725 staff employed

£1.087bn healthcare spend

Collectively they are rated CQC Outstanding and with the Great North Care Record recognised as a Global Digital Exemplar.

NHS-led bodies

Newcastle Health Innovation Partners / Academic Health Science Centre (AHSC)

Newcastle Health Innovation Partners is one of only eight Academic Health Science Centres in the UK, improving the health, wealth and wellbeing of 3.2 million people in the North East and North Cumbria.

Diagnostics North East (DNE)

DNE is a collaboration between Newcastle-upon-Tyne Foundation Trust, Newcastle University and the AHSN NENC working across the region to provide expertise that spans all elements of diagnostic pathway. Newcastle is the only UK centre with a joint Medical Research Centre/Engineering and Physical Sciences Research Council supported Molecular Pathology Node.

Northern Alliance Advanced Therapy Treatment Centre (NA-ATTC)

The Northern Alliance Advanced Therapy Treatment Centre develops the systems and infrastructure required to support the delivery of cell and gene therapies with the ultimate aim of increasing patient access to advanced therapy medicinal products (ATMPs) on a national level.

Academic science and research

Nationally recognised assets in North East universities which develop new science, work in partnership with industry and the NHS to introduce new products and services and spin out new businesses.

One of eight Academic Health Science Centre partnerships in England, Ranked 4th in the UK for Research Intensity in Clinical Medicine, Europe's largest concentration of ageing-related interdisciplinary researchers and national centres of excellence in ageing , Northern Accelerator partnership between five universities

Catapults

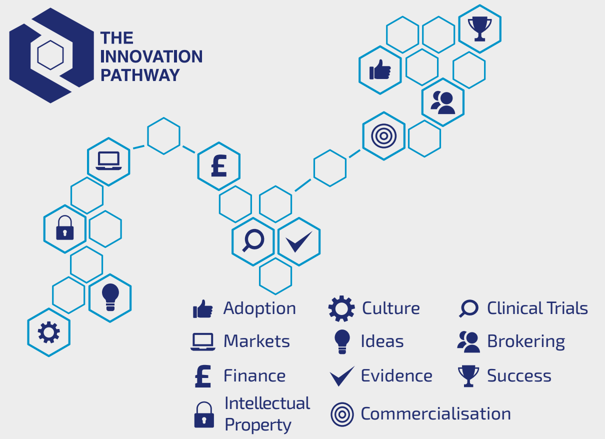
Centre for Process Innovation (CPI)

The CPI is a catalyst bringing together academia, businesses, government and investors to translate smart ideas and research into the marketplace. It is a founding member of the UK government's High-Value Manufacturing Catapult with expertise in pharmaceuticals and med-tech.

North East and North Cumbria Academic Health Science Network (AHSN NENC)

The AHSN NENC focuses on economic growth by mobilising the assets within the region's Trusts, Clinical Commissioning Groups and universities to attract and grow business.

It developed and successfully implemented The Innovation Pathway which sets out the stages and process of development to support the commercialisation of healthcare products and services. A key component of this is the Great North Care Record. This is the UK's leading initiative to share medical information across the North East and North Cumbria between authorised health and social care practitioners. It will ensure that health care activities such as diagnosis, medications, hospital admissions and treatments can be improved for both patients and the health system.



Our assets

North East universities and research excellence

World-leading research

50%

50% of biological sciences research at Newcastle University was rated four stars in the Research Excellence Framework 2014, meaning it is world-leading.

This was also the case for

51% of research in psychology, psychiatry, and neuroscience

38% of research in clinical medicine

In the top 20 for research publications

The Witty Review rated North East universities in the top 20 for 11 subjects including life sciences and regenerative medicine.

Research funding secured by North East institutions between 2008 and 2018

£92m from the Biotechnology and Biological Sciences Research Council

£122m from the Medical Research Council

University-led centres and programmes

Campus for Ageing and Vitality

The Campus for Ageing and Vitality (CAV) is a 29 acre brownfield mixed use site being developed by Newcastle University with partners. Our ambition for CAV is to construct an internationally renowned test-bed for innovation, implementation and evaluation, helping people lead longer, healthier lives through our global leadership in ageing research.

National Innovation Centre for Ageing (NICA)

The UK's National Innovation Centre for Ageing is uniquely positioned to help pharmaceutical, medical technologies and diagnostics, consumer brands and services optimise the opportunities provided by the demographic revolution and longevity economy.

National Innovation Centre for Data (NICD)

The £30m centre is co-located with NICA and funded with £15m from UK government and £15m from Newcastle University to address the availability shortage of data skills in the UK and open access to a vibrant data ecosystem.

National Institute for Health Research Innovation Observatory

The National Institute for Health Research applies state-of-the-art data analytics to explore trends in health innovation across drugs, medical technologies, diagnostic tools and healthcare services, helping better healthcare and new innovations to be cascaded into practice more rapidly.

Northern Accelerator

Northern Accelerator places entrepreneurial business leaders into university spinouts, offers a venture capital fund and supports a vibrant community of businesses.

ARROW

The ARROW programme targets SMEs looking into new products, processes or services and offers fully funded research and innovation support from university academics to accelerate progress.

Intensive Industrial Innovation Programme

The Intensive Industrial Innovation Programme is an ERDF funded programme and collaboration between Durham, Newcastle and Northumbria universities. Each university works directly with regional SMEs to develop new services and products.

Newcastle Joint Research Office

The Newcastle Joint Research Office is a partnership between The Newcastle upon Tyne Hospitals NHS Foundation Trust and Newcastle University supporting researchers in the development, implementation and delivery of world-class experimental, translational and clinical research.

International Centre for Life (Life)

Life brings together NHS services, university research, spin out businesses, education and public engagement in science on one site. The proximity of NHS clinics to university research departments facilitates collaboration and having access to a science centre allows researchers to undertake vital public engagement activity – in many cases, a necessary element of their funding criteria.

Research specialisms

Ageing and health

Newcastle is an acknowledged leader in the scientific response to global demographic change including the process of ageing, ageing well and societal responses to ageing.

Precision medicine

Newcastle has a well-developed programme focused on precision medicines. It leads two stratified medicine consortia funded by the Medical Research Council and is a key partner in three others. It co-chairs the Rare Diseases Translational Research Collaboration funded by the NIHR with the leadership of work focused on diseases of the liver.

It hosts the Wellcome Trust Centre for Mitochondrial Disease and the Medical Research Council Single-Cell Functional Genomics Unit.

Newcastle University's Institute of Genetics, based at the International Centre for Life, is acknowledged for its world-leading research into rare diseases and cancer.

The Northern Institute for Cancer Research acts as a national centre of excellence for clinical trials and development of biomarkers for cancer drug discovery focused on both adult and childhood cancer.

Opportunities and challenges

Opportunity area	Summary
Growth and modernisation of manufacturing and the supply chain	Onshoring pharmaceutical manufacturing will increase investment and strengthen our supply chain. Digitalisation in manufacturing will streamline production processes, grow contract manufacturing and create opportunities for new delivery processes and packaging. Formulating and manufacturing new treatments and therapies is a real growth area.
Development of new services and treatments	We will focus on the growth and delivery of cell and gene therapies and exploit our strengths in diagnostics, digital health, ageing and medical technologies. We will also leverage the innovation assets we hold in photonics and regional assets on biologics.
Collaboration with the NHS to adopt and commercialise drugs and treatments	Our partnership work will promote the adoption of new treatments and processes. We will prioritise the further development of the innovation pathway and develop a trusted research environment which will increase trials and demonstration. We will facilitate the deployment of digital health services and the design and delivery of early stage and stage 2 translational and clinical research studies.
Inward investment	Our strengths in securing manufacturing projects provide an opportunity for new investment into the cluster, for partnerships and for supply chain growth. Our research capabilities and partnership focused NHS create opportunities for new collaborations including on demographic change and healthy ageing through our joint High Potential Opportunity programme with the Department for International Trade (DIT).
Growth and investment in life sciences SMEs	We will continue to strengthen the business environment to support regional SMEs and the strong and growing programme of university and health services spinouts and collaborations.
Strengthening our cluster and networks	We will strengthen our leadership structures and institutions and foster collaboration between them. Key locations in the region will be a particular focus as hubs for collaboration and investment.

Challenge area	Narrative and mitigation
Overall size of the economy	While the overall scale of the economy is a constraint, we will ensure the region is well positioned within wider networks and has a key role in collaborations with national clusters, the Northern Powerhouse and Scotland.
Brand and awareness	The UK life sciences industry is concentrated on the golden triangle. We will use communications and partnership working to establish the region as a 'go to' destination in our areas of strength.
Connectivity	We are working to strengthen connectivity to key markets and collaborating with DIT to focus on opportunities and mitigate the risks from political developments like the EU Transition.
Aspects of the business environment	We will strengthen our finance offer and maintain a strong skills supply with skills development activities through the Skills Advisory Panel. We will facilitate business growth in SMEs and manufacturing and ensure our property assets and facilities create growth and attract inward investment.

Vision and objectives

Our vision for the future

"To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change."

The North East has an opportunity to become the go-to region for the development, testing and production of personalised treatments and services as technologies and demographics drive change.

To do this effectively we will focus on four priority areas which together can drive our aims of business and employment growth:

Four priority areas

1	To modernise and grow pharmaceutical manufacturing in the region
2	To increase the number of innovative health and life sciences businesses that are born, grow and scale in the region. We will do this by increasing the number of university spinouts, supporting life sciences entrepreneurs and by encouraging partnerships between our institutions, businesses and investors to develop and deliver new ventures.
3	To create a world class translation environment that can support new ideas from businesses and research to commercialisation and entry to health markets and supply chains. We'll do this by investing in our innovation pathway that provides a supported route from discovery into delivery.
4	To create a supportive environment where health and life sciences businesses can grow and have access to global markets. To do this, we need to: a. Ensure access to the right finance models b. Deliver support for our cluster bodies and networks c. Develop the property infrastructure needed to develop from labs to bigger manufacturing premises d. Improve freight access to markets.

How will we know if we have been successful?

By 2030, we will have:

- Doubled the number of businesses active in the health and life sciences community in the region from 150 to 300
- Doubled the number of jobs in the health, life sciences and pharmaceuticals businesses and the research and development community in the region from 12,000 to 24,000.

We will also:

- Be recognised as a key area for the delivery of clinical trials with three top ranking NHS Trusts on a year-on-year basis and be a leading area for the translation of innovation into the NHS
- Have quadrupled the number of university spinouts in this area.
- Be systematically recognised by government as a leading cluster location for health and life sciences
- Have secured one major and several smaller additional pharmaceuticals investments into the North East
- Have strengthened physical connectivity along the pharmaceuticals supply chain including direct freight logistics links to the United States from the North East.

Our approach

The North East Health and Life Sciences strategy has been developed to demonstrate how, as an area of opportunity in the North East Strategic Economic Plan, the sector can contribute to delivering 100,000 more and better jobs for the region.

The Health and Life Sciences Strategy has been developed around our assets, challenges, opportunities and insights into the future and priorities of the global economy.

The strategy is focused on four priority areas that are then underpinned by an ecosystem that supports businesses to start, grow and scale in the North East.

Our framework

Phamaceutical Manufacturing

Market requirements

- Onshoring
- Manufacturing of advanced therapeutics
- Continuous manufacturing
- Manufacturing automation
- Pharma and medi tech on demand
- Sustainability

Access to NHS as a market and trsuted research environment

Collaboration between pharmaceuticals SMEs and science

Regional communications and coordination

Supporting SMEs advancing science

Market requirements

- Translation environment
- Innovation to adoption clinical pathway
- Life sciences business facilities
- Drug discovery and development innovation
- Ageing and health innovation
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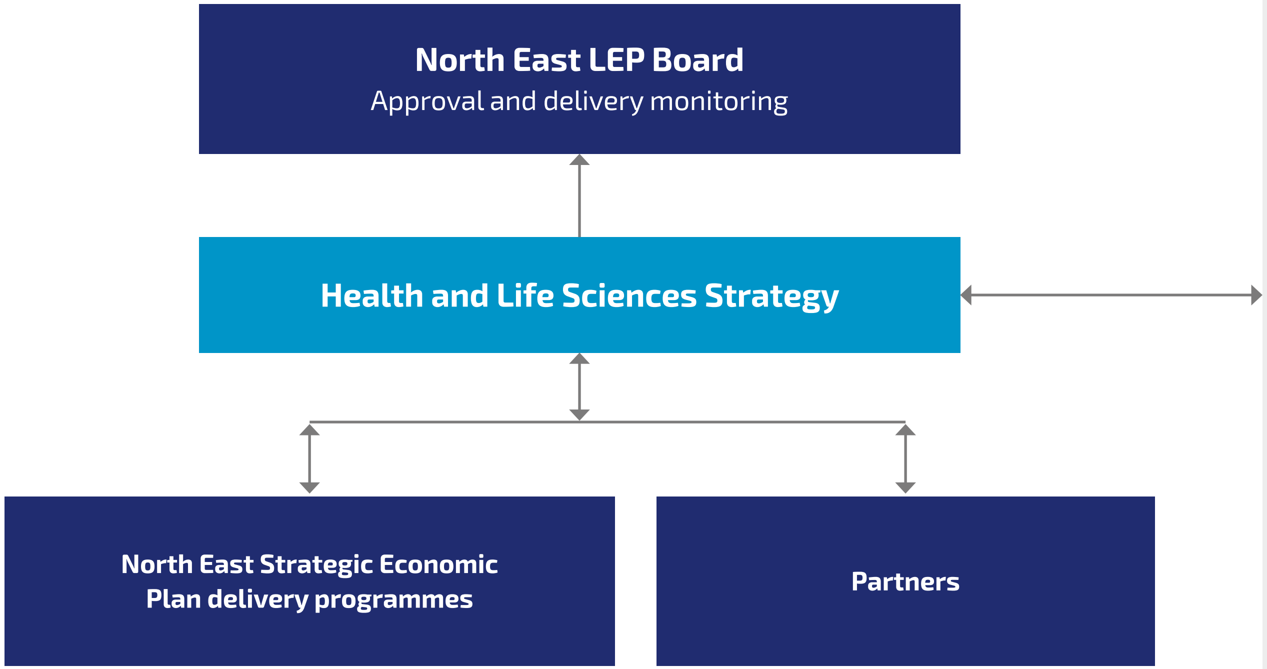
- Campus for Ageing and Vitality
- The National Innovation Centre for Ageing
- Northen Alliance
- Academic Health Science Centre

Governance and delivery

The Health and Life Sciences Strategy will be developed and delivered by the steering group and key partners, approved by the North East LEP board and its delivery facilitated across the five programmes of the North East Strategic Economic Plan.



Health and life sciences steering group

Brings together leaders from our health, life sciences and medicines manufacturing ecosystem to work together to develop and steer the delivery of the strategy.

Michael Whitaker (Chair)	Pharma North East and Innovation Board member
Tim Hammond	Durham University
Geraint Lewis	Newcastle University
Tony Alabaster	University of Sunderland
Carolyn Horrocks	Northumbria University
Richard Baker	North East LEP
Alan Welby	North East LEP
Geoff Davison	BioNow
Nicola Wesley	AHSN
Philip Aldridge	NEPIC
Arun Harish	CPI
Rachel Burdis	Invest North East England
Sarah Pavlou	RTC North
Dale Athey	NPL
Kevin Cook	Sterling Pharmaceuticals
Will Dracup	Biosignatures
Roger Kilburn	Arcinova
Andrew Tasker	Femeda
Ben Cantwell	Kromek
Andrea Burroughs	Newcastle Upon Tyne Hospitals Trust
Peter Rippingale	North East Combined Authority
Vicky Cuthbertson	North of Tyne Combined Authority
Mike Capaldi	Newcastle University

Taking action: key interventions

Key interventions

Priority 1: To modernise and grow pharmaceutical manufacturing		
Project or activity	More details	Lead body
North Shoring (re-shoring manufacture of generic drugs and medicine	A proposal for a pharmaceutical manufacturing and innovation facility will be developed to build resilience in the UK's supply chain and manufacture of NHS critical generic drugs and provide a focus for new innovation activities.	**Pharma North East**
North Shoring - supply chain development	Ongoing analysis of supply chain development needs from raw materials to production will make the North East a primary location to manufacture generic drugs and medicines.	**NEPIC**
Delivery of smart medicines	'Testbed' models for trials will demonstrate the value of innovations in real world settings to accelerate development and scaling of new technologies in the North East, particularly those focused on medicines packaging, medical drug delivery devices and wearable devices.	**CPI**
Strengthening regional pharmaceutical leadership	A new business-led leadership group, Pharma North East, will champion the role of the sector and provide a collaborative approach and focus on employment and skills, investment, exports and supply chains.	**Pharma North East**
Support for inward investment activity	Invest North East England will build the relationship with the Department for International Trade to promote and develop an inward investment proposition around our advanced manufacturing strengths.	**Invest North East England**
Industrial digitalisation: North East Made Smarter programme	The North East LEP and Tees Valley Combined Authority have submitted a bid to government, together with partners, to accelerate industrial digitalisation across North East manufacturing as part of the Made Smarter Adoption programme. If successful, this will include a focus on pharmaceuticals and supply chain businesses.	**North East LEP**

Key interventions

Priority 2: To increase the number of innovative health and life sciences business that are born, grow and scale in the region		
Project or activity	More details	Lead body
Northern Accelerator	The Northern Accelerator will increase early stage spinouts, enhance academic commercialisation aspirations though an ideas impact hub, deliver proof of concept support, and establish a seed capital investment fund.	**North East Universities led by Durham University**
Purposeful Health Accelerator	This accelerator programme will help SMEs to grow or expand into the health, wellness and social care delivery sectors building on the product, process and service innovations created by COVID-19.	**Northumbria University**
Health and Life Sciences IP Protection Fund	In the short term, businesses which have seen opportunities to deploy their intellectual property constrained by COVID-19 will be able to access a unique £300,000 fund to help protect the intellectual property of high-value health and life sciences businesses in the North East. The COVID-19 Patent Protection Scheme will offer up to £25 000 to support high-value proposition (pre-commercial) health and life sciences businesses negatively impacted by the coronavirus crisis until 31 March 2021. This will mitigate the risk of patent and intellectual property loss due to lack of funds.	**North East LEP**
Biosphere	We have invested in the Biosphere at the Newcastle Helix site to create new accommodation for life sciences businesses and continue to develop the associated support programmes. Future accommodation needs will be identified in our property review.	**Newcastle City Council**
Healthy ageing high potential opportunity	Through the High Potential Opportunities process we will will work with the Department of International Trade to attract new collaborations with the regions research expertise on ageing and health.	**Newcastle City Council and Invest North East with DiT**

Key interventions

Priority 3: To broker access to a range of expert support and services across the health and care sectors through the Innovation Pathway		
Project or activity	More details	Lead body
Great North Care Record	This digital platform has been established to enable health professionals and carers to have access to the right information at the point of need and give individuals improved access to information. In the next stage of the development, the project will develop a Trusted Research Environment enabling the strengthening of clinical research and trials.	**AHSN NENC**
North East Health Evaluation Ecosystem	This evaluation ecosystem model will address a recognised gap in the UK for translational innovation, integration, scale up and pre-commercialisation activities in life sciences and strengthen our region's innovation pathway It will provide a single point of access for businesses seeking to accelerate the commercialisation of product development and adoption by the NHS and social care.	**AHSN NENC**
CPI – Photonics 2	This innovation facility which focuses on the Med-Tech market will continue to enhance our capabilities related to digital imaging and in-vitro diagnostics. The SONNET programme supports businesses in the development and application of digital technologies for solving healthcare problems.	**CPI**
Centre for Public Health Data	This centre builds on data analytics expertise and capabilities to support the development of the GNCR's Trusted Research Environment, improving data access and analytics, allowing better population health planning based on demand and enabling the development and deployment of more innovative treatments. It is currently supporting the regional Trusts in planning and responding to COVID-19.	**Durham University**
Early Diagnostics Institute	The Early Diagnostics Institute will help to raise the profile of the North East's scientific, medical and technological knowledge. This project represents an industrial approach to applied clinical research, helping to enhance the region's attractiveness for clinical trials and inward investment to support them. In time, the Early Diagnostics Institute will be an active central diagnostic testing and clinical trials centre.	**Turbinia**
Innovation Delivery partnerships	The North East LEP will promote a programme of Innovation Delivery partnerships which will bring together businesses, science and innovation partners to collaborate on new initiatives in areas of innovation opportunity.	**North East LEP**
Northern Alliance Accelerated Therapy Treatment Centre	The NAATTC is a consortium of 20 industry, NHS and academic organisations led by Newcastle Hospitals and the Scottish National Blood Transfusion Service (SNBTS). The centre is developing the systems and infrastructure required to support the delivery of cell and gene therapies, to increase patient access to advanced therapies and treatments.	**Newcastle Upon Tyne Hospital Trust**
Academic Health Science Centre (AHSC)	One of only eight established in the UK, the AHSC will work to create world-leading improvements in health and social care, through collaboration in translational health research, clinical care and education. It will focus on scientific advancement, translation into healthcare, and careers and skills, and will support industry to access the NHS.	**Newcastle Health Innovation Partners**

Key interventions

Priority 4: Developing our ecosystem		
Project or activity	More details	Lead body
Digital Clinical Skills Hub	A UK leading Digital Clinical Skills Hub for health will be developed to enable the development, training and adoption of robotic and digital surgery, mental health and rehabilitation - building on expertise across immersive tech, robotics and AI.	**AHSN NENC**
Building facilities and places to grow	We need to understand the property infrastructure needs of the sector, ensuring we have the sites, laboratories and facilities we need to enable businesses to grow when they are ready to move to the bigger facilities. A property study will be undertaken by the North East LEP and local authorities looking at existing sites and exploring the potential for use of sites around the region including Enterprise Zones and existing hubs, and exploring models from elsewhere including ITAC at SciTech Daresbury, with the aim of developing a 10 year property plan.	**North East LEP and local authorities**
Enhanced connectivity to markets	Led by Newcastle International Airport and the North East LEP, we will carry out a market feasibility study to assess the potential for enhancing the air connectivity between Newcastle and our growth markets (especially North America) built around freight logistics. It will have a particular focus on pharmaceuticals but will also explore potential in other areas of the economy.	**Newcastle International Airport**
Cluster development support	The North East has created a fund to support our key cluster organisations.	**North East LEP**

Hear from some of our businesses on why they chose the North East...

Dr David Simpson
Chief Executive Officer, Iksuda Therapeutics, Newcastle

Iksuda is a drug development company specialising in an enhanced, new generation of Antibody Drug Conjugates (ADCs) targeting difficult to treat solid tumours.

“The reason we are based in the North East is because it is an ideal place for our business. The North East has multiple universities with science focus so in terms of talent recruitment, this region is a key place to be for us. The skill set here is a perfect fit for our industry.

While our industry is global in terms of partners we work with, we are manufacturing our second drug in the North East.

The region is very well-placed in our drug class. We could actually take one of our drugs to Phase Two and not need to go any further south than Leeds. It's a pretty powerful story for the North East – as a region, we are incredibly capable of innovation.

Dr Nathalie Huther
Senior Director of Business Development, Europe, Arcinova, Alnwick

Arcinova is a contract development and manufacturing organisation that helps pharmaceutical and biotechnology companies across the globe develop life- changing medicines.

“We initially thought it could be a challenge to recruit the right people in Northumberland however we soon learned the North East has a remarkable talent pipeline.

The huge benefit of being based in the North East is that there is so much talent in the local universities and there is such a big pharmaceutical ecosystem harnessing expertise in the region.

Being based somewhere where we can access the right talent has helped us to grow to where we are today.

Andrew Turner
Inventor and Managing Director, Quality Hospital Solutions and SamplePod Limited, NETPark Science Park, Sedgefield

Quality Hospital Solutions (QHS) is purely focussed on NHS innovation and has launched products such as beverage trolleys to be used within the NHS.

“The North East innovation network that we have been able to tap into has been hugely beneficial. It has allowed us to accelerate our product quickly and keep much of our supply chain in the region.

The digitisation of the SamplePod tracking was facilitated by NETPark manager Janet Todd who introduced us to PragmatIC, the company that produced the flexible integrated circuit technology that is used on our smart labels. They are one of the only companies in the world that could offer this and they also happened to be here in the North East.

Dr Sam Whitehouse
Chief Executive Officer, LightOx, Newcastle

LightOx's work is based around the development of new molecules that can penetrate and 'light up' damaged cells with a fluorescent drug in a multitude of cell types.

“The North of England presents some great opportunities to develop new drug entities. Commercialising and driving a drug to market involves the skill sets of a large number of companies to support, test, analyse and manufacture and protect your drug products.

Companies such as High Force Research who can develop new synthetic routes and provide GMP manufacture, Sygnature Discovery who can provide in-vitro and in-vivo testing models, Histologics who provide histology services, formulation work from CPI in Darlington, or Quay Pharma in Alderley Edge, Aptus Clinical on trial design and of course the many NHS trusts that can provide clinical trial sites.

And of course, protecting the intellectual property is key to making it to market and Definition IP in Newcastle are experts in the field, the list goes on and on.

The North of England has many companies that can make up part of the supply chain needed to bring a new drug to the market and provide world-class expertise to the industry.

North East
Local Enterprise Partnership

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Our strategy for regional growth and national change in health, life sciences and medicines manufacturing.

January 2021

Foreword

This strategy has been finalised at a time when the world is grappling with the social and economic consequences of COVID-19. The pandemic has challenged policy makers, health professionals and manufacturers to deliver immediate responses to the health challenges faced and to build a more resilient health environment for the future.

The North East has made an active contribution to the immediate response, both regionally and nationally through our manufacturing and innovation strengths, our public health and care services, and in the development of testing. This has utilised the best of our diverse life sciences, health innovation and medicines manufacturing capabilities - capabilities that are established and identified as an area of strategic importance in our Strategic Economic Plan (SEP).

We have opportunities to strengthen regional growth in the pharmaceuticals industry which is valued at over $1.25 trillion per annum globally, and to improve the performance of our healthcare system, which accounts for 10% of GDP, through new technologies and treatments that will have a positive impact on business growth and the quality of people's lives. Both of these areas are recognised by government as national strengths and a focus for investment, innovation and growth through the UK Life Sciences strategy. This regional strategy demonstrates how the North East can be positioned as a central contributor to this part of our country's economic future.

The health and life sciences industry generally is experiencing significant change. For our manufacturers, digitalisation is resulting in new methods of production and packaging. New methods of formulating drugs and new therapies are leading to novel treatments being trialled, developed and introduced. For health services, technologies like data and genetics are creating new opportunities to diagnose and target treatments. Digital communications are creating new possibilities to communicate between patients and practitioners. Each of these trends has been accelerated by the COVID-19 pandemic.

Looking forward, in a world increasingly characterised by population ageing, the countries and businesses that can add quality of life to these extra years will generate high levels of personal wellbeing, higher workforce productivity and new opportunities for economic value from these developments. The focus has therefore to be on integrating care and the development and production of more targeted and personalised medicines.

For these reasons our vision for this strategy is:

"To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change."

It sets out the ambitious but realistic aims of doubling both the number of jobs and the number of businesses active in this area of our economy over the next decade and identifies priority interventions that will enable the trial and introduction of new and improved approaches which can improve global health from the North East.

The strategy has been developed by the North East Life Sciences Steering group which brings together leaders from all parts of our health, life sciences and medicines manufacturing eco-system to work together to drive forward the interventions.

I would like to thank the members of the Steering Group and pay tribute to the Chair, Professor Michael Whitaker for his personal commitment and excellent leadership.
It provides a platform for collaboration with partners in government and other parts of the country, which I look forward to and I am delighted to see it come to fruition.

Lucy Winskell OBE
Chair, North East Local Enterprise Partnership

The North East has a diverse and vibrant clustering of life sciences, manufacturing and health services. I believe that the work that is being done in the North East can support more growth in the region and make a strong contribution to our wider UK initiative to promote research collaboration, partnership and investment globally as part of government's strategic national approach to life sciences.

Sir John Bell Regius Professor of Medicine, University of Oxford.
Champion and sponsor of the UK Life Sciences Industrial Strategy

The North East is home to international academic research expertise in health and life sciences which not only provides competitive advantage but creates significant regional benefits. Our growing reputation as a testbed and living lab is enabling us to accelerate innovation as well as attract investment and skills.

This Health and Life Sciences Strategy will enable us to further strengthen the excellent partnerships in place between industry, the public sector and our universities to grow the economy and improve health outcomes.

Professor Chris Day
Vice Chancellor, Newcastle University and Chair of the Office for Strategic Co-ordination of Health Research

One of the North East's great strengths is its ability to collaborate to deliver strategic goals and nowhere is this more evident than in the health and life sciences industry. Partnership between the public and private sector is more crucial than ever to ensure we form a core part of the UK's Industrial Strategy and to allow our capabilities to be recognised on a global stage.

We have a fantastic innovation ecosystem supported by an incredible translational environment where healthcare technologies and medicines are being constantly developed. Forward thinking leadership here in the North East is helping to drive forward global health services and markets – something of which we should all be very proud.

Professor Michael Whitaker FRSA FRSB FMBA FMedSci
Chair, Health and Life Sciences Group

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1. Executive summary

Health and Life Sciences: An area of strategic opportunity for the North East

Health and Life Sciences was identified in the North East Strategic Economic Plan as one of four areas of strategic importance to the delivery of our ambitions to drive More and Better Jobs in the future.

By bringing together a range of established, high value and high productivity assets in the region, our aim is to strengthen our role in some of the most diverse, dominant and changing economic sectors in the UK and globally with huge potential for growth in the future through science and research, innovation, manufacturing and export. Ranked 3rd in the world for this $1.25 trillion sector after the US and China, the UK hosts assets ranging from the development and manufacture of drugs and treatments, the development of gene and cell therapies, and intelligent drug discovery and development to artificial intelligence, diagnostics, wearables, telemedicine and much more.

The identification of Health and Life Sciences as an area of strategic importance in the SEP reflects its profile in the region which includes a significant footprint in many of these areas:

- A large GVA and employment footprint.
- Major manufacturing capabilities – across active pharmaceutical products (API), finished products, niche products, diagnostics, and innovation.
- Science, research and development and innovation expertise – located in local universities, catapults and private companies.
- 'Golden assets' - centres of healthcare and life science excellence including national innovation centres - these drive research and innovation.
- Excellent healthcare delivered by an innovation focused healthcare system with a strong capability in trials and demonstration and the active support of a UK leading innovation pathway.
- Significant growth potential across the sector, and an opportunity for strong collaboration.

It also reflects our understanding of the changes ahead across this eco-system as production processes, treatments and services transform in the future as a result of new medical and digital technologies. Together these create opportunities to target and personalise diagnostics and treatment, and for an effective response to the increasingly complex demands on health systems as a result of demographic ageing.

Key components of the health and life sciences sector in the North East include:

- **Med-Tech** – Companies developing clinical diagnostics, medical devices and equipment and digital health applications to diagnose and deliver care.
    - **Examples:** Biosignatures, Helena Biosciences, Rocket Medical, QuantuMDx, Femeda, Northgene, Intogral, MDNA Life Sciences and Atelerix.
- **Pharmaceuticals and biotechnology manufacturers** – Companies who create and manufacture medicines.
    - **Examples:** GSK, MSD, Recipharm, Fuifilm Diosynth Biotechnologies, Accord Healthcare, Sterling, Clinigen (Quantum Pharma) and Piramal Healthcare.
- **Support services and value chain** – Companies who either work across the supply chain or specialise in specific functions. These include specialists in the engineering and equipment supply chain and construction of facilities.
    - **Examples:** High Force Research, Datatrial, Arcinova, Alcyomics and Magnitude Biosciences, WH Partnership, Parker, Thermofisher.
- **Biotech** – An emerging biotech cluster of businesses driven by corporate and university spin-outs.
    - **Examples**: NewCells Biotech, Iksuda Therapeutics, Atelerix, AMLo Biosciences, 3D Bio-Tissues and Shield Therapeutics.
- **A broad eco-system** – A broad spectrum of institutions, innovation centres and networks that support the functioning growth and development of the sector.
    - **Examples:** Academic Health Sciences Network (AHSN), CPI which is part of the UK Catapult Network, cluster and sector bodies such as Bionow and NEPIC, universities and their programmes, research institutes like NIHR Med Tech NE, Diagnostics NE.
- **Academic science and research** – Nationally recognised assets in North East universities which develop new science, work in partnership with industry and the NHS to introduce new products and services and spin out new businesses.
    - **Examples:** One of eight Academic Health Science Centre partnerships in England, Ranked 4th in the UK for Research Intensity in Clinical Medicine, Europe's largest concentration of ageing-related interdisciplinary researchers and national centres of excellence in ageing, Northern Accelerator partnership between five universities.
- **The NHS** – The four hospital trusts and the wider commissioning and public health systems are key partners in the development and delivery of this economic strategy. The NHS performs three distinctive and important roles in the Health and Life Sciences strategy:
    - As an enabler of the ecosystem to support SMEs and spinouts to commercialise their products and services through validating 'unmet needs', real world evaluation, conducting clinical research and trials for product

development, acting a testbed of technology innovation and accelerating the commercialisation of products.

- As an innovator of products, services and processes internally.
- As a significant health market in which to adopt these products and services. Healthcare spending in the UK totals about £200 billion annually, 10% of GDP.

Example: Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH) is consistently one of the highest performing and ranking trusts for clinical research and clinical trials, with over 500 clinical trials per annum facilitated through Newcastle Joint Research Office. As an example of the scale of NHS operations in the region, Newcastle upon Tyne Hospitals NHS Foundation Trust activity levels include 1.72m patient contacts per year, 14,725 staff employed and £1.087bn healthcare spend. Collectively they are rated CQC Outstanding and with the Great North Care Record recognised as a Global Digital Exemplar.

In addition, the region hosts a wider portfolio of knowledge and industrial assets in other sectors which can be mobilised to drive development in health and life sciences given some of the key directions of development in the sector. Leading examples include the research and knowledge strengths on ageing, bringing globally recognised insight into the causes and implications of global demographic change, expertise in diagnostics, which have shaped the North East's excellence in translational research and in improving patient care with Diagnostics North East (NE) unrivalled in the UK, and the capabilities of the region's vibrant digital sector as the healthcare and medicines manufacturing industries become increasingly digitally enabled.

Strategy and priorities for action

Our strategy aims to take advantage of our strengths and opportunities in business, science and our healthcare system to drive more and better jobs in the region and make a strengthened contribution to one of the UK's priority industrial opportunities.

We aim to take opportunities to enhance our share of the global pharmaceuticals industry which is valued at over $1.25 trillion per annum, and to continually improve the performance and offer of our healthcare system through new technologies and treatments to have a positive impact on the quality of people's lives. This will in turn improve access to healthcare markets for North East businesses and innovators which currently represent 10% of UK GDP.

To achieve we will take advantage of a number of regional science, research and translational assets in business, universities and our NHS bodies which are well positioned at the leading edge of some of the major changes which are impacting on drugs, treatments and healthcare services. We will focus on:

- Strengths in production and digital delivery – supporting manufacturers to drive new methods of delivery and packaging and healthcare organisation to improve services, patient care and monitoring.
- New methods of formulating drugs, treatments, services and therapies, creating hubs to support development of these ideas and pathways to trial and introduce them into the health system.
- Taking advantage of new opportunities to diagnose and target treatments.
- The opportunities and impacts of demographic change – with a focus on using our globally acknowledged research to shape health, life sciences and drugs and treatments of the future.

We will use these assets to create new and better jobs by growing our science and research base, supporting growth in our small and medium businesses and securing higher levels of investment and engagement from manufacturers and investors into the assets in the region.

Underpinning this work will be continual strengthening of leadership, co-ordination and communication in the region and strengthening of national and international networks and connectivity to ensure that the North East is recognised for its assets and opportunities and is an accessible location for people to work and businesses to innovate and grow.

Together these areas of intervention will deliver a highly connected regional environment, which is recognised for its capacity to leverage its wide range of assets to identify, accelerate and translate drugs and treatments into key markets in health services and pharmaceuticals supply chains.

Our Vision

To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change

Strategic Aims

- To strengthen the distinctiveness and scale of the pharmaceuticals cluster with world-leading companies selecting the North East for the development and location of production.

- To provide a comprehensive support system which can enable high growth life sciences businesses and sub-sectors to be founded and grow in the North East.

- To unlock the commercial and health potential of North East universities' world-class research and assets, translating them into business and health innovations.

- To support business and NHS infrastructure to translate discovery through development to adoption by providing a comprehensive support system for key high growth businesses and sub-sectors and clinical trials.
- To be the leading region for NHS adoption of innovation through the development of the North East NE Health Evaluation System.
- To attract big players in the healthcare and life science investment community to the region to engage with its research, business and translation environment.

Strategic priorities

The Health and Life Science Steering Group has identified three strategic themes to support the delivery of these aims and outcomes in the North East (see figure 1).

1. Modernisation and growth of pharmaceutical manufacturing, in response to the rapid global growth in demand for medicines, health technologies and personalised treatments.
2. Supporting a diverse community of health and life sciences SMEs to form and grow in the region ranging across university spinouts, new business formation, and the encouragement of health and life science companies to cluster in the North East. SMEs will be attracted by the availability of an excellent business growth eco-system, access to capital, access to excellent science, research, development and innovation capabilities and for clear and navigable pathways to key health and medicines markets.
3. Improving the co-ordination of the translational environment from discovery to implementation into the NHS and wider health and pharmaceuticals markets, ensuring that the region is recognised as a leading hub for innovation, testing and trials, in turn attracting investment into this environment with a progressively growing eco-system of hubs, networks and centre of excellence.

These themes will be supported and elaborated through the Health and Life Sciences Steering Group which will provide strong collaborative leadership for the strategy, supported by key enabling actions, an excellent communications programme and a strong relationship with key government departments and agencies.

Figure 1: Strategic framework for North East Health and Life Sciences strategy

Key measures and outcomes

Through a focus on these aims and themes, the Steering Group has identified key targets aligned with the key performance indicators set out in UK and regional strategies and plans.

By 2030, the Steering Group has set two overarching targets for the Health and Life Sciences strategy:

- To have doubled the number of businesses active in the health and life sciences community in the region.
- Noting that the industries in focus within this area of strategic importance tend to deliver high productivity technical and professional roles, to have doubled the number of jobs in the health, life sciences pharmaceuticals businesses and the research and development community in the region, contributing in particular to the stock of 'Better' jobs.

Supporting these overarching targets, a number of sub-targets include:

- To be recognised as a key area for the co-design and delivery of early phase studies with SMEs and the life sciences sector and in clinical trials with Top 3 ranking NHS Trusts on a year-on-year basis.
- To be recognised as a leading area for the implementation of innovation into the NHS with a strong and navigable innovation pathway.
- To have quadrupled the number of university spin outs in this area of the economy.
- To be systematically recognised in UK government documents as a leading cluster location for health and life sciences.
- To secure one major and a number of smaller additional pharmaceuticals investments into the North East.
- To have secured strengthened physical connectivity along the pharmaceuticals supply chain including direct freight logistics links to the United States from the North East.

Key Data

There is a range of data which illustrates the current profile of health, life sciences and medicines manufacturing in the North East.

Economic value: In 2019, Health and Life Sciences in the North East region had a turnover of £1.7bn[1] (£1.5bn in 2018), with the combination of existing high productivity businesses and their capacity for growth and higher value employment making this broad area of the economy well placed to contribute to the key performance indicators set out in the SEP[2].

Employment: Figures from the Office for Life Sciences[3] illustrate the size and contribution of the health and life sciences sector. In 2019, total North East regional employment in the health and life sciences sector was 7,680 (3.0% of UK total). This comprised of 2,060 (3.2% of the national total) in Biopharma core, 2,180 (3.6%) in Biopharma service and supply, 2,150 (2.1%) in Med-Tech core and 1,290 (4.5%) in Med-Tech service and supply. Between 2010 and 2019 overall employment in the sector increased by 1,400, which represents an equivalent increase of 22% compared to 9% nationally.

This trend is likely to continue with growth in manufacturing, SME growth and in the research and science base. For example, in its first three years, 48% of spinouts from the Northern Accelerator Programme came from life sciences businesses. In the response to the COVID-19 pandemic, it reported employment growth of over 300 jobs in the pharmaceuticals sector, at a time when other sectors were furloughing staff and concerned about future job losses. The new COVID Lighthouse Laboratory project in Gateshead and Newcastle is expected to deliver 1000 new jobs in research and testing.

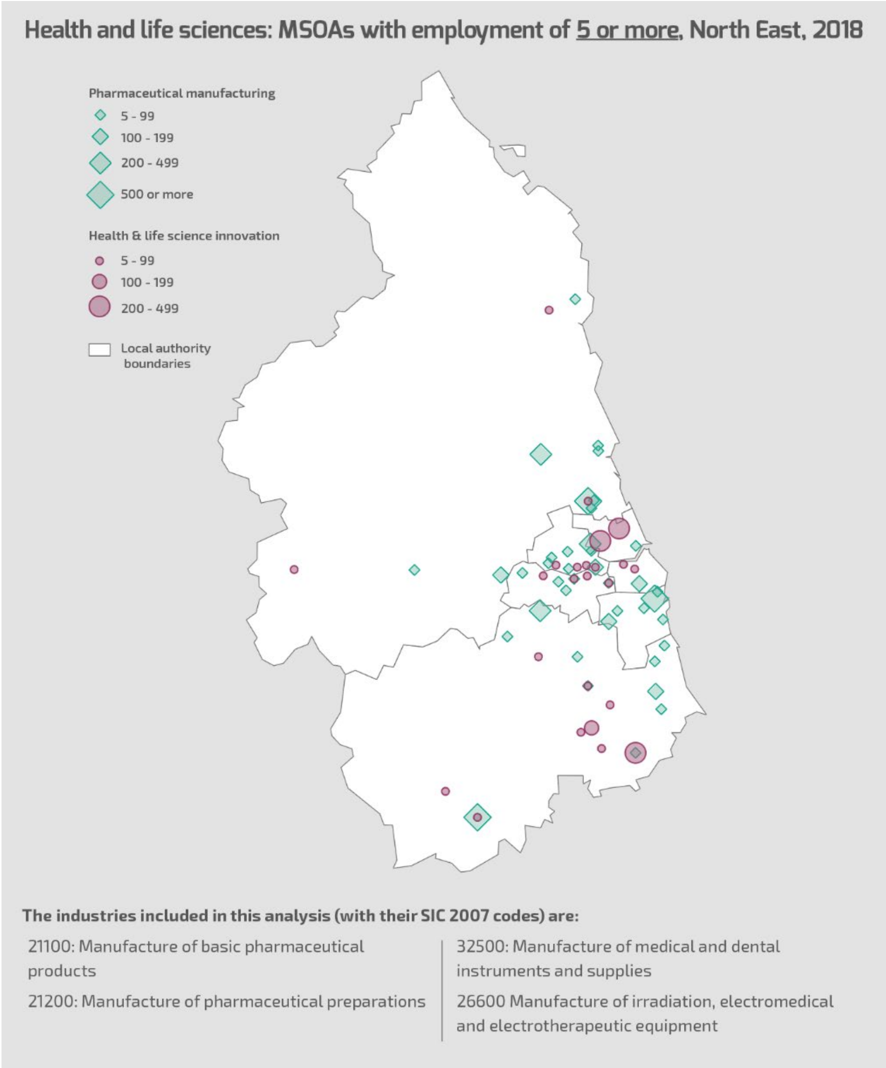
[1] Bioscience and health technology sector statistics 2019, https://www.gov.uk/government/statistics/bioscience-and-health-technology-sector-statistics-2019
[2] Note that the definition used in this strategy focuses on the business, science and innovation assets in these sectors and excludes the wider health and social care services sector. This is a narrower definition than adopted in other similar strategies elsewhere and aims to reflect the economic growth focus of this report. As is noted, however, health and social care services make a significant and valued wider contribution to the regional economy including high levels of investment and employment and represent a further significant opportunity for the region.
[3] ibid.

Inward investment: The North East attracted 4.2% of all life sciences projects into the UK between 2013 to 2017, and there is more potential for growth with opportunity areas in pharmaceuticals, advanced therapies and ageing sciences and a target to achieve a ranking as a top 10 UK life science Foreign Direct Investment.

Pharmaceuticals and advanced manufacturing: The North East hosts a significant cluster of the global pharmaceutical industry generating £868 million for the regional economy in 2017. There are 73 pharmaceuticals and biotechnology supply chain companies in the region, employing 4,100 people with an annual turnover of £601 million. Its wider impact is estimated at £1.5 billion supporting between 18,800 and 23,500 jobs. This cluster sits within a wider advanced manufacturing footprint which accounts for 15.3% of the North East LEP area's GVA and 11.3% of employment and also includes chemicals and the major automotive manufacturing cluster focused on the Nissan car plant and a wider group of automotive OEMs based around Sunderland.

Large global pharmaceutical manufacturers are located in the region including Glaxo Smith Kline, MSD, Accord Healthcare, Recipharm, Arcinova, Sterling Pharma Solutions, Fujifilm Diosynth and Piramal. The North East also has a thriving SME base working closely with industrial partners and academic institutions' innovation assets in formulation, novel therapies and biologics.

Figure 2: Maps of the region's life sciences and pharmaceuticals industries by employment.



Trade and exports: The North East has a strong export-led regional economy. The region exported £13.3 billion of goods in 2019, including £2.8 billion of chemicals and pharmaceuticals[4]. 86% of North East pharmaceutical production is exported, with 64% of finished products going to the United States.[5]

Development of the Strategy

Health and life sciences was first identified as an area of opportunity in the Strategic Economic Plan in 2017 following engagement through the Health & Life Sciences Steering Group and consultation with a wider range of stakeholders. Over 100 organisations have been consulted in total in the development of this strategy.

The programme has already been the focus for a number of actions in the North East as follows:

[4] HMRC Regional Trade Statistics, https://www.uktradeinfo.com/Statistics/RTS/Pages/default.aspx
[5]

- Convening and ongoing development of the Health and Life Sciences Steering group, with the aim of building a shared strategic ambition and approach and to foster collaboration in pursuit of growth in this area of the economy.
- Supporting the development of leadership in sector organisations and cluster bodies.
- Delivery of investment into infrastructure assets in the region including new national Innovation Centres at NETPark in County Durham, the Biosphere at the Helix site in Newcastle and support for key sites through the Enterprise Zone programme.
- Supporting partner-led action in a range of areas which have enabled support to the business base and enhanced the structure and navigability of eco-system.
- Significant development of the evidence base about the sector in the region.
- Sponsorship of events and publications which have provided opportunities for enhancing the region's profile and business networking.
- The building of relationships and partnership working with government departments and other parts of the UK in pursuit of shared aims.

Partners in the Steering Group have led the way in developing a wide range of other activities and interventions which are captured in the full strategy document and which provide the underpinning platform for this strategy.

The Steering Group commenced a formal strategy process in March 2020 and this document draws this work together with key input from both the Steering Group and the North East LEP team.

Opportunities and challenges

The strategy has identified a number of specific opportunities and challenges:

Opportunity area	Summary
Growth and modernisation of manufacturing and the supply chain	• Onshoring production facilities and securing new investment • Modernising manufacturing through digitalisation and automation of production and packaging • Growing contract manufacturing • Formulating and manufacturing new treatments and therapies
Development of new services and treatments	• Design and delivery of phase II translational clinical research studies • Growth and delivery of cell and gene therapies • Exploiting business and science strengths in diagnostics, digital health, ageing and medical technologies • Leverage of regional innovation assets in photonics and biologics
Collaboration with the NHS to adopt and commercialise drugs and treatments	• Active collaboration with an innovation-oriented health system to promote adoption of new treatments and processes • Utilisation and further development of a UK leading innovation pathway and trusted research environment • Growth in trials and demonstrators • Deployment of digital health services
Inward investment	• A strong record in securing manufacturing projects

	• Inward engagement with science, innovation and healthcare eco-system • Healthy ageing high potential opportunity (HPO) • Work with DIT to present further HPO processes including CGT
Growth and investment in life sciences SMEs	• Strengthening the business environment to support regional SMEs • A strong and growing programme of university and health service spin-outs and collaborations
Strengthening our cluster	• Building leadership structures and institutions, and fostering collaboration between them • Building out the key locations in the region as hubs for collaboration and investment

Challenge area	Narrative and mitigation
Overall size of the economy	• Overall scale of the economy is a constraint *Position region at the hub of wider networks and collaborations including with national clusters, the Northern Powerhouse, collaboration with Scotland*
Brand and awareness	• UK industry is concentrated on golden triangle *Establish the region as a go-to in strength areas through communications and partnership working*
Connectivity	• Not currently directly connected to key markets and trade risks from political developments like EU Exit *Strengthen connectivity to targeted markets and collaboration with DIT to focus on opportunities*
Business environment	• Need to strengthen finance offer in key parts of this sector • Need to ensure that there are the right facilities to host business growth in SMEs and manufacturing • Need to maintain a strong skills supply • *Strengthen the property and facilities available for growth and inward investment* • *Deliver skills development initiatives across this eco-system*

Key interventions:

Theme 1: Growth and modernisation of pharmaceutical manufacturing

The following interventions have been identified as priority actions in this area of the strategy:

Strengthening regional pharmaceutical leadership: Development of a new leadership group, Pharma North East, to champion the role of the sector in the region. Lead: Pharma North East.

North shoring investment: Creation of a new facility providing new capacity to re-shore generics and medicines manufacturing, build resilience in the UK's supply chain in critical areas of NHS demand, and support pharmaceuticals innovation. Lead: Pharma North East.

Pharmaceuticals supply chain development plan: Supply chain development project to enable the North East to strengthen its supply chains and build as a primary location to manufacture generic drugs and medicines. Lead: NEPIC.

Support for export and inward investment activity: Strengthened support for trade and investment activity, with immediate focus on building the relationship with DIT and developing a strategic inward investment proposition. Specialism focus on healthy ageing HPO, with discussion envisaged about other opportunities. Lead: INEE, North East LEP, NECC, DIT.

Industrial digitalisation; North East Made Smarter programme; Collaborative programme to support and accelerate industrial digitalisation in North East manufacturing. Lead: North East LEP, TVCA.

Smart packaging and delivery of medicines: Development of 'testbed' models to demonstrate innovative models across the healthcare and the drug development supply chain including medicines packaging, drug delivery and devices and wearable devices. Lead: CPI.

Point-of-need diagnostics: Collaboration to position the North East as the go-to place for development, scale-up and demonstration of the next generation of point-of-need diagnostics. Lead: CPI and AHSN NENC, NHS with business.

Enhanced connectivity to markets: Market feasibility study will assess the potential for enhancing air connectivity between Newcastle and key growth markets for freight logistics. Lead: Newcastle International Airport, North East LEP.

Cluster development support: Funding to support our key cluster organisations with core and project funding. Cluster bodies in this area of strategic importance will be in scope for this fund. Lead: North East LEP.

Theme 2: Supporting health and life sciences SMEs to grow

The following interventions have been identified as priority actions in this area of the strategy:

Strengthening access to finance: Addressing gaps in the current finance offer with respect to life sciences SMEs as part of the review of North East access to finance provision. Lead: North East LEP.

Strengthening links to external investors: Buildling on initiatives such as the Innovation Supernetwork Finance Camp and the good practice of a number of successful regional businesses. Feasibility study about specific North East Investor Conference for Life Sciences. Lead: North East Innovation SuperNetwork and Steering Group.

Health and Life Sciences IP Protection Fund: Short term support for those businesses which have seen opportunities to deploy their intellectual property constrained by COVID-19. Lead: North East LEP.

Driving university spin-outs through Northern Accelerator: Phase 2 programme to build on phase 1 success aiming to support growth of spin-out SME businesses through i) the

Executives into Business programme and ii) its Venture North Fund. Lead: Northern Accelerator programme, led by Durham University with other universities.

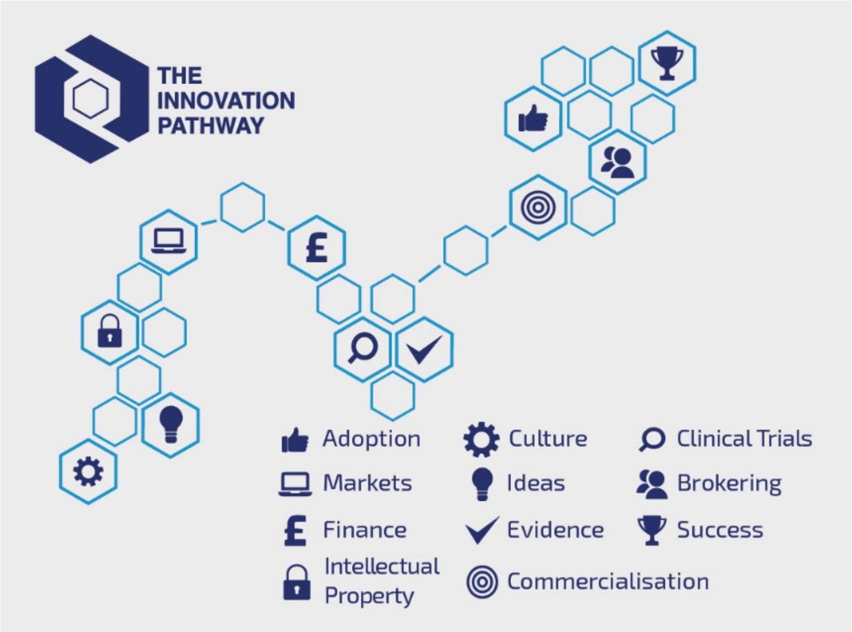
Purposeful Health Accelerator: Accelerator programme for SMEs focused on health, wellness and social care delivery sectors offering practical support, advice and capital investment. Lead: Northumbria University.

Building facilities and places to grow: Property study following on from development of new facilities at Helix and NetPark and use of existing manufacturing sites, to understand the needs of the sector and generate a development response. Lead: North East LEP and Local Authorities.

Theme 3: Supporting and enhancing our eco-system to support innovation and translation from discovery to implementation

Key interventions include:

Innovation Pathway: Further development of the innovation pathway to provide an organised and staged route to market into the National Health Service. Lead: AHSN NENC.



New interventions will build the strength of the pathway:

Great North Care Record: Enabling professionals, carers and patients to have legitimate access to patient access at the point of need through a region-wide, interlinked electronic health and care record platform, capable of transforming clinical care and supporting research.

Further extension will aim to facilitate trial design to deliver large patient cohorts for observation studies, real-world evaluation of products, and the evaluation of existing and new patient pathways, as well as a trusted Research Environment to improve access to data and analytics and enable population health planning and development and deployment of more innovative treatments and clinical trials.

North East Health Evaluation Ecosystem: A test bed to develop and evaluate the strengthening of the co-ordination of expertise and assets across the region in a systematic, transparent and accelerated way to speed the route of new products and services to market.

Digital Heath: Development of a strategy to identify where the digital sector could practically contribute to and support local health and life sciences development and articulate and agree how best to progress the sector's health tech agenda in the North East. Lead: AHSN NENC.

MedTech, internet of medical things and wearables: Building on the successful model of the National Healthcare Photonics Centre at CPI, NETPark County Durham, phase 2 of the project will extend the focus to include other key enabling technologies including flexible hybrid electronics, advanced materials, micro and nanotechnologies and biotech. It will extend CPI capabilities to provide deep R&D and innovation support to companies large and small in the broad area of MedTech, with a focus on point of need diagnostics, wearables, internet of medical things and internet of wellness things. This facility will enable academic partners, SMEs, investors, large companies, and the wider healthcare ecosystem to extensively collaborate. Lead: CPI.

Northern Alliance Advanced Therapy Treatment Centre, phase 2: The NAATTC is a consortium of twenty industry, NHS and academic organisations led by Newcastle Hospitals and the Scottish National Blood Transfusion Service (SNBTS).

The purpose of the centre is to develop the systems and infrastructure required to support the delivery of cell and gene therapies, and to increase patient access to advanced therapy medicinal products (ATMPs) on a national level.

Early Diagnostics Institute: Innovation to detect multiple age-related conditions from one blood sample taken during a GP health check appointment to create an industrial approach to support applied clinical research, leading to development of an active central diagnostic testing and clinical trials centre. Lead: Turbinia working with NIHR MIC and the NIHR Newcastle Clinical Trials Unit, NCTU.

Innovation Delivery Partnerships: Our reach to global businesses seeking solutions to challenges in treatments will be enabled by the development of Innovation Delivery Partnerships, new models for collaborative innovation supported by the North East Innovation Board which seek to accelerate our assets' entry into markets of the future.

Theme 4: Cross-cutting and enabling actions

Supporting businesses

Business support and access to finance: Connection of the range of existing start up, scale up and finance services available to the sector through the Growth Hub. Lead: North East LEP.

Developing skills to support health and life sciences growth: Through the Skills Advisory Panel (SAP), facilitated by the North East LEP, a response will be developed which aims to respond to ongoing and futures skills needs. Lead: North East LEP.

Leadership and Co-ordination

Health and Life Sciences Steering Group

The Health and Life Sciences Steering Group provides strategic advice, support and coordination of partners to the LEP and oversight of the development of a Health and Life Sciences Growth Strategy and work programme. The Steering Group acts as a critical friend to the North East LEP by steering, advising and advocating the work of the Health and Life Sciences Steering Group and the LEP Executive team.

It brings together broad representation of the Health and Life Sciences community in the North East from the private, public, health and education sectors and draws together a unique set of skills, knowledge and perspectives. It reports into the North East LEP Board on development of the strategy and links directly to other boards and structures within the LEP through officers and membership.

Communications

The North East LEP and partners will work together to communicate effectively about the health and life sciences community and capabilities and the priorities set out in this strategy, facilitated by the North East LEP.

Key audiences include:

- Businesses working in health and life sciences – to build confidence, provide support and encourage engagement and investment.
- Regional audiences – helping to ensure visibility and make collaborative links between partners.
- Policy and strategy - building the presence of the North East in government and amongst other key stakeholders.
- Investors and other economic actors – working directly and through partner and government channels to secure investment to support the objectives set out in the strategy.
- Students, graduates and workers – seeking to build the labour market capacity in the region and attract skills.

Our strategy for regional growth and national change in health, life sciences and medicines manufacturing

2. Introduction

The North East LEP leads on driving economic growth across the North East LEP area, which includes Northumberland, Tyne and Wear and County Durham. Our overarching aim is to deliver 100,000 more and better jobs in the region.

Our approach is set out in the North East Strategic Economic Plan (SEP). The SEP identifies four areas of strategic importance for the regional economy; Health and Life Sciences; Energy, Digital, and Advanced Manufacturing. Each of these areas has a strong regional concentration of leading assets, expertise and capabilities in businesses and the wider economy, and are part of growing highly productive parts of the global and national economy. This combination of regional assets and global market opportunity together provide a strong opportunity to deliver our economic ambitions. The SEP sets out our programme to drive delivery towards these objectives through investment in business growth, innovation, skills, infrastructure and connectivity.

Working with and through the North East Health and Life Sciences Steering Group, the North East LEP has co-ordinated the development of this Health and Life Sciences Growth Strategy. It sets out how the region can deliver a strong contribution to the aims of the Strategic Economic Plan through a focus on its established pharmaceutical manufacturing cluster, its range of health and life sciences capabilities in business and research, and its excellent public health services and supporting ecosystem. Together, these assets provide a compelling opportunity and competitive advantage for the region, with the potential to transform the productivity and structure of employment in the region, in turn inducing a wider set of economic benefits.

These sectors and capabilities are recognised nationally as a key focus for the UK’s industrial strategy given their global significance and the UK’s national strengths. The world's top 25 Biopharma companies and 30 Med-Tech companies have operations in the UK. The life science sector directly employs over 220,000 people, with over 160,000 within core operations and a further 60,000 within service and supply. It generates a turnover of approximately £73.8bn a year. The UK is the third most popular destination of foreign direct investment in life sciences, after the USA and China.

With this focus, by working together partners in the region have the opportunity to position the North East to make a strong and visible contribution to UK growth at a time of challenge and change.

At the time of preparing this strategy, the UK has been progressively experiencing the COVID-19 pandemic, impacting directly on the health of individuals in the UK and internationally and changing the global economy in multiple ways, with many of the changes likely to be permanent. Our focus on health and life sciences here in the North East is therefore not only an urgent economic priority for the region, but also strongly aligned with the national priority to overcome the economic and health crisis which COVID-19 is creating, and to build a healthier and more resilient national economy and society over the longer-term.

In this strategy we build on the outline set out in the SEP to:

- Explore and explain our assets in the area of health, life sciences and pharmaceuticals.
- Set out how we can mobilise them through strong and co-ordinated regional partnerships and specific interventions to drive economic growth and more and better jobs.
- Secure these benefits through a combination of inward investment, strengthened innovation performance and business start-up and growth, supported by wider interventions into the region's physical infrastructure and skills, in an area of opportunity which is genuinely global and characterised by high value investment and strong productivity performance.

Development of the strategy

Since 2017 when health and life sciences was first identified as an area of opportunity in the SEP by the Health and Life Sciences Steering Group, the North East LEP has consulted with a wide range of stakeholders in the development of this strategy. Over 100 organisations have been consulted.

The initial aims of this work were set down in the Terms of Reference for the strategy:

With deep industry engagement, to develop an industry strategy and action plan which will foster growth of the health and life sciences sector in the North East to generate economic returns from more and better jobs.

To position the North East in key areas to attract more companies to locate and employ skilled people in the region.

To leverage relevant academic and clinical expertise to grow the sector and develop consequent economic benefits.

To leverage economic returns from key research institutes and catapults.

A number of key opportunities were initially identified in pursuit of these aims:

- To provide a comprehensive support system for key high growth businesses and sub-sectors.

- To develop a cluster economy opportunity around world-leading companies selecting the North East for production plants by supplementing the pharmaceuticals supply chain.
- To unlock the commercial potential of North East university world class research.
- To support business, and the NHS infrastructure to translate discovery through development to adoption.
- To be a leading region for NHS adoption of innovation.

These priorities have been the focus for a number of actions supported by the North East LEP including:

- Convening and ongoing development of the Health and Life Sciences Steering Group, with the aim of building a shared strategic ambition and approach and to foster collaboration in pursuit of growth in this area of the economy.
- Supporting the development of leadership in sector organisations and cluster bodies.
- Delivery of investment into infrastructure assets in the region including new national Innovation Centres at NETPark in County Durham, the Biosphere at the Helix site in Newcastle and support for key sites through the Enterprise Zone programme.
- Supporting partner-led action in a range of areas which have enabled support to the business base and enhanced the structure and navigability of eco-system.
- Significant development of the evidence base about the sector in the region.
- Sponsorship of events and publications which have provided opportunities for enhancing the region's profile and business networking.
- The building of relationships and partnership working with government departments and other parts of the UK in pursuit of shared aims.

Appointment of a Programme Lead in 2019, co-financed by CPI and AHSN NENC, key partners within the Steering Group, has enabled this work to be accelerated, building further our collaboration and enabling the identification of a number of specific opportunities to strengthen the approach in the region. The Steering Group commenced a formal strategy process in March 2020 and this document draws together this work with key input from both the Steering Group and the North East LEP team.

3. Economic and policy context

3. Economic and Policy Context

Economic, health and demographic context

Global trends in health, life science and pharmaceuticals

In identifying health and sciences as an area of strategic importance for the North East, the SEP acknowledges both an extensive and developing asset base in an area of significant global opportunity and rapid social and technological change presenting both opportunities and challenges. In the context of the region's key asset base, the following trends and trajectories are the focus for this strategy:

Growth and change in medicines and therapies

Development and production of new pharmaceuticals, therapies and treatments, and change in production methods means this is a rapidly developing area of the economy. With total annual overall value of $1.25 trillion globally, continuing acceleration of demand, and transformation of treatments as technology, demography and markets interact, it is a market representing significant opportunity. Change is occurring in the types of treatment available, with the introduction of novel therapies to more traditional drugs including cell and genetic therapies, biologics, changes in diagnostics, and transformation of production and service models through automation and digitalisation of both creation and delivery processes. Key trends include:

- **Demand for Advanced Therapeutics:** There is strong interest in, and an urgent need for, more cell and gene therapy (CGT) production facilities, to meet accelerating demand. The global CGT market is predicted to grow by over $8.95bn by 2025, reaching a value of $11.96bn. In the UK, the number of patients treated using this therapy is expected to grow to 5,000 by 2023 and 10,000 by 2028. This will require significantly more highly specialist manufacturing facilities, a gap the government is looking to address.

- As more Biopharmaceutical companies develop CGTs, significant change will be required in **manufacturing processes**, as the drug manufacturing process can rely on the receipt of the patient's own or donor cells. Between 2016 and 2019, UK CGT manufacturing has increased by 80%. (Frost & Sullivan).

- **Continuous Manufacturing:** This streamlining of manufacturing processes, with products being created without the need to stop until the product is completed – is seeing a move away from the manufacturing, filling and packaging process. The region's centres of excellence are well placed to support businesses in this area. For example, GSK and AstraZeneca have partnered with CPI to build a continuous manufacturing capability at NETPark, in County Durham. It is estimated that this investment could attract up to £88m worth of investment by 2028. (UK Life Science Sector Deal 2017).

- **Contract Manufacturing:** The biopharma and supply chain branch of life sciences, which includes outsourced or contract manufacturing is also a major opportunity for the region which has grown 15% over the past five years. Med-Tech has also experienced similar levels of increased demand with growth of 9%. This demand for outsourced manufacturing has been rising. It is expected to continue, as companies (big and small) that lack in-house manufacturing capabilities begin to look to third-parties to reduce costs and form long-term relationships with suppliers as manufacturing becomes more complex.

- **Automation, digitalisation and advanced drug delivery technologies:** The emergence of new technologies is both enhancing and disrupting manufacturing operations, distribution and service provision in health services. These include opportunities to link production and delivery to strengthen the focus on individual needs. Emerging technologies include augmentation and virtual reality, robotics, big data and analytics. Nanoparticle-based drug delivery technologies are also now becoming a reality, enabling the successful adoption of a number of complex medicines and advanced therapies such as nucleic acid therapies.

- **Precision Medicine:** The rise of Precision Medicine (also known as Personalised Medicine) will give rise to the need for pharmaceutical manufacturers to produce a larger number of smaller batches of precision medicines, requiring new approaches to what has traditionally been a large batch scale production industry.

- **On Demand technologies:** 3D printing of medications and medical devices is fast becoming a reality. This could mean that drugs and devices are printed near the patient within very short timeframes.

- **Sustainability:** The need for sustainable manufacturing facilities and practices will become more pressing as eco-concerns continue to rise. Greater emphasis will be placed on the need to minimise waste, consumption of resources and the use of environmentally friendly materials.

Directions in health and care policy and services

Globally, health care policy and approaches are changing and developing in response to changing demographics which are driving different demands across the life-course and the possibilities of new drugs, treatments and interventions. Improved public health and the development of new interventions have both contributed to extended life expectancy and there is an increasing focus on quality of life so that extra years are healthy and productive.

There is an increasing focus in policy on the integration of health and care approaches to achieve this combination of goals, and also in holistic approaches which reflect the interaction of physical and mental health. The rapid development of the range of interventions available across public health, drugs and novel therapies is leading to key questions about how to integrate interventions to provide more personal, individually tailored services, and to drive change in heath and care delivery. Digital delivery and the use of artificial intelligence underpinned by detailed patient data mapping is becoming a reality across the health and care system, from consultation through to drug tracing and delivery.

This provides a complex environment for intervention with a range of issues around ethical and trust concerns about the use of personal data and the relationship between patients and professionals, but with multiple opportunities for research and science, testing, collaboration and innovation in delivery. In the UK, the government has highlighted the area of digital health as a priority theme for development within the NHS Plan, both as a driver for service improvement and commercial opportunity.

Social and demographic changes: Population ageing and diversity

Across the world, as these innovations in approaches to drugs, treatment and public health practice are changing the structure of health and care systems and improving lives for many people, they are also contributing to and responding to a wider demographic shift as the population ages and becomes more diverse.

The global population is projected to make a fundamental age shift to an older population by 2050, where it is expected there will be 2.1 billion people over the age of 60 globally, an increase of 218% compared with 2017. Population ageing is the world's dominant demographic trend. Most people in most countries can expect to live longer and healthier lives than previous generations, and the balance of our population is being transformed as extended life expectancy combines with declining birth rates.

Across the 33 member states of the OECD, for example, as the post-war baby boom works through the population, this combination of population trends is shifting the age-balance of our population steadily and permanently (see figure 1). By 2050, a 'new normal' age structure is projected to see about 1/3 of OECD population to be aged over 65, adding 245 million people to this age group compared with 2011.

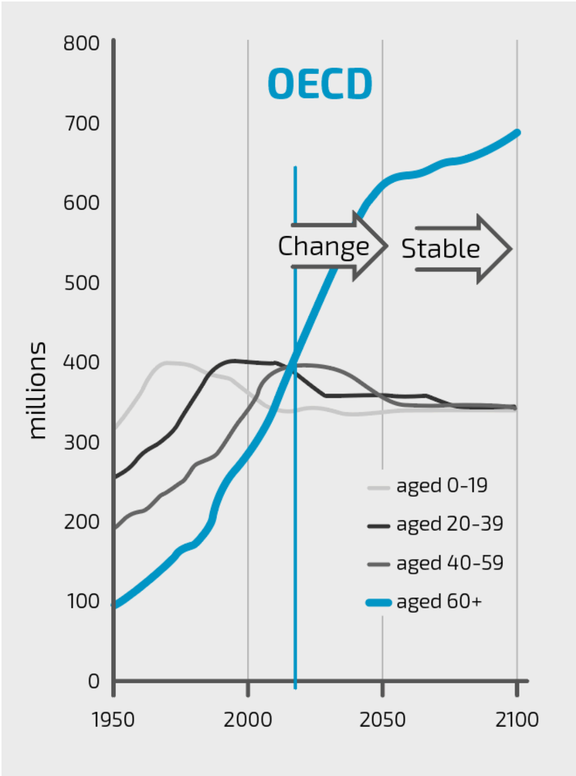


Figure 1: Changing numbers of people in different age groups across OECD member states. Source: OECD, adapted from the UN Population database

In the UK, projections[6] suggest that the population will increase by 9.6 million over the next 25 years from an estimated 63.7 million in mid-2012 to 73.3 million in mid-2037. It is forecast to reach 70 million in 2027.

These figures include an anticipated natural increase, with more births than deaths, as birth rates rise and more people live longer lives. The population is also expected to continue ageing with the average age rising from 39.7 years in 2012 to 40.6 years in mid-2022 and 42.8 by mid-2037. The number of people aged 80 and over in the UK is projected to more than double to 6 million by mid-2037 (See figure 2).

[6] ONS National Population Projections, 2012-based statistical bulletin, 6 November 2013

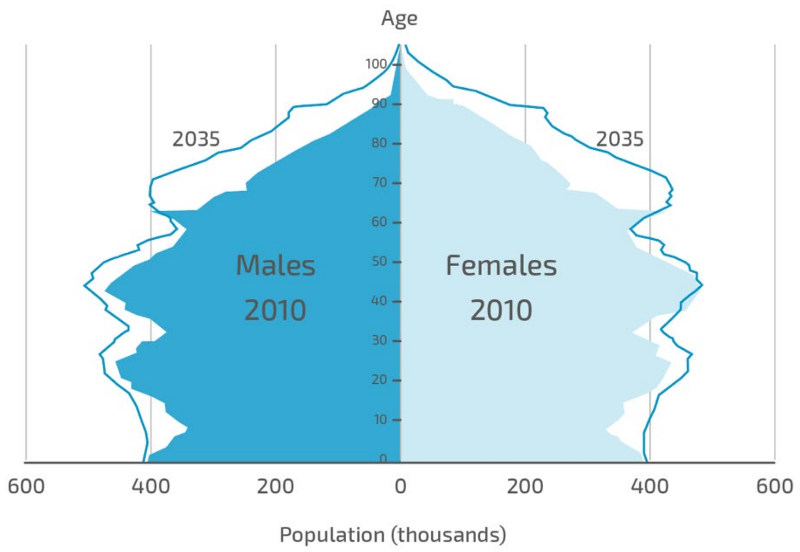


Figure 2: Projected age structure of the population in 2010 and 2035

Within these figures net migration plays an important role, with migrant populations tending to be concentrated amongst younger age groups. This will have two effects - adding about 4 million people to the overall population by 2035 and holding down the average age. As well as being younger in itself, this group tends to exhibit higher levels of fertility than the settled population, having an important effect on the rate of ageing overall (see table 1).

	2012 -2017	2017 -2022	2022 -2027	2027 -2032	*millions* 2032 -2037
Population at start	63.7	65.8	68.0	70.0	71.7
Births	4.0	4.1	4.0	4.0	4.0
Deaths	2.8	2.8	2.9	3.1	3.3
Natural change	1.3	1.3	1.2	0.9	0.7
Net migration	0.8	0.8	0.8	0.8	0.8
Total change	2.1	2.1	2.0	1.8	1.6
Population at end	65.8	68.0	70.0	71.7	73.3
Note: Figures may not sum due to rounding					

Table 1: Projected components of change, United Kingdom, mid-2012 to mid-2037

In common with the patterns in other OECD countries, by the end of this cycle, the rate of natural change in the UK is anticipated to slow to some extent as the accelerator effect of the 1945-1955 baby boom settles down, but the fundamental shift in the age structure and the overall diversity of the UK and wider population will have been established.

North East demographics

In the North East there is a subtle difference to national trends. Whilst the region exhibits the same ageing trends as the national population, it is growing more slowly, partially driven by lower levels of in-migration and partially by lower life expectancies. In fact, the home population net of migrants falls in more years than it grows, and it also remains less diverse. Whilst this presents some longer-term challenges for the productive capacity of the economy, it does provide a strong rationale for action in the region, and also means that the population is relatively stable and homogenous, creating a good location for trials and experimentation.

Overall, these trends create opportunities and challenges for ensuring that older age is healthy and productive, with success in that respect likely to be driven by a combination of social and medical interventions. This therefore provides a key context for health and life sciences sectors in the region.

The region is well placed to respond to these challenges, as Newcastle is one of two globally recognised hubs for science and research on ageing populations specialising in the development of medical science and social research in response. It leads the UK in translational ageing research, combining expertise in biology and epidemiology of ageing, experimental medicine and trials for older people. In addition to tackling "ageing syndromes" (sarcopenia, frailty and multimorbidity), it is increasing capacity through additional Newcastle Health Innovation Partnership strengths and by taking a lifecourse approach to ageing. There is an opportunity to translate this into new treatments and services through the work of the National Innovation Centre of Ageing (NICA), with its role to build a UK and regional economic response to aspects of the ageing population.

Policy context

Key policy frameworks across a number of aspects of government and Regional policy present strong reference points for the Health and Life Sciences strategy. These include:

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Key policy frameworks across a number of aspects of government and Regional policy present strong reference points for the Health and Life Sciences strategy. These include:

Policy framework	Narrative
UK Industrial Strategy	The Industrial Strategy prioritises sector growth and improved economic productivity. It includes a sector deal for life sciences and 'mission based' Grand challenges on artificial intelligence and data, and healthy ageing.
Life Sciences Sector Deals	Two 'sector deals' have been produced which prioritise: • Strengthened environment for clinical trials and health research. ○ Data to early diagnostics and precision medicine

	◦ Genomics with whole genome sequencing of the UK Biobank
	◦ Digital diagnostics and artificial intelligence
	
	• New industry-led research centres in key parts of the UK for key healthcare challenges including diabetes, bio-science and creating 1000s of new jobs.
	
	• Sector-wide collaboration with government on advanced health research projects in areas including cancer, digital pathology and radiology.
	
	• Creation of new national facilities including:
	  • A Medicines Manufacturing Innovation Centre
	  • A Vaccines Development and Manufacturing Centre
	  • Expansion of Cell and Gene Therapy Catapult Manufacturing Centre and creation of three Advanced Therapies Treatment Centres
	  • Investment to grow advanced therapies manufacturing capacity in viral vectors
	• Improved access to new technologies in the NHS for SMEs by:
	  • Establishment of an Accelerated Access Collaborative to develop a streamlined pathway and commit government funding to support innovators and the NHS locally
	  • A digital health catalyst to support SME partnering with the NHS
	  • Improvement of NHS England's commercial capacity and capability
	
	Support the UK's health data infrastructure through NHS England, NHS Digital and Health Data Research:
	
	• Develop regional, interoperable Digital Innovation Hubs which support the use of data for research purposes within the legal framework
	• Set clear standards and approaches for data and interoperability and streamline approvals for data access for researchers via NHS Digital
	• Create a sandbox for secure, remote data access for anonymised data in a safe environment

	A regional approach to the life sciences sector deal working with clusters and administrations to develop local and regional investment programmes.
Life Sciences Skills Strategy	To produce a skills action plan to join up business growth and skills priorities and extend UK leadership in life sciences and pharmaceuticals.
NHS Long Term Plan	The NHS long term plan sets out a framework to meet the need of a changing population and address the increased pressures and demands placed on the NHS by: 1. Developing a new, service model for the 21st century 2. A proactive approach to prevention and health inequalities 3. Promoting digitally-enabled care into the mainstream across the NHS It calls for a 'fundamental shift' towards a more integrated way of working alongside patients and individuals with a focus on personalisation to support the growing complexity of needs and demands in the population and to take advantage of the growing range of treatments, drugs and therapies. It recognises the opportunities for digitalisation and deployment of technologies across the service.
UK Research and Development Road map	The Road map sets out a programme of work to strengthen the UK's R&D performance, in particular amongst businesses. Two priorities include mobilising R&D in the response to Covid 19 and focusing on R&D in places as part of the wider 'levelling up' agenda
Exit from the European Union	Two key issues have been identified by partners as the UK completes its exit from the EU single market and customs union; regulatory alignment for medicines and the sustainability of supply chains. The outcome of the trade deal and the consideration of alternative options will influence long term investment into the UK. A third issue which has been resolved is the continuing engagement in EU research programmes.
The UK Covid Recovery Road Map	The Road Map provides a framework for ensuring that the sector makes a swift recovery from the pandemic and identifies opportunities to build on the role it has played in supporting the response. Key opportunities identified include; building on NHS transformation in digitalisation and testing; improvement of UK manufacturing including productivity and homeshoring; transforming clinical research; regulatory innovation
Regional strategies	Both the Strategic Economic Plan and the draft Local Industrial strategy highlight health, life sciences and medicines manufacturing as strategic

	opportunities for the region at a time of demographic change, with the regions research assets in ageing representing a significant opportunity
North East Covid 19 Recovery Plan	The regional Covid 19 recovery plan highlighted specific opportunities in this are of the North East economy related to accelerating growth in medicines manufacturing, homeshoring generics, testing of drugs and treatments and co-ordination of treatments and vaccination.

Annex 4 reviews these key policy frameworks in more detail and highlights their relevance for this strategy.

4. Health and Life Sciences in the North East

4. Health and Life Sciences in the North East

The North East Region

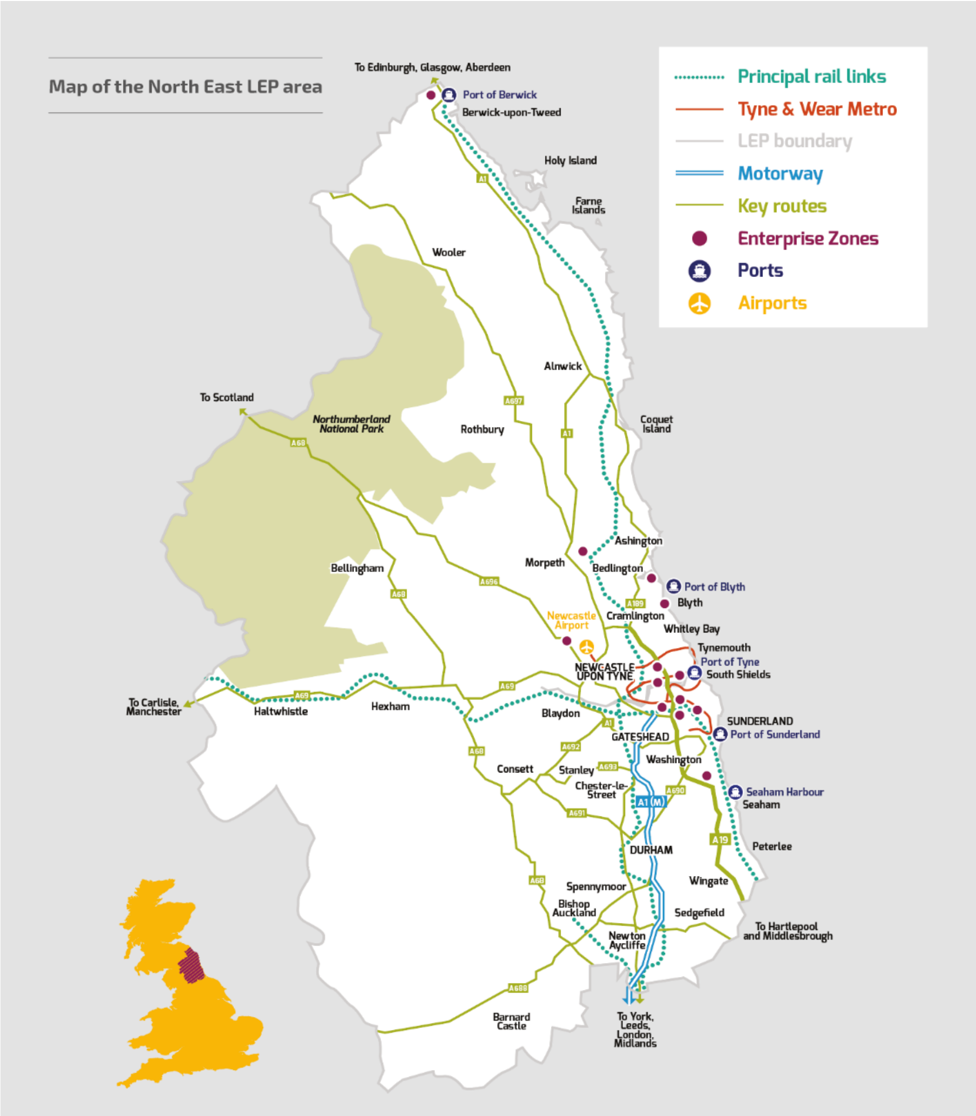
The North East is the most northerly Local Enterprise Partnership (LEP) area in England, located between Scotland, Cumbria, Tees Valley, North Yorkshire and the North Sea. At just over 3,000 square miles, we are the sixth largest LEP area in England by geographic size. The North East hosts a mix of urban, suburban and rural areas that span our seven local authority areas of County Durham, Gateshead, Newcastle, North Tyneside, Northumberland, South Tyneside and Sunderland. This variety of places and setting provides an excellent living and working environment with high quality of life and includes:

Three cities:

- Newcastle that has science, education, culture, digital and service sectors and acts as our transport gateway.
- Durham that is a leading university, science and tourism centre at the hub of a largely rural county.
- Sunderland, which is home of Nissan's UK-leading automotive manufacturing and has education, culture and a well-established digital software sector.

- Four universities: Durham, Newcastle, Northumbria and Sunderland. Two of these (Newcastle and Durham) are amongst the UK's 24 leading research intensive (Russell Group) universities.

    - Key industrial sites, business parks and innovation hubs, including Cobalt Business Park, Infinity Park, NETPark, Newcastle Helix, Integra 61, Quorum Business Park, the International Advanced Manufacturing Park and 21 Enterprise Zone sites.



The North East's communities and economic activities are heavily concentrated around the coast, the region's rivers and major transport routes. Reflecting this, the North East's five ports (Port of Berwick, Port of Blyth, Port of Sunderland, Port of Tyne and Seaham Harbour) are key assets, alongside Newcastle International Airport. Within the region, we have strong connectivity through public transport, roads, infrastructure and a UK leading digital infrastructure.

The region has a population of two million people, the ninth largest LEP area by population; 1.2 million are aged 16 to 65, with 32% of this age group having a degree or equivalent qualification. Our people are friendly, welcoming, collaborative and proud of their history. They have a strong and distinctive sense of place, a capacity for resilience, ingenuity, and a deep and shared passion for our landscapes, cities and culture.

North East regional businesses are strongly integrated into global markets. The business base includes significant international investments from the EU, US, Japan and India and exports £7.6 billion to the EU and £5.3 billion to the rest of the world.

With national and international connections through rail, air, sea, and digital infrastructure, the North East has strong links with the rest of the UK and the rest of the world.

While North East partners are well connected within a region of significant scale, it also works closely with partners from other parts of the UK. Its institutions are part of wider Northern partnerships, including the NP11 that brings together the 11 northern LEPs to promote northern growth, and Transport for the North, a new statutory authority, promoting northern connectivity. Its universities and sector bodies work across the UK and internationally and there are a number of key geographical partnerships which are relevant for different parts of the regional economy.

For example, North East pharmaceuticals are strongly connected to global value chains securing raw materials and ingredients in places including the Far East and exporting to US markets. In life sciences, there are strong university and health collaborations with other areas in the North of England through the Northern Health Science Alliance and business membership organisations, and connections to Scotland in pharmaceuticals and research activity and through the leadership role of CPI in medicines manufacturing innovation projects.

Overall, one of the features of the North East is its diversity and that it includes a relatively stable population structure and spatial composition which is a microcosm of the UK as a whole. This makes the region a useful focus for trails and demonstrator activities which require scale, but also seek to reproduce national conditions.

The North East Health and Life Sciences Landscape

The health and life sciences sector represents one of the most diverse and dominant economic sectors in the UK, including assets ranging from the development and manufacture of drugs and treatments, the development of gene and cell therapies, and intelligent drug discovery and development to artificial intelligence, diagnostics, wearables, telemedicine and much more.

The government refers to 'health and life sciences' as "*the application of biology and technology to health improvement, including biopharmaceuticals, medical technology, genomics, diagnostics and digital health.*"

The identification of health and life sciences as an area of strategic importance in the SEP responds to this global and national economic and policy context, and reflects its profile in the region which includes:

- A large GVA and employment footprint.
- Major manufacturing capabilities – Active Pharmaceutical Product (API), finished products, niche products, diagnostics, and innovations.
- Local science, research and development and innovation expertise-driven through our universities, catapults and private companies.

- 'Golden assets' - centres of healthcare and life science excellence including an Academic Health Science Centre and national innovation centres - these drive research and innovation.
- An excellent healthcare and innovation system.
- Significant growth potential in the sector.

Key components of the health and life sciences sector in the North East include:

- **Med-Tech**: Companies developing clinical and point of need diagnostics, medical devices and equipment and digital health applications to diagnose and deliver care.
    - **Examples:** Biosignatures, Helena Biosciences, Rocket Medical, QuantuMDx, Femeda, Northgene, Intogral, MDNA Life Sciences and Atelerix.

- **Pharmaceuticals and biotechnology manufacturers**: Companies which create and manufacture medicines.
    - **Examples:** GSK, MSD, Recipharm, Fuifilm Diosynth Biotechnologies, Accord Healthcare, Sterling, Clinigen (Quantum Pharma) and Piramal Healthcare.

- **Support Services and Value Chain**: Companies which either work across the supply chain or specialise in specific functions. These include specialists in the engineering and equipment supply chain and construction of facilities.
    - **Examples:** CPI, High Force Research, Datatrial, Arcinova, Alcyomics and Magnitude Biosciences, WH Partnership, Parker, Thermofisher

- **Biotech**: An emerging biotech cluster of businesses driven by corporate and university spin-outs plus the outputs of the Northern Accelerator is developing with companies such as NewCells Biotech, Iksuda Therapeutics, Atelerix, AMLo Biosciences, 3D Bio-Tissues and Shield Therapeutics.

- **Broader Ecosystem** – A broad spectrum of institutions, innovation centres and networks that support the functioning growth and development of the sector.
    - **Examples:** Academic Health Sciences Network (AHSN), Centre for Process Innovation (CPI), which is part of the UK Catapult Network, cluster and sector bodies such as Bionow and NEPIC, universities and their programmes, research institutes like NIHR Med Tech NE, Diagnostics NE.

- **Academic science and research**: Nationally recognised assets in North East universities which develop new science, work in partnership with industry and the NHS to introduce new products and services and spin out new businesses.
    - **Examples:** One of eight Academic Health Science Centre partnerships in England, ranked 4th in the UK for Research Intensity in Clinical Medicine, Europe's largest concentration of ageing-related interdisciplinary researchers and national centres of excellence in ageing, Northern Accelerator partnership between five universities.

- **The NHS**: The NHS performs three distinctive and important roles in the Health and Life Sciences eco-system:

- As an enabler of the ecosystem to support SMEs and spinouts to commercialise their products and services through validating 'unmet needs', real world evaluation, conducting clinical research and trials for product development, acting a testbed of technology innovation and accelerating the commercialisation of products.
- As an innovator of products, services and processes internally.
- As a significant health market in which to adopt these products and services. Health care spending in the UK totals about £200 billion annually, 10% of GDP.

In the North East, the four hospital trusts (Newcastle upon Tyne Hospitals NHS Foundation Trust (NUTH), Northumbria Healthcare NHS Foundation Trust, South Tyneside and Sunderland NHS Foundation Trust, County Durham and Darlington NHS Foundation Trust) and the wider commissioning and public health systems are key partners in the development and delivery of this economic growth strategy.

Example: Newcastle upon Tyne Hospitals NHS Foundation Trust is consistently one of the highest performing and ranking trusts for clinical research and clinical trials with over 500 clinical trials per annum facilitated through Newcastle Joint Research Office. As an example of the scale of NHS operations in the region, Newcastle upon Tyne Hospitals Trust activity levels include 1.72m patient contacts per year, 14,725 staff employed and £1.087bn healthcare spend. Collectively they are rated CQC Outstanding and with the Great North Care Record recognised as a Global Digital Exemplar.

Key Data

Health and Life Sciences Economic Value

In 2019, Health and Life Sciences in the North East region had a turnover of £1.7bn[7] (£1.5bn in 2018), with the combination of existing high productivity businesses and their capacity for growth making this broad area of the economy well placed to contribute to the key performance indicators set out in the SEP.

Growth in the sector will contribute to the target that 70% of the 100,000 more jobs aimed for by 2024 are 'better jobs', defined as being professional, technical and managerial. Employment growth in the sector is likely to have a higher concentration of these types of jobs than in most other sectors.

As a higher productivity area of the economy, the businesses and other organisations operating in this area of strategic importance are also more likely than others to strengthen the region's performance on productivity, measured by GVA per capita.

In employment terms. the overall growth trajectory of the sector in the North East was 22% compared to an 9% national growth between 2010 and 2019. This trend is likely to continue with growth in manufacturing, SME growth and in the research and science base. For

[7] Bioscience and health technology sector statistics 2019, https://www.gov.uk/government/statistics/bioscience-and-health-technology-sector-statistics-2019

example, in its first three years, 48% of spinouts from the Northern Accelerator Programme came from life sciences businesses. In the response to the COVID-19 pandemic, it reported employment growth of over 300 jobs in the pharmaceuticals sector, at a time when other sectors were furloughing staff and concerned about future job losses. The new COVID Lighthouse project in Gateshead and Newcastle is expected to deliver 1000 new jobs in research and testing.

In terms of employment, figures from the Office for Life Sciences[8] clearly illustrate the size and contribution of the health and life sciences sector.

In 2019, total North East regional employment in the health and life sciences sector was 7,680 (3.0% of UK total). This comprised of 2,060 (3.2% of the national total) in Biopharma core, 2,180 (3.6%) in Biopharma service and supply, 2,150 (2.1%) in Med-Tech core and 1,290 (4.5%) in Med-Tech service and supply. Between 2010 and 2019 overall employment in the sector increased by 1,400, which represents an equivalent increase of 22% compared to 9% nationally.

The North East attracted 4.2% of all life sciences projects into the UK between 2013 to 2017. Despite this achievement there is more potential for growth and a target to achieve a ranking as a top 10 UK life science Foreign Direct Investment.

Pharmaceuticals and advanced manufacturing

The North East is a major location for the global pharmaceutical industry which makes a sizeable contribution in this area, generating £868 million for the regional economy in 2017. There are 73 pharmaceuticals and biotechnology supply chain companies in the region, employing 4,100 people with an annual turnover of £601 million. Its wider impact is an estimated contribution of £1.5 billion and it supports between 18,800 and 23,500 jobs.

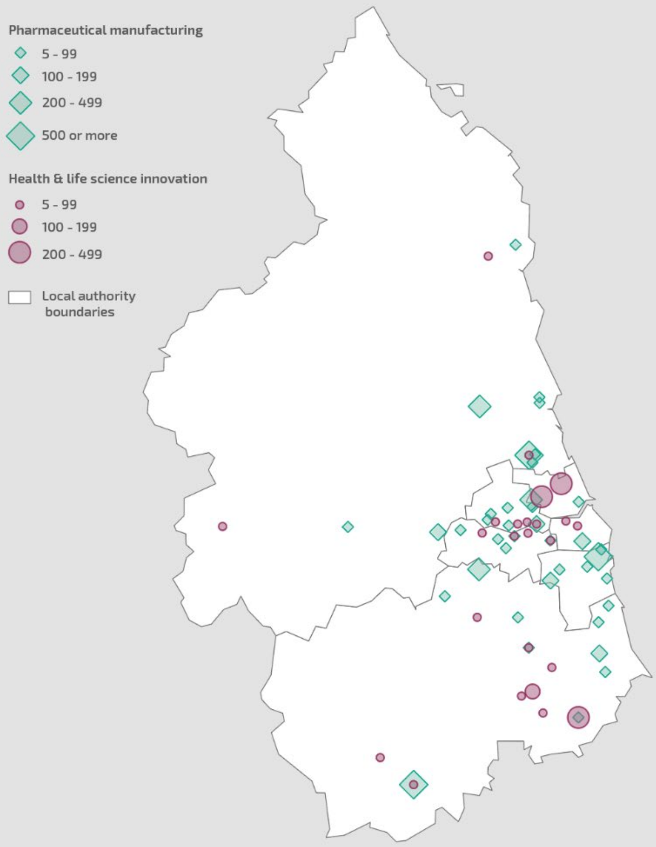
This is part of a wider advanced manufacturing footprint which accounts for 15.3% of the North East LEP area's GVA and 11.3% of employment. Alongside pharmaceuticals and chemicals, the other key advanced manufacturing specialism is automotive manufacturing focused on the Nissan car plant and a wider group of automotive OEMs based around Sunderland, with a footprint across the wider region.

Large global pharmaceutical manufacturers are located in the region including Glaxo Smith Kline, MSD, Accord Healthcare, Recipharm, Arcinova, Sterling Pharma Solutions, Fujifilm Diosynth and Piramal. The North East also has a thriving SME base working closely with industrial partners and academic institutions' innovation assets in formulation, novel therapies and biologics.

Figure 1 maps the region's life sciences and pharmaceuticals industries by employment

[8] ibid.

Health and life sciences: MSOAs with employment of 5 or more, North East, 2018



The industries included in this analysis (with their SIC 2007 codes) are:

21100: Manufacture of basic pharmaceutical products

21200: Manufacture of pharmaceutical preparations

32500: Manufacture of medical and dental instruments and supplies

26600 Manufacture of irradiation, electromedical and electrotherapeutic equipment

Trade, exports and internationalisation

The North East has an export-led regional economy. The region exported £13.3 billion of goods in 2019; this included £7.3 billion of machinery and transport and £2.8 billion of chemicals (including pharmaceuticals)[9].

The pharmaceutical manufacturing sector is a key driver of the region's export-based success. The figures show that 86% of North East pharmaceutical production is exported, with 64% of finished products going to the United States.[10]

This includes contract development and contract manufacturing concerning key supply chain companies and large multinational drug developers. Five pharmaceutical manufacturing sites in the North East are internationally owned. It is a highly efficient sector, which achieves its competitiveness through lean working practices, upskilling, reducing or

[9] HMRC Regional Trade Statistics, https://www.uktradeinfo.com/Statistics/RTS/Pages/default.aspx
[10]

mitigating costs, increasing quality and supply agility. The raw materials, chemicals and reagents involved are sourced from Asian markets such as China, higher-value processing equipment and specialised raw materials from North America, as well as other parts of the UK, Ireland and mainland Europe.

The North East is home to two of the UK's largest specials manufactures – Quantum Pharma (Clinigen) and The Specials Laboratory.

The North East Regional Asset Base

Support services and eco-system

These sectors sit within a wider eco-system of cluster bodies, support services, and key hubs and networks in the region which provide key support to the sector's growth potential. A number of these are specialist networks focused on the health and life sciences sector, whilst others provide the wider business support, skills and innovation infrastructure established in the North East.

There is also a wider network of assets around the North East, in adjacent LEP geographies, the wider North of England and in Scotland which has an existing relationship with partners in the region which can be leveraged for North East growth.

Unlocking the growth potential of the health and life sciences SME sector will require strategic collaboration between businesses and this network of key assets, institutions and networks.

The key assets within this eco-system are described below.

Cluster and sector bodies

The North East life sciences community is supported by a number of cluster and sector bodies, each of which are active members of the Health and Life Sciences Steering Group and play distinctive roles in the economy.

The North East LEP recognises and supports the crucial role of these bodies in providing a framework for business leadership, collaboration and engagement with other partners and networks. These include:

Pharma North East

Recently founded to act as a strong voice for North East-based pharmaceuticals companies, the vision of the Pharma North East is to support North East pharmaceutical sector businesses and manufacturing sites to grow their employment, skills, investment, exports and supply chains through business-led collaboration.

Pharma North East grew from First for Pharma, a network of senior pharmaceutical sector leaders which existed to share knowledge and enhance the visibility of the sector nationally and internationally.

Pharma North East aims to support the development of a strategy for growth in the sector in the region taking advantage of the trend towards reshoring of pharmaceutical manufacturing. It acts to develop and communicate information about North East pharmaceuticals, ensure the long-term supply of skills, develop and secure the supply chain, foster improvement in the logistics and connectivity and support trade and exports.

North East Process Industries Cluster (NEPIC)
Formed in 2004, following a merger of the Pharmaceutical & Specialty Cluster with the Teesside Chemical Cluster, NEPIC represents the second largest process sector in Europe.

It brings together manufacturers, suppliers, universities and research and technology organisations (RTOs). It is an award-winning cluster body, the only such UK organisation to earn the prestigious European Secretariat for Cluster Analysis, Gold Label. It exists to help the manufacturers, supply chain companies, universities and RTOs in membership exploit the synergies that naturally exist between them, including trade, collaboration and sharing best practice across issues including safety, process productivity, quality, asset management, digitalisation, skills and other areas.

NEPIC's forward plan aims to strengthen support to the region's pharmaceutical companies and innovative SMEs. Its particular focus is on strengthening the innovation ecosystem within the North East to accelerate the short-term translation / adoption of knowledge and technology from academia and SMEs into industry, and building the regional supply chain across chemical and pharmaceuticals. Strengthening these local relationships will improve the resilience of the region and encourage inward investment.

Bionow
Bionow is an award-winning not-for-profit membership organisation supporting the biomedical, pharmaceuticals and life sciences sectors. It does this by bringing people together at conferences and events across the North, being an advocate for the North, and providing comprehensive procurement member benefits that strengthen the competitiveness of the North's innovative life science sector. Activities are focused on life science companies located in the North and Bionow has a team and membership based in the North East.

Bionow provides the tools and support for member organisations to become among the most competitive in the industry through a range of specialist products and services and connects the life science sector with a range of sector specific conferences. These include annual conferences focused on Precision Medicine, Oncology and Pharma Manufacturing, all of which draw on expertise from the region and wider North with the aim of showcasing the assets, business and academic excellence. This is further highlighted at the annual BioFocus Conference which brings the North East life science community together.

North East Hubs, Networks and Centres for Excellence

The North East hosts several centres of excellence which have a national and international reputation, playing a vibrant role in the life sciences community.

Each of these centres for excellence are core assets providing a unique service to the region and a draw for potential investors.

<u>Catapults</u>

Centre for Process Innovation (CPI)

The CPI acts as a catalyst bringing together academia, businesses, government and investors to translate smart ideas and research into the marketplace. It is leading independent technology innovation centre and a founding member of the UK government's High-Value Manufacturing Catapult.

The teams based at CPI work together, applying their many years of experience to ensure that every great invention gets the best opportunity to become a successfully marketed product or process. CPI works with partners across diverse markets in the UK and around the world, driving their innovations forward and helping them to reduce the risk and cost associated with product development.

CPI currently hosts a number of national innovation facilities in the North East and adjacent areas, including a number focused on pharmaceuticals, MedTech, internet of medical things (IoMT) and in vitro diagnostics (IVD). It has £170 million of innovation assets and more than 490 staff (scientists, engineers drawn from industry and academia) housed within its facilities, including:

- National Formulation Centre (NETPark, Sedgefield).
- National Healthcare Photonics Centre (NETPark, Sedgefield).
- Medicines Manufacturing Innovation Centre (Glasgow).
- National Biologics Manufacturing Centre (Darlington).

Its expertise in pharmaceuticals and med-tech includes:

- Medicines manufacturing innovation covering multiple modalities (small molecules, biologics, complex medicines).
- Digitally enabled manufacturing of medicines.
- Development, scale-up and innovation in MedTech and diagnostics, undertaken under ISO 13485.
- Novel drug delivery systems to deliver advanced therapies and complex medicines (eg nanotherapeutic delivery systems – such as lipid and polymeric nanoparticles).
- Smart and intelligent packaging of medicines and smart connected medical devices.

North East and North Cumbria Academic Health Science Network (AHSN NENC)
The AHSN NENC has, since its inception, focused on economic growth by mobilising the assets within the region's trusts, clinical commissioning groups (CCGs) and universities to attract and grow business.

In recognising that economic growth can be driven by ideas and products that arise from within the NHS which have commercial potential, and through the development of products and services by companies through access to NHS expertise and markets, the AHSN NENC has developed and successfully implemented The Innovation Pathway. Now nationally adopted, the 'Innovation Pathway' sets out the stages and process of development to support the commercialisation of products and services in healthcare. There is significant activity in the North East to support business to easily and seamlessly access the support to navigate and support them through this complex landscape of commercialisation.

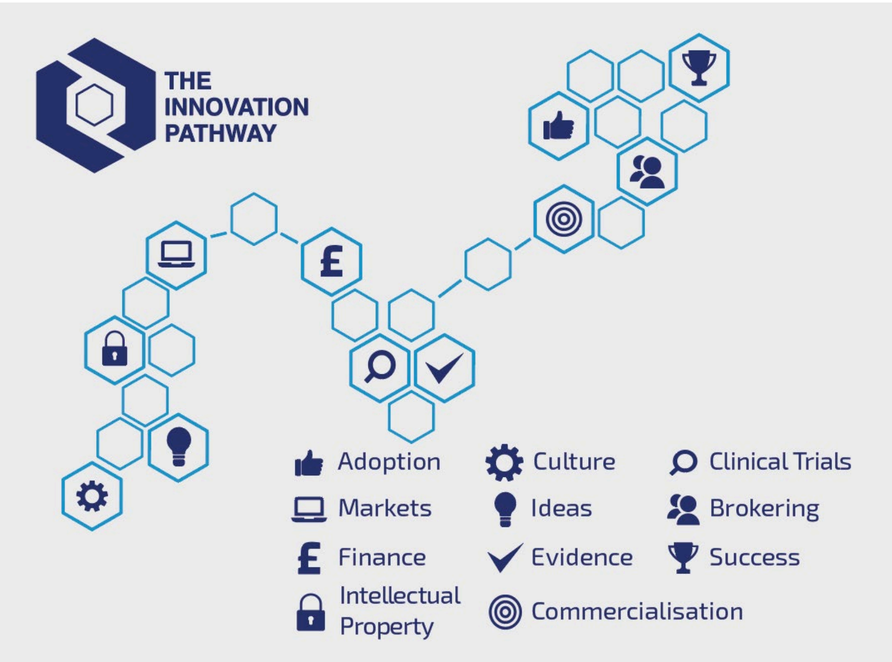
A key component of this is the Great North Care Record. This is the UK's leading initiative to share medical information across the North East and North Cumbria between authorised health and social care practitioners. It will ensure that health care activities such as diagnosis, medications, hospital admissions and treatments can be improved for both patients and the health system.

The work of the AHSN NENC focuses on four main areas:

- Supporting economic growth.
- Transforming patient safety and quality improvement.
- Digital transformation.
- Improving population health.

Across all these activities, the AHSN NENC acts as the trusted broker of cross-organisational work.

AHSN, CPI and the North East LEP have signed a joint memorandum of understanding which sets out how they will work together to facilitate the North East Health and Life Sciences programme.



<u>University-led centres and programmes</u>

Research on ageing
In Newcastle, the North East hosts Europe's largest concentration of ageing-related interdisciplinary researchers (more than 600 staff) and this capability has enabled the development of national leadership on this issue, including a number of pieces of research and delivery infrastructure. These include lead national centres of excellence in ageing

research (NIHR Biomedical Research Centre, Alzheimer's Society Dementia Care, NIHR School Public Health Research), co-leads of a National Policy Research Unit for Older People and hosting of national innovation centres in Ageing and Data.

Campus for Ageing and Vitality (CAV)

Working in partnership, Newcastle University, Newcastle Hospitals (NUTH & CNTW) and the City Council have created a vision for the UK's very first Campus for Ageing and Vitality.

The 30-acre Campus for Ageing and Vitality (CAV) site for innovation and evaluation will include a translational ageing research hub to develop new treatments and technologies, feeding into a "Spectrum of Independence" model. This will comprise: (i) Intergenerational and independent living for older people; (ii) Intermediate care and; (iii) A care home and dementia care village.

The associated National Innovation Centre for Ageing (see below) will generate a pipeline of external industry partners to utilise CAV as a collaborative research site and "living laboratory," integrated with strong academic and consumer partnerships.

National Innovation Centre for Ageing (NICA)
Set up in 2014, the UK's National Innovation Centre for Ageing is a world-leading organisation, created with a £40m investment from UK government and Newcastle University.

Leveraging the experience and expertise of older adults while harnessing big data, the UK National Innovation Centre for Ageing is uniquely positioned to help pharmaceutical, medical technologies and diagnostics, consumer brands and services optimise the opportunities provided by the demographic revolution and longevity economy.

Applying Ageing Intelligence™ to data enables organisations to generate new commercial insights and behavioural patterns to learn continuously from existing and real-time data into the ageing population and their wider social circle (stakeholders).

National Innovation Centre for Data (NICD)
The £30m centre is co-located with NICA and funded with £15 million from UK government and £15m from Newcastle University to:

- Address the availability shortage of data skills in the UK.
- Transfer practical data skills into the workforces of private and public sector organisations.
- Empower organisations to gain insights from their data to:
    - Optimise existing operations and create efficiencies.
    - Launch new products and services.
- Open access to a vibrant data ecosystem.

Research intensity in clinical research
Newcastle University was ranked fourth in the UK for Research Intensity in Clinical Medicine in the 2014 Research Evaluation Framework and is the only area outside the "Golden

Triangle" to have hosted an NIHR Biomedical Research Centre since 2007. It has top 10-ranking in the MRC Translational Research report for "directed translational award funding" (2008-2018), with particular strengths in MRC Stratified Medicine Consortia. The Newcastle upon Tyne Hospital Trust hosted three of 24 European Reference Networks in Rare Disease (liver disease, immune disorders, neuromuscular disease), the only NHS Trust to host more than one.

National Institute for Health Research Innovation Observatory
Based at Newcastle University, the National Institute for Health Research will shape the future of health advances to provide better and more efficient healthcare for patients and the wider public. It applies state-of-the-art data analytics to explore trends in health innovation across drugs, medical technologies, diagnostic tools and healthcare services and offers academia and industry unique insights into areas to develop that can provide better healthcare and allow an opportunity for new innovations to be used in practice more rapidly.

Its major stakeholders include the National Institute for Health and Care Excellence (NICE), NHS England, healthcare providers, research funders and industrial partners.

Northern Accelerator
Northern Accelerator brings together academics and business leaders to form sustainable businesses that create more and better jobs. Enabled by £4.9m from Research England's Connecting Capabilities Fund, Northern Accelerator builds upon two European Regional Development Fund programmes to embed entrepreneurial business leaders into university spinouts at the earliest stage.

Successfully accelerating the spin outs from the four North East universities during the first phase of its work, the long-term vision is to deliver sustainable impact, developing an ongoing venture capital fund for university spinouts and a vibrant community of businesses created through the programme.

Arrow
The Arrow programme is an ERDF funded initiative that matches Newcastle University research, knowledge and innovation projects with the regional needs of SMEs. It targets SMEs looking into new products, processes or services and offers fully funded research and innovation support from university academics to accelerate progress. If Arrow can't find appropriate support within the university, it can provide up to 50% match funding, up to a value of £10k, to buy support from another provider.

Intensive Industrial Innovation Programme (IIIP)
The Intensive Industrial Innovation Programme (IIIP) is an ERDF funded programme led by Durham University. It is a collaboration between Durham, Newcastle and Northumbria universities whereby each university works directly with SMEs in the North East region to develop new services and products for the market.

Eligible SMEs are supported by a dedicated PhD research student for three years, as well as having access to senior academic researchers and university research facilities. The project is targeted at supporting businesses in the priority sectors identified in the strategic economic plan of the North East LEP. The ultimate aim of the IIIP is to encourage a culture of innovation that benefits business, leading to greater export opportunities and increased graduate employment, particularly in science and engineering.

For regional SMEs, this provides the opportunity to access regional academic expertise and support as well as a full time research student to work on their proprietary research project. This is done at minimal cost to the SME which contributes approximately £5k annually towards costs. For post-graduate students, the IIIP programme offers individuals the opportunity to carry out research towards a PhD while gaining valuable industry experience and an insight into how academic research can help businesses grow and develop.

Newcastle Joint Research Office
Established in 2006, the Newcastle Joint Research Office (NJRO) is a partnership between The Newcastle upon Tyne Hospitals NHS Foundation Trust (NuTH) and Newcastle University supporting researchers in the development, implementation and delivery of world-class experimental, translational and clinical research. Through the partnership, NuTH acts as sponsor for all university research requiring access to its patients.

NJRO comprises both NuTH and university staff who work together to support clinical researchers through what can be a complex research process. Working with colleagues across NuTH and university, NJRO specialises in the development of funding applications (commercial and non-commercial), governance and regulatory compliance (from low-risk observational studies to high-risk international clinical trials), application submission, post-award contracting and intellectual property (IP) and post-award project management.

NJRO also works closely with other universities, NHS organisations, government departments and industry, and is involved in national working groups to share best practice, collaborate with the partnership and ensure that the clinical research delivered at Newcastle is safe, value for money and of the highest quality.

International Centre for Life (Life)
Life opened in May 2000 with the purpose of inspiring everyone in North East England to explore and enjoy science and to discover its relevance to their own lives. The Centre for Life has welcomed an average of 300,000 people a year to its science centre: families, adults and school groups. As well as hosting public exhibitions, ground-breaking research also takes place on-site. Newcastle University's Institute of Genetic Medicine is located within the Life Centre, as is the NHS's Newcastle Fertility Centre, recognising the benefits of running clinics outside of a hospital environment. More recently, a second NHS clinic is also situated on-site, the NHS Northern Genetics Service, which is part of the Institute of Genetic Medicine.

University and NHS-led bodies

Academic Health Science Centre (AHSC) – Newcastle Health Innovation Partners (NHIP)
In April 2020, Newcastle Health Innovation Partners was launched, one of only eight Academic Health Science Centres in the UK, bringing together world-class research, education and clinical practice for the benefits of the region.

As a Partnership, it is comprised of five of the region's anchor institutions:

- Newcastle University
- Newcastle upon Tyne Hospitals NHS Foundation Trust
- Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust
- Newcastle City Council
- Academic Health Science Network for North East and North Cumbria

NHIP is about creating new value: through an exciting work programme, which utilises and integrates the combined expertise of our anchor institutions to deliver real world benefit across the wider region, where partners act collaboratively and the sum is greater than the parts; Working with innovators to discover, develop and deliver new solutions in healthcare and population health.

Building on the Partnership's areas of academic and clinical excellence, our research and innovation assets and capabilities (Ageing across the Life Course, Rare Diseases, Diagnostics, Advanced Therapeutics and the Applied Research Collaborative on inequalities) will contribute to addressing the widening inequalities gap across the region, improving health outcomes for patients and citizens and enable innovation to stimulate and drive economic growth.

The Academic Health Science Network – as the single front door – supports innovators through the 'Innovation Pathway' to commercialise these health innovations, and facilitates the spread and adoption of life changing innovations across the health and care system in the region and beyond.

The NIHR has also funded other initiatives in Newcastle like the MedTech and in vitro diagnostics cooperative (MIC), Newcastle Innovation Observatory, and Patient Recruitment Centre. The latter is also developing innovative means of recruitment to low intensity phase III/IV studies utilising electronic patient records

Diagnostics North East (DNE)

Diagnostics have shaped the North East's excellence in translational research and in improving patient care. **Diagnostics North East (DNE)** is unrivalled in the UK. The region hosts cellular and molecular platforms that enable high quality translation, including unique biobanks and evolving strengths in digital/computational pathology. Newcastle is the only UK centre to host an MRC/EPSRC Pathology Node and NIHR *in vitro* Diagnostic Co-operative (MIC), one of four NICE External Assessment Centres, and the only NIHR Innovation Observatory.

DNE is a collaboration between Newcastle upon Tyne Foundation Trust, Newcastle University and the AHSN NENC working across the region providing a unique infrastructure with expertise spanning all elements of diagnostic pathway.

Northern Alliance Advanced Therapies Treatment Centre (NA-ATTC)

The Northern Alliance Advanced Therapy Treatment Centre, formally established in March 2018, is a consortium of twenty industry, NHS and academic organisations in the North East, Yorkshire and Scotland led by Newcastle Hospitals and the Scottish National Blood Transfusion Service (SNBTS). The purpose of the centre is to develop the systems and infrastructure required to support the delivery of cell and gene therapies with the ultimate aim of increasing patient access to advanced therapy medicinal products (ATMPs) on a national level.

The centre is focused on all elements of the clinical delivery pathway from procurement of starting materials, near patient Good Manufacturing Practice (GMP), and distribution and administration, through to delivery of clinical trials and adoption and reimbursement across a range of advanced therapies and indications involving the participation and collaboration of nurses, medical clinicians, hospital pharmacists, NHS managers, clinical commissioners and companies.

A new phase of work is currently being scoped which will see the Centre working with partners in Northern Ireland to extend the reach and capability of the work.

North East Universities and Research Excellence

In the North East LEP area, the four universities - Newcastle, Durham, Northumbria and Sunderland - each provide a research base and level of specialist expertise in different disciplines that are crucial to growing the health and life sciences sector in the region. Key components include:

- **World-leading research** - 50% of biological sciences research at Newcastle University was rated four stars in the Research Excellence Framework 2014, meaning it is world-leading. This was also the case for 51% of research in psychology, psychiatry and neuroscience and 38% in clinical medicine
- **In the top 20 for research publications** - The Witty Review rated North East universities in the top 20 for 11 subjects including life sciences and regenerative medicine
- **Research funding secured by North East institutions** – Between 2008 - 2018 £92m was secured from the Biotechnology and Biological Sciences Research Council and £122m from the Medical Research Council
- **Leaders in clinical research** - North East Health Trusts are leading the UK for their involvement in clinical research, with Newcastle Hospitals NHS Trust being one of the highest ranking over the last seven years, with more specialist services than any other group of hospitals outside of London.

Research specialisms

Ageing and health
Ageing is a particular North East specialism, with an established focus on ageing and health. With over 600 academic staff involved in different aspects of ageing research, Newcastle is an acknowledged leader in the scientific response to global demographic change. Key areas of research and learning include:

- Underpinning biological mechanisms of ageing (eg mitochondrial dysfunction, fibrosis etc).
- Translational research into ageing syndromes and multimorbidity.

- Societal responses to the global phenomenon of ageing in areas including finance, culture and social relations.

Newcastle University has created University Centres of Research Excellence (NUCoREs) in Unequal Ageing, Rare Diseases and a nascent centre in Biomedical Engineering to enable it to strengthen its offer. Acting as a virtual hub, it will draw together staff from across the university to focus on wide-ranging inter-disciplinary programmes focused on research and innovation, engagement and knowledge transfer, and learning and teaching.

Newcastle University and Newcastle upon Tyne Hospitals NHS Foundation Trust are the only partnership outside the “Golden Triangle” to have hosted an NIHR Biomedical Research Centre since 2007.

Precision medicine
Newcastle has a well-developed programme focused on precision medicines. It leads two stratified medicine consortia funded by the Medical Research Council and is a key partner in three others. It co-chairs the Rare Diseases Translational Research Collaboration funded by the NIHR with the leadership of work focused on diseases of the liver.

It hosts:
- The Welcome Trust Centre for Mitochondrial Disease.
- The Medical Research Council Single-Cell Functional Genomics Unit.

Newcastle University's Institute of Genetics, based at the International Centre for Life, is acknowledged for its world-leading research into rare diseases and cancer. This is an area of research with increasing worldwide recognition of the need for a specialised focus. The Newcastle facility combines research with practical diagnosis, treatment and care.

As a Cancer Research UK programme recipient for translational research and drug discovery, Newcastle University remains at the forefront of international development of cancer therapies. The university has been instrumental, with longstanding industry partnerships, in the discovery and delivery of two ground-breaking cancer drugs both now licensed and on the market. Most recently, in 2019, a platinum-based chemotherapy (rucaparib, sold as Rubraca®) that was discovered and developed in Newcastle was launched for women with relapsed ovarian, fallopian tube or peritoneal cancer.

5. North East Life Sciences; analysis of opportunities and challenges

5. North East Life Sciences; analysis of opportunities and challenges

Given this external context, and the assets base reviewed above, there is much potential for the future economic development of health and life sciences in the North East. The Steering Group has identified a series of opportunities and challenges, many of which have been magnified or accelerated during the COVID-19 pandemic and the economic response.

Opportunities:

Growing and modernising pharmaceuticals manufacturing and its supply chain

Within both the Industrial Strategy and the UK COVID Recovery roadmap, several opportunities are envisaged to grow UK pharmaceuticals. Specific opportunities include:

- The vision of a comprehensive strategy to improve UK manufacturing capability and supply chain resilience in medicines, medical devices and diagnostics. The plan envisages that this will be delivered through a new group that is equipped to focus on supply resilience across the life sciences industry or through expanded sub-groups of the Life Sciences Council groups, including the Health Technology Partnership (HTP) and Medicines Manufacturing Innovation Partnership (MMIP).

- A focus on exporting and capital grants to support the building of manufacturing facilities in the UK, and on innovation funding to support collaborative R&D for manufacturing and skill support. A specific Life Sciences Council workstream to support growth in the Small and Medium Enterprise (SME) base would also ensure that UK manufacturing capability is broadened.

- An ambition to attract ten large and ten smaller manufacturing facilities to the UK, in line with the Life Sciences Strategy.

Specific North East opportunities include:

- **"On-shoring**" of pharmaceutical manufacturing by expanding aseptic secondary manufacturing and positioning of fill-finish facilities that could be co-located with other manufacturing assets to reduce costs and ensure regular usage, which could be converted for emergency provisions. "On-shoring" is not envisaged to secure complete UK self-sufficiency for the management of future health emergencies, as supply chains will remain global, but the aim is to take a targeted approach to strengthen supply chains focused on critical medicines and active pharmaceutical ingredients, or where there is a current weakness in supply chain resilience, procurement and /or strategic reserve-holding.

- **Smarter advanced manufacturing**: The demand for smarter and advanced manufacturing facilities as the sector transforms will require modernisation in the region to meet growing demand and new manufacturing models. Digitisation in manufacturing and product delivery processes are both opportunities and CPI is working on a project on smart delivery of medicines with a range of partners in the region which is exploring a range of changes in the delivery of medicines from formulation to digitalisation of packaging and delivery. 3D printing of medications and medical devices is fast becoming a reality. This could mean that drugs and devices are printed near the patient within very short timeframes.

- **Continuous and digitally enabled manufacturing:** Streamlining of the manufacturing process, with products being created without the need to stop until the product is completed – moving away from the manufacturing, filling, packaging process. The region's centres of excellence are well-placed to support businesses in this area. For example, GSK and AstraZeneca have partnered with CPI to build a continuous manufacturing facility enabled by capabilities at NETPark in Durham. It is estimated that this investment could attract up to £88m worth of investment by 2028. (UK Life Science Sector Deal 2017).

- **Contract Manufacturing:** The biopharma and supply chain branch of life sciences, which includes outsourced or contract manufacturing is also a major opportunity for the region which has grown 15% over the past five years. Med-Tech has also experienced similar levels of increased demand with growth of 9%. This demand for outsourced manufacturing has been rising. It is expected to continue, as companies (big and small) that lack in-house manufacturing capabilities begin to look to third-parties to reduce costs and form long-term relationships with suppliers as manufacturing becomes more complex.

- **Advanced drug delivery technologies** (nanotherapeutic delivery systems) – Such as lipid nanoparticles, polymeric nanoparticles, exosomes etc to deliver the next generation of complex medicines (nucleic acid therapies, CRSPR therapies etc).

Development of new treatments

The future of healthcare will include a much more diverse mix of treatments and interventions, including cell and gene therapies and biologics.

The North East can respond to the urgent need for more cell and gene therapy (CGT) development and manufacturing facilities to meet the accelerating demand with the global CGT market. This will require significantly more highly specialist manufacturing facilities. As more biopharmaceutical companies develop CGTs, significant change will be required in manufacturing processes, as the drug manufacturing process relies on the receipt of the patient's own or donor cells. Between 2016 and 2019, UK CGT manufacturing has increased by 80%. (Frost & Sullivan).

The presence of the leadership of the Northern Alliance Advanced Therapy Treatment Centre (NAATTC) in Newcastle, working with partners in Leeds and Edinburgh, as one of three collaborations supported by the Cell and Gene Therapy Catapult to accelerate the technologies, represents an opportunity to play a key role in this growing area working with current and future business sponsors. NAATTC is accelerating patient access to, and building systems for, the manufacture and delivery of innovative cell and gene therapies, building on the success of stratified medicine programmes, and links to life science companies.

Similarly, the National Biologics Centre in Darlington represents an opportunity to build a broader-based community focused on development of the full range of novel therapies in the wider North East.

Collaboration with the NHS:

There is significant further scope for the North East health and life sciences ecosystem to work collaboratively with the NHS in order to achieve the ambitions set out in the NHS Long Term Plan and deliver economic benefits that will result from achieving these goals: better care, reduced health inequalities and a healthier workforce, maximising the economic impact of addressing the challenges set out in the Plan.

There are a number of specific opportunity areas with digital technology underpinning some of the plan's most ambitious targets. The North East is well placed to support in achieving the ambitions in:

- Supporting care at home through remote monitoring via wearable devices.
- Digital technology to facilitate service transformation, including the redesign of outpatient services and reorganisations of pathology and diagnostic imaging services.
- Digitisation of electronic records. The 'Global Digital Exemplars' programme will admit new organisations and create models for technology adoption and a shared record through Local Health and Care Record Exemplars. The region's Great North Care Record is being developed proactively to support this.
- Applying digital technologies to new models of care.
- The NHS app will act as a gateway for people to access services and information; people will be able to use it to access their care plan and communications from health professionals.

COVID-19 has been particularly catalytic for driving the adoption of a few digital health technologies with good results, and there is scope to use this as an opportunity to accelerate the uptake of a myriad of digital health and AI initiatives across the region from preventative and community health, through to digital pathology and artificial intelligence. The Northern Health Service Alliance has highlighted this opportunity in submissions to government.

The North East also has research and sciences' strengths which could be applied successfully in this context as follows:

- Cancer Diagnostics - Speeding up diagnosis of cancers at stages I or II.
- Cardiovascular Disease - Improving detection and care for people with cardiovascular disease (CVD) and respiratory disease, preventing diabetes and improving stroke services in order to prevent cases of heart attack, stroke and dementia.
- Primary care networks will be expected to take a proactive approach to managing population health and from 2020/21 will require them to assess the needs of their local population to identify people who would benefit from targeted, proactive support.

Supporting inward investment

Foreign direct investment has made a significant contribution to the North East health, life sciences and pharmaceuticals community, including global investment from different parts of the world. Technopolis[11] demonstrated how a range of 'golden' manufacturing assets can be added too, and the wider eco-system leveraged with the potential to act as a catalyst for change and a lightning rod for future inward investment, creating jobs and generating skilled employment. There are a number of potential opportunities to secure new and repeat investments into the region which should be the focus of work with the Department for International Trade (DIT), the business community and researchers. One mechanism for collaboration over and above existing collaboration is to exploit the High Potential Opportunities mechanism recently launched by DIT.

Healthy ageing HPO

High Potential Opportunities (HPO's) are a process to work jointly with the Department for International Trade on new potential specialisms to promote strengths for inward innovation engagement, investment and trade through the DIT Global network.

The North East has been selected to host four HPO projects with DIT on immersive technology, heat networks, plan-based products and ageing.

The Ageing HPO will be directly contributed through the health and life sciences strategy, providing an opportunity to profile our capability in response to demographic change and healthy ageing.

Looking forward, the forthcoming Export strategy and further HPO opportunities, for example on Advanced Therapies, could be a focus for joint work between DIT and the region.

Attracting investment in life sciences SMEs

In addition to fostering the region's homegrown talent through university spinouts, SME growth and the vibrant research base attached to our universities, there will also be a need

11

to attract inward investment into the North East life science SME sector to deliver growth and job creation.

With a world-class centre of healthcare excellence, a workforce underpinned by university graduate talent and pharmaceutical manufacturing prowess, the North East of England has a lot to offer life science investors.

However, it will be important to continue working at building the investment ecosystem here in the North East as investors outside the region are unlikely to act as lead investors in regional companies; investors outside the region are more likely to invest if they are able to 'follow' a 'local' lead investor who will perform most of the heavy lifting (due diligence, etc). It is also important to try and build more visible regional business angel networks that can play a role particularly in the earlier stages of start-up funding.

Supporting SMEs and advancing science

The North East has a thriving SME sector in the field of health and life sciences. Recent research by Knight Frank has listed Newcastle as one of the top ten cities for digital health investment having secured funding of £6.5m between 2014-2019.

SME health and life sciences companies can play a crucial role in delivering the SEP's goals of creating 'more and better' jobs. An important aspect of this is SME growth facilitated via university spinout businesses that are symbiotic with the research base of the four universities in the North East LEP area.

University spin-outs

North East university partnership Northern Accelerator is a driving force behind university spinout activity in the North East. The partnership consists of Durham, Newcastle, Northumbria and Sunderland universities. It exists to translate world-class research into thriving spinout businesses boosting the region's economy.

- In 2019 48% of spinouts from the Northern Accelerator Programme were life sciences businesses.
- Based on the most recent data, the growth in spinout company creation has put the Northern Accelerator universities on a par with some of the UK's leading universities.
- The latest figures show that during the academic year 2018/2019 Northern Accelerator delivered 12 new spinouts, had 59 active spinouts, generated IP and licensing income of over £26m and a research grant income of above £170m.
- It has seen the most rapid growth in spinouts across the sector. The number of spinout businesses from partner universities has more than doubled over the past year and increased fivefold since the partnership began in 2016.

- In 2019, partner universities experienced the third-highest number of university spinouts created, bringing the region in line with Cambridge. They also raised the third-highest rate of IP related income and second-highest rate of licensing revenue.

The region’s universities have a strong track record of producing innovative spinout businesses that have grown into thriving global companies. Recent success stories of spinouts that have flourished as a result of Northern Accelerator's help include Atelerix and Magnitude Biosciences. They secured significant funding to expand their businesses and are now operating in international markets. The North East LEP aims to build on and consolidate this legacy in the context of this strategy document.

Place based cluster development for SMEs

The North East hosts a number of key locations where the health and life sciences is clustering. There is a strong opportunity to complete the development of these locations, and to strengthen the linkages between them to ensure a vibrant regional eco-system.

Helix

Newcastle Helix is a unique ecosystem, purpose-built to enable the commercialisation of a company's new ideas, accelerating the concept-to-market timeline through access to its unique combination of co-located corporates. These include SMEs, research centres, National Innovation Centres and Newcastle University.

Supporting the delivery of the incubator facilities at Helix will ensure sufficient provision to meet the demand linked to the strategy. This will include an incubator/specialist space-provider support programme, enabling companies to engage with one another and share best practice, and a similar programme for sharing pharma specific best practice / collaboration.

The creation of the National Innovation Centre for Ageing (NICA), and the National Innovation Centre for Data (NICD), and their co-location at the Catalyst, on Newcastle's Helix development, represents a major opportunity to exploit the connection between the digital and the healthcare sectors.

The Biosphere

A crucial component of the Helix is the Biosphere Newcastle, which is a specialist facility tailored to the commercialisation of life sciences and innovation, research and development in the North East of England’s regional and economic capital.

The Biosphere is a focal point for the cluster in Newcastle and offers high-quality biology and chemistry laboratories, Grade A offices and conference spaces. These infrastructure facilities are crucial growth enabling assets for the North East health and life sciences sector.

North East Technology Park (NETPark)

Located in Sedgefield, the NETPark Science Park hosts an established and growing science and innovation community encouraging collaborative multidisciplinary links in order to drive innovation, enterprise and economic prosperity.

It aims to provide a range of science, technology and engineering companies with a wide choice of world-class laboratory, clean room and office space from the incubation needed in the embryonic stage of growth to the larger spaces needed by companies who are ready to prototype and scale up to manufacture on site.

Through its wide network of business and practitioner relationships, and strategic partnerships with Durham University and CPI it provides companies with access to a focused and international community. Durham University's Research Institute and two CPI-led national innovation centres, the National Formulation centre and the National Centre for Health Care Photonics are located on the site.

NETPark hosts two UK Catapult Centres – through CPI's link into the High Value Manufacturing Catapult and the hosting of the North East Centre for the Satellite Applications Catapult.

6. Challenges

6. Challenges

The North East faces several key challenges in driving forward the health and life science sector:

- **The size of the North East economy**: The North East has a smaller economy compared to other regions. In 2017, the GVA per head of the North East LEP area was £20,338. This is below the GVA per head of England excluding London (£24,181) and England as a whole (£28,096). This scale creates a number of risks including: visibility of the region in global and UK markets; a lack of a career structure for skilled staff; and investment levels

- **Collaborative working into other geographical areas**: Given this scale, while there is significant opportunity for growth in the region, there is a need for the North East LEP and the region's health and life science business community to work in partnership with organisations across the north such as The Northern Powerhouse Partnership and Core Cities to increase its voice and influence on a pan-northern basis, and to build partnerships with other parts of the UK where assets are complementary. There are good examples of this work being undertaken such as the Northern Alliance Accelerated Therapies Treatment Centre collaboration with Leeds and Edinburgh and engagement through the Northern Health Service Alliance, as well as global links through businesses and universities and civic lead relationships such as with Pittsburgh, but this needs focused and co-ordinated engagement. Being outward looking and actively working with partners is crucial to our future success.

- **Establishing the region as a go-to destination**: The conversation about the health and life science landscape in England has been dominated by traditional big players like Oxford, Cambridge, London and the South East. Cambridge, London, Oxford, and the South East of England are recognised as the UK's powerhouse for life sciences. All the world's top 20 pharmaceutical companies have invested in this region, which boasts three of the world's top 10 universities (Oxford, Cambridge and Imperial College). The North East has been successful in attracting high calibre applicants to its universities and is successful in creating a viable career ladder in this sector, but there is more to do to secure graduate retention from the skills generated in the region.

- **Greater access to international markets**: 64% of the region's exported pharmaceutical and MedTech products are exported to the United States. Still, the region currently lacks a direct flight to the USA which imposes logistical limits on the export potential in this area, due to the lack of appropriate transport infrastructure. There is a need for the North East LEP to work in collaboration with Newcastle International Airport and business partners to make the economic case for re-establishing the direct flight links to America.

- **Existing EU and bilateral trade agreements**: The outcome of the negotiations with the European Union about our future trading relationship will have important implications for the North East pharmaceutical manufacturing sector. A crucial aspect of this will be the future regulatory alignment between the UK and the EU in this area. Following the UK exits the EU, the regulatory requirements for the pharmaceutical sector are now facilitated on a domestic level by Medicines and Healthcare products Regulatory Agency. The region needs to continue to promote a converged regulatory environment to ensure smooth access to the European market for North East businesses, and take advantage of policy opportunities to promote frictionless trade.

- **Increasing levels of Foreign Direct Investment (FDI)**: The North East has two of the world's top pharmaceutical companies operating and investing in the region (GSK & MSD) and attracted 4.2% of all life sciences projects into the UK between 2013 to 2017. Whilst there is a strong and established offer, the North East does not yet feature in the top 10 UK life science FDI destinations and missing out on potential opportunities from Japanese pharmaceutical companies which between 2005 and 2014 were the second-largest contributor to foreign direct investment for life sciences. For investments into the UK, the top local determinants for life sciences foreign direct investment (FDI) include:
    - Skilled workforce availability (15.7%).
    - Proximity to markets/customers (13.5%).
    - IPA / Government support (11.3%).
    - Domestic market growth potential (10%).
    - Infrastructure and logistics (9.1%).

  The North East has strengths in a number of these areas, in particular in skills and domestic market potential but has more to do on connectivity to markets and logistics, and to secure government recognition and support.

- **Finance and facilities for SME growth:** There is evidence that the region needs to continue to build a supportive business environment to support SME growth. The opening of the Biosphere on the Helix site and specialist centres at NetPark have added new facilities close to science and research assets, but have filled quickly. There is evidence of further demand which a wider property review needs to consider. There is also evidence from businesses in the region that there is a gap in the finance available to complement the offer from the Northern Accelerator programme for university spin outs. The short-term support which was made available to defend patents during the COVID response programme was quickly utilised, which, along with evidence from business owners, suggests that there is a wider gap to be assessed.

- **Awareness and representation:** A significant challenge to the North East is that its health and life sciences sector is not represented nor understood as a cluster, like that of the "golden triangle", at a government level or in international trade discussions. The Steering Group has acknowledged the need to strengthen the brand of the region in this area of strategic opportunity.

There is a need for the sector to come together and speak as one voice, co-ordinating the regional health and life sciences sector which relies heavily on the companies based here to represent them, but which can have conflicting priorities. There are options to be explored about how to address this issue, looking to other sectors which work through a sector-led trade body such as Dynamo, the North East Automotive Alliance and NOF Energy, or from a health and life sciences figurehead with the gravitas to bring everyone together and represent the sector in Westminster and to government departments and agencies, drawing on the powerful existing assets and future potential set out in this report.

7. Our strategy and priorities for action

7. Our strategy and priorities for action

Our strategy aims to take advantage of our strengths and opportunities in business, science and our healthcare system to drive more and better jobs in the region and make a strengthened contribution to one of the UK's priority industrial opportunities.

We aim to take opportunities to enhance our share of the global pharmaceuticals industry which is valued at over $1.25 trillion per annum, and to continually improve the performance and offer of our healthcare system through new technologies and treatments to have a positive impact on the quality of people's lives. This will in turn improve access to health care markets for North East businesses and innovators which currently represent 10% of UK GDP.

To achieve this we will take advantage of a number of regional science, research and translational assets in business, universities and our NHS bodies which are well positioned at the leading edge of some of the major changes which are impacting on drugs, treatments and healthcare services. We will focus on:

- Strengths in production and digital delivery: Supporting manufacturers to drive new methods of delivery and packaging and health care organisations to improve services, patient care and monitoring.
- New methods of formulating drugs, treatments, services and therapies, creating hubs to support development of these ideas and pathways to trial and introduce them into the health system.
- Diagnosis, taking advantage of new opportunities to diagnose and target treatments.
- The opportunities and impacts of demographic change, with a focus on using our globally acknowledged research to shape health, life sciences and drugs and treatments of the future.

We will use these assets to create new and better jobs by growing our science and research base, supporting growth in our small and medium businesses and securing higher levels of investment and engagement from manufacturers and investors into the assets in the region.

Underpinning this work will be continual strengthening of leadership, co-ordination and communication in the region and strengthening of national and international networks and connectivity to ensure that the North East is recognised for its assets and opportunities and is an accessible location for people to work and business to innovate and grow.

Together these areas of intervention will deliver a highly connected regional environment, which is recognised for its capacity to leverage its wide range of assets to identify, accelerate and translate drugs and treatments into key markets in health services and pharmaceuticals supply chains.

Our Vision

To position the North East as a leader in the development, testing, manufacturing and adoption of people-centred treatments, therapeutics and medicines at a time of demographic change

Strategic aims

- To strengthen the distinctiveness and scale of the pharmaceuticals cluster with world-leading companies selecting the North East for the development and location of production.
- To provide a comprehensive support system which can enable high growth life sciences businesses and sub-sectors to be founded and grow in the North East.
- To unlock the commercial and health potential of North East universities' world-class research and assets, translating them into business and health innovations.
- To support business and NHS infrastructure to translate discovery through development to adoption by providing a comprehensive support system for key high growth businesses and sub-sectors and clinical trials.
- To be the leading region for NHS adoption of innovation through the development of the North East NE Health Evaluation System.
- To attract big players in the healthcare and life science investment community to the region to engage with its research, business and translation environment.

Strategic Themes

The Health and Life Science Steering Group has identified three strategic themes to support the delivery of these aims and outcomes in the North East. (See figure x).

1. Modernisation and growth of pharmaceutical manufacturing, in response to the rapid global growth in demand for medicines, health technologies and personalised treatments.
2. Supporting a diverse community of health and life sciences SMEs to form and grow in the region ranging across university spinouts, new business formation, and the encouragement of health and life science companies to cluster in the North East. These will attracted by the availability of an excellent business growth eco-system, access to excellent science and research and by clear and navigable pathways to key health and medicines' markets.
3. Improving the co-ordination of the translation environment from discovery to delivery into the NHS and wider health and pharmaceuticals markets, ensuring that the region is recognised as a leading hub for innovation, testing and trials, in turn attracting investment into this environment with a progressively growing eco-system of hubs, networks and centre of excellence.

These themes will be supported and elaborated on by the Health and Life Sciences Steering Group which will provide strong collaborative leadership for the strategy, supported by key enabling actions, an excellent communications programme and a strong relationship with key government departments and agencies.

Key measures and outcomes

Through a focus on these aims and themes, the Steering Group has identified key targets aligned with the key performance indicators set out in UK and regional strategies and plans.

By 2030, the Steering Group has set two overarching targets for the Health and Life Sciences strategy:

- To have doubled the number of businesses active in the health and life sciences community in the region.
- Noting that the industries in focus within this area of strategic importance tend to deliver high productivity technical and professional roles, to have doubled the number of jobs in the health, life sciences pharmaceuticals businesses and the research and development community in the region, contributing in particular to the stock of ‘Better’ jobs.

Supporting these overarching targets, a number of sub-targets include:

- To be recognised as a key area for the delivery of clinical trials with top 3 ranking NHS trusts on a year-on-year basis and a leading area for the translation of innovation into the NHS.
- To have quadrupled the number of university spin outs in this area of the economy.
- To be systematically recognised in UK government documents as a leading cluster location for health and life sciences.
- To secure one major and a number of smaller additional pharmaceuticals investments into the North East.
- To have secured strengthened physical connectivity along the pharmaceuticals supply chain including direct freight logistics links to the United States from the North East.

8. Taking action: key interventions

8. Taking action: Key interventions

In support of these aims and objectives, the Steering Group has been developing a programme of interventions under each of these strategic themes. It is envisaged that leadership be taken forward by a range of partners, supported by other members of the community and promoted through the strategic framework set out in this document.

The North East LEP has secured resources from the Local Growth Fund to support project sponsors to develop the detail of a number of these proposals, creating business cases to ensure they are investment ready. Delivery, and further development of this pipeline of intervention, will be key to the next phase of work.

Pillar 1: Growth and modernisation of pharmaceutical manufacturing

The following interventions have been identified as priority actions in this area of the strategy:

Strengthening regional pharmaceutical leadership: Leaders in North East pharmaceuticals business have agreed to come together to develop a new leadership group, Pharma North East, which will champion the role of the sector in the region and provide a collaborative, business-led structure focused on strengthened employment and skills, investment, exports and supply chains. It will work closely with a range of partners across the sector and seek to enhance engagement of the cluster of businesses into the health and life sciences community.

North shoring investment: Enabled by Pharma North East, a proposal is being developed to create a new manufacturing and innovation facility with the aim of providing new capacity to re-shore generics and medicines manufacturing and build resilience in the UK's supply chain in critical areas of NHS demand, and support pharmaceuticals innovation.

Pharmaceuticals supply chain development plan: Led by NEPIC, and aligned with the North shoring project, analysis of North East supply chain development needs from raw materials to production will be undertaken which will enable the North East to strengthen the resilience of its supply chains and build its position as a primary location to manufacture generic drugs and medicines.

Support for export and inward investment activity: Through Invest North East England and the North East Chamber of Commerce, strengthened support for trade and investment activity will be facilitated to support growth in the sector. An immediate focus will be building the collaborative relationship with DIT and developing an inward investment proposition linked to our communication programme. The healthy ageing HPO will provide a specialist focus, with discussion envisaged about other opportunities.

Industrial digitalisation; North East Made Smarter programme: Led by the North East LEP and Tees Valley Combined Authority, a collaborative bid with partners has been submitted to the UK government to support and accelerate industrial digitalisation across North East manufacturing as part of the Made Smarter Adoption programme. If successful, this will include a focus on pharmaceuticals and supply chain businesses in the region.

Smart packaging and delivery of medicines: CPI will lead this project to develop 'testbed' models for trials to demonstrate the value of innovative models across the healthcare and drug development supply chain with a number of key areas of manufacturing focus including medicines' packaging, drug delivery and devices and wearable devices.

Point-of-need diagnostics: Collaboration between CPI, AHSN, private sector, academia and the NHS will seek to position the North East as the go-to place for development, scale-up and demonstration of the next generation of point-of-need diagnostics.

Enhanced connectivity to markets: Led by Newcastle International Airport and the North East LEP, this market feasibility study will assess the potential for enhancing the air connectivity between Newcastle and our growth markets (especially North America) built around freight logistics. It will have a particular focus on pharmaceuticals but will also explore potential in other areas of the economy.

Cluster development support: The North East has created a fund to support our key cluster organisations with core and project funding. Cluster bodies in this area of strategic importance will be in scope for this fund.

Pillar 2: Supporting health and life sciences SMEs to grow

The following interventions have been identified as priority actions in this area of the strategy:

Strengthening Access to Finance: Whilst the region has developed a strong finance offer, some gaps with respect to life sciences SMEs have been identified and will be in scope for a forthcoming review of North East access to finance provision led by the North East Business Growth Board. There are also opportunities to strengthen links to external investors, building on initiatives such as the Innovation SuperNetwork Finance Camp and the good practice of a number of successful regional businesses.

The interdependence of these two areas of activity are increasingly understood and the importance of conitnuing to work on the investment ecosystem here in the North East is clear to encourage investors from outside the region to join with regional and established investors able to undertake key roles such as opportunity identification and due diligence. In addition, work will be done to build more visibility of regional business angel networks that can play a role particularly in the earlier stages of start-up funding.

With this in mind, we will explore the opportunities for extending the focus on the region amongst investors through communications activity and investor events including the potential of an annual investor conference, building on current activities and networks.

Health and Life Sciences IP Protection Fund: In the short term, support for those businesses which have seen opportunities to deploy their intellectual property constrained by the COVID-19 crisis will be able to access a unique £300k fund to help protect the intellectual property of high-value health and life sciences businesses in the North East. The COVID-19 Patent Protection Scheme will offer up to £25k to support high-value proposition (pre-commercial) health and life sciences businesses negatively impacted by the coronavirus crisis until 31 March 2021. This will mitigate the risk of losing their patents and intellectual property due to lack of funds.

Driving university spin-outs through Northern Accelerator: Building on its successful first phase since 2016, which has placed 20 CEOs in spinouts, created 21 businesses and allocated £1.7m worth of pre-incorporation funding to help 44 research projects move closer to commercialisation, the four North East universities plus new partner at Teesside University will deliver this phase 2 programme to support two new and crucial areas of its work that support access to finance for SME businesses in the health and life sciences sector. These are i) the Executives into Business programme and ii) its Seed Investment Fund.

- **Executives into Business:** This is Northern Accelerator's flagship support offer – recruiting talented business executives to lead strong and viable spinout businesses, turning world-class research into successful commercial opportunities.

- **Seed Investment Fund**: In August 2020, Northern Accelerator launched a £1.7m Seed Investment Fund, to make substantial investments in businesses with high growth potential in the healthcare, clean technology and data sector over 12 months. The fund will provide early-stage investment for the high-potential businesses created through Northern Accelerator's commercialisation processes and responds to strong investment demand generated by the programme. This will be followed by plans for a larger venture capital based Northern Universities Fund, which is in the early stages of development.

Purposeful Health Accelerator: Led by Northumbria University, this new accelerator programme for SMEs will support them to grow or expand into the health, wellness and social care delivery sectors. It will help them build on the product, process and service innovations many regional firms have come up with in response to the coronavirus pandemic, as well as look at the wider commercial opportunities available with these sectors. It offers practical support, advice and capital investment worth more than £1m.

Building facilities and places to grow: Following on from the successful development of new facilities at Helix and NetPark including the Biosphere and the growth of the manufacturing sector which has taken up existing sites, there is an ongoing need to understand the needs of the sector and generate a development response. Key perceived gaps include:

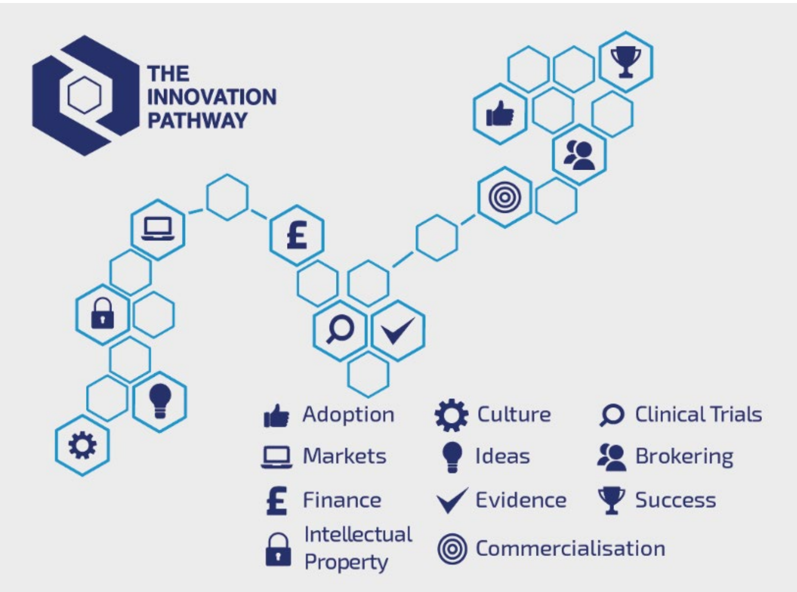
- Manufacturing sites and facilities.
- Grow on space for existing businesses incubated in these regional hubs.
- Laboratories and workshops that could be let on a flexible rented basis for companies that are young, IP rich but cash poor generated in the region or looking to locate here that need to start on research, and therefore not yet ready to move into the Biosphere or NetPark.

A property study will be undertaken by the North East LEP and local authorities looking at existing work and exploring the potential for use of sites around the region including Enterprise Zones and existing hubs, and exploring models from elsewhere including ITAC at SciTech Daresbury, with the aim of developing a ten year property plan.

Pillar 3: Supporting and enhancing our eco-system to support innovation and translation from discovery to delivery

Pilar 3 aims to co-ordinate, extend and invest into the region's eco-system to deliver a progressively navigable network of services to enable an effective translation environment, working from the identification of ideas and discovery of treatments, to their development into business and the securing of market access into the NHS and pharmaceutical supply chains.

Key interventions include:



Innovation: Led by the Academic Health Sciences Network (AHSN), the Innovation Pathway provides an organised and staged route to market into the NHS. A number of new interventions will build the strength of the pathway:

<u>Great North Care Record:</u> The Great North Care Record will enable professionals and carers to have legitimate access to the right information at the point of need, ensuring our population get better, safer care regardless of setting or organisation. This will be a region-wide, interlinked electronic health and care record platform, capable of transforming clinical

care and supporting research. 100% of primary care data is now supported, with continued expansion including community, secondary and social care and the provision of a research and population health data repository.

It will also improve access to information, allowing individuals to understand better and manage their wellbeing and care.

This, combined with a patient-facing digital infrastructure capable of supporting real-time patient feedback and easy adaptation for specific trial requirements, will enable pragmatic trial design to deliver large patient cohorts for observation studies, real-world evaluation of products, and the evaluation of existing and new patient pathways.

Importantly it will create a Trusted Research Environment to improve access to data and analytics, allowing better population health planning based on demand, and enabling the development and deployment of more innovative treatments and clinical trials.

<u>North East Health Evaluation Ecosystem:</u> This project will significantly strengthen the coordination of required expertise and assets across the region in a systematic, transparent and accelerated way to speed the route of new products and services to market. The proposition is to develop a 'test bed' approach which would allow for the accelerated evaluation of products, technology, diagnostics and digital services for early adoption into the NHS, within the wider 'Innovation Pathway'.

The ecosystem will aim to provide hands-on support to innovators to understand product placement, impact, health economics and added value. Alongside the traditional health economics that is already offered across the North East, it is proposed that this system will bring together a wider wrap-around service to include: procurement support and advice (ie who is the customer and how they buy it) and a clear understanding of the funding flows in the NHS.

Digital health: Recognising the opportunities for transformational change across the health sector in the North East through digital health applications, the Digital Health and Care Tech Steering Group (Digital HCT Group)was formed in 2020 to enable large organisations and SMEs from health and digital sectors to connect, scope and collaborate to tackle a series of health and social care problems which could be addressed through digital applications and to enhance the digital sector.

Facilitated by the AHSN, NENC, the Digital HCT Group will develop a strategy to outline where the digital sector could practically contribute to and support local health and life sciences development and articulate and agree how best to progress the sector's health tech agenda in the North East.

New innovation hubs and facilities

MedTech, internet of medical things and wearables: Building on the successful model of the National Healthcare Photonics Centre at CPI, NETPark County Durham,
phase 2 of the project will extend the focus to include other key enabling technologies including flexible hybrid electronics, advanced materials, micro and nanotechnologies and

biotech. It will extend CPI capabilities to provide deep R&D and innovation support to companies large and small in the broad area of MedTech, with a focus on point of need diagnostics, wearables, internet of medical things and internet of wellness things. This facility will enable academic partners, SMEs, investors, large companies, and the wider healthcare ecosystem to extensively collaborate. Lead: CPI.

Northern Alliance Advanced Therapy Treatment Centre, phase 2: The NAATTC is a consortium of twenty industry, NHS and academic organisations led by Newcastle Hospitals and the Scottish National Blood Transfusion Service (SNBTS).

The purpose of the centre is to develop the systems and infrastructure required to support the delivery of cell and gene therapies, and to increase patient access to advanced therapy medicinal products (ATMPs) on a national level.

Early Diagnostics Institute: Innovation to detect multiple age-related conditions from one blood sample taken during a GP health check appointment to create an industrial approach to support applied clinical research, leading to development of an active central diagnostic testing and clinical trials centre. Lead: Turbinia working with NIHR MIC and the NIHR Newcastle Clinical Trials Unit, NCTU.

Innovation Delivery Partnerships: Our reach to global businesses seeking solutions to challenges in treatments will be enabled by the development of Innovation Delivery Partnerships, new models for collaborative innovation supported by the North East Innovation Board, which seek to accelerate our assets entry into markets of the future.

Cross-cutting: Enabling actions

In addition to these specific interventions, through the North East LEP work will be undertaken to ensure that there is a focus on the objectives of this strategy among the mainstream business support programmes within the region. Interventions will include strengthened communications to promote the availability of support or tailored engagement facilitated through the Steering Group. These include:

Business support and access to finance: The range of existing start up and scale up services available to the sector through the Growth Hub. Through the review of business support services being led by the North East LEP Business Growth Team, longer-term support needs will be identified. Current support includes:

North East Growth Hub: The North East LEP also manages the North East Growth Hub, which contains a comprehensive directory of business support and access to finance opportunities available within the region. Key services accessible through the hub include:

Scaleup North East: Support for SME businesses with high growth potential. This unique programme is targeted at ambitious and growing SMEs to increase productivity, invest in transformational activity and facilitate peer-led learning with business executives. Supported by a dedicated team of experienced business leaders it offers the following bespoke package of support to grow and develop business;

- Developing a business action plan.
- Providing one-to-one consultations.

- Access to masterclasses and workshops.
- Networking with a community of scale-up businesses.
- Monthly progress meetings to keep on track.
- Brokering strategic partnerships.
- Providing advice and access to funding opportunities.

Innovation SuperNetwork: North East Innovation SuperNetwork has a strategic alignment to the North East LEP. It exists to increase connectivity and collaboration between the region's business community to enhance innovation and share best practice.

The North East Innovation SuperNetwork has developed an Access to Finance programme that allows businesses to explore the different finance options available, providing them with the tools and knowledge to help them to raise finance for their business.

The programme is managed in partnership with NorthStar Ventures and includes one-to-one support and advice on grant funding and a dedicated programme designed to help to secure equity investment.

North East Access to Finance: This provides businesses with support in key areas:

- **An online funding toolkit**: This toolkit includes dedicated funding expertise, legal advice and tips on telling your business story. There is an online library readily available, which is regularly updated with new content to prepare businesses for funding.
- **Accessing angel investment:** This involves working with eligible innovative businesses to introduce them to a network of local and national investors. There is also the opportunity to secure extra investment through the Angel Investment Accelerator, which is supported by Innovate UK funding.
- **Innovation grants**: Businesses can receive advice and support about the range of grant funding available to regional companies. Key examples of innovation grants include:
    - **Supply Chain North East Grant**: SMEs can access up to 60% in grants towards pipeline projects stalled due to COVID-19 or activities aimed at developing the supply chain. Grants of up to 80% are available for organisations that can potentially support supply chain needs relating to the health and social care sectors, for example in the provision of PPE, respirators and other products.
    - **Scaleup North East Grant**: Up to 40% grant funding is available to help businesses grow and develop. Extra support and guidance from Scale Up business advisers are also available to help grow and support businesses.
    - **NBSL Grant**: Small or medium-sized business based in Tyne and Wear can apply for a business grant of up to 35% for projects costing between £3,000 and £8,000 (a maximum grant of £2800).
    - **North East BIC's Innovation Programme Grant**: The SME Innovation Programme is designed to help SMEs realise their innovative potential. There's

up to 40% project funding as well as independent advice and guidance and access to industry experts and suppliers.

Developing skills to support health and life sciences growth: Through the Skills Advisory Panel (SAP), facilitated by the North East LEP, a response will be developed which aims to respond to ongoing skills needs. Initial discussion has identified the need for an ongoing and growing supply of skills to fill the current skills gaps and potential future needs as a result of the growth identified in this strategy, with some skills able to be secured locally through universities and movement within the sector, but also a reliance on national and international markets to fill senior level and technical opportunities.

The SAP has commenced a piece of work linked to the Life Science Skills Investment programme to look further into these needs. A starting point is a list of several key trends in the development of expertise and education within the region which require support as follows:

- Senior-level leadership and strategic-level employees are often sought outside the North East region from other regions within the UK and abroad. While companies have generally been able to recruit successfully into these roles, more needs to be done to develop the future supply of skills in the region to fulfil more of these roles as part of the SEP 'more and better' goal.
- Within research areas, high quality scientific analysts and formulation scientists are more difficult to recruit, whereas technicians and manufacturing operator positions have typically shorter recruitment cycles, largely sourced within the region.
- Graduate-level employees are attracted to the region or can be recruited locally, assisted by our four universities in Newcastle, Durham, Northumbria and Sunderland. These provide a research base and level of specialist expertise that is crucial to growing the health and life sciences sector in the region. Over one quarter of students at our universities study life sciences subjects, the highest number of life sciences students in England relative to the size of the workforce.

Immediate term initiatives underway in the region which have the potential to support these needs include the new Newcastle Futures UTC, specific initiatives in North East universities and the new government funded Institute for Technology, a North East collaborative model across further education.

In addition, more needs to be done to encourage businesses to utilise Apprenticeship Levy funds. This is a major benefit for businesses to retrain, upskill, and retain staff.

Digital Skills Hub: The North East LEP is develop a Digital Skills Hub to enable development, training and adoption in robotic and digital surgery, mental health and rehabilitation. The hub will provide virtual learning and training environments for surgical skills and other clinical disciplines; a collaborative space between NHS, academia and industry to co-develop and co-produce virtual technologies for health improvement; and a collaborative space for research and evaluation of new virtual technologies into real-world settings.

Leadership and co-ordination

Health and Life Sciences Steering Group

The Health and Life Sciences Steering Group has been established to provide strategic advice, support and coordination of partners to the LEP and for oversight of the development of a Health and Life Sciences Growth Strategy and the work programme. The Steering Group acts as a critical friend to the North East LEP by steering, advising and advocating the work of the Health and Life Sciences Steering Group and the LEP Executive team.

It brings together broad representation of the health and life sciences community in the North East from the private, public, health and education sectors and draws together a unique set of skills, knowledge and perspectives. It reports into the North East LEP Board on development of the strategy and links directly to other boards and structures within the LEP through officers and membership.

Communications

The North East LEP and partners will work together to communicate effectively about the health and life sciences community and capabilities and the priorities set out in this strategy, facilitated by the North East LEP.

Key audiences include:

- Businesses working in health and life sciences – to build confidence, provide support and encourage engagement and investment.
- Regional audiences – helping to ensure visibility and make collaborative links between partners.
- Policy and strategy - building the presence of the North East in government and amongst other key stakeholders.
- Investors and other economic actors – working directly and through partner and government channels to secure investment to support the objectives set out in the strategy.
- Students, graduates and workers – seeking to build the labour market capacity in the region and attract skills.

Annex 1: Summary of project pipeline interventions

Annex 1: Summary of project pipeline interventions

HLS Strategic Theme	Policy Fit						Name of Project / Activity	Summary of Purpose	Lead Body
	NHS Long Term Plan	Industrial Strategy	HLS Industrial Strategy	Local Industrial Strategy	NE COVID Recovery Plan	R & D Roadmap			
Building our eco-system for translation and innovation	☐	☐	☐	☐		☐	Early Diagnostics Institute	To develop a unique 'Early Diagnostics Institute' (EDI) in the North East, which will set out to discover five novel blood tests aimed at the earlier diagnosis (and therefore improved treatment) of high burden diseases, working in collaboration with regional partners. The EDI will provide a unique R&D facility which will further build on and enhance the existing expertise, capabilities and reputation of the region in its diagnostics capabilities, creating circa 300 highly skilled jobs.	Turbinia
	☐	☐	☐	☐	☐		Digital Clinical Skills hub (robotics, immersive tech, AI)	To develop a UK leading Digital Skills Hub to enable the development, training and adoption in robotic and digital surgery, mental health, and rehabilitation, building on expertise across immersive tech, robotics and AI.	AHSN NENC
	☐		☐	☐	☐	☐	NE Health Evaluation Ecosystem	This evaluation ecosystem model seeks to address a recognised gap in the UK for translational innovation, integration, scale up and pre-commercialisation activities in life sciences through the creation of a systematic, transparent and coordinated approach to enable innovators in the health and life sciences sector access to a unique evaluation system, providing a single point of access to support for businesses to accelerate the commercialisation of product development and adoption into the NHS / social care.	AHSN NENC
	☐		☐	☐	☐	☐	Great North Care Record	A digital platform enabling health professionals and carers to have legitimate access to the right information at the point of need, ensuring our population of circa 2 million get better, safer care regardless of setting or organisation. It will offer improved access to information, allowing individuals to better understand and manage their own wellbeing and care. Development of a 'Trusted Research Environment' - creating improved data access and analytics, allowing better population health planning based on demand, and enabling the development and deployment of more innovative treatments. Ambition to create a nationally recognised TRE of choice for industry collaborations.	AHSN NENC (with university and health trust partners)
	☐		☐	☐		☐	CPI – MedTech,	Innovation facility which focuses on the MedTech market to enhance our capabilities related to digital imaging and in-vitro and point-of-need diagnostics eg:	CPI

							internet of medical things and wearables	•Digital imaging: Machine vision, multimodal imaging, AI, flow cytometry •In vitro diagnostics: Laser-based manufacturing of IVDs, pilot line for manufacture of micro-arrays, automated preparation of histology slides •SONNET: Programme supports SMEs in the development of new digital technologies and in the application of digital technologies for solving real world problems including healthcare. • Internet of medical things, wearables.	
	☐		☐	☐		☐	Northern Alliance Advanced Therapeutics Treatment Centre	A consortium of twenty industry, NHS and academic organisations led by Newcastle Hospitals and the Scottish National Blood Transfusion Service (SNBTS). The purpose of the centre is to develop the systems and infrastructure required to support the delivery of cell and gene therapies with the ultimate aim of increasing patient access to advanced therapy medicinal products (ATMPs) on a national level.	Newcastle University
		☐			☐	☐	Centre for Public health data	Building on data analytics expertise and capabilities, to support the development of the GNCR's Trusted Research Environment. To improve data access and analytics, allowing better population health planning based on demand, and enabling the development and deployment of more innovative treatments. Currently supporting the regional Trusts in planning and responding to COVID-19	Durham University
Growing Pharmaceutical manufacturing	☐	☐	☐	☐	☐	☐	North Shoring (re-shoring manufacture of generic drugs/ medicines)	Develop a pharmaceutical innovation facility to enable and build resilience in the UK's supply chain and manufacture of NHS critical drugs and molecules, focusing on positioning the North East as a key location for manufacturing.	NE Pharma
	☐	☐	☐	☐		☐	CPI- Smart Meds (Health for All)	Developing 'testbed' models for trials to demonstrate the value of these innovations in real world settings to accelerate development and scaling of new technologies in the North East - driven by needs right across healthcare supply chains from pharma through to patient. Priority focus areas 1. Medicines packaging; 2. Drug delivery (medical) devices; 3. Wearable devices.	CPI
	☐			☐	☐	☐	North Shoring - supply chain development	Analysis of supply chain development needs (raw materials to production) to enable the North East to be a primary location to manufacture generic drugs and medicines.	NEPIC
Supporting Business to Grow				☐	☐	☐	Freight / logistics – market	Feasibility study to assess the potential for enhancing the air connectivity between Newcastle and our growth markets (especially North America) built around freight logistics (driven by pharmaceuticals in the North East, but covering other sectors).	Newcastle

							feasibility study and access to air freight markets		International Airport
		☐		☐	☐	☐	Northern Accelerator	North East university partnership Northern Accelerator is a driving force behind university spinout activity in the North East. Its aim is to deliver a step change in commercialising research to deliver economic impact in support of the North East priority technology / industrial sectors. The Northern Accelerator will enhance the network of entrepreneurs embedded in early stage spin-out formation, enhance academic commercialisation aspirations though an ideas impact hub, deliver proof of concept support and establish a seed capital investment fund.	Durham University – lead
		☐		☐	☐	☐	Purposeful Health Accelerator	Accelerator programme for SMEs to grow or expand into the health, wellness and social care delivery sectors, to build on the product, process and service innovations many regional firms have come up with in response to the coronavirus pandemic, as well as looking at wider commercial opportunities available with these sectors. Offers practical support, advice and capital investment worth more than £1m.	Northumbria University

Annex 2: Case studies

Case study:
Arcinova, Alnwick

Dr Nathalie Huther, Senior Director of Business Development, Europe

Arcinova, Alnwick

What is your company's main business?

Arcinova is a contract development and manufacturing organisation that helps pharmaceutical and biotechnology companies across the globe develop life-changing medicines.

We employ a multidisciplinary approach to drug development by combining chemistry, biology and bioinformatics. All our services are delivered from our 15,000m2 facility in Alnwick.

We leverage our decades of experience as a key research and development centre to deliver high quality end-to-end solutions. Our mission is to deliver best-in-class technology services in the fields of contract research, development and small-scale manufacturing to overcome project challenges and increase efficiency.

How long have you been established?

Arcinova was launched in February 2016, following the acquisition of the Covance site in Alnwick, Northumberland, by our Executive Chairman Ian Shott.

Ian is a big supporter of the North East. He knew there was a great opportunity for growth at the Alnwick site and was passionate about the expertise of the people working there.

Since then, we have experienced a massive growth in client acquisition. We now work with 220 global clients, up from 50 in 2016, and have recorded record sales this year. We employ over 180 people and are looking to recruit more.

We have a real global reach, exporting more than 80% of our sales outside of the UK. The majority are in Europe and the USA, we also export to clients in Japan, Australia, South Korea.

What are the benefits of being based in the North East?

The North East is known for life science. Being part of that group gives us credibility and room for our talent to grow.

So much investment and effort has been put into attracting companies to establish themselves in the North East life science sector. It has been great to experience how dynamic the LEP is in supporting us – it has created a very healthy environment for business.

The life sciences sector is like a big family in the North East. As well as this, the infrastructure in the region is fantastic. We have Newcastle Airport, and we are close to both major cities and the countryside.

The quality of life and the cost of living is second-to-none. We are in such a beautiful location in Northumberland that we can have clients over to visit our facility and then take them to Alnwick Castle.

What have you learned from the journey to get your business to where it is today?

We initially thought it could be a challenge to recruit the right people in Northumberland however we soon learned the North East has a remarkable talent pipeline.

The huge benefit of being based in the North East is that there is so much talent in the local universities and there is such a big pharmaceutical eco-system harnessing expertise in the region.

Being based somewhere where we can access the right talent has helped us to grow to where we are today.

Case study:
Iksuda Therapeutics, Newcastle

Dr David Simpson, Chief Executive Officer,

Iksuda Therapeutics, Newcastle

What is your company's main business?

Iksuda is a drug development company specialising in an enhanced, new generation of Antibody Drug Conjugates (ADCs) targeting difficult to treat solid tumours.
From our bases in Newcastle, UK, and Boston, MA, Iksuda is focused on improving the lives of patients living with cancer through building and refining approaches to ADC development and successfully responding to the industry-wide challenge of being able to treat all patients with cancer.

Iksuda is committed to building a pipeline of next-generation ADCs with improved therapeutic index, harnessing our deep understanding in the field and accepting the challenge of targeting areas of high unmet clinical need.

How long have you been established?

The company was established in 2007 through our investors and Bath University. Since then, we've built from being what was a technology company called Glythera into a drug development company with 12 full-time employees in Newcastle and 25 consultants in Boston and we're looking to grow further.

Have you always been based in the North East?

In 2012, we raised £2million through the North East Fund and relocated to our UK headquarters in The Biosphere, on Newcastle Helix.

Why did you choose the North East?

The reason we are based in the North East is because it is an ideal place for our business. The North East has multiple universities with science focus so in terms of talent recruitment, this region is a key place to be for us. The skills set here is a perfect fit for our industry. While our industry is global in terms of partners we work with, we are manufacturing our second drug in the North East.

The region is very well-placed in our drug class. We could actually take one of our drugs to Phase Two and not need to go any further south than Leeds. It's a pretty powerful story for the North East – as a region, we are incredibly capable of innovation.

What have you learned from the journey to get your business to where it is today?

This year has proved the importance of keeping going even though the journey is never straight. If you've got ambition and you've got a plan, it's about executing that plan. If there is a will, there is a way and we have proved that this year. Don't be narrow-minded about where your business opportunities are – we've recently done a big deal with a Korean company and that has been fantastic for us as a business. *The world is a rapidly-advancing place and there are lots of companies that want to work with us in the North East. We have a good product and a good skill-set and we have taken that and looked for opportunity wider in the world.*

Case study:
LightOx, Newcastle

Dr Sam Whitehouse, Chief Executive Officer

LightOx, Newcastle

What is your company's main business?

LightOx's work is based around the development of new molecules that can penetrate and 'light up' damaged cells with a fluorescent drug in a multitude of cell types.
LightOx is now aiming to apply this technology in the treatment of oral cancers and looks to enter clinical trials in late 2021 following the rapid development of lead drug candidates in the last few years. LightOx closely works with the research teams of our academic directors to bring through new innovations, recruit new staff members and collaboration partners from around the world.

The drug development program will allow clinicians to treat early stage lesions, with a topical application, and then activate the drug using a light source similar to that a dentitions would use in their surgeries.

How long have you been established?

We started out in 2016, although really got going in the beginning of 2018 with some seed investment from a local business that knew of the work and the development we were planning.

Have you always been based in the North East?

Yes, originally the research was carried out in Durham University with a collaborative effort from LightOx CSO Professor Carrie Ambler and CTO Professor Andy Whiting. Now we have labs in Durham and an office in Newcastle and we plan to move into the Biosphere on the Helix site in 2021.

Why did you choose the North East?

Previously having worked for the N8 Research Partnership, *I think the North East has a lot to offer over and above other Northern cities - good access to the airport, reasonable living costs, a talent pool that extends North and South, a lively city centre; and two of the best hospitals in the country.*

The North of England presents some great opportunities to develop new drug entities. Commercialising and driving a drug to market involves the skill sets of a large number of companies to support, test, analyse and manufacture and protect your drug products.

Companies such as High Force Research who can develop new synthetic routes and provide GMP manufacture, Sygnature Discovery who can provide in-vitro and in-vivo testing models, Histologics who provide histology services, formulation work from CPI in Darlington, or Quay Pharma in Alderley Edge, Aptus Clinical on trial design and of course the many NHS trusts that can provide clinical trial sites.

And of course, protecting the intellectual property is key to making it to market and Definition IP in Newcastle are experts in the field, the list goes on and on.

The North of England has many companies that can make up part of the supply chain needed to bring a new drug to the market and provide world-class expertise to the industry.

What have you learned from the journey to get your business to where it is today?

Perseverance!

Also, I have learnt over the years that often when you take technologies forward, you have to spend a lot of time to find exactly where they might be best applied, what the best market might be and where the need for the product will lie.

The ability to build a strong team and also to give opportunities to those with the ambition to push a company forward is key. It is also good to have an open mind to new possibilities and collaborations and not limit yourself in terms of how much you can expand beyond the UK.

“To position the North East as a leader in the development, testing, manufacturing and adoption of people centred treatments, therapeutics and medicines at a time of demographic change”

Case study:

Quality Hospital Solutions and SamplePod Limited

Andrew Turner, Inventor and Managing Director

Quality Hospital Solutions and SamplePod Limited, NETPark Science Park, Sedgefield

What is your company's main business?

Quality Hospital Solutions (QHS) is our parent company, which is purely focussed on NHS innovation. We have launched products such as beverage trolleys to be used within the NHS.

The idea for SamplePod, a revolutionary tracking and transport system for pathology samples, came about in 2017 as an innovation to help NHS pathology departments that receive thousands of specimens per day in many different types and sizes of tubes, using a huge amount of non-recyclable packaging.

SamplePod holds every possible sample size in an optimum upright position within one pod and can be used time and time again. By eliminating the use of plastic bags and paper request forms it removes more than five tonnes of waste from the process. It is set to revolutionise the way pathology samples are taken, transported and traced worldwide. SamplePod was developed over the last three years in partnership with investors Bill Scott, chief executive at Teesside-based Wilton Engineering, and David Frame, CEO of Sunderland technology company Asset55, and South Tyneside and Sunderland NHS. SamplePod has been successfully trialled at GP surgeries across the region and is expected to be rolled out worldwide early next year.

What are the benefits of being based in North East?

The North East innovation network that we have been able to tap into has been hugely beneficial. It has allowed us to accelerate our product quickly and keep much of our supply chain in the region.

The digitisation of the SamplePod tracking was facilitated by NETPark manager Janet Todd who introduced us to PragmatIC, the company that produced the flexible integrated circuit technology that is used on our smart labels. They are one of the only companies in the world that could offer this and they also happened to be here in the North East.
This allows ultra-low cost RFID to be added to every sample tube, giving each one a unique digital identity that can be read wirelessly. The individual sample IDs are locked to the master RFID chip within the SamplePod itself meaning each sample can be fully traced in real-time all the way through to the lab. The tracking technology allows time-sensitive samples to be prioritised automatically.

The access to innovation in the North East is superb. We also benefitted from support from our local investors and from the Academic Health and Science Network, as well as the Queen Elizabeth Hospital and Gateshead Pathology.

What have you learned from the journey to get your business to where it is today?

You have to manage your intellectual property and contracts properly. The partnerships that I have with the NHS and local investors greatly helped with this.

Having been through the process of bringing a product to market a number of times now, we've learned where to go to for advice and to engage. *The North East has a great network of world-class partners and we were able to successfully make use of that.*

Annex 3: Governance

Annex 3: Governance

Membership – Health and Life Sciences Steering Group

Michael Whitaker (Chair)	Pharma North East and Innovation Board member
Tim Hammond	Durham University
Geraint Lewis	Newcastle University
Mike Capaldi	Newcastle University
Tony Alabaster	University of Sunderland
Carolyn Horrocks	Northumbria University
Richard Baker	North East LEP
Alan Welby	North East LEP
Geoff Davison	Bionow
Nicola Wesley	AHSN
Philip Aldridge	NEPIC
Arun Harish	CPI
Rachel Burdis	Invest North East England
Sarah Pavlou	RTC North
Dale Athey	NPL
Kevin Cook	Sterling Pharmaceuticals
Will Dracup	Biosignatures
Roger Kilburn	Arcinova
Andrew Tasker	Femeda
Ben Cantwell	Kromek
Andrea Burroughs	Newcastle Upon Tyne Hospitals Trust
Peter Rippingale	North East Combined Authority
Vicky Cuthbertson	North of Tyne Combined Authority

Annex 4: Health and Life Sciences Steering Group Terms of Reference

Annex 4: Health and Life Sciences Steering Group Terms of Reference

Context
The North East Strategic Economic Plan is the plan for growing and developing a more productive, inclusive and sustainable regional economy. Its key objectives are to:

- Increase the number of jobs in the North East economy by 100,000 by 2024
- Ensure that 70% of the jobs growth is in **better** jobs

The delivery of Strategic Economic Plan is split into three distinctive parts:

Four areas of strategic importance: Where evidence tells us our assets and capabilities provide a strong opportunity for growth - Digital, Advanced Manufacturing, **Health and Life Sciences**, and Energy – these areas are where we can build a stronger North East economy; one that reinforces our position as a contributor to regional, national and global economic growth.

Four service sectors: Education, Financial, Professional and Business Services, Transport and logistics and Construction – these sectors support the wider economy and offer significant opportunity for more and better jobs in the North East.

Five programmes of delivery: Business growth, Innovation, Skills, employment, inclusion and progression, Transport connectivity and Investment and infrastructure – these programmes set out initiatives and projects that will deliver the ambitions of this Plan.

The role of the North East Local Enterprise Partnership (LEP) in delivering the Plan:
The North East Local Enterprise Partnership is a private, public and education sector partnership, supported by a small executive team that provides strong, collaborative leadership to support the growth and development of the North East economy.

Towards a Health and Life Sciences Growth Strategy:
In 2016, a small working group on life sciences, under the auspices of North East Local Enterprise Partnership Innovation Board, consulted with over 100 organisations and set out a series of recommendations to the LEP to enhance the sector.

As an evidenced and recognised area of strategic importance, the health and life sciences sector presents an opportunity for us to address the economic challenges through our excellence in clinical research, clinical delivery, innovation in pharmaceuticals, and responding to an ageing population; all of which enable us to respond to the changing global health services and markets.

The key aims identified by the working group in 2016 are still valid and continue to drive the focus of project and development and delivery. They are to:

- Provide a comprehensive support system for key high growth businesses and sub-sectors.
- Develop a cluster economy opportunity around world-leading companies selecting the North East for production plants by supplementing the pharmaceuticals supply chain.
- Unlock the commercial potential of North East university world class research.
- Support business and NHS infrastructure to translate discovery through development to adoption.
- Be the leading region for NHS adoption of innovation.

North East
Local Enterprise Partnership

One of the key priority actions to enable the achievement of these aims was to appoint a Health and Life Sciences Programme Lead to provide dedicated resource to drive this work forward to support the ongoing growth of the sector. This appointment has been made.

Annex 4: Summary of key policy frameworks for the Health and Life Sciences Strategy

National Economic Policy

Industrial Strategy
In 2017 the Government published the *Industrial Strategy: Building a Britain fit for the future.*[12] The Industrial Strategy aims to boost productivity by backing businesses to create jobs through investment in skills, industries and infrastructure. The strategy is structured around five foundations of productivity:

- Ideas – The world's most innovative economy.
- People – Good jobs and greater earning power for all.
- Infrastructure – A major upgrade to the UK's infrastructure.
- Business environment – The best place to start and grow a business.
- Place – Prosperous communities across the UK.

It provides the overarching policy framework for Sector Deals between government and key industries within the UK economy. To date, several Sector Deals have been developed and published, setting out priorities for growth and productivity in these sectors, with other Sector Deals forthcoming. A number of these are focussed on key North East sectors including:

- Automotive.
- Life sciences.
- Off-shore renewables.

Further, the Industrial Strategy identifies four Grand Challenges, 'mission based' programmes which aim to provide strategic focus for investment into research and development and innovation in key future areas of the economy. Two of these have specific application to life sciences in their focus on artificial intelligence and data, and healthy ageing.

The Industrial Strategy has a particular focus on driving productivity improvement and is underpinned by the National Productivity Investment Fund, which is being allocated to support these strategies and programmes.

Life Sciences Sector Deals

Following the publication of its Industrial Strategy, the government announced a series of sector deals for the UK life sciences industry. These are structured as agreements to work together and co-invest in interventions aiming to drive UK-based sector growth.

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The key features of the UK Life Sciences Industrial Strategy and the Sector Deal 1 and Sector Deal 2 are aligned to the UK Industrial Strategy and focus on:

Research and Development

Government investment to:

- Raise the intensity of research and development (R&D) in the UK to achieve 2.4% of GDP by 2027.
- Strengthen the environment for clinical trials by investing through the National Institute for Health Research in the research infrastructure in the NHS and the Health Research Authority speeding up approvals for clinical trials.
- Establish the Health Advanced Research Programme (HARP) as a co-ordinated programme across industry, charitable foundations and the NHS with focus on:
    - Data to early diagnostics and precision medicine.
    - Genomics with whole genome sequencing of the UK Biobank.
    - Digital diagnostics and artificial intelligence.

Life sciences sectors to invest in the UK with:

- New industry-led research centres in key parts of the UK on key health care challenges including diabetes, bio-science, creating 1000s of new jobs.

- New collaborations between companies and academia, developing innovative clinical trials in areas including cholesterol-lowering and mental health.

- Sector-wide collaboration with government on advanced health research projects in areas including cancer, digital pathology and radiology.

Support the growth of medicines manufacturing

- Working with the Medicines Manufacturing Industry Partnership[13], creation of new national facilities including:
    - A Medicines Manufacturing Innovation Centre.
    - A Vaccines Development and Manufacturing Centre.
    - Expansion of Cell & Gene Therapy Catapult Manufacturing Centre and creation of three Advanced Therapies Treatment Centres.
    - Investment to grow advanced therapies manufacturing capacity in viral vectors.

Improve the UK environment for businesses with the potential to scale up

- Realise over £20 billion of patient capital investment over 10 years through a number of actions through:
    - The British Business Bank
    - Building confidence in pension funds to invest in innovative firms by enhanced regulation.
    - Expanding support the Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs).

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Improve access to new technologies in the NHS for small and medium-sized businesses:

- Establishment of an Accelerated Access Collaborative to develop a streamlined pathway and commit government funding to support innovators and the NHS locally.
- A digital health catalyst to support SME partnering with the NHS.
- Improvement of NHS England's commercial capacity and capability.

Support the UK's health data infrastructure through NHS England, NHS Digital and Health Data Research:

- Develop regional, interoperable Digital Innovation Hubs which support the use of data for research purposes within the legal framework.
- Set clear standards and approaches for data and interoperability and streamline approvals for data access for researchers via NHS Digital.
- Create a sandbox for secure, remote data access for anonymised data in a safe environment.

Implement a regional approach to the life sciences sector deal:

Work closely with key clusters and the devolved administrations to:

1. Develop local and regional investment programmes.
2. Facilitate clustering around key local science and research assets.
3. Invest in the wider regional infrastructure to connect science hotspots including Cambridge-Milton Keynes-Oxford corridor.

People and skills:

- Attract and retain globally mobile talent – including a system that facilitates recruitment and retention of highly skilled workers from the EU and beyond, and does not impede intra-company transfers.
- Increase the take-up of science, technology, engineering and maths (STEM) subjects.
- Understand, anticipate and respond to skills gaps across occupations.
- Support mobility between sectors, for example, transfers between academic, clinical and commercial sectors to share knowledge and develop skills.
- Support training for migration of academic scientists into industry.
- Develop apprenticeships and facilitate take-up, particularly by SMEs; improving digital skills in the workforce.
- Accelerate convergence at the interface between life sciences, computer science, mathematics, statistics, engineering and chemistry in the fields of diagnostics, personalised medicine and data science.

The strategy sets an ambition to attract ten large and ten smaller manufacturing facilities to the UK, through the on-shoring of manufacturing.

The Life Science Skills Strategy 2030

The government's Life Sciences 2030 Skills Strategy plays an important function in delivering the recommendations of the Life Sciences Industrial Strategy and the subsequent Life Sciences Sector Deals. This is based on the sector's potential for future growth and job creation.

The report sets out the following objectives:

- **The production and implementation of a Life Sciences Skills Action Plan** to oversee and coordinate the delivery of this strategy's recommendations through a partnership approach. This will ensure delivery of the UK's Life Sciences Industrial Strategy through the sector's commitment to skills.
- **A sector-based skills policy that joins up skills and business agendas and meets the ambitions of the Life Sciences Industrial Strategy.** This will ensure multi-disciplinary, industry-relevant learning and skills are embedded in the education system in schools and apprenticeship through to re-skilling.
- **Promote and incentivise the take-up of apprenticeships in all parts of the sector in line with formal academic routes.** Levy recovery is very low in life sciences, and much greater flexibility is needed to support the development of a skilled workforce.
- **Maintain the UK's world-leading position in the life sciences sector**, by supporting the facilitation of the transfer and exchange of a global workforce, and ensuring the UK is an attractive place to invest and work.
- **To meet the demand requirement for up to 133,000 jobs across the sector**, develop and roll out an attraction strategy to promote working in the life sciences sector to inspire, inform and build a diverse, entrepreneurial and resilient future workforce.

NHS Long Term Plan

The NHS Long term Plan (2019) responds to some of the trends identified above and sets out key ambitions for the service over the next 10 years. The plan builds on the policy platform laid out in the NHS five year forward view (Forward View) which articulated the need to integrate care to meet the needs of a changing population and address the increased pressures and demands placed on the NHS by:

1. Developing a new service model for the 21st century.
2. A proactive approach to prevention and health inequalities.
3. Promoting digitally-enabled care into the mainstream across the NHS.

The long-term plan calls for a 'fundamental shift' in the way that the NHS works alongside patients and individuals. As part of this shift, the plan focuses on personalisation to support a range of people, from those with long-term illness and complex needs through to people managing mental health issues or struggling with social issues which affect their health and wellbeing. It helps them make decisions about managing their health so they can live the life they want to live based on what matters to them, working alongside clinical information from the professionals who support them.

There is a commitment to rolling out a comprehensive model of personalised care, which brings together six programmes aimed at supporting a whole population, person-centred approach.

Digital technology underpins the Plan's most ambitious targets and will also facilitate service transformation, including the redesign of outpatient services and reorganisations of pathology and diagnostic imaging services.

The plan recognises that the NHS does not operate in isolation and sets out critical interdependencies which exist between the NHS and local government, wider public services and communities.

In the North East, local NHS trust five year strategies build on the NHS Long Term Plan and each identifies the need to expand the focus on partnerships across the region in a number of development and delivery areas; world class, cutting-edge diagnostics; treatment and care; research; education; innovation and management. These themes have been demonstrated during the early phases of the COVID-19 pandemic with respect to social care and health service interactions.

UK Research and Development Roadmap

The Department for Business, Energy and Industrial Strategy (BEIS) published its Research and Development Roadmap in 2020. It sets out the government's commitment to building on the UK's internationally recognised reputation for leadership in research and science, and to develop a more innovative economy to recover from the economic disruption of coronavirus.

The strategy document sets out the following key commitments:

- **Increase investment in research**: To unlock discoveries and to apply analysis to solving our most pressing problems in government, industry and across society.
- **For the UK to become world-class at securing the economic and social benefits from research:** This includes the establishment of an Innovation Expert Group to review and improve the UK's innovation system. This will involve strengthening the interactions between discovery research, applied research, innovation, commercialisation and deployment.
- **Supporting entrepreneurs and start-ups to increase the flow of capital into firms carrying out R&D enabling them to scale up**: The Government aims to exploit competitive and comparative advantage where the UK can lead the world in key industries, technologies and ideas.
- **Attracting, retaining and developing the talented, diverse people and teams:** This will be achieved through a new R&D People and Culture Strategy. An Office for Talent will be set up to attract and retain the most promising global science, research and innovation talent to the UK.
- **A greater role of place-based outcomes in how R&D decisions are made in the UK so that R&D contributes to our levelling up agenda:**This includes a commitment to publishing a new UK R&D Place Strategy to unlock local growth and societal benefit from R&D across the UK.

- **Providing long-term, flexible investment into infrastructure and institutions**: This will build on the UK's system of universities, public sector research establishments and other publicly funded laboratories, developing our large-scale infrastructure, facilities, resources and services to make them world-leading.
- **Partnerships with other world-leading research and innovation nations, as well as strengthening R&D partnerships with emerging and developing countries**: This will involve maintaining a close relationship with European partners, seeking to agree a fair and balanced deal for participation in EU R&D schemes.

One of the key areas of focus in the government's R&D roadmap is using R&D as part of the levelling up agenda to rebalance growth across the different regions of the UK. The North East has been identified as a potential area of focus. The strategy makes the following key commitments to:

- Build on existing and emerging strengths in UK regions, irrespective of scale, to maximise the benefit from public investment.
- Support areas with untapped potential for future growth.
- Tailored support for less R&D-intensive regions to develop new capability and absorb new technology and innovations.
- Support increased collaboration between local, regional and devolved institutions on science, research and innovation, and ensure a strong role for local civic and business leaders in defining and delivering on local opportunities.
- Ensure that R&D interventions are in alignment with wider improvements made in support of levelling up areas across the UK.

The UK's exit from the European Union

The UK officially left the European Union (EU) on 31 January 2020 and a trade I was agreed At the time of writing this document the transition period is set to expire on 31 December 2020, and a trade deal has still to be negotiated by the Government.

This presents two key issues for the North East life sciences industry future: 1) Regulatory alignment with the EU and 2) Continuity of existing supply chains post Brexit.

The nature of the life science sector is that its operations are interconnected with global supply chains and distribution. Potential disruption caused by exiting the EU could increase operational complexity, lead times and costs, putting the sector at a competitive disadvantage. This could also impact on the recruitment and investment decisions of business owners and operators. The industry has argued that a clear roadmap is required to ensure continuity of the existing arrangement as far as possible and minimise economic disruption.

Another crucial issue is the future regulatory alignment between the UK and the EU. The existing regulatory function provided by the European Medicines Agency will be provided by the Medicines and Healthcare Products Regulatory Agency on a domestic level post Brexit.

With respect of the future trading relationship between the UK and the EU, there remain a series of options available:

- WTO's 'Zero-for-Zero Pharmaceutical Initiative'. This includes the EU, the United States, Japan, Canada, Switzerland, Norway and Macao. It involves mutual recognition rules on product inspection and batch certification. Certification of manufacturers is laid down in Chapter 15 of the EU-Switzerland Mutual Recognition Agreement (MRA) of 2002.

- If the UK joins the European Economic Areas (EEA) it would automatically be subject to the provisions of the EU-CH MRA. However, should it choose to leave the EEA, nothing is preventing the conclusion of a separate EU-UK MRA, though this would be subject to negotiation.

- There is also the possibility of an EU Swiss-style agreement, which would maintain close alignment with the EU single market. This would be managed through a series of bilateral agreements, although this would involve acceptance of the four freedoms, including freedom of movement.

The continuing importance of the regulatory environment and the need to maintain access to international supply chains and markets will be a key forward priority for this strategy.

The National Life Sciences COVID Recovery Roadmap

The Life Sciences COVID-19 Response Group, which includes key industry bodies: Association of British HealthTech Industries (ABHI); the Association of the British Pharmaceutical Industry (ABPI); the Association of Medical Research Charities (AMRC); the British Generic Manufacturers Association (BGMA); the BioIndustry Association (BIA); the British In Vitro Diagnostic Association (BIVDA) and the Proprietary Association of Great Britain (PAGB) have published a Life Sciences Recovery Roadmap.

The document provides a strategic plan of how the sector can recover from the coronavirus disruption and drive the UK economic recovery. The report makes the following recommendations:

- **Partnering with the NHS to support the delivery of the NHS Long Term Plan**: Building on and learning from the COVID-19 response, government and NHS leadership should develop strategic processes to involve industry and charities in work to support NHS transformation and healthcare provision.
- **Developing a comprehensive strategy to improve UK manufacturing capability and supply chain resilience in medicines, medical devices and diagnostics.** While supply chains have responded well in the crisis, additional resilience could be provided through improved demand forecasts and transparency along the supply chain, support for supply diversification, international inventory management and development of a strategic reserve of essential medicines.

- **Powering up the benefits of spending on medical research and delivering bold policies to incentivise research investment**: The Government has already doubled the R&D investment announced in the Budget. This should be matched with an aspiration to grow further the UK's lead in Foreign Direct Investment in Europe.
- **Transforming the UK's clinical research processes:** This will allow for rapid approval, set-up, recruitment and delivery of research across the NHS, powered by new technologies, data and approaches. This in turn will ensure that UK patients are amongst the first in the world to benefit from breakthrough treatments and technologies, with the added benefit of cost savings and investments for the NHS.
- **Taking an innovative approach to regulation**: The Medicines and Medical Devices Bill is to be reviewed to reflect innovative regulatory policies introduced by the Medicines and Healthcare Products Regulatory Agency (MHRA). Mutual Recognition Agreements should be leveraged to extend the UK's global reputation and influence through international networks and partnerships and biosimilar medicines.
- **Accelerating deployment of new and existing treatments and technologies where there are system and patient benefits**: The COVID-19 response has shown that rapid scale-up of existing therapies and devices, coupled with new medicines, medical technology and diagnostics, can significantly improve patient outcomes while making more effective use of NHS resources.

Regional Economic Strategy

North East Strategic Economic Plan

The North East LEP's Strategic Economic Plan (SEP) is focused on the growth and development of our region's economy. The SEP provides an evidence-based analysis of the long-term economic challenges and opportunities facing the North East and proposes a series of targeted interventions in response.

It was first published in 2014, covering a ten year period and demonstrated how we propose to develop a more agile, modern, diverse and entrepreneurial economy in the face of change to deliver economic benefits to residents and businesses across the region. The original plan has subsequently been refreshed and updated, as our economy and operating environment has changed and developed.

The SEP, which provides the framework for delivery, identifies four areas of strategic importance where North East assets, expertise and capabilities provide a strong opportunity for growth of the regional economy. These are:
- Health and Life Sciences.
- Energy.
- Digital.
- Advance Manufacturing.

The SEP's overarching objectives are to deliver more and better jobs, have a more entrepreneurial economy and to ensure the benefits of growth are spread to our region's people and community. To measure progress against these ambitions, we have set six targets.

These include:

1. To increase the number of jobs in the North East economy by 100,000 between 2014 and 2024.
2. For at least 70% of the new jobs to be better jobs. A better job is defined as being in managerial, professional and technical roles.
3. To reduce the gap in private sector employment density by 50% by 2024.
4. To close the gap in the employment rate for people aged 16-64 by 50% by 2024.
5. To reduce the gap in economic activity for people aged 16 – 64 by 100% by 2024.
6. To reduce the gap in productivity by 50% by 2024.

North East Local Industrial Strategy

The development of Local Industrial Strategies (LIS) was identified as a key priority in the UK Industrial Strategy. These aim to identify local and regional assets across the UK which can be aligned to national Industrial Strategy themes to ensure that every part of the UK makes its contribution to UK industrial growth and is able to benefit from the investment made into the UK's industrial development.

Co-created with government, they are intended to represent place-based statements of industrial and economic priorities led by Local Enterprise Partnerships and Mayoral Combined Authorities to increase regional productivity and to focus investment. In the prospectus published by Government, their stated objective is to "*build on local strengths and deliver on economic opportunities*".

In the North East, it was agreed that the LIS would be a document developed jointly by regional leaders and government to closely align the goals, objectives and assets set out in the North East Strategic Economic Plan (SEP) with the national Industrial Strategy and to shape investment priorities for national programmes resourced through the National Productivity Investment Fund and the UK Shared Prosperity Fund.

The draft LIS approved by the North East LEP Board in October 2019 with the support of government highlights four areas in which the North East has distinctive strengths, and represents areas where the North East can make a significant contribution to UK productivity performance.

- ***A clean growth future through energy and environmental assets***: With our objective being that the North East brings together its natural, research, science, testing and business assets to make a significant contribution to accelerating the decarbonisation of the global economy.
- ***Transforming manufacturing: smarter, greener, global***: With our objective being to ensure that North East advanced manufacturing sectors are adapting and evolving to remain globally competitive by:
    - Developing smarter ways of working, utilising capabilities and technologies to drive new products and processes.

- Developing more sustainable products and processes.
- Sustaining and growing our position in global markets.

- ***Innovating in health at a time of demographic change***: With our objective being the North East strengthens its UK leading translation environment to facilitate continuous improvement in healthcare delivery and advanced manufacturing both within the region and beyond. It will have applied its science and research strengths to position the North East as the leading hub for responding to global ageing.
- ***Driving digital and knowledge-based services***: With our objective being to further accelerate our fast growing and dynamic digital economy and utilising our digital expertise to develop niche business services, such as fintech and BIM, and transform our growing financial, professional and business service sector.

The LIS also sets out the region's planned approach to addressing the issues that underpin the North East's underperformance on productivity. These are structured under the UK Industrial Strategy's Five Foundations. The overall objectives for this part of the LIS are:

- To become a high productivity, high employment economy with:
  - A culture of innovation, where businesses, universities and others are engaging in and collaborating on innovation activities that will improve productivity.
  - A highly skilled population, with the focus on ensuring the region has the skills needed by employers to be productive and to enable greater entrepreneurship, business ambition and innovation.
  - An effective and inclusive labour market, where individuals are able to build careers and where they can access the support they need to move into and progress within employment.
  - Transport, digital and environmental infrastructure in place that supports productivity across all sectors, connects communities within the region and connects the region nationally and internationally.
  - A culture of entrepreneurship and business ambition, characterised by the region having more businesses, higher levels of business start-up, more businesses growing and more businesses trading internationally.
  - All communities contributing to and benefiting from the improvements in productivity including through improved connections between different communities across the North East.

North East - COVID-19 Economic Response

COVID-19 has significantly impacted the North East region. At the time of producing this document, as with the UK as a whole, the region was experiencing a fragile recovery as it emerged out of the summer of 2020. There were significant risks and challenges as it entered the Autumn with rising cases of COVID-1919 and growing risks to employment levels as the support to the economy which had been introduced in March 2020 was slowly withdrawn and new controls introduced.

In March, the North East LEP Board formed the North East COVID-19 Economic Response Group to lead a joint response across all sectors to the pandemic, starting with an immediate response to support business and employment, and to co-ordinate action in the region to support national challenges.

The report also considered intelligence from 21 sectors of the North East economy. This demonstrated varied experience and performance with many sectors, particularly those services involving human contact, as having effectively stalled during the pandemic with poor future prospects.

Whilst these challenges affect much of the region, there is clear evidence that the life sciences and pharmaceuticals sector has performed well during the pandemic with growth in the pharmaceuticals manufacturing sector and strong performance from support organisations involved in the sector in the region in organising supply of essential products and medicines to support the UK response. There is anecdotal evidence of growth of about 500 jobs in the manufacturing sector in the region.

The region has also been successful in rapidly creating new healthcare facilities such as the Nightingale hospital in Sunderland and attracting one of the network of COVID-19 Lighthouse Centres to the North East, with three core components:

1. The Integrated COVID Hub: Hosted by Newcastle Upon Tyne Hospitals, the first NHS organisation to host one and it will be the biggest Hub nationally. This is based in Gateshead (next to Gateshead Stadium) and will have capacity to deliver 80,000 tests per day. It will employ over 1,100 staff in the NHS jobs and be additional to current testing capacity.

2. An Innovation Hub: Based at the Biosphere at Newcastle Helix. This unique offering will provide an ongoing focus for real world evaluation and testing working closely with industry, with the potential to create many jobs and generate inward investment.

3. Co-ordination and response centre. Based at the Lumen at Newcastle Helix. This will look at rapid testing and integrate testing, tracing and containment to enable rapid place-based response.

There are other specific opportunities and challenges of relevance to this strategy. There is a potential opportunity to respond to the emerging direction for home-shoring drug supply chains to ensure future resilience. However, there have also been downside risks for the sector, with the focus on the NHS on the immediate healthcare response. For small businesses in the region seeking to accelerate innovation, this has meant that some of the work to deploy intellectual property which was being targeted for translation into the health system being stalled.

In September 2020 North East leaders adopted a COVID-19 Recovery Plan which has been proposed to government in anticipation of the Comprehensive Spending Review. Within the plan, a number of priority actions set out in this Health and Life Sciences Growth Strategy sector are identified as stimulus and growth priorities for the Recovery Plan with the aim of building the regional cluster and reinforcing national resilience.

These are positioned as part of a significant Future Economy programme, which is one of five themes in the Recovery Plan. These include:

- Priorities to build further on key sites in the region including the Helix, NetPark and Enterprise Zones to build clusters located there.
- Continuing investment into the Northern Accelerator programme to stimulate spin outs from the four universities.
- Public-private investment into manufacturing and innovation facilities to home-shore generics, with associated supply chain activity.
- Investment into the North East Health Evaluation Innovation Ecosystem to coordinate a single point of entry for businesses to commercialise into the NHS.
- Next stage of the Northern Alliance Advanced Therapy Treatment Centre on Cell and Gene Therapy.
- Further development and investment into programmes to accelerate innovation in ageing.

North East Local Enterprise Partnership Board

Thursday 28 January 2021

Item 10: Chair and Chief Executive Update

1.0 Background

1.1 The Chair and Chief Executive would like to update Board Members on some of the discussions they have been involved in since the last Board meeting in December.

2.0 Chair key meetings and discussions

2.1 During December and January, the LEP Chair has been involved in a variety of meetings and discussions championing our work.

These include:

- Various discussions with LEP Board members on an individual basis;
- Various discussions and meetings with partners and stakeholders regarding the Freeport bid;
- Regular meetings between the LEP Chair and CEO;
- Meetings with the other LEP Sub-Board Chairs;
- The NP11 Board;
- The LEP Innovation Board, Investment Board and Skills Advisory Panel;
- The North East Combined Authority (NECA) Leadership Board;
- Speaking at the Transport for the North Conference;
- The Transport for the North Board / Budget meetings;
- Attending the LEP Christmas Team ‘huddle’ (weekly virtual full team get together);
- The Northern Powerhouse Downtown in Business Webinar;
- Panel member at the NGI conference.

3.0 Chief Executives key meetings and discussions

3.1 Since the last Board meeting, outside of the internal ‘business as usual’ meetings and the four LEP sub-boards’ meetings, the Chief Executive has been involved in a number of meetings to move the regional economic growth agenda forward.

These include:

- Regional Universities Business and Enterprise Board
- Transport Strategy Board
- Energi Coast Board
- Stronger Town Board
- Blyth Towns Board
- LEP Network meetings
- NP11 Chief Executive meetings and NP11 Board
- Covid – regional Coordination Group and the Regional Economic recovery Group
- Various Freeport Bid meetings
- MP meetings
- Meetings with BEIS and MHCLG
- Academic Health Science Network
- Meetings with the other LEP Sub-Board Chairs

3.0 Recommendation

2.1 The Board is recommended to note the report.

North East Covid-19
Economic Response Group

COVID-19 Intelligence

January 2021 update

on behalf of business:

on behalf of regional universities:

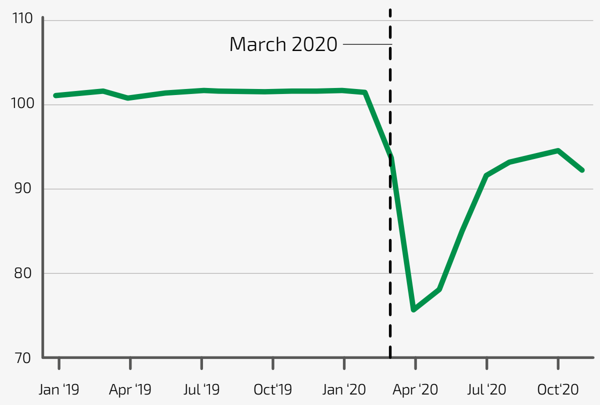
This report forms part of our ongoing monitoring of the immediate and longer term impacts of the COVID-19 pandemic in the North East. It aims to consolidate and update information from a range of available key indicators and intelligence sources.

A copy of the full report is available from the North East LEP from Richard Baker (richard.baker@nelep.co.uk) or Emma Ward (emma.ward@nelep.co.uk).

Headline findings

Economic activity

UK Gross Domestic Product (GDP), January 2019 to November 2020

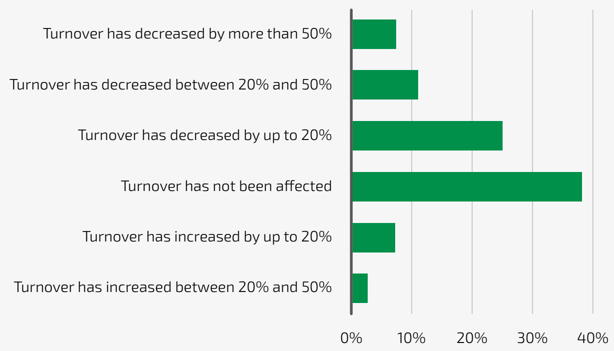


UK GDP fell by 2.6% in November 2020. This was after six consecutive monthly increases and resulted from government restrictions reducing economic activity. UK GDP remains 8.5% below February 2020 levels, the last month before the main impact of the COVID-19 pandemic.

Source: ONS GDP monthly estimate, UK: November 2020

Business activity

Impact of COVID-19 on turnover, North East region, 14 to 27 December 2020



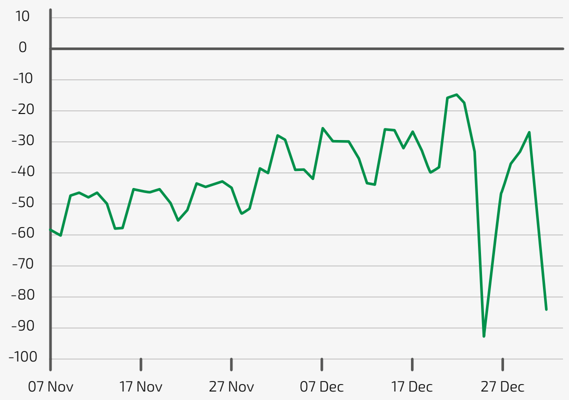
In the period 14 to 27 December, turnover had fallen in around 43% of businesses in the North East region, compared to what is normally expected at this time of year. Turnover had decreased by a fifth or more in 19% of the region's businesses. At the end of April 2020, turnover had fallen in 72% of businesses, including 54% in which turnover had fallen by a fifth or more.

Nationally, the sectors worst affected in December were arts, entertainment and recreation; other personal services; and accommodation and food services.

Source: ONS Business insights and impact on the UK economy: 14 January 2021

Footfall and visits to retail and recreation locations

Visits to retail and recreation locations (seven-day rolling average, indexed), North East LEP, 7 November 2020 to 1 January 2021

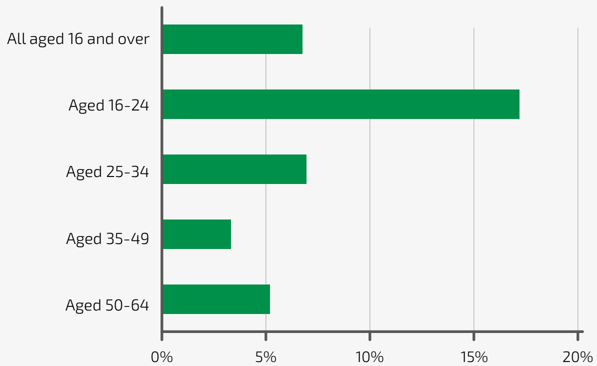


Google's community mobility data suggests that visits to retail and recreation sites on the Monday, Tuesday and Wednesday before Christmas were about 10 percentage points higher than in the previous week, and around 30 percentage points higher than in the lockdown period in late November. Visits remained at around 85% of their level for these days in early 2020.

Source: Google Community Mobility Reports

Unemployment

Unemployment rate by age, North East region, August to October 2020



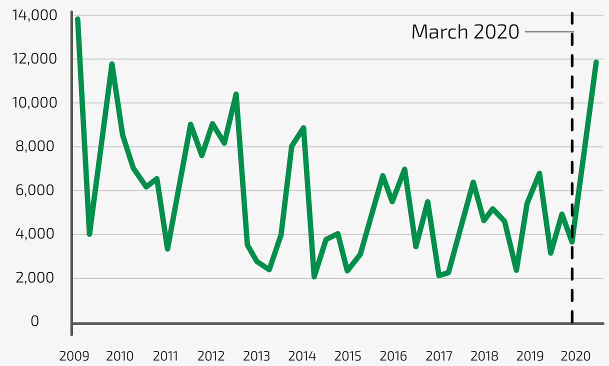
At 6.6%, the North East region had the highest unemployment rate among the English regions in August to October 2020[1]. The unemployment rate is highest among young people.

[1] This is a lagging indicator, based on the Labour Force Survey. Data for the period September to November 2020 will be released on 26 January.

Source: ONS Unemployment by age

Redundancies

Quarterly redundancy estimates, North East region, 2009 to 2020

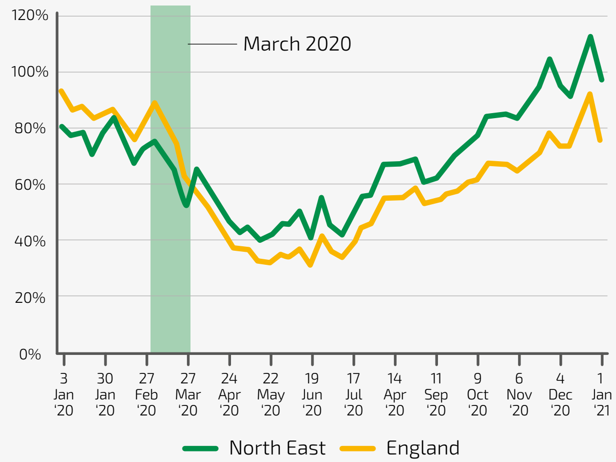


According to the Labour Force Survey, 12,000 people in the North East region were made redundant in August to October 2020. This was the highest level since 2009, and more than 1.5 times the size of any level since early 2014.

Source: ONS Labour Market Release Table RED02: Redundancy Levels by Region Aug-Oct 2020

Recruitment demand

Weekly vacancy index (as a percentage of total a year earlier), North East region and England, to week ending 1 January 2021



In the week ending 1 January, vacancy levels in the North East region were only slightly below their level a year earlier. Vacancy levels increased faster in the region than nationally in the later months of 2020 and the North East is closer to returning to pre-COVID vacancy levels than any other English region[2].

[2] The data are published as an index, and the actual number of vacancies is unknown.

Source: ONS analysis of Adzuna website data

Key data

Economic output

According to the latest ONS data, UK GDP fell by 2.6% in November 2020.

This was after six consecutive monthly increases. The services sector acted as the main drag on growth in November, falling by 3.4% as restrictions on activity were reintroduced.

UK GDP remains 8.5% below February 2020 levels, the last month before the main impact of the COVID-19 pandemic.

Reflecting the fall in UK GDP, private sector firms in the North East region (including North East and Tees Valley LEP areas) reported a decline in business activity in November.

The NatWest PMI indicates a moderate contraction in output, after five consecutive months of growth.

A fall in new business was caused mainly by the four-week lockdown in November, but firms also commented on uncertainty stemming from weaker client demand and any further potential restrictions, as well as uncertainty related to EU Exit. Export conditions also worsened, as key markets implemented their own restrictions in response to a resurgence of COVID-19.

Nevertheless, North East firms remained optimistic about the 12-month outlook

With NatWest reporting the highest level of optimism since July. According to NatWest, business confidence in the region was well below the national average, however.

Forecasters continue to indicate that the economic outlook remains highly uncertain.

According to the Office for Budget Responsibility, the outlook depends on the future path of the virus, the stringency of public health restrictions in response, the timing and effectiveness of vaccines, and the reactions of households and businesses to all of these.

Forecasters such as the Office for Budget Responsibility expect a gradual recovery in 2021 and beyond, with most suggesting that UK GDP will return to its pre-COVID levels in late 2022 or 2023.

Business activity

ONS reports that between 29 December and 10 January, around 10% of businesses in the North East region (including the North East and Tees Valley LEP areas) had temporarily closed or paused trading.

Most said they were closed because of lockdown, though almost one in five (19%) said it was not financially viable to stay open. Insufficient footfall or customer interest was also a factor.

Between 14 and 27 December, turnover was lower than normally expected for around 43% of businesses in the North East region, while profits were lower than normal for 39%.

25% of the region's exporters had exported less than normal for the time of year, and 4% had not been able to export at all. 21% of importers had imported less than normal, and 5% had not been able to import.

Stock levels were lower than normal in 13% of North East businesses, while 14% had higher levels of stock than normal. Half of businesses with stock levels higher or lower than normal cited COVID-19, while around one in five (22%) cited the end of the EU transition period and around on in six (16%) cited both.

6% of businesses in the North East region had no cash reserves, and a further 39% had cash reserves to last six months or less. 4% had low confidence in their business surviving for three months, while a further 24% only had moderate confidence in this. 12% reported that they had a moderate or severe risk of insolvency.

And only 25% thought that they had no risk of insolvency. 44% of North East businesses which thought they were at risk said the risk had increased due to COVID-19.

Business starts

BankSearch data suggests that the number of small businesses started in the North East in November 2020 was 8.5% higher than in November 2019, reflecting the national picture.

BankSearch suggests that the expected effect of more job losses, combined with redundancy payments, plus opportunities for entrepreneurial activity enhance the number of business starts.

Feedback from North East enterprise agencies suggests the COVID-19 pandemic has acted as a catalyst for many people to start a business.

There are a number of drivers, including people becoming self-employed out of necessity after losing their job, as well as people using free time and redundancy money to start businesses based on ideas they were considering before the pandemic.

Business support

Growth Hub Intelligence Reports show that businesses continue to request support to help them trade their way out of current challenges, and to look beyond COVID-19.

Businesses need support to develop a long-term ability to adapt to future restrictions, including support for short term measures (e.g. to buy new equipment or tools), to innovate with new approaches and business models, and to access professional advice and support.

Businesses also need support to adopt new technologies to help them look beyond survival and thrive post-pandemic.

Including the adoption of digital technology to help pivot business models to online where possible, or better utilise accounting and CRM systems.

Some businesses have requested support to access rapid testing for staff and customers, which would help them fully re-open.

Support agencies continue to receive enquiries from businesses and individuals excluded from government schemes.

With pleas that they are not overlooked again (such as newly self-employed, home based businesses, directors paid through dividends and so on).

According to the British Business Bank, as at 15 October 2020 a total of 1,520 loans had been offered to businesses in the North East region (including the North East and Tees Valley LEP areas) through the CBILS scheme, with a value of £344 million (an average of £226,316 per loan). 39,991 loans had been offered to North East businesses through the BBLS scheme, with a value of £1,107 million (an average of £ 27,681 per loan). In both cases, the loans offered in the North East represented 3% of all loans offered in the UK, the same as the proportion of UK businesses located in the North East.

As at 19 November, 27 loans had been approved to businesses in the North East through the Future Fund, with a value of £24.4 million (an average of just over £900,000 each).

As at 11 November, almost £11.7 billion to over 999,700 business properties in England through the Small Business Grants Fund and the Retail, Hospitality and Leisure Business Grants Fund, equating to 95% of the identified eligible funding.

More than 34,200 grants had been made to hereditaments (premises) located in the North East LEP area, with a value of over £393 million (an average of £11,500 each). This represented payments to 97% of the hereditaments identified as eligible, and 98% of identified eligible funding.

More than 3,100 grants were paid by local authorities in the North East LEP area from the Local Authority Discretionary Grant Fund, with a value of over £19.7 million (an average of £6,354 each).

Footfall and visits to recreational services

Google's community mobility data suggests that visits to retail and recreation sites on the Monday, Tuesday and Wednesday before Christmas were about 10 percentage points higher than in the previous week, and around 30 percentage points higher than in the lockdown period in late November.

Visits remained at around 85% of their level for these days in early 2020.

In the run-up to Christmas, supermarket visits were at a similar level to that in early 2020.

After the November lockdown, levels of visits to workplaces, retail and recreation sites and public transport hubs all increased, to just below October, term-time levels.

Unemployment

During August to October, according to the latest ONS data, the North East region (including the North East and Tees Valley LEP areas) had the highest unemployment rate among the English regions (6.6%, compared with 5.1% in England).

The North East's unemployment rate rose by 1.1 percentage point compared with the previous quarter. In total, 84,300 people were unemployed in the region, up from 71,600 three months earlier.

The unemployment rate is highest among young people.

17.2% of 16 to 24 year olds in the North East region were unemployed in August to October, compared with 7.0% of 25 to 34 year olds, 3.4% of 35 to 49 year olds and 5.2% of 50 to 64 year olds.

Unemployment rose among all age groups, with the largest increase among 16 to 24 year olds. Among 50 to 64 year olds, there was also a net increase in economic inactivity (larger than the unemployment increase), suggesting that some older workers who have lost their jobs have exited the labour market.

Claimant count

Over 87,000 people were claiming unemployment-related benefits in the North East LEP area in November 2020, according to ONS data, almost 33,000 more than in March.

Most of this increase happened between March and April, with a further increase between April and May.

7.0% of 16 to 64 year olds in the North East were claiming unemployment-related benefits in November, compared with 6.3% in England. Almost half of claimants were aged 16 to 34.

Coronavirus Job Retention Scheme (CJRS)

HMRC data shows that as at 31 October, 55,200 employments in the North East LEP area were furloughed. This represented 6.7% of eligible employments, a lower proportion than in England (7.4%).

The employments furloughed at the end of October in the North East LEP area represented 20.7% of the total number of employments (267,000) that had been furloughed at any time as part of the scheme. This is a lower percentage than nationally (23.5%).

Almost 52 per cent of furloughed workers in the North East LEP area at the end of October were female.

ONS data shows that in the period 10 December to 13 December 2020, 10% of workers across Great Britain had been furloughed in the past seven days, while 3% had been asked to return from furlough. The proportion of workers who were furloughed in the past seven days was up from 5% at the beginning of November.

Self-Employment Income Support Scheme (SEISS)

According to HMRC, by 31 October 2020 around 49,200 self-employed workers in the North East LEP area had made SEISS claims in the second tranche of the scheme.

This was 5,500 fewer than the number of claimants in the first tranche (54,700).

69% of the eligible population in the North East had made a claim in the second tranche of the scheme by 31 October, while the take-up rate was 77% in the first tranche. These were the same proportions as seen nationally.

Impacts on individuals

ONS data shows that across Great Britain, 37% of people who were working in the period 10 December to 13 December 2020 were working from home because of the COVID-19 outbreak.

27% said they were not able to work from home

The proportion of those working from home was the same as at the beginning of November.

Redundancies

According to the Labour Force Survey, 12,000 people in the North East region (including the North East and Tees Valley LEP areas) were made redundant in August to October 2020.

This was the highest level since 2009, and more than 1.5 times the size of any level since early 2014.

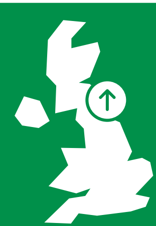
Nevertheless, at a rate of 11.1 redundancies per 1,000 employees (1.1%), the level of redundancies in the North East was lower than that for England (13.6 per 1,000 employees) and the second lowest among the nine English regions.

Nationally, the rate of redundancies was highest in arts, recreation and personal services (32.6 per 1,000 employees), accommodation and food services (27.6), administrative and support services (24.2), manufacturing (20.6), retail and wholesale (19.3) and construction (18.8). Together, these sectors accounted for 70% of reported UK redundancies during August to October.

Vacancies

In the week ending 1 January, ONS data shows that vacancy levels in the North East region (including the North East and Tees Valley LEP areas) were only slightly below their level a year earlier.

Vacancy levels increased faster in the region than nationally in the later months of 2020.



The North East is closer to returning to pre-COVID vacancy levels than any other English region.

Nationally, vacancy levels are above the levels a year ago in domestic help; construction; manufacturing; and transport, logistics and warehousing, while vacancies are approaching the levels of a year ago in health and social care, and scientific and quality assurance.

Vacancies in catering and hospitality; management, executive and consulting; legal; energy and oil and gas; accounting and finance; and sales are at less than 60% of their levels a year ago.

Future employment scenarios

Considerable uncertainty remains around future employment and unemployment prospects. Nevertheless, the extension of the CJRS to April 2021 is likely to continue to help mitigate the negative impacts of the pandemic on employment during the next few months.

As the Office for Budget Responsibility notes, the immediate outlook for the labour market is contingent on what happens when support schemes such as CJRS wind down. The longer term outlook depends largely on the pace of economic recovery, but also on the extent to which behavioural changes in response to the pandemic (such as more working from home, less business travel and the shift to online retail) drive economic restructuring away from customer-facing sectors, requiring labour to shift across occupations, sectors and regions, impacting on travel and consumption patterns and compounding the restructuring necessitated by EU Exit.

Most forecasters expect unemployment to rise markedly following the end of the CJRS, before falling broadly in line with the recovery in GDP.

Scenarios which consider a prolonged impact of COVID-19, with greater labour reallocation in response to economic restructuring, are more pessimistic.

Some forecasters, such as KPMG, expect that changing relations with the EU will lead to a loss of output in the manufacturing sector which is likely to generate some job losses over the course of 2021. Further losses in employment in financial services and some professional services linked to EU clients may also ensue. Meanwhile, the worst affected sectors during the pandemic, including hospitality and travel, may re-hire employees in the first half of 2021 to meet rising demand.

However, given the extent that the COVID-19 crisis has fundamentally shifted demand, there is likely to be a relatively large proportion of workers who will need to find new jobs in a different sector or business, while many workers who retain their jobs will find they have changed in terms of delivery. These workers will likely require training to transition to new and different roles.

Jobs in the traditional retail sector may be the worst affected, as the shift from traditional bricks-and-mortar stores to online shopping is likely to endure after the crisis is over.

Sectors, local authorities, and place intelligence

Consultation workshops have been held with representatives of key economic sectors and local authorities to understand how the impacts of the pandemic on the region's economy and places have changed since the previous round of consultation in September 2020.

Business activity

Across many sectors there is a general feeling that the region has taken a backward step economically since September 2020.

Following the easing of restrictions over the summer many businesses had experienced a significant uplift in trade. However, subsequent tier restrictions and national lockdowns during the autumn and winter have had a devastating impact for some businesses, particularly those that have been forced to close down again. There is a sense that the optimism that some businesses and sectors were feeling in the summer is now waning.

As in earlier periods, the picture across sectors is mixed, with some performing more strongly than others.

Sectors that have been largely unaffected or have experienced growth include pharmaceuticals and health, digital, professional services, energy, construction, online retail, agriculture and food production, and many parts of the manufacturing sector.

For example, according to Make UK's Manufacturing Outlook (Q4 2020), in the pharmaceuticals manufacturing sector the final forecast for 2020 was a 14.9% growth in output, compared with an average fall in output of 12% for the UK manufacturing sector as a whole.

By contrast other sectors have continued to be severely impacted, most notably those that have been subject to business closures, such as

- **hospitality**
- **culture**
- **leisure**
- **personal services**
- **tourism**
- **non-essential retail**

In September 2020 many of these businesses were beginning to see light at the end of tunnel and had started to reduce their use of furlough. However, since that time the situation has deteriorated. There is significant frustration amongst businesses that have invested substantially in making their premises Covid secure, only to have to close them again and therefore recouping no return on their investment.

The Make UK Manufacturing Outlook reports that automotive manufacturing has been the most significantly affected subsector within manufacturing, with a forecast fall in output of 39% for 2020, which is more than 3 times the average reduction for the manufacturing sector as a whole.

Despite the current challenges facing parts of the manufacturing sector, the Make UK Q4 2020 Manufacturing Outlook Report shows that average business confidence in the sector nationally had increased slightly since the previous quarter to 5.9 points, and for the North East was a little higher at 6.2[3]. This reflects some manufacturing businesses looking forward to 2021 with a little more optimism, driven partly by hopes that the Covid vaccine may see a return to more normal conditions later in the year.

Reflecting changing patterns of economic and leisure activity, feedback from Nexus indicates that public transport use started to increase over the summer but has been falling back incrementally since September. Bus services have been impacted slightly less than Metro services, as users are less likely to have access to a car as an alternative form of transport. Early indications suggest that during the current national lockdown Metro usage will be around 15% of the usual level. Meanwhile, messages about avoiding the use of public transport have resulted in an increase in people travelling by car, which is likely to result in increased congestion and air pollution.

Feedback indicates that the VCSE sector has been exceptionally busy throughout the pandemic, with significant funds being rapidly deployed into the sector. However, impact on individual VCSE organisations has varied. For example, data from Voluntary Organisations Network North East (VONNE) shows that around 50% of organisations have had to significantly reduce services because of government restrictions, while 27% were slightly reduced and 19% had been unable to operate at all. In terms of financial

[3] Confidence in the next 12 months, where 1 = substantially worse and 10 = substantially better

impacts on the sector, responses were divided. 25% of organisations expect a significant financial impact, while a further 25% expect some impact. A quarter of organisations have felt no financial impact to date but expect to in the next six months, while the remaining quarter have felt no impact and are confident there will be no impact in the next six months.

There is still a great deal of uncertainty about the full and longer-term impacts of Covid-19 on individual sectors and businesses in the region.

Sector representatives believe that Government support programmes (e.g. CJRS, business grants, loans) are masking many of the worst effects, and the scarring to the economy will become apparent only gradually as this support is withdrawn.

Jobs, skills and training

The greatest use of the CJRS continues to be in the sectors most impacted by lockdown restrictions, including:

- **hospitality**
- **tourism**
- **leisure**
- **non-essential retail**
- **culture**

which are taking advantage of furlough to sustain employment.

However, despite the extension of the CJRS in October 2020, sector feedback indicates that some businesses are beginning to make redundancies anyway, as they downsize and reduce costs with the aim of surviving in the short-term and being as lean as possible when the recovery begins.

Other firms have chosen to retain staff in the short-term but are likely to see significant redundancies when CJRS comes to an end, potentially from April 2021.

The full scale of job losses across sectors will not be known until the CJRS and other support measures are withdrawn. However, there have been initial indications of the potential scale of job losses from some sectors.

For example, at the national level CITB forecasts that there could be a peak to trough fall in construction employment of up to 13.8%, equating to around 374,000 jobs[4]; while it is estimated by sector representatives that in North East retail around 20% of jobs have been lost already.

Despite the challenges of the pandemic, some sectors are continuing to invest in the workforce, recognising the need to recruit and train young people, retain skilled staff, and reskill the existing workforce to respond to changes in their industries. This includes sectors such as

- **construction**
- **manufacturing**
- **agriculture**

where there is an ageing workforce and an urgent need to bring more young people into the sectors.

Whilst businesses across all sectors recognise the importance of workforce development, the extent to which this is happening currently varies a great deal. In some sectors, for example construction, a large proportion of training provision is now available online and virtually. Sectors such as manufacturing, and construction also report a continuation of apprenticeship activity. However, businesses in other sectors have cut training and apprenticeships where possible and are only doing the minimum necessary. This is predominantly an issue in sectors such as hospitality, culture, tourism and non-essential retail, where businesses lack the revenues to fund training activity.

Across many sectors there are people who have lost income either through furlough or because they are self-employed, who have sought alternative employment such as supermarket work or delivery services. This includes staff from hospitality, retail, culture, tourism and construction. In some cases, individuals are earning more money in their alternative employment, and at this stage it is unclear what proportion will return to their original occupation.

Deskilling of the workforce poses a threat to a number of sectors, particularly tourism, hospitality and culture where many staff have been out of the workplace for up to a year, resulting in a loss of skills, out of date certifications, and demotivation due to the stop-start nature of their employment.

Significant effort may be required to support individuals to return to the workforce, from both a skills and personal wellbeing perspective.

Instability in the labour market is one factor generating a significant increase in enquiries for self-employment and start-up support, including from social enterprises. Many are currently putting start-up plans on hold due to the continuation of furlough and uncertainty over market demand and economic conditions. However, there are potentially many good businesses ready to go and it is expected that there will be a rise in demand for start-up support during 2021.

[4] Construction Skills Network (CSN) Output and Employment Forecasts (CITB)

Places

The most deprived parts of the region, with the highest unemployment rates and the lowest incomes and skills, are the ones being impacted most severely by the pandemic

According to ONS data[5], Bede ward in South Tyneside, and Walkergate in Newcastle had among the highest unemployment benefit claimant rates in the region before the pandemic and they saw the greatest increases in the claimant rate between February and November 2020 (increases of 3.6% and 4.1% respectively). In these deprived areas people are more likely to have been furloughed or lost their job, have little or no savings to fall back on, and are more likely to be digitally excluded.

It is reported that Newcastle City Centre lost around 40% of footfall during 2020, largely linked to the hospitality and retail sectors

The City Centre started to see year-on-year increases in footfall at the end of 2020 as a result of retail reopening, although this was short-lived and footfall has again been impacted by subsequent restrictions and the third national lockdown. This pattern is confirmed by data from the Google Community Mobility Reports.

The high street retail sector across the region has been severely impacted, particularly in large towns and city centres, as well as the Metro Centre, which have been impacted by the closure of large national chains.

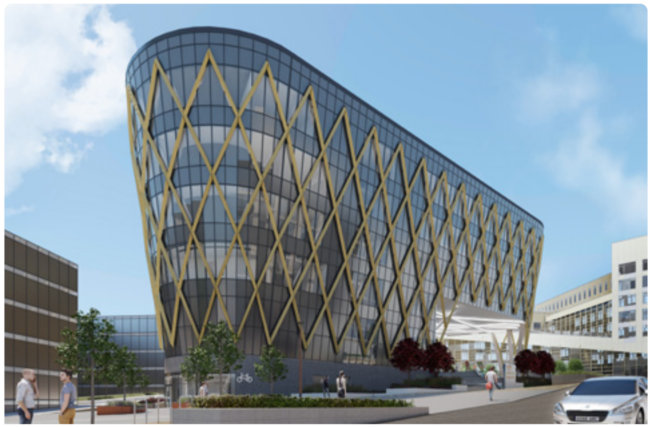
[5] ONS benefit count (experimental)

The impact has been somewhat less severe in Sunderland City Centre, which has a higher proportion of smaller independent retailers.

There is evidence of ongoing demand for industrial and commercial property in different local authority areas.

For example, in Durham there has been little reported impact on the occupancy or rent levels in industrial units; planned office developments in Gateshead are still ongoing and there is evidence that rents are holding up on the Baltic Quayside; and in Newcastle it is anticipated that the Biosphere at the Helix site will be 90% let by the end of January 2021, due in part to demand from the health sector.

Many parts of the manufacturing sector in the North East have remained resilient during the pandemic, and this has supported positive levels of activity in local economies with a high manufacturing density, such as County Durham. However, there are ongoing concerns about the fall in business activity in the automotive sector and the significant impact this could have in terms of supply chain businesses and jobs, particularly in the local areas where these firms are concentrated.



Local authority activities

Local Authorities have returned broadly to business as usual and are delivering their full range of services, although with fewer people due to staff isolating and with some services taking longer to deliver due to Covid restrictions and safe working practices.

There has also been an increase in the duties and responsibilities of Local Authorities and currently a high proportion of staff time is being spent on supporting the short-term survival of local businesses, including processing grant payments.

Colleagues are working together across the region to develop a common approach to supporting businesses that are most in need of support, including essential services such as retail, and those that have been the most severely affected such as hospitality. This includes supporting key services that have previously fallen through the gaps in support, such as childcare and taxi drivers.

Resilience

Representatives of several sectors (e.g. hospitality, retail, construction), as well as local authorities, report that burnout and mental health issues are becoming increasingly common, particularly among small business owners.

The challenge of facing a third national lockdown, after striving to survive for many months and using up business reserves, is starting to have an impact on business resilience. There has been a 'feast or famine' situation that is difficult for businesses to respond to in terms of managing cashflow, retaining staff, and managing stock. It is considered crucial that support is available to help these businesses to survive, in the hope that the Covid vaccine will usher in a return to more normal conditions later in the year.

The LA7 Economic Directors' report highlights that many businesses believe there is a cliff edge looming in April 2021 when much of the Government support is due to end, including business rates relief, VAT reductions for hospitality, government loan schemes, and furlough.

There is concern that this will lead to further closures and job losses, given that many businesses have exhausted cash reserves, loans and previous grants.

The Make UK / PWC Executive Survey indicates that manufacturers are building their resilience to prepare for the challenges in 2021 by investing in people, new products, markets and technology.

The survey also reports that just under half (48%) of UK manufacturers expect conditions within their industry to either moderately or significantly improve in 2021.

There are also indications of optimism in the construction sector, where insolvencies are below the overall average for all sectors, at 1.9% compared with 2.8%. The rate of temporary closures is also below the overall average at 9.6% for construction compared with 13.2% for all sectors.

In addition, CITB research shows that 83% of businesses were either fairly (47%) or very (36%) confident of surviving the economic conditions resulting from Covid-19, while only 5% were not very or not at all confident.

A recent report by VONNE on the key challenges facing the sector as a result of COVID-19 highlights the issue of resilience. Despite significant strength in terms of the flexibility and adaptability of organisations to date, there are concerns over long-term sustainability. In particular, many of the Government and charitable funds to support short-term survival in the VCSE sector will end in the current financial year, with no clarity currently about whether further financial support will be available in 2021/22. In addition, while the workforce takes pride in persevering through the challenges they are facing, staff and volunteer fatigue is a real concern.

The shift to home working has produced mixed results. For some businesses and individuals, working from home has brought positive benefits in time management, productivity, and flexibility.

For others, particularly those in rural communities, lack of broadband connectivity has been a problem. In addition, home working has resulted in increased isolation and mental health problems for some workers.

The pandemic has also highlighted the extent of digital exclusion in the North East, with many people unable to access the equipment or internet services required to access services digitally, as well as lacking the skills and know-how to do so. According to data from VONNE, it is estimated that around 38% of the North East population is digitally excluded and it is suggested that a comprehensive regional strategy is required to tackle this major problem.

Sector representatives report that the short-term impacts on North East businesses of EU exit are difficult to judge with confidence at this time.

As the Trade and Cooperation Agreement was secured only a couple of weeks ago, and many of the practical implications and ways of working are still to be resolved, it is too early to say what the impact will be.

In the short-term many North East businesses that may have been at risk of disruption appear to have avoided significant immediate impacts by stockpiling in advance of the end of the transition period.

It is anticipated that the impacts on businesses will become clearer in the coming weeks and months, the main concerns being the potential impacts on smaller manufacturers, food production businesses, and construction firms from disruption to supplies and dealing with additional paperwork and rules of origin.

Some sectors report that supply chains have already been impacted by EU exit, including construction and the food and drink sector.

In addition, it was reported that freight costs have increased, while availability of supplies has decreased, and some businesses do not have sufficient space or capacity to stockpile.

Opportunities and changes

Organisations across all sectors have demonstrated their ability to innovate and make positive changes to the way they operate.

This includes the development of new products and services; entering new markets; developing better and more efficient ways of working; and accelerating the pace of digital adoption.

Many parts of the hospitality sector have embraced changes in legislation and new ways of working that have enabled outdoor operations, which can add around 40% additional capacity for some businesses.

Once businesses are no longer required to implement social distancing, combined with this additional outdoor capacity, it will put them in a stronger position to bounce back.

It has recently been announced that the UK's first Gigafactory dedicated to the production of batteries for electric vehicles may open in Blyth within the next three years. It is expected that the factory will employ 3,000 people once fully operational and help create a further 5,000 jobs in the wider supply chain. Coupled with other announcements, including the Ten Point Plan for a Green Industrial Revolution and the National Infrastructure Strategy and Construction Playbook, this is contributing to a sense that there is a pipeline of projects with potential to stimulate investment and growth as the North East economy begins to recover.

The Make UK / PWC Executive Survey report highlights potential opportunities arising from EU exit, which will see the UK competing globally through its own independent trade strategy. Whilst it is expected that this will create challenges, it is also anticipated that it will provide opportunities to expand into new markets.

Around 27% of manufacturers expect that their exports to the US will increase in 2021, and this may be higher if a Free Trade Agreement (FTA) is agreed. In addition, 48% of manufacturers expect exports to South America to increase or stay the same, while 57% said that exports to the Asia Pacific region will either increase or remain the same.

There is a greater propensity for cycling and walking in the region, which began during the first lockdown and has continued since. This will have positive impacts for both the environment and personal health and wellbeing.

Looking ahead and preparing for recovery

Long-term planning is currently difficult for many businesses. There is an awareness that they need to adjust business models and assess future skills and workforce requirements. However, the ongoing challenges caused by further national lockdowns, as well as uncertainty over when they may return to more normal trading, means it will take some time before businesses are able to fully develop recovery plans.

Some businesses prepared in advance for EU exit while others planned to react when they knew the details of the deal. At this stage it is still too early to assess the potential impact of the trade agreement on individual sectors, or on the wider North East economy. Feedback suggests a mixed picture among businesses over whether they believe EU exit will have positive or negative impacts.

For example, the Make UK Executive Survey 2021 shows that a third of manufacturing companies believe the investment prospects for UK businesses will decrease following the EU exit, while 18% believe they will increase. In addition, just over a quarter of companies believe exports to the EU will fall, while 16% believe they will increase. The biggest risks anticipated by businesses are customs delays, the increased costs of regulation, and the risk of a major customer relocating out of the UK.

There have been some early indications of re-shoring activity as a response to EU exit, including some businesses planning to relocate some production activities back in the North East, or increasing their levels of domestic production.

Make UK feedback suggests that up to a quarter of manufacturing businesses intend to re-shore activity back to the UK in order to address weaknesses in their global supply chains, as well as to increase production and protect jobs and skills domestically.

Economic development agencies report a healthy pipeline of inward investment enquiries to the North East during recent months, across a range of sectors including manufacturing, digital, professional services, contact centres, and health and life sciences.

This provides optimism about the prospects for new investment and job creation as the economy begins to return to more normal conditions.

A key area of preparation for recovery in many sectors is training and skills development. This includes retraining and reskilling the current workforce for new jobs and new technologies; supporting staff who have been out of the workplace for many months to refresh their skills and knowledge; and bringing more young people into the workforce, particularly in those sectors where the current workforce is ageing.

Public messages during the pandemic about avoiding the use of public transport may have longer-term implications for passenger numbers.

It was apparent that even when restrictions were lifted over the summer of 2020, there were still high levels of concern about using public transport.

Once current restrictions are lifted, initiatives will be required to increase public confidence in using the transport system, particularly given the potential negative impacts of congestion and air pollution if car usage increases.

Current and future support

It is essential that current Government support for businesses continues until the economy begins to recover to more normal conditions. This includes grants, business rates relief, the VAT reduction for hospitality businesses, and the furlough scheme.

All are playing a crucial role in retaining the region's business base, which will be essential in delivering a strong regional recovery.

At both national and regional levels, there should be a distinction between the short-term support that is needed for immediate business survival, and the development of a more long-term and strategic approach to supporting economic recovery by helping businesses to adapt, invest and grow.

A wide range of cultural venues and festivals are calling for support in the form of event cancellation insurance. Confidence across the sector is low and organising performances and events for summer 2021 and beyond is high risk when there is no guarantee they will be able to go ahead. The current lack of insurance is placing significant restrictions on the sector in terms of future planning and will make the transition to reopening and recovery very difficult.

The culture, tourism and hospitality sectors require investment both nationally and locally to stimulate demand, so that customers are there once businesses are able to open. If the North East is to compete as a region with other parts of UK it requires a large, co-ordinated promotional effort to stimulate demand.

There is a feeling that the current situation offers a major opportunity to raise awareness of a relatively undiscovered region and to capitalise on the significant outdoor spaces and attractions it offers.

In the coming months there should be a focus in the North East on supporting self-employment and business start-up, to ensure that wide-scale redundancies can be channelled into the growth of high quality, sustainable new businesses.

Digital adoption requires public intervention as it is a clear area of market failure. While some businesses have been quick to adopt digital ways of working in response to the pandemic, others have been slow to adapt, and this is weakening their resilience and growth potential.

Additional support is needed for those businesses that are still some distance from digital adoption, to help them understand how it can support their growth, efficiency, and productivity.

More clarity is needed urgently about the UK Shared Prosperity Fund.

In the 2014-2020 ESIF programme, the North East LEP area allocation amounted to over £437m, which has been invested in economic infrastructure, business growth, innovation, and skills. Many sectors are keen to see an equivalent replacement, as well as continuity and consistency of funds as they transition from ESIF to UKSPF. This will be a crucial source of investment in supporting economic recovery in the region.

Apprenticeships and the wider training and recruitment of young people to the manufacturing and energy sectors is vital.

In the drive towards net zero there needs to be co-ordinated investment in education provision to grow the workforce. There also needs to be intelligence and guidance for the education sector to ensure it is delivering provision that meets the emerging technologies and future skills needs of manufacturing and energy businesses.

The VCSE sector is very keen to forge closer working relationships with the North East LEP and the Economic Response Group to set out how it can respond and contribute to the regional recovery. The VCSE can make a significant contribution to the recovery in a number of key areas, including digital inclusion, skills and employment, and wellbeing.

Observations and implications

In the short term there is a need to focus on supporting businesses to survive the impacts of the third national lockdown, particularly in the sectors that have been most severely impacted. The ongoing challenges and stop-start nature of operating have had a significant negative impact on both the financial and mental resilience of these businesses.

The Government should extend aspects of business support for as long as possible, in order to give businesses time to recover. This includes an extension of business rates relief and VAT reductions, as well as the consideration of new forms of support such as event cancellation insurance for the tourism, culture and hospitality sectors.

Support is required for the workforce across all sectors. This includes retraining the existing workforce to ensure they have the skills needed to remain relevant in the labour market; bringing more young people into the workforce; and providing support for people who have been made redundant to update their skills and secure alternative employment. In addition, it includes support for those returning from furlough, both to update and refresh their skills and to address any wellbeing problems they may be experiencing after a significant period out of the workplace.

In the longer term, there needs to be a focus on upskilling the workforce and supporting businesses to take advantage of the opportunities arising from planned government investments and strategies, such as the Green Industrial Revolution Ten Point Plan and the National Infrastructure Strategy, among others.

This includes upskilling the workforce to meet the new skills needs of a greener, more digital economy.

The pandemic has disproportionately affected the North East's most deprived communities and further exacerbated inequalities in the region. To ensure there is long-term and sustainable recovery for the entire region, initiatives need to be implemented to ensure these inequalities are addressed. This includes tackling the problem of digital exclusion, as well as ensuring that the creation of more and better jobs includes a focus on entry level jobs that offer security, a living wage, and opportunities for progression.

Recovery and support plans should be developed for individual sectors, setting out targeted, short-term support measures, as well as articulating the longer-term role each sector will play in the region's economic recovery, and the targeted investment needed to support this. Recovery plans should address the sector specific recommendations identified in the sector reports.

Investment in regional economic infrastructure should be accelerated, including digital and transport infrastructure; major projects; and investment to raise the region's profile and stimulate demand for the tourism, culture and hospitality sectors. This will provide a direct economic stimulus, as well as providing the infrastructure the region needs to attract investment and achieve a strong and sustained recovery.

It is too early to judge the impacts of EU exit on the region's businesses. Early indications suggest a mix of positive and negative effects, including potential reshoring of some jobs to the North East and new trading opportunities with global markets, set against potential challenges including supply chain disruption and the additional costs of adjusting to new regulations.