NELSIP
North East
Local Skills Improvement Plan

delivered by the
NORTH EAST AUTOMOTIVE ALLIANCE

Funded by UK Government

Contents

This Local Skills Improvement Plan has been approved by the Secretary of State in line with the approval criteria set out in the Skills and Post-16 Education Act 2022, and in accordance with the LSIP statutory guidance.

June 2023

1. Introduction

The North East Local Enterprise Partnership (LEP) Strategic Economic Plan (SEP) seeks to "drive forward a modern, diverse, and entrepreneurial economy" that is "agile in the face of change and that will deliver economic benefits to residents and businesses across every part of the region." It includes an ambition to create "more and better jobs" – targeting an increase of 100,000 jobs in the period from 2014 to 2024, with 70% of those being "better jobs" – defined as managerial, professional, and technical roles. Progress towards this ambition has been underpinned by the growth in "better" jobs, compensating for the loss of other jobs, and requiring a higher qualified workforce, leading to higher income levels that drive a stronger regional economy.

The pace of innovation and adoption of new technologies is accelerating, and creating more opportunities for inward investment, economic growth, and high-value jobs. Digitalisation, electrification, automation, and decarbonisation (Net Zero) are creating highly skilled jobs across the UK and the North East. Future skill requirements need to be anticipated and prioritised to enable local investment opportunities and realise improved productivity and regional growth. An ageing population and developments in Health & Life Science are also driving demand for STEM skills.

The North East Local Skills Partnership (NELSIP) region, encompassing County Durham, Sunderland, Gateshead, and South Tyneside, and a combined workforce of over half a million people, has shifted away from an industrial heritage of coal mining and ship-building, developing a more diverse economy with new strategic capabilities that have significant potential to revitalise the regional economy. Challenges remain though. The region attracts relatively low levels of Research and Development (R&D) spend, lags other regions on "better" jobs and higher levels of qualifications, and has relatively high levels of economic inactivity, social deprivation, and ill-health. Employers are faced with trying to attract and develop new skills and capability to exploit opportunities for productivity and growth afforded by new technologies in an exceptionally competitive post Brexit/Covid-19 labour market, whilst managing the challenges of an ageing workforce, insufficient supply of higher-level technical skills, and a complex skills system.

The NELSIP is grounded in the context of the local economy and the SEP for the region. It focusses on the current and future technical skill requirements of the

NELSIP focused on 5 high impact sectors

Digital.

A capability that is transforming most sectors. The rate of digitalisation is accelerating, based on the proliferation of electrical devices, electrification and technical progress in computing hardware/software and cloud networking capability. This is enabling various forms of data analytics and science that is supporting artificial intelligence, machine learning and augmented/virtual reality. Digitalisation underpins operational transformation and sustainability in most sectors. Digital skills will be required in future work environments, and the North East will need to accelerate the development of more advanced digital capability, to avoid falling behind the rest of the UK.

Advanced Manufacturing.

An established high value sector operating in automotive, aerospace, semiconductors and pharmaceutical, with significant growth identified and committed in the region. These investments arise from demonstrated global competitiveness, the adoption of emerging technologies, sustainability drivers, and the potential for electrification and industrial digitalisation.

Construction.

Environmental legislation will transform the industrial and domestic built environment, initially through retrofit, but eventually through modern manufacturing techniques. Advanced sustainable construction methods will change working practices and require new skills, other skills will likely be displaced. The construction sector is fragmented and historically slow to adopt new technologies and manufacturing methods. Proactive employer engagement will be needed to anticipate and pace the alignment of workforce capability with future requirements.

Health and Health Science.

An ageing population continues to place new and increasing demands on health provision whilst resources are constrained. Improved prevention measures, diagnosis and monitoring, tailored treatment, and health care are fundamental and are digitally enabled. The adoption of new technologies, progress in medical science, and digital solutions transform the technical skills which support the science backbone of the NHS. They are complemented by regional capability in aseptic pharmacies, pharmaceutical manufacturing, and advanced research capability in life-sciences.

Transport & Logistics.

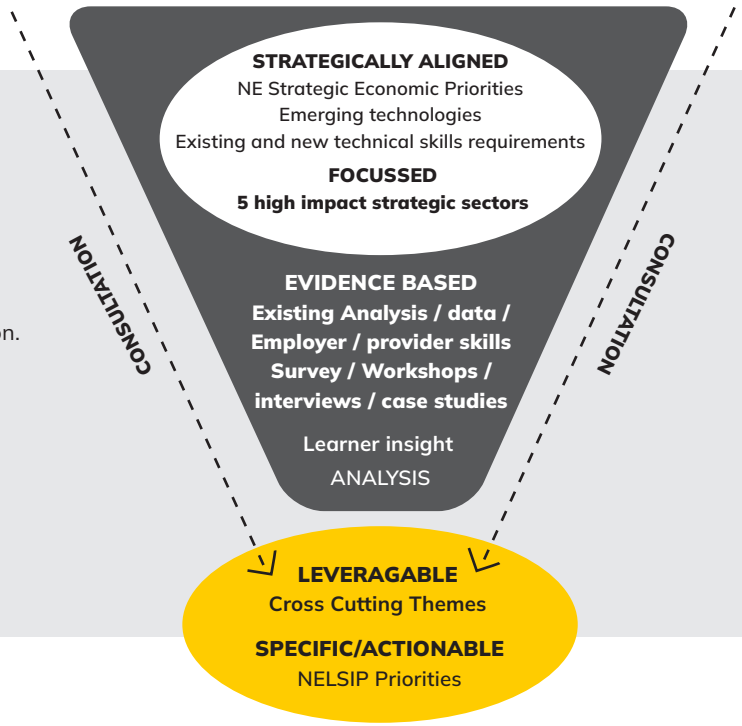
Growth and a complex geography need effective supply chains. This requires end-to-end digital visibility that optimises productivity, whist minimising environmental impact. Developing this capability in region enables further inward investment ensuring global connectivity of supply chains, responsiveness, resilience, and a sustainable operating footprint.

NELSIP - A Process and a Report

The evidence based LSIP is informed by extensive consultation which includes more than 1,800 touch-points with stakeholders in the region, including employers, employer bodies, education and training providers, students, and other key stakeholders. It is shaped by the strategic economic priorities for the region and a consideration of emerging technologies and sustainability and their systemic implications for future skills requirements. It identifies cross-cutting themes that will require action and can achieve high-impact through leverage across the high-impact sectors, as well as identifying specific actionable priorities, both at a sector and regional level.

NELSIP - A process that...

- Is grounded in the North East strategic priorities.
- Is focussed on high impact outcomes.
- Is employer and evidence based
- Engages all stakeholders through extensive consultation.
- Highlights transferable cross cutting themes and underlying changes required.
- Identifies specific actionable priorities.
- Defines stakeholder accountability and responsibility and identifies consultation and information rights.
- Provides a robust planning base for successful change.



What is the **NELSIP** seeking to achieve?

The NELSIP seeks to make a material contribution to the SEP through actions which enable sustainable economic growth through a workforce which is Productive, Sustainable, Resilient, and Inclusive.

A Productive Workforce

A North East workforce that is equipped with the technical and soft skills needed to improve productivity, competitiveness, and deliver future growth.

A Future Workforce

A sustainable supply of skilled new employees to support growth and attract new investment, who are work-ready to perform higher value work.

A Resilient Workforce

A workforce with core technical skills and behaviours, enabling the agility and flexibility to routinely embrace the adoption of new technologies and emerging changes in the working environment.

An Inclusive Workforce

Increasing skills availability through the offer of compelling jobs, improving participation of under-represented groups, and removing barriers preventing access to better jobs.

These perspectives should inform how the success of the NELSIP is measured and monitored through implementation and form the basis of how the impact of the LSIP is assessed in the longer term.

Part 1 - LSIP Priorities

2. Local Context

The NELSIP Region.

The geographic scope of the NELSIP, defined by the Department for Education (DfE), is the 4 local authorities immediately South of Tyne – Gateshead, South Tyneside, Sunderland, and County Durham. The region is home to around 1.1 million people, with a workforce of c. 518,000 across a diverse economic region which spans urban, rural, and coastal communities (ONS, 2023). County Durham covers the largest geographic area and accounts for 45% of the workforce in the region. Migration into the region is relatively low. The proportion of the population that is economically active is low relative to the rest of the UK, and economic activity levels have declined in the past decade.

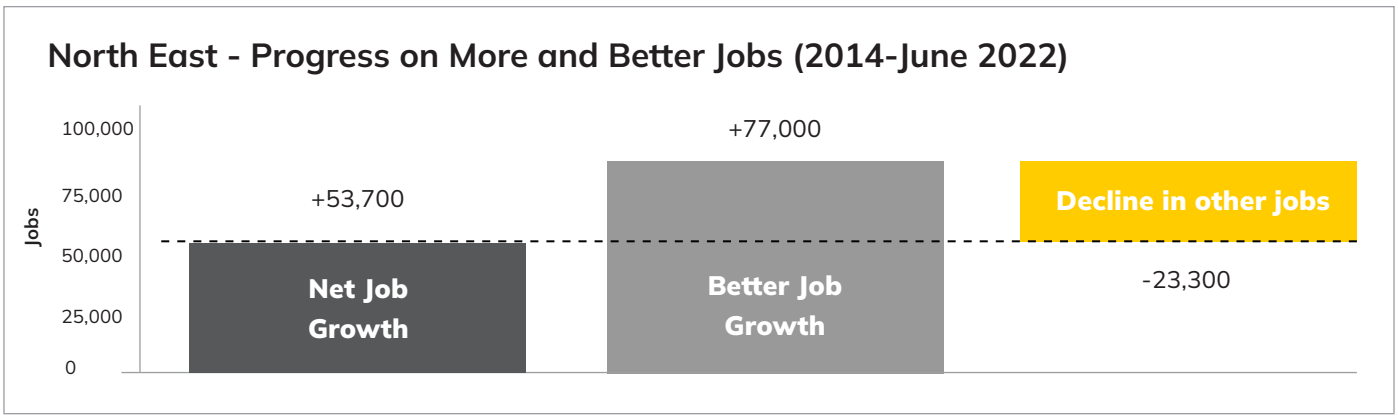
SEP for the region is defined by the NELEP. A new North East Mayoral Combined Authority (NEMCA) will come into effect from May 2024, which will encompass the local authorities within the NELSIP region and those currently served by the North of Tyne Combined Authority. The DfE has confirmed it will seek to align the LSIP specified area to the NEMCA within the first year of the NEMCA assuming devolved authority for the Adult Education Budget (AEB). The region currently borders two other NELSIP regions, the North of Tyne and Tees Valley, and there is significant workforce mobility across the regions and employers stress the opportunity for a more integrated approach to workforce and skills across the broader region.

NELSIP Employment (Source: ONS 2023)

Local Authority	**LSIP Region Employment**	**% Total**	**Proportion of Population Economically active, %**			**UK average 57.2 %**
	518,400		**2021**	2011	Change	2021 VS UK
County Durham	235,700	45.5%	**51.2**	53.8	-2.6	6.0
Gateshead	94,500	18.2%	**54.1**	56	-1.9	3.1
Sunderland	123,700	23.9%	**51.8**	53.6	-1.8	5.4
South Tyneside	64,500	12.4%	**51.5**	53.1	-1.6	5.7

Economic Context.

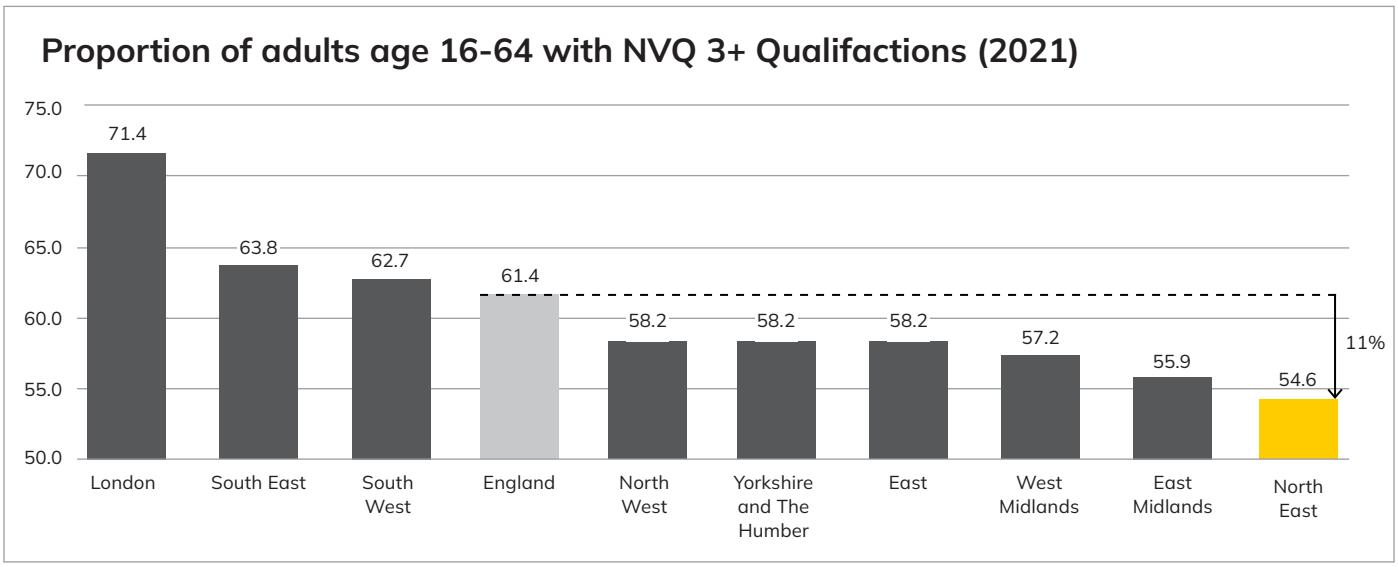
Growth in better jobs is driven by employer requirements for more higher-level technical skills. The NELEP strategy targets the creation of "more and better jobs". The net growth of 53,700 jobs in the region since 2014 reflects progress, an increase of 77,000 "better" jobs off-setting a reduction of 23,300 other jobs. The job market in the region has tightened considerably in the period following the Covid-19 pandemic – the volume of job postings in the North East relative to pre-pandemic levels has consistently been higher than any other part of the country (Indeed, 2023).



Source: NELEP Evidence hub

However, the region continues to lag the rest of the country regarding the proportion of better jobs, with 42.6% of overall jobs in the North East being Managerial, Professional or Technical versus a national average of 51.9%. Low levels of R&D investment is a contributing factor - in terms of R&D spend per head the North East attracts half the national average, (ONS, 2021,). This matters because R&D activity leads to innovation, which enables productivity and creates well-paid jobs. Clusters of R&D create a self-reinforcing employment eco-system, where innovation requires and is re-enforced by a strong supply of technical skills, sustained by long term professional career opportunities in the region. The strategic drivers of Sustainability, Electrification, and Digitalisation and associated inward investment, provide new opportunity to accelerate the changing mix of work and create more high-value jobs in the North East. There is a significant risk that in the absence of a credible approach to skills, R&D activity will migrate to other parts of the UK where business leaders perceive that the ongoing availability of skills is more robust and can support growth commitments.

Higher value jobs generally require higher qualifications, typically at Levels 4-6, with Level 3 qualifications providing a key gateway to higher technical qualifications and better jobs. However, levels of advanced and higher educational attainment in the North East are relatively low. The region has the lowest level of graduate employment, equivalent to 143,000 fewer graduate jobs than the UK average, worth circa £1/3bn of lost regional income a year (IFS, 2020). The proportion of Level 3 qualified adults is the lowest in the country, and the rate of progression from Level 2 to Level 3 by age 19 is 10% below the national average (DfE, 2021). GCSE Maths & English attainment is in line with national levels at age 16, but 30% of each annual cohort are still without a Level 2 qualification in Maths & English by age 19. Higher qualifications command a significant pay premium. In Engineering and Manufacturing, those with Level 4/5 qualifications by the age of 25-30 secure a median pay premium of 30% versus those with Level 3 qualifications and 60%+ over those with Level 2 qualifications at the same age (Unit for Future Skills, 2023). Roles requiring digital/IT skills attract a similar premium.



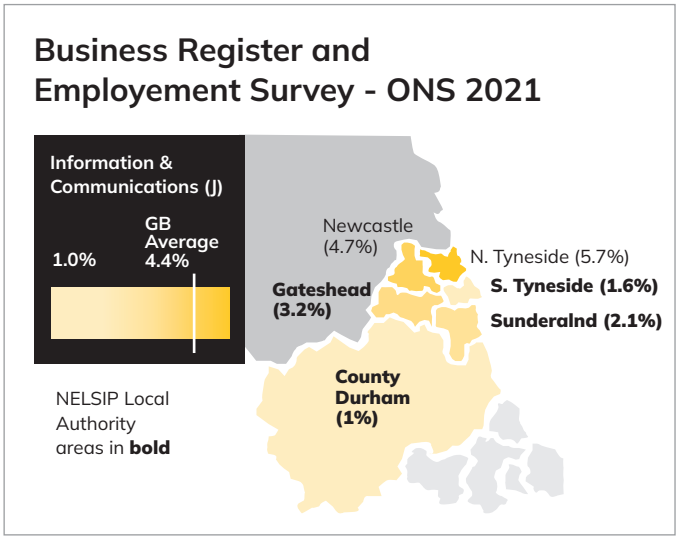
Source: ONS 2023 – Annual Population Survey

Digitalisation.

Digital skills are increasingly required for better jobs and improve regional economic resilience; jobs requiring higher digital skills reduce the risk of job elimination due to automation by 59%. The digital-sector workforce in the NELSIP region is low, representing 1.5% of the total workforce, compared to 4.4%. nationally (ONS 2023).

The North East digital sector is concentrated around Newcastle. In the LSIP area c 70% of the specialist digital workforce is in Gateshead (3.2%) and Sunderland (2.1%).

All jobs will require basic digital skills, and higher skilled jobs will also require occupational specific advanced digital skills. One-third of the population in the region currently has low levels of digital engagement (IPPR, 2021).



Social context.

The region has some very significant social challenges. It has the highest proportion of households in the country which are deprived on at least one dimension (54.6% - ONS), life expectancy is below the UK average for men and women, high levels of economic inactivity, a high proportion of children eligible for Free School Meals (28.5% versus national average of 22.5%), and the highest rate of child poverty in the country (38%) (North East Child Poverty Commission, 2023).

These issues reflect longstanding economic and social challenges which are beyond the scope of the LSIP, but it is important that the LSIP recognises this context and prioritises social inclusion. Enabling wider access to vocational qualifications will benefit employers and the economy by increasing the pool of qualified workers, and it will also provide wider access to good jobs and careers that can help people contribute more to the local economy and enable improved opportunities for future generations.

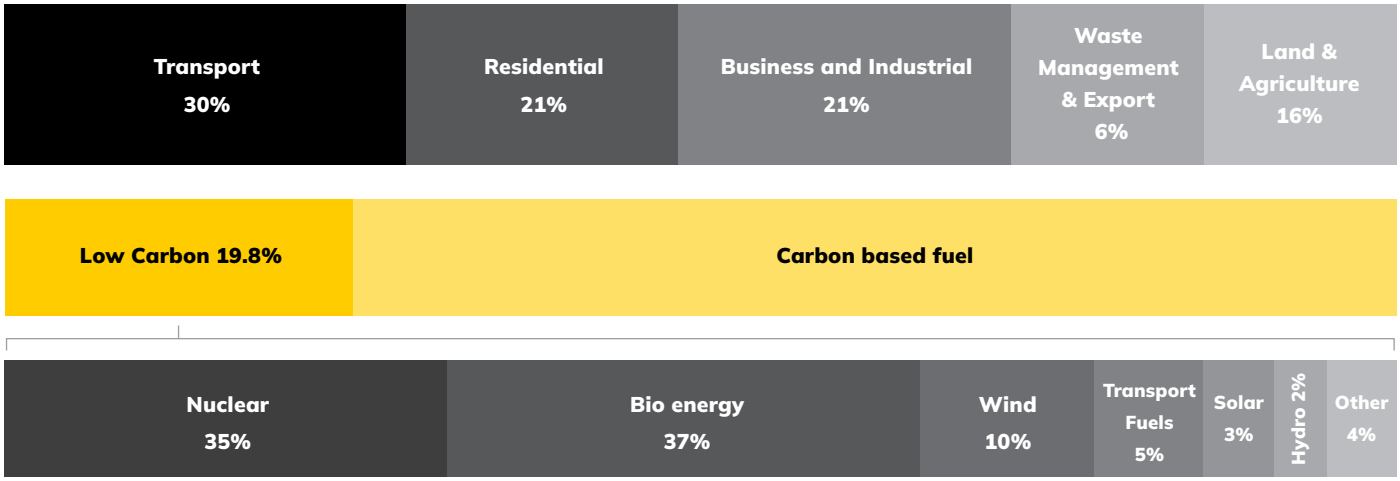
3. Strategic Drivers

Sustainability.

Reduced carbon usage is essential to achieving net zero emissions targets. Transport, residential, and business and industrial users account for over three-quarters of the UK 454.8 million tonnes of end user emissions each year. Sustainability is now a business imperative driven by commitments to a 50% reduction in Co2 by 2030 (Intergovernmental Panel on Climate Change), and minimising environmental impact arising from product design, manufacture, product/service usage and disposal are recognised as central to high performance. Regulation and corporate Environmental, Social & Governance (ESG) commitments are driving requirements to reduce emissions. Many businesses are responding to investor and customer calls by accelerating decarbonisation of their products and processes.

The electrification of electrification of transport and infrastructure/facilities helps avoid direct carbon emissions, however for the benefits to be realised there must be a supply of clean electrical power. Presently only 20% of UK power generation is generated through low carbon fuels.

76% of end users emissions Total UK - 454.8 Million tonnes of carbon dioxide emissions equivalent



The numbers do not add to 100% due to rounding

Source: UK ENERGY IN BRIEF 2020 - BEIS

Green Jobs.

The UK Governments Green Jobs Task Force (2020) define a 'green job' as a broad term used to define a job that either directly contributes to, or indirectly contributes to, achieving net zero emissions and other environmental goals. Four of the five high impact NELSIP sectors are explicitly included as key sectors by the Green Jobs Task force. The Task Force specifically identify Automotive and HVAC as sectors experiencing growth, driven by climate targets and legislation. The construction energy-efficient retrofit sector is also identified as expecting to grow in the short to medium term.

Electrification.

Transport, business and industrial processes, and residential account for 3/4 of UK carbon emissions.

Although the impact of electrification is very much cross-sector, the UK Government assumes that, in the near term, most value will be derived from the electrification of automotive, due to market dynamics and high volume. The IEA Global EV outlook 2020 estimates 140M electric/hybrid vehicles by 2030 and a global market of £233Bn in electrification technologies. The value of power electronics, machines and drives (PEMD) is approximately £9Bn, and the North East has 20% of Power Electronics spend in the UK, accounting for £72M pa. The North East Automotive Alliance (NEAA) suggests there is a potential for £3.7bn incremental economic activity for the North East based on current known innovation and growth opportunities, providing circa 12,000 skilled jobs, including 5,000 technicians.

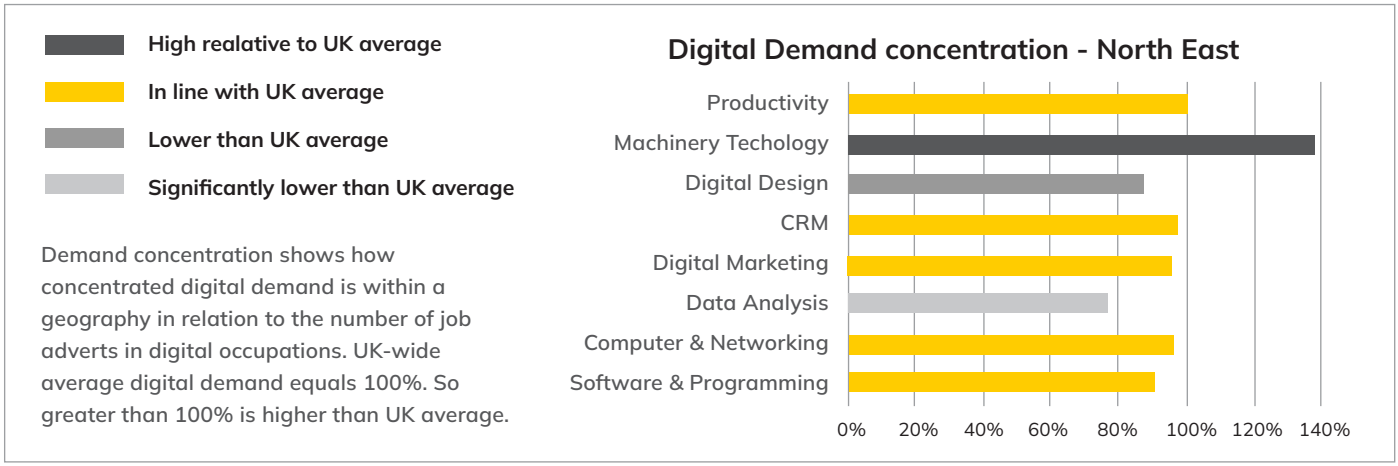
The Driving the Electric Revolution industrialisation centre (DER-IC) in Sunderland is focused on supporting the growth of supply chains for these technologies. The growth in innovation, product development, test validation, prototyping and scale-up provides the region with an opportunity to move up the value stream and build on an established Drive capability that accounts for circa 60% of the value chain. The NEAA estimates that 18 of 22 of the regions automotive R&D centres are involved in electrification, contrasting more generally with the low levels of R&D investment in the region. Significantly, the North East attracts only half the UK average level of investment in R&D.

Digitalisation.

Digitalisation is transforming all sectors, and redefining many. Commercial models are evolving into cloud-based services that offer professional consulting, shared services, online retail, and other streamed content, as well as other leisure activities, such as gambling and gaming. They rely on data on product usage patterns leading to marketing and upselling. Products are merging with services, and subscription replacing ownership. New product introduction, upgrades and augmented services can be enabled remotely through software configurations applied to installed hardware for relatively little marginal cost.

Digitalisation is central to the NELSIP since it is a key enabler to better jobs. However, demand for advanced digital skills in the NE is trailing the rest of the UK, with the exception of skills relating to Machinery Technology, reflecting the relative density of advanced manufacturing in the region. This requirement should be reflected in skills development, but it should also be recognised that there is a link to a shift in higher value product development that typically requires advanced digital skills capability in areas such as Software & Programming, Digital Design, and Data Analysis.

Digital intensity of advertised vacancies in advanced digital skills



Source: No Longer Optional: Employer Demand for Digital Skills, June 2019. Burning Glass Technologies for UK Government - Department for Digital, Culture, Media, and Sport (DCMS).

Advanced digital skills:

- Improve regional economic resilience; jobs with a higher digital skill requirement reduce the risk of job elimination due to automation by 59%.
- Are required for career progression into higher level jobs, enabling a greater proportion of the workforce to be employed in better jobs,
- Improve regional income levels – digital skills attract a significant wage premium over jobs that do not require advanced digital skills, increasing with the skill level of job, ranging from +12.7% at lower entry level/level 1-2, +22% for level 3-5 technician roles and +33% for professional and graduate occupations.

Workforce Implications.

Sustainability, electrification, and digitalisation are driving changes in the work that is done and how it is done, with implications for skills that are required, illustrated for the five LSIP sectors below. An ageing workforce and high levels of economic inactivity are restricting the available labour force, driving increasing wage pressure and automation across all sectors. Sustainability drivers for Health & Health Science are complex and the NELSIP scope is limited to consideration of technical skills in Health provision & pharmaceutical manufacturing. It is recognised climate change and health are inextricably linked, and the NHS has an objective to be the world's first net-zero Health service.

	Digital	Advanced Manufacturing	Health & Health Science	Construction	Transport & Logistics
Strategic Drivers	5G Connectivity. Cloud data storage Data analytics/ science SMART optimisation Visualization Augmented decision making Virtual/augmented realities Machine learning/AI	Industrial Digitalisation Digital twins/ machine optimisation Increasing automation & clean room activity Rapid new product introduction/ smart Pharmaceutical Zero lifecycle carbon imprint Electrification of products and subscription services.	Ageing population with complex needs vs cost – shift to integrated care Digital Transformation Electronic Patient Records. Medical devices. monitoring. remote digital consultations. Digital wards. Analytics & data science Technical advances in Medical Science - earlier diagnosis and more affordable treatment.	Retrofit Environmental assessments EV and PV infrastructure. digital devices to improve productivity at all job levels. SMART Building services/HVAC	Fleet optimisation/ decarbonisation Net Zero impact Reduced supply chain miles Automation/ Smart Warehousing Supply Chain visibility /resilience
Skills Implication	Base digital skills required by all work				
	Increase in specialist digital skills. Rate of digital adoption drives skill demand. Ongoing refreshing of skills as software and platforms change. Digital are Better & well-paid Jobs - 20-30% premium	Automation driving increasing base skill requirements. Significant upskilling and reskilling required. Increase in higher digital technical skills, - analytical and data science. New product technical skills Complex facilities require higher skilled technicians	Rate of technological adoption drives higher digital specialist skills. Shift to integrated care requires cross disciplinary skills. Workforce resourcing plan-needs to support transformation. New technical career paths needed for healthcare to build local skills & improve organisation capability.	Traditional skills need replacing – ageing population. Upskilling and reskilling for retrofit new technologies. Uncertainty regarding pace of adoption of modern construction methods	Technicians to support SMART facilities. Skills to support digital logistics and operational real time end to end tracking. Emerging skills to support environmental and data analytics.

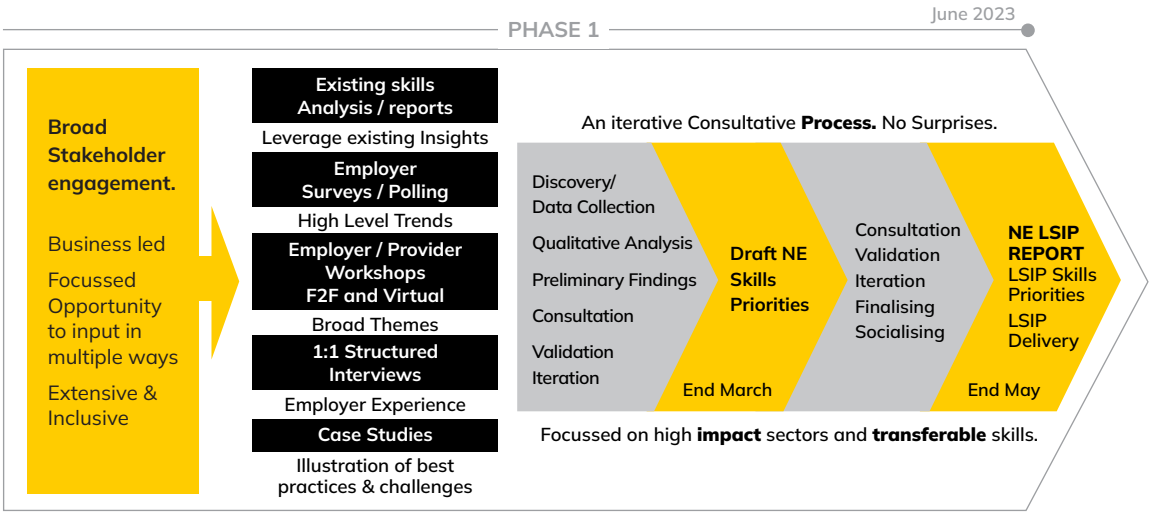
These strategic drivers are converging to drive investment opportunities in the North East, which are creating high-value jobs requiring a strong supply of technical skills. Cross-sector investment in areas such as Life-sciences, Off-Shore Renewables, SMART Warehousing, Electric vehicle and battery manufacture, and energy efficient Retrofit are all increasing demand for a workforce with technical and digital skills, and require a regional cross-sector response.

4. **NELSIP** – An evidence based approach

The NELSIP approach is evidence based and focuses on the skills requirements of employers in five high impact sectors that align to the regions strategic economic priorities. Collectively, the sectors employ over a third of the regional workforce.

The NELSIP analysis is underpinned by extensive stakeholder engagement involving over 1,800 occasions where individuals have been directly engaged in the development of the NELSIP across different forums. Employers participated in over 749 instances of direct engagement regarding their skills needs, and this input supplemented existing analysis and secondary data, and previous surveys and workshops. National/regional employer bodies were engaged to ensure alignment with any national strategic priorities for each sector.

The NELSIP involved the extensive engagement of employers, providers, and learners. The skills priorities were identified through an iterative process that provided opportunities for consultation across a broad group of stakeholders throughout.



Multiple methods of data collection were used and combined to maximise access to employer input for each of the five sectors.

Type of Engagement	Numbers involved	Description
Employer structured Interviews	66	Structured interview lasting an hour
Surveys/Polling	394	NELSIP Survey
Workshops	92	Dedicated Workshops enabled by ERBs
Other	197	Skills discussion at established employer forum
Total	**749**	

Five areas of enquiry were used to provide a consistent approach to data collection across the engagement.

Focus	Areas covered
Employer Context	No. of employees, nature of business, location, business drivers
Current Skills Needs & Gaps	Understanding of difference between hard to fill vacancies and technical skills gaps arising from a shortage of skills, specific examples/ experience
Anticipating Future Technical Skills Requirements	Level of maturity of workforce planning, link to business strategic priorities and anticipation of future capability and implication for technical skills and level of forward planning and creating pipelines
Building Skills	Extent of commitment to growing and developing own staff through education and training including apprenticeships
Acquiring Skills	Level of reliance of acquiring skills through hiring or use or reliance on third party contractor/agency or foreign nationals

The approach provided.

- a contextual understanding of the employers' skills needs, now and in the future.
- an understanding of the extent of employer workforce planning activity.
- understanding the organisation's experiences in addressing their skill needs.
- an opportunity for a dialogue to understand underlying systemic issues.

Over 300 employers responded to the initial NELSIP employer survey, including a mix of sectors and size of organisation. Nearly 50% of those employers responding employed fewer than ten people. Half the employers report skills shortages are impacting operating costs and 40% report its affecting competitiveness and leading to outsourcing. 75% of employers say existing employees are required to do more and skill shortages are impacting customer quality, order fulfilment and impacting the introduction of new products and services. Only a third of employers say they have a robust skills plan which identifies their requirements and informs actions they take to train, hire, and develop their staff.

The definition of technical skills in the NELSIP includes those practical occupational skills required to do a job, but also includes the digital skills that are increasingly essential in all jobs. Transferable behavioral skills are also considered. They may not be technical skills in themselves, but according to most employers these skills are key in determining how quickly and effectively new employees deploy their technical occupational skills, and adapt to ongoing change in working practices. Nearly two thirds of employers (64%) regard digital skills as important or critical to their business, and over 1 in 5 report a shortage in data analytics skills. 7 out of 10 employers cite behavioral skills as critical or important. Leadership, critical thinking and problem solving are identified as key by a third of employers. Work values and ethics, and how employees present themselves in a work environment are all highly valued by employers.

Engagement with Providers, Learners, and other key local Stakeholders

This broader engagement provided valuable insights and supported the identification of cross-cutting themes relating to different sectors, and enabled the identification of cross-sector and sector-specific NELSIP priorities and actions.

Provider Forums/ workshops	254	17 facilitated sessions, including open subject forums & provider leadership sessions.
Provider 1:1 Interviews	67	Specific sessions with Principals and leadership teams
Apprentice/ school events	18	Polling at open evenings
Student Poll	683	Polling facilitated by local FE colleges with 16-18 Students studying relevant subjects
Other Stakeholders - interviews	19	Local Authorities, HE, NELEP, DWP/JCP etc.
NELSIP Programme Board	46	NELSIP Board members

Six high level LSIP priorities have been identified as part of the **NELSIP** development process.

1. **Provide essential digital skills required by all learners at the appropriate level, including upskilling & reskilling support for employers and adult learners and ensuring a work-ready supply of specialist digital skills.**

2. **Align 16+ technical education and training provision to ensure the key technical skills required by the five LSIP sectors are prioritised.**

3. **Increase the supply of level 3+ technical skills to meet current and future regional requirements.**

4. **Collaborate to deliver key technical skills for regional growth.**

5. **Employer focussed - enable all employers, including SMEs, to identify their technical skill requirements, and access high quality technical skills development for their current and future workforce.**

6. **Prioritise Social Inclusion – aligned approach to enable those from under-represented and disadvantaged groups to develop the skills needed and provide the support required to remove barriers to access good jobs and careers.**

5. Summary Evidence from five Strategic Sectors in the North East

This section provides a high-level summary for each of the five high impact sectors considered in the NELSIP, outlining what is currently happening in the sector with regards to technical skills, what should be retained, what changes will be needed, and the potential impact of those changes.

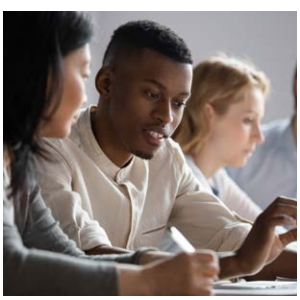
There are several common requirements that cut across these sectors and are not necessarily detailed for each sector within the sector summary. **These include:**

Digital skills are critical to the region and are no longer an option in the workplace. Basic digital skills are now an essential requirement for most jobs, as electronic devices are now integral to processing information and work in all sectors. More advanced digital skills are required to leverage technical skills in higher level roles, enabling productivity and innovation.

Foundation numeracy and literacy skills are becoming increasingly important in more digital workplaces and are required to enable progression and qualification for higher-level jobs.

Transferable behavioural skills (or soft/employability skills) are key to helping people interact with others in the workplace and enabling the effective deployment of technical skills. Employers want new entrants to be work-ready and have values and behaviours that enable them to adapt and continue to be effective as the workplace changes over time.

Emerging technologies and sustainability are increasing the importance of higher-level technical skills, which enable innovation, the adoption of new technologies, and productivity. In a tight employment market employers are alert to the importance of "growing their own" talent, but the supply of Level 3+ technical skills is insufficient to support growth.



Creating a compelling proposition that attracts people to jobs and careers in the sector. Long-standing traditional perceptions of some sectors can present a barrier to attraction, and greater emphasis on positive career opportunities associated with sustainability and digitalisation, plus well-informed aspirational vocational career guidance will be important.

Digital.

Sector Profile

Around 8,000 employed in specialist digital sector in the region, distributed unevenly across the region with 70% located in Gateshead and Sunderland. Employment is still relatively low - 1.5% of workforce versus national average of 4.4%, but adjacent to areas of higher density (Newcastle & North Tyneside). Employers in both public and private sector and working in shared services, consultancy, and gaming and gambling software. An increasing number of specialist SMEs are providing digital services, and many are growing rapidly. Software development roles represent one-third of sector job demand, associated with applications, cloud migration, and increasingly cyber-security and infrastructure. Additional demand for higher-level digital skills exists within other sectors – 59% of Level 3-5 jobs require higher digital skills. Data analysis/engineering is an emerging requirement in most sectors. Regional demand is relatively high for skills in machinery technologies, but demand for other advanced skills is still low relative to other regions. Focussed support on sector growth is provided through Sunderland Software City and the Digital Catapult. Digital jobs, are typically better jobs and command a wage premium of 20-30%, but workforce diversity is limited with only a quarter of Digital roles held by females and the pipeline in training is even less representative.

What is currently happening?

- Education levels for entry-level roles in the digital sector are typically Level 3+. Relatively few sector entrants progress through vocational apprenticeships (8%), and supply is more likely to be from graduate recruitment (20%), self-taught (21%), or transfer from another sector (18%). (Sunderland Software City, 2022)
- A lack of relevant professional experience is a key barrier to entry for those seeking access to jobs in the digital sector, which often specify 3-5 years of experience as a prerequisite. The prevalent client billing model limits scope to train or absorb those who are not directly contributing.
- Hybrid-working is common and a key sector attribute, however it reduces work experience opportunities and enables employers to recruit those with experience from outside the region,and drives local wage inflation as a result of London and other regions competing for North East digital talent.
- Provision of advanced digital skills has increased in recent years – now annually around 800 16-18 learners on Level 3 programmes in the region, and 1,200 apprentices on Level 3-5 programmes. (Vector, 2023)
- The scarcity of higher-level skills and wage premium, compounded by the pace of technological change in the sector makes it hard to recruit and retain high quality FE teaching staff.
- Digital Skills Boot Camps provided a significant number of learners with access to short flexible modular Level 3-5 equivalent programmes in priority areas identified by employers. High take-up includes data skills/engineering, digital marketing, interactive real-time 3D, and cyber-security. Around 40% progress to new roles within the sector – prior experience often cited as a barrier to those who don't. Flexibility required for Boot Camp delivery can present challenges to some FE Colleges.
- Some larger employers are investing in degree apprenticeships in Digital, often seeking to extend access by limiting emphasis on prior experience. Delivery models for higher apprenticeships that recognise the work/learning commitments of the participant are important.
- Made Smarter is driving advanced digital technologies, enabling the manufacturing businesses and their supply chain to innovate, create new opportunities, technologies, and skills to boost productivity and create the high-value, highly paid jobs of the future.

What needs to be retained?

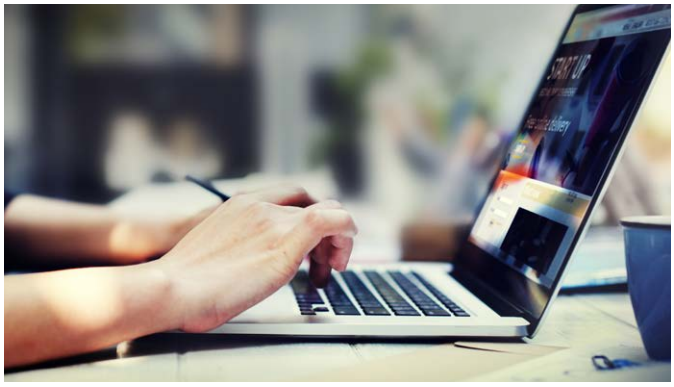
- Maintain capability to deliver short modular programmes, and ability to tailor delivery to support multiple channels (e.g. upskilling/reskilling), potentially leveraging Boot Camp model.
- Development of employer engagement through Sunderland Software City.
- Strategic focus on digital skills as a transformational enabler.

What changes are needed?

- The development of a sustainable teaching model that leverages regional capability, through HE/FE partnership and potential employer participation.
- Mechanisms to develop standards and curriculum in response to changing platforms/technologies.
- New approaches to engage employers in providing work-experience, and bridge the experience gaps identified by employers.
- Mechanisms to attract & engage more under-represented groups into Digital learning and careers.

What are the potential benefits?

- Development of strategically important growing sector providing access to high-value jobs.
- Provide confidence to potential new Digital investors.
- Development of very transferable high-level skills which will enrich other key sectors.
- A sustainable delivery model that mitigates risk of individual providers competing for scarce teaching resource in a very competitive market.



Advanced Manufacturing.

Sector Profile

Employing 57,000, the largest industrial sector in the region (ONS, 2023). Global capability in lean manufacturing, production of vehicles, pharmaceutical, and aerospace machining and component manufacturing. A small but growing high-value space cluster is emerging in the region, potentially putting further pressure on access to advanced technical skills in the longer term. Industrial digitalisation is providing opportunities to optimise efficiency, asset and resource utilisation, and data analysis is key to realising these opportunities. The region is attracting substantial inward investment, and automotive and electrification alone are forecast to create 12,000 new high-value jobs in the next 5 years, in the broader region. The International Advanced Manufacturing Park will attract more investment. GVA contribution per job is twice the national average, and new future digital facilities are more automated and complex, required to be sustainable. Clean-room manufacture is increasing, across Pharma, electronic component, and space technologies. All require higher-level technical skills mix and expertise in emerging technologies. Electro-mechanical technicians are a long-standing scarce skill which is transferable across sectors, and an incremental 5,000 will be required in the next 5 years, with increasing digital/electronic skills required. Traditional skills in die setting, tool making, and welding are scarce and advanced technical skills in materials such as plastics are difficult to source locally.

What is currently happening?

- A strong demand for electro-mechanical technicians and engineers qualified to Level 3+, compounded by inward investment and growth, and increased requirements from other sectors, such as Off-Shore and Smart Warehousing, and the retirement profile in automotive.
- C. 700 Advanced Apprentice starts per year, but supply hasn't increased in response to new demand. Some employers source apprenticeship training from providers outside the region.
- Apprentice starts in Engineering/Manufacturing SMEs reduced by 60% since 2015/16. SMEs are particularly vulnerable to increased market demand for technicians.
- 70% reduction in Level 2 apprenticeships since 2015/16. Historically best-practice provision for Lean Manufacturing Operative. Increasingly difficult to attract learners at reduced apprentice pay rates.
- Requirements for Level 4/5 technicians/engineers not yet high volume, but emerging due to digitalisation, emerging technologies, and specialist facilities. Few apprenticeship standards at Level 4/5 currently available, and employers often revert to degree apprenticeships.
- Some batch process production in Pharma Manufacturing requires higher-level multi-skilled operator-technician in clean-room facilities due to regulatory and compliance requirements. Strategic Development Fund (SDF) has recognised the requirement and introduced Level 3 Science Manufacturing Technician programme.

What needs to be retained?

- Investment in Engineering technician training capability.
- FE/HE commitment to seamless progression pathway to degree apprenticeships (e.g., Battery/PEMD/applied digital)
- Level 2 Apprenticeships that support improved functional & behavioural skills and best practice L1/2 work experience and skills support, such as Ford Engineering Academy.
- Strategic Development Fund (SDF) - Science Manufacturing Technician provision.
- Digital SMART Learning Factory (NA College) but should be leveraged more.

What changes are needed?

- Basic digital skills provision in all engineering/manufacturing provision, including upskilling & CPD
- A regional plan to meet future demand for Advanced Electro-mechanical technicians.
- Review Level 4/5 apprentice standards and prioritise development of in-region provision.
- Partner with Research & Technology Organisations (RTOs) to enrich technical curriculum and access research & teaching capability.
- Curriculum development to reflect industrial digitalisation in Level 3+ programmes.
- Development of more clean-room manufacturing provision.
- Increased SME engagement in apprenticeships.

What are the potential benefits?

- Supply of transferable electro-mechanical technician skills to support investment and growth.
- More resilient SME network, with the technical capability to grow.
- Wider capability to leverage digitalisation to improve productivity.
- More efficient training delivery due to more integrated Level 4-6 offer and pathway.
- Stronger skills proposition to supporting productivity, attract new investors and support regional growth.

Health and Health Science.

Sector Profile

Largest LSIP sector employer, 60,000+ employed across a range of separate Health & Social Care providers, including 5 NHS Trusts. A new Integrated Care Board is seeking to optimise the approach to delivering patient care in the region, but the demand signal for skills provision still sits with independent employers, managed within an annual budget cycle. A very challenging context, with increasing demand for services, constrained resources, leading to local skills shortages in critical roles, resulting in containment actions, including significant international recruitment and use of agency personnel. "Growing your own" is a mantra, but, is less prevalent in practice. Advances in Healthcare science has significant impact, accountable for 80% of diagnosis, leading to earlier treatment and lower treatment costs. Clinical practitioners need to be degree qualified, and most professions lack a structured career pathway, and operational pressures limit release and training opportunities. Digital technologies provide a transformational opportunity to improve prevention, diagnosis, and virtual care as well as improve productivity, but adoption is still ad hoc, and strategies are still emerging.

What is currently happening?

- HE higher/degree apprenticeships and graduates in Nursing, the Allied Health Professions, and Biomedical Science are supplemented by international hiring and agency support.
- Apprenticeship participation is limited to existing employees, and not available as an entry point for new employees.
- Nursing is a critical and scarce skill. Participation in Level 5/6 Nursing apprenticeships is limited by financial and operational pressures, requiring 50%+ time off-the job with no backfill, except in primary care, where funding for supernumerary support is available. There is no shortage of internal applicants, but Trusts typically hire 10 international nurses for every apprentice nurse they train.
- There is significant FE capacity for Healthcare provision, supporting around 800 new starts a year on Level 2/3 Healthcare Support Worker apprenticeships, 2,800 16-18 learners, and a large number of adult learners.
- Level 2 qualifications are no longer required for entry-level Healthcare roles, but employers provide functional skills training and Level 2/3 Healthcare apprenticeships to existing staff.
- SDF funding in 2022/3 was secured to develop Level 2 & 4 apprenticeships in Healthcare Science and Level 2/3 in Science Manufacturing, addressing needs in the NHS and Life Science Manufacturing. A North East Health Skills Hub provides a collaborative forum for employers and providers, and has overseen SDF implementation.
- T-Levels are now available, but there is no natural progression point from a Health T-Level within the NHS. Employers expect recruits to get practical experience in an entry-level Healthcare Assistant role without guarantee of progression, which is unlikely to be a compelling proposition for the learner.
- An NHS strategic workforce plan is anticipated, and indications are that it covers some of issues identified.

What needs to be retained?

- Healthcare Support worker provision.
- Leveraging SDF capability to increase participation in Healthcare Science and Science Manufacturing programmes.
- The North East Health Skills Hub.
- HE provision for Nursing, Biomedical Science, Paramedics, and other Allied Health Professions.
- Level 5 Associate Practitioner Apprenticeship to support pathway to practitioner level in Allied Health Professions

What changes are needed?

- Embed digital needs in all Health provision, and establish CPD offer for existing staff.
- HE providers to explore innovative ways to reduce time-off-the-job for apprenticeship delivery without compromising quality.
- NHS Trusts/ICB/NHS England to establish funding model to enable release for apprenticeship programmes, as part of Strategic Workforce Plan for the region.
- Leverage Life Science research/training capability of National Horizons Centre.

What are the potential benefits?

- Sustainable workforce and resourcing plan that reduces dependency on international and agency staff, particularly in Nursing but also in other clinical professions.
- Improved productivity and resource optimisation through effective digital deployment
- Integrated employer voice into Providers through the NE Health Skills Hub.
- Development of best-practice Healthcare science provision.

Construction.

Sector Profile

Sector employs c.25,000 across the NELSIP region, largely in micro-businesses providing specialist technical skills to those leading house-building or infrastructure projects. Forecast net employment levels to 2027 are flat (CITB, 2023). Ageing workforce, and replacement hiring of around 1,500 per year is needed. Potential investment in large-scale infrastructure projects can disrupt skills availability. Emerging Retrofit requirements will stretch skills availability further, compounded by challenges associated with poor sector attraction, particularly for underrepresented groups, and low SME participation in apprenticeships. Digital communication tools are commonplace, but digital adoption is still immature and significant scope for productivity improvement exists. Modern Methods of Construction (MMC) are emerging but are presently limited in the region.

What is currently happening?

- Strong demand for traditional skilled trades, and provision for most skills is generally available. Around 3,000 learners a year at Level 2, with apprenticeships in Bricklaying and Joinery most in-demand.
- Advanced skilled trades, such as Plumbing/HVAC or Electrical Installation are typically provided by sub-contracted micro-businesses, which often don't commit to apprenticeships.
- A strong "grow your own" culture emphasises the importance of the vocational pathway in larger employers, and drives demand for higher technical skills in areas such as engineering and surveying. c. 500 Level 4/5 apprenticeships and c. 200 learners at Level 4/5 pa.
- Some FE Colleges in the region are investing in new Construction training capability

What needs to be retained?

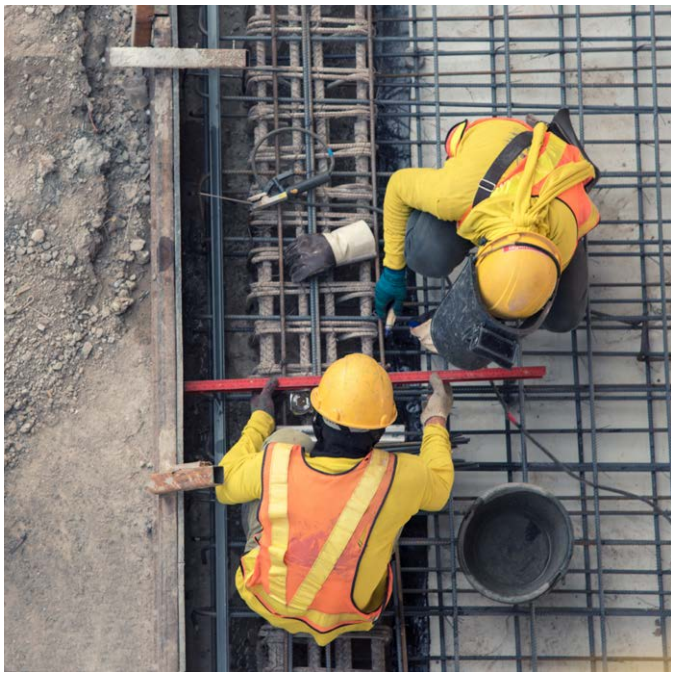
- Investment in the development of Construction training capability.
- FE provision of core skilled trades such as Bricklaying, Joinery, Electrical and Plumbing/HVAC.
- Employer engagement in identifying emerging skills requirements.
- Currently, employer-led workstreams are in place within the North East Institute of Technology (NEIoT) on Retrofit, MMC, and Digital and provide potential to leverage NEIoT capability in Lean Manufacturing to support MMC capability development.
- CITB support for SMEs apprentice recruitment through New Entrant Support Team.

What changes are needed?

- A cross-region process, including employers and providers, to monitor and take action to address gaps in the region for provision of scarce specialist skilled trades. E.g. roofing, flooring, and scaffolding.
- Basic digital skills to be embedded in all provision, and made accessible as upskilling modules for employers.
- Curriculum development to support Retrofit requirements, and development of plan to back-fill skilled-trades "pulled" into Retrofit (E.g. HVAC/Plumbing, Electrical, Glazers).
- Further development of curriculum at Levels 4 and 5 to embed digital skills and support vocational progression.
- Increased focus on SME engagement to enable participation in apprenticeships, including wider deployment of Flexible Apprenticeship model.
- Increased employer engagement in education outreach and 16-18 programmes, to enrich curriculum and attract young people and more diversity to the sector.
- Assessment of RTO partnership options to enhance provision and anticipate emerging technologies.
- Improve technical skills access through positive assistance to increase employment levels of underrepresented groups.

What are the potential benefits?

- Accessible and more diverse participation in provision for all skilled trades in the region.
- More digital adoption at all levels, enabling improved productivity.
- Enhanced provision for Higher Technical skills, enabling productivity, vocational progression and talent retention.
- Accelerated deployment of Retrofit activity, minimising disruption due to pull on scarce skills.
- Proactive consideration and curriculum planning associated with emerging technologies.
- More resilient SME supply chain, benefiting from increased apprenticeship participation.
- Increased supply of young people and diverse talent into jobs in the sector.



Transport & Logistics.

Sector Profile

Around 16,000 employed in the sector, predominantly in SMEs – less than 2% of businesses employ 50+ employees. GVA contribution to North East of £2bn+ a year (NELEP, 2021)– strategically important to other sectors, enabling productivity and inward investment by providing access to resilient global/local supply chains from a complex geography. An interdependent network for freight movement by road, rail, sea, and air, includes east-coast ports, a road haulage sector employing 6,000, and SMART warehousing. Sustainability is a key strategic driver, with a focus on decarbonising transport fleets and supply chains. Digitalisation provides opportunity for end-to-end value-stream visualisation and optimisation, eliminating waste, improving productivity and customer-fulfilment. Increased automation and smart warehouses and data analytics require higher level skills. 5G CAL (Connected Automated Logistics) illustrates regional innovation leadership in connected autonomous logistics. High profile, critical workforce challenges post Covid-19, including shortages of drivers were not caused by skills provision, but related to lack of investment in training and insufficient replacement of an ageing workforce due to a failure to be competitive for low-skilled work, which proportionally accounts for 1.5x the UK average. Anti-social working conditions make it difficult to establish attractive employment proposition, resulting in limited diversity that restricts the available labour pool. Sector tends to "grow their own", and developing managerial/commercial skills for existing employees is important, but career paths are limited.

What is currently happening?

- Limited demand signal into Providers for technical skills at Level 2+. Important scarce skills that are required to operate often fall outside Level 2+ provision (e.g. LGV driving & Fork Lift Truck). Low demand for apprenticeships – around 600 a year across the region (mainly Level 2). Boot Camps delivered by independent providers to support LGV driving requirements.
- Specialist Independent Training Providers exist with insight and experience of delivering in transport sector and meeting licensing requirements.
- Scarcity of skilled vehicle technicians presenting challenges to those managing Fleets, and skills to support transition to maintaining fleets with new vehicle technologies needs to be supported.
- Early adopters are exploiting potential of digital technologies, generating needs for technicians/engineers to establish and maintain digital infrastructure and facilities, and data analysts. Small numbers of learners at this stage, and skills consistent with other sectors (e.g. Advanced Manufacturing).
- Sustainability informing new green skills in established roles relating to planning, regulation, and reporting activities as well as managing operational environmental impact,
- Logistics UK has members in region, and network forums, but currently there is no specific sector ERB focussed only on the region.

What needs to be retained?

- Continued ITP provision of specialist sector requirements.
- Engagement with Fleet businesses to support development of vehicle technicians (plus upskilling on new vehicle technologies).
- Sector Innovation through autonomy - 5G CAL Testbed

What changes are needed?

- Providers to monitor demand for electro-mechanical technicians and data analysis skills as level of automation accelerates– consistent with advanced manufacturing requirements.
- Modular basic digital CPD for existing employees and provision to enable advanced digital skill pipeline.
- Opportunities to further leverage existing programmes for supervisory/commercial skills within Transport & Logistics as automation increases.
- Technicians skilled in maintenance of new technologies in electrified last mile logistics.

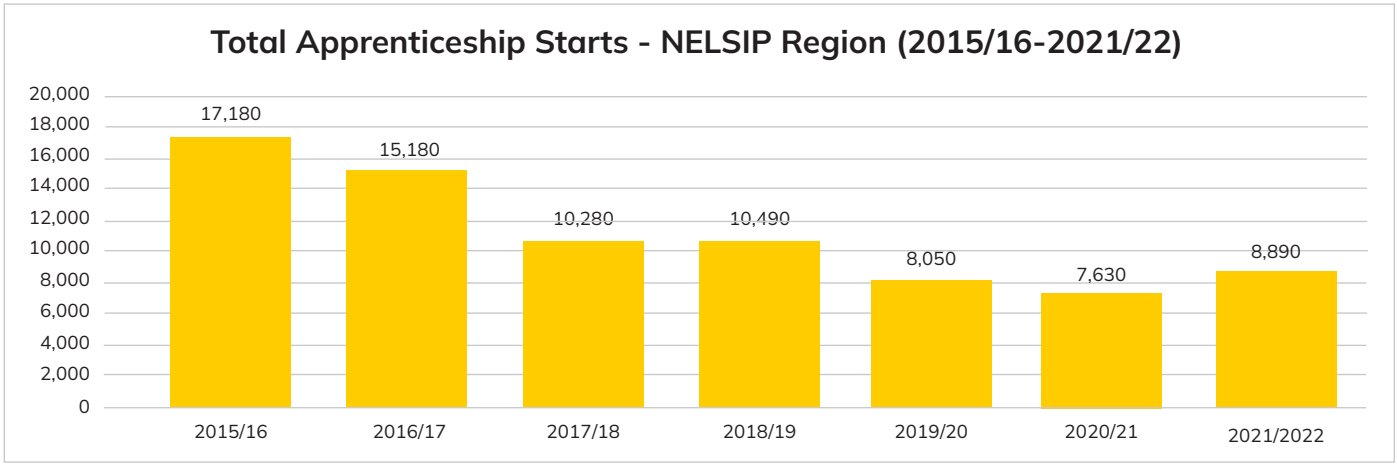
What are the potential benefits?

- Demonstrate regional leadership in development of best-practice lean digital Transport & Logistics activities, through connected automation, eliminating waste and improved productivity.
- Transition to sustainable fleet operations and net-zero impact warehousing operations. Increased local economic resilience through robust interconnected supply chain that is agile, and predicative and capable of anticipating and containing disruption in support of other sectors.
- Demonstrate global smart integrated supply chain connectivity to encourage inward investment.

Current State – Local Apprenticeship and Training Provision.

Apprenticeships

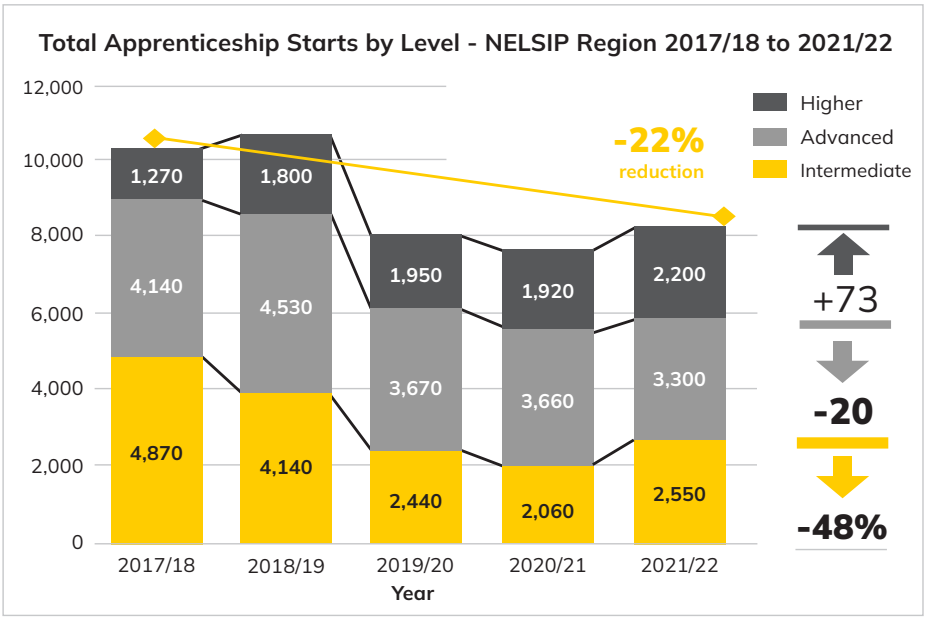
Apprenticeships are central to ensuring an adequate supply of technical learners into the workforce. However, apprenticeship starts in the NELSIP region have almost halved since 2015/16 (DfE, 2023)



Source: ONS 2023 – Annual Population Survey

The mix of apprenticeships in the region has also changed substantially in the last 5 years. Level 2 Intermediate apprenticeships have halved, whilst Level 4+ Higher Apprenticeships have increased by 73%. Critically, the number of Level 3 Advanced Apprenticeship starts has dropped by 20%, reducing the pipeline into "better jobs" at a time when more with those skills and qualifications are needed. SME participation has also dropped significantly – accounting for 62% less starts in 2019/20 than in 2015/16. Furthermore, starts with SMEs fell more than for larger employers during the Pandemic. Employers are now using apprenticeships more as CPD for existing staff than for new recruits – 47% of starts are now age 25+ and the proportion of Under-19 starts has dropped from 33% to 26% since 2017/18.

The increase in higher apprenticeships is important since it supports the development of higher-level technical skills and progression to better jobs. However, those starting apprenticeships from the 20% most deprived areas have been disproportionately impacted by the reduction in Intermediate apprenticeships, with participation from these areas falling by 60% between 2015/16 and 2019/20. (Source: Sutton Trust, 2022). Participation of those who have been eligible for Free School Meals is also relatively low in subjects such as Engineering & Manufacturing Technology and Construction, which offer opportunities for the highest wage premium associated with apprenticeships and qualifications.



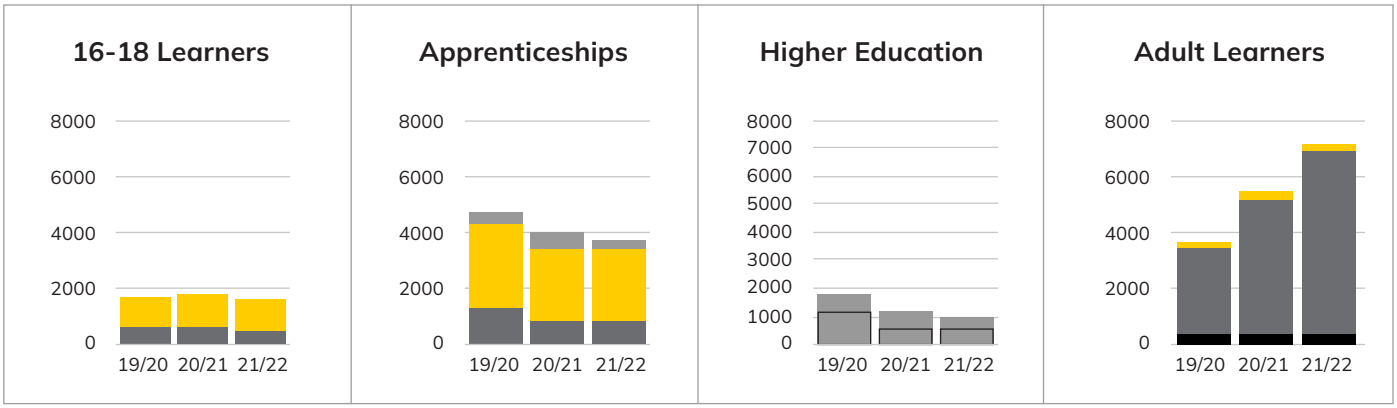
The tight employment market has provided a challenge to the established practice of many employers subsidising investment in apprenticeships by paying apprentices reduced pay rates, as those seeking work can now earn substantially more in low-skilled work outside an apprenticeship. Many may not be in a position where they can afford to pursue a lower-paid apprenticeship or may be sceptical of the value of it – only one-third of students surveyed strongly agreed that apprenticeships lead to well-paid jobs and only a quarter said that they would apply for an apprenticeship if it paid less than they could earn in another job. This may help explain why many employers say they find it difficult to find suitable applicants for apprenticeships.

Current Provision for NELSIP sectors.

There is extensive education and training provision in the region which supports the skills requirements of the NELSIP high impact sectors, although limited demand for specific Transport & Logistics provision. The numbers detailed below reflect the number of active learners studying in the region within the respective academic year and gives a rolling three-year pipeline view of supply (Source: Vector, 2023).

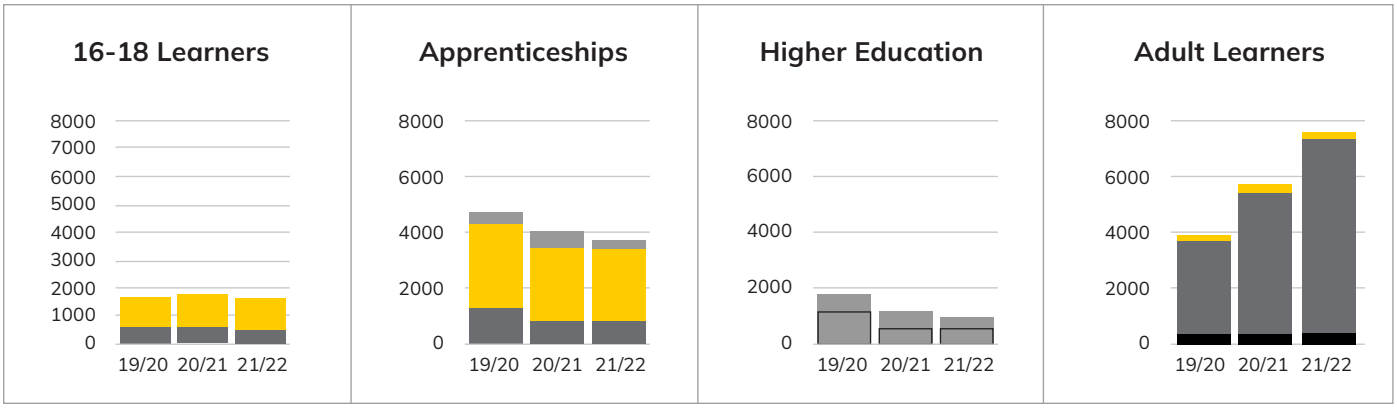
Learner Study Level	Entry	Level 1	Level 2	Level 3	Level 4/5

Digital



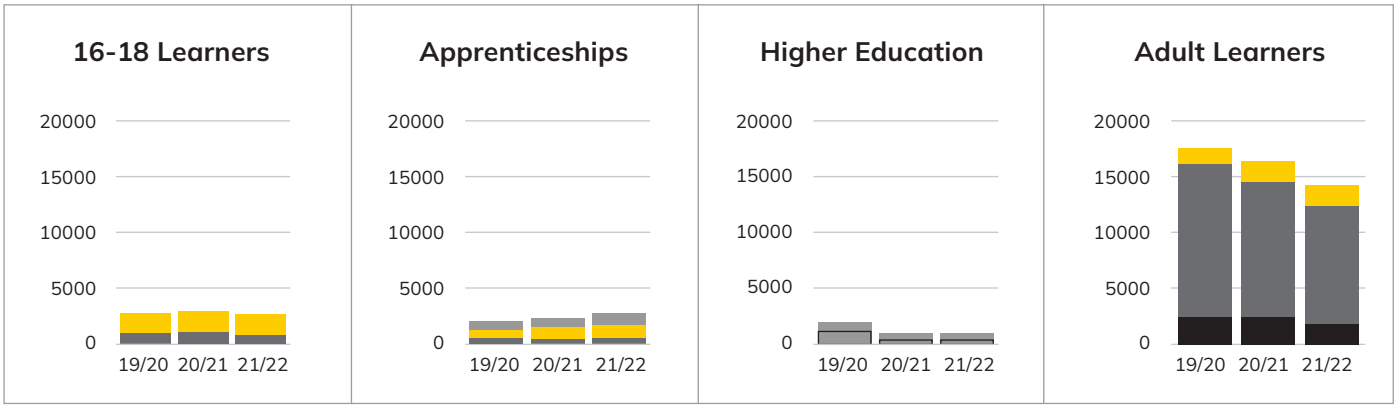
- Significant growth in adult learners reflects support for basic digital upskilling.
- Provision for advanced/higher programmes is substantially more than 5 years ago but has stabilised in last 3 years – c. 500 apprentices in learning at Level 3 and 700 at Level 4/5. C. 800 16-18 learners on Level 3 programmes.

Advanced Manufacturing



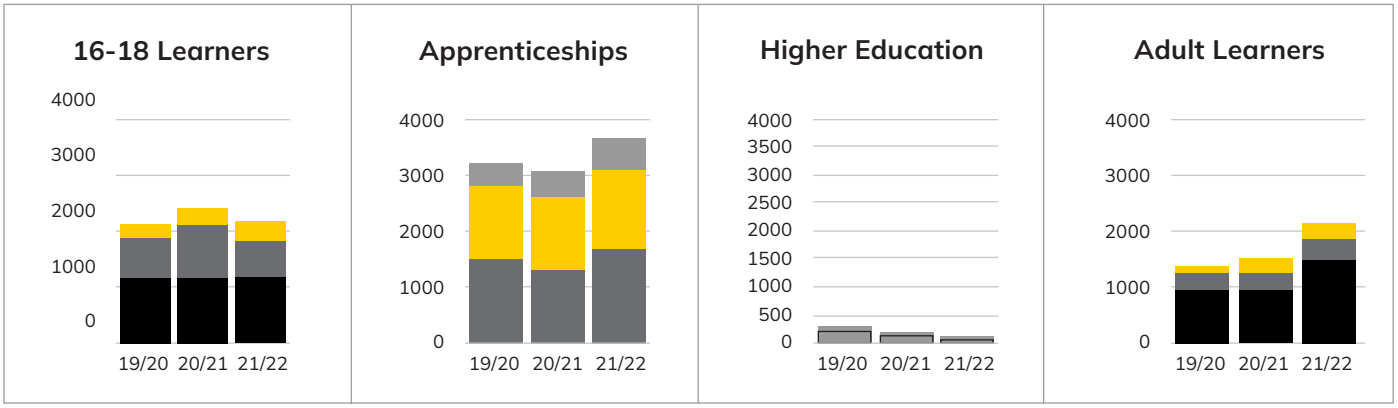
- Historically region has supported best-practice Level 2 Lean Manufacturing Operative Apprenticeship, but participation has declined by 30% since 2019/20.
- Advanced Level 3 Engineering Technician apprenticeships have declined by 20% since 2019/20 despite scarcity and expected strong demand.
- C. 1,000 Level 4/5 learners pa outside apprenticeships suggests could be more scope for apprenticeship standards at that level.

Health & Healthcare Science



- Very high volume of adult learners, but mainly at Level 2.
- Providers in the region have significant capacity to support 16-18 learners (c. 3,000 pa mainly at Level 3)
- Apprenticeship support for FE Colleges is largely Level 2/3 Healthcare Support Worker programmes, but future volumes will include new Health Science and Science Manufacturing programmes developed through SDF.
- Higher Education and Higher Apprenticeships are typically provided by Universities.

Construction



- High volume of Level 2 learners and apprentices reflects qualifications needed to provide a “license to operate” for most skilled trades.
- Apprenticeship demand has been maintained – employers’ commitment also reflects requirement to demonstrate social value in public procurement.
- Higher education levels are low, but increasing demand for Level 4/5 apprenticeships in technical subjects, including engineering and surveying.

Part 2 - Taking the LSIP Priorities Forward

6. Taking the **NELSIP** Priorities forward

This section identifies recommended actions to support progress against six NELSIP priorities. It includes a provisional view of what success measures should be adopted to monitor progress on proposed actions. A provisional RACI, which identifies Responsibility, Accountability, Consultation and Information rights is included in Part 3. The LSIP process recognises that systemic changes will be required, and the report does not make recommendation on timing for each specific action, although an indicative plan is included in Part 3. Progress should be made on all the NELSIP actions during the implementation of the NELSIP, but the specific timeline for each action should be agreed with those accountable during the transition to implementation. An important aspect of managing change is ensuring the programme is appropriately scoped, resourced, and programmed by the accountable leader. It is also recognised that there may be a time-lag before some of the more systemic outcome measures are impacted. More specific measures and accountabilities are recommended for priorities 1a and 2 below, which have been discussed with Providers, although it is recognised that some key enablers and resources will be needed to support implementation of the NELSIP priorities, and this should be considered by Providers as part of LSIF funding application process.

NELSIP Priorities.

1. Provide essential digital skills required by all learners at the appropriate level. Including upskilling & reskilling support for employers and adult learners and ensuring a work-ready supply of specialist digital skills.

a) Embed digital skills provision in all forms of technical provision, at all levels.
b) Establish a supply of higher digital apprentices, with the right capability and experience to meet demand.
c) Enable flexible upskilling & reskilling programmes to improve digital employment opportunities. E.g. leverage and align NE Digital Bootcamps
d) Innovate to simulate workplace learning - using immersive technology, digital simulation, SMART learning factory, virtual reality wards/ classrooms.

a. Embed digital skills provision

The provision of digital skills impacts all learners. Digital skills are no longer optional in the workplace. Essential digital skills are needed for all occupations and the level and specific digital skills varies depending on the nature and level of the job. These skills need to be embedded at all levels of learning provision.

Essential Digital (All Sectors)

Priority	Action	Measure	Who
Basic digital skills for operational devices	- Embed basic digital skills in all Level 1 & 2 & 16+ education programmes	Basic digital provision embedded in all programmes	FE
	- Develop basic digital upskilling programme for existing employees	No. of employers/employees participating in digital upskilling	FE
Applied digital skills in all technical roles	- Review all Level 3+ technical programmes and embed appropriate applied digital skill development	Applied digital skills embedded in all L3+ technical programmes	FE/HE
Data science/ analytics capability	- Include basic data analytics modules in all Level 3+ technical programmes	Data analytics modules embedded in all L3+ technical programmes	FE
	- Ensure capability to deliver higher qualifications in digital analytics is available in modular form to support CPD/Boot Camp delivery	Availability of training Participation numbers and completion rate	FE/HE

2. Align 16+ technical education and training provision to ensure the key technical skills required by the five LSIP sectors are prioritised.

a) Prioritisation of technical skills required for five NELSIP sectors, mapped to existing technical occupational standards.

b) Embed transferable behavioural skills in provision that are needed by employers to enable work readiness/experience needed for the effective deployment of technical skills.

Advanced Digital Skills Priorities

Advanced Digital (sector)				
	Priority	**Action**	**Measure**	**Who**
Level 3/4	Improve diversity of Digital workforce	Develop plan to attract under-represented groups to advanced digital programmes	No. of females on advanced digital programmes. No. of FSM students on advanced digital programmes	FE
Level 4-5	Enhance higher level vocational offer in Digital	Develop full-time and modular offer that meets key requirements in region (software development/programming, data analysts/ engineers, and infrastructure)	No. of digital learner completions at Level 4-5	FE
Level 6	Vocational pathway to degree level	Identify opportunities to improve flexibility of degree apprenticeship programmes to ensure access to learners in employment	No. of participants on Digital degree apprenticeships at NE Universities	HE
Impacting all levels	Employability of those new to the digital sector through work experience	Establish plan with employers to provide meaningful work experience placements for those on advanced digital programmes	No. of local people securing jobs in digital sector	Sunderland Software City & FE
	Maintaining sustainable digital teaching capability in the region and agile curriculum development planning	Establish collaborative model for curriculum development and delivery across region	No. of advanced digital programmes available in region	FE/HE/ Sunderland Software City

Key Enablers

- The development of regional teaching capability and infrastructure that involves HE/FE and employers to deliver advanced/applied digital provision,
- Mechanisms need to be in place to track technology development and develop standards and curriculum in response to changing platforms/technologies. Digital specialisms are localised, and the region needs to anticipate and be agile to ensure adequate learning provision is in place to meet demand.
- Ensure skills delivery tailored to multiple channels in the digital sector, including implications for upskilling, reskilling, and funding of different learners and modular delivery.
- Develop new approaches to engage employers to build work-experience and address the 3–5-year experience gap that advanced digital employers identify as a barrier to recruitment.
- Establish mechanisms to attract under-represented groups to digital learning provision.

Advanced Manufacturing Skills Priorities

Advanced Manufacturing				
	Priority	**Action**	**Measure**	**Who**
Level 3	Address scarcity of Engineering/ Maintenance Technicians relative to strong demand	Ensure capacity in place to meet future regional demand. Increase SME participation in apprenticeship training. Develop curriculum to meet requirements of industrial digitalisation	No. of Level 3 E&MT apprentices No. of SMEs employing apprentices Curriculum review includes digital requirements	LSIP FE Colleges
	Leverage deployment of Level 3 Science Manufacturing programme developed through SDF	Continue to promote programme with Pharma manufacturers and NHS Aseptic Pharma Manufacturers	No. of Level 3 Science Manufacturing Apprentice starts	SDF Colleges
Level 4/5	Level 4/5 Engineering provision meets requirements associated with digital and emerging technologies	Engage employers in identifying additional Level 4/5 standards to be developed in region. Curriculum development of prioritised standards	Review completed. Curriculum developed. No. of Level 4/5 apprentices in region.	LSIP FE Colleges/ NEIoT
	Collaboration between local providers to provide seamless progression pathway higher level technicians/ engineers	Partner with HE provider in IESAM (Newcastle University) to establish complimentary pathway through to degree apprenticeship programmes associated with Electrification/Batteries.	Level 4/5 offer in place which is accredited for those progressing on to engineering degree programmes related to PEMD/ Batteries at Newcastle University	Newcastle University & FE Providers/ NEIoT
Level 6	Equivalent vocational pathway to Engineering roles in all disciplines	Extend availability of degree apprenticeships, including electrical and software engineering	Degree apprenticeship programmes in place Participation of local people on engineering degree programmes at NE universities	HE
Impacting all levels	Leverage advanced engineering research/ teaching capability to enrich higher technical curriculum	FE Partnering with in-region RTOs to enrich curriculum and establish sustainable teaching model (e.g. CPI, DER, Faraday, National Horizon Centre) Strategic partnering opportunities with national centres of excellence/RTOs (e.g. MTC/AMRC).	In-region partnerships with RTOs in place National RTO partnership opportunities evaluated and identified	RTO/HE
	Develop digital manufacturing experience and capability, through best-practice learning factory	Leverage simulated learning opportunity provided by SMART Learning Factory at NA College.	No. of learners attending Smart Factory No. of T-Level work placements at Smart Factory	Made Smarter/ RTO/HE/ NA College Collaboration.

Key Enablers

- A Regional plan is required to ensure an adequate pipeline of level 3 technicians. The acute shortage of Level 3 and above technicians will not be met by falling numbers of Level 3 learners.
- There needs to be a robust collaborative partnership with HE providers to establish complimentary seamless pathways through to degree apprenticeship programmes associated with Electrification/Batteries.
- Review Level 4 & 5 apprenticeship standards with ERB and NEIoT, and prioritise development of in-region delivery capability for niche low volume technical capabilities. This should involve developing partnership with Research and Technology Organisations (RTOs) to enrich vocational curriculum and access to specialist teaching resource and facilities.
- Leverage development of Level 3 Science Manufacturing programme (SDF) to ensure an adequate pipeline for pharma advanced manufacturing, including scoping of Level 4 standards and programme to meet Level 4+ Pharma manufacturing requirements.
- Industrial digitalisation requires basic digital skills are embedded in Level 1 & 2 provision, and in CPD offer for existing workforce.
- Resource SME engagement activity, as there is a real danger that SMEs will not be able to employ the technical expertise they require going forward.

Construction Skills Priorities

Construction				
	Priority	**Action**	**Measure**	**Who**
Level 2/3	Accessible in-region provision for all skilled trades	Review regional skilled-trade provision with employer representatives and identify gaps	Plan to address identified gaps	FE Colleges / CENE
	Maintain supply of specialist skills typically found in SMEs (e.g. Electrical & Plumbing)	Resource SME engagement	No. of apprenticeships with SMEs	FE Colleges
Level 4/5	Level 4/5 Technical/ Engineering provision meets requirements associated with digital and emerging technologies	Engage employers in identifying additional Level 4/5 standards to be developed in region. Curriculum development of prioritised standards	Review completed. Curriculum developed. No. of Level 4/5 apprentices in region.	LSIP FE Colleges/ NEIoT
Level 6	Equivalent vocational pathway to Engineering/ Surveying roles in all disciplines	Extend availability of degree apprenticeships	Degree apprenticeship programmes in place Participation of local people on engineering degree programmes at NE universities	HE
Impacting all levels	Resource capability required to manage Energy efficient Retrofit to meet Net Zero targets	Develop Retrofit curriculum. Identify skills requiring replacement due to Retrofit-pull and ensure capacity in place to support back-fill	Retrofit curriculum in place Level of participation in retrofit training Back-fill analysis completed	FE/NEIoT with employers
	Capability to meet Modern Methods of Construction skills requirements	Monitor emerging requirements	Monitoring responsibility identified	FE/NEIoT with employers

Key Enablers

- Establish flexible digital CPD offer for existing workforce.
- Embed applied digital and data analytics in all Level 3+ provision.
- Continue with NEIoT Strategic work-streams.
- Regional Employer Forums with Providers to assess regional scarcity of skilled-trades and gaps in provision.
- Leverage CITB New Entrant Support Team to enable SME engagement.
- Develop Retrofit provision in line with requirements specified by NEIoT workstream.
- Continue to monitor emerging MMC requirements through NEIoT work-stream – including opportunities to leverage NEIoT digital manufacturing capability.

Health & Health Science – Skills Priorities

Health & Healthcare Science				
	Priority	**Action**	**Measure**	**Who**
Level 2/3	Healthcare support worker provision	Monitor capacity to meet regional demand	Annual review	FE/NHS Trusts
Level 3/4	Development of Healthcare Science talent pipeline	Leverage SDF investment in Healthcare Science across all NHS Trusts in region	No. of participants in Level 4 Healthcare Science apprenticeships	FE/NHS Trusts
Level 5-6	Vocational Pathway into Nursing	Providers to explore innovative practices to reduce time-off-the-job requirements without compromising quality Provide supernumerary cover to enable release	No. of participants in Nursing Associate & Registered Nurse Degree Apprenticeship at NE Universities	HE Providers & NHS Trusts NHS England
Impacting all levels	Focussed collaboration between employers and providers	Continue to leverage NE Health Skills Hub for ongoing dialogue on future requirements	NE Health Skills Hub Meetings	East Durham College

Key Enablers

- Embed digital skills & data literacy in all Health provision – including occupational specific (e.g. Digital nurse).
- Establish digital CPD offer for existing Healthcare workforce.
- To enable increased participation in vocational higher/degree apprenticeship programmes, HE providers to explore innovative practices to reduce time-off-the-job requirements without compromising quality.
- New NHS Workforce Plan. Approach which recognises need to provide supernumerary cover to enable release for participation in higher/degree apprenticeships.
- Continue to develop the NE Health Skills Hub and leverage SDF deployment in Health Science & Science Manufacturing.

Transport & Logistics Skills Priorities

Transport and Logistics priorities by level.

Transport & Logistics				
	Priority	**Action**	**Measure**	**Who**
Level 3	Vehicle technicians to maintain “green” Fleets	Curriculum development to support new vehicle technologies	Curriculum in place	FE
Level 4-6	Optimising sustainable supply chain	Establish Digital/data engineering provision relevant across sectors	Programmes in place	FE

3. Increase the supply of level 3+ technical skills to meet current and future regional requirements.

a. Develop strategic skills plans that increase the supply of Level 3+ skills from all educational pathways, including adult learners.
b. Ensure approaches to T-Level deployment and associated career and progression pathways that are both attractive to learners and employers.

4. Collaborate to deliver key technical skills for regional growth.

a. Ensure NELSIF reflects NELSIP priorities through broad and inclusive regional collaboration to leverage best practice.
b. Ensure 22/23 NE SDF investment and other technical skills funding and programmes are fully leveraged in support of LSIP priorities.
c. Leverage strategic partnerships and collaborative arrangements, including the NEIoT, to develop key technical skills. Ensure integrated and seamless technical educational pathways that provide an adequate supply of technical skills to meet regional requirements.
d. Realise opportunities arising from the North East Mayoral Combined Authority to promote partnership between FE/HE providers in region and RTOs to align curriculum & delivery model for high value inward investment, emerging technologies, and Higher Technical Qualifications.
e. Develop and invest in resourcing and deployment models that establishes, retains, and leverages digital and higher technical teaching capability across the region, including support from employer secondees.

5. Employer focussed - Enable employers, including SMEs, to identify their technical skill requirements, and access high quality technical skills development for their current and future workforce.

a. Leverage established employer advisory boards to provide strategic leadership on emerging and scarce technical skills across the region.
b. Resource Workforce Planning and skills brokerage support for employers, particularly SMEs, to improve workforce planning and participation in vocational apprenticeships, reskilling & upskilling.
c. Establish a mechanism to prioritise transfer of unspent apprenticeship levy in the region to support NELSIP priorities.
d. Increased number of regional opportunities for technical work experience and apprenticeships.
e. Develop guidance and establish flexible opportunities to increase upskilling, informed by NELSIP priorities, and enabled through proposed flexible Lifelong Loan Entitlement and devolved regional Adult Education Budget.

6. Prioritise Social Inclusion – aligned approach to enable those from under-represented and disadvantaged groups to develop the skills needed and provide the support required to remove barriers to access good jobs and careers.

a. Establish and deliver appropriate Level 1 and 2 Maths & English attainment targets to improve the foundation skills for employability and increased economic activity.
b. Establish and deploy a set of consistent social inclusion measures and positive assistance actions for underrepresented groups that support achievements of NELEP targets on employment rate and economic activity and sector employment representation targets.
c. Focussed approach to vocational careers, including improved and aspirational early career guidance within North East Ambition

PART 3 - Delivering the LSIP Priorities

7. Delivering the NELSIP Priorities

Delivering the NELSIP priorities will require a new response to the skills challenges in the region, which will involve changes to established practices, and will require stakeholders across the region to align in support of these changes. In this section we identify cross-cutting themes and key challenges that will need to be addressed to enable effective NELSIP implementation and delivery of outcomes in line with NELSIP objectives.

Translating aggregate employer demand into a sustainable supply of skills

Significant education and training capability already exists in the NELSIP region, including seven Further Education Colleges, two universities, and independent training providers. There are other strong FE and HE providers adjacent to the LSIP region who engage with employers and learners within the region. The provision of training for some of the high impact sectors in the NELSIP area has been a core aspect for many of these providers over a long period, and there are some good examples of long-term employer-provider partnerships built on a shared understanding of the employers' skills needs. Conversely, employers have a choice between Providers with similar offers, and do switch between Providers, which can represent a risk to Provider investment in long-term capability.

There is also evidence in the region of occupational groups with longstanding skill shortages, reflecting a failure, over time, of all employers to collectively support the volumes of vocational technical training needed to replenish, and meet the skills requirements to support growth. Inward investment into the region has increased demand further and compounded these issues. The technical skills requirements and rate of transition associated with emerging technologies present additional complexity and challenge for both employers and providers.

A different response to the skills challenge is required and it must involve all stakeholders. The collective capability of Education & Training providers across the region needs to be greater than the sum of its parts. Long-standing issues will need to be addressed to ensure that the region has a sufficient supply of technical skills, and a truly inclusive skills system is required to increase the size of the employment pool. All employers, particularly SMEs, need to participate and all local people need to have routes to access opportunities to education and skills training, that lead to good jobs and careers. In this section we recommend actions that can help address these challenges, including cross-sector actions. LSIPs are one part of a complex change process, that needs to be supported by stakeholders and involve appropriate supporting actions. A robust systemic deployment programme needs to be underpinned by a robust change plan that enables the changes required and ensures that they are sustainable and institutionalised through accountable stakeholders.

Cross-cutting themes.

Employer Focussed

LSIPs are positioned as "employer led". Employers need to play an active role in shaping a skills system that meets their requirements as part of their workforce planning. Some employers will have the resource and capability to provide leadership, and there are best-practice employers in the NELSIP region who do this. However, the reality is that many other employers, including most SMEs, find the skills system fragmented, difficult to navigate and wish to engage with a single focal point. Some sector-level Employer bodies play a role in consolidating employer "voice", but they are not resourced to manage ongoing detailed interaction with Providers on solution development, or able to commit to a funded demand-signal on behalf of employers. It is important that this reality is recognised, and it is reflected in the "employer-focussed" approach adopted in the NELSIP, which provides assistance to employers to enable their participation in education and training.

An employer focus will require:

- Workforce Planning assistance for employers to assist them in developing a longer-term workforce and skills strategy appropriate for their organisation.
- Business engagement support in Providers, that helps employers understand what provision can meet their needs and how they can access it, including identifying opportunities presented by policy change, devolved Adult Education Budget, and the proposed Lifelong Loan entitlement.
- A commitment to support reskilling, upskilling and continuous professional development (CPD) through flexible modular delivery to enable employee development and career progression.

- Forums which facilitate employers and providers coming together at a sector and regional level to monitor progress on key priorities and identify emerging issues. Identifying specific gaps in provision within the region and identifying efficient ways of addressing them.
- Mechanisms that provide additional support to SMEs in key sectors (e.g. prioritised apprenticeship levy-transfer).
- Increasing focus, cohesion, and simplification of regional skills infrastructures for employers, with support from NEMCA.

Regional Collaboration

Several collaborative models and strategic partnerships already exist in the region, but for most sectors there aren't presently mechanisms at a sector-level that bring all Providers together to monitor priorities across the region and identify the most effective way to address them. This can result in duplication and waste, competition for students and scarce teaching talent, which ultimately leads to a dilution of regional capability and important regional skills requirements not being addressed. Providing education and training in higher technical, digital skills and responding to emerging technologies requires a different approach that leverages capability across employers and learners in the region. The recent SDF programme for Health Science in the region is a good example of Providers and Employer Bodies collaborating at a sector-level through the North East Health Skills Hub. Regional sector-level collaboration is important, and should enable:

- Development of shared capability (in terms of capital equipment, curriculum development, and teaching capability) in higher technical and digital provision that can be focussed to support an emerging demand signal and leveraged across the whole region.
- Partnership that leverages the research and teaching capability of Higher Education and RTOs in emerging technologies to enrich the vocational technical curriculum.

Collaboration Best Practice

IESAM – partnering to support growth and the transition to Net Zero. Newcastle University has created the Institute of Electrification and Sustainable Advanced Manufacturing (IESAM), a partnership between the region's universities, FE colleges and the North East Institute of Technology. The North East is fast becoming an international leader in electrification technologies, and IESAM, supported by funding from UKRI/Innovate UK, recognises the importance of a common supporting curriculum which leverages the world-leading expertise in the region to maximise impact. IESAM provides a common curriculum for electrification skills aimed at students, apprentices, schoolteachers, and college lecturers. It will create Power Electronics, Machines, & Drives (PEMD) content to enrich T-level, Higher Technical Qualifications as well as Advanced and Degree Apprenticeship programmes. IESAM's curriculum development team is working closely with its education and industry partners to ensure that current and future industrial needs are reflected in the education offer, including Robotics, Automation and Control, and Digital Manufacturing. Professor Stephanie Glendinning, Pro-Vice-Chancellor of the Faculty of Science, Agriculture and Engineering, said: "I am really excited about the launch of IESAM: it is a true collaboration that will support the work of industry, universities, colleges and government to grow the UK PEMD supply chain, providing new jobs in the region and helping the global transition to net zero."

Seamless Technical Education Progression

Several factors are leading to an increased employer emphasis on internal career progression, to 'grow their own' talent. This includes the tightening of the employment market, which is making recruitment challenging, and the apprenticeship levy providing an opportunity to fund training for existing staff. Career progression requires efficient educational pathways that provide seamless progression, particularly from Level 3 through to Level 6 to enable opportunity for a technical career pathway and progression to better jobs. Some employers express frustration with instances where employees have duplicated training when progressing to higher level programmes with different providers. This can prompt the employer to default straight to selecting degree apprenticeship programmes with one provider to avoid the risk of duplication, which could sometimes result in wasteful over-training where a Level 4/5 programme may have been more appropriate.

Seamless technical skills progression will require:

- Removing repetition of content between different providers in the region at different levels, to enable efficient and timely progression.
- Credit accumulation within and across FE and HE institutions to enable life-long vocational pathways and confidence and credibility with learners and employers.
- Concurrent upskilling of core transferable behavioural and digital skills required to be effective in higher level technical occupations.
- More flexible modular delivery, remote and work-based, to accommodate, work, home, and study obligations. Innovative approaches to learning 'off the job', to enable learning to be accessible without compromising quality. Improved employer support and release from the job, with backfill-funding where time off the job is high, such as nursing.

Aspirational and Inclusive

Inclusive economic growth requires all local people to have access to education and training which can provide the opportunities associated with good jobs and employment. The proportion of the population that is economically active in the North East is the lowest in England. There are examples of good practice in the region where positive assistance is provided to under-represented and disadvantaged groups, but there is not a consistent approach which aligns schools, education providers, and employers in support of shared objectives. Poor attainment in education and low aspiration are barriers to entry into employment and progression to better jobs. Vocational career pathways should be viewed as aspirational.

A cohesive approach to Inclusion would include:

- A consistent set of success measures and attainment targets deployed across the region, and in-region monitoring of progress against those measures.
- Access to high quality Careers advice and guidance which ensures all pupils understand vocational learning and career options available to them.

Systemic Challenges.

Addressing some of these cross-cutting themes presents some key challenges to be managed.

Cohesion & Leadership

Public funding streams often seek to improve collaboration between Providers, but requirements associated with different funding streams can result in different collaborations forming (e.g. NEIoT, SDF, LSIF). Some Providers are outside some arrangements, and consequently other in-region collaborations have formed, including partnerships spanning different LSIP regions. This can present a challenge for employers or sectors seeking a focal point across the region, rather than fragmentation. Clarity and simplification of this interface, certainly at a sector-level, will build employer confidence in investing time in strategic partnerships with the Education & Training sector.

In regions where a more integrated approach to investment, skills, and economic growth has been achieved, it has required a significant ambition to make a substantial long-term difference to the economy of the region, and a strong and tenacious leadership to implement the systemic changes required to align stakeholders, resource, and action in support of that. NEMCA provides opportunity to create a stronger focal point for alignment and collaboration across the broader region, consolidating fragmented funding streams, and providing more focussed engagement for employers. In Part III our draft RACI anticipates NEMCA playing an important role in establishing a vision and framework for systemic alignment in the region.

Effective ERBs supporting sector skills

There are several sector-specific ERBs in the region, and 'skills shortages' are frequently cited as a priority for their members, multinationals to SMEs. Some already have employer forums related to skills, but others don't, and their resourcing model doesn't generally enable them to commit appropriate capability and resources to play a leadership role in this area. A recent poll by one sector-ERB suggests that most members are now looking for the ERB to play a more active role in partnering with providers to coordinate delivery of programmes to meet common sector needs. This may reflect the challenges that some employers face in trying to service their own needs through the education and training system, and the survey did not address the subject of how this resource would be funded or empowered. Translating this sentiment into resourced programmes that are financially supported by multiple employers and attended by participants from different employers has historically proved difficult. Notwithstanding this, it is important that employer-groups do come together and provide a regional sector-level "voice" into Providers on scarce skills and emerging requirements. A good example of this is the work that Construction sector employers are leading in identifying emerging requirements through work-streams within the NEIoT.

A focus on SME Engagement is needed

The c. 50,000 SMEs, across the broader North East are responsible for half the region's turnover and employment (Ref: NELEP, 2022), often in activities requiring advanced technical skills. SMEs often do not have the resource or capability to navigate the education and training system or funding arrangements, and they feel undervalued.

> **"Colleges aren't interested in businesses like ours. They want to be associated with the big names who can commit to training higher numbers of apprentices."** Manufacturing SME

Mentoring apprentice training requires resource, and many SMEs won't commit to a regular demand signal. The number of apprenticeship starts with SMEs in the region has declined significantly in recent years - down by 62% between 2015/16 and 2019/20 (DfE, 2021). This

leaves SMEs in a vulnerable position, particularly as inward investment, the transition to Net Zero and associated technical compliance requirements, increases the demand for higher technical skills in the region.

Although the North East trend for apprentice starts in SMEs is consistent with the national picture, there is evidence that SMEs will commit to training if the employer offer is high-value and accessible. At the University of Sheffield AMRC training centre, 80% of the 700+ Level 3+ apprentices are employed by SMEs, attracted by the high-value offer under-pinned by advanced manufacturing research capability, as well as the full recruitment and administrative support provided. The need for intermediaries to help access training solutions appropriate for their business has been identified by the CITB with the introduction of a New Entrant Support Team and by IPPR (May 2023). In the absence of that type of approach, the Business Development teams within providers have an important role to play to support SME engagement, and resourcing needs to reflect that.

Strong leadership commitment to training and "social responsibility" has been identified as a differentiating element in those SMEs that do commit to apprenticeships (BEIS-2014), and this is evidenced by best-practice SMEs in the NELSIP region.

Best-practice - SMEs committed to training & development

MGL Construction, based in Durham and providing a range of construction and demolition services, consistently commit to apprentice training - around 30 of their 470 employees are on apprenticeships at any one time, and more than 90 of their employees have been supported through Higher Education. The HR Manager is proactive, and draws on support from the local CITB advisor, to leverage apprenticeships across a wide variety of roles. attracting new and diverse talent to the business.

BTS Facades & Fabrications supply and manufacture Rainscreen systems and Façade systems from their site in Newton Aycliffe, and demonstrate significant commitment to people development which spans apprenticeship training, work-experience placements, and employability programmes. 4 of their 55 employees are currently on apprenticeships, including two on degree apprenticeship programmes at Teesside University.

The Work Experience Dilemma

85% of employers emphasise the importance of employability & work-readiness skills. They value problem-solving, critical thinking, and team-working and work experience is recognised as a way of developing these skills. Yet securing opportunities for this experience is often challenging. More than one-third of young people responding to our student poll had not had the opportunity to gain work experience with an employer in the subject they were studying. Many employers find it difficult to commit to provide work-placements for a variety of reasons, including operational pressures, safety, safeguarding, and hybrid/remote working limiting the availability of staff to supervise placements. This presents a systemic challenge for programmes, such as T-Levels, which require work-placements to be provided at scale. Work placements also attract new people to the sector. Students who had external work experience in a sector related to their studies were more likely to be very interested in working in that sector following completion of their studies (NELSIP student poll).

Simulated working environments and immersive learning have many benefits, and should continue to be deployed, but have limitations in terms of developing the behavioural awareness and skills important to employers. Further hybrid innovation will be required to address this dilemma and make work-experience more accessible. The SMART learning factory at NA College illustrates what is possible. This type of Learning Factory features prominently in the higher technical curriculum for Advanced Manufacturing in countries such as Austria and Germany, and the Gatsby Foundation has recommended they should play a key role in accelerating UK Manufacturing digitalisation and productivity.

Leverage best-practice SMART Learning Factory

UK Community Production, in partnership with NA College, provide learners with access to a fully integrated digital manufacturing process and the working environment. The digital production environment engages the learner in the manufacture of a real product and provides practical experience of the transformational impact of industrial digitalisation. The SMART factory is equipped with innovative automation, including collaborative robots, autonomous guided vehicles, and an EffiMat pick and place system. Learners experience how to integrate these digital technologies into a lean manufacturing process, developing skills related to business improvement, data analytics, and machine programming, Sustainability is central through the elimination of waste and maximising energy efficiency. The SMART Factory at NA College has also been accredited for T-Level Work Placements, and has significant potential to compliment technical training provision at all levels for other Providers, leverage best-practice Business Improvement teaching capability, and develop work-readiness for learners in the region.

The T-Level Challenge

T-Levels are progressively being introduced and are generally recognised as a rigorous qualification supplemented by valuable work-experience, although there remain concerns about Level 3 reforms which require the transition away from other vocational qualifications. Other concerns relate to the ability to scale-up participation, particularly the availability of work-placements, and the need for universities to recognise parity with A-Levels. Employers will also need to consider how to align entry points for T-Levels within established career pathways and provide the learner with an attractive progression proposition into higher-level technical roles. Managing all this complexity will be important in enabling progress to be made on one of the key LSIP priorities which identifies the need to increase the supply of level 3+ technical skills to meet current and future regional requirements.

Evidenced examples of occupational alignments requiring attention.

Health

NHS Trusts have limited organisational structure between Band 2 Healthcare assistant roles and Band 5/6 clinical practitioners, and do not generally recruit externally onto higher apprenticeship programmes. A T-Level student would be expected to enter the NHS as a Band 2 Healthcare assistant to gain practical experience, without any guarantee of progression. This is unlikely to be an attractive proposition, and those interested in Nursing, or the Allied Health Professions are likely to be incentivised to progress through the traditional undergraduate route.

Engineering

An Engineering T-Level will not provide the breadth or depth of practical/technical skill acquired by those undertaking 3-5 year advanced apprenticeships. They will not be qualified for the electro-mechanical technician roles identified as a key scarce-skill across the region and a gateway to higher technical roles. Their options are more likely to be repeating a Level 3 qualification through an advanced apprenticeship, or pursuing an engineering degree through the traditional undergraduate route, as employers prioritise higher apprenticeships to “grow their own.”

Support for Life-Long Learning

Half those responding to our student survey indicated that they were very interested in continuing to study at a higher level in future. Pursuing this ambition, however, can be difficult. Anecdotal evidence suggests that economic circumstances is requiring some young people to seek work rather than continue studying at 18, including making choices to pursue low-skilled work paying more than most apprenticeships. Progressing out of this low-skilled work then becomes challenging – time off or financial assistance for education and training is unlikely to be supported by their employer, and finding the time and funding to continue with education is difficult. 65% of current/recent adult learners identify various barriers to learning, with work/time pressure being the most frequent, followed by a lack of confidence, and cost (Learning & Work Institute, 2022). Funding changes are proposed in 2025 through the introduction of a Lifelong Loan Entitlement for those 18+ accessing training equivalent to Level 4-6 qualifications, which will provide more flexible funding for modular training over the lifetime of the learner. The impact of these changes will depend on accessibility of learning, and the extent of take up. Only 7% of current/recent adult learners pay for their training through a loan, and attitudes to debt will likely continue to be a factor. Support will be required to help potential adult-learners understand and accept the new loan arrangements.

Resourcing Teaching capability required for higher technical and digital

FE and Independent Training Providers describe significant challenges in being able to afford to attract and retain the staff they require. This challenge is particularly evident when seeking teaching staff for higher technical training and digital where scarcity of skills generally is driving market-levels of remuneration that the education sector cannot compete with.

> 'Trying to get somebody in off the tools that's probably earning £50,000 a year to come in to teach and drop £20,000 to teach.' – Provider (Learning & Work Institute, 2021)

This challenge clearly presents a risk to Providers' willingness and ability to sustain delivery of the higher technical and digital skills prioritised within the NELSIP, particularly as skills-requirements in these subjects are dynamic and require an agile approach to curriculum development and delivery. The challenge is compounded if FE Colleges in the region compete for the same limited expert personnel with each other, the ITPs, and Colleges from adjacent regions. The subject of remuneration within the education sector is outside the direct scope of the LSIP, but it does highlight the need for sufficient and different approaches to resourcing teaching capability in important subjects. The delivery model may need to adapt to incorporate a blend of different solutions, which could include:

- FE Providers collaborating to share and leverage scarce specialist teaching resource across the region.
- Partnering with HE Providers in the region to leverage HE teaching capability for HTQs.
- Secondments of specialists from industry to support curriculum development and delivery.
- Subject matter experts from employers delivering specialist modules within programmes – Construction employers are currently considering this for sector-specific advanced digital skills.
- DfE policy and funding interventions, including recognition of incremental costs of employing specialist teaching expertise.

NELSIP Governance

A NELSIP programme board was established with stakeholders from employers, ERBs, HE/FE, ITPs, and local government to oversee the development and deployment of the NELSIP. It provided governance and oversight to the NELSIP project team, to ensure that the NELSIP is:

- Closely aligned with the Strategic Economic Plan for the North East.
- Effectively programme managed within the timeline and budget and meeting all the requirements and conditions associated with funding provided by the Department for Education.
- Developed in collaboration with employers, key stakeholders and education and training providers in the region.
- Reflective of employer requirements across all the key sectors identified as the primary scope for the NELSIP.
- Aligned with other strategic skills programmes in the region, including work being undertaken by the NELEP and LSIPs in adjacent regions.
- Transparent to all key stakeholders, and not disproportionately representing the interest of any single stakeholder or stakeholder group.

Further detailed consultation with those accountable and an understanding of resource available and prioritisation would be required to establish a timeline for each of the LSIP priorities.

The NELSIP board recognise that to turn the NELSIP priorities into an effective implementation plan it needs to be firmly underpinned by stakeholder commitment to the changes required. The Local Skills Improvement Plan (LSIP) is as much a process of change, as it is the development of priorities included in a report. The NELSIP sets out the first stage of a "roadmap" for delivering the recommendations. A first draft of a RACI is included for all priority areas. However, it will be appropriate to develop this further with specific output measures and timing, involving the appropriate local stakeholders in the initial implementation phase. This consultation should occur during the first phase of NELSIP implementation. It is envisaged that progress should be made on all these actions during the implementation of the NELSIP, but it is recognised that there may be a time-lag before some of the more systemic outcome measures are impacted. The recommendations outlined below in the RACI include a provisional view of stakeholder accountability and responsibility, and consultation and information rights. There are number of complex issues that need to be addressed, including split accountability for policy, delivery, and funding within the education system as well as the transition to NEMCA during the implementation stage and the intended consolidation of the LSIPs for the North East and North of Tyne regions.

Detailed NELSIP RACI with rationale

Definitions	
Responsible	Body/organisation that does the work to complete the work or create the deliverable.
Accountable	Body/organisation who ensures those responsible know the expectations and deliver the work.
Consulted	Body/organisation that provides input and feedback/ has a stake in the outcomes because it could affect their current or future work.
Informed	Body/organisation looped into the progress of the work but not consulted as not decision makers.

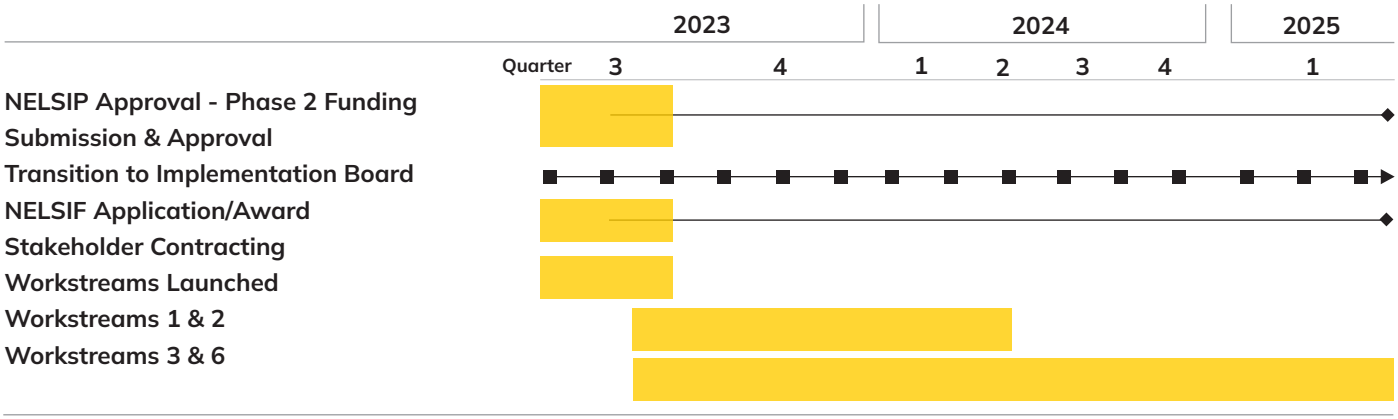
NELSIP Priority	NEMCA	Local Authority	Skill Providers	Employers	DWP	Schools	SECTOR ERB
Provide essential digital skills	C Devolved funding body for adult skills. Alignment with regional digital strategies	C Alignment with local digital strategies	A LSIP FE College' to FE/6th Form College R Any skills provider funded to deliver training	R Identification of needs Provide placements for students and release for re/upskilling	I	I May have responsibilities, but sits outside LSIP scope	C Provide sector trends and current/ future skills needs
Align 16+ technical education	R Responsible for devolved funding for adult skills Aligning skills needs to inward investment and strategic priorities	C Aligning skills needs to inward investment and strategic priorities	A FE College' to FE/6th Form College Aligning Priorities, LSIF & Delivery R Any skills provider funded to deliver training	R Identification of current and future technical skills need and translating into a demand signal	I	I	C Provide sector trends and current/ future skills needs
Increase the supply of level 3+ technical skills	R Providing regional leadership and oversight on technical skills planning	C Aligning skills needs to inward investment and strategic priorities	R Ensuring adequate L3+ capacity and quality of technical provision	A Provide sufficient L3+ apprentice demand R Provide work placements	I	R Ensure all students get access to Vocational careers advice. CEIAG	C Employer Engagement across the sector
Collaborate to deliver key technical skills	R Driving an integrated approach across the region	I Aligning skills needs to inward investment and strategic priorities	A Ensuring adequate supply of higher technical skills R Mechanisms to meet regional needs	R Translating skills requirement into a demand signal	I	I May have responsibilities, but sits outside LSIP scope	C Provide focal point for sector collaboration
Employer focussed - Enable employers	R Improve levy transfer mechanisms and align Adult Education Budget	C Aligning skills needs to inward investment and strategic priorities	A Accountability to DfE to work with Employers R Utilise forums & resource for engagement	R Translating skills requirement into a demand signal	I	R Employer engagement through outreach & promoting work experience	C Coordination and Alignment of sector level requirements
Prioritise Social Inclusion	A Strategic approach to improve level of employment rate.	R Deployment of regional strategy	R Positive assistance to drive equitable participation levels in line with regional strategy	R Equitable representation through inclusive people practices	R Reduce economic inactivity	R L2 attainment and careers guidance	I Sector representation and attraction

A number of principles drive the approach and consistency of the RACI:

- Single accountable lead body.
- Schools' commentary limited to LSIP scope.
- Assumed LSIF alignment to support broader LSIP priorities.
- Assume transition to NEMCA during implementation – recognise roles and responsibilities will be subject to clarification.
- Lead employer body role of NEAA in LSIP implementation covered by separate programme governance. NEAA sector role covered in Sector ERB.
- Role of skill providers recognises local FE Colleges direct accountability to DfE. All funded providers have responsibility for delivery of contracted programmes.

NELSIP Roadmap

The high-level roadmap reflects the transition of the NELSIP programme from development to implementation.



Following DfE programme budget approval of phase 2 of NELSIP, initial Phase 2 activities will include:

- Transitioning from the NELSIP Programme board to a new board that reflects the accountabilities and responsibilities in the RACI and provides governance for implementation.
- Alignment and approval of NELSIF and other appropriate funding to support the six LSIP priorities.
- Stand up the leadership and resourcing for the six workstreams aligned to priorities.
- Development of master programme schedule incorporating work break down schedules and outputs, and measurables for approval by the NELSIP implementation board.

It is envisaged that timing of delivery of priorities 1 and 2 will be during the three-year NELSIP implementation period, whereas that more systemic change activity associated with workstream 3-6 will be sustained beyond the programme.

NELSIP
North East Local Skills Improvement Plan

Funded by UK Government

delivered by the NORTH EAST AUTOMOTIVE ALLIANCE

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