



Learning Ecosystems: A new model for levelling up skills in Doncaster

**A Report by ResPublica for the Lifelong
Education Commission**

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About the Lifelong Education Commission

The Rt Hon Chris Skidmore MP launched the Lifelong Education Commission under his Chairmanship at ResPublica in February 2021. The Commission will seek to recommend how the multiple and varied barriers to lifelong learning can be removed, what future investment is needed to support this, and what regulatory change is needed to ensure the maximum possible flexibility that will benefit learners and deliver on the promise of a whole system change for education post-18.

The commission will focus on how post-18 education and skills ought to be designed, so that both Higher and Further Education institutions are valued, but also how the individual learner can be better empowered to make decisions and undertake their learning. Lessons can be learnt from abroad, as well as from mistakes made in the past, but post-Covid, the need to act differently for different outcomes will be essential.



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Foreword by Chris Skidmore MP — Chair of the Lifelong Education Commission

For far too long, learners in the UK have faced a stark choice when they turn 18. Stay in the communities they come from, or leave them to pursue opportunities for training, education, and professional advancement elsewhere.

Some are lucky enough to grow up in prosperous towns and cities that are home to thriving industries and well-established university and college campuses. But all too few are in this position. For most school leavers, carrying on up means heading on out.

Further and higher learning is, for the most part, concentrated in the larger and medium-sized urban centres. This tears would-be college and university students out of the communities to which they belong and scatters them across the country.

Often, the places where they undertake their post-18 training and education are where they end up settling once they finish it. Or they feel the magnetic pull of one of the major cities. In either case, they do not return to where they come from—except perhaps for Christmas or family occasions.

Of course, it is only right that learners should strive for excellence and pursue the best options for skills training and scholarly education available to them. But we need to recognise that this comes with a cost, both for them and for the places they come from.

For learners, it is the cost of dislocation. They are uprooted from their familiar networks of families and friends. They leave behind the areas where they grew up. And they face the social and financial burdens of re-establishing themselves in a new place.

For the areas themselves, it is the cost of a ‘brain drain’. Local communities are starved of the thought-leaders, innovators, and cutting-edge talent they need to grow and develop. Their economies stagnate, their main industries atrophy, their labour markets shrink, and their high streets fall silent.

This is an unsustainable situation. If levelling up is to achieve its aims for a UK where prosperity and opportunity are more evenly distributed, it has to reunite the interests of learners and communities. It has to ensure that real options for training and education, for accessing higher skills and scholarship, are available to all wherever they are.

This report offers a way to realise this core mission. Its focus is the Talent and Innovation Ecosystem: a model for a borough-wide learning community that brings together the interests and abilities of learners, employers, and educators, as well as a wide array of further partners in the local community.

The Talent and Innovation Ecosystem is a place-based partnership. Together, its stakeholders are tasked with coming up with pioneering learning programmes that respond to local problems, identified by the local community. These programmes, in turn, answer the needs of key sectors in the local economy that have the potential for growth.

At the heart of this partnership is a close symbiosis between schools, Further and Higher Education providers. When they reach 18, learners should no longer be forced to choose between academia and technical vocations. In the pitched battle over students and resources between the UK's fantastic colleges and universities, nobody wins, and learners lose.

Some key policy changes will be needed to realise the Talent and Innovation Ecosystem's potential. Local authorities must be awarded new place-based budgets, which can give them the flexibility and accountability they need to allocate skills and education spending where it can do the most good in their areas.

Everyone must have a statutory right to retrain, regardless of which qualifications they have achieved before. Working adults from deprived areas benefit the most from the chance to break into a new career. We owe them all the support we can give to unlock the contribution they can make to the UK economy.

The government has set out its vision of lifelong learning through the Lifelong Loan Entitlement (LLE), which is now the subject of a sector-wide consultation. Through its ecosystem approach, this report provides a template for joint working across institutions.

This approach should be seriously considered for wider national adoption. It is a vital tool to deliver the best possible outcomes for learners, by allowing them to effectively navigate the learning pathways that will be right for them.

Without this structural underpinning, the LLE will fail in its purpose, regardless of how much the Government invests in it. Standards and structures matter—and this report and its findings show how both can be taken up from the outset.

The Government has the chance to make the UK a world leader in place-based learning. Doncaster has set a gold standard for how local learning ecosystems should work. Local authorities everywhere in the UK now need to be given the powers so they can follow their example.

EXECUTIVE SUMMARY

Introduction

This report seeks to explore how a place-based approach to education and skills can transform lifelong learning. This builds on the experience and practice of partners in Doncaster to establish a local 'Talent and Innovation Ecosystem'. Raising skill levels is a key driver behind Doncaster's strategy to level up deep-seated inequalities in the borough, improve social mobility, address poor health outcomes, boost productive growth, and include all individuals and communities in the benefits of a more prosperous economy.

Doncaster's economy

Doncaster has a relatively low-waged, and low-skilled economy. The borough and the wider sub-region possess high-skilled labour and world-class economic assets, but the key drivers of growth – innovation and skills - are comparatively weak. Doncaster has transitioned from unskilled and labour-intensive employment in heavy industry to low and intermediary skilled jobs in retail, warehousing, and logistics. But the region as a whole has struggled to adjust to the structural changes in the UK and global economy. This story of economic and geographical divergence has become one of the defining features of regional inequality in the UK.

The skills gap

Doncaster has a low share of qualified workers at Level 4 and above compared to the region and the UK as a whole. Many adults in the workforce do not hold a qualification, while the proportion of 19-year-olds with Level 3 qualifications (44%) is well below the national average (56.9%). The majority of young people who do achieve in education leave the town and never return, contributing to the skills deficit and an ageing workforce.

Around 5% of employers are experiencing problems with skill shortages in Doncaster. This is broadly in line with the national average. By contrast, 15% of all local employers are experiencing significant skills gaps, and high levels of staff underutilisation which affects around one third of employers.¹ This is a key barrier to productive growth in Doncaster.

The productivity gap

Doncaster has, from a low base, made significant 'real terms' GVA growth over the past 20 years. However, the borough remains in the bottom 20% of all local authorities in the UK. Prior to the outbreak of Covid-19 the borough's position, in terms of GVA per hour worked, had worsened relative to the UK average.²

This is due to the structure of the local economy. Doncaster has fewer jobs in highly productive sectors and fewer industrial specialisms with export potential. There is a significant

¹ Employer skills survey (ESS) 2019

² ONS, Regional and sub-regional productivity in the UK: July 2021

underrepresentation in sectors that exhibit the strongest demand for knowledge workers such as professional, scientific, and technical activities; financial and insurance services; information; and communication. These are all industries that can demand a higher level of innovation and R&D investment, driving strong wage growth and future demand for highly skilled people.

Sector specialisms

While there are numerous challenges to be addressed there are also strengths and opportunities to build on. The economy contains several sector specialisms with the potential to drive future growth. These include Logistics and E-commerce, Manufacturing, Civil Engineering, and Construction. Healthcare and Education also form an important part of the foundational economy, while the Digital and Creative industries alongside the increasing importance of the Green Economy present future opportunities for high-skilled growth.³ Of these, several cross-sectional strengths and key specialisms have been detected.

Development opportunities

Doncaster has a pipeline of economic development opportunities that could be transformational for the local economy. Investments in the physical development of strategic sites and premises and vital infrastructure will also provide tangible assets that are essential to productive growth. Wider economic development opportunities in the borough have the potential to grow and attract higher-skilled businesses while also providing the infrastructure to support human capital. These key locations – including the town centre, the Waterfront, Unity and Gateway East - have been recognised in the regional Strategic Economic Plan.

Skills provision in Doncaster

Just as Doncaster's economy differs from the national economy so too does its employment and skill needs. Yet education and skills in Doncaster is largely determined by national policy objectives and funding allocations set by central Government. With the exception of the devolved Adult Education Budget, the extent to which local partners can direct mainstream provision to meet local need is limited.

Learning assets and anchor institutions

Doncaster has many important assets, including The DN College Group, A University Technical College (UTC), The National College for Advanced Transport and Infrastructure (NCATI), and a teaching hospital (Doncaster and Bassetlaw NHS Trust). The recent Government announcement to establish a new £12 million Institute of Technology will accelerate current provision, to help transform the skills profile for the region.

The borough does not formally host a university; however, Team Doncaster has transformed its approach to the delivery of learning provision over the past four years, undertaking key transformational projects such as the University City Partnership, which aims to: (1) Increase the

³ Ortis Economic Research and the University of Sheffield, Industrial Specialisms in the Doncaster economy, December 2018.

proportion of the working population with higher-level qualifications; (2) Develop a joint Further and Higher Education prospectus and curriculum (3) Provide Advanced Learning through Centres of Excellence focusing on sectoral strengths.

The supply of provision

There is currently a wide range of partners delivering education and skills. The scope of initiatives provides the potential for duplication and possible confusion within the current system. Duplication in itself is not necessarily a bad thing, but there may be efficiencies to be gained through a clearer division of strategic and delivery roles, between partners within the local skills system. There could also be clear benefits to valuable resources by integrating services, and streamlining valuable funds, for example, to target specific industries and sectors. This could also help employers to navigate the available support for recruitment, training and workforce development.

Matching supply and demand

It is difficult to identify where the crucial gaps in delivery may be and where there is a possible mismatch of supply and demand. Analysis produced for the South Yorkshire Mayoral Combined Authority suggests that Doncaster is performing less well in matching the supply and demand for skills compared to Sheffield and Rotherham.⁴ This has identified key gaps between the skills profile in South Yorkshire and the requirements of important sectors (digital, tech, health, hospitality, and catering) and occupations (healthcare workers, HGV drivers).

Some large employers in Doncaster, including the NHS and Unipart, have indicated the need for short bespoke courses to address specific skill components and expressed interest in the potential for microcredentials. This suggests an identifiable gap in existing provision and the scope for future development, although these qualitative findings would need testing with a larger sample of local employers.

There is a pressing need for reliable 'real time' information that can effectively assess the supply of skills training. This intelligence can then be triangulated with job vacancy data, local employer surveys (identifying skill gaps and shortages) and forecast demand (emerging growth sectors and investment opportunities) to provide a genuinely flexible system that can respond to employer needs. It is this level of analysis that will be needed to inform the Local Skills Improvement Plan.

Higher Technical Provision

UK skill levels, while relatively strong at the higher level, are relatively weak at the intermediate level compared to international standards. While the UK lags other countries in the proportion of higher technical qualifications, South Yorkshire is lagging the UK average with less than 6% of learners studying HTQs (Level 4 & 5) compared with 8.5% nationally. However, Doncaster Colleges fare comparatively well in relation to other Colleges in South Yorkshire, providing the largest share (39%) of all FE enrolments in the sub-region.⁵ This suggests that Doncaster has a proportionally higher demand, among learners, for these intermediate-level skills.

⁴ Sheffield City Region Local Skills Report, June 2021 p.51

⁵ HEFC/EFSA, 2021

Towards a new model

Efforts to improve the local skills system need to be undertaken in a manner that is consistent with national skills policy but in a way that responds to local circumstances and needs. The borough's ambition is to develop a whole system, whole place, whole person approach to lifelong learning that can offer a strong 'cradle to career' pathway for everyone in Doncaster.

Building the local skills system

The existing skills system is not working for everyone in Doncaster. Too few are participating in higher-level learning, and long-standing disparities in educational attainment, at all ages, persist. Partners in Doncaster have begun to focus on the concept of a Talent and Innovation Ecosystem (TIE) as a new model for further and higher learning. This aims to unite all parts of a diffuse education and skills system, to drive the system and cultural change necessary to deliver on the borough's priorities.

Doncaster's Talent and Innovation Ecosystem

Doncaster has already begun to transform education in the borough. This journey started with the One Doncaster Independent Commission. Having implemented all of the commission's recommendations, educational attainment in schools has improved significantly, narrowing the gap with the national average. Doncaster has innovated pathways from schools into further and higher education, developing a hybrid approach to academic and technical learning as well as a deeper collaboration with employers in the borough.

However, there is still scope for significant improvement which Doncaster believes can only be accelerated with fundamental systemic changes. The challenge now is to expand this model, to include those who are outside the reach of formal education – those in work who need to reskill/upskill, and those out of work. This will involve connecting the system in a more coherent way, from Early Years to through-life learning. This will provide the full scope of Doncaster's education and skills ecosystem.

The TIE will shift the focus from a traditional academic centred model of learning to a more diverse and inclusive borough-wide learning community that is vocationally and socially relevant. The development of this mixed or 'hybrid' approach will draw on international best practice to bring together learners and employers, community partners and educators to co-design and apply learning to real-world problems. The thinking about learning ecosystems has developed beyond a narrow focus on economic utility to consider the potential for human flourishing, focusing on wellbeing, life quality and social impact.

Doncaster's Ecosystem is currently geared towards 'Talent' (with a focus on higher-skilled people for good jobs) and 'Innovation' (that supports productive learning). It builds on the many programmes and initiatives that have been developed to improve educational outcomes and transform the culture of learning. It aims to (1) Bring all learning assets together in one place; (2) Build a digital platform that enables all residents to engage in learning; (3) Develop community assets and expertise to access the most vulnerable people and places; (4) Co-design and deliver pathways linked to the needs of the local economy.

Building on the University City Partnership the TIE will develop a joint Further and Higher Education prospectus for higher-level qualifications in four Centres of Excellence – Health & Care, Engineering, Creative & Digital and Green Technology. In this way the TIE will address the borough’s levelling up challenge and meet the opportunity for growth in key sectors and strategic development areas.

Ecosystems and economic growth

The TIE allows for a radical reassessment of learning and its relationship to economic growth and the opportunity for wider wellbeing improvements. Skills matter for productive growth and the borough’s levelling up challenge. There is evidence that investment in human capital has much more linear returns compared to other forms of investment – for example, research and development – particularly in less technologically advanced regions, like Doncaster,⁶

Doncaster has grounded the TIE in its assessment of the local economy and assets. But it will need to do this while pivoting towards a different future in emerging sectors like digital, tech, creative industries and the green economy, and by developing strategic sites like the Waterfront (the proposed location for a new NHS hospital) and Doncaster Airport, that will host new firms with the potential to boost innovation. Developing university-industry linkages, and the ability to translate academic research to solve strategic industry challenges, will be important to the TIE model moving forward.

Foreign Direct Investment (FDI) and skill development

Human capital and higher skills acquisition have a complementary relationship with FDI, as they tend to reinforce each other. This suggests a key role within the TIE for Business Doncaster and the combined authority vis-à-vis investment promotion. There is evidence that investment promotion agencies in less developed regions can increase FDI inflows by up to 71%.⁷ Doncaster has a low proportion of larger firms relative to other more productive places like Oxford, Cambridge and London. Attracting and growing the size of firms is important because on virtually every meaningful indicator, including wages, productivity and on-the-job training, large firms as a group significantly outperform small firms, in virtually all economies.⁸

Towards a joined-up approach

Doncaster’s model extends across all phases of education and public-private arrangements. The scale of this ambition raises the question of where one ecosystem ends, and another begins and whether activities relating to business support and inward investment should be considered as part of the same system given the relationship between skills development and job creation activity.

⁶ Charlot, Sylvie, Crescenzi, Riccardo and Musolesi, Antonio (2014) Econometric modelling of the regional knowledge production function in Europe. *Journal of Economic Geography*, online. pp. 1-33. ISSN 1468-2702

⁷ Source: Crescenzi, R., Di Cataldo, M., and Giua, M. (2021). “FDI inflows in Europe: does investment promotion work?”, *Journal of International Economics*.

⁸ Atkinson, R. D., and Lind, M. (2018). *Big Is Beautiful: Debunking the Myth of Small Business*. Cambridge, MA: MIT Press.

The ecosystem approach in education has already delivered positive results across the world. However, the UK is exceptionally centralised by international standards and examples from other nations are operating in different conditions, where local partners may have more freedoms and flexibilities to innovate. This raises the issue of what additionally is needed to make this work.

Recommendations

Team Doncaster should:

- Bring a sharper focus to the needs of adult learners already in the workforce by targeting skill gaps in those sectors with growth potential.
- Consider the demand for bespoke 'bite-sized' learning modules and microcredentials to be co-developed with employers and co-delivered by higher and further education.
- Pursue a high-level growth strategy and consider how the wider functions of job brokerage, workforce development, business support and inward investment should be integrated with the TIE.
- Identify and target larger firms in the borough, to understand their workforce development needs and provide a bespoke solution to skill gaps and on-the-job training.
- Aim to attract an applied research institution to increase R&D activity and generate greater levels of knowledge transfer in the local economy.
- Develop a dashboard of 'real time' information that can effectively assess the supply of skills training and inform decisions about future strategy and investment.

Government should:

- Introduce a statutory right to retrain regardless of prior attainment, to support even more working adults in deprived areas to progress along the skills escalator.
- Remove all restrictions on engaging in training for individuals receiving welfare benefits.
- Consider both loan and maintenance support for the Lifelong Loan entitlement.
- Enable the Lifelong Loan Entitlement to provide a single system that can bridge between modules, including microcredentials, at various levels, including post-graduate.
- Pilot a Local Skills Account co-developed with Partners in Doncaster.
- Pause the decision to defund BTECs indefinitely until the T Level programme is more established.
- Enshrine a clearly defined role for local and combined authorities in LSIFs.
- Enable a 'big data' approach to skills planning by allowing anonymised learner data to be freely accessed and analysed at the local level.
- Introduce high-quality Career Development Hubs in priority areas for levelling up.
- Introduce levy flexibilities and tax incentives in high-skilled 'cold spots' to address skill gaps in exportable growth sectors.

Levelling up skills in Doncaster

- Retain the match funding element in future succession funds to ESF/ERDF.
- Introduce a 'licence to innovate' – to develop a local Curriculum, Credentialing, and Assessment framework, working with and running parallel to national assessments.
- Create a 'Local Skills Development Fund' tied to the operation of LSIPs.
- Trial place-based budgeting, giving local leaders full flexibility and accountability for integrated spending and investment across economic and social policy, with a focus on education and skills.
- Extend the scope of the Education Investment Areas to look at wider outcomes for lifelong learning (levels 4-6) and the 'cradle to career' journey.

1 INTRODUCTION

In this second report, the Lifelong Education Commission seeks to explore how a place-based approach to education and skills can transform lifelong learning. This builds on the experience and practice in Doncaster to establish a local 'Talent and Innovation Ecosystem' that can empower all people to learn and acquire skills through life and thereby fulfil their potential to thrive in life and in work.

This is a partnership endeavour comprising the public, private, voluntary and community sectors under the Team Doncaster umbrella.⁹ Team Doncaster's vision is to achieve a whole systems, whole place, and whole life approach to learning. Raising skill levels is a key driver behind Doncaster's strategy to address deep-seated inequalities in the borough, to improve social mobility, to address poor health outcomes, to boost productive growth, and to include all individuals and communities in the benefits of a more prosperous economy.

This report makes the case for place-based skills as part of the Government's levelling up agenda, especially as it relates to the White Paper's stated missions to improve education and skills. Perhaps more than any other policy intervention, this holds the key to levelling up places like Doncaster. Not least as the labour market adjusts to the impact of the Covid-19 pandemic and the end to free movement with the European Union.

The shortcomings of the current system are felt most acutely in precisely those areas of the country that are in most need. Reforming skills, therefore, goes to the heart of the challenge: to provide better, more flexible, pathways from education and training into employment; and to reskill and upskill the existing workforce. More than this, a focus on lifelong education and skills can help places like Doncaster transition towards a more inclusive and regenerative economy.

This work aims to demonstrate how skills systems can be effectively organised at the local level. It identifies specific 'asks' of government that can enable partners in Doncaster to take further control over the supply of skills provision, to facilitate lifelong learning, and help learners to better meet the current and future needs of the local labour market. In so doing, this report seeks to establish Doncaster as an exemplar that can be copied and scaled to other similar labour markets in the UK.

⁹ Team Doncaster is formally recognised as the strategic partnership of organisations overseeing the delivery of the Borough Strategy: Doncaster Delivering Together.

2 DONCASTER'S ECONOMY

Doncaster, in South Yorkshire, is the largest metropolitan borough in England with a resident population of over 300,000, greater than many cities. The local economy can be characterised, like many other places across the north of England, as relatively low-waged, and low-skilled, although the borough and the wider sub-region does possess high-skilled labour and world-class economic assets.

Prior to the pandemic, Doncaster was among the weaker labour markets in the UK, although there had been significant progress in employment rates and wage growth in recent years. However, the social and economic shock of Covid-19 has compounded the scale of the challenge facing the borough. With the unemployment claimant count rising steeply, despite the Government's job retention measures, Doncaster is within the top quartile of towns and cities that have been most impacted by the pandemic.¹⁰

Doncaster is a self-contained travel-to-work area, with low commuting patterns beyond the borough and fewer employment opportunities in highly productive sectors that create high wage, high-value jobs. The key drivers of growth – including innovation and skills – appear to be comparatively weak. The main challenge for Doncaster's economy is therefore to address a long-standing productivity problem, with a particular focus on higher-level skills.

2.1 Challenges

Doncaster's economy is rooted in its post-industrial heritage. The area evolved as a major industrial centre in the 19th century, specialising in a wide range of light and heavy industries including the manufacture of locomotive and carriage works, textiles, glass, and iron production. The borough's engineering works produced some of the great icons of the Industrial Revolution: The Great Northern Railway, for example, opened in 1849 and turned Doncaster into an industrial centre of national importance.

In the early 1900s, Doncaster became a national centre for coal mining, resulting in further population growth and in-migration as the coal industry became the largest employer in the borough. But during the latter half of the 20th century, the increasing forces of globalisation has resulted in many of these industries, central to Doncaster and South Yorkshire, relocating to other parts of the world where businesses have often found materials and labour to be cheaper. The fall in manufacturing and the closure of the pits, during the 1980s, have contributed to a long period of economic decline and high levels of unemployment. Most mining areas in the UK have not fully recovered from the closures.

Despite recent improvements, in employment rates and GVA growth, the borough is still dealing with the legacy of its industrial past. Doncaster's economy has transitioned from unskilled and labour-intensive employment in coal production, manufacturing, and the railways to low and intermediary skilled jobs in retail, warehousing, and logistics. But the

¹⁰ Centre for Cities, Cities Outlook, 2021

region as a whole has struggled to adjust to the structural changes in the UK and global economy, which has seen a continuing rise in services (professional and financial) and increasingly knowledge-based industries that have concentrated in London and the Greater Southeast of England, where the productive base is both more specialised (in the industries that matter for growth) and more diverse, thus providing greater resilience to economic shocks.

Low levels of business formation and investment, combined with a less varied and lower-skilled economy has meant that post-industrial places like Doncaster have struggled to develop the agglomeration forces that attract highly skilled labour and new innovative firms that can reinvent economies and typically drive high productivity growth.

This story of economic and geographical divergence has become one of the defining features of regional inequality in the UK. Doncaster, like many places in the North, has experienced the effects of outward migration as those with higher skills have gravitated to other parts of the country, where there are better job prospects. Those left behind have tended to be older and lower skilled. It is to be noted that Doncaster’s population is growing (3.1% since 2010) but at a lower rate than comparators and is predicted to rise at a lesser rate. Projections indicate that by 2028 the number of people over 65 will for the first time equal the number up to age 19.¹¹ When combined with high levels of economic activity, due to poor health, this has severe implications for a wide range of local services, particularly health and social care services, as well as the productive capacity of the population.

2.1.1 The skills gap

Doncaster has a low share of higher qualified workers (Level 4 and above) compared to the region and the UK as a whole and a correspondingly large share of employees in lower-skilled occupations.

Table 1: Qualifications of the resident population aged 16-64 (Jan 2020-Dec 2020)

	Doncaster (%)	Yorkshire and Humber (%)	Great Britain (%)
NVQ4 and Above	26.2	37.0	43.1
NVQ3 and Above	51.4	57.3	61.3
NVQ2 and Above	69.9	75.5	78.1
NVQ1 and Above	83.3	86.4	87.7
Other Quals	9.5	6.5	5.9
No Quals	7.3	7.1	6.

Source: ONS annual population survey

With employment rates improving in recent years, the skills profile of the working-age population would appear appropriately balanced to the requirements of the local economy. However, while this so-called ‘low-skill equilibrium’ is enabling many people to find employment within the borough it is also holding back the potential for economic growth. Many employers in growth industries (such as health, engineering and advanced

¹¹ The State of the Borough, 2019

manufacturing) are reporting skills shortages for higher-skilled jobs (at Level 4 and above) across a range of occupations.

Prior to the pandemic, Doncaster had vacancy levels in line with the national average – 18% of all employers had at least one vacancy corresponding to 3.2% of the local workforce. Vacancies which were hard to fill and particularly those relating to skill shortages are relatively small in relation to all jobs and employers. They were also broadly in line with the national average, although higher than South Yorkshire as a whole. By contrast, 15% of all employers are experiencing significant skills gaps and high levels of staff underutilisation which affects around one third of employers. Skill gaps within the existing workforce is clearly a key barrier to productive growth in Doncaster.

Table 2: Vacancies, skill shortages and gaps, utilisation.

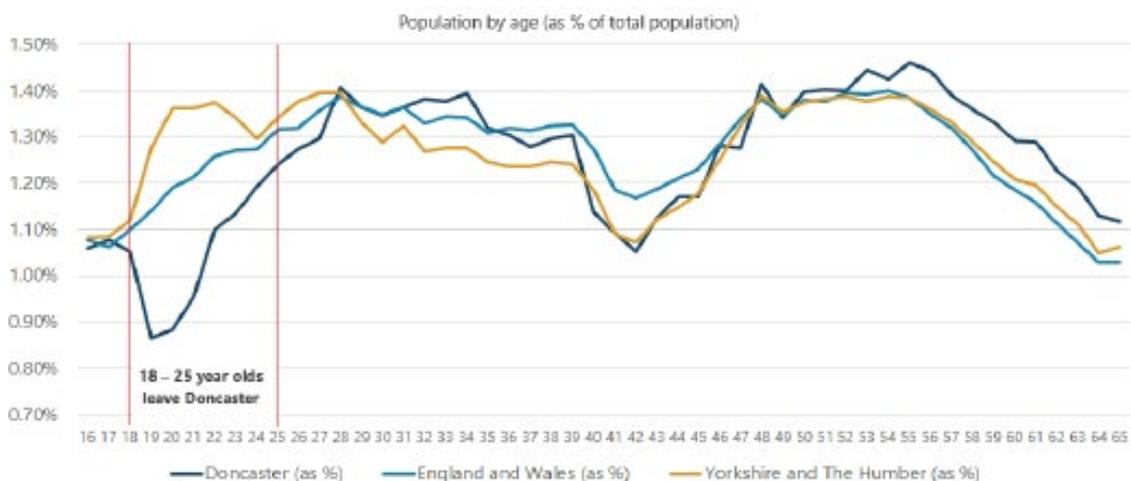
		Doncaster	SY	England
Total vacancies	% Jobs	3.2	2.8	3.2
	% employers	18	15	17
Hard to fill vacancies	% Jobs	1.2	0.9	1.1
	% employers	9	6	8
Skill shortage vacancies	% Jobs	0.9	0.5	0.8
	% employers	5	4	6
Skill gaps	% Jobs	3.6	4.2	4.6
	% employers	15	15	13
Staff underutilisation	% Jobs	-	-	-
	% employers	32	36	34

Source: Employer skills survey (ESS) 2019

While many adults, already in the labour market, do not hold a qualification, young people are also leaving school and college without the requisite skills. Educational performance at the GCSE level is improving but remains below the national average, especially in English and Maths. The proportion of 19-year-olds with Level 3 qualifications (44%) is also well below the national average (56.9%) and this position is much worse for disadvantaged young people, with only one in four gaining Level 3 qualifications at this age.

A key problem for Doncaster is that the majority of young people who do achieve in education leave their hometown for university and employment opportunities, and many never return. This exodus of young talent is contributing to the skills deficit. Unfortunately, where graduates do return the likelihood is that they will be employed in a non-graduate role, or that their skills will not align with employer needs and particularly the opportunities available in higher technical roles.

Figure 3: Doncaster’s skills drain



Source: Doncaster’s Education and Skills 2030 Strategy

In addition, population trends reveal a shortfall among 24–49-year-olds which suggests that this age group is also relocating. This is contributing to an ageing workforce and the pressure of ‘replacement demand’. With a high proportion of both young and older people either out of work or in part-time work, it is possible that with the right programme of skills training and labour market initiatives, these gaps may be narrowed.

Doncaster is a relatively self-contained travel-to-work area, with a high proportion of residents living and working in the borough, and fewer travelling in or out to work. However, a net outflow of around 6,000 commuters indicates an insufficient number of local jobs. Median wage levels for the resident population (£564/week) exceed the work-based population (£527) suggesting that those commuting out of the borough do so for higher paid work.¹²

There is a pressing need for Doncaster to both retain more residents and attract highly skilled workers to improve the supply of human capital. Doncaster’s skills challenge is therefore twofold:

- To improve the **flow** of higher-skilled school leavers into employment, while reversing the outward flow of young people to other places.
- To improve the skills profile of the existing **stock** of employees already in the workforce, and to retain these employees in the borough.

2.1.2 The productivity gap

The UK economy has a productivity problem with few places outside of London and the Greater Southeast performing above the national average. This is particularly pronounced in

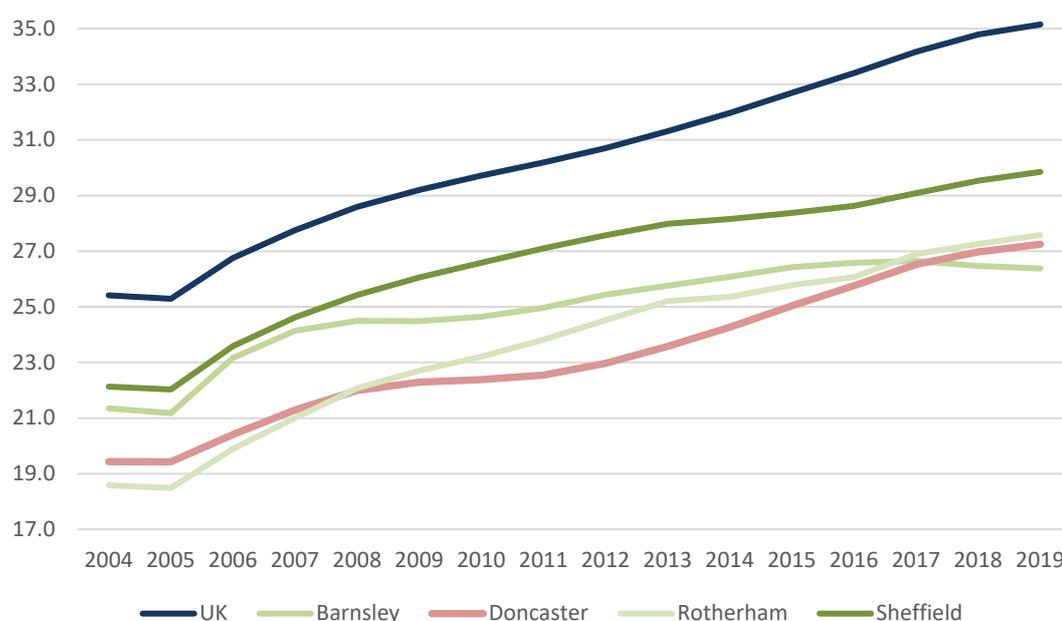
¹² Figures for earnings come from NOMIS: the Annual Survey of Hours and Earnings (ASHE). Information relates to a gross pay during a specified period in the survey.

South Yorkshire, which is the least productive ‘city-region’ in England. Real economic output (GVA) in relation to total hours worked has not changed in the past 15 years.¹³

Doncaster has, from a low base, made significant ‘real terms’ GVA growth over the past 20 years. The borough has recorded the third-highest growth among all local authority areas in Yorkshire and Humber over this period. This speaks to the presence of industrial specialisms (engineering and technology) and higher growth firms in the borough.

However, the picture for Doncaster is worrying. The borough remains in the bottom 20% of all local authorities in the UK, for productive growth. Prior to the outbreak of Covid-19, the borough’s position, in terms of GVA per hour worked, had worsened relative to the UK average. This is due to the structure of the local economy. Doncaster has fewer industrial specialisms with export potential for higher-value goods and services and more firms that are inward facing and service the ‘everyday economy’ and which can be more sensitive to fluctuations in local demand. (See figure 5).

Figure 4: GVA per hour worked (£)



Source: ONS, Regional and sub-regional productivity in the UK: July 2021

Skills is a vital component of productivity. Without a highly skilled workforce, economies cannot grow. But the conditions for growth clearly extend beyond the availability of local talent. The underlying structure and formation of the economy in terms of the types and size of businesses are also crucial.

Doncaster has moved towards a more service-based economy in recent years, although it remains disproportionately dependent on public sector employment relative to the UK and

¹³ ONS subregional productivity latest [release](#) July 2021

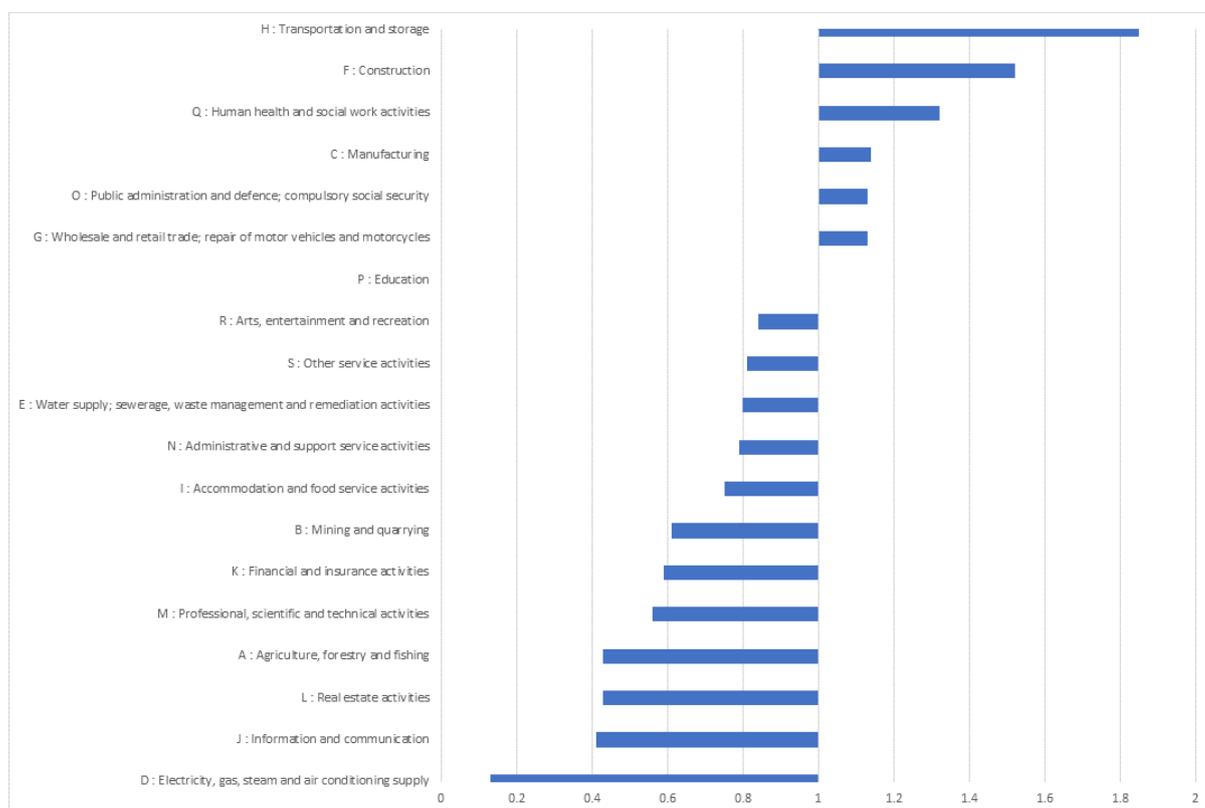
other more productive places. Health, education and public administration are among the largest employers in Doncaster, representing a third of all jobs.

By both GVA and employment, Doncaster’s economy is dominated by public services, retail, construction, manufacturing, transport and storage. Manufacturing has contracted significantly over the past twenty years but remains the third largest sector behind health and retail, which, despite no significant change, remains the borough’s largest sector.

Conversely, there is a significant underrepresentation in sectors that exhibit the strongest demand for knowledge workers such as professional, scientific, and technical activities, financial and insurance services, information, and communication. These are all industries that can demand a higher level of innovation and R&D investment, driving strong wage growth and future demand for highly skilled people. There has been large relative growth in these sectors, but they remain small compared to other industries in Doncaster and to the UK as a whole.

Doncaster needs more private sector businesses and specifically more businesses in tradable sectors that will create more economic output and better paid employment. The borough has a relatively low number of jobs (0.7) per working-age resident and although business stock has grown over the past decade, overall business density (per population) remains relatively weak.

Figure 5: Sectoral structure Doncaster v GB, 2019



Source: ONS, 2021

Doncaster sectoral structure continues to change although it has not yet adjusted in line with the national profile. Consequently, the borough has not shared in the benefits of

higher-value exports that has happened over the last 35 years. These export-driven industries, which include high-value manufacturers, as well as financial and professional service businesses, drive growth because they trade in regional, national and international markets. This brings multiplier effects to the local economy including spending power to support retail, hospitality, leisure, culture and arts. The orientation of Doncaster's economy towards new emerging sectors with export potential will be key to the creation of better-quality employment opportunities.

2.2 Opportunities

While there are numerous challenges to be addressed, there are also strengths and opportunities to build on. Doncaster can count on excellent accessibility, transport and infrastructure links, by rail, road and air, which are vital to connecting the local economy to wider markets. The borough also enjoys a high-quality natural environment and easy access to outstanding natural resources, which provides a desirable and attractive place-offer for businesses, entrepreneurs and highly skilled workers.

The economy also contains several sector specialisms with the potential to drive future growth alongside a pipeline of economic development opportunities that could be transformational for the local economy.

2.2.1 Sector specialisms

A recent study identified the key tradeable sectors that are prominent in Doncaster.¹⁴ These include Logistics and E-commerce, Manufacturing, Civil Engineering and Construction. Healthcare and Education also form an important part of the foundational economy, while the Digital and Creative industries alongside the increasing importance of the Green Economy present future opportunities for high-skilled growth. Of these a number of cross-sectional strengths and key specialisms have been detected.

Transport and logistics

This sector involves the transportation of people and goods, as well as the products and services that support road, rail and air transport and infrastructure. The sector is the most highly concentrated in Doncaster compared with the UK average, comprising 4% of all firms and 9% of all employment.

The sector has grown significantly in recent years, although remaining less productive than the Doncaster average. Further growth in GVA (22%) and employment (50%) is projected by 2032 with notable growth in warehousing and storage, freight transport, rail construction and service activities such as the operation of freight terminals and passenger facilities.

However, this sector could be particularly vulnerable to automation and advances in Artificial Intelligence (AI). Employment numbers and densities could therefore decline within

¹⁴ Ortis Economic Research and the University of Sheffield, Industrial Specialisms in the Doncaster economy, December 2018.

some activities, although other higher-skilled opportunities will emerge. These include the increasingly high level of skills required for jobs in logistics and transport (e.g. designing, implementing and managing technology).

Engineering & Technology

The Engineering & Technology sector includes a wide range of products and services that rely on engineering and technology skills. This sector represents about 2% of all firms, 7% of all employment and 8% of total GVA in the borough. The sector is more highly concentrated in Doncaster than the UK as a whole and has grown faster relative to the UK average.

Engineering & Technology is one of Doncaster's more productive sectors and GVA per employee is projected to rise at a faster rate than the Doncaster average, by around 29% by 2032 (1.09 times the average level of productivity in Doncaster). Employment growth of 37% is also projected by 2032, particularly in civil engineering, freight rail transport and some manufacturing sectors.

Advanced Materials

The Advanced Materials sector involves the production and supply of plastics, glass, metals, stone and rubber and related products and the technologies required to create them. The sector is more highly concentrated in Doncaster than the national average although it includes less than 1% of all firms in Doncaster and 3% of all employment. In terms of employment, the sector has contracted over the past decade with further employment losses projected over the next 10 years. However, productivity in Advanced Materials is projected to rise at a faster rate than the Doncaster average, by around 31%. This makes the sector an important driver of productive growth.

Digital & Creative Industries

At present, digital and creative industries are comparatively small in Doncaster, comprising around 2% of all firms and all jobs. The sector has grown but not as fast as other places in the UK. Consequently, it represents less of a specialism than other sectors in the Doncaster economy.

However, the sector is predicted to grow over the next 10 years, increasing the value of the sector (in terms of GVA) to the local economy by almost 50%. Productivity, which is high in Digital & Creative businesses, is also projected to improve at a faster rate (28%) than the Doncaster average, while employment is estimated to grow between 10-12% by 2032. This suggests the sector will become increasingly important.

These projections do not take account of the development of a film, television and technology hub at the Waterfront, led by 360 Media (see below).

2.2.2 Development opportunities

Capital investment in the physical development of strategic sites and premises and vital infrastructure will also provide tangible assets that are essential to productive growth. These

wider economic development opportunities in the borough have the potential to grow and attract higher-skilled businesses and new employment opportunities, shaping the demand for labour, skills development and supporting human capital. These key locations have been recognised in the regional Strategic Economic Plan.

The Town Centre

Doncaster Town Centre is critical to the economic future of the borough and central to the borough's levelling up programme. It is the borough's main business, civic and cultural centre but has experienced market decline in recent years, particularly in retail. The emerging Local Plan identifies the town centre as the principal employment centre and main growth area in Doncaster.¹⁵

Successful applications to the Government's Town Fund and Levelling Up Fund will contribute to the required 're-balancing' of this strategic site. The intention is to create a thriving and accessible retail, office and leisure destination with a range of high-quality services, businesses, homes and excellent cultural and further education facilities. Densifying the urban core with mixed-used development will help create the conditions for growth through agglomeration effects, which are currently lacking.

The Waterfront

Comprising approximately 50 hectares, Doncaster Waterfront is adjacent to the town centre and within walking distance of a national rail hub. The site is one of the most significant urban centre development opportunities in the UK. A successful application to the Levelling Up Fund was announced by the Chancellor in the Autumn budget and this investment will help to unlock the potential of this and other town centre sites to develop a major mixed-use Innovation District which can expand Doncaster's urban centre and transform the local economy. The development may include:

- **A college-university campus:** Prior investment has already delivered the newly built Doncaster College and University Centre, which is now well established on this site. Further investment will extend the University Campus concept linking future skills development to new businesses located on-site, and with new accommodation for Health and Medical students and key workers.
- **Film & TV studios:** The UK has a growing shortage of production studios for film and television production. This is particularly true of Yorkshire and surrounding areas, where there are limited facilities. There is a growing national skills shortage across the sector – in particular immersive production (i.e. the utilisation of Virtual Reality, Augmented Reality), which is now becoming more integrated with film, television and games production. The convergence of this technology in Doncaster will provide a valuable digital and creative cluster capable of wider agglomeration effects that can drive future growth and demand for skills.

¹⁵ (Policy 68), improve the design, quality and appearance of the town, to act as, an economic driver for the borough, a focal point for investment and an exemplar for borough-wide urban regeneration.

- **A New Teaching Hospital:** A proposal to relocate Doncaster's hospital to a new facility located on the waterfront site. This will include teaching, training and research facilities, providing the potential for innovation in the health economy and the expansion of the borough's skills offer.
- **A Northern Sustainability Centre:** An education building situated alongside Doncaster College to support the delivery of green technology courses and training.

Unity

Unity is a development site covering an area of approximately 250 hectares. It is one of the largest regeneration and infrastructure projects of its kind in the UK and will deliver a mixed-use development of regional importance, providing:

- Over 3,000 new homes
- A new town centre
- Offshore marina
- A school and transport hub
- A variety of new commercial uses, which aims to deliver 7,000 new jobs.

Unity is situated in a prime strategic location, on the eastern section of the M18/M180 motorway corridor, and in close proximity to Doncaster Sheffield Airport. This ambitious project aims to transform some of the most challenged wards in Doncaster, including Stainforth which is supported by the Town Fund, by stimulating economic regeneration, promoting social inclusion and improving the health and wellbeing of people living in the area through access to quality community and leisure spaces.

Gateway East

Gateway East, with Doncaster Sheffield Airport at its heart, is a major development opportunity for the region with the potential to support major job growth across a range of industries. The site comprises five distinct zones, featuring a mix of uses including airside operations, cargo, logistics, engineering, advanced manufacturing, warehousing, retail and accommodation. The site will help create a new international destination that will benefit not only from the airport serving as its economic anchor but also from planned infrastructure improvements such as the motorway link road (J3) and a market-led proposition to bring an East Coast Mainline station to site.

Gateway East is a cornerstone of a Global Innovation Corridor that will build on developments, particularly in warehousing and advanced logistics, that have taken place along the M18 and A1 corridors and which have now home to some of the most successful and well-known companies and brands, including Amazon, Ikea, Next, Asda, The Range, B&Q, Lidl and BMW. It also houses stock from local companies, such as Ceva Logistics, the Carlton Forest Group, DB Cargo, Unipart Rail, Volker Rail, Pass Logistics and Anglo International Express.

The development of a Gateway East Academy will offer recruitment and training services to employers, including over 70 businesses already located on the site. Companies looking to invest will also receive bespoke recruitment support. The Academy aims to support local residents and businesses by brokering employment solutions.

Doncaster is one example of how disparities, resulting from profound changes in the structure of the national economy, have sustained over long periods, resulting in an unbalanced pattern of 'divergent growth'. The local economy has re-orientated over the past 30-40 years, and in many ways, this change has been dramatic, but future employment and economic growth will depend on a complex host of factors.

While there is no singular accepted theory about the determinants of place-based growth, the elements needed are well observed. The role of economic structure and the relative advantages and disadvantages of specialisms, versus a more diversified base, are clearly important. Another issue is that of tradable sectors and what the economy can innovate and export. Related to this is the question of employment density (designed to capture local agglomeration effects) and population size. The importance of skills and human capital, which has repeatedly been found to influence city growth, are bound up with all this. (Glaeser, et al, 1992; Rauch, 1993; Simon and Nardinelli, 1996; Simon, 2004; Moretti, 2012).

It is also clear that the fastest growing cities and towns in Britain over the past thirty years have been those that have been deliberately planned and developed through urban policy: the purposive and integrated expansion of population and employment in these places has set them apart from others.¹⁶ Providing 'A Place to Work and Learn' is one of the priorities for Doncaster's Urban Centre Masterplan.¹⁷ Aligning and fully integrating strategies for skills with physical plans to develop the town centre and other strategic sites, combined with a focus on key specialisms with the potential for growth, will help to concentrate and densify economic activity

Ultimately, the levelling-up challenge for Doncaster is to drive up productivity by improving skill levels in line with the needs of those sectors that have the potential to innovate and grow and by increasing overall levels of enterprise and employment. Improving local skills will also help attract new business investment to create the wider conditions for growth through agglomeration effects in key strategic locations and other areas in the borough.

This is not to suggest that skills development cannot help other firms and sectors with the potential to create good jobs, whether in the foundational economy or at the frontier of innovation. A local skills offer should enable indigenous firms, large and small, to address shortages and gaps in the workforce. This offer should integrate with available business

¹⁶ Martin, R et al Divergent cities in post-industrial Britain, Future of Cities: Working Paper. Foresight, Government Office for Science, 2016.

¹⁷ The 'Town Centre First' approach adopted in the borough's Core Strategy (succeeded by the Doncaster Plan) gave rise to the urban centre masterplan which created specific zones for the town centre, including the waterfront, and specific investment opportunities).

support services – to improve supply chains, product development, marketing and export potential. It should also be at the heart of inward investment activities, to help attract new businesses (as we discuss further in Chapter 4).

3 SKILLS PROVISION IN DONCASTER

As discussed, Doncaster's economy differs from the national economy. Its employment and skill needs differ too. Yet education and skills in Doncaster are largely determined by national policy objectives and funding allocations set by central Government; the scope of available provision is broadly similar to most other places in England. With the exception of the Adult Education Budget, which has been devolved to the South Yorkshire Mayoral Combined Authority (SYMCA), the extent to which local partners can reform and direct mainstream provision to meet local need is limited. This means that local partners must work collaboratively to help learners and businesses navigate a complex system, to align provision and eliminate unhelpful competition between providers, to optimise local assets and ultimately to deliver the outcomes that are needed.

3.1 Learning assets and anchor institutions

Doncaster's learning landscape includes a number of important assets:

- Early years and family hubs
- Nurseries and childminders
- Primary schools & secondary schools, most of which now have academy status
- Tertiary education providers including:
 - School sixth forms
 - The DN College Group including Doncaster College
 - New College Doncaster
 - A University Technical College (UTC), and
 - The National College for Advanced Transport and Infrastructure (NCATI).
- A teaching hospital (Doncaster and Bassetlaw NHS Trust)
- Employer 'academies' (e.g. iPort)
- A variety of voluntary and community-based learning providers
- The recently announced Institute of Technology.

University City Partnership

Although the borough does not formally host a university, Team Doncaster has transformed its approach to the delivery of learning provision over the past four years, undertaking key transformational projects such as the University City Partnership. This is an idea that

emerged from the One Doncaster plan¹⁸, drawn up by an independent panel of commissioners, to establish a new model of Post-16 Education.

The University City Partnership aims to:

- Increase the proportion of the working population with higher-level qualifications - and develop effective learning and careers pathways from early years through to adult learning.
- Develop a joint Further and Higher Education prospectus and curriculum, co-designed with employers, to increase practical work experience and ensure learners gain the right vocational skills and knowledge to secure sustainable employment.
- Provide Advanced Learning through Centres of Excellence focusing on sectoral strengths and specialisms in the local economy where there are existing skills gaps and growth potential.

Doncaster College is a key partner in this new model for tertiary education. It is already a large provider of higher education provision, with over 1,200 students currently enrolled in higher learning, accredited through the universities of Hull, Lincoln and Huddersfield, as well as Sheffield Hallam. The Doncaster College and University Centre is a new campus facility situated on the Waterfront with the potential for expansion of its higher education offer. It is also well located in terms of access and proximity to other partner organisations - Sheffield University and Sheffield Hallam University.

3.2 The supply of provision

3.2.1 Education and skills training

It is possible to outline the main strategic and delivery organisations in Doncaster's education skills system. Figure 6, below, provides an overview of key partners and their respective operations.

¹⁸ One Doncaster. The report and recommendations of the Independent Commission on Education and Skills in Doncaster, October 2016.

Figure 6: Doncaster’s education and training provision

Doncaster Council	Early years and nurseries	Apprenticeships
	Schools and 6th Form	Advance Doncaster (R & Training)
	Adult & Community Education	Start in Doncaster (careers i.a.g)
DN Colleges	Higher Education Qualifications	6th Form (A-levels)
	Vocational Training	Apprenticeships
UTC	Apprenticeships	T-Levels
NCATI	Apprenticeships	
Doncaster Chamber	Job Brokerage (Kick Start)	Employability Support
	Skills Training	Careers Information
Business Doncaster	Skills Brokerage	Careers Information
SYMCA	Skills Bank (workforce skills)	Apprenticeships
	Adult Education	Working Win (Job search)
	Careers Hub	
NHS	Teaching Hospital	Workforce Development
Employers	Skills Academies	

This picture is by no means complete but it nevertheless illustrates the range of partners currently contributing to the provision of education and skills, the multiplicity of initiatives and the potential for duplication and possible confusion within the current system.

Duplication in itself is not necessarily a bad thing. It is desirable, for example, to provide basic skills such as literacy and numeracy via a range of providers and venues to meet the demand from learners who want and need to study locally. Duplication in apprenticeships can also provide employer choice and healthy competition which can drive up quality.

But there may be efficiencies to be gained through a clearer division of strategic and delivery roles between partners within the local skills system. This has already occurred in the education sector which as a consequence of national policy changes has seen the Local Authority’s role shift from direct provision of support to a systems leadership role.

There could also be benefits to valuable resources by integrating services, and streamlining valuable funds, for example, to target specific industries and sectors. This could also help employers to navigate the available support for recruitment and training and workforce development, by addressing the levels of duplication and fragmentation in the current market.

3.2.2 Employment programmes and career services

There is, in addition to established skills provision, a broad range of employment programmes and services that aim to assist local people of all ages into employment. This includes national programmes (e.g. Kick Start, Restart, Way to Work) and local initiatives such as recruitment and job brokerage, work experience and career tasters: for example:

- 'Start in Doncaster', an online employment hub and careers platform which aims to provide a single gateway for training, employment, enterprise advice and careers information, focused on the 18-24 age group.
- 'Advance', the council's employment advancement service which was established to help people of all ages progress in their chosen career.

Most local initiatives have been delivered in collaboration between partners and funded via short term sources such as the European Social Fund. The sustainability of these services is therefore something that will need to be considered in the context of local ambitions to develop high-quality provision that can meet local needs.

Doncaster's Education and Skills 2030 Strategy outlines the intention to drive early and regular careers advice and planning in schools through locally developed career advice partnerships and embed the Gatsby Benchmarks across the system. While the Sheffield City Region Strategic Economic Plan (2020-2040) sets out its intention to deliver, "a careers service that is truly best in class and meets the needs of our people and employers".

Providing a coordinated approach to help bring many of the borough's employment services and careers resources into one place, as a single point of contact would help address problems of funding and potential duplication. Providing career resources that serve all age groups would address apparent gaps and weaknesses in provision for the adult population.

While it is possible to assess, at headline level, the type of provision available in the borough, it is more difficult to identify where the crucial gaps in delivery may be and where there is a possible mismatch of supply and demand.

3.3 Matching supply and demand

Analysis produced for the South Yorkshire Mayoral Combined Authority provides a macro-level assessment of the supply and demand for skills, and the extent of any skill mismatches.¹⁹ This states that on most measures of skills demand and supply the sub-region is below the national average. The position has improved over the latter half of the past decade, although there are some noticeable differences, with Doncaster performing less well compared to Sheffield and Rotherham.

The Mayoral Combined Authority has identified key gaps between the skills profile in South Yorkshire and the requirements of important sectors (digital, tech, health, hospitality and

¹⁹ Sheffield City Region Local Skills Report, June 2021 p.51

catering) and occupations (Healthcare workers, HGV drivers), although it is unclear whether there is enough of the right kind of provision to meet current and future demand.

Large employers in Doncaster, including the NHS and Unipart, have indicated the need for short bespoke courses to address specific skill components and expressed interest in the potential for microcredentials. This suggests an identifiable gap in existing provision and the scope for future development, although these qualitative findings would need testing with a larger sample of local employers.

3.3.1 Higher Technical Provision

UK skill levels, while relatively strong at the higher level, are relatively weak at the intermediate level compared to international standards. The rapid expansion in university education has resulted in a relatively small higher technical sector – the so-called ‘missing middle’ of technical provision at levels 4 & 5.²⁰ In response to increasing demand from employers Government intends to introduce a new system for the introduction of higher technical qualifications.²¹

While the UK lags other countries in the proportion of higher technical qualifications, South Yorkshire is lagging the UK average. As an expression of all post Level 3 enrolments in Higher and Further Education, South Yorkshire has less than 6% studying HTQs (Level 4 & 5) compared with 8.5% nationally. However, in terms of the supply of this provision, Doncaster Colleges fare comparatively well in relation to other FE Colleges in South Yorkshire, providing the largest share (39%) of all enrolments at this level.

Figure 7: Post Level 3 Enrolments in FE in South Yorkshire

Further Education	Total Enrolment	Level 4 & 5 Enrolment	% of Total Enrolment	% of All 4 & 5s in FE
BARNSELY COLLEGE	3060	50	1.6	8.5
CHESTERFIELD COLLEGE	2830	50	1.8	8.5
DN COLLEGES GROUP	9310	230	2.5	39.0
RNN GROUP	11150	50	0.4	8.5
SHEFFIELD COLLEGE, THE	12130	210	1.7	35.6
TOTAL FE	38480	590	1.5	100.0

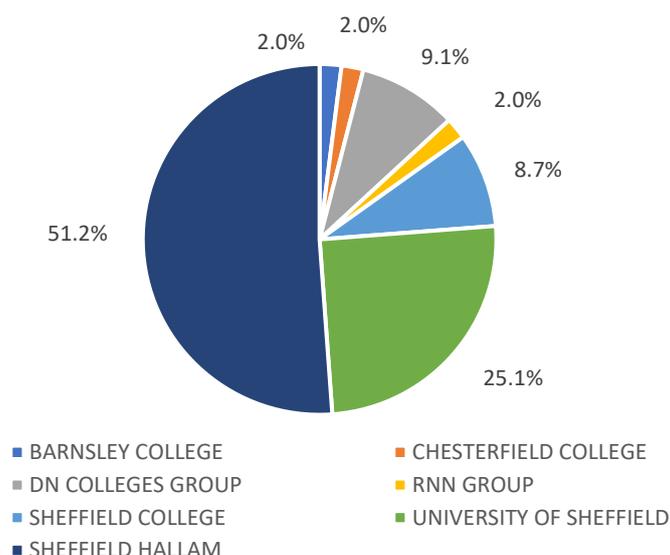
Source: HEFC/EFSA, 2021

Higher Education - Sheffield Hallam (51%) and Sheffield University (25%) provide over 75% of the total provision at levels 4 & 5.

²⁰ Field, S. Beyond the Missing Middle: Developing Technical Higher Education, The Gatsby Foundation, 2020.

²¹ <https://www.gov.uk/guidance/htqs>

Figure 8: Proportion of all Level 4 & 5 Provision in South Yorkshire



Source: HEFC/EFSA, 2021

The recent Government announcement to establish a new £12 million South Yorkshire Institute of Technology (IoT) will accelerate current provision to help transform the skills profile for the region. The IoT will be a collaboration between the DN Colleges Group, Sheffield Hallam University, Barnsley College and the University of Sheffield AMRC Training Centre as core education partners. RNN Group, the Sheffield College and the National Centre for Advanced Transport & Infrastructure (NCATI) are also associate partners.

3.3.2 The need for improved data

The analysis above suggests that Doncaster Colleges are well placed to bridge the gap in higher technical skills. There are, however, significant data gaps that need to be addressed in assessing the balance of provision within Doncaster and South Yorkshire, including:

- **Learner profiles:** Cohort analysis is required to understand and baseline who is participating in what type of training (e.g. age, gender, ethnicity, postcode, employment status etc.) and how people are training (e.g. full or part-time, online or college/work-based etc.)
- **Employer data:** At the moment it is not possible to identify:
 - Which employers in which sectors and locations are being supported through various publicly funded skills initiatives
 - How this provision is responding to recruitment needs or workforce development
 - What skills training employers are investing in, including a comprehensive audit of industry ‘academies’.
- **HE / FE provision:** More granular information is needed on the type and level of Higher Education provision delivered through Further Education as well as destination outcomes.

- **Graduate retention:** Little is known about the retention of graduate skills in the local labour market. This includes college leavers and graduates from Sheffield's two universities which attract a large number of qualified people from other parts of the UK and internationally.
- **Job outcomes and earnings:** Information on job entry and progression, as well as wage rates by sector and occupation, is vital intelligence for the supply of skills training that can help grow the economy.

Any attempt to improve current provision will need reliable 'real time' information that can effectively assess the supply of skills training. This intelligence can then be triangulated with job vacancy data, local employer surveys (identifying skill gaps and shortages) and forecast demand (emerging growth sectors and investment opportunities) to provide a genuinely flexible system that can respond to employer needs. It is this level of analysis that will be needed to inform the Local Skills Improvement Plan.

3.4 Towards a new model

Efforts to improve the local skills system need to be undertaken in a manner that is consistent with national skills policy but in a way that responds to local circumstances and needs. To this end the Team Doncaster Strategic Partnership has been working to build greater connectivity and adapt a complex and multi-various system, with different reporting and governance structures, to better meet local needs. Following a review of the borough's education system in 2016,²² partners embarked on a programme of strategies, plans and local initiatives, including:

- The Inclusive Growth Strategy (3 years), which is about to have a refresh.
- The Education & Skills Strategy (10 years).
- The Borough Strategy 'Doncaster Delivering Together' (10-years): specifically, 'Prosperous and Connected' and 'Skilled and Creative'; and
- The Social Mobility Opportunity Area (SMOA) action plan.²³

These documents all provide a consistent set of messages about the foundational role of education and skills in place-making, which has resulted in:

- A developing University City agenda with 4 centres of excellence tied to local industry specialisms.

²² One Doncaster. The report and recommendations of the Independent Commission on Education and Skills in Doncaster, October 2016.

²³ In 2017, Doncaster was identified as a social mobility 'cold spot' by the Social Mobility and Child Poverty Commission Index. Since then, Doncaster has received DfE funding for a hugely successful Opportunity Area programme. The purpose of this programme improving life chances for the children and young people of Doncaster in several key areas. These include improving careers advice and narrowing the attainment gap for disadvantaged children.

- An established 'hybrid model' of post-16 education that includes high-quality specialist provision such as the National College for Advanced Transport and Infrastructure.
- A successful Inclusion Programme that has seen the opening of the first UK Big Picture Learning School which places the learners at the centre of their education.
- The provision of a high-quality all-age careers service offering both 1:1 and online support.
- A Social Mobility Opportunity Area Programme to transform outcomes for the most disadvantaged pupils.

The borough's ambition is to develop a whole system, whole place, whole person approach to lifelong learning that can offer a strong 'cradle to career' pathway for everyone in Doncaster. At the centre of this vision is the idea of a local Talent and Innovation Ecosystem (TIE) that can drive the system and cultural change necessary to deliver on the borough's priorities. This will shift the focus from a traditional academic centred model of learning to a more diverse and inclusive borough-wide learning community that is vocationally and socially relevant. The development of this mixed or 'hybrid' approach will draw on international best practice to bring together learners and employers, community partners and educators to apply learning to real-world problems.

4 BUILDING THE LOCAL SKILLS ECOSYSTEM

The existing education model, with its emphasis on academic attainment and the embedded cultural preference for university degrees, is not working for Doncaster. Too few are currently achieving the grades necessary to access university while those who do leave the borough are unlikely to return. Of those that are left behind, few are likely to participate in higher-level learning.

Doncaster has made great strides to address the local skills challenges. The borough has adopted all 30 recommendations made by the independent commission in the One Doncaster report and established a University City agenda that seeks to establish parity of esteem between traditional academic routes and vocational routes. The partnership has delivered the Social Mobility Opportunity Area Programme, including activities to promote the development of essential life skills, and developed a high-quality Careers Information Advice and Guidance offer, extending this to all ages.

Yet despite this, the borough still has long-standing issues that frustrate best efforts, and seemingly cannot be resolved by standard interventions. Improvements have been made to narrow the participation and attainment gap, where partners have been able to shift towards a coordinated place-based education offer, but disparities remain.

A new hybrid model of further and higher learning is needed. One that can bring together all the learning assets – in one place – and provide pathways to lifelong learning that are linked to the needs of the local economy. In seeking to provide a more inclusive, skills-led approach to productive growth, partners in Doncaster have begun to focus on the concept of a Talent and Innovation Ecosystem Model (TIE). The TIE aims to unite all parts of a diffuse education and skills system and to deliver on local problems as well as the grand global challenges – the climate emergency and the need for clean growth, the advance of AI and the implications for the future of work, the problems of chronic health and an ageing society.

In thinking about how the TIE model may be ‘fine-tuned’ to Doncaster’s real-world economy and labour force, it may also offer insights and ideas contributing to current thinking and sparking new areas of exploration for other places and policymakers.

4.1 The Talent and Innovation Ecosystem

4.1.1 What is a skills ecosystem?

There are various ‘ecosystems’ models being developed and scaled worldwide. Examples can be seen in the trend towards technological platforms, but ecosystems are also emerging between multiple stakeholders in the development of innovation networks, as well as providing powerful synergies for R&D and knowledge transfer.

The concept as it relates to education policy is of particular interest to more vocational, problem-based and situation-led approaches to pedagogy. In this context, skills ecosystems are understood in both the popular and the academic sense, “as regional or sectoral social

formations in which human capability is developed and deployed for productive purposes.”²⁴ But the thinking about learning ecosystems has developed beyond a narrow focus on economic utility to consider the potential for human flourishing, focusing on wellbeing, life quality and social impact.

The term lends itself to the metaphor of biological systems for building human capital. As an organising principle, it moves beyond a top-down systems approach to suggest a diverse community of interdependent parts (organisms) acting in conjunction with the (natural) environment. It also points to the ability to self-order, to correct and rebalance according to external and internal challenges and to allow for adaptation. There is, however, one important distinction to be made. Whereas natural ecosystems evolve, learning ecosystems require some aspect of purposeful design.

There are many different expressions of an ecosystem, and not all that have been identified and observed would refer to themselves as such. However, the Innovation Unit has identified the following features in helping to explain the characteristics, values and behaviours of a learning ecosystem.²⁵ Accordingly, they are described as:

- Diversifying learning resources and pathways for learners
- Activating and sharing resources for learning in new ways from diverse sources
- Dynamic in composition and porous around the edges
- Supported by helpful infrastructure
- Comprising formal and informal learning institutions, traditional and new entrants
- Distributive in governance
- Learner driven with learner agency at their heart
- Meeting C21st century challenges in some way.

In attempting to define learning ecosystems, Luksha et al identify three integral elements, in terms of them being multifaceted, co-created and purposeful.²⁶ This suggests that something is not an ecosystem if it is highly centralised or requires constant external organising efforts.

4.1.2 International case studies

There are numerous international examples of emerging ecosystems at the local and national levels.

Pittsburgh, a post-industrial steel city in the US, has developed a learning network of interconnected and highly innovative organisations across the city region, who are trying to

²⁴ Finegold, D. (1999) ‘Creating self-sustaining, high-skill ecosystems’, *Oxford Review of Economic Policy*, 15:1, 60-81

²⁵ Hannon, V et al. *Local Learning Ecosystems: Emerging Models*, 2019

²⁶ Luksha, P. et al *Learning Ecosystems: An Emerging Praxis For The Future Of Education*, 2020

make learning more engaging, relevant and fair for young people as they navigate huge social and technological change.

The Remake Learning network consists of more than 500 organizations in the region, with 137 school districts, as well as museums, libraries, other out-of-school education non-profits, philanthropies, government bodies, industry partners large and small and start-ups in the education space. It has trained over 5,300 educators (formal and non-formal) in innovative teaching methods and has granted \$70 million (USD) of philanthropic support to local learning innovation. Among the innovations introduced are mass participation learning events where learners can come and try an activity such as computer coding hands-on.

The “DigiOne” skills programme in **Finland** includes ecosystems in six Finnish municipalities, initially designed for students in primary and secondary school, but extended to include early childhood and then critically to upskilling adults. The approach unites service users, education providers, research and assessment organizations, platform owners, service providers and content producers. In addition, the ecosystem also includes a variety of background actors, such as government officials, at the national level who can influence the service platform, for example through policy and legislation.

The purpose of DigiOne is to create a stable skills equilibrium that can regulate and control the supply *and* demand for skills. This suggests that close partnerships between public, private and third sector actors can help to avoid skills mismatches and improve infrastructure to facilitate private sector investment.

4.1.3 Doncaster’s Talent and Innovation Ecosystem

Doncaster has already begun to transform education in the borough. This journey started with the One Doncaster Independent Commission. Having implemented all of the commission’s recommendations, educational attainment in schools has improved significantly, narrowing the gap with the national average. However, there is still scope for significant improvement which Doncaster believes can only be accelerated with fundamental systemic changes.

The aim is to empower pupils to learn within a creative, stimulating and challenging school environment that progresses through the phases of compulsory education and prepares them for tertiary education and high-quality employment. To achieve this, Doncaster has innovated pathways from schools into further and higher education, developing a hybrid approach to academic and technical learning as well as a deeper collaboration with employers in the borough.

This requires a continuous adaption and enrichment of the school curriculum and teaching methods to allow opportunities for pupils to engage in problem-based learning that is shaped by local employers. This also allows them to develop the core non-cognitive skills and characteristics required to meet these challenges.

The challenge now is to expand this model, and in particular, to include those who are outside the reach of formal education – those in work who need to reskill/upskill and those

out of work. This will involve connecting the system up in a more coherent way, with pathways that extend from Early Years to through life learning. This will provide the full scope of Doncaster’s Talent and Innovation Ecosystem.

Doncaster’s Ecosystem is currently geared towards ‘Talent’ (with a focus on higher-skilled people for good jobs) and ‘Innovation’ (that supports productive learning). The Talent and Innovation Ecosystem is at the heart of the borough’s Education and Skills 2030 Strategy. It builds on the many programmes and initiatives that have been developed to improve educational outcomes and transform the culture of learning. It aims to:

- Bring all learning assets together in one place – Doncaster College and University Centre, the UTC, NCIS and NHS teaching hospital - to create a new hybrid form of higher learning.
- Build a digital technology platform that enables all residents (young people and working adults; children and parents) to engage in learning opportunities.
- Develop a community-based offer that utilises community assets and expertise to access the most vulnerable people and places.
- Provide progression pathways linked to the needs of the local economy, recognised and co-designed by businesses at all levels.

The borough’s University City Partnership will be central to the ecosystem in developing effective career pathways and through-life learning that can meet the needs of the local economy. The main goal of the partnership is to develop a joint Further and Higher Education prospectus specialising in four Centres of Excellence – Health & Care, Engineering, Creative & Digital and Green Technology – all sectors with the potential for economic growth and where there are existing skills gaps.



Case Study 1: Health and Care

Health and Care is a diverse sector that can provide pathways into hundreds of occupational roles at all levels. In recent years the Doncaster College has developed new ways of working with Doncaster and Bassetlaw Health Trust (DBHT) and Sheffield Hallam to:

- Help provisions meet the workforce needs of the NHS long term plan.
- Develop a 'health passport', to help health workers gain broader skills (and recognition of them) so they're effectively inducted before they enter employment.
- Make joint appointments with DBTH, so that clinicians can continue to practice as they teach – ensuring they're able to stay up to date with the system.

DBHT is one of the biggest employers in the region and achieved Teaching Hospital status in 2017. It has a clear vision to grow a pipeline of local talent for future growth, building routes to the highest level of qualification but also developing the existing workforce and those without traditional foundation qualifications for entry. In 2018 the Trust trained 25% of all medical students across the region, as well as 30% of all clinical and other health professional learners. More specifically, work includes:

- Sharing accredited programmes across the region, e.g. with the part-time pre-registration nursing programme in conjunction with BPP.
- Developing a Health Care Assistant Apprenticeship pathway - offering functional skills at Level 2 for Maths and English to remove what would otherwise be a bar to entry.
- Progression pathways to Level 4 and 5, in collaboration with Sheffield University.
- Working with 18–24-year-olds who are 'NEET', to promote pathways, raise aspirations and challenge perceptions about a career in health.
- Engagement with the Careers Hub as a cornerstone employer, driving careers advice and guidance for primary and secondary schools.

Hall Cross Academy became England's first 'Foundation School in Health' in October 2018. Its formal partnership with DBTH means that pupils will have opportunities to work towards a career in health and care from the age of 11 onwards. This includes extensive work experience and internships, advice and information from experienced medics and clinicians about job roles, as well as the appointment of 'Careers Champions' within the Trust.

The proposal to build a new NHS hospital located at the Waterfront will provide further opportunities for growing the health economy.

Case study 2: Engineering

Doncaster has a strong heritage of engineering – particularly rail engineering which is still a key industry in the area, with leading firms like Skanska, VolkerRail, Wabtec Rail and iPort Rail. The South Yorkshire region also has a large manufacturing and engineering sector (around 12% of all employment), which includes civil and precision engineering, as well as high-tech plastics.

Engineering is one of four 'learning centres of excellence' proposed under the University City Strategy Partnership and an ideal sector to expand vocational training routes and

higher technical learning (Levels 3 & 4) within the Talent & Innovation Ecosystem. Increasing engineering skills and jobs is also part of Doncaster's Inclusive Growth Strategy, which aims to develop more resilient careers and move away from a low skill, low pay economy.

Doncaster has three superb institutions to help channel engineering learning pathways and form strong learning collaboration with industry to co-design and deliver curriculum:

- University Technology College (UTC)
- National College for Advanced Transport & Infrastructure (NCATI)
- Two XP schools.²⁷

The benefits of expanding intermediate engineering skills, qualifications and careers in Doncaster is helping to put vocational pathways on a par with academic routes. Apprenticeships (especially advanced apprenticeships) are crucial to engineering and this is now the preferred route for many businesses to meet increasing local demand and address local skills gaps.

The introduction of T-levels will also play a crucial role, as these courses require close working between learners, educators and employers to ensure further education meets real-world and commercial challenges. It also requires more co-design and co-delivery of learning experiences and outcomes, which can increase workplace experience and lead to more employment potential.

Doncaster is one of 12 areas in England chosen by the government as an Opportunity Area to improve social mobility among children and young people. This work has made significant strides to improve pathways to engineering careers, including for BME communities and women, through improved careers guidance. The male/female split in students attending the UTC is now equal.

This approach to engineering has been achieved by committed partners (schools, universities, engineering firms, Doncaster Chamber and Doncaster Council) who successfully bid for the UTC and the recently announced Institute of Technology. Doncaster's bid to host the headquarters of GB Rail will – if successful – provide the opportunity to grow this pathway further.

These Centres of Excellence will involve shared assets and alignment of provision between regional education partners (including Doncaster Colleges, and the Universities of Sheffield and Hull) to provide a unique specialist learning and training offer which will increase the proportion of the working population with qualifications at Levels 3, 4 and above. In this way, the TIE will address the borough's levelling up challenge and meet the opportunity for growth in key sectors and strategic development areas.

Against this backdrop, the TIE model will be deeply rooted in place, centred on a set of key industry specialisms that harness the strengths of local assets and the local labour market.

²⁷ XP schools, founded in 2014 and based in Doncaster, follow Expeditionary Learning as their philosophy, pedagogy. Students are immersed in term-long learning expeditions, covering standards from across many subjects, that are designed around real-world issues and problems and allow students to work to affect positive change in their communities.

Additionally, several cross-cutting features of the TIE can have a transformative effect on people and place. These include:

- A programme to develop a curriculum for life, in partnership with employers. If successful, this would lead to an associated new set of credentials – including badged certificates for informal learning - and an increased focus on formative assessment, i.e. an assessment *for* learning rather than an assessment *of* learning.
- A programme of engagement, facilitated by either an existing or new local partnership (e.g. a Doncaster Centre for Applied Learning) and sponsored by local businesses, that can accredit qualifications, and communicate the learning offer.
- A programme to create new learning spaces within employer premises to address upskilling needs and to ‘showcase’ the business within the community to give residents opportunities to get involved in tackling their real-world challenges (e.g. as a way of engaging the unemployed).
- A programme to engage with local employers and wider partners to identify broader purposes for learning – setting out what is needed to tackle the grand social, economic and environmental challenges of the time.

Doncaster’s strategy will be centred on retaining local talent by providing industry-specific skills. For this to occur, it is crucial to see skills as ‘the portable currency’ within the system. Alongside this, the overriding aim will be to improve the economic landscape, grow key industries and attract new sectors that offer quality jobs and tackle the ongoing exodus of young and talented people who are leaving the borough for higher education and better jobs.

4.2 Ecosystems and economic growth

Ecosystems allow for a radical reassessment of learning and its relationship to economic growth. Underpinning this is the idea that the education and skills system does not work for everyone and needs rethinking, beyond greater economic efficiency, to account for alternative narratives for growth and the opportunity for wider wellbeing improvements. However, the desire for a more inclusive economy is nevertheless premised on the imperative for growth. Transformation towards a sustainable future must be combined with due attention to the legitimate needs of the present population, who might otherwise be left behind and further impoverished.

The TIE has the potential to address the long-term challenges, but the more immediate and prosaic requirement is to support learning and better economic outcomes, which are themselves the determinates of good health and wellbeing. It can do so through a fixed focus on human capital investment to ‘future-fit regenerative learning’, towards addressing these challenges, through reskilling, upskilling and modelling a different future.

4.2.1 Human capital investment

Skills matter for productive growth and given Doncaster's position relative to other places in England investment in human capital is clearly a vital component of the borough's levelling up challenge. Human capital is of critical importance to economic growth in both economic theory and empirical analysis.²⁸ According to economist David Romer, even moderate improvements in human capital can lead to large benefits for future growth.²⁹

Professor Riccardo Crescenzi provided evidence to the Lifelong Learning Education Commission about the relationship of investment in human capital to innovation (patent intensity) compared to other forms of investment, for example, research and development.

Whereas investment in R&D is less likely to return an advantage below 2% of regional expenditure the relationship between human capital and innovation is significantly more linear.

"The returns are positive and increasing [...] Investment in skills has much more linear returns at all levels of the skills distribution."

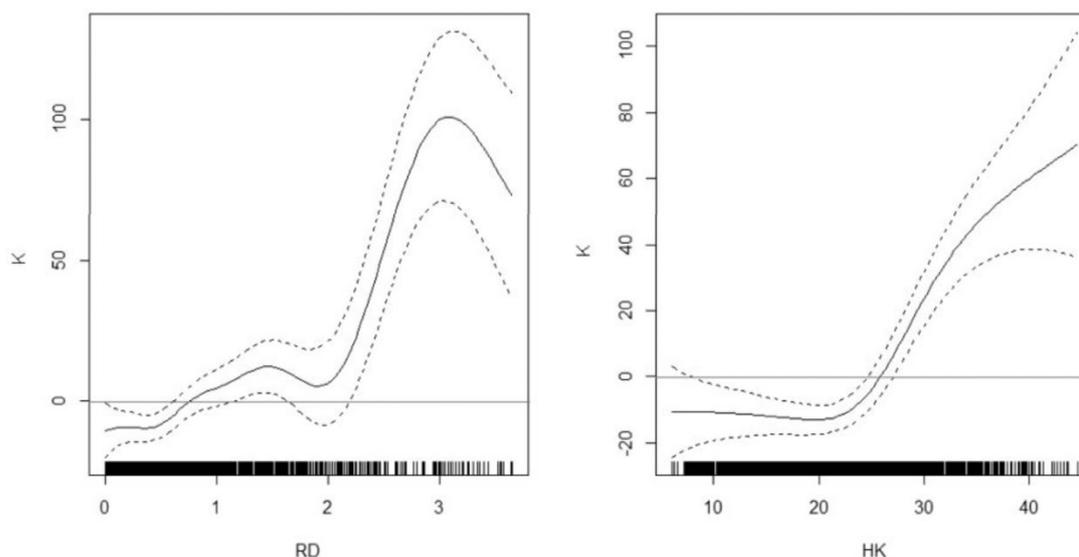
This is particularly the case in less technologically advanced regions, like Doncaster, with lower levels of R&D investment and less research infrastructure that can generate spillovers into local firms to drive innovation.³⁰

²⁸ Mankiw, N. G.; Romer, D. Weil, D.N., 1992. A Contribution to the Empirics of Economic Growth. *The Quarterly Journal of Economics*. 107 (2), pp. 407-437

²⁹ Romer, D., 1996. *Advanced Macroeconomics*, 4th edition. New York, NY, USA: McGraw-Hill Companies Inc.

³⁰ Charlot, Sylvie, Crescenzi, Riccardo and Musolesi, Antonio (2014) Econometric modelling of the regional knowledge production function in Europe. *Journal of Economic Geography*, online. pp. 1-33. ISSN 1468-2702

Figure 9: The effect of R&D (RD) and Human Capital (HK) on regional patent intensity (K).



Source: Charlot et al³¹

This analysis includes several findings relevant to Doncaster’s Talent and Innovation Ecosystem. Perhaps the clearest result concerns the existence of an “innovation trap” for regions with very low levels of human capital and R&D investment. According to Charlot et al. (2014):

“For these regions, investing marginally in such inputs would be wasting money. In particular, the return to R&D expenditure is maximized between 2% and 3% of regional GDP, whereas human capital has a positive effect when at least 20% of the regional population has completed tertiary education.”

In thinking about how investment in skills can drive growth in Doncaster, it will be important to ensure that skills are aligned with need and that skills policies are grounded in a correct diagnosis of the local economy, identifying those sectors and businesses with the potential to innovate, as well as the borough’s position in the regional and global economy. The development of the skills ecosystem recognises and proposes to build on what is there, in terms of local assets and infrastructure, but it will need to do this while pivoting towards a different future that can emerge out of a long-term plan to improve the skills profile of the local population, in emerging sectors like digital and creative industries and the green economy, while developing new investment in strategic sites like the Waterfront and Doncaster Airport.

³¹ Ibid – Figure 9: The continuous line shows the estimate of the smooth; the dashed lines represent 95% confidence bands. The black box at the bottom of the plots represents the frequency of the observations over the range of the explanatory variable. This allows identifying ranges with sparse observations.

Connecting different parts of the borough with effective public transport is a central challenge for inclusive growth – enabling more remote and disadvantaged communities to access employment opportunities and vital services. Extending Doncaster’s travel-to-work footprint into surrounding areas, through improved transport connections, will also increase the number and type of employment opportunities for Doncaster residents. Other authorities in South Yorkshire have their own strategies for skills development and this form of polycentric development can allow the region to grow in alignment with local and regional plans.

The South Yorkshire Mayoral Combined Authority performs an important ‘enabling’ role within the region’s employment and skills landscape. From this perspective, partners in Doncaster will need to think about how the TIE can respond to wider economic opportunities while seeking common platforms and cross-agency working. This, in turn, will lead to the optimal use of the Adult Education Budget and as well as other devolved powers that may be secured in the future.

Since investments in R&D and human capital are highly complementary, both are needed to boost innovation. But neither may pay off if they are not supported by university-industry linkages. Doncaster lacks its own University and translational research hub, such as the TERC facility in Sheffield. However, the UK Rail Research and Innovation Network (UKRRIN), a £92 million partnership between industry and academia (including the universities of Huddersfield, Southampton and Birmingham) has just launched a new Technology and Innovation Hub at Unipart Rail’s Headquarters in Doncaster. This will support the sector in translating academic research and innovation to solve strategic industry challenges. It will have a particular focus on supporting SMEs and supply chain development and will be situated in close proximity to the National College for Advanced Transport Initiative which will help meet the sector’s skills and recruitment needs.

Similarly, plans to build a new NHS hospital in the town’s Waterfront site will present the opportunity to develop specialisms in the health economy with the co-location of educational institutions (DN Colleges and Nursing College) to create a Health Education and Innovation Research Centre. There is scope for SME co-location – perhaps in related sub-sectors such as digital and tech – the site sits in the corridor of development, across Doncaster town centre, which will be attractive to other institutions and businesses.

These factors – institutional research-industry relationships – could be considered as part of the TIE model in driving economic growth and future skills development.

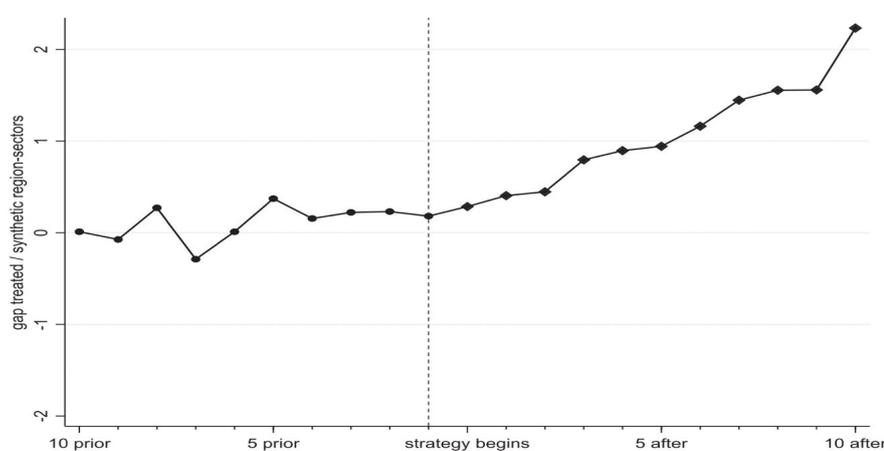
4.2.2 Foreign Direct Investment (FDI) and skill development

Human capital is a key determinant of local economic growth and improving the resident skills base is an important policy objective. At the same time, globalisation has made human capital even more important. The reduction in trade barriers and the surge in FDI have

resulted in an uptake of highly skilled jobs via major multinational companies.³² On average, these firms are more productive and technology-intensive than domestic firms and tend to bring positive contributions to the local economy, including in the form of skilled apprenticeships and on-the-job training.³³ In this respect, FDI and skills acquisition have a complementary relationship, as they tend to reinforce each other.

The main policy conclusion that can be drawn from this is that the economic benefits of FDI are real, but they do not accrue automatically. Regional policies and the local investment agencies matter for attracting big enterprises. This suggests a key role within the TIE for Business Doncaster vis-à-vis investment promotion. According to Crescenzi et al. (2021), investment promotion agencies in less developed regions can increase FDI inflows by up to 71%.

Figure 10: Impact of Investment Promotion Agencies in Europe, 2003-2007 (less developed regions)



Source: Crescenzi et al³⁴

The complexity of attracting foreign direct investment may also require further engagement with the combined authority. Doncaster’s economy is still relatively self-contained, suggesting that the borough might be at a disadvantage when it comes to leveraging wider regional assets, e.g. applied research institutions and integrated supply chains. As can be seen in Table 11, the commercial sector has few large (0.4%) and medium-sized enterprises (1.6%), compared to other high productivity places like Oxford and the City of London. This is important because, on virtually every meaningful indicator including wages, productivity and

³² Typically, there are two main types of FDI: horizontal (a business expands its domestic operations to a foreign country) and vertical (a business expands into a foreign country by moving to a different level of the supply chain).

³³ Of course, the beneficial effects of training provided by larger companies can *supplement*, but *not* replace, a generic increase in human capital. The presence of larger companies may, however, provide a useful ‘demonstration effect’, as the demand for skilled labour by these enterprises provides Doncaster Council with a ‘pipeline’ to highly-skilled apprenticeships and on-the-job training.

³⁴ Source: Crescenzi, R., Di Cataldo, M., and Giua, M. (2021). “FDI inflows in Europe: does investment promotion work?”, *Journal of International Economics*.

on-the-job training, large firms as a group significantly outperform small firms, not just in rich nations but in virtually all economies.³⁵

Table 11: Enterprises by employment size band

Area	Total	Micro (0-9)		Small (10-49)		Medium (50-249)		Large (250+)	
		No	%	No	%	No	%	No	%
Doncaster	9,670	8,720	90.2%	760	7.9%	150	1.6%	40	0.4%
Oxford	4,915	4,145	84.3%	575	11.7%	155	3.2%	40	0.8%
London, City	22,275	17,820	80%	3,195	14.3%	950	4.3%	310	1.4%
Great Britain	2,688,450	2,411,845	89.7%	226,190	8.4%	40,470	1.5%	10,300	0.4%

Source: Nomis, BRES, 2021

The data reviewed is collected at a very low level of sector resolution. It only goes as far as examining the makeup of firm size, and so does not support an understanding of specialisms. However, it is clear that some of the key tradeable sectors within the borough – logistics, manufacturing and construction – are unlikely to drive further FDI, although there is scope for clusters of activity in the engineering and digital sectors to do so.

The pursuit of a high-level growth strategy via the brokerage of skills, staff development requirements and business support is an integral component of the borough’s growth strategy, and there is an opportunity to further integrate these functions within the operation of the TIE model.

4.2.3 Towards a joined-up approach

The ecosystem approach in education has already delivered positive results across the world, particularly in places and among communities where opportunity and access to high-quality learning are limited. It should be noted, however, that the UK is exceptionally centralised by international standards and case study examples from other nations are operating in different conditions, where local partners may have more freedoms and flexibilities to innovate.

Conceptually, Doncaster’s TIE offers a more place-sensitive approach to learning for people of all ages and backgrounds. It also places equal value on the development of vocational skills alongside academic assessment and brings public and private sector actors to collaborate on aligning learning with real-world design and commercial challenges.

The scope of Doncaster’s model extends across all phases of education and public-private arrangements. The scale of this ambition raises the question of where one ecosystem begins and another ends. Should activities relating to business support and inward investment be

³⁵ Atkinson, R. D., and Lind, M. (2018). *Big Is Beautiful: Debunking the Myth of Small Business*. Cambridge, MA: MIT Press.

considered as part of the same system given the symbiotic relationship between skills development and job creation activity?

Further, in a system that is increasingly characterised by market principles, the test for partners to make this work could come down to the incentives for cooperation. Beleaguered by financial and policy constraints, the energy and focus to drive this approach through could be compromised. In biological ecosystems, energy is conserved. This raises the issue of what additionally is needed to make this work.

5 CONCLUSIONS AND RECOMMENDATIONS

Doncaster has set out its strategy for the future of lifelong learning. It is an ambitious response to the challenges of the local economy and the current education and skills system. It outlines a progressive vision for the future, including details of what an even more effective and forward-looking system will look like. At the heart of this is the concept of a Talent and Innovation Ecosystem which aims to bring together and orchestrate local provision to build progression pathways and support a more inclusive learning community.

The TIE is a new idea. It builds on local and international practice, but it is nonetheless an experimental idea in its nascent condition. If this is to succeed in the scope of its ambition, then it needs to be carefully incubated by partners in Doncaster and supported by Government. Education and skills is an area of policy which in England has been rigidly directed by central government compared to other OECD countries. If local innovation is to flourish, it will require greater flexibility and balance between national frameworks and local priorities.

There is an opportunity here for Government to look to Doncaster and see what lessons can be learnt about how to genuinely co-create with employers, including what people learn, how they learn, the settings in which they learn it and whom they learn it from. There is an opportunity to shape curricula, credentialing and assessment to better meet the needs of learners and businesses. And there is an opportunity to change attitudes and behaviours towards learning, to achieve a complete culture shift in places and among people that don't participate in or value learning. If it works these lessons can be transferred to other places facing similar challenges.

The new model is an attempt to do things differently. The following concluding remarks and recommendations, aimed at Team Doncaster and Government, are intended to help support aspects of this evolving system.

5.1 To Team Doncaster

Partners in Doncaster may want to consider how the following areas might strengthen the current approach, where collaboration is required, and where efficiencies might be gained through a clearer division of strategic and delivery roles, between partners within the local skills system.

5.1.1 Increasing adult participation in learning

The publication of the Education and Skills 2030 strategy marks a watershed moment for Doncaster by formally committing the partners to the expansion of a lifelong learning agenda through the ecosystem approach. The challenge now is to address the significant skill gaps in the existing workforce and to develop appropriate provision for those already in employment. There is still an issue with a low take up of adult learning, and this has a huge impact on social mobility and economic performance in the borough.

- Team Doncaster should now bring a sharper focus to the needs of adult learners already in the workforce by targeting skill gaps in those sectors with growth potential.

Encouraging adults to participate in learning may be achieved through the development of short courses and microcredentials that are co-designed with employers to meet local skill gaps and shortages. This could be delivered remotely and at the learner's own pace, making learning more flexible – and achievable – and potentially leading to full qualifications.

- Team Doncaster should consider the demand for bespoke 'bite-sized' learning modules and microcredentials to be co-developed with employers and co-delivered by higher and further education.

5.1.2 Pursuing high growth

Economic growth is a priority outcome in the Borough Strategy, 'Doncaster Delivering Together'. But there is a clear strategic intent for this to be achieved via a transition towards a wellbeing economy (i.e. regenerative instead of extractive, distributive instead of concentrated, inclusive instead of exclusive). The challenge for Doncaster will be to bring coherence to this strategy by combining what is conventional, familiar, and known to work in economic development with a more progressive ambition to pursue a different understanding of sustainable growth.

- Team Doncaster should pursue a high-level growth strategy and consider how the wider functions of job brokerage, workforce development, business support and inward investment should be integrated with the TIE.

Doncaster has a relatively small number of large firms (40) compared to other more productive places. Large firms have the capacity to drive wage growth and productivity, directly and indirectly through local supply chains.

- Team Doncaster should identify and target larger firms in the borough, work closely with them to understand their workforce development needs and provide a bespoke solution to skill gaps and on-the-job training.

5.1.3 Developing the University 'City' concept

Doncaster should continue to build on its ambitions for University City and indeed maintain its mission for city status. The borough is a city in all but name. This is something that will raise its profile, helping to attract higher-skilled workers and higher-value and larger enterprises. Investing in infrastructure (e.g. a new hospital at the waterfront), encouraging businesses to locate their headquarters in Doncaster (e.g. the GB Rail HQ) and bringing new research-intensive institutions (e.g. building on the new Technology and Innovation Hub at Unipart) will all contribute to a high growth agenda.

- Team Doncaster should aim to attract an applied research institution to increase R&D activity and generate greater levels of knowledge transfer in the local economy.

5.1.4 Improving labour market intelligence

There is a need to improve local intelligence about employment and skills, to understand skill mismatches in the borough and properly assess the balance of available provision. This should include, as a minimum:

- (1) Detailed 'cohort analysis' about learners - to baseline who is participating in what type of training (e.g. age, gender, ethnicity, postcode, employment status) and how people are training (e.g. full or part-time, online or college/work-based)
- (2) Intelligence to understand which employers and sectors are being supported and how, what employers are investing in, and how provision is responding to recruitment needs or workforce development.

This intelligence can then be triangulated with job vacancy data, local employer surveys (identifying skill gaps and shortages) and forecast demand (emerging growth sectors and investment opportunities). It is this level of analysis that will be needed to inform the Local Skills Improvement Plan.

- Team Doncaster should develop a dashboard of 'real time' information that can effectively assess the supply of skills training and inform decisions about future strategy and investment.

5.2 To Government

The current policy context is favourable to Doncaster in terms of entrusting local leaders to provide a skills system that works for the borough. Both the Skills Bill with its emphasis on lifelong and flexible learning and the Levelling Up White Paper with its identified missions to improve education and training speak directly to the challenges that have been identified. There are, however, barriers that could hold back success, if not addressed. Doncaster would therefore welcome a coordinated relationship with government, convened around the place-based challenges and opportunities that partners are facing and the ambitions to develop the local Talent and Innovation Ecosystem.

5.2.1 The Lifetime Skills Guarantee

The additional investment in further education and adult skills will especially benefit a place like Doncaster. The Lifetime Skills Guarantee, which will provide a free Level 3 qualification, could provide a huge boost for up to 128,000 working-age adults (16-64) who do not hold an equivalent qualification. However, there will be a large number of residents, including mid-career workers (aged 25-50) in routine/manual occupations who currently hold a Level 3 qualification but who would benefit from reskilling to a similar level in another area. The Levelling Up White Paper states that from April 2022, Government will introduce a trial enabling any adult with a level 3 qualification or higher who earns below the National Living

Wage or who is unemployed to access a further high-value level 3 qualification for free, regardless of their prior qualifications.³⁶

- Government should consider a statutory right to retrain regardless of prior attainment to support even more working adults in deprived areas to progress along the skills escalator.

Recipients of Universal Credit are also ineligible because they are currently required to spend up to 35 hours per week engaged in job search activities. JSA and income support claimants are also constrained by the 16-hour rule. Given the relatively high levels of unemployment and inactivity in Doncaster, and the benefits that skills training could bring to job prospects:

- Government should remove all restrictions on engaging in training for individuals receiving welfare benefits.

5.2.2 The Lifelong Loan Entitlement

The Lifelong Loan Entitlement is another flagship policy in the government's Skills Bill which will offer the facility to access loans for modular and full-time study available at higher technical and degree levels (Levels 4-6). However, many adults will find it difficult to take up new learning opportunities due to a lack of time, caring commitments and financial resources, particularly low-paid workers. The LLE is now the subject of a consultation, and both Birkbeck and the OU (LEC Commissioners) are on the steering committee. There is a need to rethink the LLE in some form.

- Government should consider both loan and maintenance support to subsidise costs and encourage uptake, particularly among those for whom debt will be viewed as a barrier to reskill.

For some firms upskilling is required at Levels 4 to 7. At the same time, many learners will not experience 30 to 40 credit modules (which involve 300-400 learning hours) as a short course. Smaller bite-sized modules will be needed to attract adult learners.

- Government should enable the Lifelong Loan Entitlement to provide a single system that can bridge between modules, including microcredentials, at various levels, including post-graduate.

Beyond this, different funding arrangements should be considered for working adults whereby contributions towards the cost of training can be funded by employee, employer, and the state.

- Government should consider a pilot to co-develop a Local Skills Account with Partners in Doncaster.

³⁶ Levelling Up White Paper, 2022 (p. 198).

5.2.3 Defunding BTECs

The government had announced that BTEC (Level 3) qualifications will be phased out and replaced by T-Levels, although the decision to do so has been paused until 2024 at the earliest, by which time T-Levels will be more established. Defunding BTECs will be unnecessary if institutions and students are allowed the choice since they will either continue to prove their worth or naturally come to an end due to a lack of demand.

There is also a concern that the new system will also risk undermining BTECs at Level 2s, even if they are not directly defunded, since many Level 2s would not be financially sustainable without progression to Level 3. Limiting student choice and accessibility would disadvantage learners in economic cold spots like Doncaster, where the take-up of BTECs are popular.

- Government should pause the decision to defund BTECs indefinitely until the T Level programme is more established.

5.2.4 Local Skills Improvement Plans (LSIPs)

Doncaster is one of the trailblazer pilot areas for the introduction of the Local Skills Improvement Plans (LSIPs) and associated Strategic Development Funds. These will help to catalyse plans for the TIE and enable research into the skills needs of employers in the borough, to tailor provision and to accelerate the development of the Doncaster curriculum offer.

- Government should consider retaining the Strategic Development Fund and embedding this within the wider LSIP approach to help boost regional growth.

The Skills Bill puts employers firmly in the driving seat when it comes to the development of LSIPs, but this process should also include other strategic partners.

- Government should enshrine a clearly defined role for local and combined authorities. The process of developing local plans should not bypass local devolution.

Additionally, LSIPs will need to accurately identify and address the supply of skills across the whole system to identify 'real time' skill gaps and shortages and forecast demand. The LSIP must provide an intelligence-led system that can respond to employer needs.

- Government should enable a 'big data' approach to skills planning by enabling anonymised learner data to be freely accessed and analysed at the local level.

5.2.5 Developing a high-quality careers service

High-quality careers information advice and guidance, for both young people and adults, are needed to signpost opportunities. This service should provide detailed labour market and **industry-specific advice**. The benefits of training, in terms of future earnings, will need to be calculated and communicated. The financial contributions towards the cost of training will be needed to encourage workers to participate in training. Further wrap-around support

should also look to address other barriers to the uptake of learning – including concerns about debt, childcare and low confidence.

- Government should introduce high-quality Career Development Hubs in priority areas for levelling up.

5.2.6 Incentives to invest in skills

Policies are required to incentivise employers to invest in training and release workers for learning. The introduction of tax credits, equivalent to the R&D relief would allow local firms to offset investment in skills against their tax returns. HMRC estimates that every £1 of R&D tax relief generates an additional £1.53 to £2.35 of R&D. If a similar approach were applied to higher skills training, the volume of relevant training in targeted sectors could more than double. This could provide additional enablers, particularly since the overwhelming majority of businesses in Doncaster are SMEs. Broadening the Apprenticeship Levy into a Flexible Skills Levy could help to support higher levels of investment across a range of vocational training activities – including bespoke short courses and microcredentials. This could be targeted to support employers who commit to offering a minimum quota of ‘business skills’ coaching as part of their employees’ onboarding and later skills development programmes.

- Government should introduce levy flexibilities and tax incentives in high skilled ‘cold spots’ to address skill gaps in exportable growth sectors. The match funding, which has proven an effective means of leveraging private investment in skills training in deprived areas should also be encouraged in future succession funds to ESF/ERDF and all UK grant aid proposals.

5.2.7 Further devolution of powers

The Skills and Post-16 Education Bill reinforces the power of the central state over local skills policy. Doncaster’s plans for a radical new approach to education and skills requires a major shift in what people learn, how they learn and where they learn. This needs to be supported through changes in the assessment and accreditation process – including smaller units of portable credit. These developments need to be underpinned by greater policy freedoms at the local level and by robust funding.

- Government should introduce a ‘license to innovate’ – to work with local partners like Team Doncaster to develop a local Curriculum, Credentialing and Assessment framework, working with and running parallel to national assessments.

Doncaster is looking to innovate and co-design its own provision for problem-based learning to develop the meta-skills people need to be successful in the labour market. With government endorsement, a Doncaster Skills Passport (building on the current UTC offer) and Employability Framework could formally recognise broader skills and competencies, so that each unit or ‘skill’ signed off by the employer can become credit-bearing to demonstrate employability plus knowledge.

Further devolution of skills funding to SYMCA, beyond the Adult Education Budget, would enable greater coherence across the system and limit the burden on local areas to

competitively tender for external funding. The creation of a single levelling up budget would bring together several disparate funding programmes, including devolved allocations of the Shared Prosperity Fund, from across Government departments. This will simplify and streamline the assistance available for skills-led recovery. Other functions including, for example, regional skills commissioners could be aligned to the MCA.

- Government should create a 'Local Skills Development Fund' tied to the operation of LSIPs.

After years of austerity, compounded by the Covid-19 pandemic, levelling up in Doncaster will require additional investment in social and economic infrastructure. Increasing the availability and affordability of childcare, especially for low-income families as a means to support pre-school education, will be crucial to enabling adults to upskill and reskill.

- Government should also trial place-based budgeting, giving local leaders full flexibility and accountability for integrated spending and investment across economic and social policy, with a focus on education and skills.

As one of 12 Opportunity Areas in England, Doncaster welcomes its new designated status as an Enterprise and Skills Area. The borough is keenly aware of the difference targeted financial support has in terms of improving attainment and post-16 destinations of disadvantaged young people. Sustained financial support for schools in deprived areas is also key.

- Government should extend the scope of the Education Investment Areas to look at wider outcomes for lifelong learning (levels 4-6) and the cradle to career journey'.

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Commissioners:

- Chris Skidmore MP, Chair, Lifelong Education Commission
- Prof. Liz Barnes, Professor Emerita, Staffordshire University
- Prof. Tim Blackman, Vice-Chancellor, The Open University
- Douglas Blackstock, President, The European Association for Quality Assurance in Higher Education
- Dr Diana Beech, CEO, London Higher
- Prof. David Latchman, Vice-Chancellor, Birkbeck, University of London
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- Johnny Rich, Chief Executive, EPC
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- Prof. Susan Rigby, Vice-Chancellor, Bath-Spa University
- Jonathan Simons, Director, Public First
- Baroness Wilcox of Newport

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- Oldham College
- Warrington Borough Council
- West of England Combined Authority

Contributing Experts:

- Dr Pauline Anderson, Senior Lecturer, Work, Employment and Organisation, University of Strathclyde
- Michael Stevenson, Senior Adviser-PISA, OECD
- Prof. Riccardo Crescenzi, Professor of Economic Geography, LSE

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