Cambridgeshire and Peterborough Local Skills Improvement Plan

10 August 2023

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

Contents

Foreword

Foreword provided on behalf of the Cambridgeshire and Peterborough Combined Authority:

"The Combined Authority has worked closely with the Cambridgeshire Chambers of Commerce in its new role leading the Local Skills and Improvement Plan (LSIP). We are committed to the success of what will be an important component of a world class skills system that we want to embed across Cambridgeshire and Peterborough. Indeed, the LSIP has adopted our new Employment and Skills Strategy, published in January 2022 and has built on the existing evidence and analysis that we commissioned.

One aspect our skill strategy makes clear is the need for employers to be at the heart of skills provision. We welcome working with the Chambers on ensuring that the skills offered in the region match the demand of employers, supporting business growth and improved prosperity for all. In a complex system of learners, the education sector and employers, the Combined Authority is committed to working collaboratively to ensure a more joined up, better, simpler skills future for Cambridgeshire and Peterborough, of which the LSIP will be a welcome part."

Councillor Lucy Nethsingha,

Deputy Mayor and Lead Member for Skills,
Cambridgeshire & Peterborough Combined Authority

Executive Summary

This report provides the context for skills needs within the Cambridgeshire and Peterborough region as defined by those existing priorities established by the Cambridge and Peterborough Combined Authority (CPCA) and additional needs that have been identified by the Cambridgeshire Chambers of Commerce through research and stakeholder engagement with a wide range of businesses.

Whilst the business engagement has been successful in terms of numbers, the difficulties cited by many employers in accessing and navigating the regional and national skills system continues to be a factor into their perceptions about the effectiveness of the system and its ability to identify and meet their skills needs.

This report is set out to meet the specification of the Department for Education (DfE):

- **Part 1: The LSIP Priorities**

    In this section of the report, we set out the regional characteristics of Cambridgeshire and Peterborough and explain the key strengths and challenges. It sets out the strategic priorities in the following three categories: Sector growth priorities, Cross-sector skills priorities and a focus on Digitalisation and Low Carbon.

- **Part 2: Taking the LSIP Priorities Forward**

    In this section of the report, we document the priorities for providers, some of which are already being delivered or are part of future delivery plans for the region. It describes the specific skills and competences that have been requested by employers. These insights have been gathered through our data analysis and stakeholder engagement either in person or via the online surveys.

    We have not been provided with comprehensive evidence from employers that their skills needs are not met by the range of provisions delivered by the current providers. The fundamental issues identified from the stakeholder engagement suggest that employers require consistent support to articulate their needs in terms of skills and on-going support to navigate the skills system and to understand the opportunities and benefits that can be gained from transferrable skills. Therefore, the focus of this report is to signpost the skills required and to provide consistent structures for a wider range of employers in accessing and developing the skills required through enhanced engagement.

- **Part 3: Delivering the LSIP Priorities**

    In this section of the report, we set out the emerging solutions and a roadmap for delivering the LSIP. It establishes specific actions for stakeholders, bringing out how the whole will be greater than the sum of its parts. These have been developed through the analysis and validation of the perceptions and their solutions discussed in the two rounds of the stakeholder workshops and through additional consultation with stakeholder groups including the CPCA, business representative organisations (BRO's) and education providers. More details are available in **Appendices 11 and 12.**

    It is expected that these proposals will be refined as part of the ongoing implementation of the LSIP between June 2023 and March 2025.

- **Annex A** - Local strategic context and priorities relevant to the LSIP: Provides additional contextual information that is required to be understood when developing an LSIP for the region.
- **Annex B** - Background and Method: This section set out the key phases of implementation and engagement in the development of this LSIP report. Its sets out the key features of mobilisation, wider engagement, our research and analysis and our approach to the survey. Additional details are included in **Appendices 1,2,14,15 and 17**.
- **LSIP Report Appendix** which provides additional insights and information that could not be incorporated into the main body of the report.

The priorities established within this report will be communicated to the region via multiple channels and the progress with the solutions will be monitored and reported via periodic communications and an annual report. In its role as the Employer Representative Body (ERB), the Cambridgeshire Chambers of Commerce will support the delivery of actions/changes identified in the approved Local Skill Improvement Plan. As the ERB, it will seek to build upon the successes of stakeholder engagement from stage one.

Introduction

Overview of the LSIP

The Local Skills Improvement Plan (*LSIP*) is a business-led and locally owned approach to bringing together employers, education and training providers and other key local stakeholders to better understand the priorities for the region's post-16 technical education landscape. The LSIP is set in statute in the Skills and Post-16 Education Act 2022. This means that the DfE is committed to funding independently led employer-driven activity to shape skills provision at a regional level. Cambridgeshire Chambers of Commerce and Industry (the Chamber) is the appointed Employer Representative Body (*ERB*) for the development of the Cambridgeshire and Peterborough LSIP.

As documented in the Department for Education LSIP Guidance[1], all post-16 technical education or training is in scope and an LSIP is not intended to be a comprehensive list of all skills gaps in the area. The process has been designed to allow employers working with the Chamber as the designated ERB to identify the most pressing skills issues informed by local economic strategies, employment and skills plans and engagement with stakeholders.

In defining the scope of work for the Cambridgeshire and Peterborough LSIP the Cambridgeshire Chambers agreed that it would:

- Work in partnership with the CPCA and draw on existing data and analysis.
- Target hard to reach employers defined as those not normally consulted by skills providers and funders.
- Build on and align with specific sectoral skills initiatives.
- Amplify the voice of those employers or sectors that most struggle to be heard through existing
- stakeholder routes, such as small employers.
- Provide a coherent articulation of cross-cutting issues such as Green (low carbon), Digital (digitalisation) and essential and transferable skills affecting businesses in all sectors.

Ultimately the LSIP process will help facilitate a stronger and more responsive relationship between employers and providers within the Cambridge and Peterborough region. All employers are encouraged to become co-producers or producers of skills; local skills providers have access to regional support to maintain their alignment to the current and future needs of the regional economy. LSIPs can support this by identifying ways that local employer-led activities can complement and supplement publicly funded provision.

Format of this report

This report is set out to meet the specification of the DfE:

- **Part 1: The LSIP Priorities**
- **Part 2: Taking the LSIP Priorities Forward**
- **Part 3: Delivering the LSIP Priorities**
- **Annex A - Local strategic context and priorities relevant to the LSIP**
- **Annex B - Background and Method**
- **LSIP Report Appendix**
- **Approval of the LSIP report**

We have captured the work and projections of stakeholders in the skills system and we have used skills data from a variety of sources, including a review of all the CPCA's key skills documents (see **Appendix 1**).

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[1] Department for Education, Statutory Guidance for the Development of a Local Skills Improvement Plan (2022)

The status of this LSIP

This section of the report provides an update on the Chambers current position with respect to the LSIP processes in its role as the Employer Representative Body (ERB).

This report provides an evaluation of the observed alignment between regional employers' skills needs (demand-side skills) and the skills provided through existing training and education (supply-side skills). It seeks to identify insights and opportunities for supporting activities in the region and continue efforts to co-align these. It also recommends a range of possible activities that will provide optimisation of the regional skills system.

This report remains a draft report, until approved by the Department for Education on behalf of the Secretary of State.

Changes and approach to achieving the solutions

Changes the LSIP is seeking to achieve

The LSIP is seeking to enhance the relationships between the education stakeholders and businesses in the region, ensuring where good practice exists it is easily accessible to all and where challenges exist, they are easily acknowledged and the stakeholders are working towards improving these. This will minimise confusion and create consistency across the region.

The approach for achieving the actions and solutions

In order to achieve this, there must be a strong consensus and agreement from all stakeholders involved, which will be achieved through soft governance and working towards a regional commitment of collaboration across the Cambridgeshire and Peterborough Chamber of Commerce, CPCA and (BRO) group.

Future projections

In its role as the Cambridgeshire and Peterborough ERB, the Chamber is committed to work collaboratively with its stakeholders across the duration of the LSIP to enhance the responsiveness of the existing skills system in meeting the needs of the region's employers. Clarity regarding the capturing of skills needs is the initial priority that will need to be addressed and following that it will be important to understand how the employers can be supported to communicate their skills needs. Providers have also reported the challenge of attracting, recruiting and retaining qualified staff to teach current and future skills, because they can earn more money working in industry, which may impact the ability to respond to employer demands.

Whilst our original intention had been to gather details of specific skills required by the employer stakeholders across the region, the feedback in the workshops consistently related to challenges for employers in their experience with and navigation of, the skills system. We have captured these challenges and reported them as cross-sector skills priorities and resolving these perceptions is linked to the success of the local skills system and the skills needs of the Colleges and other education and training providers.

Part 01: The LSIP Priorities

In this section of the report, we set out the regional characteristics of Cambridgeshire and Peterborough and explain the key strengths and challenges. It sets out the Strategic Priorities in the following 3 categories: Sector growth priorities, Cross-sector skills priorities and a focus on Digitalisation and Low Carbon. More details are available in **Annex A** and **Appendix 14.**

Context

This provides an overview of the region and describes the key strengths and challenges that have influenced the development of the LSIP approach and priorities. Additional local strategic context is provided in **Annex A.**

This report builds on the existing work conducted by the CPCA set out in the Employment and Skills Strategy (*2022*)[2], by attempting to bring more employer's needs into the skills system, particularly where employers may not previously have engaged with the region's skills conversation.

The 2018 Cambridgeshire and Peterborough Independent Economic Review (CPIER)[3] identified three interdependent sub-economies across the geography, Greater Peterborough, Greater Cambridge and the Fens. These are distinct in terms of needs and opportunities and equally important in terms of their contributions to the wider economy.

These significant regional differences reveal areas of affluence as well as pockets of intense economic deprivation. Variation in education provision across the region is also reflected in the disparity of skills and qualification attainment. For example, analysis of Office for National Statistics (ONS) data indicates that the proportion of individuals in Fenland with no formal qualifications is 28% whereas across Cambridge, South Cambridgeshire and East Cambridgeshire this figure is only 6%. Whilst an absence of formal qualifications is not necessarily an equivalent of low skills, it is a useful indicator for comparative purposes in terms of understanding technical education provision.

Map of the Cambridgeshire and Peterborough region
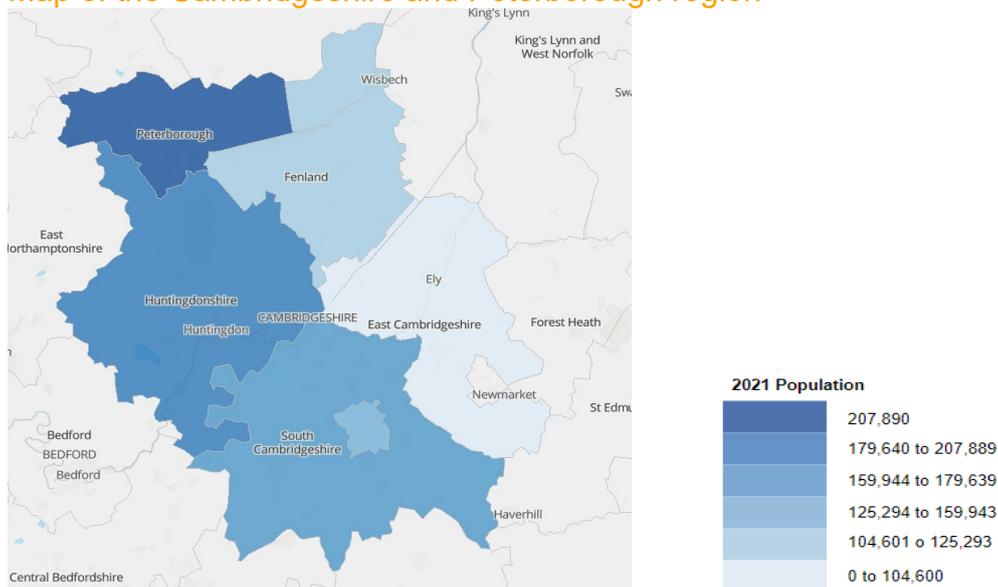
Source: Lightcast (2022)[4]

It is also important to recognise the national and global challenges that have been experienced in recent years that have impacted the region's local economies in diverse ways, depending on the sectors and demographics that dominate. These factors include the Covid 19 pandemic, Brexit and the war in Ukraine, where for example the sectors hardest hit by the Covid-19 pandemic are facing a rapid need to adapt swiftly to changing trends in consumer habits, market structure and technological advancements. These include Retail, Hospitality and Leisure, Health and Care, Education, Construction, Transport and wider Manufacturing[5]. Alongside this, businesses are also experiencing pressure from the net zero transition and the digitalisation of industries.

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[2] Cambridgeshire and Peterborough Combined Authority, Employment and Skills Strategy (2022)

[3] Cambridgeshire and Peterborough Combined Authority, Cambridgeshire and Peterborough Independent Economic Review (2018)

[4] Lightcast, LMI data (2022)

[5] Cambridgeshire and Peterborough Combined Authority, Local Economic Recovery Strategy (2021)

Key Strengths of the region

This section summaries the main strengths of the region when compared to other 37 LSIP regions that have been designated by the Department for Education[6].

Strong labour market

The Greater Cambridge area has the highest skilled population and best educational outcomes across the CPCA area, creating a **strong supply of skills**[7]. The region's employment rate is high at 80.1%[8] compared to the national average of 75.6%[9] and whilst Peterborough has the lowest employment rate at 76.3% the area is still performing above the national average.

This large, employed workforce has supported the recovery out of the Covid 19 pandemic and is underpinning the growth of the priority sectors - Agri-Tech, advanced manufacturing, digital and life sciences. These growth sectors are creating a **strong demand for skills**, particularly as there are occupational crossovers between the roles and skills required within the sectors.

We have captured examples of good innovative practice and collaboration that support employers and students across the region and many of these include co-design and provider collaboration. Case study 1 provides an example of a regional initiative that was mobilised to meet a regional demand. We have provided additional examples within the report but also attempted to capture a list of these activities which is recorded in **Appendix 3.**

Case study 1 - An example of regional innovation and collaboration

HGV Case study
- **Peterborough college (part of Inspire Education Group (IEG)) worked** with the CPCA and the Department for Work and Pensions (DWP) to fund a new programme to provide HGV training in response to well published shortages of drivers. The quick action was possible thanks to devolution of the adult education budget program to the CPCA giving it flexibility to help meet the need for more drivers
- The courses were free for learners and involved the college working in partnership with industry body the Road Haulage association (RHA) who not only provided practical training but supported the college to understand the entire process involved in gaining a HGV licence allowing the college to build the training process from scratch. This increase in skills aimed to give a real boost to the local economy supplying the haulage sector with highly qualified drivers whilst also giving people skills that employers demand helping them start
- RHA said "This is a fantastic scheme helping people to get trained to drive lorries and secure work with a local firm. We are delighted to be involved with the CPCA and Peterborough college to help local people start new careers in our industry."
- The relationship between college and the RHA further grew to support a number of then local members to find career opportunities as newly qualified HGV drivers

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Providers

The Adult Education Budget (AEB) allocation for 2022/23 is delivered through contracts with 25 providers, 9 of which are grant funded. All the 8 FE providers were classified as overall effectiveness grade 1 - Outstanding or Grade 2 - Good (Ofsted), which compares well to other regions who have a lower proportion of these high grades. Two providers have been graded as Strong for skills as part of the new enhanced Ofsted Inspection. More details of the profile of providers have been collated and extracts are included in **Annex A** and **Appendix 13.**

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6 https://www.gov.uk/government/publications/designated-employer-representative-bodies

7 Cambridgeshire and Peterborough Combined Authority, Local Skills Refresh (2022)

8 Department for Education, Unit for Future Skills Dashboard

9 Office for National Statistics, Census (2021)
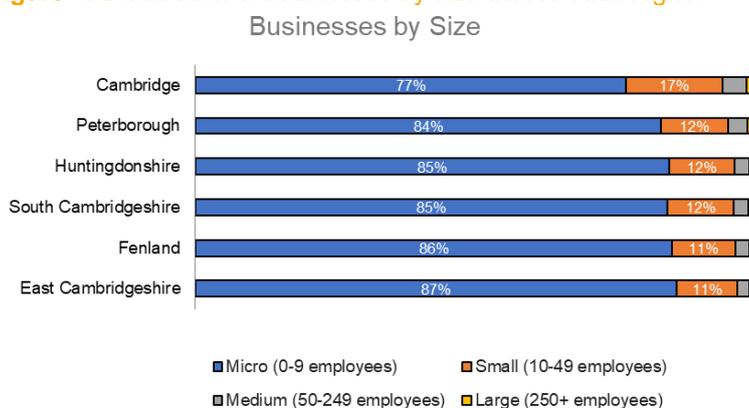
Key Challenges for the region

This section summarises the key challenges for the region that have an influence on the priorities that have been addressed in this report. It also includes a summary of sector challenges that have been identified as having an impact on skills. More details are available in **Annex A.**

Domination of Micro-Businesses

The region is saturated with micro-businesses and SMEs as reflected in **figure 1.** Employees in these businesses account for 30% of the total working population showing the influence these small businesses have on the workforce. Due to the size, capacity and monetary constraints of these organisations their voices are often not spoken or heard when discussing the skills needs of the region and they may present a larger challenge for colleges and other providers in translating their skills needs.

Large players, such as AstraZeneca, have the wealth of strong recruitment processes and branding to drive successful recruitment and dominate the employee market. Ensuring that the smaller local players are included in our discussions has therefore been a priority to ensure the LSIP is representative of all needs.

Figure 1: Distribution of businesses by size across each region

Businesses by Size

Region	Micro (0-9 employees)	Small (10-49 employees)	
Cambridge	77%	17%	
Peterborough	84%	12%	
Huntingdonshire	85%	12%	
South Cambridgeshire	85%	12%	
Fenland	86%	11%	
East Cambridgeshire	87%	11%	

■ Micro (0-9 employees) ■ Small (10-49 employees)
■ Medium (50-249 employees) ■ Large (250+ employees)

Source: ONS (2022)

Deprivation and regional disparities

Despite the relatively high employment rate across the region, there are clear variations between each area and sub-economy affecting the supply of skills and therefore enhancing the disparities in wealth. East Cambridgeshire has the highest economically active population at 88% whilst Peterborough has the lowest at 76%[10], as highlighted in **figure 2**. Greater support is therefore needed for business growth, job creation and upskilling in the more deprived areas to boost the demand and supply of skills and help to level up the region.

Figure 2: Level of economic activity across each region

Economic Activity Levels

Region	Level
Cambridge	83%
Peterborough	76%
Huntingdonshire	83%
South Cambri…	81%
Fenland	77%
East Cambrid…	88%
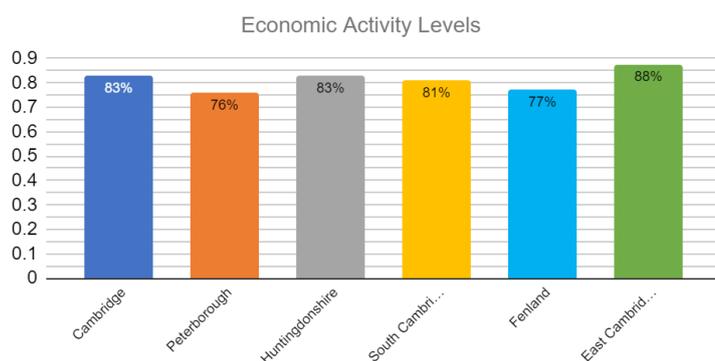
Source: NOMIS (2022)

It is also important to note that of those who are economically inactive, 78-94% have stated that they do not want a job. As such, additional support also needs to be provided to these individuals to encourage and help them back into the workplace. Cambridgeshire and Peterborough Local Skills Report (2022) states:

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[10] Office for National Statistics, Nomis (2022)

"Within the Indices of Multiple Deprivation, Fenland is ranked third of all 316 local authorities nationally for Education, Skills and Training need, where 1 is most deprived. Peterborough is ranked 31st, which is the second lowest rank across the CPCA. These two areas show much higher levels of deprivation compared to other districts in the area. This directly translates to lower educational attainment. East Cambridgeshire also shows higher levels of relative deprivation for Education, Skills and Training relative to its overall deprivation rank."

Education and skills

The education system traditionally trades in qualifications and these are regulated through Ofqual (*The Office of Qualifications and Examinations regulation*) and the IfATE (*Institute for Apprenticeships and Technical Education*). One of the key features of the LSIP is its ambition to identify the specific skills required by employers, however, skills are not clearly defined across the UK education system and there is no universally agreed taxonomy. The IfATE has published a range of occupational maps[11] which demonstrate the relationships that exist between education, qualifications, apprenticeships and occupations in England. These maps provide the ability for a review by specific job and can underpin the development of regional careers and progression pathways.

As defined by the international group of stakeholders involved in the Organisation for Economic Co-operation and Development (OECD) Future of Education and Skills 2030 project[12] skills are the ability and capacity to carry out processes and to be able to use one's knowledge in a responsible way to achieve a goal. Skills are part of a holistic concept of competency, involving the mobilisation of knowledge, skills, attitudes and values to meet complex demands.

There is no single comprehensive taxonomy for skills across occupations and education in the UK and therefore developing a consistent understanding of skills is a prerequisite for any detailed analysis. For this report, the Chamber has adopted the following definition of skills, this will be informed by developments.

"A skill is the ability to achieve a specific task at an agreed performance standard, i.e., we can all kick a ball, but we are not professional footballers who can kick a ball with accuracy and skill."

This definition leaves the option for skills to have levels and for skills to be grouped. A consistent approach for the capturing and monitoring of the detailed skills required for employers has been a significant challenge for the LSIP process. It is also broadly consistent with the International Labour Organisation (ILO) definition for skills which is described in **Annex 1**.

Skills Data

Outside of the new vocational qualification such as T-Levels and Apprenticeship standards there is no consistently agreed set of skills associated with job roles or occupations. Lightcast[13] is one of the leading suppliers of labour market analytics, its data set logically groups 32 employment categories and contains a skills framework that represents 32,000 different skills. Lightcast classifies skills into common, specialised and certified skills. We have used the CPCA's access to Lightcast to inform our analysis of the regional job market. However, other skills classifications exist such as the Skills Builder Partnership[14] that focuses on 'essential skills' and is widely used by business and providers.

The ILO is using skills to provide insights on the transition to the world of work in the future by assisting in the development of skills policies and systems aligned to local labour market needs, it has three programmes of work:

- Skills policies and systems.
- Anticipating and building competencies for the jobs of the future.
- Social inclusion.

It suggests there are 3 types of skill:

- **Basic skills:** These skills (*such as literacy, numeracy and ICT (Information Communication Technology) skills*) are considered as a prerequisite for further education and training and for acquiring transferable and technical skills.
- **Transferable skills:** These are skills that are relevant to a broad range of jobs and occupations and can be easily transferred from one job to another. They include but are not restricted to problem-solving and other cognitive skills, physical skills, language skills, socio-emotional and personal behavioural skills
- **Job-specific/technical skills:** These are skills particular to an occupation which include specialist knowledge needed to perform job duties; knowledge of products or services produced; ability of operating specialised technical tools and machinery; and knowledge of materials worked on or with.

Our engagement with stakeholders identified a fourth category of skills referred to as 'work ready skills.'

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[11] https://www.instituteforapprenticeships.org/occupational-maps/

[12] OECD Future of Education and Skills 2030 (2019)

[13] https://lightcast.io/uk/about/company

[14] https://www.skillsbuilder.org/

Work ready skills are the skills and behaviours that employers expect that all employees should be able to demonstrate when they start work. They are a combination of the ILO's basic and transferable classifications. There is not a standard approach to work ready skills being delivered to students and accredited across the region and whilst many providers embed these skills into existing qualifications employers and students may not always be aware of these specific skills.

Cambridge Regional College has implemented a Personal Development Portfolio that focuses on five of the most in-demand employability skills in the region that employers are looking for. PDP badges will be awarded in recognition of students demonstrating these skills helping them to understand, articulate and showcase them at interviews.

Skills Analytics

The ability to use recruitment data and analytical techniques to identify the profiles of skills associated with individual occupations, qualifications and Curriculum Vitae (CVs) provides a granular understanding of the capabilities being requested by employers. However, the robustness of this analysis can be variable depending on the tools being used. CPCA has provided access to Lightcast to the project team which was used to provide some insights into the skills associated with the local recruitment data. Additional analysis has been provided by Geek Talent to provide the Chamber with insights of skills supply for HE and FE and skills profiles from European Skills, Competences, Qualifications and Occupations (ESCO) these have been used to enhance the Chambers understanding of complexities of skills matching. However, the regional skills demand analysis has largely been driven through stakeholder engagement and as such is not as detailed.

Case study 2 - Example of skills Accreditation using digital badges

Cambridge regional college Is the first college in Cambridgeshire to recognise the learning and development of soft skills through exclusive digital badges. The badges showcase the 5 most in demand skills identified from analysis of half a million job adverts and include communication, self-motivation, innovation, problems solving and digital skills.

The Cambridgeshire and Peterborough region of learning (CPRoL) project is an ambitious multiyear social mobility project that will use the Cities of Learning framework to badge, map and connect learning in the region. It was launched in 2021 with the aim of supporting 15- to 24-year-olds furthest from education and employment to take advantage of learning across the region to achieve their ambitions. Its focus is on identifying and creating pathways into key growth sectors in the region including:

- creative and cultural.
- finance and legal.
- wellbeing being opportunity provision.

working with the **RSAs future of work team** they are also delivering a local sector specific skill framework of future risks register that is being shared with employers across the region including additional badge for work ready skills.

West Suffolk College has identified 8-character strengths; resilience, optimism, curiosity, ambition, ownership, respect, self-control and confidence, which foster a culture in which we are preparing our students to live as independent thinkers confident in their choices and actions and ready for the workplace, but this does not include the digital accreditation

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Apprenticeships

For the 2021/22 academic year regional Apprenticeships participation numbers are 9,710 learners. To compare it to the other LSIP regions we can rank it based on its participation rate (per 100000 population) which is 1,828 with an achievement rate of 361 achievements rate (per 100000 population). Which places it 33/38 for overall participation and 32/38 with a rate of 361 for overall Apprenticeships achievements[15]. Cumbria LSIP region is top of the list for both with respective rates of 3164 and 631.

The CPCA Skills Strategy describes its plan for a Skills Talent & Apprenticeship Recruitment Hub (STAR Hub). CPCA has the ambition to support providers, businesses and residents to navigate effectively through the complex skills landscape by the creation of the Digital Talent Portal through a "one stop shop." This action will facilitate a better match of potential talent to skills needs and job vacancies and in doing so will create opportunities for a strong, productive and thriving economy. Learning from experience in the past, there should be the opportunity to bring together demand and supply through a dedicated skills brokerage.

Figure 3: LSIP Apprenticeship Performance

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[15] Department for Education, Unit for Future Skills Dashboard

LSIP Apprenticeship Performance
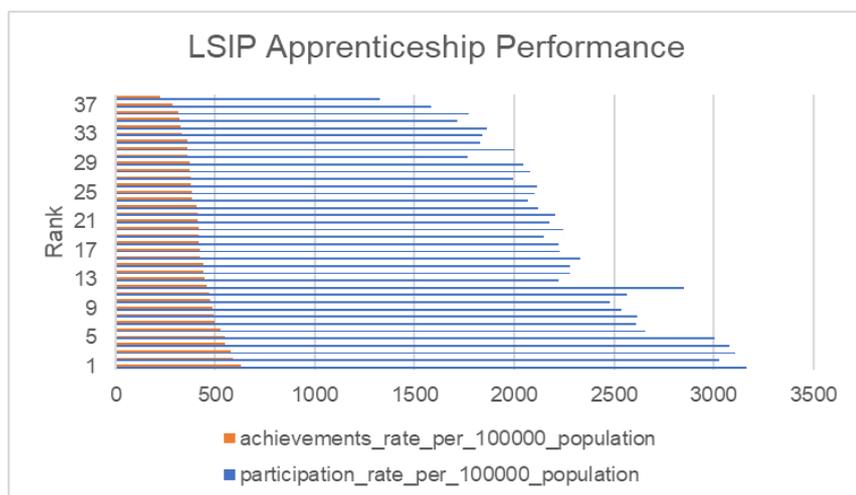
Source: DfE Apprenticeships starts 2021/22

Further analysis on key challenges can be found in Annex 1.

Qualification Reform

The government continues to review the qualifications landscape and in July 2021, they published their plans for Review of post-16 qualifications at level 3 in England[16]. Their stated ambition is to:

"We will streamline and improve the quality of the level 3 system. We are strengthening the pathways to progression, creating clearly defined academic and technical routes with qualifications leading to further study and/or skilled employment. This clarity of purpose will allow students to see more easily how their study will help them to progress."

The CPCA will have the ability to continue to fund training and education programmes where providers can demonstrate that this leads to increased employability.

Context summary	
	• The CPCA region is highly diverse and therefore the skills requirements across the districts are likely to require specific features. Market towns feature across the region and the access to work and training is constrained by the rurality of some areas.
	• The CPCA currently commissions its AEB programmes through 25 providers, with most of that funding allocated via grant provision. Further commissioning of provision includes Skills Bootcamps, Free Courses for Jobs and Multiply in the future there will be the potential to utilise Higher Technical Qualifications and Adult T-Levels. Whilst the AEB funding awarded by the CPCA may not be the providers main funding stream, the CPCA uses the flexibilities available since devolution to ensure provision is regionally relevant. However, the CPCA AEB funding does not represent the main allocation for any of the providers and may not be considered a priority income stream for all.
	• The CPCA has established processes for capturing the needs of employers, but this excludes skills analysis.
	• Currently, Skills Analytics are undeveloped and therefore understanding the skills needs of employers is a significant challenge and employer's struggle to clearly articulate their current and future skills needs
	• A consistent regional understanding of skills will provide the basis for a detailed understanding of skills gaps in the future.

Strategic Priorities

The following commentary on the strategic priorities has been underpinned by a review of the CPCA's published documentation to evaluate the knowledge of the skills priorities for the region that can contribute to the development of the LSIP priorities. More details are available in **Appendices 5,6,7,9**.

1. Sector growth priorities

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[16] Department for Education, Review of post-16 qualification at level 3 in England (2021)

Emergence of the priority sectors

The Cambridgeshire and Peterborough Independent Economic Review (*CPIER*[17]) and the Local Industrial Strategy (LIS) identified **Agri-Tech, life sciences, advanced manufacturing and materials and Digital and IT** as priority sectors for long-term, innovation-based growth in the region. These have continued to be referenced as priority sectors in more recent reports including the Cambridgeshire and Peterborough Local Economic Recovery Strategy (*LERS*), Cambridgeshire and Peterborough Economic Growth Strategy and the Employment and Skills Strategy 2022. The Chamber has agreed, with the CPCA and key LSIP project stakeholders, that these will also form the sector priorities focused on within this LSIP report.

As referenced in the Employment and Skills Strategy[18], employment in these sectors is rising faster in the area than nationally, at 17.4% compared with 6.6%. However, the growth in these sectors is not experienced evenly across the region – with priority sectors clustering in specific places, for example, advanced manufacturing and materials in Peterborough, Cambridge and South Cambridgeshire, life sciences in Cambridge and South Cambridgeshire and Agri-Tech in Huntingdonshire and the Fens. To ensure that the LSIP is representative of the entire region, cross-sector themes and skills needs have also been considered and stakeholders from the entire region have been consulted in locally based workshop activities.

In 2022 these sectors accounted for 20% of employment in the region[19]. The recent Strategy identified a wider set of priority sectors due to their significance as employers: retail, hospitality and leisure, construction, transport, education, manufacturing, health and care.

The scope of the LSIP project have meant that the LSIP cannot individually consider each of these priority areas in depth in its first iteration, though cross-sector considerations have included consultation of stakeholders in each of these sectors wherever possible. Further skills analysis on the remaining 80% of employment can be found in the Local Skills Refresh (*including a detailed action plan in **Appendix 4***)[20].

Challenges (as referenced in the Employment and Skill Strategy)[21]

Understanding the transitions between jobs, employers, occupations and roles is increasingly important as the employment market responds to the increased pace of change. Net-zero, Industry 4.0 and automation, potentially accelerated by labour shortages currently being experienced from the effects of Covid-19 and Brexit, are expected to impact priority sectors in Cambridgeshire and Peterborough. Agri-Tech has the highest exposure to automation at 49% of employment exposed, with 43.9% of employment not overlapping with other priority sectors.

Advanced manufacturing and materials face 39% of employment exposure, with 33% for digital and 31% for life sciences. These four sectors also have more overlapping occupations in other sectors, ranging from 74.2% to 79.9%. Reskilling will be a clear challenge in the coming years, particularly in areas with concentrations of agriculture and manufacturing.

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[17] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

[18] Cambridgeshire and Peterborough Combined Authority, Employment and Skills Strategy (2022)
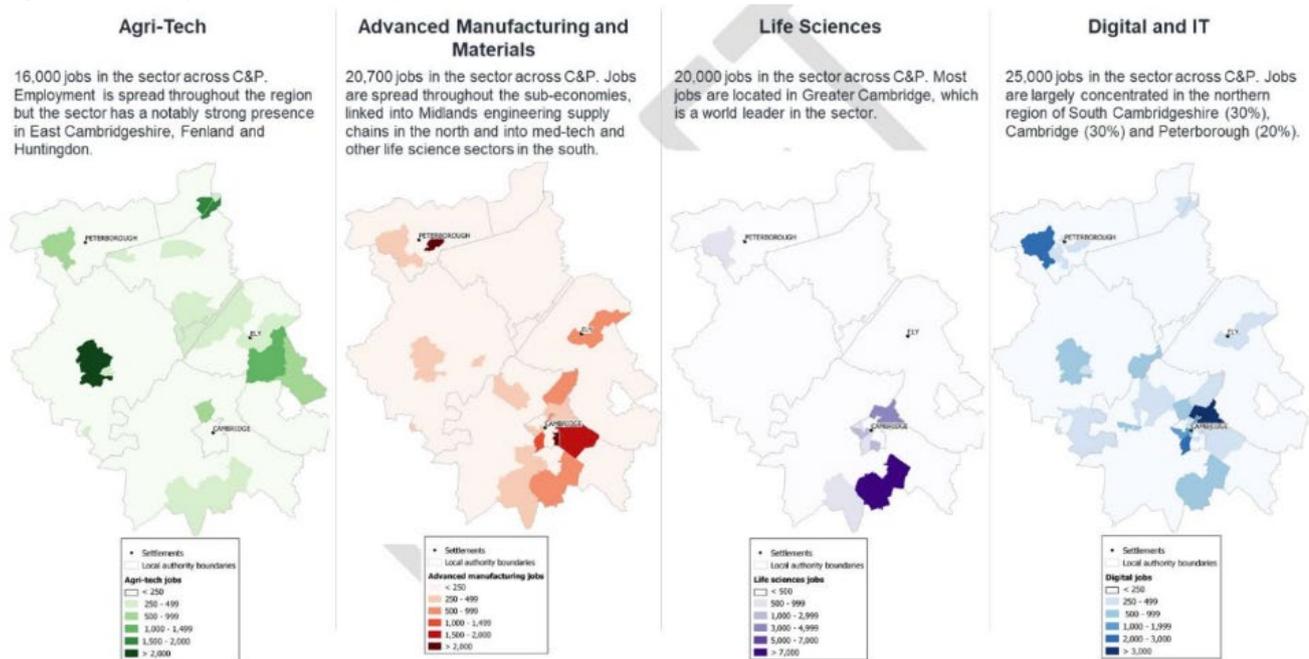
[19] Cambridgeshire and Peterborough Combined Authority, Employment and Skills Strategy (2022)

[20] Cambridgeshire and Peterborough Combined Authority, Local Skills Refresh (2022)

[21] Cambridgeshire and Peterborough Combined Authority, Employment and Skills Strategy (2022)

District profile

Agri-Tech	Advanced Manufacturing and Materials	Life Sciences	Digital and IT
16,000 jobs in the sector across C&P. Employment is spread throughout the region but the sector has a notably strong presence in East Cambridgeshire, Fenland and Huntingdon.	20,700 jobs in the sector across C&P. Jobs are spread throughout the sub-economies, linked into Midlands engineering supply chains in the north and into med-tech and other life science sectors in the south.	20,000 jobs in the sector across C&P. Most jobs are located in Greater Cambridge, which is a world leader in the sector.	25,000 jobs in the sector across C&P. Jobs are largely concentrated in the northern region of South Cambridgeshire (30%), Cambridge (30%) and Peterborough (20%).

Source: Cambridgeshire and Peterborough Independent Economic Review (2018)[22]

Summary of the sector growth priorities

Appendix 5 provides detailed definition and demand and supply analysis for the sector growth priorities along with source references. The tables below provide a summary of the skill landscape for each of the priority sectors. Where possible we have confirmed these with our BRO's and we will continue to develop our understanding of these sectors through future engagement.

life sciences sector	• The life sciences sector is prominent in Cambridge and South Cambridgeshire and is home to large international organisations. • There is a shortage of people with the technical skills to support the life science industry in the Cambridge area, especially in the convergence of AI and life sciences, seen which is seen as the key differentiator for the industry in the region. • There is also a shortage of people with the commercial management skills required to grow a life science company. This is supported by data analysis, conducted as part of the LSIP, which shows that Pharmaceuticals and Clinical Trials (*part of life sciences*) at a Manager, Director and Senior Officials level is in the top 10 sought after specialised skills at 5% and 4% of job postings[23]. • There is a large number of people enrolled in life science related programmes in Cambridgeshire, but a significant proportion of these people tend to relocate to London once they finish. More work needs to be done to improve retention levels in the region.

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[22] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

[23] Lightcast, LMI data (2022)

Digital and IT sector	• The region's Digital and IT sector is attractive at an international scale due to its home-grown success, such as ARM and major private investments including Microsoft and Apple. • Cambridge is also a key part of the £1bn invested in UK artificial intelligence start-ups. • There is on-going and significant demand for Digital and IT skills across the region, particularly within Professional Occupations with Python being the most sought after. • Programmers and software development professionals are in the highest demand across the region, which may indicate labour shortages. • Definitions for the digital sector are consistent with Cambridge Insights list of Standard Occupational Classification (SOC) codes and therefore this excludes the skills required by non-digital workers because of on-going digitisation.
Advanced manufacturing and materials sector	• Peterborough and Huntingdonshire have strong manufacturing backgrounds and large international firms are based in this area. Fenland is also a significant contributor to growth in this sector. • Advanced manufacturing and materials employment is growing at a faster rate than manufacturing in the region. • There is a national skills shortage for individuals in the manufacturing sector and a large proportion of those currently employed in the sector are over 50s so retraining and upskilling is vital. • Training provision is strong and there are multiple skills initiatives already in place such as the College of West Anglia Technology Centre in Wisbech, the North Cambridge Training Centre in Chatteris and the new Anglia Ruskin University Peterborough Campus. • The skills agenda needs to focus on alignment, where significant investments in education may not necessarily be aligned to future skills needs and quality, reflecting a perception that there was a mismatch between the delivery of training and the way employers would prefer it to be delivered.
Agri-tech sector	• The strength of the Agri-Tech sector in the region is based on a highly skilled and international workforce, attracted to Cambridgeshire by the reputation of centres such as NIAB and the University of Cambridge. • There is a disparity in skills from PhD level to vocational and seasonal work around agriculture and Agri-Tech in the region. • There are several regional HE and FE delivery partners who are reflecting on how to offer courses and skills programmes to prepare the workforce for 21st Century agriculture, which includes emerging skills as well as traditional. These operate in a competitive backdrop nationally, so more bespoke programmes are reportedly needed for the region. • There are several industry-led providers – such as the Agri-Tech Register and Training for Innovation and Skills;(ARTIS) which currently exists to provide flexible learning in some areas of the industry – and plans should be considered within the context of this and other initiatives.

2. Cross-sector skills priorities

The cross-sector skills priorities have been developed using data analysis, desktop research, stakeholder engagement, workshops and the skills survey. These perceptions were gathered through LSIP workshops and have been tested with the main stakeholder groups. Further information is detailed in **Annex B**.

Skills shortages

Perception	Features
Inconsistent understanding of skills	Employers often do not engage and when they do, they struggle to articulate their skills needs to providers. Currently skills are not clearly defined across the UK education system and there is no universally agreed taxonomy in use. Both employers and education and training providers do not always speak using a consistent language of skills.
There appears to be a lack of sustained investment in skills by employers	Emerging from the pandemic and given the high inflationary pressures there appears to be a lack of investment in skills by employers and many do not have a clear skills strategy. Return on investment (ROI) for training and development is unclear which is contributing to the lack of investment in skills. Many businesses, particularly SMEs, do not have seem to have the capacity to spend time outside of their day job understanding their future skills needs as they are unaware of the ROI in this engagement.
Skills gap in entry and mid-level skilled roles	Skills needed are entry to mid-level technical with a particular concern from employers about level 2 skills. The most immediate challenge is the need for lower-level technical provision.
Inconsistent appreciation of transferable skills	Some sectors require a distinct set of skills within their workforce. However, there is a lack of understanding or clarity of transferable skills across sectors. There can be a lack of openness to diversity of experience from different sectors, so skills and experience can be overlooked.
Mixed approach to work ready skills	Employers have identified the lack of 'employability' skills as a barrier to successful recruitment. There is a lack of a consistent approach to 'work readiness', for example communication, time-management, teamwork and attitude to work.
Employers believe that students are not choosing the education courses that meet the local labour needs	There were perceptions that on some occasions students are choosing to take courses or study degrees in areas or subjects they want to but where there is not necessarily a skills demand locally. The value of student autonomy and transferrable skills needs to be recognised by employers.
Business skills	Business skills are lacking in the region e.g., leadership, business planning and financial accounting skills. This is limiting the growth of micro-businesses. Training exists but uptake is insufficient to meet business needs and the costs of training may be prohibitive.
Business experience	Alongside or prior to work experience, it would be valuable for businesses to engage with schools and colleges to provide talks on specific sectors and job roles. This supports the careers advisors and gives the students exposure to new industries. We need to support businesses who are often too time constrained to engage. Stakeholders have suggested a range of channels including drop-in session, chatbots and amplifying the support from the regional BRO's.
Stakeholders have reported inconsistencies with careers information, advice and guidance	Students are not always aware of what options are available to them in the local recruitment market and in terms of further education options. There needs to be better support for students to recognise how their skillset can be transferred on to a CV and understand what jobs would be suitable for them. Careers advisors do not always have the appropriate industry experience and are not aware of the local demand for skills.

Skills shortages

Perception	Features
Apprenticeships	Concerns have been expressed by some employers about the need for supporting apprentices throughout their programme as this is not perceived to be part of the apprenticeship funding. This is a particular concern for smaller businesses.

Professional and personal development

Perception	Features
Teacher industry experience	It would be valuable for teachers to have access to relevant industry placements or day visits to businesses so they can provide guidance on a range of sectors in the local areas and understand how businesses work. The challenge is that teachers are often too time constrained to enable this.
Mentoring	Mentoring will support new employees to be more effective in their role. There is an opportunity for reverse mentoring to fill potential skills gaps. The idea is that the junior employee can share their expertise (commonly, technology and digital media topics) with the senior colleague, who may be less familiar with these areas.
Work experience	The majority of stakeholders appreciate the value in work experience. There are challenges in supporting the students and the businesses to provide meaningful opportunities. There can also be safeguarding issues and health and safety issues.

Diversity and inclusion

Perception	Features
Women returning to the workplace	Women often face a skills gap when they are returning to the workplace. There is limited support and opportunities for upskilling provided for them.
Refugee communities	Refugee communities often contain a range of professionals with skills and talent that are not easily recognised or transferred.
Over 50s	The over 50s and retired population can often contain a range of professionals with skills and talent but their expectations for working styles and potential health constraints may require workplace flexibility. A continued focus on working with the DWP and employers on finding more opportunities for the economically inactive including the long term unemployed is required.

Our findings were supported by a companies report produced by Cambridge Ahead which cited the following areas of focus from their membership:

- Shorter training interventions for businesses.
- Work placement being better co-ordinated.
- Career partnerships getting more support.

3. Focus on Digitalisation and Low Carbon

This report also considers cross-sector themes including Digitalisation and Low Carbon (Net Zero) due to the repeated raising of these as of particular significance both nationally and locally by key stakeholders (including the CPCA). It is important to note that defining these areas at the skills level is particularly difficult.

The pace of change within these evolving areas makes it challenging for employers to understand their future skills needs and there is pressure on the education system to keep the curriculum and provision of skills up-to-date and aligned with the wider economy. There is a clear need for futureproofing of skills strategies to ensure the region can manage the risks and realise the opportunities which can be generated from a low carbon and digitalised world. As more industries adopt green and digital technology into their workflows, more strain will be placed on the supply of suitable talent leading to an ever increasing digital and green skills gap, particularly if employers do not upskill their existing workforce.

Digital skills

The CPCA's focus has been on evaluating digital occupations through Standard Occupational Classification codes that are in **Appendix 5.** Digitalisation is likely to have a broader definition of specific skills and this will need to be the focus for additional analysis in the future.

The Analysis of Digital Skills from Lightcast and the Skills survey
Lightcast analysis indicates that C#, Python and Software development are the most common specialised skills requested by employers in job postings from across the region. For common skills, communication, management and problem-solving skills are the most frequently requested skills. Each sector has its own profile of specialised skills and this can be seen in **Appendix 9.**

Digital Skills (advanced) was selected by 13% of the responders to the Employer Skills Survey question 'Which skills do you feel your business most needs to maintain, develop or obtain over the next 3 to 5 years in order to remain viable and competitive?'. 8% of responses suggested Basic IT Skills (which could be provided through the government's free online Skills Toolkit[24]).

Summary of the digital skills challenges	
	• Developing a meaningful regional definition for digital is a challenge.
	• The Digital Sector Strategy provides a comprehensive Digital Strategy for the region and aims and recognises four different segments of digital users, each of which have their own skill levels and educational needs: Digital Exclusion, Basic and Workforce.
	• There is a perceived skill shortage which is only set to increase as all industries adopt advanced technologies.
	• The strategy highlights skills gaps, such as for software developers, senior programme developers, data analysts / big data developers and artificial intelligence developers.
	• The region will need to be able to supply newer skills in relation to artificial intelligence and data processing as they become part of the digital economy of the future.
	• Engagement with the Careers Hub is critical to support and influence the upskilling of educators and working smarter with outreach work.
	• In addition to the basic IT skills provision available through the Colleges, a range of free online courses exist but it is not clear if stakeholders access these online courses.

Green skills

The definition of Green for CPCA is currently based on adoption of the GLAECONOMICS approach to identifying Green Occupations in London (*Jan 22*)[25]. It classifies green occupations into three broad categories. See examples below with the full occupational list included in **Appendix 7.**

Green category	Examples of SOC2010* occupations	Examples of green-related jobs
Green increased demand	Construction operatives n.e.c.[26]Carpenters and joiners Bus and coach drivers	Insulation installers Construction carpenters Bus drivers
Green enhanced skills	Plumbers and heating and ventilating engineers Vehicle technicians, mechanics and electricians Finance and investment analysts and advisers	Renewable energy engineers Electric vehicle mechanics Directors of sustainability
Green new and emerging	Management consultants and analysts Actuaries, economists and statisticians	

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[24] National Careers Service, The Skills Toolkit

[25] Greater London Authority, Identifying Green Occupations in London (2022)

[26] https://nationalcareers.service.gov.uk/job-groups/8149

Green category	Examples of SOC2010* occupations	Examples of green-related jobs
	Marketing associate professionals	

The Analysis of Green Enhanced Skills from Lightcast and the LSIP Skills Survey

For Green enhanced skills, Lightcast identified marketing, mechanical engineering and machinery skills as the most frequently required specialist skills from job postings. Communications, management and customer service were the top 3 common skills across the region.

The LSIP Skills Survey indicates that Green technology and sustainability represented approximately 7% of responses against the question 'Which skills do you feel your business most needs to maintain, develop or obtain over the next 3 to 5 years in order to remain viable and competitive?'.

Summary of the green skills challenges	- Developing a meaningful regional definition for the Green sector and impact of low carbon initiatives on the workforce is essential. - Government policy on energy security and net zero is creating new demand for green skills. - The Green Jobs Delivery Group are focussing on 18 Priority Sectors to achieve the Net Zero Targets, all of which are relevant to the region. This includes Energy and Network, Transport, Sustainable Land Use, Manufacturing and Homes and Buildings. - There are national skills programmes providing opportunities for individuals to train, retrain and upskill to meet green sector needs, which includes work-based and classroom-based provision. However, providers will require capital investment to deliver on these skills. - Communications, Management and Sales are in the top common skills sought in Green Enhanced Skills Job posting. - College of West Anglia has plans to build a Carbon Net Zero Skills Centre at the Wisbech Campus.

See Appendix 5 for a detailed definition and demand and supply analysis for the cross-sector theme challenges.

Part 02: Taking the LSIP Priorities Forward

In this section of the report, we document the priorities for providers, some of which are already being delivered or are part of future delivery plans for the region. It describes the specific skills and competences that have been requested by employers. These insights have been gathered through our data analysis and stakeholder engagement either in person or via the online surveys.

Key Priorities

We have not been provided with comprehensive evidence from employers that their skills needs are not met by the range of provisions delivered by the current providers. The key issues identified from the stakeholder engagement suggest that employers require consistent support to articulate the needs in terms of skills and on-going support to navigate the skills system and to understand the opportunities and benefits that can be gained from transferrable skills. Therefore, the focus of this report is to signpost the skills required and to provide consistent structures for a wider range of employers in accessing and developing the skills required through enhanced engagement.

1. Sector growth priorities

The Chamber is committed to supporting the existing growth priority areas as part of the introduction and development of the LSIP. There will need to be a balanced approach to meeting sector growth priority needs as they may compete for talent in a tight labour market. More details are available in **Appendix 5.**

Life Sciences

Employers in the life sciences sector are recognising a shortage of technical skills, including immunology and genomics and data science[27]. They are of critical importance to meet the forecasted growth in demand in evolving roles within the sector and therefore providers across the region need to respond to this shortage. There also needs to be more provision around generalist skills in business management and entrepreneurship. This is a common topic discussed throughout the stakeholder engagement and is therefore a point that needs to be addressed not only for life sciences. Another challenge is that many students currently enrolled in subjects suitable for life sciences employment will not enter the industry after graduating[28].

Local Actionable Priorities: **Improved regional careers information and guidance to encourage students into life sciences employment and minimise migration to other areas is key. Evaluate the regional need for the skills listed in Appendix 5 as identified by the sector body Cogent skills.**

Digital and IT

Employers, particularly within professional occupations, are increasingly seeking individuals with the necessary digital skills, including python, software engineering and software development. In terms of occupations, programmers and software development professionals are in the highest demand in the region[29].

Local Actionable Priorities: **There needs to be improved digital training and upskilling for employees already in work, as well as provision for students which focuses on developing these skills. Evaluation of the need for a regional digital literacy standard for all adults who pass through the FE system to support the upskilling.**

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[27] Cambridgeshire and Peterborough Combined Authority, Life Sciences Strategy (2021)

[28] Cambridgeshire and Peterborough Combined Authority, Life Sciences Strategy (2021)

[29] Lightcast, LMI data (2022)

Advanced manufacturing and materials

The National Manufacturing Skills Task Force (NMSTF) is the catalyst for advanced manufacturing and recognises high level skills issues in the industry which include the following[30]:

- Ability to attract new and diverse talent into the sector.
- Upskilling and reskilling the existing workforce.
- Employers' ability to keep pace with technological change and understand what that means for their workforce and skills.
- Difficulty to invest in upskilling, reskilling and recruitment of new talent with other constraints on time and resources e.g., energy costs etc.
- Competition for skills and number of vacancies needed to be filled.
- Ability for employers to foresight and understand future skills and how to understand and respond to "green skills" or "industry 4.0" etc.

Local Actionable Priorities**: Providers need to utilise this information to signpost courses and skills programmes which will equip the workforce with the traditional and emerging skills required for this industry. Delivery style and location of the courses may be key considerations.**

Agri-Tech

There is an acute skills and labour shortage in the Agriculture, Horticulture and Agri-Tech industry nationally, but a disparity in skills from PhD level to vocational and seasonal work within the CPCA area. The local industry is built on a highly skilled, international workforce, attracted to Cambridgeshire by the highly productive soils growing high value crops as well as the reputation of centres such as NIAB and the University of Cambridge[31].

This inward migration helps to fill the shortages, but also indicates that increased and improved local provision and upskilling is needed to encourage local entry into the sector. This includes the development of apprenticeships and T Levels as both are important entry routes through to the industry from a policy perspective.

Examples of specific skills required across the Agri-Tech sector include knowledge of agronomy and biology, knowledge and application of IT and statistics tools, knowledge of regulations covering plant science products, rigour/ ability to analyse and summarise, comfortable interpersonal relations / team player, ability to write documents, ability to work independently, adaptability and able to make suggestions in a group[32].

There are several regional HE and FE delivery partners and they, like their counterparts across the wider UK, are reflecting on how to offer courses and skills programmes to prepare the workforce for 21st Century agriculture and horticulture, which includes emerging skills as well as traditional. Agri-Tech of course forms a key part of this; however, the national pool of learners is presently attracted to providers on a national scale and it has been suggested that bespoke offerings for the businesses and learners in the CPCA area are needed.

There are several industry-led providers – such as ARTIS[33] which provides flexible learning in some areas of the industry – and future plans should be considered within the context of this and other initiatives[34].

Local Actionable Priorities**:**

Based on the above information, 5 short-term objectives have been identified to support the sector growth priorities.

- **Raising awareness of Agriculture, Land Management and Production T levels to employers as a steppingstone into Agri-Tech.**
- **Ensuring that apprenticeships meet the needs of employers and particularly SMEs.**
- **Upskilling and reskilling with a focus on digital and green skills.**
- **Developing a common skills language for the sectors to aid the transferability of skills across sectors.**
- **Developing regional Skills Brokerage Service Offer so that the specific skills required for the industry are considered and communicated to providers.**

2. Cross-sector skills priorities

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[30] Cambridgeshire and Peterborough Combined Authority, Advanced Materials and Manufacturing Strategy (2021)

[31] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

[32] My G Work, Biological Dossier Writer (BAD)

[33] ARTIS, Practical Management of Soil Compaction

[34] Cambridgeshire and Peterborough Combined Authority, Agri-tech Strategic Action Plan (2021)

Using the validated stakeholder perceptions and our agreed approach (**see Annex B**), a short-list of emerging solutions has been identified which recognises the significance of the perception as well as the ease and impact of the solution. These are outlined below and further details of the features are provided in **part 3** of the report and **Appendices 11 and 12.**

- **Governance/ Central Commitment**
  A vehicle for regional collaboration on taking forward the actions/changes set out in the LSIP.
- **Centralised Communications**
  An approach for simplifying the skills system for stakeholders.
- **Regional Careers Entitlement**
  Developing a consistent and regional approach for access to careers information.
- **Regional Independent Skills Brokerage**
  Establishing a central service for the delivery of and signposting of a range of business services.

3. Focus on Digitalisation and Low Carbon

The CPCA have used Cambridge Insights to define Green and Digital by SOC code and we have used the CPCA's working definitions in our analysis of the Lightcast data to identify the relevant jobs. Our stakeholder discussions relating to these topics has revealed that the current SOC approach may require adjusting in future to make it more relevant to stakeholders needs.

Digital skills

Sufficient educational provision for both young people and adults needs to be accessible either through the school, college and higher education system, or through employer-led training. Engagement with the 'Careers Hub' is critical to support and influence the upskilling of educators and working smarter with outreach work.

Businesses also need to have a clear process for engaging with the education system and for signposting what skills and knowledge it needs its future workforce to develop. One route to achieving this is through the 'Digital Skills Partnership,' which is a localised, nation-wide programme of joint public/private sector engagement on education. Alternatively, a more ambitious programme could be the creation of a CPCA Digital Skills Task Force, consisting of business, education and public sector leaders, that generates and actions specific opportunities around the creation of digital skills among young people and adults; its mission would be to ensure that all businesses in the area are able to thrive through access to a consistent, high-quality supply of talent[35].

Local Actionable Priorities: **There is a need to define digitisation of occupations through the monitoring of specific skills codes and all stakeholders should be supported by future versions of the LSIP to understand the difference between Digital and IT as a growth sector and digitisation of current roles through the impact of technology and Artificial Intelligence.**

Low Carbon - Green skills

The key challenge for cross-sector skills themes is that there is currently no consistent understanding or definition of Digital or Green. What might be a digital or green skill for one person, might not be the same for another person. A clear working definition needs to be developed which can be shared across the region, ensuring consistency in the development of provision.

Local Actionable Priorities: **The development of clear communications and definitions about skills will be a key aspiration for the next stage of the LSIP process. This should be embedded as part of careers guidance and aligned to the messages currently being developed by the DWP on the identification of green jobs**

Skills Components and Competences

This section provides a view of the specific skills requirements identified during the development of this LSIP. See **Appendix 15** for more details.

As the focus of the workshops and the interviews related to perceptions of the system, the LSIP Skills Survey has been the main source of information regarding the skills needs of employers across the region. The survey provides an articulation of the specific skills and training requirements employers need. Continued communication with providers will clearly demonstrate where this currently exists and/or where new provision is required. Whilst selective views of the survey responses have been included in this report the Chamber has analysed all of the responses and will use the success of this survey to develop its approach to consultations and surveys in the future.

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[35] Cambridge Wireless and Anglia Ruskin Recruiting staff with the necessary technical skills University, A Digital Sector Strategy for Cambridgeshire and Peterborough (2019)

Analysis of the LSIP Skills Survey

An instance of the survey was launched by the Chamber aimed at the general public and was hosted on the Chambers website whilst another instance of the survey was launched as a closed survey that was linked to a prize draw that was advertised through alternative routes such as football clubs. Overall, the survey had 344 responses (some of which were not completed in full).

- 38% of those have indicated that they would be happy to continue to engage with the Chambers on skills issues in the future.
- 55% of total responses were made by employers and were spread across the sectors.
- 51% of employees were from the hard-to-reach target group which is employers with less than 50 employees.

Challenges experienced in looking for work

Overall respondent reported that the Top 4 Challenges to finding work are:

- 22% - Difficulties in recruiting from the local area.
- 21% - Recruiting staff with the necessary technical skills.
- 19% - Recruiting staff with good employability (e.g., communication skills attitude initiative).
- 18% - Finding sufficient numbers of employees. (This demand appears to be more prevalent in the larger businesses.)

What challenges have you experienced in looking for work most recently?
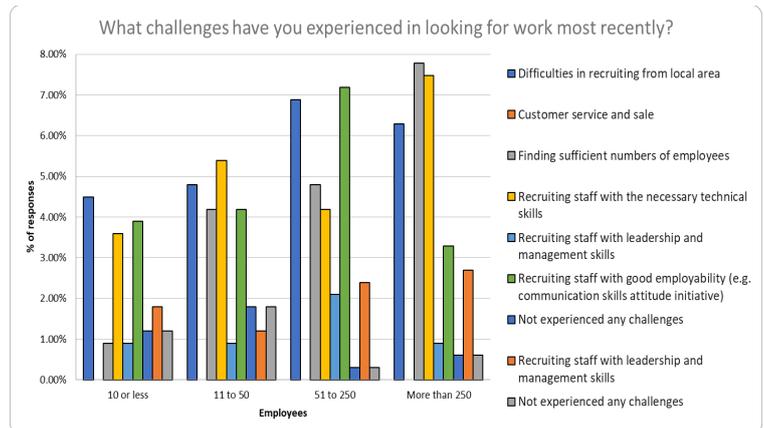
The skills businesses most need to maintain, develop, or obtain over the next 3 to 5 years in order to remain viable and competitive?

Respondents reported that the Top 8 most common requested skills over the next 3-5 years are approximately:

- 18% - Soft/transferable skills (e.g., communication problem solving).
- 17% - Sector specific technical skills (please see below*).
- 15% - Leadership and management.
- 13% - Digital skills (advanced).
- 11% - Customer service and sales.
- 7.5% - Basic IT skills.
- 7% - Green technology and sustainability.

Skills required by business
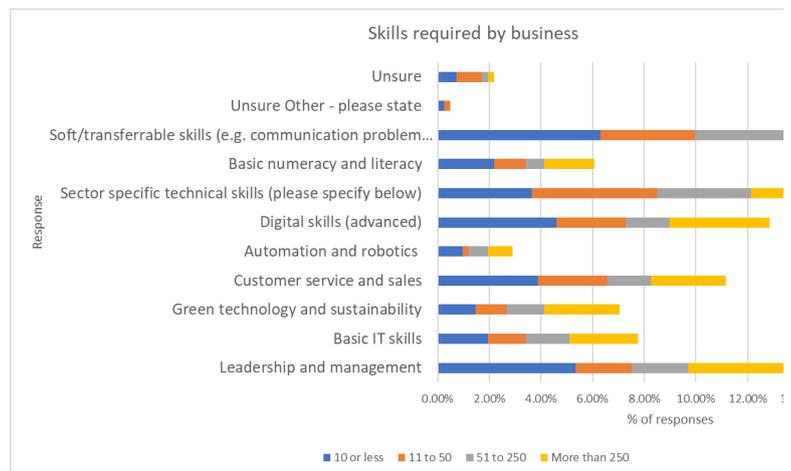
*sector specific technical skills detailed 17 unique characteristics that mainly related to personal characteristics

Key skills shortages

Overall, approximately

- 44% of all responses identified Specialist Skills as the biggest shortage category. (The specialist skills were individual requests for behaviours and competencies that have been assessed by the Chamber.)
- 32% Soft Skills
- 20%Technical Skills
- Life Sciences, Advanced Engineering, Education and Professional Services provided details of the specialist skills required and these will be monitored by the LSIP team.

Skills shortages by sector
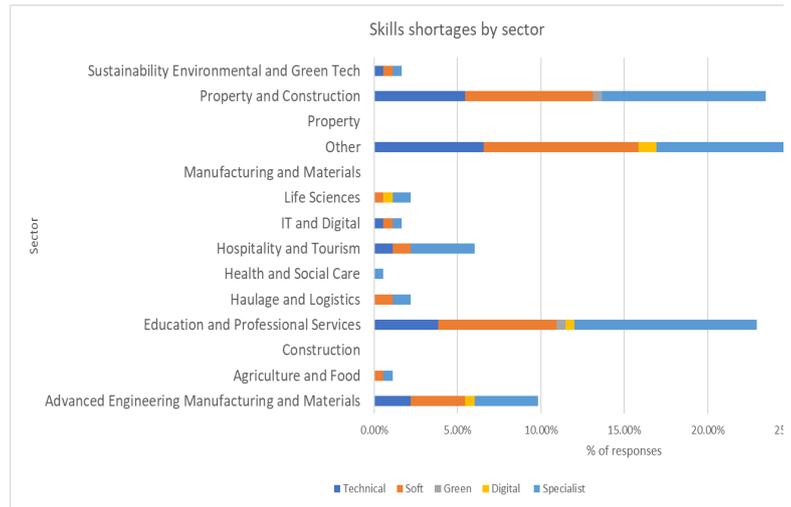
Actionable priorities for local provision

Providers should consider the results of the survey and the actionable priorities in order that they continue to meet the identified needs of the region

Skills priorities summary	- The CPCA growth sectors have been established as the priority skills required by the region and their skills needs have been summarised above and more details are available in **Appendix 5.** - Green and Digital skills needs are related to their definitions, we have provided a view of skills based on current definitions, but these should be continued to be discussed and refined through sector groups. Additional considerations are included in **Appendices 6, 7 and 9** - Engagement with stakeholders has identified a number of skills requirements that employers want from local provision and sets out the specific skills components and competencies employers need in the workplace but are struggling to find; it also provides a rationale for where and why changes in local provision are needed to better meet those needs. Providers are asked to review and consider if they can provide additional flexibilities in the delivery of their provision to meet these needs. More details are included in **Appendix 15**. - The results of this analysis will be used to underpin the sector focussed dialogue that will follow to develop detailed profiles of skills needs for each district and sector. - Innovative approaches are required to meeting the skills shortages of regional providers and is a priority. - Some employers are unclear about the range of provision that is available to them to meet their skills needs. Providers should continue to work with the Chamber, Stakeholders and the CPCA to review the range of provision across the region to ensure that there is an appropriate mix of Apprenticeships. T-Levels accredited and non-accredited provision available and sign-posted to meet the regional needs. This can be supported by sector groups. See part 3.

Part 03: Delivering the LSIP priorities

In this section of the report, we set out the emerging solutions and a roadmap for delivering the actions/changes identified within this LSIP. It establishes specific actions for stakeholders, bringing out how 'the whole will be greater than the sum of its parts.' These have been developed through the analysis and validation of the perceptions and their solutions discussed in the two rounds of the stakeholder workshops and through additional consultation with stakeholder groups, including the Chamber and the CPCA, BRO's and education providers. More details are available in **Appendices 11 and 12.**

Implementing effective and sustained change

The solutions have been designed to mitigate against the perceptions that were summarised into major themes, identified during the workshops and through our interviews. The Chamber and the CPCA have agreed to work towards embedding the LSIP process into the existing skills system that has been implemented by the CPCA to identify and deliver skills priorities across the region. The project outline on the following pages describes the current thinking that will be continued to be revised and tested with stakeholders to ensure that it can provide sustainable changes to the region. These proposed solutions provide:

- The rationale for being a facilitator/enabler of collaborative action, bringing together local partners to support the delivery of the roadmap including supporting greater employer investment in skills.
- A range of actions to take forward the priorities.
- A description of the process for managing effective delivery, reviewing progress and realising the expected benefits.

It is expected that these proposals will be refined as part of the ongoing implementation of the LSIP programme and that the resources for the implementation of these initiatives will be sought through the Chamber as the Designated ERB, the CPCA budget and/ or LSIF funding as agreed by the stakeholders, or other additional funding that may be accessible to the region's stakeholders. Below we set out four proposed solutions, in summary these are:

- **Governance/ Central Commitment**
  A vehicle for regional collaboration on taking forward the actions/changes set out in the LSIP.
- **Regional Independent Skills Brokerage**
  Developing a central service for the delivery of and signposting of a range of business services.
- **Centralised Communications**
  An approach for simplifying the skills system for stakeholders.
- **Regional Careers Entitlement**
  Establishing a consistent and regional approach for access to careers information.

Below we set out in summary each proposed solution and more detail, including proposed implementation schedules, are included in **Appendix 11.**

Governance/Central Commitment

The region's providers have demonstrated that they are committed to meeting the needs of the region's businesses and two of the FE colleges have had their approaches validated in recent Ofsted inspections. However, there is the opportunity to implement improvements in the coordination and consistency of educationally related services across the region which would support the ability of providers, (BROs), including the ERB and Local Authorities to meet the needs of a wider range of employers and individuals across the region. This becomes the main vehicle for regional collaboration on taking forward the actions/changes set out in the LSIP. More details are included in **Appendix 11.**

Our hypothesis is that through establishing a clearly articulated commitment of collaboration for Providers, Local Authorities and BROs across the region, a range of easy access, regional entitlements for key stakeholder groups and more consistent ways of working can be established.

Features (to be reviewed and agreed annually) are likely to include:

- Agreement on how the LSIP process is incorporated into the CPCA existing skills system, including evaluation of the opportunities for secondments and operational alignment.
- Collaboration and coordination of education and training related services across regional business support service providers including the Chamber, Providers, BRO's and Local Authorities (LAs).
- Regional agreement to use Learner Support to provide help for Apprentices (this requires an appropriate diagnostic).
- Explore updating the conditions of grant funding to include 'working towards' regional collaboration.
- Bringing together regional and sector focused networks coordinated via centralised comms.

- Agreement on the development and adoption for a regional approach and language around transferable skills.
- Support providers with activities including annual accountability statements.
- Making recommendations for regional curriculum plans that meet the emerging skills needs of employers.
- Evaluating the sufficiency and adequacy of the curriculum available to employers against the current and future priorities established by the LSIP.

Regional Independent Skills Brokerage

We have developed a working definition for a regional skills brokerage as 'a service that arranges for the supply of skills to be aligned to the user's needs for skills.' As such, this role is different to that normally offered by a provider as it would be similar to the role of an independent mortgage adviser who would assess the suitability of the regional provision to meet a detailed understanding of business needs. It is clear from conversations with providers that brokerage does occur naturally within the system as referrals, but these referrals are not tracked and therefore it is unclear if all needs are being met. There are also inconsistencies in the access to business services across the region, as many of the wider business services reside across the BRO network and 'Skills Brokerage Service Offer with Skills' and there is minimal collaboration across these groups. It should also seek out and promote best practice solutions from across the region, UK and internationally.

Our hypothesis is that there is an opportunity to utilise the re-commissioning of the Skills Brokerage Service Offer to provide a more comprehensive range of services to the regional stakeholders.

Beneficial elements of the service would be:

- Evaluation and development of a regional curriculum offer.
- Promoting and supporting identification of transferable skills.
- Repository for regional careers pathways.
- Capturing and analysing skills needs.
- Support for the development of regional skills networks that can be used to gather skills needs.
- Work experience brokerage.
- Networks co-ordination - central registry of regional and national groups.
- Build on existing Skills Brokerage contract service offer - 1:1 business growth coaching advice, expert-led workshops, talent and skills development, grant funding, equity finance, inward investment.
- Building on the CPCA ambitions for a Skills Talent & Apprenticeship Recruitment Hub (STAR Hub).

Centralised Communications

Independent businesses, individual colleges and other regional education service providers have successfully developed and delivered their own approaches to communications with their stakeholders. When reviewing the range of individual approaches from a regional perspective it is evident that the differences in the communication approaches adopted can lead to confusion for the service users.

Our hypothesis is that an agreed centralised approach to communications across the region will provide a more consistent user experience for regional stakeholders and will provide opportunities for combined marketing campaigns and services targeted at the harder to reach groups. This can be through the support and promotion of Sector forums/round tables.

Features (to be reviewed and agreed annually) are likely to include:

- Standardisation and central glossary of terminology (set for the language of the Cambridgeshire and Peterborough region).
- Centralised communications, updates and signposting.
- Stakeholder engagement co-ordination.
- Our Education Landscape in Cambridgeshire and Peterborough - A Guide for Employers (Gatsby Example - but this should be multi-media).
- Our Education Connections in Cambridgeshire and Peterborough - A Guide for Employers (Gatsby Example - but this should be dynamic and multi-media).

Regional Careers Entitlement

The careers guidance landscape is complex as the National Careers Service (NCS) and the Careers and Enterprise Council (CEC) are independent organisations that service different age groups. Whilst many of the career's perceptions related to the provision of work experience in schools (which is out of the scope of the LSIP), the introduction of the T-levels and Apprenticeships standards will benefit from a standardised service offering for careers and work experience that can benefit from economies of scale.

The LSIP Skills survey reveals that employers use a variety of sources to access information about careers and it is unclear if they are informed by a signal source of regionally focussed Careers Advice and Guidance. Stakeholders have suggested that the access to regional careers advice and guidance can be developed and reduce any potential confusion for stakeholders.

Our hypothesis is that an agreed centralised approach to Careers information across the region will provide a more consistent experience for regional stakeholders and that engagement with the CPCA Careers Hub is critical to support and influence this approach

Features (to be reviewed and agreed annually) are likely to include:

- Liaison and alignment with the needs of regionals schools and the DWP.
- Localised, regional national careers information - a multimedia resource bank of local career opportunities.
- Local employment opportunities to be a focus of local careers communications.
- Career pathways and links to Green and Digital sign posted.
- Skills information.
- Education and information for employers and providers.
- Formal mentoring schemes and guidance (including reverse mentoring).

Roadmap and framework for future actions by stakeholder groups

To implement these proposed solutions there is an overarching set of implementation milestones which align to the DfE requirements. These are indicated dates below:

1. **Establishing LSIP structures**
   a. Governance July – September 2023.
   b. Brokerage August - December 2023.
   c. Careers Entitlement August – December 2023.
   d. Centralised Communications August -December 2023.

2. **Evaluating actionable priorities - Bi-annual reviews**
   a. Capturing unmet demand as collated by the Colleges in their engagement with business.
   b. Collaborating with CPCA in provider account management, seeking to capture how their provision can meet the needs of the LSIP.
   c. Implementing priority deep dives, where further demand signals are needed. These may be sector and regional focussed and will involve collaboration from sector groups.

3. **Embedding the LSIP**
   a. Monitoring of progress against targets – as agreed with stakeholders.
   b. LSIP annual review and report.

The role of the Chamber as ERB

In supporting the delivery of actions/changes identified in the approved Local Skill Improvement Plan as the ERB, we will seek to build upon the successes of stakeholder engagement from stage one. We will:

- Bring together the networks formed as part of stage one engagement, for example the BRO and Provider groups, to create a 'Skills Commitment Partnership' (Partnership) that clearly continues to be employer led.
- We will negotiate the terms of reference for this with CPCA to define the ways of working for the Partnership, which may include the creation of subgroups tasked with taking forward the collective approach to the action/changes identified within the approved LSIP, or sector forums to identify changes to employer skills needs.
- Engage alongside the CPCA, with stakeholders such as BROs, providers and local government, or third sector organisations to facilitate their joining of the Partnership and help to identify how they can commit to supporting the regions skills agenda.
- Once the partnership is established, as an ERB we will seek to support ongoing collaboration and monitor the effectiveness of the local actionable priorities.
- Work with providers to ensure the approved LSIP actions are clear and remain appropriate, as well as to identify how employer skills needs can be better articulated in ways that are useful to relate to provision.
- Provide support to providers on a range of LSIP related actions, including the development of LSIF applications and accountability agreements (Ofsted).
- Work closely with the Partnership to support collaboration and delivery of the LSIP roadmap, while continually sharing insights and establishing best practice.
- Carry out continued employer engagement, working with the Partnership and stakeholders, including those not already engaged as part of stage one, to better understand the evolving skills needs of employers and to support employer investment in skills.
- Bring together insights from the continued direct employer engagement and collaboration via the Partnership, seeking to establish metrics and to enable progress monitoring of activity to support the priority areas identified within the approved LSIP.
- Report annually on the progress made by the region on the local actionable priorities and changes identified within the approved LSIP and submit a new LSIP to the Department for Education's approval, where we identify that employers, skills needs have materially changed.

LSIP solutions summary	- These solutions provide the infrastructure for the implementation of a sustainable LSIP process that is aligned to the existing skills system and meets the current and emerging needs of regional employers. - The LSIP engagement has identified and acknowledged a range of regional skills system challenges alongside local actionable priorities that will need to be resolved to embed an LSIP into the existing skills system and these have been presented in **Part 2** of this report with additional insights of requirements for consideration by providers contained in **Appendices 5, 6 and 7.** - This report provides a snapshot analysis of the current skills challenges and provides an evidence base for the regional priorities. However, additional work will be required to develop a detailed understanding of the skills required by the current and future workforce and those that are missing that will need to be developed by the regional providers. - Effective collaboration across the Chamber, CPCA, providers and BRO's is key to the future success of any regional skills system.

Annex A - Local strategic context

Provides additional contextual information that important to understand in developing an LSIP for the region.

Context

A key feature of the Cambridgeshire and Peterborough region is that there is no single substantially developed larger urban city but multiple major employment hubs with complex needs for digital, transport and real estate infrastructure which present significant challenges for the region.

In 2020, the mayor identified eleven market towns as unique communities – Chatteris (*11,011*), Ely (*18,000*), Huntingdon (*25,428*), Littleport (*9,168*), March (*20,917*), Whittlesey (*16,058*), Wisbech (*20,200*), St Ives (*17.020*), St Neots (*33,261*), Soham (*10,860*) and Ramsey (*7,765*)[36] as belonging to the region's Market Towns Programme. (By comparison Cambridge and Peterborough have population of 80.4 and 76.2 thousand inhabitants).

Each of these locations has a master plan of priorities for development and this demonstrates the significance of this multitude of major, though smaller, locations. They represent approximately 19% of the population of the region[37].

Prior to the introduction of the LSIP the CPCA had implemented a range of processes for identifying and communicating the skills priorities of the region. The decision-making structure is shown below, with the majority of the analysis and stakeholder engagement feeding into the Employment and Skills Advisory Board. The operations of the CPCA are governed by the CPCA Assurance Framework[38].

Decision making structure

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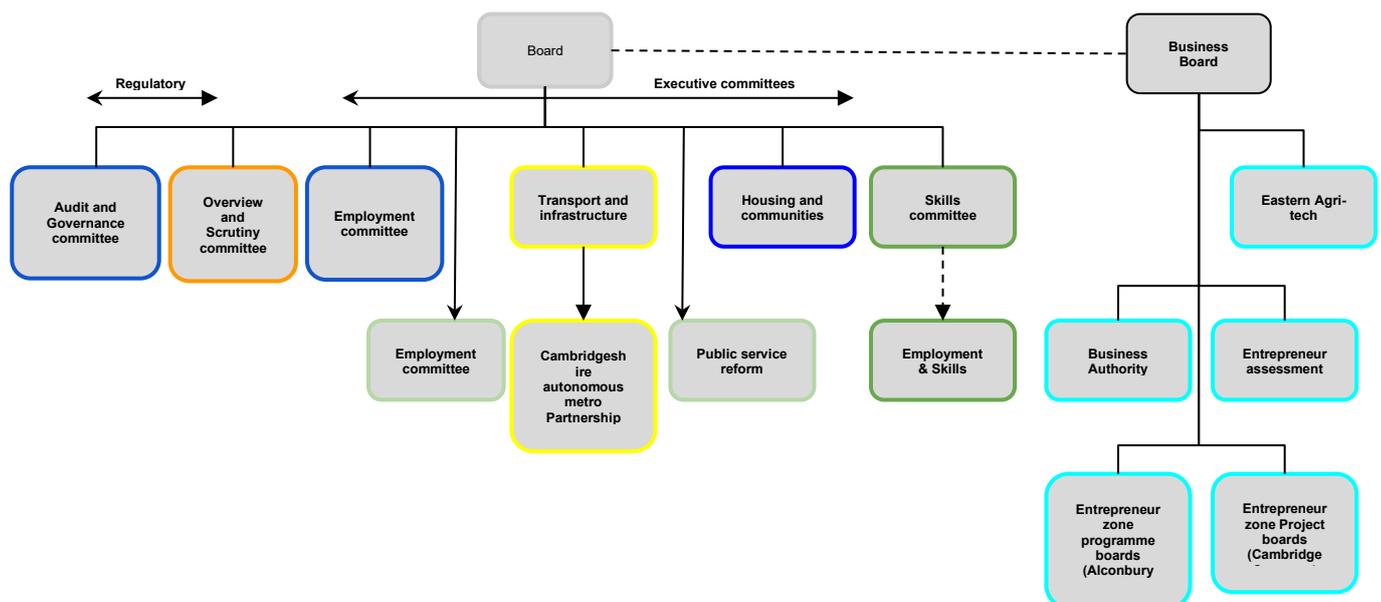
[36] Office for National Statistics, Census (2021)

[37] Cambridgeshire and Peterborough Combined Authority, Mayor's Blog: A Tale of Two Cities - And Eleven Market Towns (2020)

[38] Cambridgeshire and Peterborough Combined Authority, Combined Authority Assurance Framework (2021)

Key strengths of the region
Access to education and training provision

The CPCA benefits from a diverse network of further education (*FE*) providers, with a focus on the 16-19 (*post 16*) age group. These institutions maximise the employability of their students, through the delivery of vocational and technical qualifications and bespoke training. They also deliver more traditional academic qualifications and provide an important bridge for those looking to progress to higher education (*HE*). Cambridgeshire and Peterborough Local Skills Report (2022) states:

"We have a vast range of FE colleges across Cambridgeshire and Peterborough, delivering a wide variety of different courses. Some of our key institutions such as Cambridge Regional College, Long Road Sixth Form College, Hills Road Sixth Form College, the College of West Anglia, City College Peterborough and the Inspire Education Group (Peterborough College and University Centre Peterborough) provide the majority of FE provision in the area. There are also 16 School Sixth Forms providing academic pathways and two University Technical Colleges in the region for 14–19-year-olds. One of the key strengths of skills supply across the area is local Higher Education provision in the south of the CPCA area which is home to the University of Cambridge, one of the world's leading academic centres and Anglia Ruskin University, an innovative global university."

Key challenges of the region
Providers

The provider landscape is complex particularly in relation to funding. As detailed in **figure 5**, there is a border edge element that needs to be factored in. Some providers fall outside of CPCA's influence and therefore the impact of the LSIP is limited for these grant funded providers despite them teaching students who reside in the region. The type of funding which is available under the LSIP also means that some changes to provision will be outside of the scope.

Figure 5: CPCA influence over providers in the region
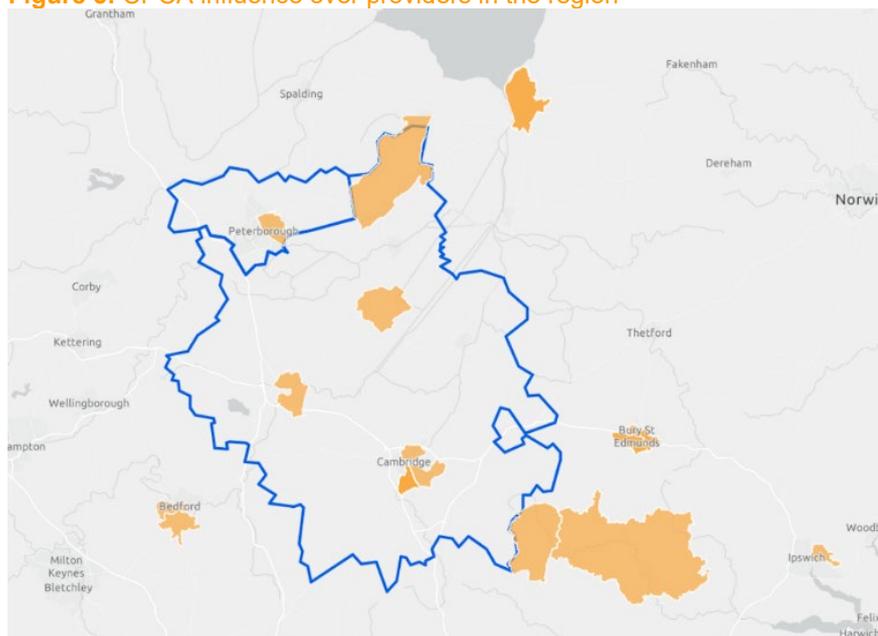
Source: Grant funded supplier delivery postcodes

Funding allocations

For the 2022/23 academic year the CPCA has issued the maximum contract allocations to 25 providers.

These can be broadly divided into Grant Funded Providers (mainly Colleges and Independent Training Providers (ITP's) representing Funding allocations for £13.1M for the Adult Education Budget (*AEB*), £1.6M for Free Courses for Jobs (FCJs) and £730K for multiply funding **(see Appendix 13).**

The £13.1M of AEB budget is contracted through 25 providers and 72.9% is allocated to 6 local providers. This AEB funding represents approximately 54 % of the providers overall skills funding and as such the CPCA has limited financial influence over the providers that they fund. However, the CPCA does have the flexibility to fund training that is linked to employer needs not a qualification and there is not a cap on how much regional funding can be non-accredited.

Type	Providers	SUM or AEB Allocation	SUM of FCFJs Allocation	SUM of Multiply
Grant	09	£10,000,000	£545,000	£6000,0000
ITP	16	£3,173,267	£1,086,149	£730,061

All grant funded providers are required to submit their detailed accounts information which is published by the Education and Skills Funding Agency (ESFA) annually. Whilst many of the providers deliver AEB provision across multiple regions it is not possible to accurately assess the relevance of the CPCA grant to each individual institution. However, all of the grant funded providers are likely to have priorities relating to other regions and other funding sources alongside those described within this LSIP report.

The CPCA has the ability to fund training that has been identified by its grant funded providers as meeting the needs of employers to increase employability. It is Currently unclear how much of the AEB funding has been allocated to this type of provision.

**Heatmap of AEB Provision using DfE data**
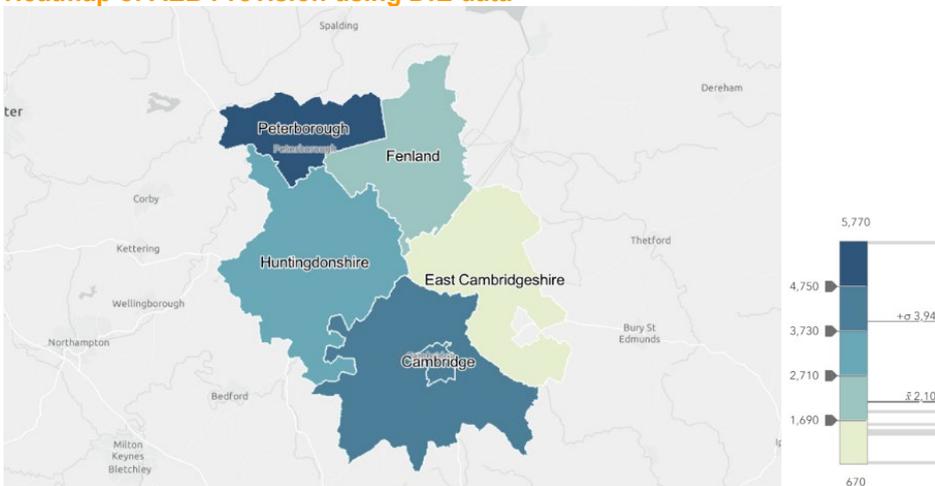
Source: DfE

Deprivation and regional disparities

The salaries across the region vary with Cambridge having the highest median advertised salary at £34,000 and Fenland with the lowest at £26,700, highlighting the disparity in wealth. These salaries are reflective of how lucrative the industries are in the local area, with Cambridge and South Cambridge home to wealthy industries such as pharmaceuticals and life sciences whilst Fenland's high-quality land makes it an exceptional location for the agricultural industry. This is, however, more impacted by seasonal patterns and wider external economic changes reflected in the wages.

Salaries offered are a principal factor that affects the appeal of the jobs in the local area, the inward and outward migration and therefore the supply of skills and availability of labour.

Our stakeholder engagement found that the agricultural industry within Fenland is experiencing labour shortages and retention issues where there is a shift towards greater workplace flexibility and improved working conditions. It is clear that the salary is not appropriately reflecting the lifestyle which is associated with the role. With lower salaries and falling appeal of these traditional roles, deprivation in Fenland will only continue to grow. Greater emphasis needs to be placed on supporting these industries and encouraging young people into these roles.

Median Advertised Salary
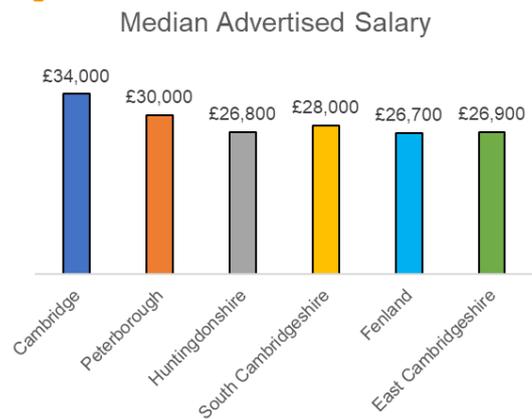
Source: Lightcast (2022)

Skills Data

The DfE has recently commissioned work to develop the specification for a UK Skills Taxonomy, but this is unlikely to be available until 2025. Internationally the USA utilises O'net[39], Europe uses ESCO[40], in common with other countries such as Canada and Australia who use derivatives of O'net within their regions. However, the absence of a UK taxonomy means that each ERB is required to develop its own approach to capturing, monitoring and translating the skills needs of its employers.

Throughout the development of this report, we have utilised existing data from Lightcast[41] that has been made available to Cambridgeshire Chambers via the CPCA relationship with Cambridge Insights or through the public data sources provided by HMG government. The full list of data sources is included in **Appendices 1 and 16** along with the contents page for a data book that has been delivered for the LSIP project team. Additional analysis on skills has also been undertaken by Geek Talent[42], to provide additional insights into the skills requirements of the region.

The International Labour organisation[43] (ILO) defines skills as:

> *The innate or learned ability to apply knowledge acquired through experience, study, practice, or instruction and to perform tasks and duties required by a given job.*

Skills Gaps and Mismatches

A current or potential employee may be judged as mismatched by level of education, subject and/ or a skills mismatch. Whilst employers experience all forms of mismatch, they are collectively recognised as Skills Gaps by employers and education providers with inconsistent reference to the detail.

Other forms of mismatch can be:

Mismatch Type	Description
Qualification	Qualification mismatch refers to a situation in which a person in employment, during the reference period, occupied a job whose qualification requirements did not correspond to the level and/or type of qualification they possessed.
Level of Education	A subset of qualification mismatch that is experienced when the level of education of current or future employees does not align to the level of education required to competently deliver the job.

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[39] O*Net, O*Net OnLine

[40] European Commission, ESCO Classification

[41] Lightcast

[42] Geek Talent

[43] International Labour Organisation, Education and Mismatch Indicators (EMI database)

Mismatch Type	Description
Subject	When the subject/field of study of the person in employment does not correspond to the field of study required to perform their job.

Mismatch by Subject: Educational attainment is the highest level of education an individual has successfully completed. This is usually measured with respect to the highest education programme successfully completed, which is typically certified by a recognized qualification.

Subject is the area of content covered by an education programme, course, or module.

Qualification is the official confirmation, usually in the form of a document, obtained through**:**

- Successful completion of a full education programme;
- Successful completion of a stage of an education programme (*intermediate qualifications*); or
- Validation of acquired knowledge, skills and competencies, independent of participation in an education programme (*acquired through non-formal education or informal learning*).

Qualification mismatch differs from skill mismatch. Skill mismatch refers to a situation in which a person in employment, during the reference period, occupied a job whose skills requirements did not correspond to the skills they possessed.

In this report we have attempted to present all the stakeholders' views about the skills gaps across the region. Then we have classified those perceptions into those that are within or outside our understanding of the scope of the LSIP. Where the perceptions do not relate to specific skills gaps, they are reported in this report.

An ambition for the Chamber is to develop a consistent and comprehensive approach to utilising skills analytics across the region, which provides an opportunity for the region to develop a detailed understanding of the skills required by employers and those delivered through the skills system. Future iterations of the LSIP will need to consider how it refines and builds the maturity of its skills analytics. **Appendix 17** contains a view of ESCO versus Lightcast skills views.

Achievement

The number of education and training achievements in Cambridgeshire and Peterborough saw a rapid decline of 18% from 2018/19 to 2020/21[44], which is likely to be an effect of the Covid 19 pandemic. However, there has since been a strong recovery with education and training achievements increasing by 10% in 2021/22 from 2020/21. Providers are fully focussed on the need to bring achievements back to the pre-pandemic peak.

Apprenticeship achievements have seen a more gradual decline since 2017/18 and there are very little signs of this improving to the 2017/2018 level. This decline is likely to have been impacted by changes to the Apprenticeship Levy, the introduction of End Point Assessments and Covid 19 and was a common theme raised during our stakeholder engagement.

Travel to work and school

Travel is a key challenge for the region and was reported significantly throughout our stakeholder engagement and LSIP Skills Survey. Transport affects the region's access to education and training provision. In particular, bus services are lacking and this disproportionately affects the younger population who may be unable to drive or afford a car.

Figure 7 shows there is a lower-than-average rate of usage of public transport in the East of England. Although this is a key challenge, it does not fall within the scope of the LSIP and therefore will not directly be addressed in this report.

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[44] Department for Education, Unit for Future Skills Dashboard

Figure 7: Distribution of businesses by size across each region

Main mode of Transport to School
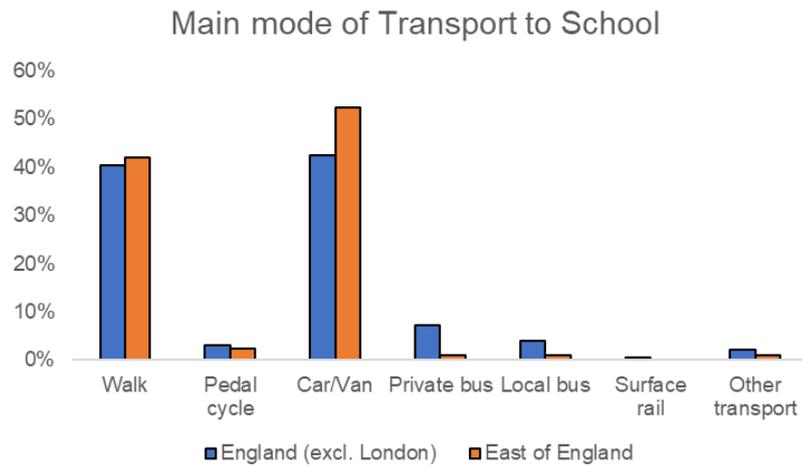
Source: Department for Transport (2021)

Skills and Productivity

The OECD Skills Studies, Skills Matter report[45] suggests that skills are drivers of productivity. The analysis of the Survey of Adult Skills, a product of the OECD Programme for the International Assessment of Adult Competencies (PIAAC), captures information about adults' proficiency in literacy, numeracy and problem-solving skills and whether and how those skills are used on the job and throughout life. It suggests that where large volumes of adults have poor skills, it becomes difficult to introduce productivity-enhancing technologies and new ways of working, which in turn stalls improvements in living standards and business growth. The report describes that challenges and approaches implemented to capture the skills mismatch and the differences between over qualification and under skilling.
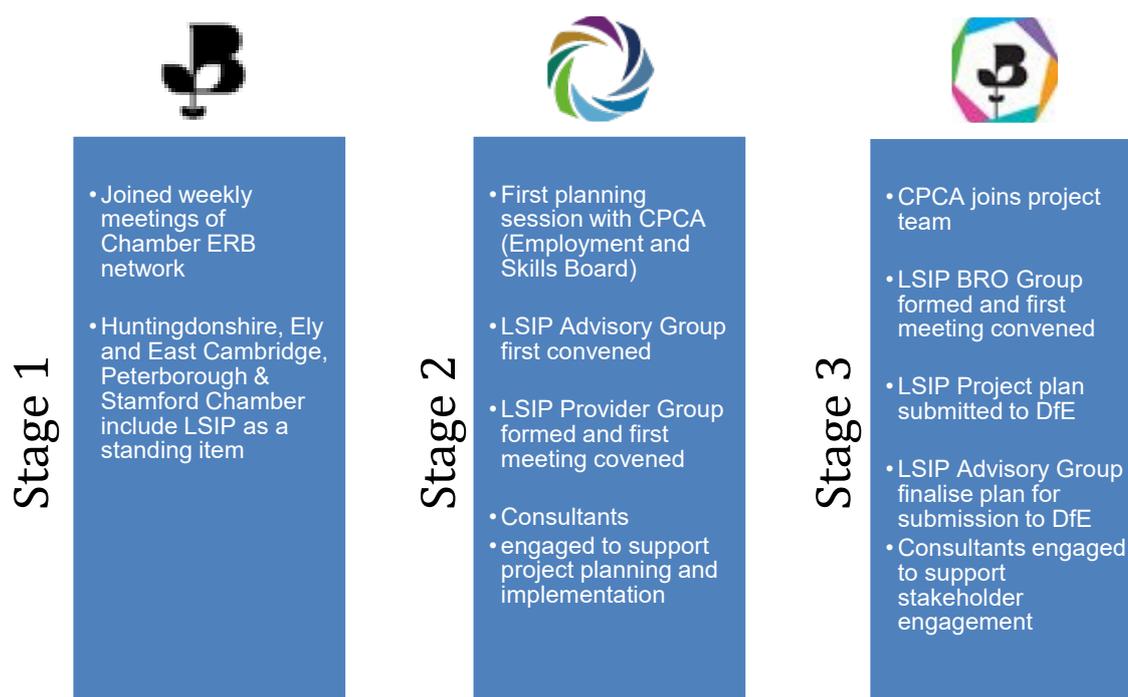
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[45] OECD iLibrary, OECD Skills Studies

Annex B - Background and Methodology for engagement

This section set out the key phases of implementation and engagement in the development of this LSIP report. It sets out the key features of mobilisation, wider engagement, our research and analysis and our approach to the LSIP Skills survey. Additional details are included in **Appendices 1,2,14,15 and 17.**

Mobilisation approach

The Cambridgeshire Chamber started discussions about the LSIP in September. **Since then, we have undertaken the following 3 stages:**

Stage 1
- Joined weekly meetings of Chamber ERB network
- Huntingdonshire, Ely and East Cambridge, Peterborough & Stamford Chamber include LSIP as a standing item

Stage 2
- First planning session with CPCA (Employment and Skills Board)
- LSIP Advisory Group first convened
- LSIP Provider Group formed and first meeting covened
- Consultants
- engaged to support project planning and implementation

Stage 3
- CPCA joins project team
- LSIP BRO Group formed and first meeting convened
- LSIP Project plan submitted to DfE
- LSIP Advisory Group finalise plan for submission to DfE
- Consultants engaged to support stakeholder engagement

Overview of approach for wider engagement

There are five elements that make up our iterative approach for the development of our strategic priorities - desktop research, data analysis, stakeholder engagement, workshops and the LSIP Skills survey. Further information on each stage is provided below.

1. Desktop research

12 strategy documents, briefing papers and reports provided by the CPCA were analysed to assess the baseline skills of the region and sector demand.

Document	Author	Date
Cambridgeshire and Peterborough Independent Economic Review	CPCA and Cambridge Ahead	September 2018
A Digital Sector Strategy for Cambridgeshire and Peterborough	CPCA	March 2019
Cambridgeshire and Peterborough Local Industrial Strategy (LIS)	CPCA	July 2019
Cambridgeshire and Peterborough Local Economic Recovery Strategy (LERS)	CPCA	2020
Cambridgeshire and Peterborough Advanced Manufacturing Strategy	CPCA	March 2021
Cambridgeshire and Peterborough Life Sciences Strategy	CPCA	April 2021
Cambridgeshire and Peterborough Agri-Tech Strategic Plan	CPCA	April 2021
Cambridgeshire and Peterborough Economic Growth Strategy	CPCA	October 2021
Employment Skills and Strategy	CPCA	2022

The desktop research was summarised, reviewed by the Chambers and presented to the LSIP Advisory group for discussion

2. Data analysis

We used different data sources to understand the context of the region and the supply and demand of skills. The findings can be found in the attached data book.
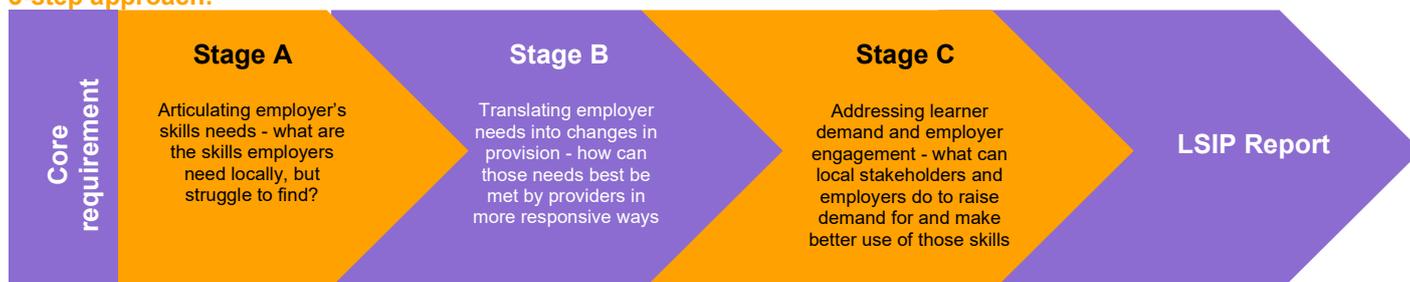
Data Sources:

Nomis: The Office for National Statistics data provides a view of the official census and labour market statistics

Lightcast: A source of labour market analytics used by the CPCA and many education providers. It provides a view of the recruitment activity and the associated skills. It also provides a view of the education supply within our region and aligns it to the recruitment activity.

Unit for Future Skills: A new team in the DfE that aims to improve the quality and availability of data on skills and jobs.

Geeks Talent: Bespoke data analysis identifying skills derived from curriculum delivery and an evaluation of ESCO as an alternative source of occupational skills data.

3-step approach:

Core requirement	Stage A	Stage B	Stage C	LSIP Report
	Articulating employer's skills needs - what are the skills employers need locally, but struggle to find?	Translating employer needs into changes in provision - how can those needs best be met by providers in more responsive ways	Addressing learner demand and employer engagement - what can local stakeholders and employers do to raise demand for and make better use of those skills	

The data analysis has been consolidated into a data book that has been used in the development of this report. **Appendix 16** provides the contents of this resource. The data book demonstrates the difficulty in using existing datasets to clearly identify skills gaps.

3. Stakeholder engagement

Education providers representing Further Education, Higher Education and Sixth Form Colleges from across the CPCA region were engaged and consulted with throughout the development of the LSIP and formed the Provider Group. Some providers were also part of the Advisory Group assuring cross-stakeholder participation. Providers were invited to attend both rounds of workshops, roundtable discussions and 1:1 consultations. The Provider Group and other stakeholders were instrumental in and supported the development of the final LSIP report.

Employers of all sizes across both the public and private sectors along with 20 BRO's (which represented thousands of businesses in the Cambridgeshire and Peterborough region) were also consulted using similar methods outlined above and provided feedback and support prior to the submission of the LSIP report.

In addition to these engagements a LSIP Skills Survey was produced and distributed across the region which resulted in a total of 344 responses. Further analysis of this is provided within our Strategic Priorities.

Through the stakeholder engagement, we have captured, classified and validated a number of perceptions regarding their experiences with the skills system. Whilst some of these perceptions relate to areas outside of the scope of the LSIP such as inadequate public transport, many of the perceptions captured do relate to opportunities and challenges within the region. These validated perceptions have been summarised into themes and aligned to our set of tangible actions that will deliver priority interventions designed to enhance the experience for all stakeholders across the region.

Perceptions that fall outside of the scope of the LSIP are included in the **Appendix 10** as sub-priorities and will be reported back to the DfE and the other relevant stakeholders.

4. Workshops

We have held two rounds of workshops with a total of 134 people attending which followed a 5-stage process:

- Stakeholder perceptions of the local skills system were gathered and validated through the first round of workshops.
- These were grouped together to form common themes and a count was applied against each one to assess their significance.
- Throughout the second round of workshops stakeholders were asked to share features of the solutions that could be implemented for each perception.
- The ease and impact were measured to understand the potential impact each solution could have across the region, recognising the opinions of all stakeholders.

These were also grouped together, similarly to the perceptions, to reduce the long list to a short list. This short list is reported in Part 1 - Cross-sector skills priorities.

5. LSIP Skills Survey

The survey asks a range of questions, some of which have prescribed answers whilst others have free text. Answers are broken down by size of business, sector and, less commonly, county regions. The questionnaire was designed to capture the skills gaps and challenges for all stakeholders. We have undertaken analysis of the survey responses to attempt to align to our perceptions and solutions.

Limitations of the survey
The final analysis is against 344 returns. Of the responses, a large proportion of the questions are unanswered making it difficult to draw firm conclusions from the analysis. Where there is a free text, we have attempted to draw out themes, but this has been difficult in a lot of places due to the way they have been answered. Additional Insights are in Part 2 Skill Competences and Components and **Appendix 15.**

Appendix 1 - Sources

Source	Author	Date
Cambridgeshire and Peterborough Independent Economic Review	CPCA and Cambridge Ahead	September 2018
A Digital Sector Strategy for Cambridgeshire and Peterborough	CPCA	March 2019
Cambridgeshire and Peterborough Local Industrial Strategy (LIS)	CPCA	July 2019
Mayor's Blog: A Tale of Two Cities - And Eleven Market Towns	CPCA	2020
Cambridgeshire and Peterborough Local Economic Recovery Strategy (LERS)	CPCA	March 2021
Cambridgeshire and Peterborough Advanced Manufacturing Strategy	CPCA	April 2021
Cambridgeshire and Peterborough Life Sciences Strategy	CPCA	April 2021
Cambridgeshire and Peterborough Agri-Tech Strategic Plan	CPCA	October 2021
Net Zero Strategy: Build Back Greener	HM Government	2021
Census	Office for National Statistics	2021
Cambridgeshire and Peterborough Local Skills Refresh	CPCA	January 2022
Cambridgeshire and Peterborough Economic Growth Strategy	CPCA	June 2022
Accountability Agreements for 2023 to 2024	Department for Education	December 2022
Employment Skills and Strategy	CPCA	2022
The Ten Point Plan for a Green Industrial Revolution	HM Government	2022
Business Energy Security Strategy	HM Government	2022
Green jobs delivery steps up a gear	HM Government	2022
LMI data	Lightcast	2022
Skills for green jobs	Department for Education	2023

Appendix 2 - Stakeholder groups
Citizens of Cambridgeshire and Peterborough region

Intersectionality across stakeholder groups

We recognise that the residents in the region represent a range of stakeholder roles within the skills system such as current or future employees/employers. Therefore, we have designed our engagement approach across several key stakeholder groups, providing opportunities for engagement across multiple channels to maximise the opportunities for engagement (see **Appendix 2**).
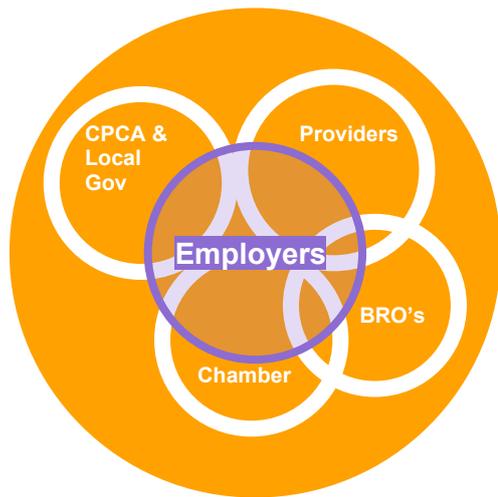
Stakeholder groups

- Advisory Group.
- Employment and Skills Board. (CPCA)
- Provider Group.
- BRO Group.

The provider landscape is complex, for the purposes of this LSIP report we have categorised them into four types, it should be noted that some providers deliver in one or more of these.

CPCA grant funded providers
who are delivering AEB funding under contract. Additionally, these and other regulated mainly traditional Colleges and Sixth form Colleges. Colleges are able to access funding via
two main funding streams 16-19 Funding (Out of Scope of the LSIP) and 19 + Funding which is the AEB.

Apprenticeship providers
are regulated and registered to deliver Apprenticeship programmes to Levy or non-Levy employers where the contract is directly with the employers.

Private training providers
business that may specialise in delivering bespoke or standard training interventions contracted directly with the employer. CPCA grant funded providers and Apprenticeship providers can also deliver private training.

Higher Education providers
are regulated by the Office for Students; their provision is funded largely by Student Loans via the Student Loan Company.

The Department for Education ultimately provides funding for post-16 Education and Training 'Skills Budget' (excluding Higher Education) and theoretically all employers are able to procure training that is relevant to their requirements, the cost of this is funded and regulated by the government and delivered by contracted providers (Skills Budget and Apprenticeship). For a devolved region, the CPCA is responsible for managing the Skills Budget and it contracts through a range of registered providers.

An indicative schematic of the regional skills system excluding Higher Education and Careers is drawn below, this should be reviewed, developed and validated with stakeholders.
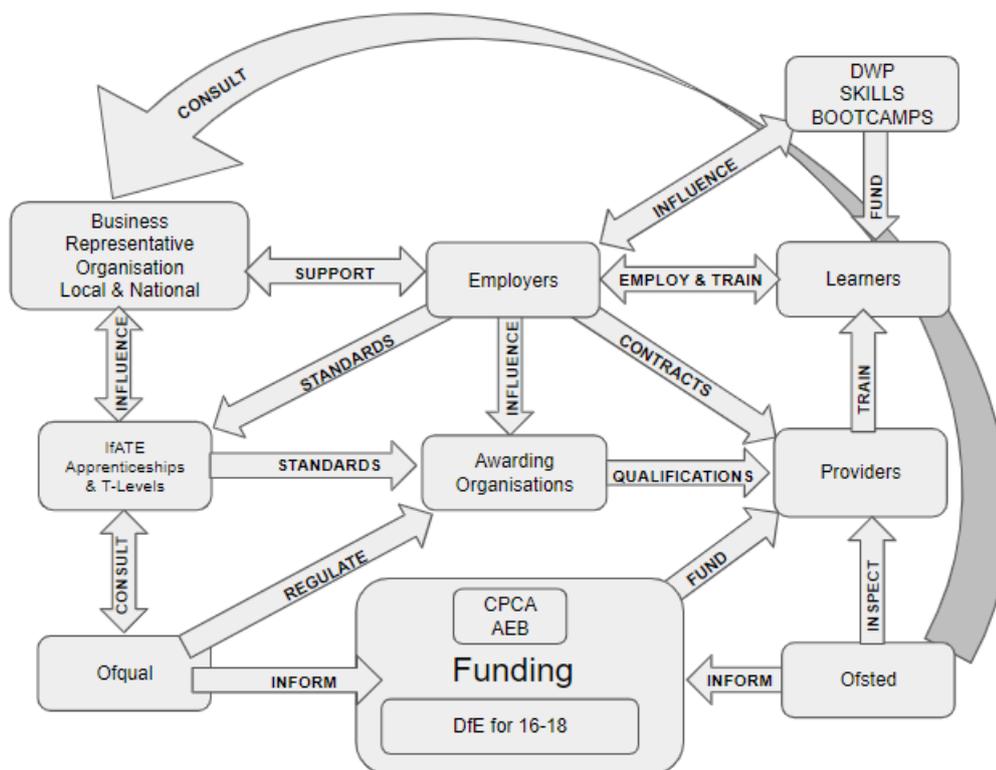
Appendix 3 - Case studies

HGV Case Study

- **Peterborough College (Part of Inspire Education Group)** worked with the CPCA to fund a new programme to provide HGV training in response to well-publicised shortages of drivers. The quick action was possible thanks to devolution of the Adult Education Budget programme to the CPCA, giving it the flexibility to help meet the need for more drivers.

- The courses were free for learners and involved the College working in partnership with industry body the Road Haulage Association (RHA) who not only provided practical training but supported the College to understand the entire process involved in gaining a HGV licence allowing the College to build the training process from scratch. This increase in skills aimed to give a real boost to the local economy, supplying the haulage sector with highly qualified drivers, whilst also giving people skills that employers demand, helping them start a new career.

- RHA said: "This is a fantastic scheme helping people to get trained to drive lorries and secure work with a local firm. We are delighted to be involved with the CPCA and Peterborough College to help local people start new careers in our industry."

- The relationship between the College and the RHA further grew to support several of their local members to find career opportunities as newly qualified HGV drivers.

Crown Holdings Case Study

- **Crown Holdings, Inc.** approached Peterborough College (Part of Inspire Education Group) to support the company to recruit and train apprentices to build Europe's largest beverage can manufacturing facility at Delta Park, Peterborough, UK. To ensure the programme best suited their needs, Crown visited the College to speak to existing subtends. As a result of the programme, Crown successfully recruited 10 apprentices in September 2022.

- As the Peterborough plant was not operational, the College developed a bespoke apprenticeship programme to meet their business needs. Peterborough College managed the recruitment process, which included shortlisting candidates and arranging interviews.

- The interviews were held over a couple of days at Peterborough College, to shortlist potential candidates through BKSBs and tailored engineering assessments. Candidates were then taken to the Engineering Workshop, where they met the Crown team and conducted practical exercises.

- Peterborough College, was very pleased with the smooth running of the programme, saying, "the process worked really well and Crown were very grateful for the way in which we supported them during their recruitment process. This could definitely be used as a template for future larger recruitments."

Appendix 4 - Skills Action Plans

Appendix 4 - Skills action plan[46]

Strategic action: Fenland

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
Strategic priorities				
First priorities for Fenland:	Widening education access and participation and increasing school achievement at level 3	Supporting businesses to start up, grow and create good jobs – upskilling people in leadership and management	Providing support to upskill and reskill in response to economic restructuring (e.g. following Covid-19, Brexit, further digitisation, as net-zero transition intensifies)	Supporting unemployed, NEETs and young people into training and employment
	Connecting people to education and training through transport and digital inclusion Enhancing exposure to role models, work experience, and understanding of various routes into sectors and occupations Capital investment to improve teaching facilities and kit, particularly at FE Focus of increasing level 4+ qualifications on in-work training and progression Improving careers education, information, advice and guidance	Supporting Covid recovery, growth and net-zero transition by developing priority skills and responding to acute issues Embedding modern work practices and conditions and improving job quality Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area	Increasing work-based learning, particularly apprenticeships, and introducing more accessible formats (e.g. short courses/ online/blended learning) Improving access to careers information, advice and guidance at any age	Targeting support for Covid-19 recovery and transitions for displaced workers Providing support for disadvantaged groups to access the labour market Connecting people to work through transport and digital inclusion
Actions				
	College of West Anglia Wisbech campus development Expand employers engaging with schools and colleges in T Level placements Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice Social value contracts - require businesses receiving local funding to do outreach in schools	CRF – Start and Grow pre-start up and micro business enterprise skills support for individuals Expand Growth Works in business management and leadership emphasising job design and creation, and skills training for small business leaders Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform and engagement model Rapid response skill gap mapping for Recover/Brexit	Improving access to careers information, advice and guidance at any age Direct AEB funding to priority skills needs, use AEB Innovation Fund to pilot new forms of training provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	CRF – Turning Point funded internships and short courses for work re-entry and digital/management Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and furthest from labour market, and national DWP support Add Work and Health Programme to Growth Works Expand short courses through innovative course design, such as skills bootcamps
Progress measures				
	Increasing proportion of vocational courses age 16-18 studied at Level 3 Increasing progression rates post-18 into HE and FE towards national levels	Increasing number of professional & technical jobs, at least at level 3	Reducing numbers of workers at level 1 and increasing at level 3 Increasing rates of in-work training (provided flexibility at various levels)	Falling levels of economic inactivity and UC claimants Increasing investment in connectivity Reducing unsustained destinations after school

Strategic action: Peterborough

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
Strategic priorities				
First priorities for Peterborough:	Widening education access and participation, increasing school achievement, and progression into technical education	Supporting Covid recovery, growth and net-zero transition by developing priority skills and responding to acute issues in priority sectors such as manufacturing and digital	Providing support to upskill and reskill in response to economic restructuring (e.g. following Covid-19, Brexit, further digitisation, as net-zero transition intensifies)	Supporting unemployed, NEETs and young people from deprived communities into training and employment
	Increasing level 4+ qualifications through progression and access into HE locally Enhancing exposure to role models, work experience, and understanding of various routes into sectors and occupations Capital investment to improve teaching facilities and kit, particularly at FE Improving careers education, information, advice and guidance	Higher skilled jobs creation through innovation Embedding modern work practices and conditions and improving job quality Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area	Creating and growing more level 3 and 4 jobs across sectors Increasing work-based learning, particularly apprenticeships, and introducing more accessible formats (e.g. short courses/ online/blended learning) Improving access to careers information, advice and guidance at any age	Targeting support for Covid-19 recovery and transitions for displaced workers Providing support for disadvantaged groups to access the labour market
Actions				
	Continue establishment and development of ARU Peterborough Green skills centre and net zero ARU programme Expand employers engaging with schools and colleges in T Level placements Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice Social value contracts - require businesses receiving local funding to do outreach in schools	Net-zero Green Skills Centre CRF – Start and Grow pre-start up and micro business enterprise skills support for individuals Energy Hub supply chain development Rapid response skill gap mapping for Recovery/Brexit Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform, using Growth Works as a local engagement model	Improving access to careers information, advice and guidance at any age AEB Innovation Fund - pilot new provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	CRF – Turning Point funded internships and short courses for work re-entry and digital/management Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and furthest from labour market, and deliver DWP support Add Work and Health Programme to Growth Works model Expand short courses through innovative course design, such as skills bootcamps
Progress measures				
	Increasing progression rates post-18 into HE, FE, and apprenticeships towards national levels	Increasing number of professional & technical jobs, at least at level 3	Reducing numbers of workers at level 1 and 2 and increasing at level 3 and 4	Falling levels of economic inactivity and UC claimants Reducing NEETs and unsustained destinations after school

Strategic action: Huntingdonshire

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
	Strategic priorities			
First priorities for Huntingdonshire:	Widening education access and participation and increasing progression and achievement at level 4+	Supporting Covid recovery, growth and net-zero transition by developing priority skills and responding to acute issues	Providing support to upskill and reskill in response to economic restructuring (e.g. following Covid-19, Brexit, further digitisation, as net-zero transition intensifies)	Targeting support for Covid-19 recovery and transitions for displaced workers
	Growing numbers of apprentices delivered with local employers Enhancing exposure to role models, work experience, and understanding of various routes into sectors and occupations Capital investment to improve teaching facilities and kit Improving careers education, information, advice and guidance	Embedding modern work practices and conditions and improving job quality Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area	Increasing work-based learning, particularly apprenticeships, and introducing more accessible formats (e.g. short courses/ online/blended learning) Improving access to careers information, advice and guidance at any age	Supporting unemployed into training and employment
	Actions			
	St Neots FE provision improvements Continue delivery of Apprenticeship Levy Pooling, apprenticeship delivery through local development projects at level 3 upwards for young people Expand employers engaging with schools and colleges in T Level placements Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice	CRF – Start and Grow pre-start up and micro business enterprise skills support for individuals Rapid response skill gap mapping for Recovery/Brexit Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform, using Growth Works as a local engagement model	Improving access to careers information, advice and guidance at any age Direct AEB funding to priority skills needs, use AEB Innovation Fund to pilot new forms of training provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and those furthest from the labour market, and deliver national Covid support programmes with DWP Add Work and Health Programme to Growth Works model Expand short courses through innovative course design, such as skills bootcamps
	Progress measures			
	Increasing progression rates post-18 into FE and apprenticeships towards national levels	Increasing number of professional & technical jobs, particularly in priority sectors	Increasing receipts of/participation in careers IAG for adults	Reducing unsustained destinations after school

Strategic action: East Cambridgeshire

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
	Strategic priorities			
First priorities for East Cambs:	Widening education access and progression into HE, increasing achievement at level 4+	Supporting Covid recovery, growth and net-zero transition by developing priority skills, and growing jobs at level 4	Increasing work-based learning, particularly progression into level 4 skills, and introducing more accessible formats (e.g. short courses/ online/blended learning)	Targeting support for Covid-19 recovery and transitions for displaced workers
	Capital investment to improve teaching facilities and kit, particularly at FE Connecting people to education and training through transport and digital inclusion Enhancing exposure to role models, work experience, and understanding of various routes into sectors and occupations Improving careers education, information, advice and guidance	Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area Embedding modern work practices and conditions and improving job quality	Providing support to upskill and reskill in response to economic restructuring (e.g. following Covid-19, Brexit, further digitisation, as net-zero transition intensifies) Improving access to careers information, advice and guidance at any age	Connecting people to work through transport and digital inclusion Supporting unemployed into training and employment
	Actions			
	Development of FE provision Expand employers engaging with schools and colleges in T Level placements Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice	Rapid response skill gap mapping for Recovery/Brexit Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform, using Growth Works as a local engagement model	Improving access to careers information, advice and guidance at any age Direct AEB funding to priority skills needs, use AEB Innovation Fund to pilot new forms of training provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and those furthest from the labour market, and deliver national Covid support programmes with DWP Add Work and Health Programme to Growth Works model Expand short courses through innovative course design, such as skills bootcamps
	Progress measures			
	Increasing progression rates post-18 into HE and FE towards national levels	Increasing number of professional & technical jobs, at least at level 3	Reducing numbers of workers at level 2 and increasing at level 3	Increasing investment in connectivity Reducing unsustained destinations after school

Strategic action: Cambridge City

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
	Strategic priorities			
First priorities for Cambridge:	**Ensuring access to technical education, apprenticeship and training choices are available to students not following A Level and university routes**	**Supporting Covid recovery, growth and net-zero transition by developing priority skills and responding to acute issues**	**Increasing work-based learning, particularly apprenticeships and for those with lower level skills, and introducing more accessible formats (e.g. short courses/ online/blended learning)**	**Targeting support for Covid-19 recovery and transitions for displaced workers**
	Capital investment to improve teaching facilities and kit, and expanding access Improving careers education, information, advice and guidance, particularly for students not following A Level and university routes	Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area Opening up access in priority sectors to students following vocational and technical routes	Improving access to careers information, advice and guidance at any age	Providing support for disadvantaged people to access the labour market Supporting unemployed into training and employment
	Actions			
	Continue delivery of Apprenticeship Levy Pooling, apprenticeship delivery through local development projects at level 3 upwards for young people All Age Careers Advice throughout school years Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice	Rapid response skill gap mapping for Recovery/Brexit Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform, using Growth Works as a local engagement model	Improving access to careers information, advice and guidance at any age Direct AEB funding to priority skills needs, use AEB Innovation Fund to pilot new forms of training provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and those furthest from the labour market, and deliver national Covid support programmes with DWP Add Work and Health Programme to Growth Works model Expand short courses through innovative course design, such as skills bootcamps
	Progress measures			
	Increasing progression rates post-18 into FE and apprenticeships towards national levels for young people following vocational routes	Reversing employment level decline	Increasing rates of in-work training (provided flexibility at various levels)	Reducing localised inequalities

Strategic action: South Cambridgeshire

	Pre-work and formal education	Employer access to talent	Life-wide learning and training	Support into and between work
	Strategic priorities			
First priorities for South Cambs:	**Widening progression into HE from local schools and into FE and technical education**	**Supporting Covid recovery, growth and net-zero transition by developing priority skills and responding to acute issues**	**Increasing work-based learning to support growing productivity, and introducing more accessible formats (e.g. short courses/ online/blended learning)**	**Targeting support for Covid-19 recovery and transitions for displaced workers**
	Capital investment to improve teaching facilities and kit, particularly at FE Improving careers education, information, advice and guidance	Increasing employers' engagement and influence on education and training and connecting residents in Fenland to opportunities across the area	Improving access to careers information, advice and guidance at any age	Supporting unemployed into training and employment
	Actions			
	Continue delivery of Apprenticeship Levy Pooling, apprenticeship delivery through local development projects at level 3 upwards for young people All Age Careers Advice throughout school years Continue to deliver Growth Works Talent Pledge – linking employers to schools and colleges and enterprise advisers, and providing careers advice	Rapid response skill gap mapping for Recovery/Brexit Continue delivery of Growth Works Skills Brokerage and Digital Talent Platform, using Growth Works as a local engagement model	Improving access to careers information, advice and guidance at any age Direct AEB funding to priority skills needs, use AEB Innovation Fund to pilot new forms of training provision Green Jobs Action Plan and build on success of Form the Future model, supporting skills for the future	Deliver local ESF projects up to 2023 focused on young people, NEETs, ex-offenders, and those furthest from the labour market, and deliver national Covid support programmes with DWP Add Work and Health Programme to Growth Works model Expand short courses through innovative course design, such as skills bootcamps
	Progress measures			
	Increasing progression rates post-18 into HE and FE towards national levels	Increasing number of professional & technical jobs, at least at level 3	Increasing receipts of/participation in careers IAG for adults	Reducing unsustained destinations after school

Appendix 5 - Strategic priorities
Sector growth priorities
We have provided additional information on the sector growth priorities below

Life Sciences

Defining Life Sciences (*as referenced in the Cambridgeshire and Peterborough Independent Economic Review)*
In recent decades, life sciences have become one of the UK's greatest business strengths and the reach of the biomedical industry in Cambridge and South Cambridgeshire is international. In South Cambridgeshire, the sector accounts for 16% of turnover and 18% of employment. The sector covers a variety of interrelated fields, including pharmaceuticals, genomics and biodata. This industry generates numerous spinouts with innovative products, including Abcam (*which offers research tools into proteins and other chemicals*), Crescendo Biologics (*therapeutics in oncolog*y) and Kymab (*developing antibody technologies*).

Large international businesses have based themselves (or established a presence) in the region, including Astra Zeneca, Eisai *(a Japanese pharmaceutical company*) and Glaxo Smith Kline (*GSK*). Many of these businesses report that their alternatives to being based around Cambridge are outside of the UK, in similar clusters in Europe, America or South-East Asia. Therefore, there is clearly of high national significance to these industries in this area: they bring in business that would otherwise look abroad.

Demand and supply for Life Sciences (*as referenced in the Life Sciences Strategy*)[47]
There is an identified shortage of people with the technical skills to support the life science industry in the Cambridge area, especially in the convergence of AI and life sciences, seen as a key differentiator for the industry in the area. However, there is also a demonstrated shortage of people with the commercial management skills required to grow a life science company. This is supported by data analysis, conducted as part of the LSIP, which shows that Pharmaceuticals and Clinical Trials (part of life sciences) at a Manager, Director and Senior Officials level is in the top 10 sought after specialised skills at 5% and 4% of job postings[48].

Demand
The CPCA estimates the total life sciences employment in Cambridgeshire and Peterborough amounts to around 20,000 people. The vast majority of this employment is concentrated in Cambridge and South Cambridgeshire and comprises roles focused on research and development into biotechnology and natural sciences.

The sector is set to grow across the UK and therefore is likely to need new roles to meet the forecasted growth in demand. Filling these vacancies will not only be a challenge due to the numbers involved, but also because the skills requirements of the sector are evolving. A 2019 report by ABPI identified shortages of technical skills in immunology and genomics, areas of critical importance to the development of new medicines; as well as a shortage of technical skills, such as data science. There is likely to be a considerable shortfall in areas of interdisciplinary overlap between medical fields and data analytics, such as computational chemistry, chemometrics and chemoinformatic.

While the CPCA area is home to a large employment base and some of the world's most talented scientists, interviewees consistently mentioned skills shortages as an area of concern. In particular, retaining those working in bioinformatics and related fields is a challenge. It was also made clear in interviews that skills shortages in the sector were not only related to scientific and technology fields, but also to more generalist skills in business management and entrepreneurship. As one industry leader commented:

> *We need people with the commercial management skills to take companies to the next level, but these are few and far between. Buying them in is not the answer as they are just as rare, if not more so, in the rest of the UK.*
> **The shortage of commercial management skills was one of the most frequently commented-upon points.**

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[47] Cambridgeshire and Peterborough Combined Authority, Life Sciences Strategy (2021)

[48] Lightcast, LMI data (2022)

Supply

Much of the sector's future talent will still be enrolled in education programmes. Cambridge University, as the world's top-rated university in life sciences, is central to helping address the talent demands of the sector and shaping some of the sharpest minds, while Anglia Ruskin University is also a key player in addressing skills shortages. The Higher Education Statistics Agency (*HESA*) provides data on undergraduates, postgraduates and other students enrolled in full time and part time programmes at UK higher education institutions. According to this data, there are currently 8,375 students enrolled in life science related programmes at the University of Cambridge in 2018 - 2019, compared with 8,065 in 2014 – 2015. There are also an additional 10,965 students enrolled in these programmes at Anglia Ruskin University.

It is important to recognise that many students enrolled in subjects suitable for life sciences employment will not enter the industry after graduating. Many who do enter the CPCA's life sciences sector will migrate from other parts of the UK (*and beyond*). However, ensuring that a large proportion of Cambridge's newly graduated talent opt to remain in Cambridge after completing their studies will be an important component of meeting the labour needs of the life sciences sector going forward According to several people we spoke to during our interviews, some of the most talented individuals leaving university are increasingly opting to relocate to London over remaining in Cambridge. Indeed, data from the UK Office for National Statistics shows that the CPCA experienced a net negative migration of those aged between 25 and 30 over the last three years, with around 1,450 more young people moving out of the area than moving in.

Skills Gaps

Cogent Skills, the Sector body for life sciences has identified the following skills gaps and shortages:

- Biological Sciences: Immunology and Genomics;
- Clinical Areas: Clinical Pharmacology;
- Informatics, Computational, Mathematical and Statistics Areas: Pharmacokinetic/ Pharmacodynamics Modelling, Computational Chemistry, Cheminformatics and Chemometrics, Biomedical Imaging;
- Chemical Sciences: Medicinal and Synthetic Organic Chemistry;
- Regulatory Areas: Regulatory Affairs, Qualified Person (*Pharmacovigilance*) and Qualified Person (*Quality Assurance*) – roles considered to be particularly affected by the UK's departure from the EU.
- Engineers (*involved in chemical and/ or process control*) who understand both digital and pharmaceuticals and can drive process and efficiencies;
- Engineers who can simulate processes and build digital twins;
- Digital/data scientists who can create relevant programs and infrastructure to medicines manufacturing;
- Chemists/pharmacists who understand AI and can adapt to and apply new technologies.

To continue to deliver growth in employment and innovation, the life sciences also need to address the following:

- Digital, computational and statistical literacy;
- Leadership skills;
- Communication skills;
- Translation and commercialisation skills;
- Skills updates to reflect technological and regulatory change;
- Skills for cross-team and cross-disciplinary working;
- Succession planning for an ageing workforce;
- Promotion and facilitation of agile careers;
- Continuing Professional Development (CPD);
- Holistic sales and marketing skills.

Digital and IT
Defining Digital and IT (*as referenced in the Cambridgeshire and Peterborough Local Industrial Strategy*)[49]

The vibrancy and technological expertise of the Cambridgeshire and Peterborough area digital sector is a significant reason for the area's international attractiveness. The sector delivers almost 9.0% of the area's revenue and 8.0% of employment. Furthermore, it is the fastest growing knowledge intensive sector, increasing 10.4% over the last three years (*compared to 6.6% for KI as a whole*). Foreign direct investment (*FDI*) into the area and sector is strong and, when these projects occur, they generate twice the proportion of jobs than information technologies FDI more generally across the UK.

A well-known example, ARM, was started in Cambridge with fewer than twenty employees and has grown into a global player valued at £24bn in 2016. This is one reason why Greater Cambridge is an internationally recognised centre for artificial intelligence and digital technology innovation, with Cambridge University among the top five globally in this area. Academic and home-grown success has led to major private investment too. Microsoft established their first non-US research centre in Cambridge in 1997, followed by Apple, Amazon, Samsung and others.

As demonstrated in the artificial intelligence sector deal, Cambridge is a key part of the £1bn invested in UK artificial intelligence start-ups. Venture funding of £170m was invested in Darktrace, £140m in BenevolentAI and £50m in Featurespace and the number of spinouts from the University continues to rise with startups such as PROWLER.io, Cytora, AudioTelligence and Intelligens and many other companies choosing Cambridge for their international headquarters. Cambridge has recently secured a major expansion by Bristol-based Graphcore, which designs chips used for artificial intelligence. More widely, firms are supported in innovative growth by numerous technological assets, key amongst which is the new artificial intelligence supercomputer which is being used to support artificial intelligence companies in developing next generation solutions.

The inter-relationship between digital and the other Local Industrial Strategy strategic growth sectors can be neatly demonstrated by the 2018 decision of one of Europe's biggest artificial intelligence firms – BenevolentAI – to acquire a drug discovery and development facility at the Babraham Research Campus in Greater Cambridge, to dramatically speed up drug discovery.

Demand and supply for Digital and IT

According to the data analysis, conducted as part of the LSIP, there is a shortage of people with the correct Digital skills across the region specifically within professional occupations[50]. The data shows 7 of the top 10 sought after skills for Professional Occupations relate to Digital and IT, this includes Python (*8%*), Software Engineering (*7%*), Software Development (*5%*), C++ (*5%*), JavaScript (*5%*), Computer Science (*5%*), Data Analysis (*4%*). This could indicate that professional firms are increasingly working to digitise but perhaps do not have the talent available to keep up with the rapidly changing environment.

Programmers and software development professionals are in the highest demand in the region accounting for 46.4% of all the Digital job postings. This is followed by IT business analysts, architects & system designers at 12.8%[51]. This clustering of demand may indicate a labour shortage for this particular occupation. Furthermore, 74-85% of Digital job occupations across the region do not require a minimum education level, again indicating that this may be a labour issue rather than a skill shortage.

Advanced Manufacturing and Materials
Defining advanced manufacturing and materials (as referenced in the Cambridgeshire and Peterborough Independent Economic Review)[52]

The region has a very strong high-tech manufacturing base and Peterborough has a significant manufacturing history, where large firms such as Caterpillar have engineering bases.

According to CBR figures, 20% of Peterborough's turnover comes from high-tech manufacturing (*with a further 6% stemming from other manufacturing*). Prototype fabrications for the first MRI machines were built in Fenland at Chatteris and Stainless Metalcraft continues to produce high-end scientific products, such as cryostats – chambers that can maintain very low temperatures.

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[49] Cambridgeshire and Peterborough Combined Authority, Cambridgeshire and Peterborough Local Industrial Strategy (2019)

[50] Lightcast, LMI data (2022)

[51] Lightcast, LMI data (2022)

[52] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

One of Cambridge's most successful science areas, Granta Park, was conceived by The Welding Institute (TWI Ltd) – TWI's headquarters is now based there.

Composites are a particular strength in the west of the area, with Forward Composites, Paxford Composites and Codem Composites based in and around Huntingdon, producing alternatives to steel and aluminium for aerospace, motorsport and other industries.

Demand and supply for advanced manufacturing and materials (*as referenced in the Advanced Materials and Manufacturing Strategy*)[53]

Demand
As of 2019 (*the most recent data available*) Cambridgeshire and Peterborough was home to 3,270 manufacturing and engineering firms employing 51,400 people. Since 2010 employment within the sector has grown by 3,810 jobs, or 8.0%. Within this, advanced manufacturing accounted for 1,770 firms employing 22,200 people, representing 54% of the businesses and 43% of the jobs within the wider manufacturing sector.

advanced manufacturing and materials employment has grown by 2,430 jobs, or 12.3%, so at a faster rate than the wider manufacturing sector. In the 2019 Employer Skills Survey, manufacturing had the joint highest skill-shortage vacancy density of any sector in the country, with 36% of vacancies proving hard to fill due to applicants lacking the required qualifications, skills, or experience (***average across all sectors: 24%***).

Whilst this data is only available at the national level, this percentage grew sharply from 29% in 2017, suggesting growing skills shortages within the sector. Furthermore, manufacturing is one of the four sectors nationally with the highest number of workers aged over 50 (along with health, retail and education), many of whom will have skills that need updating or retraining as the sector evolves.

Supply
There is a good level of provision via organisations such as the North Cambridge Training Centre (a partnership between West Suffolk College and Metalcraft (Advanced Manufacturing and Materials Training Centre) and the new Anglia Ruskin University Peterborough Campus (which is not specific to the manufacturing sector). Whilst the region has access to skills development, more is needed to further enhance the pipeline of skills, which could include further development of technical pathways including T levels and Higher Technical Qualifications.

Skills Gaps
Stakeholders at the March 2021 workshop identified two priorities within the skills agenda - alignment and quality:

- The alignment issue, where significant investments in education may not necessarily be aligned to future skills needs. Gap analysis has shown a significant disconnect between the disciplines people are being trained in and where skills needs are growing. This can often lead to people entering different industries to which they were trained in, meaning they may be less '*job-ready*,' and employers are required to provide additional support, often incurring training costs.
- The quality issue, reflecting a perception that there was a mismatch between the delivery of training and the way employers would prefer it to be delivered. One of the motivations behind investing in the Advanced Manufacturing Research Centre was to address the perceived quality issues and for employers to become more involved with delivery.

The National Manufacturing Skills Task Force is the sector body and catalyst for Advanced Manufacturing (NMSTF)
The NMSTF has stated that Engineering and Manufacturing has struggled with a sizeable skills gap for a number of years. With the loss of adult workers from the manufacturing workforce due to changing life choices post pandemic and the loss of skilled labour due to the exit from the EU, the challenge for the sector was not about having the right skills but having enough people.
Due to the nicheness of manufacturing, a general summary of the high-level skills issues consistent across all Task Force members includes:

- Ability to attract new and diverse talent into the sector
- Upskilling and reskilling the existing workforce
- Employers' ability to keep pace with technological change and understand what that means for their workforce and skills
- Difficulty to invest in upskilling, reskilling and recruitment of new talent with other constraints on time and resources e.g., energy costs etc.
- Competition for skills and number of vacancies needed to be filled

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[53] Cambridgeshire and Peterborough Combined Authority, Advanced Materials and Manufacturing Strategy (2021)

- Ability for employers to foresight and understand future skills and how to understand and respond to "green skills" or "*industry 4.0*" etc.

Short Term Objectives (*6-9 months*) of the Task Force include:
- Raising awareness of T levels to employers
- Ensuring that apprenticeships meet the needs of employers and particularly SMEs
- Upskilling and reskilling with a focus on digital and green skills
- Developing an evidence base to really understand the current situation and measures to mitigate.
- Developing a common skills language for manufacturing to aid the transferability of skills across sector

Agri-Tech

Defining Agri-Tech (*as referenced in the Cambridgeshire and Peterborough Independent Economic Review*[54] *and the Cambridgeshire and Peterborough Independent Economic Review*)[55]

Agricultural industries are growing in importance as the prominence of food security on the international agenda increases. To match rising international demand, more innovative means of food production are being called for, which are less space intensive and carry lower risk. This is where Agri-Tech – a sector based around research, development and innovation to improve agricultural methods – comes in.

Agri-Tech tackles global challenges including hunger, resource sustainability, disease resistance, adapting to and mitigating climate change and delivery of healthy food. It is also one of the four pillars for East of England knowledge-led growth identified in the 2017 Science and Innovation Audit (*SIA*). The area is home to Agri-Tech companies such as Dogtooth Robotics, which builds robots to pick soft fruit, using artificial intelligence to recognise ripe fruit, pick it and place it into punnets, NIAB – the National Institute of Agricultural Botany, which researches plant genetics and disease and Agri-Tech East are located in Cambridge.

38,000 people are currently employed in the Agri-Tech sector in the local economy, generating approximately £4bn of economic value per annum. Agri-Tech opportunities were highlighted by the CPIER and the sector is forecast to grow by over 10% over the next ten years. The local Agri-Tech cluster has internationally significant research and development in both agriculture and food. This research base is also a significant provider of postgraduate training with a global reputation and creates a significant market for those with higher level skills and qualifications.

The strength and breadth of the research base is built on a highly skilled, international workforce, attracted to Cambridgeshire by the reputation of centres such as NIAB and the University of Cambridge. Firms in the economy have expertise in sensors, robotics, genomics and communications and are at the forefront of ideas and commercial applications that are shaping food production in the UK and globally.

Demand and Supply for Agri-Tech (*as referenced in the Agri-Tech Strategic Action Plan*)[56]

The skills and labour issue in agriculture is well-documented and being considered at a national level as part of the national Food and Drink Sector Council. In the CPCA geography, however, there is a disparity in skills from PhD level to vocational and seasonal work around agriculture and Agri-Tech.

There are a number of regional HE and FE delivery partners and they, like their counterparts across the wider UK, are reflecting on how to offer courses and skills programmes to prepare the workforce for 21st Century agriculture, which includes emerging skills as well as traditional. Agri-Tech of course forms a key part of this; however, the national pool of learners is presently attracted to providers on a national scale and it has been suggested that bespoke offerings for the businesses and learners in the CPCA area are needed.

There are several industry-led providers – such as the ARTIS which currently exists to provide flexible learning in some areas of the industry – and future plans should be considered within the context of this and other initiatives.

Cross-sector theme challenges

This report also considers cross-sector themes including Digitalisation and Low Carbon/Net Zero due to the repeated raising of these as of particular significance both nationally, by the DfE and locally by key stakeholders including the CPCA. It is important to note that defining these areas at the skills level is particularly difficult.

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[54] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

[55] Cambridgeshire and Peterborough Combined Authority and Cambridge Ahead, Cambridgeshire and Peterborough Independent Economic Review (2018)

[56] Cambridgeshire and Peterborough Combined Authority, Agri-tech Strategic Action Plan (2021)

The pace of change within these evolving areas makes it challenging for employers to understand their future skills needs and there is pressure on the education system to keep the curriculum and provision of skills up-to-date and aligned with the wider economy.

There is a clear need for futureproofing of skills strategies to ensure the region can manage the risks and realise the opportunities which can be generated from a low carbon and digitalised world. As more industries adopt green and digital technology into their workflows, more strain will be placed on the supply of suitable talent leading to an ever increasing digital and green skills gap, particularly if employers do not upskill their existing workforce.

Digital Sector
Defining the Digital Sector

The Digital Sector Strategy[57] provides a comprehensive Digital Strategy for the region and aims to:

- Significantly increase the contribution of the technology sector to the region's GVA;
- Stimulate faster growth in other sectors through early and easy adoption of cutting-edge technology;
- Ensure that the benefits of technology-based business growth are spread beyond the Greater Cambridge cluster and across the entire region;
- Support the overarching aim of the CPCA in making Cambridgeshire and Peterborough a leading place in the world to live, learn and work.

The Strategy provides recommendations (**Appendix 6**) across ten domains. Domain two focuses specifically on the need for a skilled workforce.

> *The supply of a sufficiently skilled workforce across all levels of the digital sector is critical to the success of this region. Businesses already perceive a talent shortage and this is only going to increase as vertical industries adopt increasing quantities of advanced technologies into their processes. Attention is needed by both the public sector and the business community to the development not only of STEM skills but also their creative use.*
>
> *We need to focus on the region's young people, on the retention of existing talent and the upskilling of the adult population to enable all citizens to thrive in a digital world.*

This Strategy recognises four different segments (User Groups) of digital users, each of which have their own skill levels and educational needs:

User Group	Description	Education Requirements
01 Digital Exclusion	The 11% of the UK population not connected to the internet and not using digital services on a regular basis.	Connectivity, if not yet in place Basic digital education
02 Basic	These are users who in their home or work life are able to securely use internet-connected devices for general browsing and communicating.	General IT education
03 Workforce	These are users who use specialist digital services for home or work life, such as accountancy software, warehouse management tools, or photoshop.	Regular information on new developments Basic understanding of how programme works
04 Professionals	These users design the tools used by the other user groups.	Maths Understanding of how computers work Programming languages Data management

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[57] Cambridge Wireless and Anglia Ruskin University, A Digital Sector Strategy for Cambridgeshire and Peterborough (2019)

Skills Gaps

The Strategy highlights the following skills gaps:

- Software developer
- Senior programme developers
- Data analysts / big data developers
- Artificial intelligence developers
- Computer aided design
- Cyber security
- Mobile and cloud computing
- Technology specific skills (*e.g., high level technological knowledge of communications networks*)

An insight into skills requirements

Artificial intelligence and data processing are expected to be a central part of the digital economy of the future. With Samsung, Qualcomm, Microsoft and Amazon already establishing global artificial intelligence, R&D operations in Greater Cambridge, alongside home-grown talent like PROWLER.io and Darktrace, the region is well positioned to be a leader in this field.

This would require the region to be able to supply newer skills in addition to the programming and data management. The East of England Science and Innovation Audit identified skills, particularly related to data, as a gap in the regional provision that needs to be fulfilled. The slide below focuses on a machine learning software project workload presented by Nokia at CW Technology and Engineering Conference 2018. It demonstrates that the largest proportion of time on a machine learning project is present on data capture, storage, access, transformation, pruning, structuring and encapsulation.
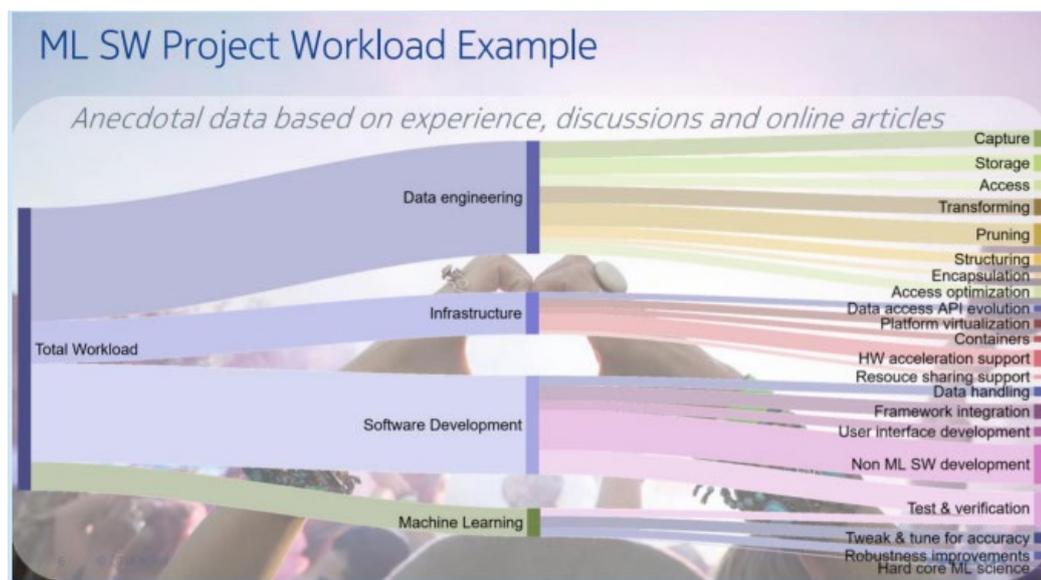
This Strategy is primarily concerned with ensuring that appropriate IT skills are present in the workforce of Cambridgeshire and Peterborough's future. To this end, sufficient educational provision for both young people and adults needs to be accessible either through the school, college and higher education system, or through employer-led training. **Engagement with the Careers Hub is critical to support and influence the upskilling of educators and working smarter with outreach work.**

At the same time, businesses need to have a clear process for engaging with the education system and for signposting what skills and knowledge it needs its future workforce to develop. One route to achieving this is through the Digital Skills Partnership, see inset above, which is a localised, nation-wide programme of joint public/private sector engagement on education.

Alternatively, a more ambitious programme could be the creation of a CPCA Digital Skills Task Force, consisting of business, education and public sector leaders, that generates and actions specific opportunities around the creation of digital skills among young people and adults; its mission would be to ensure that all businesses in the area are able to thrive through access to a consistent, high-quality supply of talent.

Analysis of Digital Skills from Lightcast and the Skills survey

The LSIP Skills Survey is currently live and an interim analysis of the current responses indicates that 16% of employers experience skills shortages in Basic Numeracy and Literacy, 19% Basic IT, 32% Digital Skills (*advanced*) and 10% Basic IT Skills with Customer Service.

**The CPCA are using the following SOC Codes to capture and monitor Digital employment across the region.**

SOC 4	SOC 4 Description
1136	IT and telecommunications directors
2133	IT specialist managers
2134	IT project and programme managers
2135	IT business analysts, architects and system designers
2136	Programmers and software development professionals
2137	Web design and development professionals
2139	IT and telecommunications professionals not elsewhere classified
3131	IT operations technicians
3132	IT user support technicians
5242	Telecommunications engineers
5245	IT engineers

Figure 8: Distribution of Digital Occupations
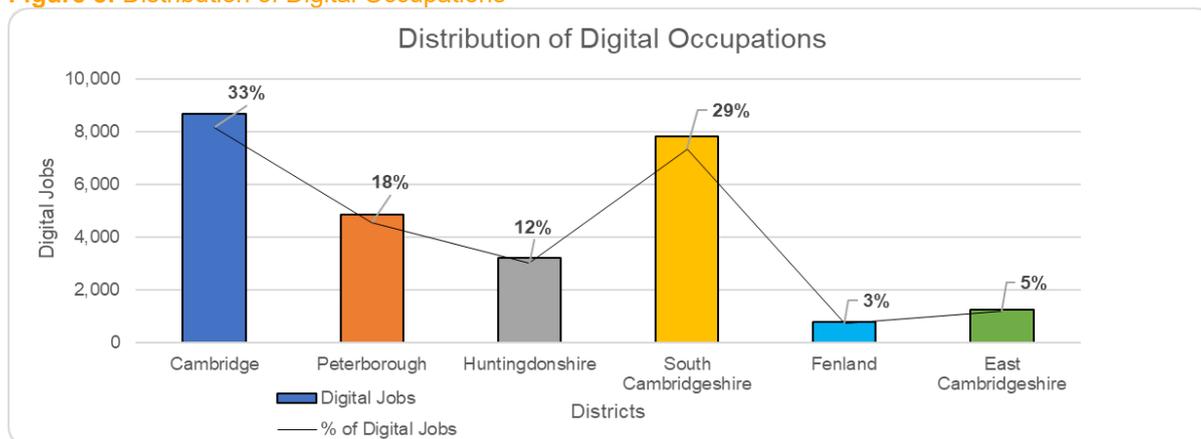
Source: Lightcast (2022)
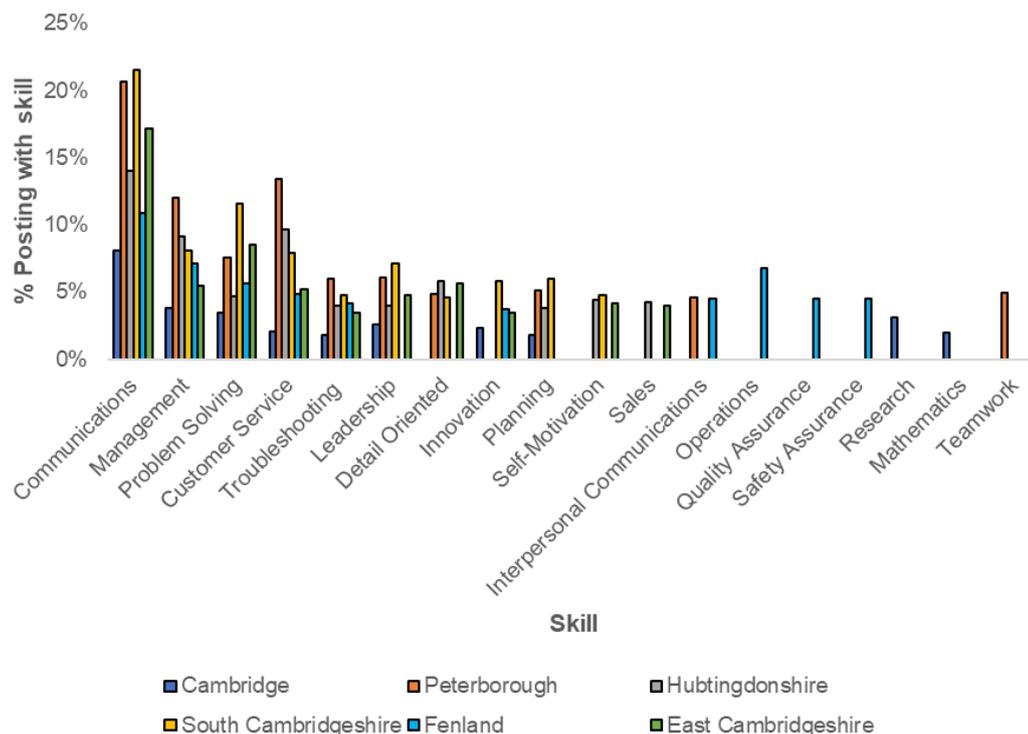
Source: Lightcast (2022)

Green

Government policy on energy security and net zero is creating new demand for green skills. In June 2019, the Government legislated to increase its ambition on previous climate targets by committing to net zero greenhouse gas emissions by 2050. Skills will play an integral part in helping to deliver a net zero economy, boosting productivity, reducing unemployment and increasing the UK's energy independence. This demand will be further accelerated by developments outside the UK such as the EU Green Deal and the US Inflation Reduction Act. The more economies that move in this direction, the more trade and international business viability will depend on it.

The Government has set an ambition to support 2 million green jobs in the UK by 2030. To help meet this target, the **Ten Point Plan**[58] and **Net Zero Strategy**[59] will support an estimated 440,000 Green theme jobs by 2030.

The British Energy Security Strategy[60] updated in April 2022, builds on the Ten Point Plan and the Net Zero Strategy setting out a long-term plan for the country to deliver "*secure, clean and affordable British energy for the long term*".

The Government's analysis suggests that 21% of current jobs (*over six million people*) have skills that will be impacted by the transition to net zero and green energy production. The transition will require a shift of workers moving into low-carbon roles, as well as large numbers shifting out of high-carbon roles. With 80% of the 2030 workforce already in the workplace today, there needs to be a particular focus on retraining and upskilling.

The Green Jobs Delivery Group[61] was set up in response to a recommendation of the Green Jobs Task Force to help government and industry work together to better understand workforce challenges, including skills gaps.

The Delivery Groups 5 Key objectives are:

- Ensuring we have the skilled workforce to deliver net zero and wider environmental goals in line with the UK's levelling up agenda;
- Ensuring workers and communities in high carbon sectors are supported with the transition in the wider context of the UK's levelling up agenda;

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[58] HM Government, The Ten Point Plan for a Green Industrial Revolution (2020)

[59] HM Government, Net Zero Strategy: Build Back Greener (2021)

[60] HM Government, Business Energy Security Strategy (2022)

[61] HM Government, Green jobs delivery steps up a gear (2022)

- Better understanding and addressing barriers to recruitment, retention and progression in green jobs (*including quality of work, pay, conditions, image, etc.*);
- Ensuring green jobs are open to all;
- Building on the work of the Green Jobs Taskforce to develop a clearer understanding of the green economy and how to define and measure it.

The Green Jobs Delivery Group are focussing on 16 Priority Sectors to achieve the Net Zero Targets

Grouping	Sector
Energy and Networks	Offshore Wind (installation and infrastructure) Onshore Wind Solar Nuclear Energy production Electricity Networks including Charge Points Smart Energy Systems
Homes and Buildings	Retrofit, Energy Efficiency and Heat pumps
Sustainable Land Use including Water Resources	Electric Vehicle Manufacture and Maintenance
Manufacturing including EVs and Offshore Wind	Financial and Professional Business Services
Hydrogen CCUS and Oil and Gas transition	Carbon Capture Usage and Storage Hydrogen Oil and Gas transition
Waste, Recycling and Circular Economy	Water, Waste, Recycling and Circular Economy
Transport	Public Transport (rail) Aviation and Aerospace Maritime (shipping)

		16-19	19-23	24+
Work-based	**Skills Bootcamps** (Level 3 – 5)		Flexible training courses for aged 19 and over to fast-track specialist skill development, for existing or new talent for your business. (No cost if co-designing courses for new employees; 30% co-funding arrangement if training existing employees, 10% for SMEs)	
	Apprenticeships (Level 2 – 7)	Paid employment for over 16s, combining work and study in a job allowing you to develop your workforce and business. Minimum duration of 12 months and 20% off-the-job training, leading to full competence in the occupation. Funding available to employers of all sizes. (Employers who do not pay the apprenticeship levy pay 5% of costs)		
Classroom-based	**T Levels** (Level 3)	T Levels - rolling out from 2020, Provide a 45-day (315 hours) industry placement. (Fully funded)		
	Free L3 Quals (Level 3)		Free Courses for Jobs – high-value Level 3 for adults without full L3 qualification. Eligibility expanding from April 2022 to unemployed adults, or those earning under National Living Wage. (Fully funded for eligible adults)	
	IoTs (Levels 3 – 6)	Institutes of Technology are collaborative interventions between FE and HE providers, and employers. Provision is responsive to local labour market demand. IoTs specialise in L4/5 provision in STEM subjects. Wave 1 cohorts started in September 2019. Wave 2 will introduce 9 further IoTs by the end of the Parliamentary term.		
	HTQs (Levels 4 – 5)		Higher Technical Qualifications (HTQs) are new or existing level 4 and 5 qualifications approved by the Institute for Apprenticeships and Technical Education as covering the knowledge, skills and behaviours employers need. We are rolling out HTQ cycles from 2022 until 2025.	

Current or planned DfE provision linked to green sectors

- **Work Based**
    - Delivering a range of Skills Bootcamps, including those that deliver skills to support sustainability
    - and the green industrial revolution, such as retrofit construction, electric vehicles,
    - and woodland management
    - Over 100+ apprenticeship standards supporting green skills as identified by the (*GATEAP*)
    - Other standards such as engineering and manufacture are being reviewed by employers for suitability. - Portable, Flexi-job and Accelerated Apprenticeships available.

- **Classroom Based**
    - Engineering for construction T Level launched Sept 21 covers retrofit and heat pump installation.
    - From Sept 22, new T Levels in Engineering, Manufacturing, Processing & Control. Agriculture,
    - Land Management and Production available by Sept 23
    - Over 400 free qualifications at Level 3 in Agriculture, Building and Construction,
    - Engineering, Environmental Conservation, Horticulture and Forestry and Science.
    - IoTs offer specialisms in STEM and green sectors such as zero carbon energy production
    - and sustainable engineering. Wave 2 of IoTs (*2022*) to deliver in wider green sectors.
    - LLE piloting short course provision at Levels 4-6 to support in-work adults upskill/retrain in STEM/net zero subjects. HTQs (*Levels 4-5*) rolling out from Sept 2022 in digital, construction and engineering.

Defining the Green sector

The definition of Green for CPCA is currently based on adoption of the GLAECONOMICS approach to identifying Green Occupations in London (*Jan 22*)[63]. It classifies green occupations into three broad categories.

Please see examples below with the full occupational list included in **Appendix 7.**

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[62] Department for Education, Skills for green jobs (2023)
[63] Greater London Authority, Identifying Green Occupations in London (2022)

Green category	Examples of SOC2010* occupations	Examples of green-related jobs
Green increased demand	Construction operatives n.e.c.** Carpenters and joiners Bus and coach drivers	Insulation installers Construction carpenters Bus drivers
Green enhanced skills	Plumbers and heating and ventilating engineers Vehicle technicians, mechanics and electricians Finance and investment analysts and advisers	Renewable energy engineer's Electric vehicle mechanics Directors of sustainability
Green new and emerging	Management consultants and analysts Actuaries, economists and statisticians Marketing associate professionals	Sustainability consultant's Environmental economists Green marketers

Figure 10: Green Jobs by type as a proportion of all jobs across CPCA
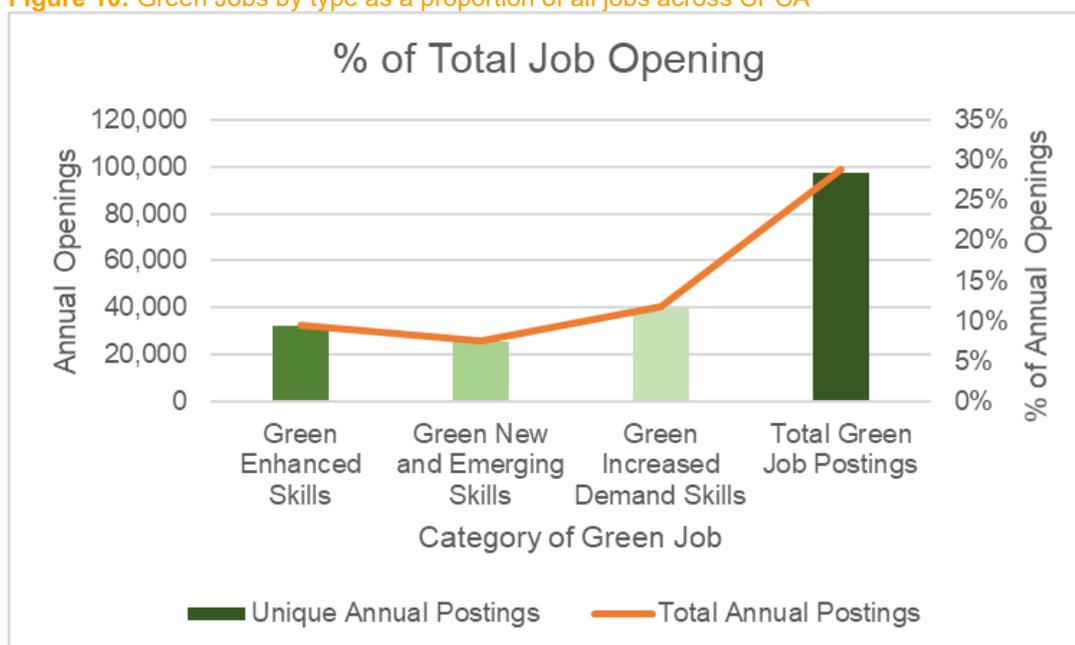
Source: Lightcast (2022)

Demand and supply for the Green Sector
Our Analysis of Green Enhanced Skills using Lightcast

No.	Skill	Frequency of main skills requested in postings by region					
		Cambridge	**Peterborough**	**Hunting-donshire**	**South Cambridge**	**Fenland**	**East Cambridge**
01	**Communications**	9%	13%	11%	15%	10%	13%
02	**Management**	5%	8%	6%	8%	4%	5%
03	**Customer Service**	3%	7%	9%	6%	4%	4%
04	**Sales**	5%	6%	9%	7%	2%	5%
05	**Detail Oriented**	3%	4%	8%	8%	3%	8%
06	**Planning**	3%	4%	3%	4%	3%	5%
07	**Problem Solving**	2%	3%		5%	5%	5%

No.	Skill	Frequency of main skills requested in postings by region					
08	Leadership	3%	3%		4%	3%	4%
09	Operations	2%	3%	4%	4%	4%	
10	Self-Motivation		4%	5%		2%	3%
11	Computer Literacy			5%			
12	Innovation				4%		
13	Research	3%					
14	Quick Learning			3%			
15	Time Management						3%

Appendix 6 - Digital Strategy Recommendations[64]

Domain area	Recommendation(s) for public sector	Recommendation(s) for private sector
Artificial Intelligence	CPCA to tailor specific actions and priorities to cement the national leadership position of the region for the national AI Grand Challenge.	Private sector and investors to play their part in the development of a regional AI strategy.
Talent & Skills	Ensure high quality digital education and training opportunities, ranging from digital literacy, advanced programming skills up to doctorates, as well as reskilling programmes, are available and accessible for young people, teachers and adults throughout the region.	Develop a region-wide culture of employer engagement in education to support the development of STEM skills in the next generation and showcase potential career routes with a scheme that involves the participation of employers.
Technology Infrastructure	Deliver a step-change in technology infrastructure ambitions by with aspirational targets of 1Gb/s broadband speeds across the region by 2022. Put in place internal processes that will support the private sector in turning Cambridgeshire & Peterborough into a world-class smart region at pace.	Inspire demand for advanced technology infrastructure by bringing citizen and business communities together and raising awareness of next-generation infrastructure capabilities through networking and workshops. Campaign for faster and more ambitious roll-out.
Supply Chain	Sponsor a researched programme of networking activities that helps the region to increase understanding of the value chains of digital businesses and to help remediate potential gaps and bottlenecks in the local supply market.	Provide more opportunities for digital businesses to meet local suppliers, and vice versa, through targeted face to face networking opportunities and intra-regional programmes.
High Impact Networking	Ensure appropriate physical space, connections and channels are available for businesses to network by transforming underutilised public infrastructure into co-working spaces or learning zones and supporting landlords in installing co-working spaces in high street spaces.	Established networking firms to deliver high quality events across the region while collaborating to build a comprehensive ecosystem of business development and knowledge transfer.
Entrepreneurship	Ensure the presence of high-quality, supportive spaces for start-ups to grow across the region, along with financial stimulus that encourages growth in desired areas, for example business establishment in non-Cambridge hubs, or digital businesses focused on products/services for Manufacturing / Agriculture / Logistics.	Established networking firms and universities to deliver knowledge sharing programmes across the region that match different stages of start-ups, from birth to scale-up, along with networking and mentoring opportunities.
Investment & Finance	Create a CPCA Digital Innovation Fund (similar to the Northern Powerhouse Investment Fund), supported by the British Business Bank, for digital start-ups with a particular focus on convergence activities and hubs outside Cambridge city.	Increase the visibility and accessibility of financial information & support throughout the region.
Application in industry	Conduct a study to understand the value chains of digital businesses and potential gaps and bottlenecks in the local supply market. Share this information publicly.	Establish Leadership Councils for Technology in Manufacturing, Logistics and Agriculture that identify opportunities and blockers and generally accelerate the deployment of technology in industry.
International: Foreign Direct Investment and trade	Build a compelling Greater Cambridge cluster brand and marketing programme that promotes the Cambridge value proposition and strategically targets major investments complementary to the regional technology ecosystem, ensuring that an effective inward investment sales and fulfilment function is being delivered across the region.	Support local intermediary organisations to develop relationships with overseas technology hubs and encourage partnerships and networking between companies. Encourage large regional technology companies to participate in outbound missions to demonstrate the expertise of the region, alongside cohorts of new exporters.
Knowledge Transfer	Develop Launchpads where the applications of new digital technologies and solutions can be trialled. These Districts should feature the latest technology infrastructure, should be accessible for start-ups and should focus on industries that are important to the Combined Authority economy, such as Manufacturing or Agriculture.	Working with existing communities for technology / industry, deliver more inter-sector networking opportunities across the region that connect industry with the technology community and academia.

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[64] Cambridge Wireless and Anglia Ruskin University, A Digital Sector Strategy for Cambridgeshire and Peterborough (2019)

Appendix 7 - Green Jobs Classification (SOC)

Type	SOC	Green Occupation
Green Enhanced Skills	**1121**	Production managers and directors in manufacturing
	1122	Production managers and directors in construction
	1132	Marketing and sales directors
	1161	Managers and directors in transport and distribution
	1211	Managers and proprietors in agriculture and horticulture
	2113	Physical scientists
	2121	Civil engineers
	2122	Mechanical engineers
	2123	Electrical engineers
	2124	Electronics engineers
	2431	Architects
	2432	Town planning officers
	2471	Journalists, newspaper and periodical editors
	2472	Public relations professionals
	3113	Engineering technicians
	3119	Science, engineering and production technicians n.e.c.
	3534	Finance and investment analysts and advisers
	3541	Buyers and procurement officers
	3542	Business sales executives
	3563	Vocational and industrial trainers and instructors
	3565	Inspectors of standards and regulations

Type	SOC	Green Occupation
	4134	Transport and distribution clerks and assistants
	5111	Farmers
	5213	Sheet metal workers
	5313	Roofers, roof tilers and slaters
	5216	Pipe fitters
	5225	Air-conditioning and refrigeration engineers
	5231	Vehicle technicians, mechanics and electricians
	5314	Plumbers and heating and ventilating engineers
	8123	Quarry workers and related operatives
	8133	Routine inspectors and testers
	8211	Large goods vehicle drivers
	9120	Elementary construction occupations
Green New and Emerging	**1123**	Production managers and directors in mining and energy
	1133	Purchasing managers and directors
	1162	Managers and directors in storage and warehousing
	1255	Waste disposal and environmental services managers
	2126	Design and development engineers
	2129	Engineering professionals n.e.c.
	2135	IT business analysts, architects and systems designers
	2141	Conservation professionals
	2142	Environment professionals
	2150	Research and development managers
	2423	Management consultants and business analysts
	2425	Actuaries, economists and statisticians

Type	SOC	Green Occupation
	2436	Construction project managers and related professionals
	2461	Quality control and planning engineers
	2462	Quality assurance and regulatory professionals
	3112	Electrical and electronics technicians
	3116	Planning, process and production technicians
	3131	IT operations technicians
	3531	Estimators, valuers and assessors
	3532	Brokers
	3539	Business and related associate professionals n.e.c.
	3543	Marketing associate professionals
	3561	Public services associate professionals
	5330	Construction and building trades supervisors
	8124	Energy plant operatives
	9235	Refuse and salvage occupations
Green Increased Demand	2111	Chemical scientists
	2112	Biological scientists and biochemists
	2119	Natural and social science professionals n.e.c.
	2127	Production and process engineers
	2136	Programmers and software development professionals
	2435	Chartered architectural technologists
	3111	Laboratory technicians
	3422	Product, clothing and related designers
	3550	Conservation and environmental associate professionals
	3567	Health and safety officers

Type	SOC	Green Occupation
	4131	Records clerks and assistants
	5112	Horticultural trades
	5113	Gardeners and landscape gardeners
	5119	Agricultural and fishing trades n.e.c.
	5214	Metal plate workers and riveters
	5215	Welding trades
	5221	Metal machining setters and setter-operators
	5223	Metal working production and maintenance fitters
	5224	Precision instrument makers and repairers
	5237	Rail and rolling stock builders and repairers
	5241	Electricians and electrical fitters
	5249	Electrical and electronic trades n.e.c.
	5250	Skilled metal, electrical and electronic trades supervisors
	5311	Steel erectors
	5315	Carpenters and joiners
	5319	Construction and building trades n.e.c.
	6215	Rail travel assistants
	7214	Communication operators
	7219	Customer service occupations n.e.c.
	8114	Chemical and related process operatives
	8125	Metalworking machine operatives
	8131	Assemblers (electrical and electronic products)
	8132	Assemblers (vehicles and metal goods)
	8139	Assemblers and routine operatives n.e.c

Type	SOC	Green Occupation
	8142	Road construction operatives
	8143	Rail construction and maintenance operatives
	8149	Construction operatives n.e.c.
	8213	Bus and coach drivers
	8229	Mobile machine drivers and operatives n.e.c.
	9112	Forestry workers
	9260	Elementary storage occupations

The IfATE Classifications for Green occupations[65]

Green Occupations and the occupational standards that describe them are the basis of apprenticeships and technical qualifications. Occupations have been categorised as mid and dark green via a leaf icon on the maps to indicate the impact that the occupation has, in terms of scale and influence, on helping the UK achieve net-carbon zero by 2050.

Dark-green occupation
A dark-green occupation, for example wind turbine engineer, which is embedded within the green occupational landscape and delivering sustainable outcomes.

Mid-green occupation
A mid-green occupation will remain the same in overall scope but there might be a need for new knowledge, skills and behaviours to be embedded to enable the use of new technologies and approaches.

There is evidence from research that young people want jobs and careers that align with their passion for tackling climate change and environmental issues and employers would like to see the breadth of occupations available to equip their organisations with the climate change and environmental skills they need.

Green themes

Through the improvement of working practices, all occupations can contribute to the country's achievement of its environmental and climate changes goals. However, there are occupations in certain areas, such as offshore wind electricity generation, which are particularly important to helping the country meet these goals.

Building on the initial work of the Green Jobs Taskforce and the subsequent work of the Green Jobs Delivery Group we have identified 11 areas that are particularly important, which we are referring to as green themes and where appropriate we have mapped occupations to these themes.

By allowing users to select themes to display, they will quickly be able to identify all occupations that are relevant to a particular green theme that might be of interest to them.

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[65] Institute for Apprenticeships and Technical Education, Occupational Maps

Appendix 8 - Perceptions Analysis

Challenges to accessing the skills that were raised during the stakeholder engagement and interviews were documented as perceptions as these were topics experienced by employers but may not be related to the actual status of the particular topic.

1. We gathered and validated **stakeholder perceptions** of the local skills system through the first round of workshops.
2. These were grouped together to form **common themes** and **a count was applied** against each one to assess their significance.
3. Throughout the second round of workshops, we asked the stakeholders to share **features of the solutions** that could be implemented for each perception.
4. We measured their **ease and impact** to understand the potential impact each solution could have across the region, recognising the opinions of all stakeholders. We then created an average Ease and Impact score.

These were also grouped together, similarly to the perceptions, to reduce the **long list to a short list**.

Category	Draft perceptions	Description	Initial evidence	Theme count	Additional validation approach
Skills shortages	1. Lack of consistent understanding of skills	Employers struggle to articulate their skills needs and there is no evidence of a consistent Taxonomy. Both Employers and Education Providers do not speak a consistent language of skills.	BRO/ meeting 1 and 2, stakeholder engagement	High	Survey
Skills shortages	2. There is a lack of sustained investment in skills by employers	There is a lack of investment in skills by employers or a clears skills strategy. Return on investment for training and development is unclear, which is contributing to the lack of investment in skills. Businesses, particularly SMEs, do not have the capacity to spend time outside of their day job understanding their future skills needs.	BRO meeting 1 and 2, stakeholder engagement	High	Survey
Context	3. Significant regional differences	The skills required and qualifications vary across the region creating disparities in terms of wealth and sector focus.	Desktop research, BRO meeting 2	High	Data
Skills shortages	4. Skills gap in entry and mid-level skilled roles	Skills needed are entry to mid-level technical with a particular concern from employers about level 2 skills – e.g., toolmaking, welding, metalworking. The most immediate challenge is the need for lower-level technical provision.	Desktop research, BRO meeting 1	Low	Data
Skills shortages	5. Lack of appreciation of transferable skills	Some sectors require a distinct workforce. However, there is a lack of understanding or clarity surrounding transferable skills across sectors. There can be a lack of openness to diversity of experience from different sectors so skills and experience can sometimes be disregarded.	Desktop research, workshops	Medium	Skills analysis Survey
Skills shortages	6. Lack of employability skills	Employers have identified the lack of employability skills as a barrier to successful recruitment. There is a lack of a consistent approach to 'work readiness', for example communication, time-management, teamwork and attitude to work.	BRO meeting 1 and 2 Stakeholder engagement	High	TBC via Providers Survey
Skills shortages	7. Employers believe that students are not choosing the education courses that meet the local labour needs	Students are choosing to take courses or study degrees in areas or subjects they want to but where there is not necessarily a skills demand locally.	BRO meeting 2, stakeholder engagement	Low	TBC via Providers
Skills shortages	8. Business skills	Business skills are lacking in the region e.g., leadership, business planning and financial accounting skills. This is limiting the growth of micro-businesses.	Workshops, stakeholder engagement	Medium	Survey
Skills shortages	9. Business experience	Alongside or prior to work experience, it would be valuable for businesses to engage with schools and colleges to provide talks on specific sectors and job roles. This supports the careers advisors and gives the students exposure to new industries.	Workshops, BRO meeting 1 and 2, stakeholder engagement	High	No baseline

Category	Draft perceptions	Description	Initial evidence	Theme count	Additional validation approach
		We need to support businesses who are often too time constrained to engage.			
Professional and personal development	**10. Teacher industry experience**	It would be valuable for teachers to have access to relevant industry placements or day visits to businesses so they can provide guidance on a range of sectors in the local areas and understand how businesses work. The challenge is that teachers are often too time constrained.	Workshops Stakeholder engagement	High	No baseline
Skills shortages	**11. Stakeholders have reported inconsistencies with careers information, advice and guidance**	Students are not always aware of what options are available to them in the local recruitment market and in terms of further education options. There needs to be better support for students to recognise how their skillset can be transferred onto a CV and understand what jobs would be suitable for them. Careers advisors do not always have the appropriate industry experience and are not always aware of the local demand for skills.	Workshops	High	CEC Survey
Professional and personal development	**12. Mentoring**	Mentoring will support new employees to be more effective in their role. There is an opportunity for reverse mentoring to fill potential skills gaps. The idea is that the junior employee can share their expertise (commonly, technology and digital media topics) with the senior colleague, who may be less familiar with these areas.	Workshops	High	TBA Survey
Diversity & inclusion	**13. Women returning to the workplace**	Women often face skills gap when they are returning to the workplace. There is limited support and opportunities for upskilling provided for them.	Workshops	Low	CPCA Data
Diversity & inclusion	**14. Refugee communities**	Refugee communities often contain a range of professionals with skills and talent that are not easily recognised or transferred.	Workshops	Low	BRO's
Diversity & inclusion	**15. Over 50s**	The over 50s and retired population can often contain a range of professionals with skills and talent but their expectations for working styles and potential health constraints may require workplace flexibilities.	Workshops	Medium	TBA
Skills shortages	**16. Apprenticeships**	Concerns have been expressed by some employers about the need for supporting apprentices throughout their program as this is not part of the apprenticeship funding. This is a particular concern for smaller businesses.	BRO meeting 2, stakeholder engagement	Low	Survey
Professional and personal development	**17. Work experience**	The majority of stakeholders appreciate the value of work experience. There are challenges in supporting the students and the businesses to provide meaningful opportunities. There can also be safeguarding issues and health and safety issues.	Workshops	High	Ofsted & Gatsby benchmarks

Each perception was reviewed and the solutions identified were captured and recorded on an Ease and Impact assessment to capture the consensus across the regional groups on a scale of 1-5 for Ease and Impact, where 1 represented low impact and easy to implement.
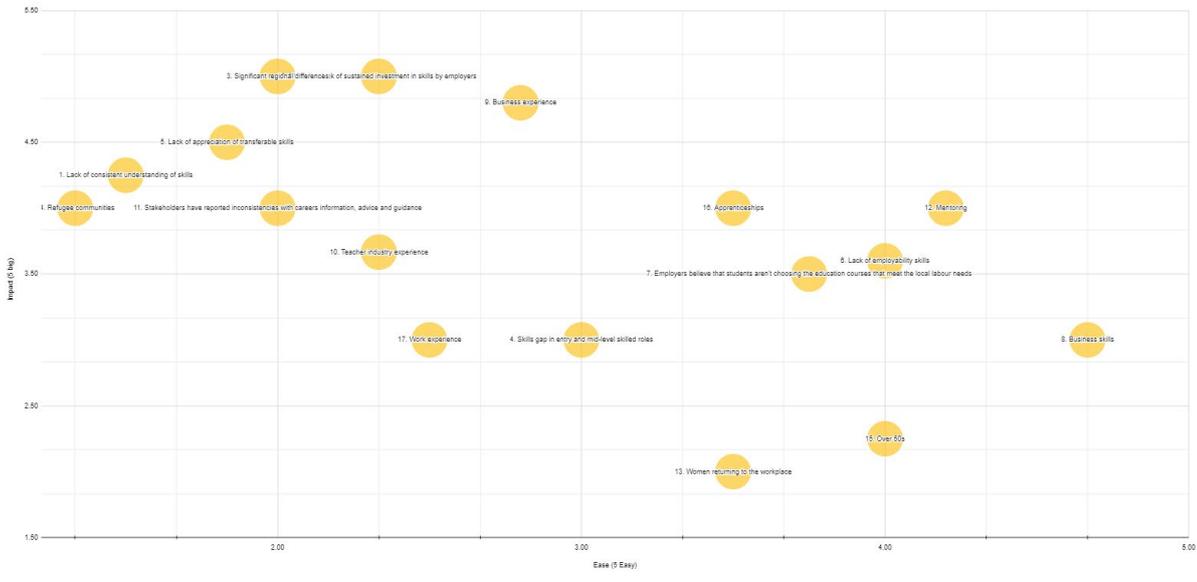
The Ease and Impact assessment and consolidation of solutions provided the basis for the solutions which were tested against the LSIP criteria in **Appendix 18**.

Appendix 9 - Digital and Green Skills

Digital

No.	Skill	Frequency of Top Ten main specialised skills requested in postings by region for Digital Occupations					
		Cambridge	Peterborough	Huntingdonshire	South Cambs	Fenland	East Cambs
01	C#	4%	3%	4%	6%		4%
02	Python	7%			12%	4%	5%
03	Software Development	5%		4%	9%		5%
04	Microsoft Azure		3%	6%	7%		7%
05	SQL		3%	4%	6%	7%	
06	Agile Methodology	5%	3%	5%	11%		
07	Software Engineering	7%			11%		6%
08	C++	5%			7%		5%
09	Computer Science	4%			7%		4%
10	JavaScript	4%	3%	4%			

No.	Skill	Frequency of Top Ten main common skills requested in postings by region for Digital Occupations					
		Cambridge	Peterborough	Huntingdonshire	South Cambs	Fenland	East Cambs
01	Communications	8%	21%	14%	22%	11%	17%
02	Management	4%	12%	9%	8%	7%	6%
03	Problem Solving	3%	8%	5%	12%	6%	8%
04	Customer Service	2%	13%	10%	8%	5%	5%
05	Troubleshooting	2%	6%	4%	5%	4%	3%
06	Leadership	3%	6%	4%	7%		5%
07	Detail Oriented		5%	6%	5%		6%
08	Innovation	2%			6%	4%	3%
09	Planning	2%	5%	4%	6%		
10	Self-Motivation			4%	5%		4%

Green enhanced skills

No.	Skill	Frequency of Top Ten main specialised skills requested in postings by region for Green enhanced skills Occupations					
		Cambridge	Peterborough	Huntingdonshire	South Cambs	Fenland	East Cambs
01	Marketing	4%	5%	4%	6%	3%	4%
02	Mechanical Engineering	2%	2%	2%	4%	2%	4%
03	Machinery		3%	4%	3%	5%	5%
04	Purchasing	1%	3%	3%	2%		3%
05	Maintenance Engineering		2%	2%		4%	2%
06	Procurement	1%	3%	2%			2%
07	New Product Development	2%			3%		2%
08	KPIs		2%	2%			2%
09	Finance	1%	2%		2%		
10	Production Line			2%		2%	

No.	Skill	Frequency of Top Ten main common skills requested in postings by region for Digital Occupations					
		Cambridge	Peterborough	Huntingdonshire	South Cambs	Fenland	East Cambs
01	Communications	9%	13%	11%	15%	10%	13%
02	Management	5%	8%	6%	8%	4%	5%
03	Customer Service	3%	7%	9%	6%	4%	4%
04	Sales	5%	6%	9%	7%	2%	5%
05	Detail Oriented	3%	4%	8%	8%	3%	8%
06	Planning	3%	4%	3%	4%	3%	5%
07	Problem Solving	2%	3%		5%	5%	5%
08	Leadership	3%	3%		4%	3%	4%
09	Operations	2%	3%	4%	4%	4%	
10	Self-Motivation		4%	5%		2%	3%

Appendix 10 - Sub-priorities (out of scope)

The analysis allowed employers to feedback a range of insights, some of which fall outside of the scope of the LSIP. These have formed the sub-priorities.

Skills/ labour shortages

Perception	Description
Traditional" roles are perceived to be less appealing and experience staff retention issues	Difficulty recruiting young people into "traditional" industries and encouraging uptake in apprenticeships. People are leaving these roles to move into jobs that are perceived to be more appealing in terms of salary and working conditions.
Perceived inflexibility of provision for Apprenticeships, T- Levels & Study programmes	There is less flexibility for Full-Time work for the 16/18-year-old cohort in technical education as they will be expected to be taking T-Levels, Study programmes or Apprenticeships.
Impact of Covid on skills	Learning has been adversely impacted, in particular face-to-face and interpersonal skills.
School leavers are often going straight into work with insufficient training and skills	School leavers are going straight into work so are missing out on upskilling and further career progression. There is lower than average rates of progression from school into Higher Education, Further Education and apprenticeships
Transport	Transport impacts the region's access to skills. Bus services are lacking and this disproportionately affects young people.
Employee market	The labour market is experiencing retention issues. It is now an employee, rather than an employer market, heightened by the effects of Covid and Brexit.

Funding and curriculum

Perception	Description
Perceived inflexibility of provision for Apprenticeships, T- Levels & Study programmes	There is less flexibility for Full-Time work for the 16/18-year-old cohort in technical education as they will be expected to be taking T-Levels, Study programmes or Apprenticeships

Appendix 11 - Emerging Solutions

Outlines for consideration and discussion between the Chamber and CPCA

Governance/ Central Commitment

Aims and objectives

The region's providers have demonstrated that they are committed to meeting the needs of the region's businesses and two of the FE colleges have had their approaches validated in recent Ofsted inspections. However, there is the opportunity to implement improvements in the coordination and consistency of educationally related services across the region which would support the ability of providers, BRO's and LA's to meet the needs of a wider range of employers and individuals

Our hypothesis is that through establishing a clearly articulated commitment of collaboration for Providers, Local Authorities and BRO's across the region, a range of easy access, regional entitlements for key stakeholder's groups and more consistent ways of working can be established.

Features (to be reviewed and agreed annually)

- Agreement on how the LSIP process is incorporated into the CPCA existing skills system, including evaluation of the opportunities for secondments and operational alignment.
- Collaboration and coordination of education and training related services across regional business support service providers including the Chamber, Providers, BRO's and LA's.
- Regional agreement to use Learner Support to provide help for Apprentices (this requires an appropriate diagnostic)
- Explore updating the conditions of CPCA Skills grant funding to include 'working towards regional collaboration
- Establishment of sector focused networks coordinated via centralised comms
- Agreement on the development and adoption for a regional transferable skills approach and language
- Implement the annual process for developing the content for the providers accountability statements.

Implementation Activity	By whom	By when	Dependencies/ considerations
The Chambers to work with CPCA to develop and agree on a draft Terms of Reference (ToR) for a 'Skills Commitment Partnership,' including an aspiration which results in the Partnership Committee. (See **Appendix 12**) Draft and agree clearly articulated commitment of collaboration. Consideration should be given to providing a membership role to the College that is coordinating and chairing any regional LSIF partnership	Chamber CPCA	July - Sep 23	Alignment with existing boards, including the Employment and Skills Board (ESB)
Negotiation of the commitment for the ToR with targeted key stakeholders. Collaborative partners to be signatories to the 'Commitment statement' and be part of the Partnership.	Chamber	July – Sep 23	
Partnership sub-groups developed, launched and aligned to the actions/changes identified in the approved LSIP, including communication channels, data (proposed structure is provided in **Appendix 12**)	Partnership	July - Sep 23	
Public Communication/ Launch of commitment alongside a launch of the LSIP roadmap, which will be monitored through the Partnership.	Chamber	Sep 23	

How is success defined?

- The ToR is agreed and key structures established, including the Partnership
- Signatories to the commitment of collaboration
- The LSIP solutions are successfully delivered through this central commitment
- Developing a set of KPIs for the success of the actions/changes taken forward as a result of the LSIP

Centralised Communications			

Aims and objectives

Independent businesses, individual providers and other regional education service providers have successfully developed and delivered their own approaches to communications with their stakeholders. When reviewing the range of individual approaches from a regional perspective it is clear that the differences in the communication approaches adopted can lead to confusion for the service users.

Our hypothesis is that an agreed centralised approach to communications across the region will provide a more consistent user experience for regional stakeholders and will provide opportunities for combined marketing campaigns and services targeted at the harder to reach groups.

Features

- Standardisation and central glossary of terminology (set for the language of the Cambridgeshire and Peterborough region)
- Centralised communications, updates and signposting
- Stakeholder engagement co-ordination
- Our Education Landscape in Cambridgeshire and Peterborough - A Guide our Employers (Gatsby Example - but this should be multi-media)
- Our Education Connections in Cambridgeshire and Peterborough - A Guide our Employers (Gatsby Example - but this should be dynamic and multi-media)

Implementation Activity	By whom	By when	Dependencies/ considerations
LSIP Partnership sub-group formed to agree scope of the Centralised Communications project and Project Lead	Partnership	tbd	Review Skills Brokerage Platform to check alignment
Draft implementation plan developed by the Centralised Communications working group (CCWG) including a business case summary for review and approval by the Partnership	CCWG	tbd	
Communication plan developed will include frequency and scope for regional stakeholder consultation	CCWG	tbd	
Evaluation of coverage of sub-regional networks	CCWG	tbd	Aligned to brokerage
Budget reviewed and agreed by the Partnership	Partnership	tbd	
Project launched and monitored by the Partnership	CCWG/Part nership	tbd	

How is success defined?

- The project successfully delivers on the features of the solution
- Improvement in awareness of communication channels for stakeholders, measured via future stakeholder engagement
- KPIs TBA

Regional Careers Entitlement

Aims and objectives

The careers guidance landscape is complex as the National Careers Service (NCS) and the Careers and Enterprise Council (CEC) are independent organisations that service different age groups. Whilst many of the careers perceptions related to the provision of work experience in schools (which is out of the scope of the LSIP), the introduction of the T-levels and Apprenticeships standards will benefit from a standardised service offering that can benefit from economies of scale.

The survey reveals that employers use a variety of sources to access information about careers and it is unclear if they are informed by a signal source of regionally focussed Careers Advice and Guidance. Stakeholders have suggested that the access to regional careers advice and guidance can be developed and reduce any potential confusion for stakeholders. This should work alongside existing.

Our hypothesis is that an agreed centralised approach to Careers information across the region will provide a more consistent experience for regional stakeholders and that engagement with the CPCA Careers Hub is critical to support and influence this approach.

Features

- Localised, regional national careers information - a multimedia resource bank of local career opportunities
- Local employment opportunities to be a focus of local careers communications
- Career pathways and links to Green and Digital sign-posted
- Skills information
- Education and information for employers and providers
- Formal mentoring schemes and guidance (including reverse mentoring)

Implementation Activity	By whom	By when	Dependencies/ considerations
Partnership Sub-group formed to agree scope of the project and Project Lead	Partnership	tbd	Ensure there is no overlap with other regional offerings for careers services. Alignment with school's careers provision. Review CPCA's All Ages Careers Service to check alignment. Alignment to aspirations of the Matrix Standard.
Identification of other parties to be invited to join the working group such as CEC, NCS, DWP and Career Hub	Partnership	tbd	
Draft implementation plan developed by the LSIP - Regional Careers Entitlement working group (RCEWG) including a business case summary for review and approval by the Partnership	Partnership - RCWG	tbd	
Project launched and monitored by Partnership	RCWG/ Partnership	tbd	

How is success defined?

- The project successfully delivers on the features of the solution
- Improvement in employer recognition of the availability of careers information and guidance for all ages, measured via future stakeholder engagement
- KPIs TBA

Regional Independent Skills Brokerage

Aims and objectives

We have developed a working definition for a regional skills brokerage as a service that arranges for the supply of skills to be aligned to the users' needs for skills. As such, this role is different to that normally offered by a provider as it would be similar to the role of an independent mortgage adviser who would assess the suitability of the regional provision to meet a detailed understanding of business needs. It is clear from conversations with providers that brokerage does occur naturally within the system as referrals, but these referrals are not tracked and therefore it is unclear if needs are being met. There are also inconsistencies in the access to business services across the region, as many of the wider business services reside across the BRO network and Skills Brokerage Service with Skills and there is minimal collaboration across these groups

Our hypothesis is that there is an opportunity to utilise the re-commissioning of the Skills Brokerage Service provider contract to provide a more comprehensive range of services to the regional stakeholders.

Features

- Promoting and support identifying transferable skills
- Repository for regional careers pathways
- Capturing and analysing skills needs
- Support for the development of regional skills networks that can be used to gather skills needs
- Work experience brokerage
- Networks co-ordination - central registry of regional and exo-region groups
- Build on existing GW services - 1:1 business growth coaching advice, expert-led workshops, talent and skills development, grant funding, equity finance, inward investment
- Building on the CPCA ambitions for a Skills Talent & Apprenticeship Recruitment Hub (STAR Hub)

Implementation Activity	By whom	By when	Dependencies/ considerations
Partnership sub-group formed to agree scope of the project and Project Lead	Partnership	tbd	Whether Skills Brokerage Service Offer can be re-commissioned for this purpose. Future of the Growth Company. Alignment to aspirations of a standard such as (Matrix Standard, Gatsby, or Quality in Careers standards where appropriate)
Draft implementation plan developed by the LSIP - Regional Independent Skills Brokerage working group (RISBWG) including a business case summary for review and approval by the Partnership	RISBWG	tbd	
Project launched to agree business requirements for RISB and monitored by Partnership	Partnership	tbd	
Working with the skills brokerage provider	CPCA	tbd	

How is success defined?

- The project successfully delivers on the features of the solution
- Improvement in stakeholder's ability to navigate the regional skills system, measured via future stakeholder engagement
- KPIs TBA

Appendix 12 - Draft Terms of Reference

01. PURPOSE

The purpose of the Skills Partnership is to meet and enhance the impact of the LSIP by driving coordination and collaboration across the main Stakeholders and provide recommendations for enhancing the experience of all education and training stakeholders in the CPCA region.

02. COMPOSITION AND QUORUM

The Skills Partnership is composed of up to four Committee Members and may include at least one senior post holder from the Chamber of Commerce and the CPCA. There will be a rotating chair for the Committee.

The Committee, by vote, appoints the LSIP Partnership members based on their willingness to sign up to and work towards the ambitions of the LSIP.

A majority of members of the Committee constitutes a quorum.

03. DUTIES AND RESPONSIBILITIES

Subject to the powers and duties of the Committee, the Governance Committee:

a. Annually, reviews the governance framework (*including written policies*) for the Committee regarding:
    i.   Areas of concern;
    ii. Best practices; and
    iii. Recommended changes

b. Ensures appropriate structures and procedures are in place to allow the Committee to function effectively;

c. Annually reviews the composition of the Committee and the Partnership as a whole and recommends, if necessary, changes to the Committee.

d. Annually or as vacancies arise, works with the Committee Chair to identify any gaps that should be filled in new Committee Member candidates and recommends to the Committee the desired skills and experience for potential new Committee Members;

e. In respect of appointed Committee Members, works with the Committee Chair to identify potential candidates for appointment to the Committee.

Appendix 13 - Funding

Provider	Type	AEB Allocation	FCFJs Allocation	Multiply	TOTALS
Bedford College	College	£200,000	£10,000	£0	£210,000
Cambridge Regional College	College	£2,600,000	£105,000	£145,000	£2,850,000
Cambridgeshire County Council	College	£2,000,000	£50,000	£95,000	£2,145,000
Inspire Education Group	College	£2,300,000	£180,000	£170,000	£2,650,000
North Hertfordshire College	College	£100,000	£0	£0	£100,000
Peterborough City Council	College	£1,500,000	£50,000	£100,000	£1,650,000
The College of West Anglia	College	£500,000	£50,000	£35,000	£585,000
West Suffolk College	College	£500,000	£100,000	£55,000	£655,000
Workers Education authority	College	£300,000			£300,000
Back to work complete	ITP	£398,000			£398,000
Capita	ITP	£192,801	£207,020		£399,821
eVolve your future	ITP	£129,304	£14,480	£150,685	£294,469
Futures group	ITP	£86,249			£86,249
GNR training Ltd	ITP		£224,054		£224,054
Ixion Holdings (Contracts)	ITP	£150,000	£200,000	£50,000	£400,000
Learning Curve Group Ltd	ITP	£320,783	£65,149		£385,932
MPCT	ITP			£200,000	£200,000
Pathway Group Ltd	ITP	£98,397			£98,397
PeoplePlus Group Ltd	ITP	£399,096			£399,096
Runway Training Ltd	ITP			£161,376	£161,376
Seetec Business Technology Centre	ITP	£307,626		£100,000	£407,626

Provider	Type	AEB Allocation	FCFJs Allocation	Multiply	TOTALS
Steadfast Training Ltd	ITP	£274,494	£75,506	£50,000	£400,000
The Portland Training Company	ITP	£415,785			£415,785
The Construction Skills People	ITP		£299,940		£299,940
TCHC Group Ltd	ITP	£400,732	£0	£18,000	£418,732

Appendix 14 - Data Insights

The following extracts are taken from the LSIP data book which was provided to the Chamber as part of the development of the LSIP.

Figure 11: Level of economic activity across each region by gender
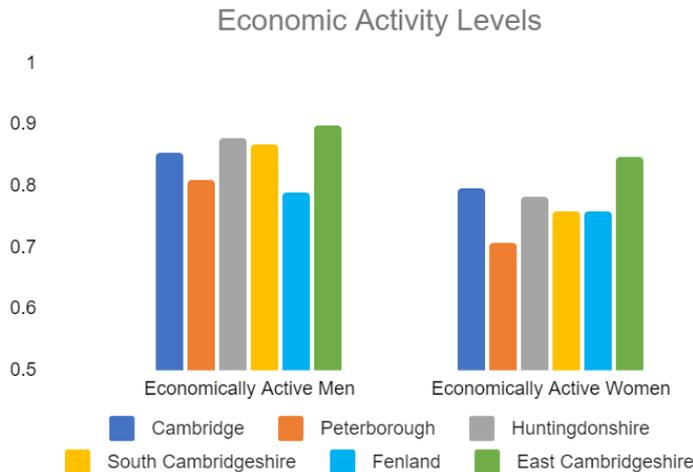
Source: Nomis (2022)

Economic activity is higher for males than females across the region. The largest difference in activity between males and females is in South Cambridgeshire (10.2%) whilst the smallest difference is in Fenland (3.0%). We would suggest that a view of this by sector would provide insight into where greater support is required to encourage females into the workplace. An understanding of whether there are any targeted gender policies in place would help to understand whether the demand for labour and skills is higher for women.

Figure 12: Job postings by occupation (%)
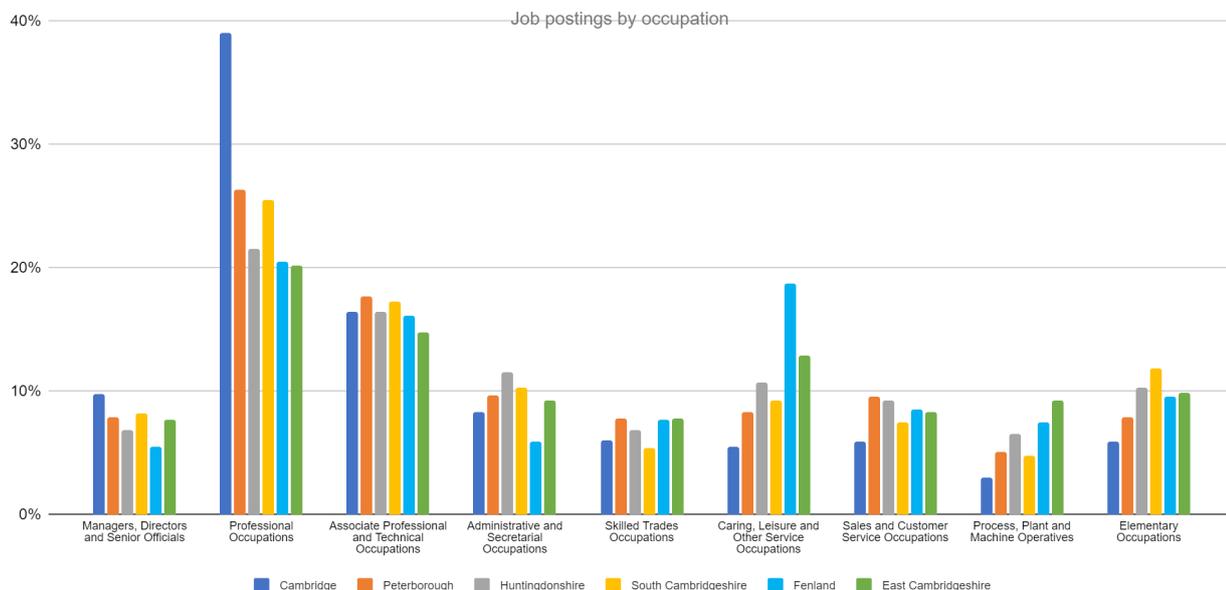
Source: Lightcast (2022)

Professional occupations have the greatest number of job postings across the region (33.7% of total job postings) indicating high demand for labour and skills. Cambridge has the greatest demand for professional occupations within the region at 39.1% whereas East Cambridge has the smallest at 20.2%. This could be due to the domination of the

life sciences sector in this area. An understanding of the supply of skills available to go into these roles would provide an understanding of the skills gap per occupation.

Figure 13: Job postings by industry (%)

Job Postings by Industry
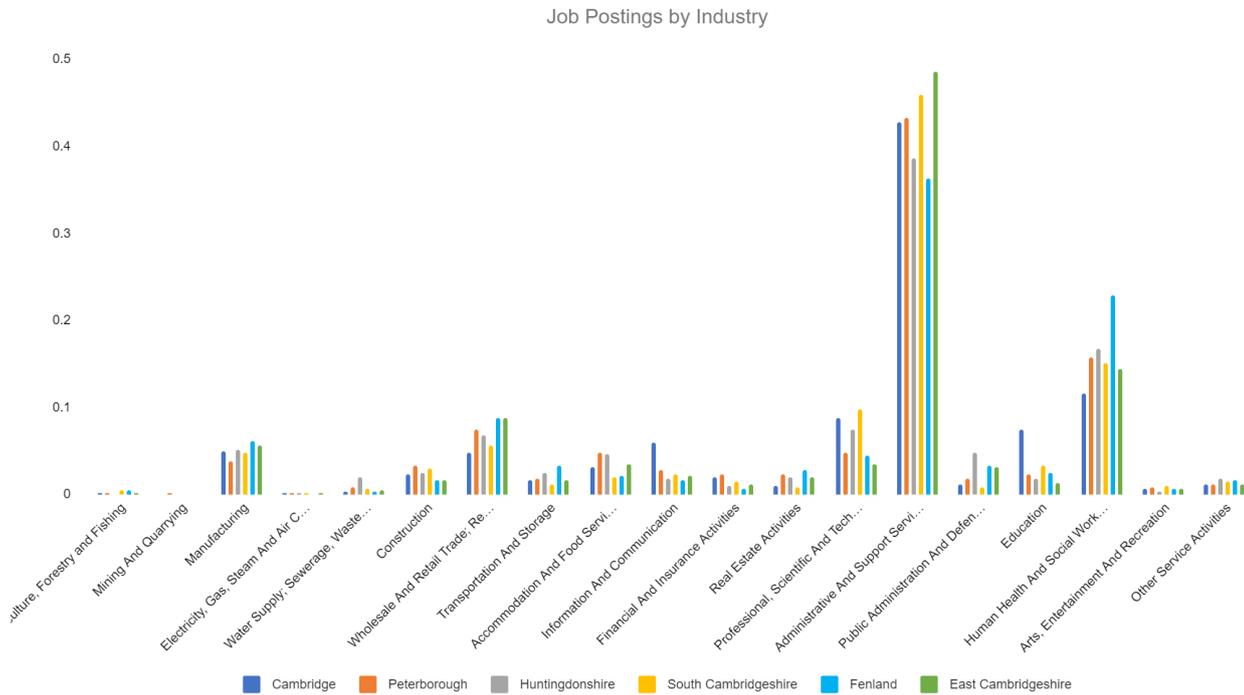
Source: Lightcast (2022)

The greatest percentage of job postings by industry across the region are in Administrative And Support Service Activities (42.5%) followed by Human Health and Social Work Activities (13.3%) and Professional, Scientific And Technical Activities (7.7%). Greater analysis could be performed if the industry groupings aligned with the region's sector growth priorities.

Figure 14: Top recruiters in Cambridgeshire and Peterborough (excluding recruitment agencies)

Top Recruiters in Cambridgeshire

Source: Lightcast (2022)

The top recruiters across the region are the NHS, University of Cambridge and AstraZeneca. The NHS remains as the top employer when broken down per area, whilst the top 2 and top 3 employers vary outside of Cambridge. It is important to recognise that recruitment challenges within the NHS will be distinctively different to those for SMEs and micro-businesses which dominate in the region. It is therefore important for the LSIP to continue to engage all types of businesses.

Figure 15: Distance travelled to work

Distance Travelled to Work
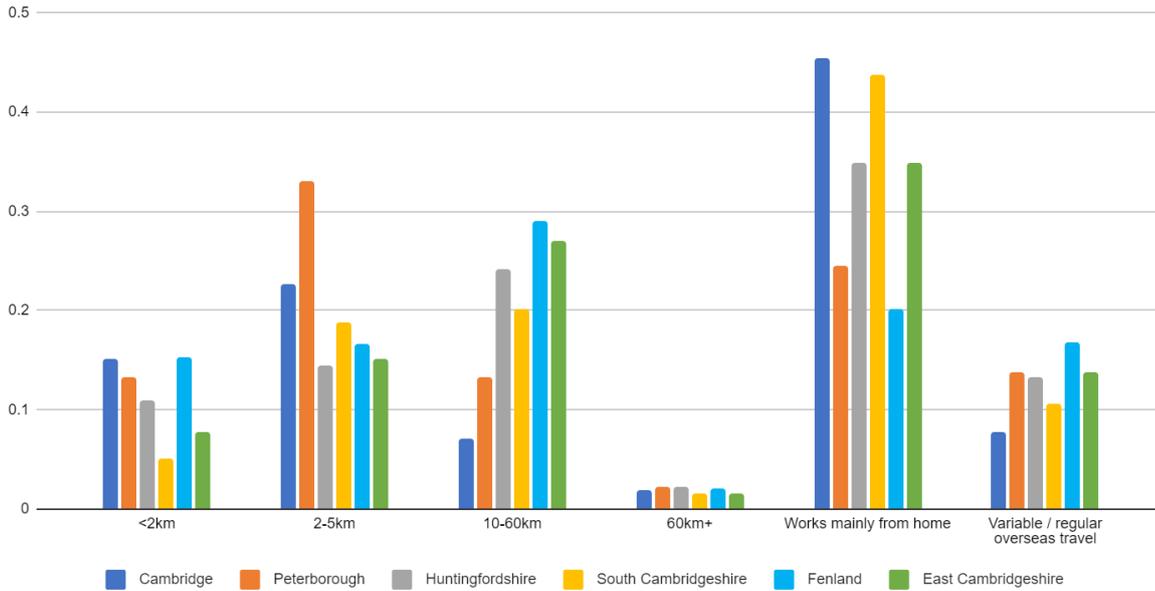
Source: ONS (2022)

The majority of people in the region work from home (34%) with the highest proportion being in Cambridge and South Cambridge and the lowest in Fenland and Peterborough. This could be reflective of the industries that dominate these areas. Fenland and Peterborough have a large proportion of their population working in Agriculture and Manufacturing where it is usually harder to work remotely, whilst Cambridge and South Cambridge are predominantly based in life sciences which is likely to allow for more flexibility.

Figure 16: Highest level of qualification

Highest Level of Qualification
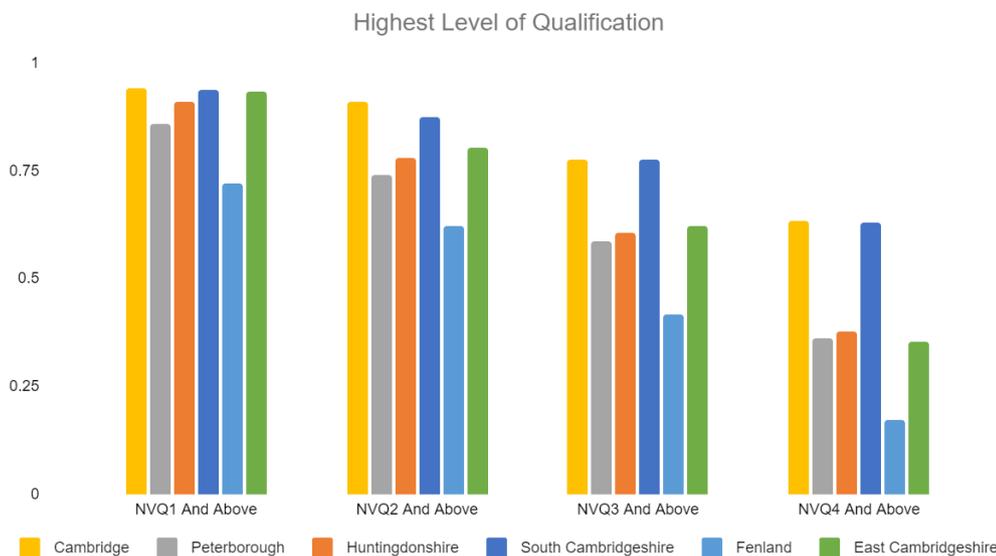
Source: Nomis (2022)

Cambridge and South Cambridgeshire have the highest proportion of their population with a qualification level at NVQ4 and Above whilst Fenland has the lowest. This could be affected by the different skills required for the industries and jobs available in that area. Greater support for workplace based upskilling and focused provision may be required in Fenland to increase the average and improve levelling up in the region.

This graphic also supports the wider stakeholder engagement and desktop research which suggests that ambitions are generally lower in Fenland. More work and targeted policies need to be done to raise ambition for all ages in the area.

Figure 17: Most frequently sought 'common skills' in job postings

Legend: Cambridge · Peteborough · Huntingdonsire · South Cambridgeshire · Fenland · East Cambridgeshire
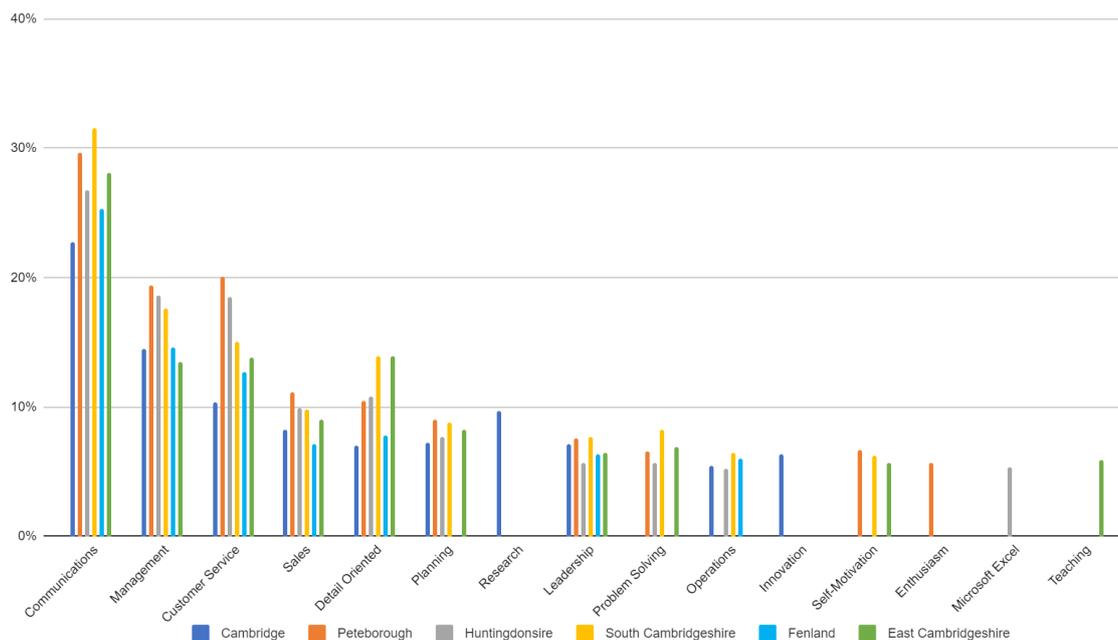
Source: Lightcast (2022)

The most common sought skills are in communications, management and customer service. A view by sector and understanding of the supply of these skills would provide more insight.

Figure 18: Most frequently specialised skills sought after in job postings

No.	Skill	Frequency in postings					
		Cambridge	Peterborough	Huntingdonshire	South Cambs	Fenland	East Cambs
1	Auditing	3%	5%	4%	5%	6%	4%
2	Marketing		7%	5%	7%	4%	5%
3	Warehousing		4%	5%	6%	6%	4%
4	Finance	5%	5%	5%	5%		5%
5	Invoicing		3%	3%	5%		4%
6	Agile Methodology	4%	4%	3%	4%		
7	Machinery			3%		5%	5%
8	Nursing		4%	4%		5%	
9	KPIs		4%	3%		3%	
10	Personal Care					6%	3%
11	Python	5%			3%		
12	Mental Health			3%		5%	
13	Risk Analysis				3%	4%	
14	Accounting		4%		3%		
15	Procurement		3%		3%		
16	Food Safety & Sanitation					5%	
17	Purchasing						4%
18	Software Engineering	4%					
19	JavaScript	3%					
20	Pharmaceuticals	3%					
21	Computer Science	3%					

No.	Skill	Frequency in postings					
22	Software Development	3%					
23	C++	3%					
24	Standard Operating Procedure						3%

The most frequently sought specialised skills are in auditing, marketing and warehousing. A view by sector and understanding of the supply of these skills would provide more insight.

Figure 19: Digital occupation openings

Distribution of Digital Occupation Openings

Legend: East Cambridgeshire, Fenland, South Cambridgeshire, Huntingdonshire, Peterborough, Cambridge

Values shown: 6%, 24%, 11%, 18%, 38%
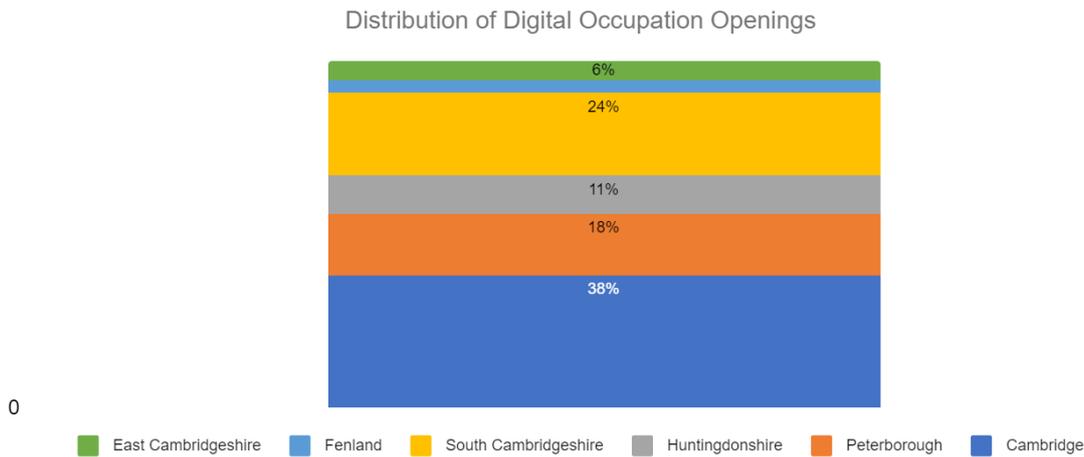
Digital occupation openings are predominantly distributed\ in Cambridge, suggesting a high demand for digital skills in this area. An understanding of the current provision available and the supply of digital skills would provide more insight into the skills gap.

Figure 20: Most frequently sought common skills in digital job postings

Most Frequently Common Skills Sought in Digital Job Postings
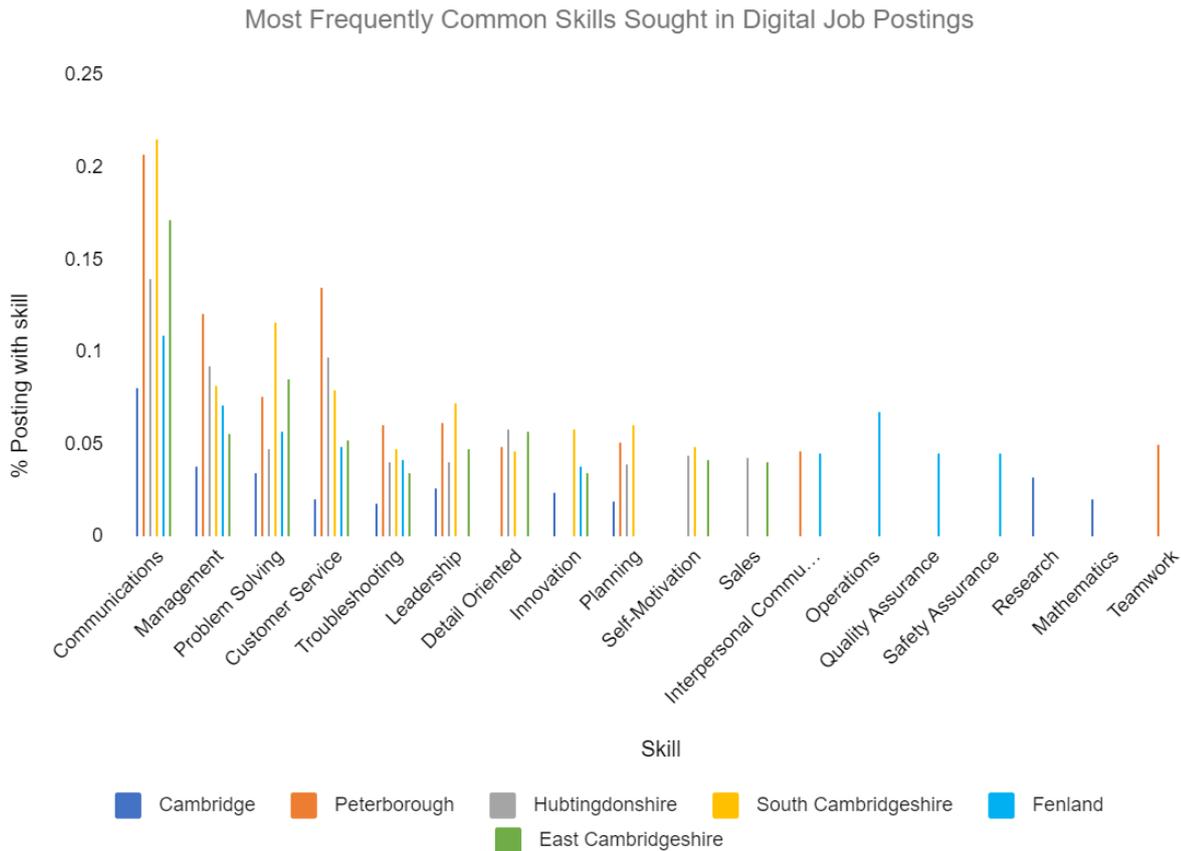
Source: Lightcast (2022)

The most common sought skills in digital occupations are in communications, management and problem solving. This is very similar to the results for all job postings in figure 21 and highlights the importance of transferable skills.

A view of the most frequently sought specialised skills in digital job postings can also be found in a data book. However, it would be useful to understand the specific digital skills required that are underpinning a wider set of occupations as digital literacy becomes increasingly prevalent in all jobs.

Figure 21: % of total job openings for green jobs

% of Total Job Opening
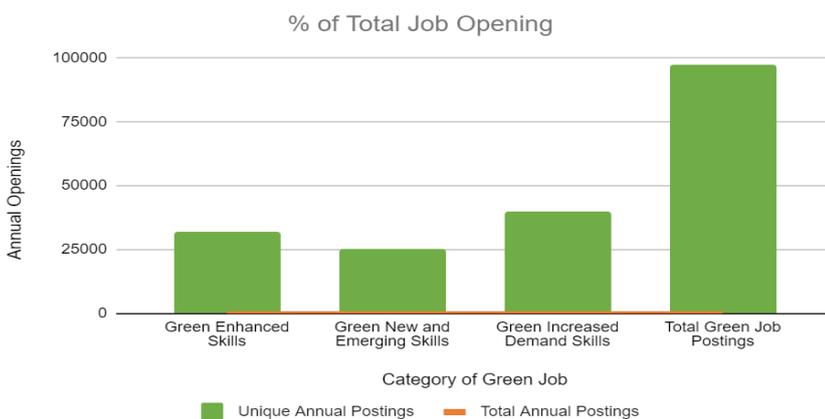
Source: Lightcast (2022)

This graph shows a breakdown of the job openings for the three categories of Green Jobs used by Lightcast. Green Increased Demand, where there are significant changes in skills requirements, have the greatest number of openings. Green New and Emerging skills are the smallest proportion of total openings and are where there are new skills or significant changes to skills required. This may suggest that more green activity is becoming embedded within current roles so smaller changes in skills are required.

Figure 22: SSA1 enrolments and openings

SSA1 Enrolments & Openings
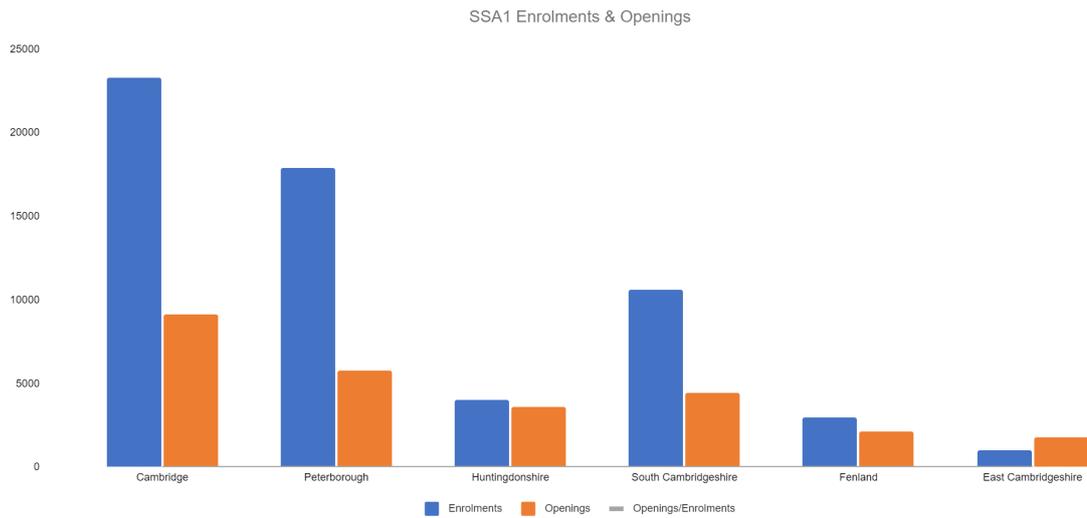
Source: Lightcast (2022)

This graph shows Lightcast's closest analysis to a skills gap. Enrolments are greater than openings across the region except for East Cambridgeshire where openings are greater than enrolments. This suggests that the demand for the courses is less than the supply and therefore there could be a potential skills shortage.

Appendix 15 - Additional Survey Insights

Profile of respondents by sector

Sector	10 or less	11 to 50	51 to 250	More than 250	Grand Total
Advanced Engineering Manufacturing and Material	2.26%	3.39%	1.69%	2.26%	9.60%
Agriculture and Food	0.56%	0.00%	0.00%	0.56%	1.13%
Construction	0.00%	0.56%	1.13%	0.00%	1.69%
Education and Professional Services	7.91%	2.82%	5.08%	8.47%	24.29%
Haulage and Logistics	0.00%	0.56%	0.00%	0.56%	1.13%
Health and Social Care	0.00%	0.00%	0.00%	2.82%	2.82%
Hospitality and Tourism	0.56%	2.26%	1.13%	0.56%	4.52%
IT and Digital	0.56%	3.39%	1.13%	0.00%	5.08%
Life Sciences	0.00%	1.69%	0.00%	0.00%	1.69%
Manufacturing and Materials	0.00%	0.00%	1.13%	0.00%	1.13%
Other	12.43%	3.39%	3.39%	4.52%	23.73%
Property	0.56%	0.00%	0.00%	0.00%	0.56%
Property and Construction	5.08%	5.65%	3.95%	7.34%	22.03%
Sustainability Environmental and Green Tech	0.56%	0.00%	0.00%	0.00%	0.56%
Grand Total	**30.51%**	**23.73%**	**18.64%**	**27.12%**	**100.00%**

Confidence in Education Sector
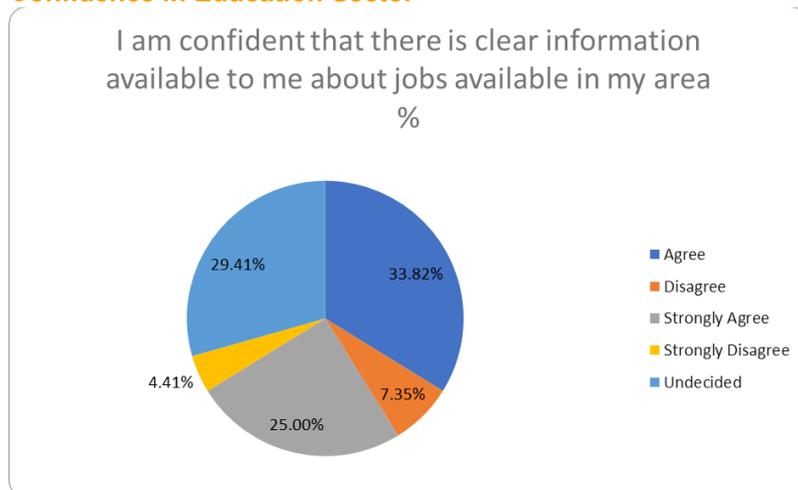
I am confident that there is clear information available to me about jobs available in my area
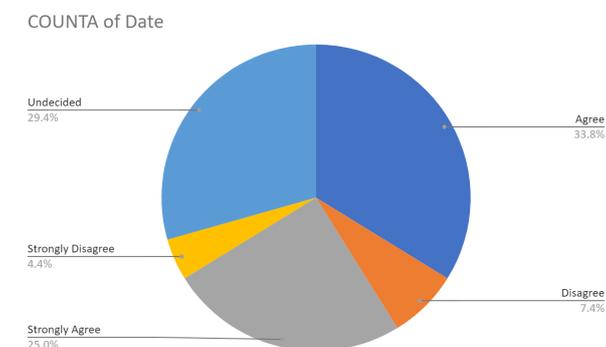
Where would you turn to for support in identifying your priority skills needs?

Who you turn to get get advice on you skills and training needs
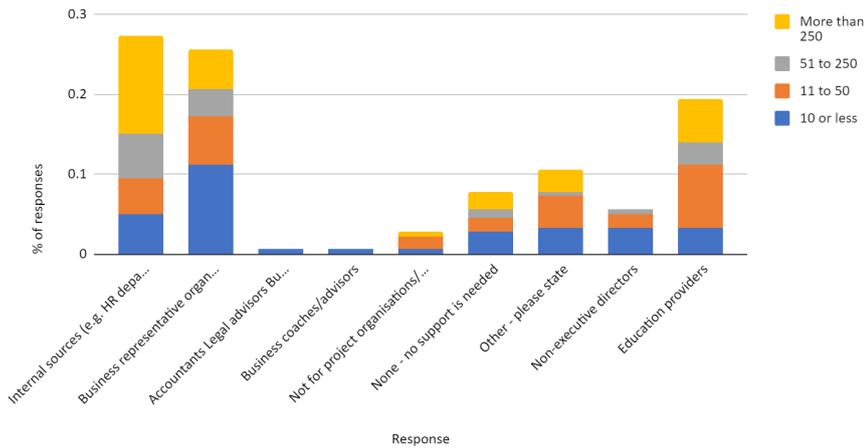
In the last 12 months which Education and Training providers have you engaged with?

In the last 12 months which Education and Training providers have you engaged with?
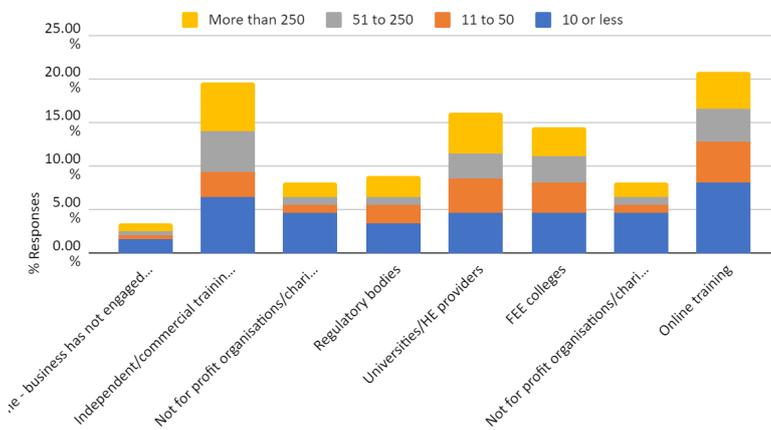
In the last 12 which barriers to education and training have you experienced?

In the last 12 which barriers to education and training have you experienced?
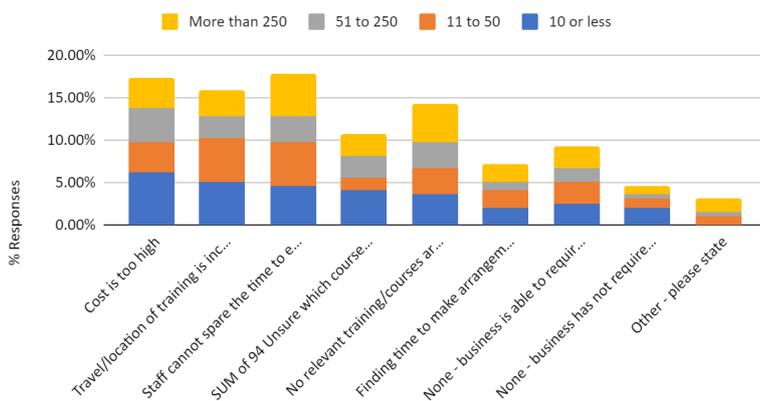
Appendix 16 - Databook Contents

Analysis	Source(s)
Employee & Employer Overview	
1. Economically Active Population	NOMIS, ONS
2a. Employment by Occupation	Lightcast, NOMIS
2b. Job Postings by Occupation	Lightcast, NOMIS
1. Job postings by occupation (visual)	Lightcast
4. Travel to work	ONS
1. Job postings by occupation (visual)	NOMIS
Skills	
6. Skills by region	Lightcast
Educational Provision	
7. Population's Qualifications	Lightcast
8. SSA1 Provision & Openings	Lightcast
9. SSA2 Provision & Openings	Lightcast
Digital Jobs	
4. Digital occupations	Cambridge Insights, Lightcast
Green Jobs	
5. Green occupations	Cambridge Insights, Lightcast
Apprenticeships	
Apprenticeship Provision	DfE

Alternative data	
HE Skills Supply	Geek talent
FE Skills Supply	Geek talent/DfE Data
HE Profile	Geek talent
FE College Profile	DFE
ESCO Skills Diagram	ESCO/Geek Talent
ESCO Data for skills diagram	ESCO/Geek Talent
ESCO Overview	ESCO/Geek Talent
ESCO Environmental Consultant vs Lightcast	ESCO/Geek Talent
ESCO Solar Energy Installer vs Lightcast	ESCO/Geek Talent
ESCO Software Engineer vs Lightcast	ESCO/Geek Talent
Green Term Definitions	Geek Talent
Digital SOC v 2020	Geek Talent
Green Jobs Analysis	Geek Talent
Digital Titles	Geek Talent
Final Green Digital 2020	Geek Talent
SOC2010 - SOC2020 xref	Geek Talent

Providers by Location	DfE

Appendix 17 - ESCO

European Skills, Competences, Qualifications and Occupations (ESCO) is a multilingual classification that identifies and categorises skills, competences, qualifications and occupations relevant for the EU labour market and education. ESCO has been developed by The European Commission since 2010. The ESCO skills pillar distinguishes between i) skill/competence concepts and ii) knowledge concepts by indicating the skill type. There is however no distinction between skills and competences. Each of these concepts comes with one preferred term and a number of non-preferred terms in each of the 27 ESCO languages. Every concept also includes an explanation in the form of a description.

The skills pillar of ESCO contains 13,485 concepts structured in a hierarchy which contains four sub-classifications. Each sub-classification targets different types of knowledge and skill/competence concepts:

- Knowledge
- Skills
- Attitudes and values
- Language skills and knowledge

In addition to the hierarchy, subsets of skills can be accessed through:

- A transversal skill hierarchy
- A collection of languages
- A collection of digital skills

The ESCO skill hierarchy is in a continuous process of improvement. Please share your feedback regarding the quality of the skills and skill groups through our contact page.

Visualisation of ESCO
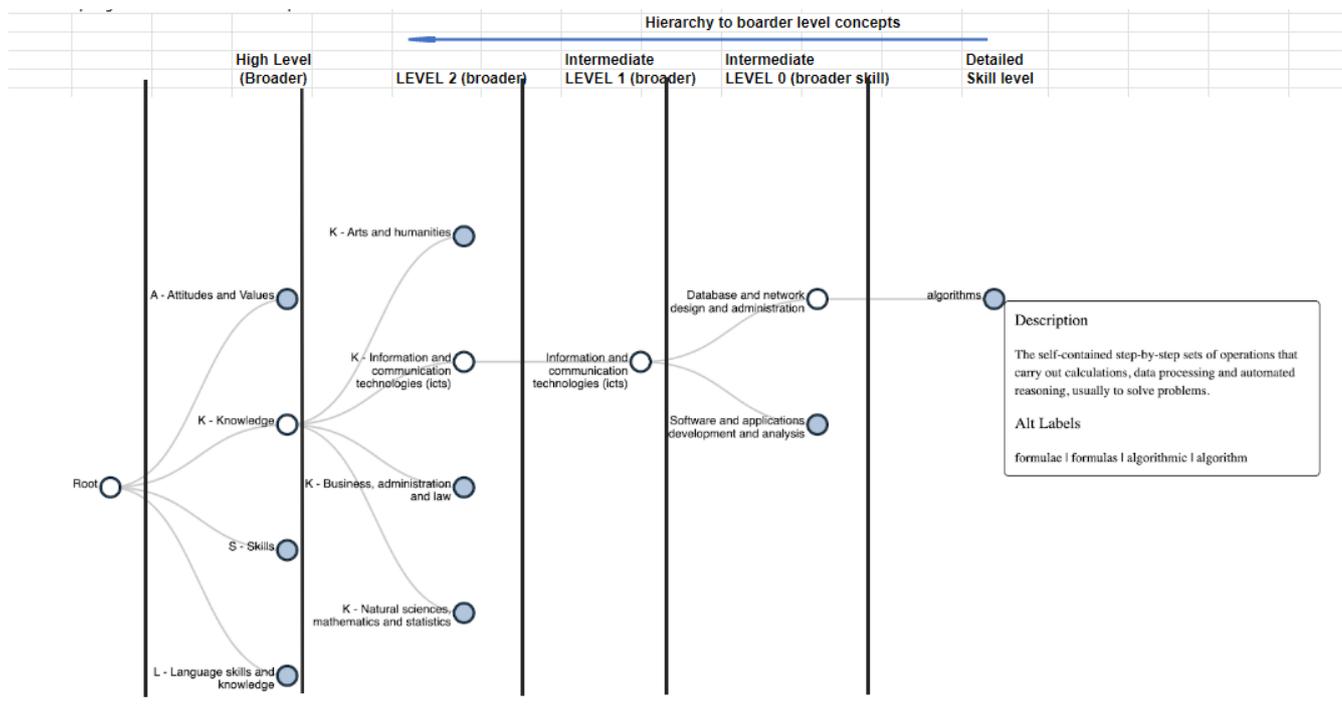
Environmental Consultant	ESCO Description		
The word, "Consultant" is a vague term and there are many environments in which they can operate (e.g., air, water, soil, climate) so there are a wide variety of skills and related job titles.	Environmental consultants search for technological solutions to tackle environmental problems. They detect and analyse environmental issues and develop new technological production processes to counter these problematic issues. They research the effect of technological innovations and present their findings in scientific reports.		
Alternative titles	**ESCO Essential Skills and Competences**	**ESCO Optional Skills and Competences**	
climate change specialist	advise on environmental remediation	apply scientific methods	
ecosystem restoration project manager	advise on pollution prevention	assess environmental plans against financial costs	
environmental advisor	analyse environmental data	carry out training in environmental matters	
environmental compliance expert	assess environmental impact	inspect industrial equipment	
environmental consultant	carry out environmental audits	liaise with engineers	
environmental expert	collect samples for analysis	liaise with local authorities	
environmental health manager	conduct environmental surveys	monitor environmental parameters	
environmental scientist	create solutions to problems	perform scientific research	
environmental specialist	develop environmental policy	promote environmental awareness	
environmental sustainability expert	develop environmental remediation strategies	work with chemicals	
environmental technologist	investigate pollution	write scientific publications	
geological technologist	measure pollution		
geologist	perform environmental investigations		
green infrastructure analyst	provide training in sustainable tourism development and management		
mineral technologist	report on environmental issues		
soil scientist	report pollution incidents		
technological environmentalist			
	ESCO Essential Knowledge	**ESCO Optional Knowledge**	
	environmental legislation	environmental engineering	
	environmental policy		
	environmental threats		
	pollution legislation		
	pollution prevention		
	scientific research methodology		
Top Advertised titles	**Top Requested Specialised Skills**	**Top Requested Specialised Knowledge**	**Lightcast - Top Requested Specialised Knowledge**
Environmental consultant	environmental consulting	sustainability/sustainable development	Environmental Consulting
Environmental advisor	project management	climate change	Environmental Impact Assessments
Environmental assurance advisor	risk assessment	environmental engineering	Carbon Management
Sustainability consultant	assess environmental impact	environmental permitting/environmental planning	Stakeholder Communications
Geo environmental engineer	report on environmental issues	environmental science	Climate Resilience
Environmental specialist	advise on sustainability solutions		Geology

Air quality consultant	communication skills		Nuclear Power
Supply chain sustainability analyst	environmental management		Ecology
Sustainability technologist	strategy development		Environmental Science
Principal environmental sustainability consultant			Financial Management

Solar Energy Installer	ESCO Description		
The terminology is still evolving, particularly the use of "solar" versus "photovoltaic". The scale of the installation is important, individual and domestic versus commercial and large-scale.	Solar energy technicians install and maintain systems that collect solar energy. They prepare the necessary fixtures, often on roofs, install solar panels and plug them into an electronic system including an inverter to connect the solar energy systems to the electricity lines. *Technicians involved in design and monitoring of large installation may have sophisticated skills.*		
Alternative titles	**ESCO Essential Skills and Competences**	**ESCO Optional Skills and Competences**	
photo-voltaic cell technician	check compatibility of materials	analyse big data	
photovoltaic cell technician	comply with legal regulations	analyse test data	
photovoltaic energy installer	follow health and safety procedures in construction	answer requests for quotation	
photovoltaic energy panel installer	follow safety procedures when working at heights	assemble mechatronic units	
photovoltaic field technician	inspect construction supplies	assemble sensors	
photovoltaic system technician	inspect electrical supplies	calculate needs for construction supplies	
PV field technician	install circuit breakers	calculate solar panel orientation	
solar energy array technician	install concentrated solar power systems	demonstrate products' features	
solar energy farm technician	install electrical and electronic equipment	design prototypes	
solar energy generation technician	install photovoltaic systems	determine suitability of materials	
solar energy harvesting technician	interpret 2D plans	estimate profitability	
solar energy installation technician	interpret 3D plans	install automation components	
solar energy panel installer	mount photovoltaic panels	install inverter	
solar energy panel technician	test procedures in electricity transmission	install mechatronic equipment	
solar energy plant technician	transport construction supplies	keep personal administration	
solar energy system builder	use measurement instruments	maintain equipment	
solar energy system constructor	work ergonomically	maintain robotic equipment	
solar energy system designer		maintain solar energy systems	
solar energy system installer		maintain work area cleanliness	
solar energy system maker		manage data	
solar energy system technician		manage quantitative data	
solar energy technician		monitor stock level	

solar farm technician		operate 3D computer graphics software	
solar O and M technician		operate printing machinery	
solar operations and maintenance technician		order construction supplies	
solar roofer		perform data mining	
solar technician		process incoming construction supplies	
		provide information on solar panels	
		rig loads	
		test mechatronic units	
		test sensors	
		use CAD software	
		use safety equipment in construction	
		use specific data analysis software	
		use technical drawing software	
		utilise machine learning	
		work in a construction team	
	ESCO Essential Knowledge	ESCO Optional Knowledge	
	electrical wiring plans	3D modelling	
	electricity	3D printing process	
	mechanics	CAD software	
	solar energy	ICT software specifications	
		automation technology	
		building codes	
		business intelligence	
		cloud technologies	
		control engineering	
		data mining	
		data storage	
		electric heating systems	
		information extraction	
		information structure	
		maintenance of printing machines	
		maintenance operations	
		mechatronics	
		printing materials	
		printing on large scale machines	
		printing techniques	
		robotic components	
		robotics	
		sensors	
		smart grids systems	
		solar panel mounting systems	
		statistical analysis system software	
		types of photovoltaic panels	
		unstructured data	
		visual presentation techniques	
		zero-energy building design	

Top Advertised titles	Top Requested Specialised Skills	Top Requested Specialised Knowledge	Lightcast - Top Requested Specialised Knowledge
Solar designer	electrical engineering	electricity	Solar Systems
Solar electrician	maintenance & repair	renewable energy	Lead Generation
Solar storage technician	electrical design	solar pv	Renewable Energy Systems
Solar PV commissioning engineer	estimating	maintenance operations	Warehousing
Solar farm electric technician	advise on sustainability solutions	full uk driving licence	Telemarketing
Solar battery storage technician	assess environmental impact	energy efficiency	Solar Energy Systems Installation
Solar PV installation electrician roofer	Install inverter	risk assessment	Solar Engineering
Solar PV electrician			Data Capture
Solar installer			Site Inspection
			Office Equipment

Software Engineer	ESCO Description		
Software Engineer is often used as a synonym for Software Developer, it can imply a more formal approach such as the use of software design patterns. Titles often include reference to specific computer languages.	Software developers implement or program all kinds of software systems based on specifications and designs by using programming languages, tools and platforms. *The huge choice of languages, tools and platforms means that there are many optional skills.*		
Alternative titles	ESCO Essential Skills and Competences	ESCO Optional Skills and Competences	
application developer	analyse software specifications	adapt to changes in technological development plans	
application programmer	create flowchart diagram	collect customer feedback on applications	
applications engineer	debug software	design user interface	
application software developer	define technical requirements	develop creative ideas	
developer of software	develop automated migration methods	do cloud refactoring	
programmer	develop software prototype	integrate system components	
soft developer	identify customer requirements	migrate existing data	
software developer	interpret technical requirements	use automatic programming	
software developers	manage engineering project	use concurrent programming	
software engineer	perform scientific research	use functional programming	
software specialist	provide technical documentation	use logic programming	
solutions developer	use an application-specific interface	use object-oriented programming	
	use software design patterns	use query languages	
	use software libraries	utilise machine learning	
	use technical drawing software		
	utilise computer-aided software engineering tools		
	ESCO Essential Knowledge	ESCO Optional Knowledge	
	ICT debugging tools	ABAP	
	computer programming	AJAX	
	engineering principles	APL	

	engineering processes	ASP.NET	
	integrated development environment software	Ansible	
	project management	Apache Maven	
	technical drawings	Assembly (computer programming)	
	tools for software configuration management	C#	
		C++	
		COBOL	
		CoffeeScript	
		Common Lisp	
		Eclipse (integrated development environment software)	
		Erlang	
		Groovy	
		Haskell	
		ICT security legislation	
		Internet of Things	
		Java (computer programming)	
		JavaScript	
		JavaScript Framework	
		Jenkins (tools for software configuration management)	
		KDevelop	
		Lisp	
		MATLAB	
		ML (computer programming)	
		Microsoft Visual C++	
		Objective-C	
		OpenEdge Advanced Business Language	
		PHP	
		Pascal (computer programming)	
		Perl	
		Prolog (computer programming)	
		Puppet (tools for software configuration management)	
		Python (computer programming)	
		R	
		Ruby (computer programming)	
		SAP R3	
		SAS language	
		SQL	
		STAF	
		Salt (tools for software configuration management)	
		Scala	
		Scratch (computer programming)	
		Smalltalk (computer programming)	
		Swift (computer programming)	
		TypeScript	
		VBScript	

		Visual Studio .NET	
		World Wide Web Consortium standards	
		Xcode	
		blockchain openness	
		blockchain platforms	
		cyber-attack counter-measures	
		defence standard procedures	
		object-oriented modelling	
		smart contract	
		software anomalies	
Top Advertised titles	Top Requested Specialised Skills	Top Requested Specialised Knowledge	Lightcast - Top Requested Specialised Knowledge
Software engineer	software engineering	software development	Software Engineering
Fullstack software engineer	c++	application architecture	Software Development
Embedded software engineer	arm	computer science	Python (Programming Language)
Principal software engineer	python	programming languages	C++ (Programming Language)
Software develop engineer	java	embedded software	C# (Programming Language)
Software engineer manager	web development	linux	Computer Science
Lead software engineer	ruby		Agile Methodology
Principal software graphic engineer	git		Linux
Software support engineer	javascript		Maintenance Engineering
Electronics and software engineer	.net		Ventilation
Software performance analysis engineer	html		
	sql		
	nosql		
	docker		
	mvc (model-view-controller)		
	nodejs		
	css		
	agile		
	asp.net		

Appendix 18 - LSIP Success Criteria

01. PURPOSE

The purpose of the success criteria is to provide a basis against which the appropriateness of outcomes and recommendations for the LSIP report can be assessed.

This is necessary to support successful development and delivery of the LSIP Report for Cambridgeshire and Peterborough by May 2023.

The intention is for the LSIP to be developed and implemented in a way which takes stakeholders with us, working in genuine collaboration and cooperation in the best interests of Cambridgeshire and Peterborough and ensuring that the research is genuinely employer led, whilst also working constructively with the range of stakeholders.

These criteria assume that the data research and analysis for the project meets the following quality metrics:

- A target of 250 stakeholders have been engaged and consulted through meaningful interactions with the project, a target 150 of these stakeholders should be employer representatives to ensure that the data is sufficiently representative of the employer voice.

02. CRITERIA

Success criteria for LSIP recommendations:

- Is it supported by the data and insights gathered from employers as part of the LSIP?
- Does it increase and/or improve the skills available to employers in the region within the scope of the LSIP?
- Can it be delivered through existing funding routes or the LSIF?
- Can it be implemented within the time frame of the LSIP?
- Is there an existing precedent or model for the successful delivery of this intervention? If not, is it supported by a consensus from a group of employers and education providers?

Appendix 19 - Glossary (Post-16)

Text	Description
Adult Education Budget (AEB)	The AEB is funding targeted at engaging adults and providing the necessary skills and learning for work, an apprenticeship or other learning. The national AEB is used to support statutory entitlements to full funding for eligible adults (aged 19 and above). The statutory responsibility for certain adult education functions, including for funding the statutory free entitlements has been transferred to certain Mayoral Combined Authorities (and delegated to the Mayor of London) in relation to their areas together with an associated portion of the AEB.
Adult T-Levels	T Levels were launched in September 2020 as technical equivalents to A-levels, but originally intended for those aged 16 to 19. Students aged 19 to 25 who have an education health and care plan can currently access any T Level available for 16 to 19s. Adult T-Levels were piloted in 11 Colleges in 2023.
Advanced Learner Loan (ALL)	An Advanced Learner Loan helps eligible adults (aged 19 and above) with the costs of a course at a college or training provider in England. Further information can be found on GOV.UK. Qualifications for which an individual can take a loan out are known as "qualifications approved for ALL." They can be found at: https://www.qualifications.education.gov.uk/
Advanced Level	Any qualification at level 3, they include A Levels, the T Level technical qualification, level 3 NVQs and level 3 National Diplomas. Apprenticeships can also be delivered at advanced level.
Advanced Technical Education	Refers to technical education that is delivered at level 3, this includes level 3 apprenticeships, T Levels, level 3 NVQs and some Level 3 National Diplomas. This is the same level as A Levels.
Apprenticeship	An apprenticeship is a job that combines practical training with study. These can be provided from intermediate level (level 2) to professional level (levels 6&7). See "A guide to apprenticeships" on GOV.UK for further information.
Higher Technical Qualification	This refers to a level 4-5 Higher Technical Qualification that gains approval from the Institute where its content aligns with the Institute's employer-led standards.
Augar Report	The Post-18 Review of Education and Funding: Independent Panel Report published on 30 May 2019. It makes recommendations on how government can ensure that the education system in England for those aged 18 years and over is: accessible to all; supported by a funding system that provides value for money and works for students and taxpayers; incentivises choice and competition across the sector; and encourages the development of the skills that we need as a country. See GOV.UK for more information.
Awarding organisations	Refers to individual organisations recognised by Ofqual that design, develop and certificate qualifications but are not themselves education providers.
Blended learning	Learning that takes place partly in a digital environment and partly in-person.
Business Representative Organisations (BRO's)	The government is working closely with Business Representative Organisations and Trade Associations to get advice
Free Courses for Jobs	If you are aged 19 or over, you could access a level 3 qualification for free. This is part of the support available from the government to help you gain the skills you need to get the job you want - whatever your stage of life.

Text	Description
Degree Apprenticeship	An apprenticeship delivered at level 6 or 7, equivalent to an undergraduate or post-graduate degree.
Degree Level	Any qualification at level 6 or 7. Level 6 includes a full undergraduate degree (may be degree with honours/bachelor's degree), or a graduate diploma. Level 7 includes a master's degree, postgraduate diploma and a level 7 diploma. Apprenticeships can also be delivered at levels 6 and 7.
Education and Skills Funding Agency (ESFA)	The ESFA is an executive agency sponsored by the Department for Education. It is responsible for funding education and skills for children, young people and adults. See the ESFA website for more information.
Employer-led standards	Set out the knowledge, skills and behaviours (KSBs) required for an occupation. Also known as occupational standards. Employer-led standards enable assessment of whether an individual has achieved the KSBs needed to be competent in an occupation. They are developed by groups of employers and approved by the Institute for Apprenticeships and Technical Education. They currently form the basis of the T Level technical qualification and apprenticeships (see also Apprenticeship Standards).
Employer Representative Body	An eligible body that has been designated by the Secretary of State to lead the development and any subsequent review of a local skills improvement plan for a specified area.
ESCO	Is the European multilingual classification of Skills, Competences and Occupations. ESCO works as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market, education and training
European Social Fund (ESF)	The European Social Fund (ESF) Operational Programme is part of the European Structural and Investment Funds Growth Programme for England in 2014-2020. The Programme's priorities are to increase labour market participation, promote social inclusion and develop the skills of the potential and existing workforce. It contributes to improving youth employment by providing support for young people who are harder to reach and incorporates the Youth Employment Initiative (YEI) money in areas with higher rates of youth unemployment. The UK has now left the European Union and is ending its participation in the European Social Fund at the end of 2023. For more information, please see: https://www.gov.uk/guidance/england-2014-to-2020-europeanstructural-and-investment-funds
Further education college (FEC)	Refers to institutions conducted by further education corporations. Further education colleges offer a variety of courses from entry level through to higher level qualifications.
Further Education Provider	An education or training organisation that is approved to deliver education to students. In this paper 'provider' relates specifically to those that provide further education.
Higher level	Any qualification at levels 4 and 5. Apprenticeships can also be at higher level.
Higher technical education (HTE)	Refers to technical education provided at levels 4 and 5.
Information, advice and guidance	Impartial, practical support provided to students enabling them to make suitable educational and employment decisions. This can help minimise potential costs associated with uninformed and unsuccessful choices. Information, advice and guidance to support employers in identifying appropriate training that matches their skills needs.

Text	Description
Institute for Apprenticeships and Technical Education (Institute)	The Institute is an executive non-departmental public body, sponsored by the Department for Education. It approves and publishes the employer-led standards for occupations (and their associated apprenticeship assessment plans), approves technical education qualifications and advises government on funding for each standard. See the Institute website for more information.
International Labour Organisation	The International Labour Organization is a United Nations agency whose mandate is to advance social and economic justice by setting international labour standards
Institutes of Technology (IoT)	Collaborations between further education colleges, universities and employers, focused on providing higher-level technical STEM education.
Intermediate level	Any qualification at level 2, including GCSEs (Grades A*-C/9-4), level 2 NVQ. Apprenticeships can also be at intermediate level.
Knowledge, skills and behaviours	These are the outcomes set out in employer-led standards, which demonstrate competence in an occupation. For an approved Higher Technical Qualification and the T Level qualifications, an individual will attain as many of the outcomes as may be reasonably expected from a course of education.
Level (L)	Refers to the 9 qualification levels in England, Wales and Northern Ireland. See GOV.UK for more information.
Level 2 Also known as Intermediate level	Level 2 qualifications include GCSEs (Grades A*-C/9-4) and level 2 Technical Award. Apprenticeships can also be delivered at Intermediate level.
Level 3	Also known as Advanced level. Level 3 qualifications include A Levels, T Levels, Pearson BTECs and Cambridge Technicals. Apprenticeships can also be delivered at Advanced level.
Levels 4 and 5	Also known as higher level. Level 4 includes Certificate of higher education, level 4 diploma and higher national certificate. Level 5 includes, diploma of higher education, foundation degree, higher national diploma. Apprenticeships can also be delivered at higher level.
Levels 6 and 7	Also known as degree level. Level 6 includes a full undergraduate degree (may be degree with honours/bachelor's degree) and a graduate diploma. Level 7 includes a master's degree, postgraduate diploma and a level 7 diploma. Apprenticeships can also be delivered at degree level.
Lifelong Loan Entitlement	A new transformative funding provision, enabling people to access four years' worth of student loan funding across further and higher education providers throughout their lifetime.
Local Enterprise Partnership (LEP)	A legal relationship between two or more local authorities by way of partnership or otherwise, created for the purposes of identifying, determining and facilitating economic opportunities that generate economic growth, prosperity and job creation in a particular area.
Local Skills Improvement Plans	Local Skills Improvement Plans will set out the key changes required to skills provision in a local area to make provision more responsive to labour market skills needs.
Mayoral Combined Authority (MCA)	A combined authority is a legal structure that may be set up by local authorities in England, with or without a directly elected mayor. Specified adult education statutory functions of the Secretary of State have been transferred to certain MCAs by way of affirmative orders under the Local Democracy, Economic Development and Construction Act 2009. In addition, a delegation of those functions has been made by the Secretary of State in relation to London (which is not a combined authority) under section 39A of the Greater London Authority Act 1999.

Text	Description
Multiply	Adults looking to improve their numeracy skills are set to benefit from a £270 million investment in new courses, helping to level up opportunities for more people to progress and get good, well-paid jobs.
National Colleges	National Colleges are institutions, created by employers to support high-level skills training in those sectors that are economically and strategically important to UK growth (i.e. High-Speed Rail, Nuclear, Digital, Creative & Cultural). Courses are predominantly between levels 4 to 6, with employers involved in developing the curriculum and 58 industry professionals teaching the content in simulated workplaces.
National Skills Fund	A £2.5 billion fund to help adults learn valuable skills and prepare for the economy of the future.
Ney Review	The report of Dame Mary Ney's review of financial oversight arrangements for further education and sixth form colleges, with recommendations for improvement, published on 15 July 2020. See GOV.UK for more details.
Organisation for Economic Co-operation and Development (OECD)	The Organisation for Economic Co-operation and Development is an intergovernmental organisation with 38 member countries, founded in 1961 to stimulate economic progress and world trade
Occupational Standards	Occupational Standards is a term often used to refer to employer-led standards. They contain a list of the skills, knowledge and behaviours an apprentice will need to have learned by the end of their apprenticeship. Apprenticeships based on employer-led standards have replaced apprenticeship frameworks as part of reforms to raise the quality of apprenticeships. The standards are developed by groups of employers and the Institute for Apprenticeships and Technical Education is responsible for approving and publishing the employer-led standards and the related assessment plans. (See also employer-led standards).
Office for Students (OfS)	The OfS is a non-departmental public body and is the independent regulator of higher education in England. See OfS website for more information.
Ofsted	The Office for Standards in Education, Children's Services and Skills is a non-ministerial department of His Majesty's government, reporting to Parliament.
Office of Qualifications and Examinations Regulation (Ofqual)	The Office of Qualifications and Examinations Regulation (Ofqual) regulates qualifications, examinations and assessments in England. Ofqual is an independent government department with jurisdiction in England. See the Ofqual website for more information.
Post-16 Skills Plan	The Government's plan to support young people and adults to secure skilled employment and meet the needs of the economy, including through bringing forward technical education reforms based on the work of Lord Sainsbury's independent panel. See GOV.UK for more information.
Sainsbury Review	The review conducted by the Independent Panel on Technical Education, chaired by Lord Sainsbury, which reported its findings in April 2016. The recommendations were accepted in the Post-16 Skills Plan.
Skills Advisory Panels (SAP)	Mayoral Combined Authorities and Local Enterprise Partnerships have created 36 SAPs which bring together employers, skills providers and local government to resolve mismatches between skills supply and employer demand at a local level.

Text	Description
Skills Bootcamps	Skills Bootcamps offer free, flexible courses of up to 16 weeks. You will be offered a job interview with an employer once you complete the course.
Standard Occupational Classifications (SOC)	The Standard Occupational Classification (SOC) is a common classification of occupational information for the UK. The current standard is SOC 2020,
T Level	A T Level is a rigorous, stretching programme of study at level 3 containing a qualification which is based on employer-led standards, as well as a significant industry placement and other components. T Levels offer a high-quality, prestigious technical alternative to A Levels and are aligned with work-based technical education also provided at level 3 through apprenticeships. T Levels are being introduced in phases from September 2020.
Technical education	Technical education encompasses any education or training, such as qualifications and apprenticeships, which focuses on progression into skilled employment and requires the acquisition of both a substantial body of technical knowledge and a set of practical skills valued by industry. Technical education covers provision from level 2 (the equivalent of GCSEs at A* to C or 9 to 4) to higher education (level 6), but it differs from A Levels and other academic options in that it draws its purpose from the workplace rather than an academic discipline.
Traineeships	A traineeship is a skills development programme that includes a work placement. Traineeships help 16- to 24-year-olds - or 25-year-olds with an education, health and care (EHC) plan - get ready for an apprenticeship or job if they do not have the appropriate skills or experience. It can last from six weeks up to one year.
UK Shared Prosperity Fund	A fund to replace structural funding from the European Union at the end of the transition period. European Union funding has been used for boosting several aspects of economic development, including support for businesses, employment and agriculture.