Swindon and Wiltshire Skills Analysis

February 2020

Note: Produced before the Covid-19 pandemic

Contents

1. Executive Summary

Following the guidance offered in the Skills Analysis Panel (SAP) Toolkit, developed by the Department for Education (DfE), this reports seeks to build an understanding of Swindon and Wiltshire's skills supply and demand, and inform decision making on skills needs and priorities.

In terms of the skills supply, the proportion of working age population with the highest qualification levels (NVQ4+) in Swindon and Wiltshire is below the national average. This is partly driven by the low Higher Education (HE) progression rates, meaning that fewer school leavers attempt to become highly skilled. Research suggest that the lack of a local university contributes to this.

Overall, apprenticeships are seeing strong participation numbers. There were 7,300 apprenticeship starts in Swindon and Wiltshire Local Enterprise Partnership (SWLEP) in 2017/18. Of the total SWLEP population aged 16-64, 1.7% started an apprenticeship, which is higher than both the regional (1.3%) and the national average (1.1%). Similarly, apprenticeship achievements in SWLEP account for 1.0% of the total working age population, compared to a proportion of 0.8% at the country level. However, the total number of apprenticeships starts in SWLEP decreased by 11.8% in 2017/18, in line with the regional and national trends. This suggests that the apprenticeship system has room to expand further.

In term of the demand, one of the key challenges for Swindon and Wiltshire stems from the fact that the skills that are currently in high demand have been declining across the country and this trend is expected to continue over the next decade. The high-skills occupations with low demand currently in Swindon, and to a lesser extent in Wiltshire, have been growing across the country and that too is expected to continue into the future.

In addition, Swindon and Wilshire area has a low proportion of high-skill jobs, including managers, professional occupations and associate professional and technical roles. These roles are typically associated with growth and productivity and their limited presence in the area is believed to be holding back future improvements. Driven by the Local Industrial Strategy, Swindon and Wiltshire will work to further develop higher-output sectors, in which demand for high-skill roles is greater, both by encouraging local businesses to start and grow, as well as bringing in new developed businesses through inward investment. Building on the area's strengths, these sectors will include: Cyber resilience, Pharmaceutical manufacturing, ElecTech, DigiTech, Life sciences, Defence and Security.

Aside from the planned interventions within the Local Industrial Strategy, a number of jobs are expected to be affected by the introduction of robots and automation of tasks. The University of Bath analysis suggests that over the next 20 years, Automation and Artificial Intelligence could cause around 64,000 job losses, with a similar number of new jobs created, resulting in a slight net increase in jobs (c. 500) in Swindon and Wiltshire. Within this, Swindon is expected to be slightly worse off, with c.1,500 fewer jobs, and Wiltshire slightly better off, with c. 2,000 more jobs.

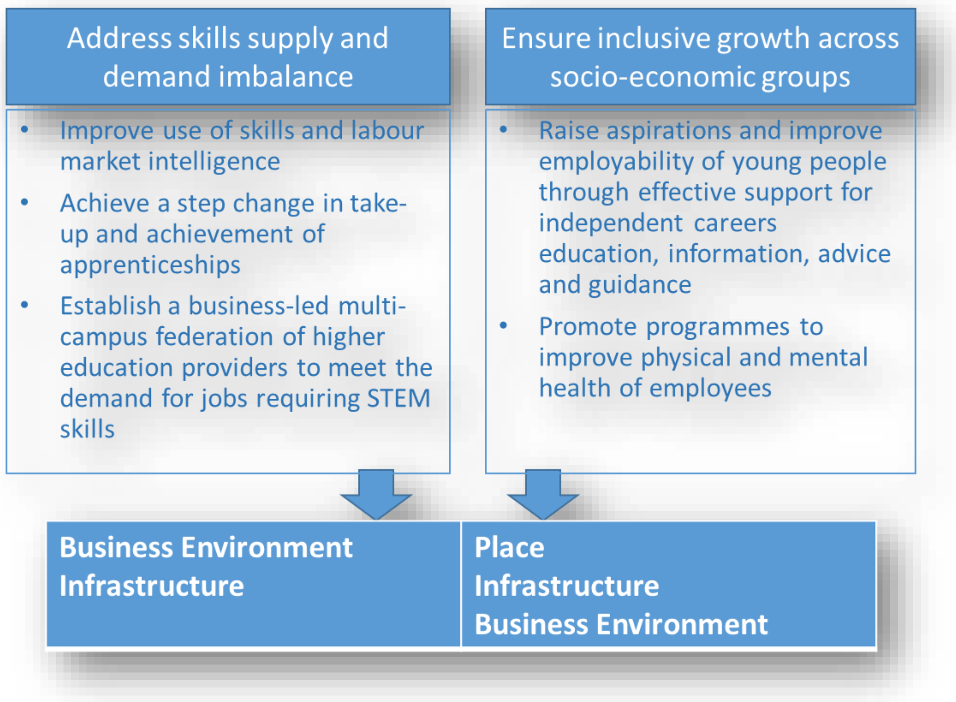
The job gains are to be led by five industries in Swindon and Wiltshire:

- Human Health and Social Work Activities, which is expected to have by far the highest net gains
- Professional, Scientific and Technical Activities
- Information and Communication
- Education, with the lowest levels of automation
- Accommodation and Food Service Activities, which is expected to see the greatest level of transformation, with a potential for two thirds of its tasks to be automated.

In contrast, the greatest losses are expected in Manufacturing, for both Swindon and Wiltshire, within which c. 50% of tasks could be automated.

To address these issues, SWLEP is currently developing a Skills Plan. The planned actions are outlined in the diagram below.

Diagram 1: Priority Areas in the Emerging SWLEP Skills Plan



2. Methodology

The Skills Analysis Panel (SAP) Toolkit is structured around four main stages outlined below:

The Skills Advisory Panels analytical framework contains 5 key stages:

Stage 1 – Analysis and definition of the local landscape
▪ Examination of the current economic landscape in the area ▪ Determine performance benchmarks within and across multiple geographical levels
Stage 2 – Analysis of skills demand
▪ Identification of the strengths and weaknesses in labour markets ▪ Exploration of skill needs based on current and future demand ▪ Insight into business and employer environments
Stage 3 – Analysis of skills supply
▪ Determine available skills against those required in the area ▪ Identification of potential challenges that may restrict skills supply
Stage 4 – Mapping of demand and supply
▪ Assessment of the types of skills gaps and the causes ▪ Ascertain whether learner provision and business development meets demand ▪ Assessment of the likelihood in meeting future demand through current supply
Stage 5 – Conclusions
▪ Derive skills priorities for the local area to improve economic efficiency ▪ Outline the available or required mechanisms to support the delivery of the skills and employment priorities

The underlying analysis in this report has been undertaken, on behalf of the Swindon and Wiltshire Local Enterprise Partnership (SWLEP), by the University of Bath Department of Economics.

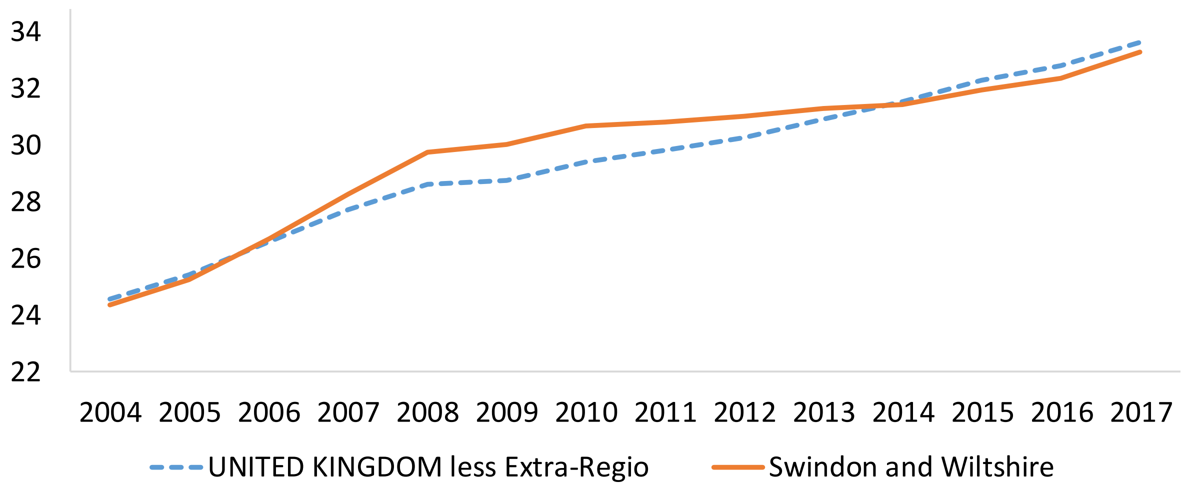
The analysis is largely based on data sources outlined by the DfE in December 2018. In some cases data availability, either in terms of local granularity or relating to some of the indicators, limited deeper examination.

The University of Bath team produced a detailed report for each stage and subcategory outlined in the SAP Toolkit. In addition, they have provided additional information about the likely impact of Automation and Artificial Intelligence on the Swindon and Wiltshire LEP labour market.

3. Setting the Context

The University of Bath analysis suggested that the SWLEP has a dynamic economy, with a number of strong and competitive sectors. However, its GVA per filled job was lower than that of England in 2017, although GVA per hour worked was comparable (see Graph 1). Growth rates in both measures were worse than England as a whole.

Graph 1: Nominal (smoothed) GVA per hour worked, 2004-2017



Manufacturing accounts for a larger share of employment in Swindon and Wiltshire than in England as a whole, while Transport & Communications and Distribution, Hotels & Restaurants account for a smaller share.

In 2018, the average gross hourly earnings in SWLEP were £15.52, slightly down on the previous year and significantly below England's average of £16.98. Although incomes are relatively low in Swindon, house prices are also low, meaning that it is relatively affordable place to live. In contrast, Wiltshire is less affordable than England as a whole.

The proportion of individuals in receipt of government payments in Swindon and Wiltshire increased between 2015 and 2018, but it is still lower than the England average. The area tends to show more deprivation relative to the comparator LEPs, although levels of extreme deprivation are fairly low. Swindon and Wiltshire rank low among local authorities for social mobility, meaning that a child from a disadvantaged background is less likely to do well at school or in the labour market. The gender gap in hourly pay in Swindon and Wiltshire is relatively high compared to the compactor LEPs and is higher than in England as a whole.

The Swindon and Wiltshire Further Education (FE) participation and achievements have declined recently, despite the increase in numbers in Swindon. There is relatively high participation in Education & Training – Community Learning and the levels of employer-based training are comparable to the national average. Barriers to training from the demand side are primarily resource constraints, time and money, and a lack of awareness of opportunities and prohibitive costs from the supply side.

In contrast to its comparator LEPs, SWLEP has a lower percentage of young people staying for Higher Education (HE) or FE study or employment in the area they grew up in. This may be partly due to the limited provision of Higher Education in the area, which also drives below-average uptake for foundation degrees and higher education.

Some core STEM subjects, such as "Engineering and Technology" and "Computer Sciences", are identified as the most popular subjects that employers would like to see delivered by Higher Education institutions. However, based on the most recent publicly available data, this demand is not being met by FE colleges, with non-STEM courses accounting for approximately two thirds of total learners in the academic year 2014/15.

Higher National Diplomas and Certificates have high levels of uptake in the SWLEP, as do apprenticeship schemes. In both cases, employers are increasingly engaged in their promotion.

There is currently a single supplier of T-levels in the SWLEP. The supplier is, however, selected to deliver T-levels in industry areas that have been identified as having skills shortages – most notably digitalisation.

Apprenticeships have been found to be effective in leading to appropriate matching employment. In line with the rising need for digital skills development in the local workforce, the employment rates of "Information and Communication Technology (ICT)" apprenticeship completers have witnessed a notable increase over the last years in Wiltshire.

The SWLEP is less exposed to possible future restrictions on migration from EU countries due to Brexit than most comparator LEPs and the country as a whole. This is due to a lower overall number of employees with EU background and also a smaller than national average reliance on EU nationals to fill 'hard-to-fill' vacancies.

4. Swindon and Wiltshire Today

The analysis in this section focusses on the trends in terms of skills supply, by looking at the qualifications of the residents, and skills demand, by looking at the mix of occupations in employment and the proportion of vacancies, including hard-to-fill and skill shortage vacancies.

The results show that the high-skilled sector of the economy is not very well developed. This is especially pronounced in Swindon, where there is both a relatively low share of labour supply as well as labour demand at the highest qualification levels. Conversely, Swindon is substantially above the national average for Machine Operator occupations (12% of employment in Swindon compared to. 8% in England). Correspondingly, there is a high proportion of overall vacancies this occupation group.

Aside from Machine Operatives, Swindon was well above the national average for Skilled Trades vacancies and has seen the fastest growth in these two groups, suggesting that the demand is increasing. The increasing demand is also apparent in the employment figures, with the proportion of staff employed in these two groups increasing by around 40% between 2015 and 2017. These two groups are also most pronounced in Swindon's hard-to-fill and skill-shortage vacancies.

In Wiltshire, the share of high-skill occupations in overall employment is lower than the national average, despite the strong growth in recent years. Looking at the vacancies which have been in decline between 2015 and 2017, we expect this growth in high-skill occupations to slow down.

Since high wage and high productivity jobs are typically found at the high-skill level, this can be perceived as a key structural weakness hindering substantial productivity improvements, and is therefore something that the Swindon and Wiltshire Local Industrial Strategy will aim to address.

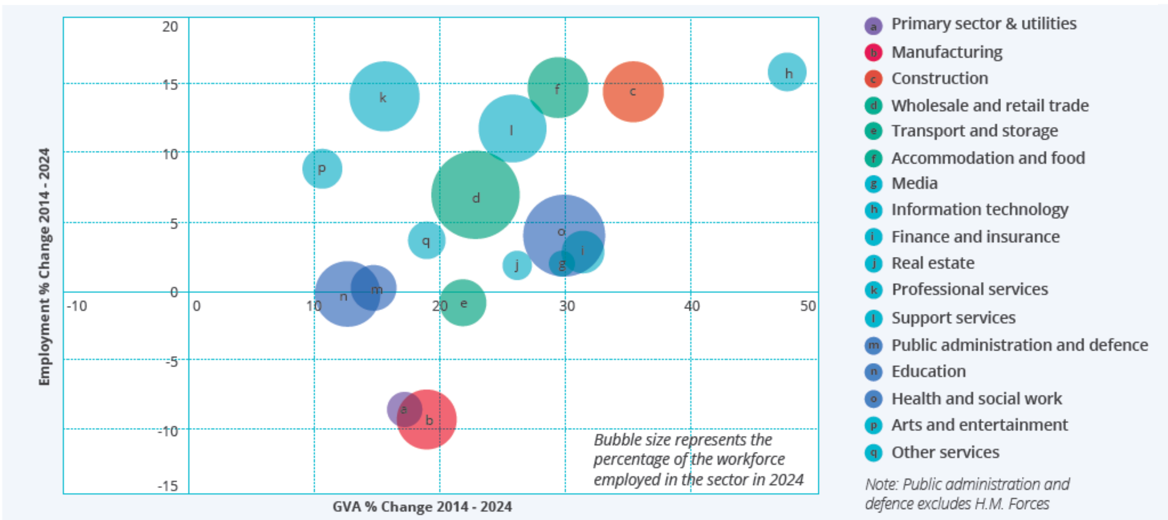
Regarding the workforce technical skills, Swindon's employers are expecting to see demand that is above the national average in nine out of twelve areas, whilst Wiltshire is more in line with the national average. The top three most needed skills for Swindon are in line with the national average: "knowledge of products and services offered by your organisation and organisations like yours", "specialist skills or knowledge needed to perform the role" and "adapting to new equipment or materials". In Wiltshire, the top two skills in need are in line with Swindon, however, the third most important area is "computer literacy / basic IT skills."

More detail on the skills supply (qualifications) and demand (employment and vacancies) can be found in the Appendix A.

5. Future Jobs – UK and South West

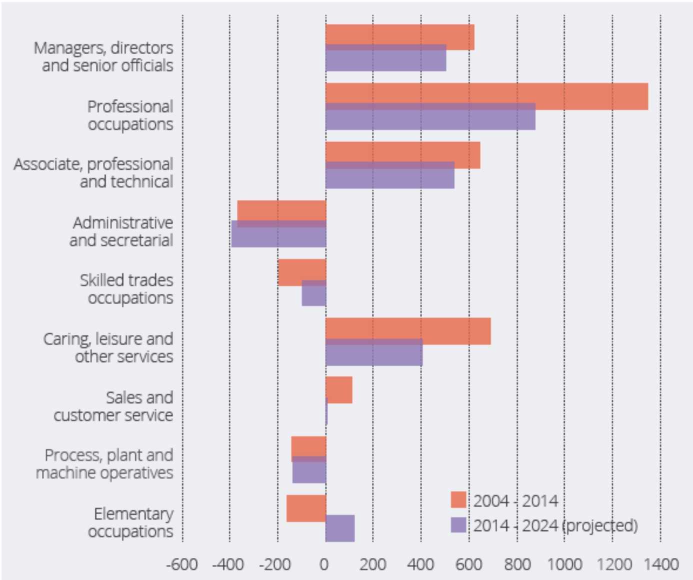
According to the UK Commission for Employment and Skills (UKCES) Working Futures labour market projections for the period 2014 to 2024, by sector, the greatest employment increases are anticipated in IT, Accommodation and Food, Construction, Professional Services and Support Services. Employment across all of these sectors is expected to grow by more than 10% between 2014 and 2024. Over the same period, the size of employment in Education, Public Administration and Defence (excluding HM Forces) and Transport and Storage are to remain relatively stable. Employment in the Primary sector and utilities, and Manufacturing are expected to see substantial decline. Manufacturing, however, is expected to see output and productivity growth, in line with the roll-out of Industry 4.0, implying that jobs in the sector will become more skilled (see Graph 2).

Graph 2: Expected change in employment and output of broad economy sectors, 2014-2024



Source: Working Futures

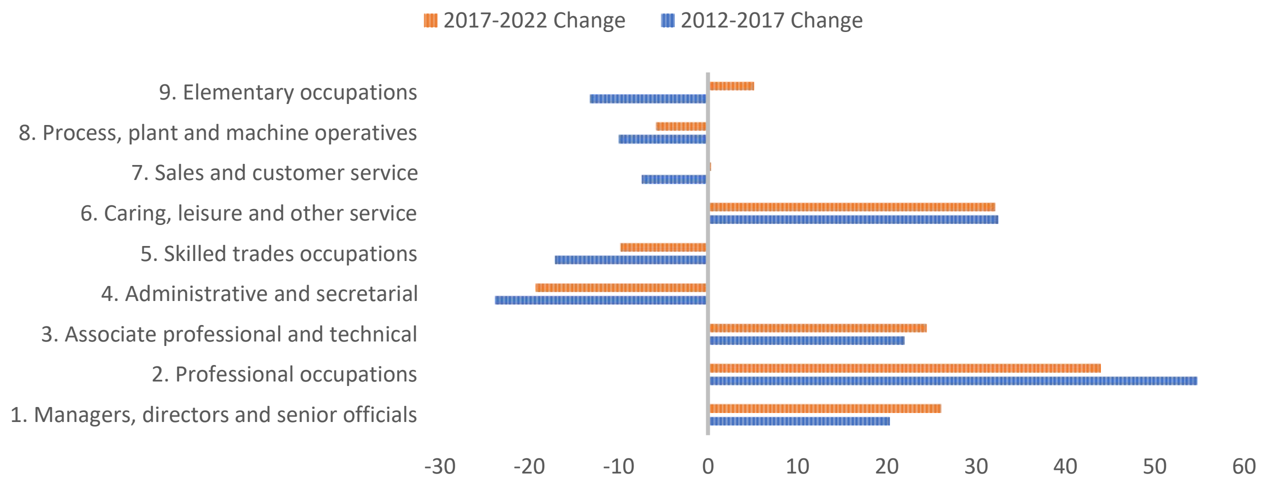
Graph 3: Occupational Change, Total Employment (000s)



Strong growth is expected for higher skilled level roles, including: managers, most professional occupations and many associate professional and technical occupations. However, the growth between 2014 and 2024 is expected to be slower than the previous decade. Caring, leisure and other service occupations are also expected to see significant growth. Conversely, net job losses are anticipated amongst the Administrative and Secretarial, Skilled Trades and Machine Operatives. Elementary occupations, which have seen a decline between 2004 and 2014, are to see modest growth, driven by jobs less susceptible to automation.

The occupation shifts in the South West, also published by Working Futures but going to 2022 (see Graph 4), are expected to follow similar trends, with strong growth across the high-skill occupations and Caring, leisure and other services. Among the high-skills, the increase in demand for Professional services to 2022 is expected to outstrip the 2012-2017 growth, which is not expected nationally.

Graph 4: South West Changes in Employment ('000)



According to the World Economic Forum (WEF), future skills development should focus more on new technologies and solutions, creativity, emotional intelligence, critical thinking, problem solving and caring, continuous learning, ability to manage change, resilience, and grit. Emerging roles and the roles likely to decline are shown in Table 1 below.

Table 1: The jobs landscape in 2022 | Emerging and declining roles

Emerging roles	Declining roles
AI and machine learning specialists	Data entry clerks
Software and applications developers and analysts	Accounting, bookkeeping and payroll clerks
Sales and marketing professionals	Administrative and executive secretaries
Big data specialists	Assembly and factory workers
Digital transformation specialists	Business services and administration managers
Information technology services	Accountants and auditors
Ecommerce and social media specialists	Material-recording and stock-keeping clerks
Training and development specialists	Postal-service clerks
Robotics specialists and engineers	Cashiers and ticket clerks
Service and solutions designers	Mechanics and machinery repairers

Source: Future of Jobs Report 2018, World Economic Forum

6. Future Jobs – Impact of Automation on Swindon and Wiltshire

According to PwC, the introduction of robots and automation of tasks is expected to impact our economy from the early 2020s, starting slowly then gathering momentum. Initially, only a small proportion (approximately 2%) of jobs are to be affected, increasing to 20% towards the end of 2020s and 30% of jobs thereafter.

Building on this, the University of Bath analysis suggests that over the next 20 years, Automation and Artificial Intelligence are to cause around 64,000 job losses, with a similar number of new jobs created, resulting in a slight net increase in jobs (approximately 500) in Swindon and Wiltshire. Within this, Swindon is expected to see a slight net loss (approximately 1,500) and Wiltshire a net gain (approximately 2,000) in jobs.

In relation to industries, five are expected to see net gains: Human Health and Social Work Activities, which is expected to have by far the highest net gains; Professional, Scientific and Technical Activities; Information and Communication; Education and Accommodation and Food Service Activities. The greatest losses are expected in Manufacturing, for both Swindon and Wiltshire. Table 2 below shows the breakdown.

Table 2: Job Creation and Displacement for Swindon and Wiltshire add date range

Industry	Wiltshire			Swindon		
	Created	Displaced	Net	Created	Displaced	Net
Human Health and Social Work Activities	7,820	-2,760	5,060	3,740	-1,320	2,420
Professional, Scientific and Technical Activities	5,610	-3,060	2,550	2,970	-1,620	1,350
Information and Communication	2,160	-1,440	720	1,080	-720	360
Education	2,400	-1,000	1,400	960	-400	560
Accommodation and Food Service Activities	4,180	-3,040	1,140	1,540	-1,120	420
Administrative and Support Service Activities	3,220	-3,360	-140	2,990	-3,120	-130
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	8,840	-9,520	-680	4,940	-5,320	-380
Construction	1,320	-1,650	-330	540	-675	-135
Financial and Insurance Activities	450	-625	-175	1,980	-2,750	-770
Public Administration and Defence; Compulsory Social Security	360	-2,070	-1,710	140	-805	-665
Transportation and Storage	850	-1,900	-1,050	1,530	-3,420	-1,890
Manufacturing	900	-5,400	-4,500	500	-3,000	-2,500
Other sectors	1,853	-2,138	-285	936	-1,080	-144

Source: Nomis, official labour market statistics, Office for National Statistics (ONS)

7. Future Jobs – Swindon and Wiltshire Local Industrial Strategy

As mentioned in Section 4, Swindon and Wiltshire's economy is exposed to a structural weakness due to the lower proportion of higher skills, both in supply and in demand. To address the low demand, over the longer-term, we are looking to develop a number of high-output sectors as part of our Local Industrial Strategy. This will involve both helping the local businesses start and grow, for example through our Growth Hub, as well as attracting new investment to the area, for example by working with DIT and promoting this area internationally.

	Places: develop resilient, agile and inclusive settlements through a more diversified economy, improved cultural and retail offer while conserving and enhancing our natural capital
Skills demand Skills supply	***People***: address the skills supply / demand imbalance and ensure there is inclusive growth across socio-economic groups
	Ideas: grow R&D and innovation activity, building on our strengths (advanced engineering, energy / sustainability, agritech, life sciences) and emerging opportunities (cyber resilience and digital technologies)
	Infrastructure: further improve digital, road and rail connectivity and tackle capacity constraints in energy, water and waste
	Business Environment: attract investment and enable businesses to reach their potential, building on the Growth Hub successes

To ensure success, we will build on our current strengths, which include:

- Cyber resilience, which is currently a small but rapidly growing market globally and as such is highlighted among the UK Industrial Strategy's Four Grand Challenges
- High value manufacturing and advanced engineering, building on the existing pharmaceutical development and manufacturing cluster around the Swindon/Chippenham M4 corridor, including Patheon, Catalent, Vectura, Becton Dickinson, Qualasept Pharmaxo and Alliance Pharma and the research groups at the neighbouring universities, including Bath, Southampton and Oxford; in Wiltshire we will build on the industries such as manufacture of computer, electronic and optical products, which employs around twice as many people as the national average
- Life sciences, leveraging our Life Science Opportunity Zone status and building on the capabilities and assets, including the Defence Science and Technology Laboratory (Dstl), Public Health England (PHE) and a plethora of research-related companies and Universities from around the world working in partnership
- ElecTech / DigiTech, which brings together companies with a broad set of specialisms around electronics and semiconductors, electro-technical hardware, firmware software products and services and which allows Swindon to build on its strengths around electronics, digital and manufacturing specialisms to benefit from the anticipated demand growth, partly driven by Industry 4.0.

8. Next Steps and The Skills Plan

The analysis undertaken by the University of Bath, on behalf of the SWLEP, has identified five key challenges keeping skills supply and demand in imbalance and preventing inclusive growth across socio-economic groups:

- There is evidence that apprenticeships in Swindon and Wiltshire provide relatively advanced training – apprentices tend to study at higher levels and receive higher wages than the national average. However, the take-up and achievements can be further improved and they could be better aligned with the local economy.
- The lack of a unified university presence is having impacting a number of areas, from the low proportion of the high-skill sector, causing a structural weakness, and a low proportion of students progressing to higher education, through to limited opportunities for innovation and spin-offs
- There is more that we can achieve to ensure inclusive growth across socio-economic groups, as well as aspirations and employability of young people, especially those from disadvantaged backgrounds, can be further improved
- There are emerging links between physical and mental health of employees and their productivity and we need to explore these further
- Currently we have limited skills and labour market intelligence, both in terms of the frequency of reports and the depth of analysis.

Our Skills Plan will focus on tacking all of these issues. As a relatively low-cost path for learners to get a degree with good skills match to employer needs, as part of the Skills Plan, we will aim to strengthen our apprenticeship system and see a step change in take-up and achievements. Through the Higher Futures, the LEP will continue to coordinate between the local employers with similar training needs and the education providers. UK-wide evidence suggests that many apprentices fail to receive the government's target of one day per week of off-the-job training. LEP will work to improve this, for instance, by matching employers with nearby training providers.

We will aim to develop a federation of HE providers already present in the area to better align courses on offer to local higher-level skill shortages. This will also have the general benefit of increasing the flow of young people – including international short-term migrants – into the area.

Swindon and Wiltshire's low levels of social mobility will also be tackled. The Skills Plan will focus on effective support for independent careers education, information, advice and guidance. This, in turn, is expected to raise aspirations and improve employability of young people, especially those with disadvantaged backgrounds. The Skills Plan will also promote inclusion of socio-economically weaker parts of the population by supporting them to find entry into labour market via taking one of the many vacancies in the lower skill sectors.

Apprenticeships might be a suitable vehicle for this, allowing them to minimise costs as they will be able to earn a wage.

We will work on understanding better the impact of physical and mental health on employability and productivity. To that end, we will work with the NHS Federation and the two local Academic Health and Science Networks to develop and implement innovative programmes

To be able to tackle the skill shortages and better align the supply and the demand, we will aim to develop robust labour market intelligence. This will include producing an in-depth annual report, as well as quarterly updates on focus sectors, towns and cities, and jobs requiring different skill levels and attracting varying salaries. We will also consider expected future technological changes, such as further Automation and Artificial Intelligence, in particular their impact on the middle and lower educational degree offers. The non-routine elements, creativity, empathy and human relations management are aspects that are expected to become relatively more important in future jobs. The identified priorities will be shared with businesses through the Growth Hub.

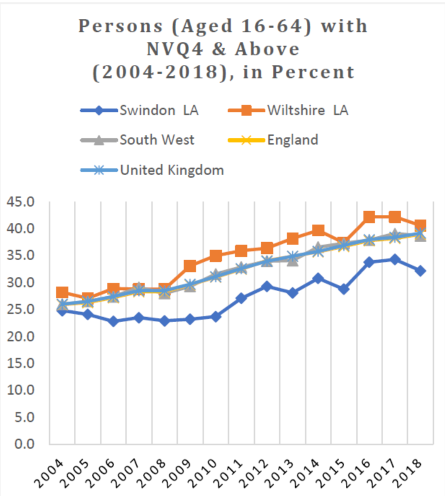
Productivity as well as flexibility and inclusion will be aided by the planned digital infrastructure improvements. These will ensure good broadband and / or mobile network coverage for high-speed internet, allowing individuals, including those with special needs and those caring for children or their elder relatives, to use advances in IT and communications technology to work more flexible hours and work remotely. Avoiding a longer commute, especially in the rural area of Wiltshire, might also help reducing the gender pay gap as caring responsibilities are still over-proportionally taken up by women.

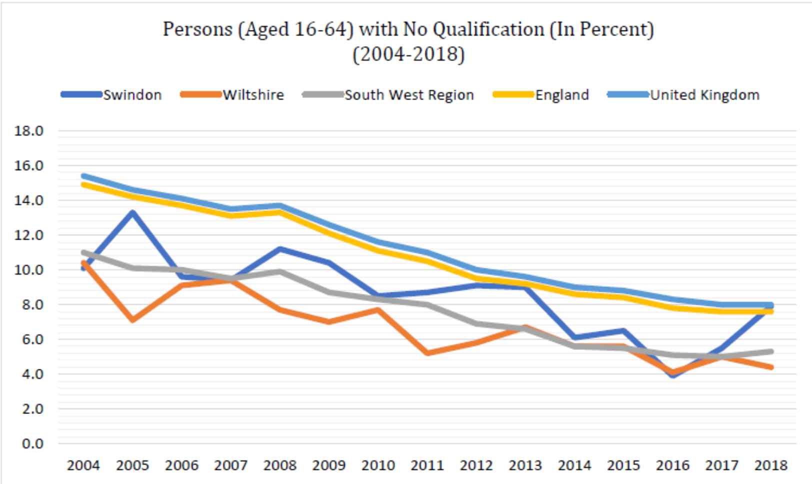
Also aiding our Skills Plan will be a strong business environment in terms of infrastructure, space and taxation. In addition, since good highly paid jobs are often found in innovative firms, we will aim to support innovation. This will be achieved by enabling access and exposure to the technological knowledge held within local research facilities, for example through the IoT, HE Federation or via co-operation with the existing MoD research at Porton Down and Boscombe Down. This can also lead to spin-off entrepreneurship. Such cases, as well as general entrepreneurship, may further be supported by additional incubators providing space and business support at low costs.

As well as growing our own, we will also work with Department for International Trade to attract foreign direct investment (FDI), which may lead to an increase in high skill jobs. Having an ‘anchor’ research and teaching institution in place, which we hope to achieve through HE Federation, can contribute in attracting and retaining FDI, as well as lead to a more sustained development of a cluster with research, education and commercialisation via private businesses.

Appendix A: SAP Analysis - Skills Supply

When it comes to the qualification levels, Swindon is behind the national average for the highly qualified and the gap has widened recently. In addition, whilst the proportion of people aged 16 to 64 without any qualification is rapidly falling in England and the United Kingdom, this has been rising in Swindon, nearly doubling since 2016 to 8% in 2018. Wiltshire, in contrast, has consistently held a higher proportion of highly qualified, compared to the national and regional average, although the gap has been closing over the last two years. Similarly, Wiltshire's proportion of people without qualifications is well below the national average.





Source: Nomis, official labour market statistics, Office for National Statistics (ONS)

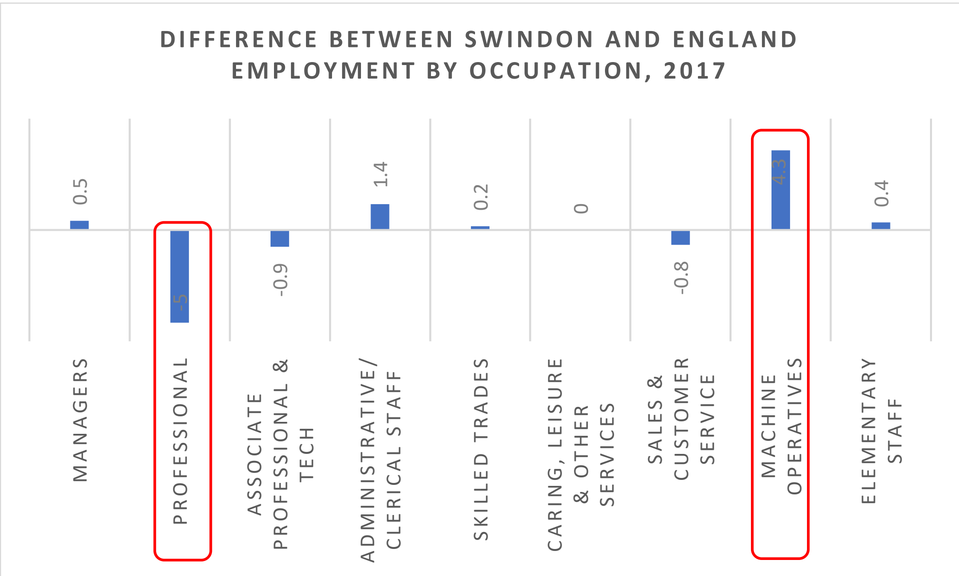
Appendix B: SAP Analysis - Skills Demand

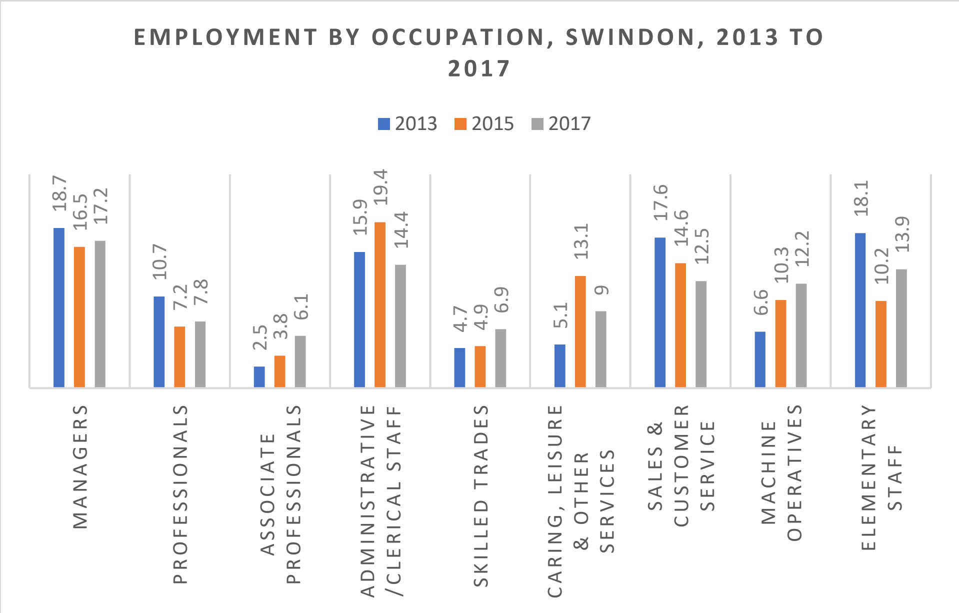
B1 Employment

In the labour-intensive sector, which includes Machine Operatives and Elementary Occupations, employment has grown in importance in both Wiltshire and Swindon, with shares well above the England average. Since the number of vacancies, and especially skill-shortage vacancies, in labour-intense occupations has substantially increased across Swindon and Wiltshire, it is likely that this sector will become even more important in the future.

B1.1 Swindon Employment

When it comes to the occupations, Swindon is substantially above the national average for Machine Operators (12% of employment in Swindon vs. 8% in England) and is substantially behind the average for Professional Services (8% in Swindon vs. 13% in England). Swindon also has slightly more: Managers, Administrative and Clerical staff, Skilled trades and Elementary occupations. Conversely, there are slightly fewer Associate Professional and Technical Services and Sales and Customer Service staff in Swindon that in England overall.



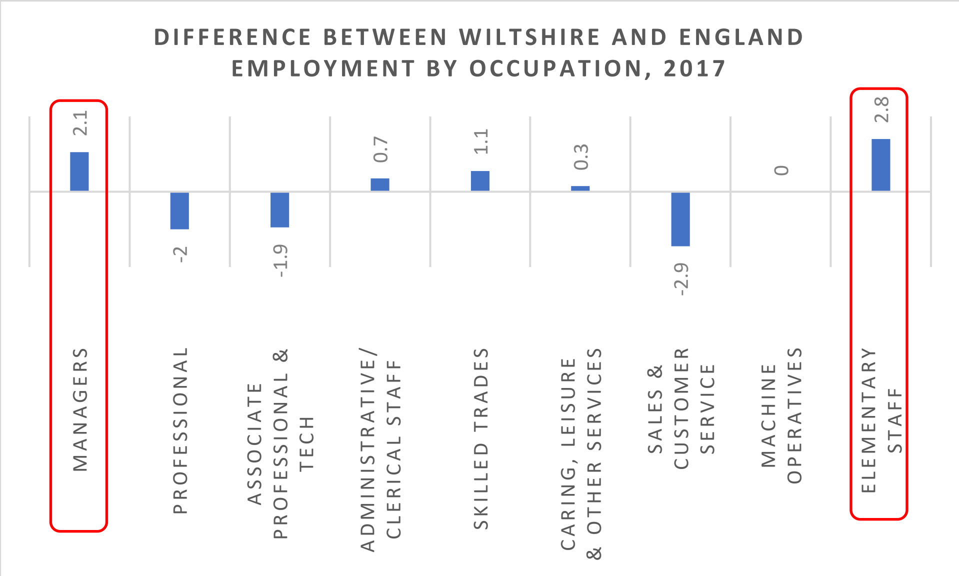


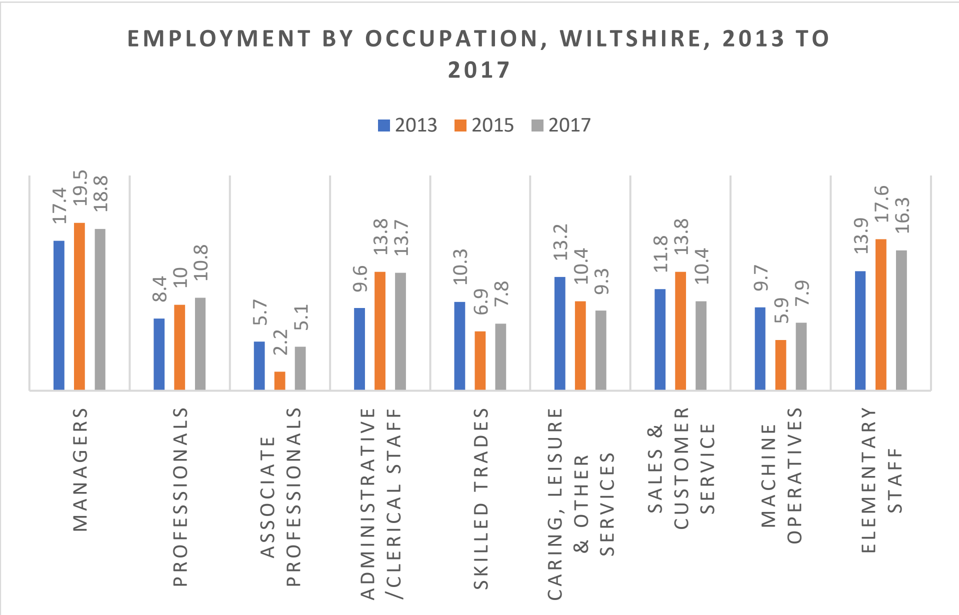
B1.2 Wiltshire Employment

Compared to Swindon, Wiltshire has seen similar increases in high-skill, driven by Associate Professional and Technical service roles, and significantly lower increases in labour-intensive jobs, again driven by Machine Operators. In addition, the decline in service-intensive occupations has not been as steep as in Swindon and there was a slight increase in middle-skill jobs, driven by Skilled Trades, in contrast to Swindon's decline.

For higher skills, Wiltshire is ahead of Swindon but behind the national average in 2 out of 3 sub-groups. There are more Managers, but like in Swindon, fewer Professional and Associate Professional and Technical Services roles. Increases in Associate Professional vacancies between 2015 and 2017, against a slightly slower national trend, suggest that Wiltshire is catching up with England.

Like Swindon, Wiltshire is above the national average for middle skills, both in Skilled Trades and Administrative roles, and labour-intensive jobs, driven by Elementary occupations. The lack of service jobs is even more pronounced in Wiltshire than in Swindon, driven by the lower proportion of Sales and Customer Service jobs.



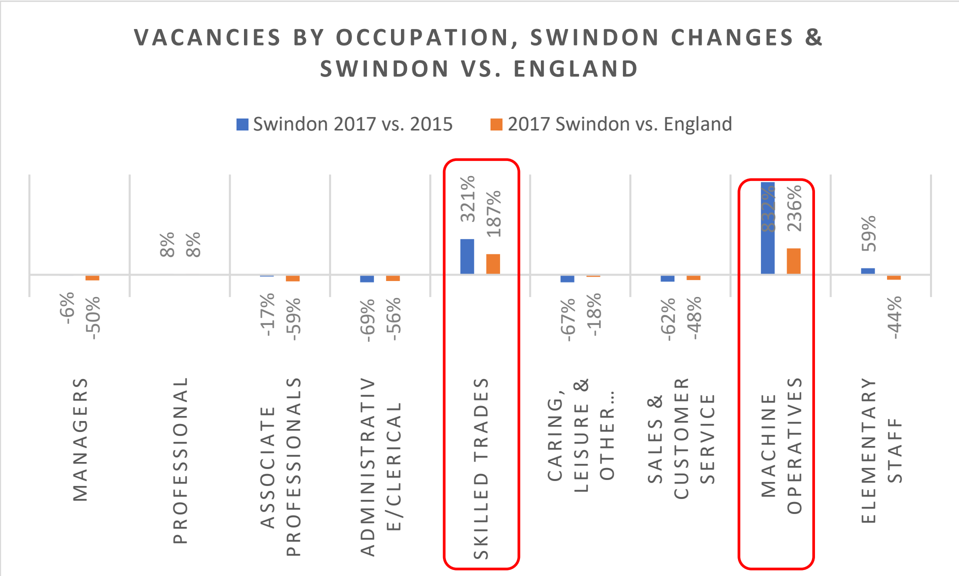


B2 Vacancies

Swindon and Wiltshire has a lower proportion of high-skill and service-intensive vacancies and a higher share of middle-skill and labour-intensive vacancies than the country overall.

B2.1 Swindon Overall Vacancies

When it comes to the **overall vacancies**, Swindon, which in 2017 was well above the national average for Skilled Trades and Machine Operatives, has seen the fastest growth in these two groups, suggesting that the demand is increasing. The increasing demand is also apparent in the employment figures, with the proportion of staff employed in these two groups increasing by c. 40% between 2015 and 2017. These two groups are also most pronounced in Swindon's hard-to-fill and skill-shortage vacancies. Conversely, Swindon is behind the national average for high-skill and service-intensive vacancies. All of these, with the exception of Professional services, have seen declines in Swindon between 2015 and 2017.



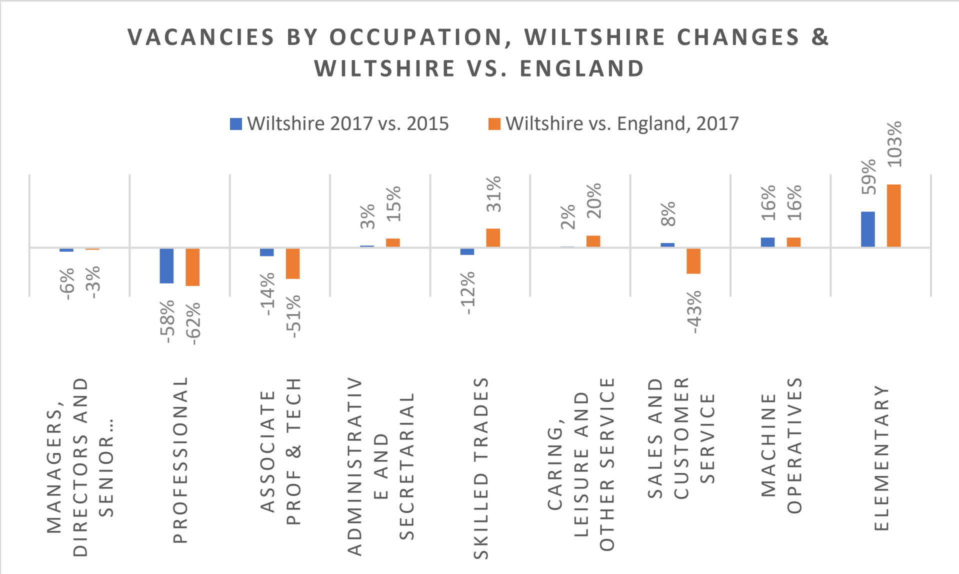
B2.2 Wiltshire Overall Vacancies

Wiltshire's high-skill vacancies are below Swindon's and well below the national average, driven by lower demand for both Professional and Associate Professional positions. Against an upward national trend, Wiltshire's high-skill vacancies have been declining, suggesting that this gap will widen further.

Wiltshire is also behind on service-related vacancies, due to lower need for Sales and Customer Service occupations. The vacancies have been growing, but at half the national average rate, so the gap is likely to remain.

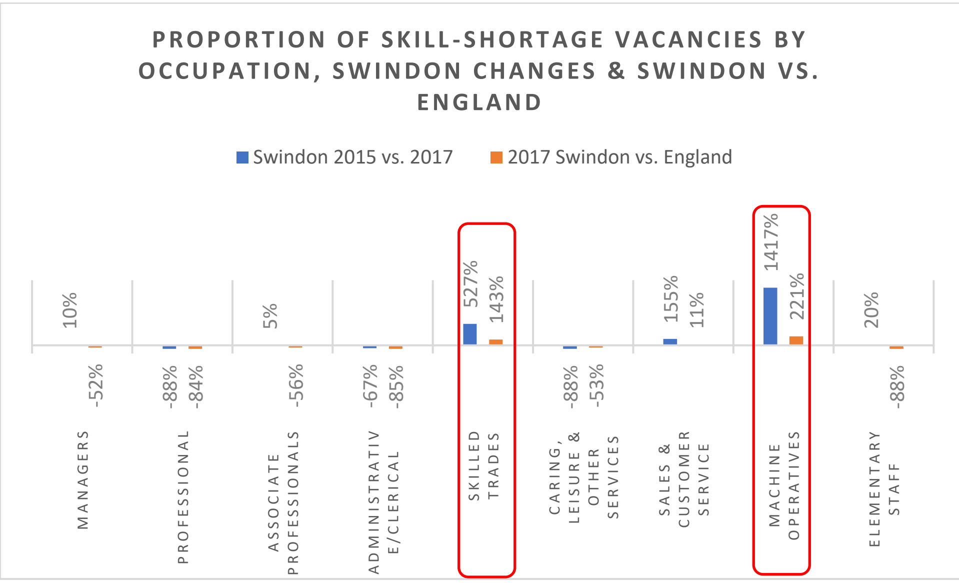
For middle-skill vacancies, Wiltshire is slightly above, due to Skilled Trades, although the proportion of vacancies has been declining against an increasing national trend, suggesting that we are moving closer to the England average.

Finally, labour-intensive vacancies are considerably above the national average, driven by high demand for Elementary jobs. The vacancies have been increasing fast, suggesting that the strong demand will continue.

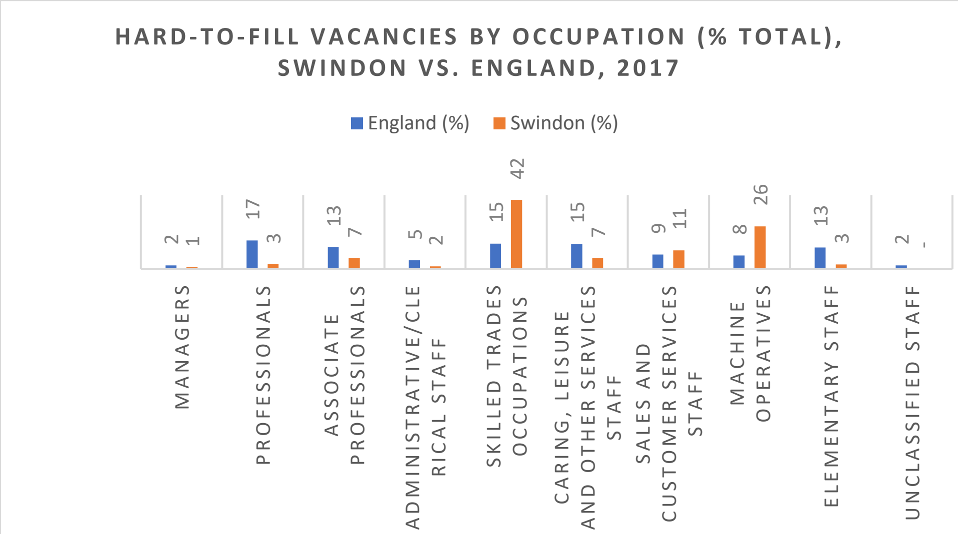


B3.1 Swindon Skill Shortage and Hard-to-fill Vacancies

In relation to specific occupations with **skills shortage vacancies**, Swindon has seen strong growth in Skilled Trades and Machine Operatives vacancies and is currently well above the national average for these two groups. Conversely, Swindon is behind for all high-skilled vacancies, with the gap for Managers and Associate Professionals staying relatively stable over the last few years. Swindon's Professional skills vacancies have dramatically reduced between 2015, when they were above the national average and 2017, when they dropped to well below the national average, suggesting that the supply has been quickly catching up with the demand.

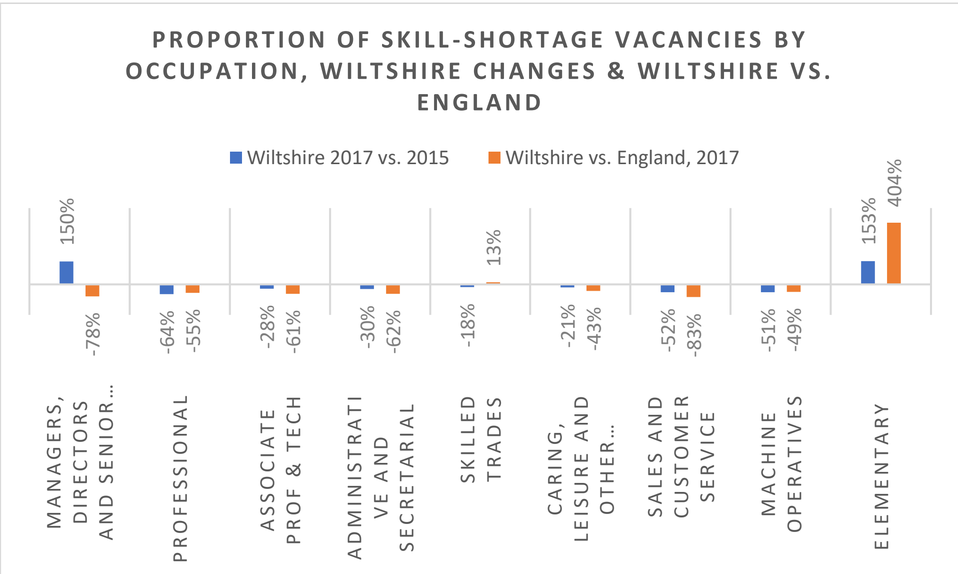


Hard-to-fill vacancies show a similar picture as skill-shortage and overall vacancies, with Skilled Trades and Machine Operators most pronounced. Swindon also appears slightly above the national average for Sales and Customer Service hard-to-fill vacancies. This, however, is considerably lower than in 2015, due to the decrease in employment and in overall vacancies in Sales and Customer Service.

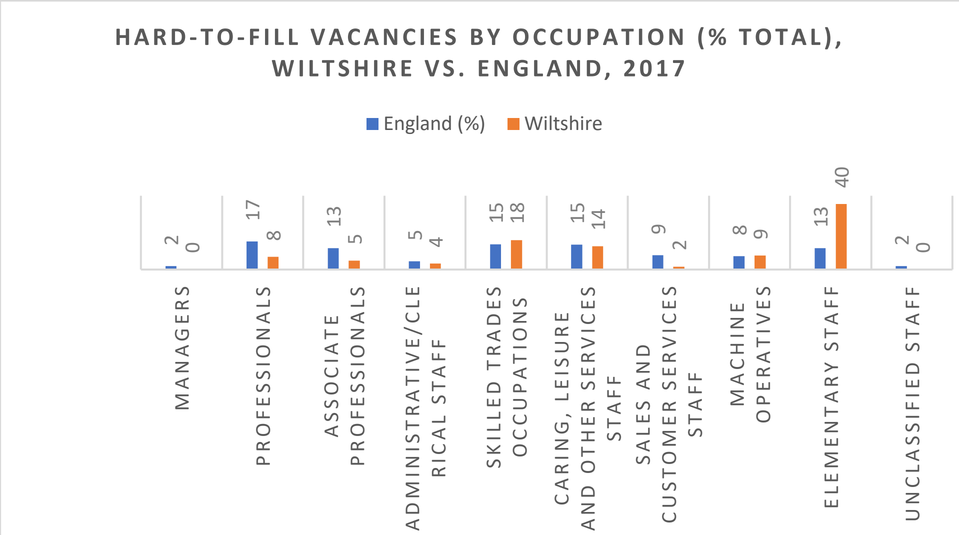


B3.2 Wiltshire Skills Shortage and Hard-to-fill Vacancies

Skills shortage vacancies in Wiltshire are broadly in line with the overall vacancies and are highest and more pronounced for Elementary occupations. Manager and Director vacancies have seen a considerable increase in 2017, however, Wiltshire remains well below the England average for these. With the exception of these two groups, Managers and Elementary, skill shortage vacancies have declined across the occupation groups.



Hard-to-fill vacancies show a similar picture with Elementary occupations accounting for the largest share . Wiltshire is also finding it slightly harder to fill Skilled Trade vacancies. For everything else, it is broadly in line or below the national average.

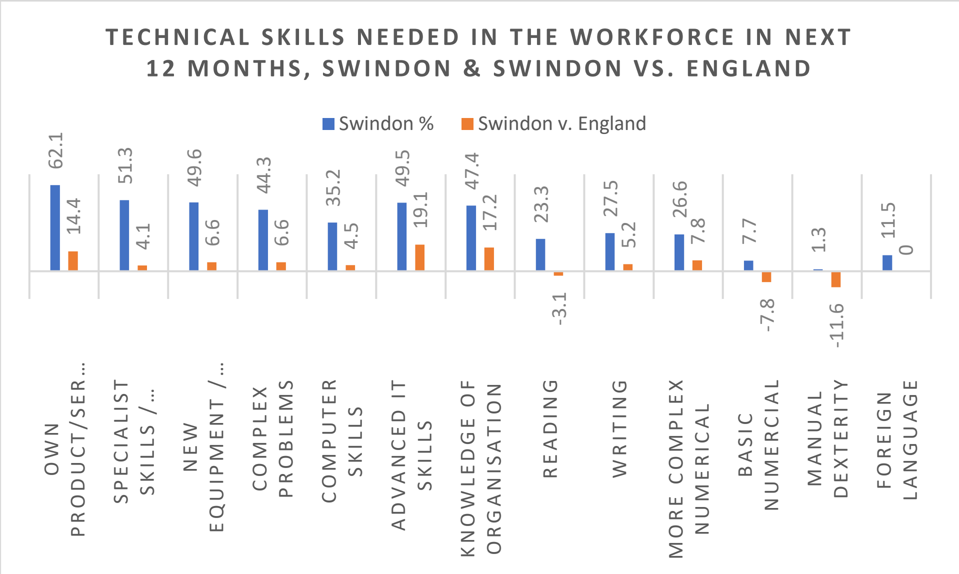


B3. Skills gaps

Skills gaps have widened more in Swindon and Wiltshire than elsewhere in England, with more "staff with skills gaps" and "skills shortage vacancies" than any other comparator LEPs. These two indicators have grown at a substantially higher rate than the England average. Employers in SWLEP cited "the introduction of new technologies or equipment" (39%) as the main reason for the new skills needed and identified the most important skills gaps as being in Digital skills and in Operational skills. Whilst this is in line with the national trend because of the rise of digital technology, both of these skills gaps are more pronounced in Swindon and Wilshire and are above the national average and comparator LEPs.

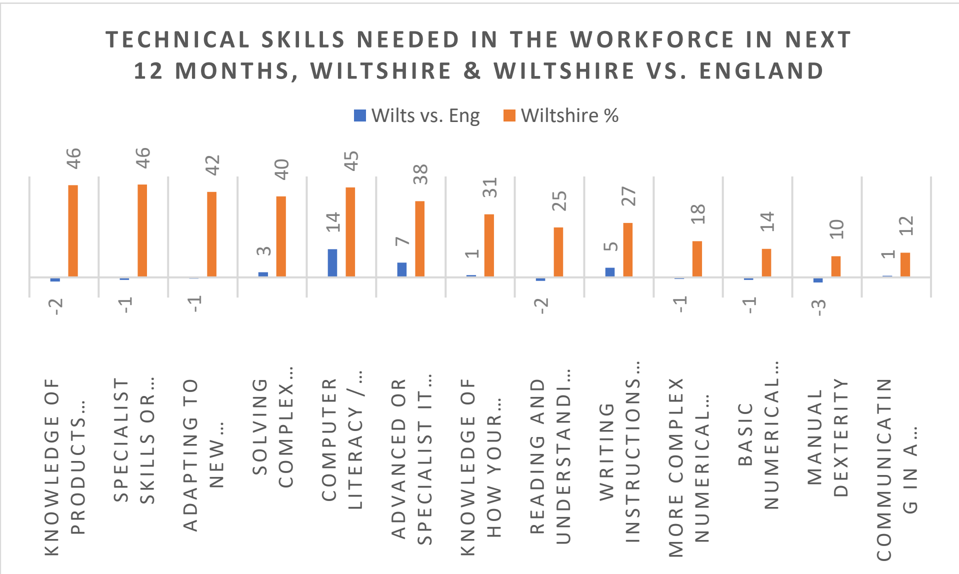
B3.1 Swindon Skills Gaps

In 9 out of 12 categories, Swindon's employers are expecting to see demand that is above the national average. The top 3 most needed skills for Swindon are in line with the national average: "knowledge of products and services offered by your organisation and organisations like yours", "specialist skills or knowledge needed to perform the role" and "adapting to new equipment or materials". However, in all 3 areas Swindon's need for upskilling is greater. "Advanced IT skills" and "knowledge of how your organisation works" are ranked 4th and 5th in Swindon, slightly above the national ranking (6th and 7th for England). Conversely, "solving complex problems" and "basic IT skills" were ranked 4th and 5th in England, but 6th and 7th in Swindon, suggesting that there is a somewhat lower demand for these.



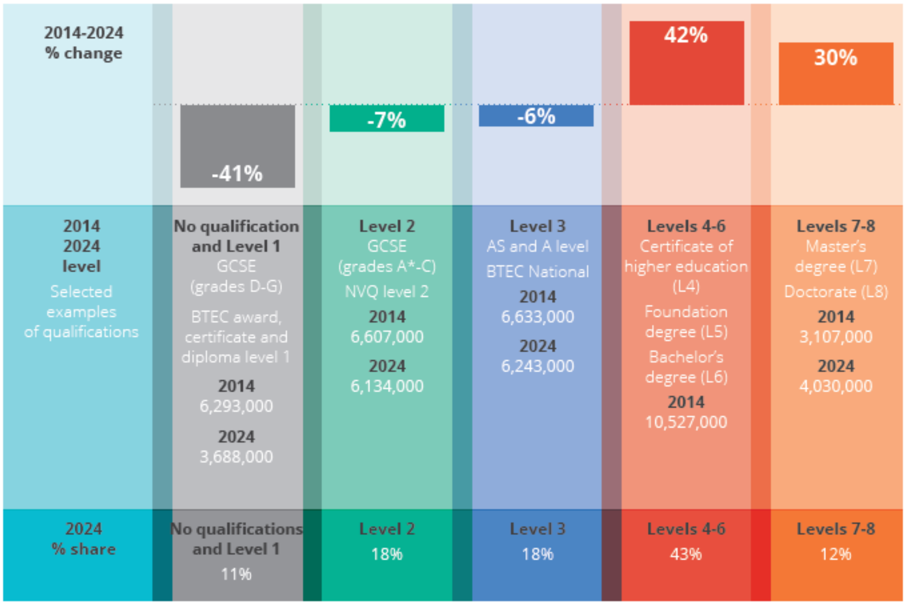
B3.2 Wiltshire Skill Gaps

Employers in Wiltshire are anticipating fewer changes than their counterparts in Swindon, with only digital skills, in particular basic computer literacy, expected to increase substantially faster than the national average. The demand for operational skills is expected to be slightly behind the national average, in contrast to Swindon, and for complex analytical skills it is expected to be slightly higher than the national average.



Appendix C

Changing profile of employment by qualification level



[2] The Regulated Qualifications Framework categorises qualifications by size and difficulty ranging from entry level to level 8 (Ofqual, 2015). The Scottish Credit and Qualifications Framework applies to Scotland.

Appendix D

Swindon and Wiltshire had the lowest share of self-employed people (11.98%), while Buckinghamshire Thames Valley has the largest share of self-employment workers.

Share of self-employed people in total employment across LEPs (2018)