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Labour Market Intelligence

Working Futures 2014-2024 Summary paper for Wales

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Llywodraeth Cymru
Welsh Government

Working Futures 2014-2024: Summary paper for Wales

Working Futures 2014-2024 (Wilson et al., 2016) is the sixth in a series of decade-long projections of the UK's labour market, providing projections for output and the demand and supply of skills between 2014 and 2024. This paper provides a summary of some of the trends reported, with a specific focus on those for Wales.

What is Working Futures and why is it important?

Published by the UK Commission for Employment and Skills (UKCES), Working Futures draws on the best available evidence, in the form of hard data on demographics, education, employment and the wider economy, and applies a set of proven models to these to work through how they are likely to evolve over a ten year timescale. UKCES consider it to be the leading source for UK labour market projections because its 10 year forecasts are:¹

- comprehensive: it covers the entire UK labour market, investigating how different industry sectors' prospects interact, with some expanding and some contracting, and each changing in different ways;
- robust: it draws on the full range of published statistics to provide an employment baseline by sector, occupation and local area, and uses sophisticated modelling to forecast how these different dimensions are likely to evolve; and
- granular: by providing a breakdown by sector and occupation, it allows us to understand not only the likely broad changes in the labour market, but also the implications for the skills mix in each industry sector.

Even so, as this is projections data the information must be used with caution and readers should be aware of the following caveat:

As with all projections and forecasts, the results presented in Working Futures should be regarded as indicative of likely trends and orders of magnitude given a continuation of past patterns of behaviour and performance, rather than precise forecasts of the future. Whilst Working Futures refers to its figures as 'employment', the main source for the production of projections is Workforce Jobs data. This measures jobs rather than persons in employment, and figures for 2014 will therefore be greater than 2014 Annual Population Survey estimates of employment, as some individuals may hold more than one job. These projections were produced and published prior to the UK's decision to leave the European Union.

¹ Working Futures 2014-2024: Headline report (April 2016).

For this reason, the focus should be on the general trends projected to occur, not on specific figures.² The Working Futures outputs in this paper have been rounded to the nearest hundred. Percentages are based on unrounded figures.

Employment projections, such as those from Working Futures, are just one piece of the evidence jigsaw required when determining what the future of the labour market will look like. For example, if Working Futures were being used as part of the evidence base for planning future provision, current and anticipated movements in the economy / labour market (i.e. emerging major infrastructure projects) should also be considered which may not be picked up via Working Futures, especially those occurring on a local/regional level, along with the provision being provided through other routes.³

The tables make reference to expansion demand, replacement demand and the total requirement. These can be summarised as:

- Expansion demand – the net change in the number of jobs;
- Replacement demand – the need for employers to replace workers due to mortality, retirement or other reasons⁴; and
- Total requirement – the sum of expansion and replacement demand.

Due to data limitations, replacement demand projections are based on the assumption that the general patterns of age structure and rates of flow are common across all sectors and regions. This will not be true in practice, although they are occupation-specific *at the UK level*. For this reason replacement demand results at the sector level should be considered as merely indicative.

² In 2002, London Economics produced a review of regional economic forecasting models in Wales, noting that forecasts 'can have a value as an input to a coherent framework for organising one's thinking about the future. However, less attention should be paid to the precise point estimates shown in the forecasts for the various economic indicators and more attention should be given to the intuition behind the forecast.' It also noted that forecasts using regional data will be less reliable than those using national data. The paper is available at: <http://www.learningobservatory.com/uploads/publications/209.pdf>

³ For example, if determining optimal provision levels for higher education to meet demand, notice should be taken of further education courses that could provide a similar outcome.

⁴ Due to a lack of reliable data on occupational and geographical mobility, Working Futures focusses on retirements and other reasons for leaving the workforce semi permanently (such as family formation).

What does Working Futures say about the future of the labour market?

Working Futures projections suggest that employment in Wales is projected to grow by 3.8 per cent between 2014 and 2024, which is similar to Scotland and Northern Ireland, but slower than England (Table 1). Across the UK as a whole, employment growth is projected to occur at 5.5 per cent between 2014 and 2024.

Table 1: Projected percentage employment change 2014-2024

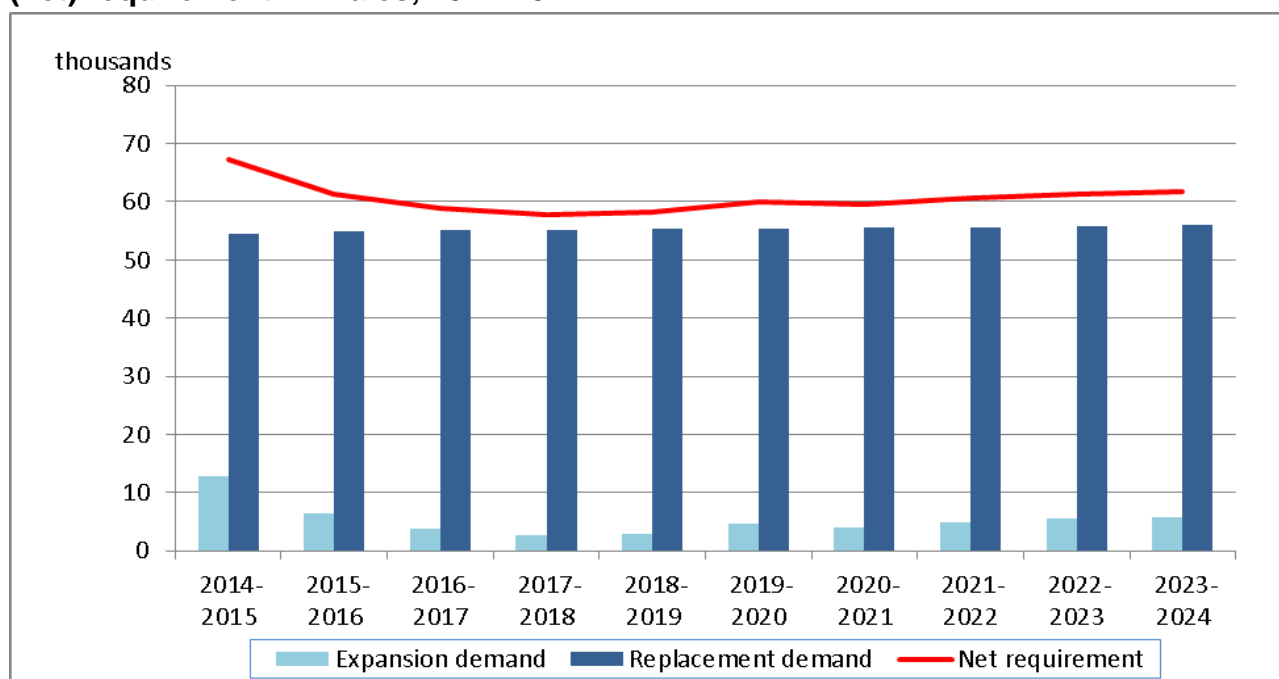
	2014	2024	Change	% Change
Wales	1,412,300	1,465,900	53,600	3.8
England	28,235,200	29,862,400	1,627,200	5.8
Northern Ireland	821,500	851,000	29,500	3.6
Scotland	2,698,100	2,813,100	115,100	4.3
United Kingdom	33,167,000	34,992,400	1,825,400	5.5

Source: Working Futures 2014-2024

Notes: figures have been rounded to the nearest hundred, although percentages are based on unrounded figures.

An increase in employment from 1.412m to 1.466m is projected in Wales, resulting in around 54,000 more people being in employment in 2024 compared to 2014. In addition to the increase in the number of people in employment, there is also a need to replace workers who have left the labour market due to a variety of reasons. This is known as replacement demand. This replacement demand is far greater than the net change in employment (expansion demand) at 553,000, resulting in a net requirement of 607,000 between 2014 and 2024. This can be seen on an annual basis between 2014 and 2024 in Figure 1.

Figure 1: Projected annual expansion demand, replacement demand and the total (net) requirement in Wales, 2014-2024



Source: Working Futures 2014-2024

In addition to these over-arching findings, Working Futures also looks at projections of future employment by sector, occupation and qualification level.

Projections by industrial sector

Working Futures 2014-2024 results are based on 6, 22 and 75 industrial sector definitions. This paper includes findings from the definition of 22 sectors.⁵ The sector with the largest projected increase in employment between 2014 and 2024 is wholesale and retail trade, which has a projected increase of 19,700, making it the largest sector in 2024. This was the second largest sector in 2014, following health and social work, which is also projected to see a rise between 2014 and 2024, albeit to a lesser extent (7,100). On a proportion basis, the largest increases are projected to occur in the finance and insurance (17.9 per cent), water and sewerage (16.5 per cent) and professional services (13.2 per cent) sectors. However, the combined growth for these sectors (16,200) is still less than that projected for wholesale and retail trade due to their relatively smaller size.

Declines in employment are projected across a number of sectors including agriculture (-10,700), rest of manufacturing (-10,000), and engineering (-5,100). Due to the need to replace workers who have left the labour market, there will still be considerable demand from these sectors between 2014 and 2024.

⁵ For further information on sector definitions see Annex A.

Table 2: Projected employment change in Wales, by sector, 2014-2024

	2014	2024	Exp.	% Exp.	Rep.	Total
Agriculture	37,000	26,400	-10,700	-28.8	14,200	3,500
Mining and quarrying	2,100	2,400	300	12.2	900	1,100
Food drink and tobacco	24,200	24,500	300	1.3	8,800	9,100
Engineering	19,300	14,200	-5,100	-26.4	6,100	1,000
Rest of manufacturing	111,600	101,600	-10,000	-9.0	36,800	26,800
Electricity and gas	6,100	6,700	500	8.9	2,200	2,700
Water and sewerage	11,800	13,700	1,900	16.5	4,700	6,600
Construction	100,900	109,600	8,600	8.6	35,700	44,300
Wholesale and retail trade	205,000	224,800	19,700	9.6	82,700	102,400
Transport and storage	48,900	50,300	1,400	2.8	19,100	20,400
Accommodation and food	86,000	96,100	10,100	11.8	37,200	47,300
Media	10,000	9,300	-700	-7.1	3,900	3,100
Information technology	18,000	20,100	2,100	11.7	6,700	8,800
Finance and insurance	30,100	35,400	5,400	17.9	12,100	17,400
Real estate	22,900	25,000	2,100	9.3	9,800	11,900
Professional services	67,100	75,900	8,900	13.2	27,900	36,700
Support services	88,100	97,100	9,100	10.3	35,500	44,500
Public admin. and defence	87,000	87,100	100	0.1	32,000	32,100
Education	142,100	140,500	-1,500	-1.1	58,100	56,600
Health and social work	213,900	221,100	7,100	3.3	85,700	92,800
Arts and entertainment	35,100	37,600	2,600	7.4	14,700	17,300
Other services	45,000	46,300	1,400	3.0	18,900	20,300
All industries	1,412,300	1,465,900	53,600	3.8	553,400	607,000

Source: Working Futures 2014-2024

Notes: figures have been rounded to the nearest hundred, although percentages are based on unrounded figures.

'Exp.' denotes expansion demand, 'Rep.' denotes replacement demand, and 'Total' denotes the total requirement.

Replacement demand and total requirement figures for sectors should be considered as indicative only.

Projections by occupation

The period between 2014 and 2024 is projected to see large expansion-based employment increases for higher skilled occupations in the managerial, professional, and associate professional and technical groups (Table 3). Only protective service occupations are projected to decline between 2014 and 2024 out of those groups. These occupational groups are likely to require individuals to hold higher level qualifications. The increase in these three occupational groups (SOC 2010 Major groups 1-3⁶) is a continuation of longer-term trends, with this group projected to account for 40.5 per cent of employment in Wales in 2024 compared to 30.1 per cent in 1994.

In addition to higher skilled occupations, a large increase in employment is projected for those in caring personal service occupations. This can be seen as a reflection of the demographic issues facing Wales and the UK and follows strong growth between 2004 and 2014 for the occupation (rising from 97,800 in 2004 to 123,300 in 2014 and projected to rise further to 138,200 by 2024).

⁶ For further information on occupation definitions see Annex B.

Customer service occupations are projected to see the largest percentage rise of all occupations - an increase of 20.5 per cent between 2014 and 2024, rising from 24,400 to 29,400.

Regarding mid-skill level occupations, a sharp decline is projected for secretarial and related occupations, at 30.9 per cent (a net loss of 10,800). Losses are also projected at 12.7 per cent, 8.9 per cent and 8.4 per cent for skilled agricultural and related trades; skilled metal, electrical and electronic trades; and textiles, printing and other skilled trades. Both the wider administrative and secretarial, and skilled trades occupations (SOC 2010 Major groups 4 and 5) are projected to see net job losses up to 2024.

For lower skilled occupations, growth projections are mixed. As noted above, high levels of growth are projected for caring personal service occupations and customer service occupations. However, considerable losses are projected for process, plant and machine operatives and sales occupations.

Differences *within* the broader occupation categories are also projected to occur. For example, the wider Sales and Customer Service occupation (SOC 2010 Major group 7) is projected to see relatively little change, but this masks a loss of 5,000 from sales occupations and an equivalent gain of 5,000 in customer service occupations.

All occupations, even those that are projected to decline, will require new people to come into these occupations to replace those who leave the labour market. Replacement demand is largest in caring personal service occupations, administrative occupations, and elementary administration and service occupations which have projected replacement demand of around 50,000 each.

Due to this replacement demand, the total requirement is positive for all occupations. The total requirement between 2014 and 2024 in Wales is highest for:

- caring personal service occupations (68,300);
- teaching and educational professionals (50,800);
- elementary administration and service occupations (47,900);
- administrative occupations (47,600);
- health professionals (45,100);
- business and public service associate professionals (38,800); and
- corporate managers and directors (36,500).

The inclusion of elementary administration and service occupations on this list illustrates the need for individuals to fill roles which may be considered lower skilled into the future.

Table 3: Projected employment change in Wales, by occupation, 2014-2024

	2014	2024	Exp.	% Exp.	Rep.	Total
11 Corporate managers and directors	65,400	76,900	11,500	17.6	25,000	36,500
12 Other managers and proprietors	41,000	45,700	4,700	11.5	20,100	24,800
21 Science, research, engineering and technology professionals	45,500	50,300	4,800	10.5	14,000	18,800
22 Health professionals	79,300	92,000	12,800	16.1	32,300	45,100
23 Teaching and educational professionals	91,900	101,900	10,100	11.0	40,700	50,800
24 Business, media and public service professionals	44,700	51,200	6,500	14.6	19,200	25,700
31 Science, engineering and technology associate professionals	20,800	21,200	400	2.2	6,200	6,700
32 Health and social care associate professionals	26,300	30,400	4,100	15.4	10,100	14,200
33 Protective service occupations	15,900	15,000	-900	-5.7	3,800	2,900
34 Culture, media and sports occupations	22,000	24,700	2,700	12.1	9,600	12,300
35 Business and public service associate professionals	74,000	84,300	10,400	14.0	28,400	38,800
41 Administrative occupations	119,500	117,100	-2,400	-2.0	49,900	47,600
42 Secretarial and related occupations	34,700	24,000	-10,800	-30.9	15,200	4,500
51 Skilled agricultural and related trades	26,200	22,900	-3,300	-12.7	13,300	10,000
52 Skilled metal, electrical and electronic trades	63,000	57,400	-5,600	-8.9	18,900	13,300
53 Skilled construction and building trades	67,000	69,900	2,900	4.3	22,600	25,400
54 Textiles, printing and other skilled trades	35,400	32,400	-3,000	-8.4	13,100	10,100
61 Caring personal service occupations	123,300	138,200	14,900	12.1	53,400	68,300
62 Leisure, travel and related personal service occupations	29,200	28,900	-400	-1.2	13,300	12,900
71 Sales occupations	90,300	85,300	-5,000	-5.5	34,600	29,600
72 Customer service occupations	24,400	29,400	5,000	20.5	8,600	13,600
81 Process, plant and machine operatives	81,200	72,000	-9,200	-11.3	24,300	15,100
82 Transport and mobile machine drivers and operatives	39,500	41,500	2,000	5.2	17,600	19,600
91 Elementary trades and related occupations	32,800	34,200	1,400	4.3	11,300	12,700
92 Elementary administration and service occupations	118,900	118,900	100	0.1	47,800	47,900
All occupations	1,412,300	1,465,900	53,600	3.8	553,400	607,000

Source: Working Futures 2014-2024

Notes: figures have been rounded to the nearest hundred, although percentages are based on unrounded figures.

'Exp.' denotes expansion demand, 'Rep.' denotes replacement demand, and 'Total' denotes the total requirement.

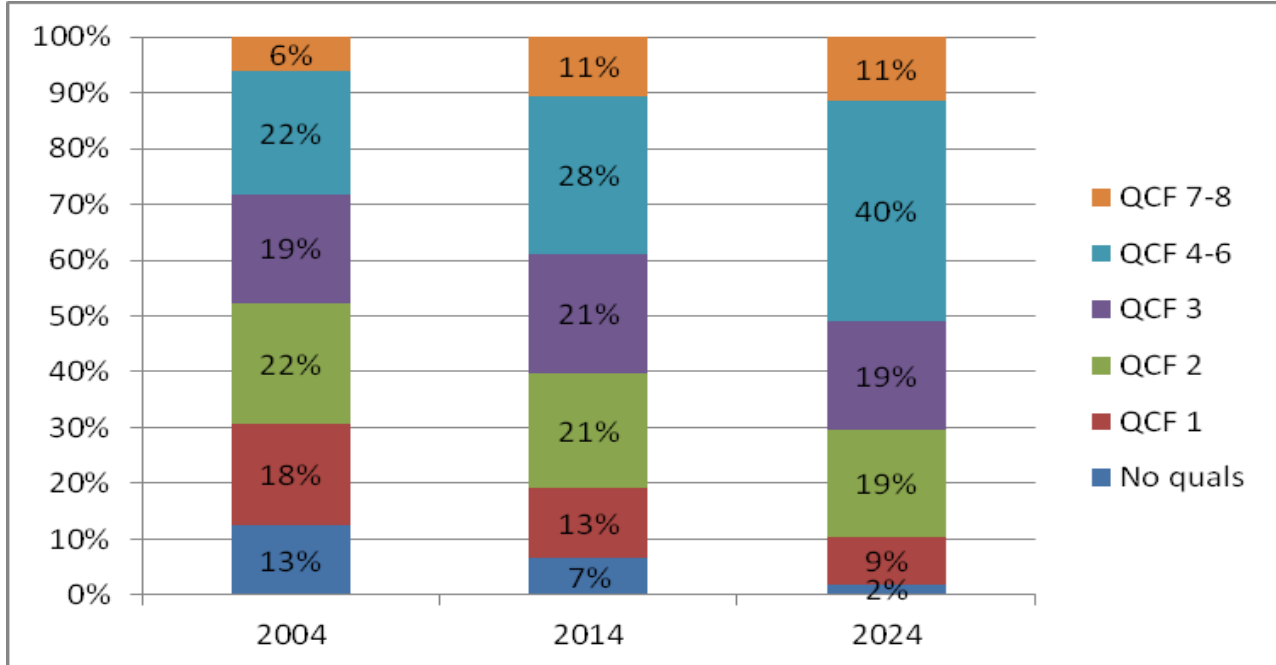
Projections by qualification

Whilst occupation level may be used as a proxy for skills, it is also possible to look at how the qualification levels of those in employment are projected to change between 2014 and 2024.

Figure 2 shows the changes that have occurred and are projected to occur between 2004 and 2024. The expansion of higher level qualifications amongst those in employment can clearly be seen. Between 2004 and 2024, the proportion of those in employment who are qualified at QCF level 4-6 is projected to have almost doubled from 22 per cent to 40 per cent. The proportion in employment qualified to levels 7-8 is also projected to have almost doubled, from 6 per cent to 11 per cent. This means that by 2024 it is projected that over half of those in employment in Wales will hold qualifications at level 4 or above. This is in contrast to around a quarter in 2004.

The opposite effect can be seen for those holding no qualifications. Whilst 13 per cent of those in employment in Wales held no qualifications in 2004, this is projected to fall to just 2 per cent in 2024. Similarly the proportion of those in employment qualified to level 1 is projected to decline from 18 per cent to 9 per cent. A small decline is projected for the proportion in employment qualified to level 2, whilst there is relatively little change in the proportion qualified to level 3.

Figure 2: Projections of employment by qualification level 2004-2024

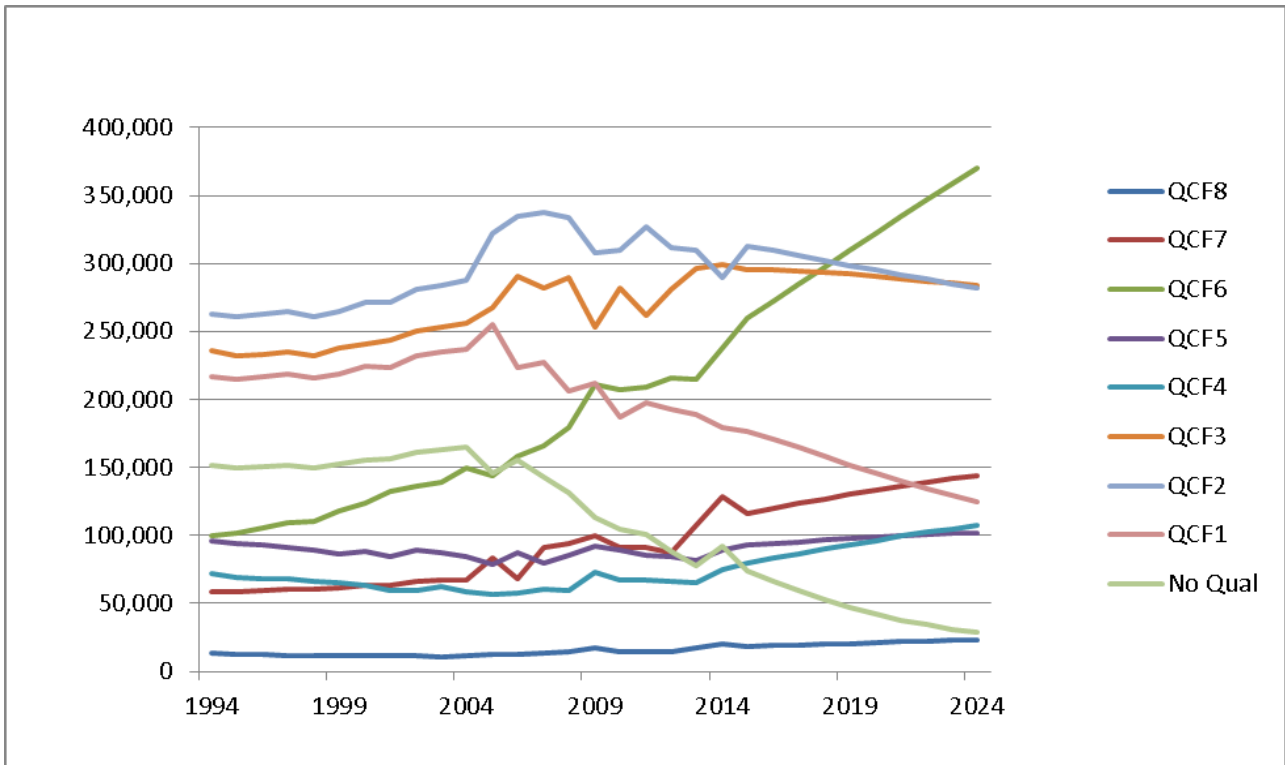


Source: Working Futures 2014-2024

Looking at individual levels of qualification (Figure 3) reveals that it is QCF 6 that is the main driver behind the projected increase in QCF level 4-6 between 2014 and 2024. Little change is expected for QCF level 5 (especially in the second half of the decade), although

increases are expected for QCF level 4. A large increase is projected for QCF level 7 and the number with QCF level 8 is also projected to increase between 2014 and 2024.

Figure 3: Projections of employment change by disaggregated qualification level 1994-2024



Source: Working Futures 2014-2024

Whilst a large decline is projected in the proportion and number of those in employment who hold no or low qualifications it is worth noting that significant replacement demands will still be required in these areas (Table 4). Whilst the (combined) number of people in employment with no or low qualifications (QCF level 1) is projected to decline by around 119,000, there will still be around 107,000 people needed at these levels to replace those who have left the labour market. This is also true for QCF levels 2 and 3 which are also projected to have losses in employment, but each require in excess of 110,000 to replace those who will leave the labour market.

Table 4: Projected change in qualification level of those in employment in Wales, 2014-2024

	2014	2024	Exp.	Rep.	Total
QCF 7-8	149,200	166,700	17,600	58,400	76,000
QCF 4-6	401,800	579,900	178,100	157,400	335,600
QCF 3	299,600	284,100	-15,500	117,400	101,900
QCF 2	289,700	281,800	-7,800	113,500	105,700
QCF 1	179,700	124,800	-54,900	70,400	15,500
No Qual	92,300	28,500	-63,900	36,200	-27,700
Total	1,412,300	1,465,900	53,600	553,400	607,000
	% share	% share	% change		% of 2014 level
QCF 7-8	10.6	11.4	11.8		51.0
QCF 4-6	28.4	39.6	44.3		83.5
QCF 3	21.2	19.4	-5.2		34.0
QCF 2	20.5	19.2	-2.7		36.5
QCF 1	12.7	8.5	-30.6		8.6
No Qual	6.5	1.9	-69.1		-30.0
Total	100.0	100.0	3.8		43.0

Source: Working Futures 2014-2024

Notes: figures have been rounded to the nearest hundred, although percentages are based on unrounded figures. 'Exp.' denotes expansion demand, 'Rep.' denotes replacement demand, and 'Total' denotes the total requirement.

Conclusion

Working Futures 2014-2024 is a useful resource that provides projections of employment up to 2024. This paper provides a brief overview of the findings for Wales, but there is a wealth of further detail available in the reports and workbooks.

Projections suggest that there is a continued movement towards higher qualifications and higher skilled occupations. However, some lower skilled occupations show growth (with customer service occupations and caring personal services showing particularly high growth) and there will be a need to replace those who have left the labour market across all sectors, occupations and qualification levels.

Whilst projections data should be used with caution and relevant caveats should be noted, many of the projected changes are likely to be in response to long-term trends in demographics (the increase in caring personal service occupations) and technological change (the decrease in secretarial and related occupations).

For further information:

UK Commission for Employment and Skills Working Futures 2014-2024 webpage:

<https://www.gov.uk/government/publications/uk-labour-market-projections-2014-to-2024>

Working Futures 2014-2024 Main Report:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/513801/Working_Futures_final_evidence_report.pdf

Working Futures 2014-2024 Annexes (contains Wales data):

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/523332/Working_Futures_Annexes_1424.pdf

Working Futures 2014-2024 Wales Excel workbooks:

<https://www.gov.uk/government/publications/ukces-labour-market-projections-for-wales-2014-to-2024>

Annex A: Working Futures 2014-2024: Sector definitions

The table below shows how the definition of six broad sectors used in Working Futures fits together with the more disaggregated 22 sector system also used. SIC 2007 (Standard Industry Classification) codes are also given.

Working Futures – 6 Broad Sectors		Working Futures – 22 Sectors				
Number	Name	Number	Name	SIC2007		
1	Primary sector and utilities	1	Agriculture	(01-03)		
		2	Mining and quarrying	(05-09)		
		6	Electricity and gas	(35)		
		7	Water and sewerage	(36-39)		
		2	Manufacturing	3	Food and drink	(10-12)
				4	Engineering	(26-28)
				5	Rest of manufacturing	(13-25) (29-33)
3	Construction	8	Construction	(41-43)		
4	Trade, accommodation and transport	9	Wholesale and retail trade	(45-47)		
		10	Transport and storage	(49-53)		
		11	Accommodation and food	(55-56)		
		5	Business and other services	12	Media	(58-60) (63)
				13	IT	(61-62)
6	Non-market services	14	Finance and insurance	(64-66)		
		15	Real estate	(68)		
		16	Professional services	(69-75)		
		17	Support services	(77-82)		
		21	Arts and entertainment	(90-93)		
		22	Other services	(94-96)		
		18	Public administration and defence	(84)		
		19	Education	(85)		
		20	Health and social work	(86-88)		

Annex B: Working Futures 2014-2024: Occupation definitions

The table below shows how the definition of nine broad occupations (SOC 2010 Major Group) used in Working Futures fits together with the more disaggregated 25 occupation system also used (SOC 2010 Minor Group). SOC 2010 (Standard Occupational Classification) codes are also given.

Working Futures – 9 Broad Occupations		Working Futures – 25 Occupations	
SOC 2010 Major Group code	Name	SOC 2010 Minor Group code	Name
1	Managers, directors and senior officials	11	Corporate managers and directors
		12	Other managers and proprietors
2	Professional occupations	21	Science, research, engineering and technology professionals
		22	Health professionals
		23	Teaching and educational professionals
		24	Business, media and public service professionals
3	Associate professional and technical	31	Science, engineering and technology associate professionals
		32	Health and social care associate professionals
		33	Protective service occupations
		34	Culture, media and sports occupations
		35	Business and public service associate professionals
4	Administrative and secretarial	41	Administrative occupations
		42	Secretarial and related occupations
5	Skilled trades occupations	51	Skilled agricultural and related trades
		52	Skilled metal, electrical and electronic trades
		53	Skilled construction and building trades
		54	Textiles, printing and other skilled trades
6	Caring, leisure and other service	61	Caring personal service occupations
		62	Leisure, travel and related personal service occupations
7	Sales and customer service	71	Sales occupations
		72	Customer service occupations
8	Process, plant and machine operatives	81	Process, plant and machine operatives
		82	Transport and mobile machine drivers and operatives
9	Elementary occupations	91	Elementary trades and related occupations
		92	Elementary administration and service occupations