



**IT
Professionals
Australia**

ICT PROFESSIONALS EMPLOYMENT AND REMUNERATION REPORT

2020-21

ABOUT IT PROFESSIONALS AUSTRALIA

IT Professionals Australia represents ICT professionals across the full spectrum of industries and specialisations. Our members work in a wide variety of roles including ICT trainers, ICT sales, business and systems analysts, multimedia specialists, web developers, software and applications programmers, database and systems administration, ICT security, ICT support, test engineers, telecommunications and ICT management as employees, via labour hire agencies and as contractors and consultants.

IT Professionals Australia is a division of Professionals Australia (formerly the Association of Professional Engineers, Scientists and Managers, Australia) which is an organisation registered under the Fair Work Act 2009 representing over 25,000 Professional Engineers, Professional Scientists, Veterinarians, Architects, Pharmacists, Managers, Transport Industry Professionals, Translating and Interpreting Professionals as well as Information Technology Professionals throughout Australia. Professionals Australia is the only industrial association representing exclusively the industrial and professional interests of these groups.

IT Professionals Australia has four key objectives:

- to ensure members' interests are protected when government policies, outsourcing and offshoring, management decisions, new technologies or other large-scale domestic or global events including the current health crisis lead to workplace change;
- to provide a strong voice for IT professionals. This involves considering the kind of support, policies and practices at the enterprise and structural levels needed to create a sustainable and diverse IT workforce capable of realising optimal levels of innovation and productivity;
- to play a leading role in encouraging dialogue between industry, government and the higher education sector on skills. This means, in particular, a strong match between industry needs and the skills of university IT graduates. It also means playing a leading role in keeping IT professionals' skills up-to-date by providing access to career-long learning, modular forms of learning and options for technical skills development to facilitate certification as needed and ensure an agile and well-trained workforce; and
- to promote public understanding of IT and the key role IT professionals play in ensuring Australia's future including the technology investment needed to ensure IT professionals play the central role they should in rebuilding the Australian economy post-pandemic. This involves influencing public policy and resource allocation decisions and promoting the value of IT to decision-makers and the wider community. We seek to highlight the critical role IT plays in enabling improved productivity and digital transformation, promoting economic prosperity, supporting new ways of working and protecting national security. In doing so, we raise the status of the profession and the professionals who work in it.

IT Professionals Australia

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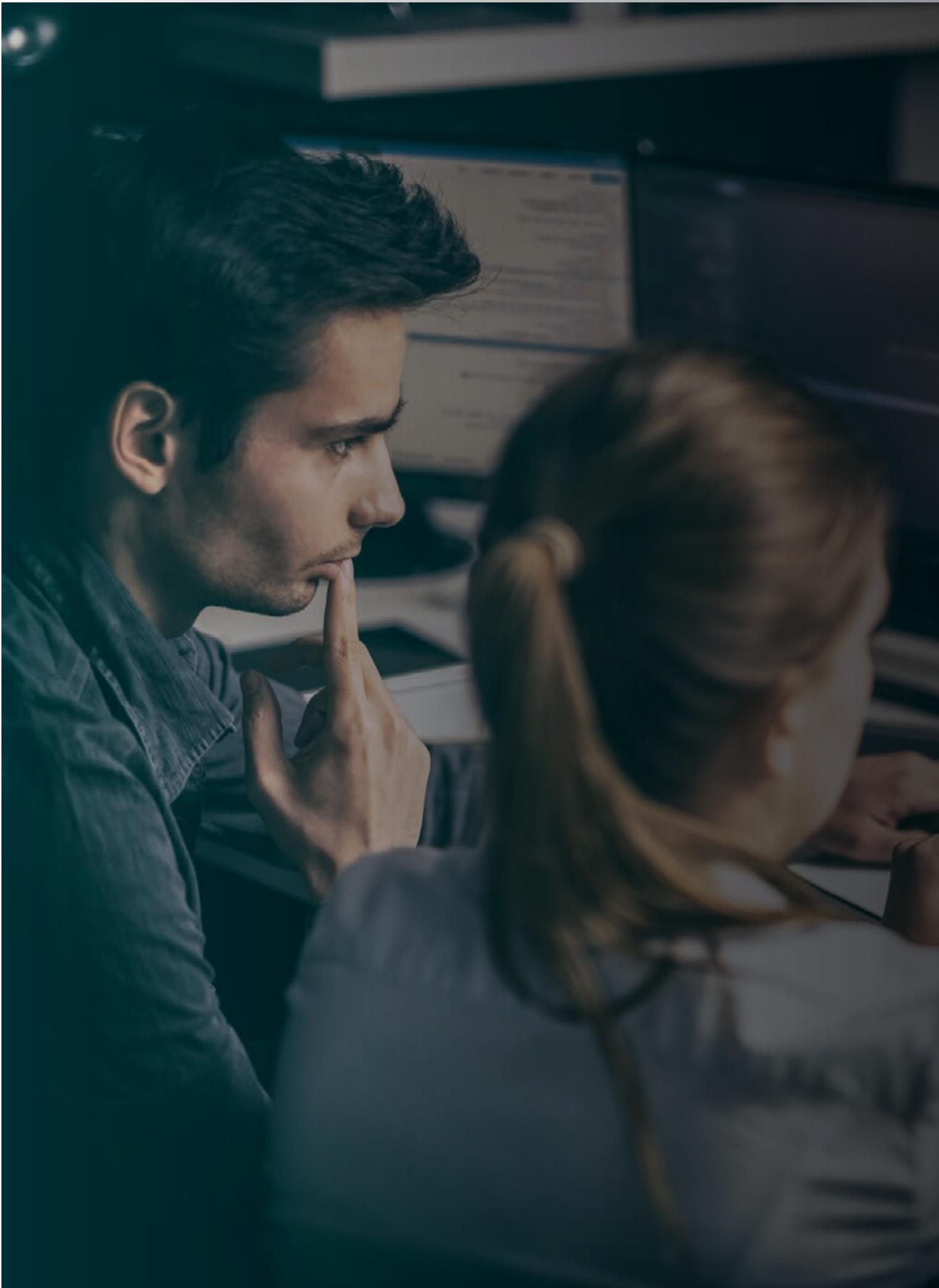
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FOREWORD

The COVID-19 pandemic will continue to have a major impact on the IT labour market in the next 12 months and beyond. However the speed of social and economic recovery, the magnitude of the changes and the extended outlook for particular industries, skill sets and labour market segments are difficult to forecast at this stage. As the McKinsey report “Global health and crisis response” highlights “We have never before attempted to shut down the modern global economy, much less reopen it in the setting of an ongoing pandemic.”¹

One thing that is clear from the COVID-19 pandemic however is how critical ICT professionals are to contemporary workplaces, industries and the economy, enabling us to quickly adapt in a crisis and operate effectively in the short and long term.

ICT professionals should be more formally acknowledged for the crucial role they have played in developing innovative ICT solutions, which have allowed many public services, industry sectors and employees to continue working remotely through the pandemic.

The impact of the pandemic on the employment of ICT workers has been variable across sectors. Since the COVID-19 crisis unfolded, tech job losses have mainly affected the travel and retail industries. Although the 2020 Deloitte report on Australia’s Digital Pulse estimated a reduction of around 35,000 in the Australian IT workforce between March and December 2020, it also forecast significant growth by 2025, projecting a workforce of around 928,700.²

ICT professionals have not been immune from the negative effects of the COVID-19 pandemic. Around one in ten of our ICT survey respondents reported receiving JobKeeper (the Commonwealth subsidy to encourage business to retain staff during the pandemic) and 18 per cent were asked to use their annual leave.

While the timing and scale of the economic recovery remains uncertain, it appears hiring intentions for ICT professionals will remain strong in several areas. Specialists in AI, machine learning, mobile app development, web development, advanced data analytics, cybersecurity and transitioning to the Cloud remain in high demand across Australia.

Employers who continue to invest in digital transformation look set to recover more quickly and effectively than others. ICT professionals will be required to support the acceleration in online product and service delivery and remote working, and to strengthen cybersecurity, especially in critical infrastructure areas over the next 12 months.

Although many IT professionals will maintain current roles or take up opportunities in emerging areas, others could experience changes in their conditions, reduced hours of work, wage freezes and greater use of contract arrangements.

IT Professionals Australia will prioritise the safeguarding ICT jobs, pay and conditions, including working hours and health and safety. Wage growth for ICT professionals reported through our survey was disappointing at 1.4 per cent. While 28.8 per cent of our ICT survey respondents were dissatisfied with their current remuneration, 32.1 per cent did not expect any wage growth for ICT workers over the next 12 months. Survey respondents also reported increased working hours and unpaid overtime and just over 22 per cent indicated that they experienced mental health issues during the pandemic.

“We have never before attempted to shut down the modern global economy, much less reopen it in the setting of an ongoing pandemic.”

McKinsey and Company (2020). COVID-19 briefing materials: Global health and crisis response.

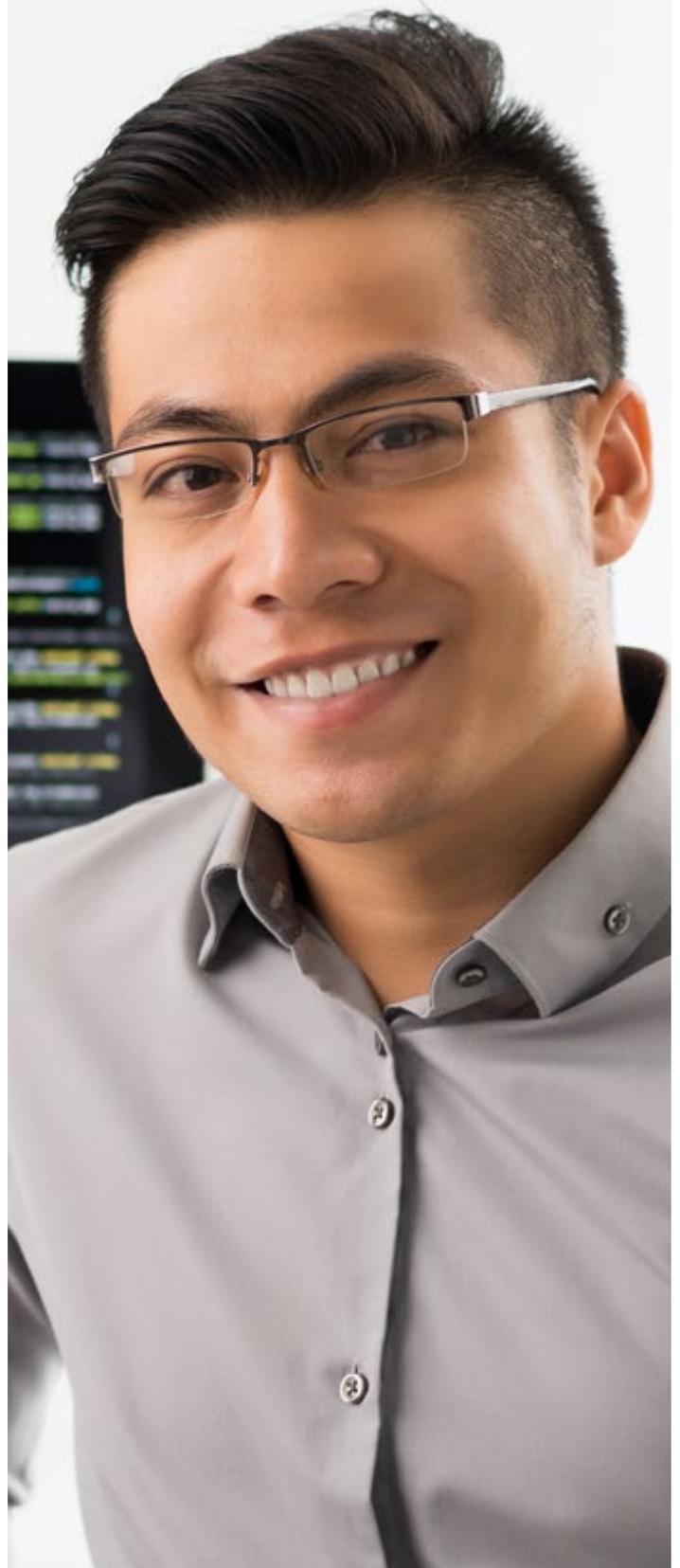
One of the greatest concerns emerging from our survey this year was the negative workplace experiences reported by female ICT workers. While 76 per cent of survey respondents said that their organisation had policies in place to deal with discrimination, over 56 per cent of female respondents reported they had experienced discrimination on the basis of gender over the past three years, compared to just 2.8 per cent of males. In addition, over 20 per cent of female respondents reported sexual harassment, compared to 3.1 per cent of male respondents.

Discrimination and sexual harassment in the workplace are illegal and cause serious harm and damage to affected workers. While workplace policies are a necessary starting point, organisational leaders need to drive, model and embed a culture of respect across their organisations.

Professionals Australia will continue to advocate for gender equality and diversity across STEM and will take action to prevent and respond to discrimination and sexual harassment in workplaces where our members work.



Jill McCabe
CEO, Professionals Australia



KEY FINDINGS



REMUNERATION

- Survey respondents recorded median annual wage growth of 1.4 per cent with a median base salary of \$115,000 and median total package of \$131,400. This growth represents an outperformance of CPI at negative 1.9 per cent but not WPI at 1.8 per cent (to June quarter, 2020).
- Private-sector respondents reported a median base salary of \$116,000, and a median increase in their salaries of only 1.4 per cent over the last 12 months but a mean of 3.3 per cent indicating a few ICT professionals receiving much greater increases.
- Public-sector respondents reported a median base salary of \$120,000, and a below WPI median increase of 1.4 per cent over the last 12 months.
- The Telecommunications services industry recorded the highest median base salary at \$146,000. The Internet services providers, web search portals and data processing services industry came in second with a median base salary of \$128,750. The Financial and insurance services as well as Electricity, gas, water and waste services industries followed with median base salaries of \$127,000 and \$122,000 respectively.
- The Healthcare and social assistance industry recorded the highest median wage growth at 6.7 per cent followed by the Internet service providers, web search portals and data processing services industry at 2.9 per cent and the Education and training industry at 2.7 per cent.
- Almost half (45.1 per cent) of the respondents reported being satisfied with their current remuneration, while a concerning 1 in 4 (28.8 per cent) reporting being dissatisfied.
- Respondents were less optimistic than previous years about future wage growth with roughly 3 in 10 (31.6 per cent) predicting growth of over 2.0 per cent over the coming year. Over 4 in 10 (43.9 per cent) reported that they expected wage growth of less than 1 per cent, showing the uncertainty around pay in the profession following the impacts of COVID-19.
- Over 4 in 10 (42.3 per cent) survey respondents said they had received no pay increase in the previous 12 months.



SKILLS

- The skills attracting the highest pay were Sales, Business development, Team leader and Marketing.
- The skills attracting the highest wage growth over the past year were Graphic design, Data warehousing and TCP/IP UML.
- Cloud services was the most commonly held skill among respondents followed by Software development, SQL, System architecture, and Information security.
- Respondents identified Business intelligence, RF/Wireless, ACP, and TCP/IP UML as the most likely to increase in demand.
- Respondents to the survey had undertaken predominantly ICT-related training in the previous 12 months. Of those who had undertaken professional development activities, close to half had training provided by their employer.



EMPLOYMENT

- Australia's ICT workforce continued its long-term pattern of growth with the number of ICT positions rising to 772,100 in 2019, up from 723,334 in 2018. While the latest Deloitte report estimates that COVID-19 has led to a reduction of around 35,000 in the IT workforce between March and December 2020, they forecast the workforce will grow to around 928,700 by 2025. They project an average 3.1 per cent increase in IT workers over the next five years with over a million technology workers in Australia by 2027.
- The Computer system design and related services industry accounted for the largest share of employment (32.5%) followed by the Professional, scientific and technical services industry (12.3%) and Telecommunications (12.1%).



WOMEN IN ICT

- According to the Workplace Gender Equality Agency, a gender pay gap of around 17.2 per cent persists across the Information, media and telecommunications industry. Our survey confirmed a pay gap with male respondents' median base salaries of \$113,606 while female respondents' median base salaries were \$109,000, suggesting a pay differential of 4.1 per cent.
- Just over 6 in 10 (63.9 per cent) said their workplace currently had formal policies in place to promote diversity.
- Almost 3 in 4 (76.2 per cent) said their workplace currently had formal policies in place to deal with discrimination.
- Close to 1 in 3 (30.8 per cent) said they did not believe the employer had strategies in place to actually implement policies relating to diversity and discrimination.
- Over half (56.5 per cent) female respondents said they had been discriminated against on the basis of gender in their workplace over the last three years compared to 3 in 100 (2.8 per cent) of male respondents.
- 1 in 5 (20.1 per cent) of female respondents and 3 in 100 (3.1 per cent) of male respondents reported having been sexually harassed in their careers.



WORKPLACE ISSUES

- Respondents reported working an average of 41.6 hours per week, with an average of 3.1 hours of overtime. A concerning 43.5 per cent of respondents reported receiving no compensation for overtime - 46.4 per cent and 27.3 per cent in the private and public sectors respectively.
- Respondents identified work/life balance as their highest workplace priority, followed by job satisfaction and pay.
- Around 1 in 10 (11.5 per cent) of ICT professionals surveyed reported being concerned about future opportunities in ICT and around 1 in 5 (20.3 per cent) reported that the profession offers poor long-term career paths.
- Just over 2 in 5 (39.1 per cent) of the respondents expect an increase in opportunities for ICT professionals over the next 12 months, with just under 1 in 4 (23.5 per cent) expecting an increase in opportunities in decision-maker roles.
- Almost 1 in 5 (21.8 per cent) respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive efficiencies.
- 1 in 5 (19.6 per cent) respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive innovation.
- Almost 1 in 5 (21.3 per cent) respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive profit.
- Over half (54.3 per cent) of the survey respondents reported being satisfied with their current role. 1 in 5 (21.8 per cent) reported being dissatisfied with their current role.



ICT WORKFORCE DEMAND

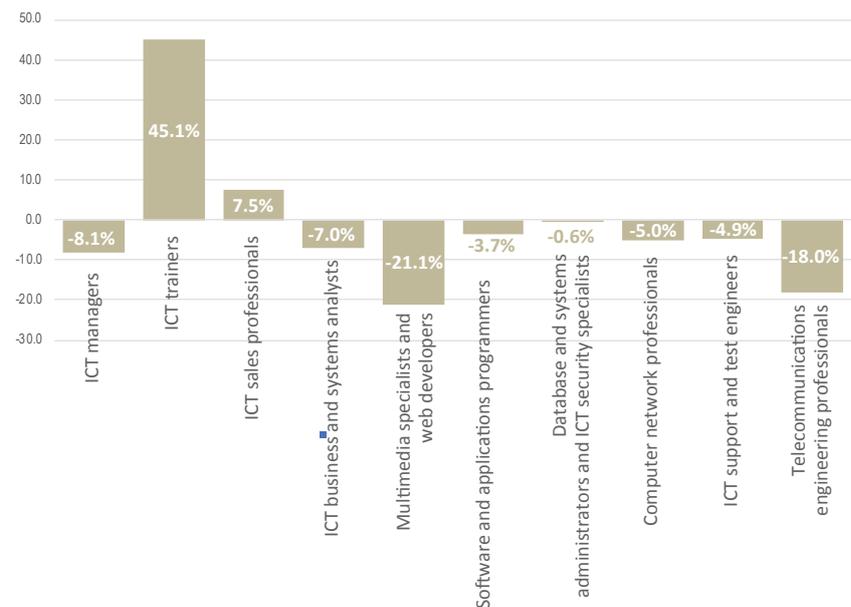


Australia's ICT workforce continued its long-term pattern of growth with the number of ICT positions rising to 772,100 in 2019, up from 723,334 in 2018. While the latest Deloitte report estimates that COVID-19 has led to a reduction of around 35,000 in the IT workforce between March and December 2020, they forecast the workforce will grow to around 928,700 by 2025. They project an average 3.1 per cent increase in IT workers over the next five years with over a million technology workers in Australia by 2027.

YEAR-ON-YEAR JOB ADS

The Department of Employment's Internet Vacancy Index reflects the early stages of the impact of COVID-19 with job ads down across the board with the exception of ICT trainers and ICT sales professionals. This is likely due to the rapid shift to work from home arrangements across organisations that has created a large demand for ICT professionals who can sell new ICT services and train less tech literate people to use the systems available to them. As we move into the next phase of the COVID-19 crisis, the risk to ICT professionals' jobs is likely to become even more acute but hiring intentions and the likely impact on advertised vacancies are difficult to forecast at this stage.³

FIGURE 1 - ANNUAL CHANGE IN JOB VACANCIES FOR ICT ROLES (%)



ROLES MOST IN DEMAND

The market for new positions remains relatively concentrated, with the top two roles of ICT business and systems analysts and Software and applications programmer positions accounting for three-quarters of all positions. Software and applications programmer positions accounted for the largest share of job advertisements at 51.7 per cent, with ICT business and systems analysts accounting for 25.1 per cent of advertisements. Database and systems administrators and ICT security specialists was the third most advertised role at 6.8 per cent, followed by ICT support and test engineers at 4.8 per cent and Computer network professionals at 4.6 per cent.⁴

FIGURE 2 - DISTRIBUTION OF JOB VACANCIES IN ICT PROFESSION BY ROLE (%)

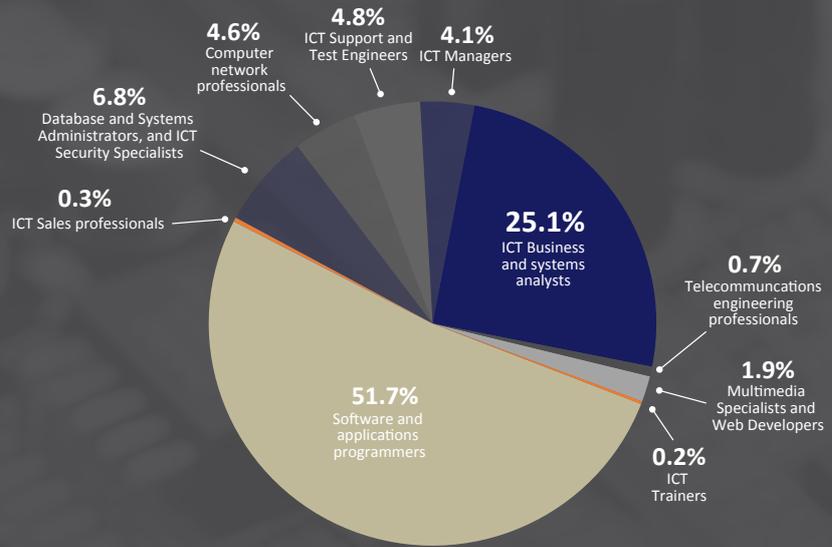
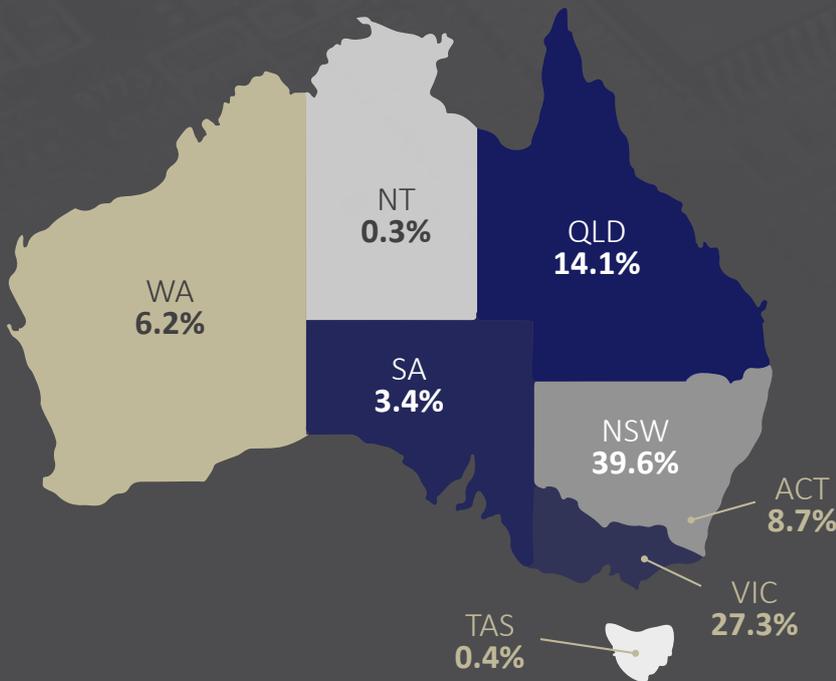


FIGURE 3 - DISTRIBUTION OF JOB VACANCIES IN ICT PROFESSIONS BY STATE (%)



JOB VACANCIES BY STATE

Geographically, job vacancy data was strongly correlated with overall workforce distribution. New South Wales, Victoria and Queensland again dominated the market, accounting for 81.0 per cent of vacancies.

Additionally, the ability to manage many ICT roles remotely allows larger firms to locate themselves in the larger cities, closer to the majority of the skilled workforce, while also capturing a share of work in smaller states and more remote locations.

Source: Department of Employment, Internet Vacancy Index – April 2019 to March 2020



CHARACTERISTICS OF THE ICT LABOUR MARKET

A complex set of factors combine to create a complex and highly competitive Australian ICT employment market. These include high levels of skilled migration, temporary work visas, international students staying on to gain experience in the industry, offshoring, an IT degree not being required for IT employment, the rapid pace of change in the skill requirements of industry and a mismatch between the skills of graduates and employer needs.⁵

The Australian ICT sector is characterised by:

- a high proportion of workers with qualifications from overseas (30 per cent of employed ICT professionals compared to 23 per cent of engineering professionals and 20 per cent of science professionals);⁶
- a low proportion of ICT professionals born in Australia with a university degree (around two-thirds have a degree and about a quarter hold upper-level vocational qualifications while some opt for those offered by Microsoft and Cisco);⁷
- a high number of ICT professionals brought in by Australian businesses on temporary working visas.⁸ These figures have risen again in 2019/20 after a sharp decline the previous year with the replacement of the 457 visa with the 482 Temporary Skills Shortage visa. This brings the share of ICT workers engaged under temporary skilled visas to around 2 per cent;⁹
- a high proportion of skilled migration for ICT workers (19,600 in 2014-15, six times the number of completing domestic bachelor graduates).¹⁰ Migration levels have dropped slightly due to international border closures in response to the COVID-19 pandemic;
- a high proportion of offshoring as a cheaper alternative to in-house services¹¹ leading to high levels of job losses/redundancies (some commentators have suggested that we may see a level of onshoring of formerly outsourced services in response to the pandemic);
- being a net importer of ICT services importing \$2.6 billion and exporting \$2.3 billion;¹²
- higher monthly job vacancies for ICT workers than for other STEM fields, although often for specific projects rather than ongoing positions;¹³ and
- problems with a mismatch between ICT graduate skills and areas of demand in the labour market,¹⁴ compromising employment rates for ICT graduates on entry into the labour market.

The COVID-19 pandemic has impacted skilled migration in ICT with border closures and limitations on movement across borders potentially creating skills gaps in particular areas of the ICT workforce but skilled migration levels are expected to return to their former level over the medium-term. In September 2020, software developers and programmers were exempted from the Federal Government's immigration ban and added to the Priority Migration Skilled Occupation List with projected shortages in these areas. As highlighted in the 2019 Migrant Workers' Taskforce Report,¹⁵ migrants on temporary visas are exposed to job insecurity and underpayments while job exploitation is disturbingly common amongst skilled migrants generally. The COVID-19 pandemic has the potential to exacerbate these issues.

The number of international students commencing and completing ICT degrees in Australia and the number of international students who remain in Australia after completing their degrees to gain work experience are also likely to be impacted by the pandemic. With social security supports not being extended to international students, the potential for cash-in-hand payment below the relevant minimum award rates has the potential to increase significantly. Where job opportunities do exist, employers are likely to want to maintain flexibility in staffing levels and are more likely to offer positions on a contract or project-basis than was the case prior to COVID-19.



REMUNERATION

Survey respondents recorded median annual wage growth of 1.4 per cent across the wider profession, with median base salaries of \$115,000 and median total packages of \$131,400. This limited growth is concerning as it includes growth that should have happened prior to the effects of the COVID-19 pandemic undermining the economy. Over a similar period, the cost of living reduced by 1.9 per cent as measured by the Consumer Price Index (CPI, June 2020)¹⁶ so ICT professionals have at least experienced growth in real terms. Australia-wide wages grew by 1.8 per cent for the 12 months to June 2020 as measured by the Wage Price Index (WPI, June 2020).¹⁷

Pay increases to ICT Professionals appear to be out of step with the broader Australian workforce as a whole, a surprising result considering how critical ICT has been for not only handling the impact of the pandemic, but the digitisation of business processes, the push for businesses to expand their online presence, the shift to the cloud for storage, the imperative for greater data security, the ongoing growth of mobile apps, growth in artificial intelligence and machine learning and greater investment in data analytics capability by businesses.





EMPLOYMENT SECTOR

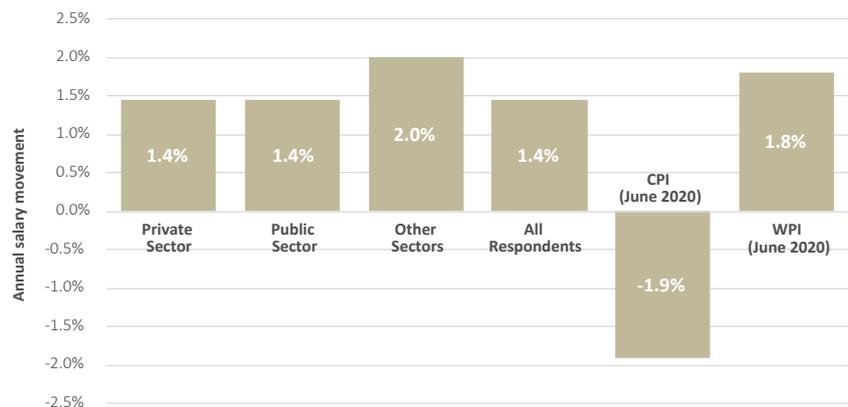
ICT professionals in the public sector reported a median base salary of \$120,000 and total package of \$133,590, compared with \$116,000 median base salary and total package of \$131,400 in the private sector.

All sectors shared the burden of soft growth for ICT professionals. Those employed in the private and public sectors reported median growth of 1.4 per cent while those in other sectors reported median growth of 2.0 per cent. Looking at mean growth painted a slightly more positive image, with mean salary increases of 3.3 per cent in the private sector and 2.6 per cent in the public sector, but this largely reflects a small portion of the IT workforce receiving generous increases while increases for the rest of the workforce are very limited. With the cost of living temporarily in decline this low growth can largely be absorbed by professionals, but it will be important, as the economy recovers, that the skills of ICT professionals are properly recognised and their pay rates do not fall further behind.

FIGURE 4 - MEDIAN ANNUAL BASE SALARY AND TOTAL PACKAGE BY SECTOR (\$)



FIGURE 5 - ICT PROFESSIONAL MEDIAN ANNUAL SALARY MOVEMENTS COMPARED TO ECONOMIC INDICATORS (%)



INCIDENCE OF ZERO PAY INCREASE BY SECTOR

Around 4 in 10 (42.3 per cent) survey respondents said they had received no pay increase in the previous 12 months. This figure was 44.0 per cent for the private sector, 39.1 per cent for the public sector and 20.0 per cent in education.

Sector	Percentage
Private	44.0
Public	39.1
Other sectors	20.0
All respondents	42.3

INDUSTRY

Remuneration varied significantly by industry owing primarily to the diverse nature of ICT roles. While ICT professionals are becoming more important in the day-to-day operations of all businesses, the specifics of their work are highly dependent on their industry, with some industries producing primarily digital services, while others utilise more basic enabling technology in their operations.

The Telecommunications services industry recorded the highest median base salary at \$146,000 (median total package \$162,400). The Internet services providers, web search portals and data processing services industry came in second, with a median base salary of \$128,750 (median total package \$148,669). The Financial and insurance services as well as Retail trade industries followed with median base salaries of \$127,000 and \$117,500 respectively (median total packages of \$145,065 and \$136,535 respectively).

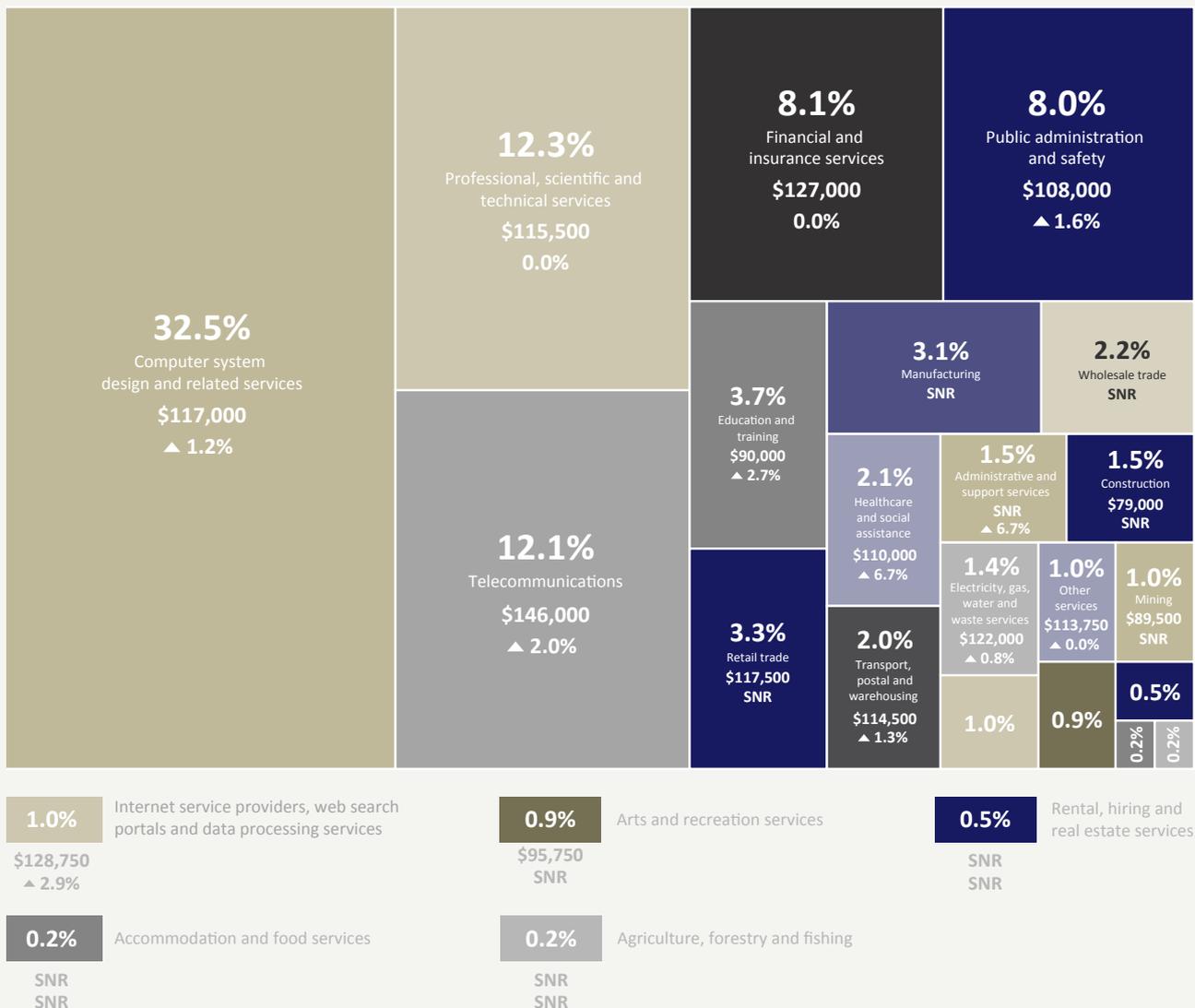
The Health care and social assistance industry recorded the highest median wage growth by a large margin at 6.7 per cent followed by the Internet Service Providers, web search portals and data processing services industry and Education and training industry, at 2.9 and 2.7 per cent respectively.

INDUSTRY EMPLOYMENT

The wider Information media and telecommunications sector¹⁸ is by far the largest employer of ICT professionals, accounting for 47.0 per cent of all ICT employees across Australia. These businesses require ICT professionals in their day-to-day operations, and also provide consulting services to businesses in other industries. Outsourcing to specialist IT firms can be particularly attractive to smaller companies that lack the scale or knowledge to build an in-house capability, or companies that require specialist skills for one-off projects.

The Computer System Design and Related Services industry (a subset of the Information, Media and Telecommunications subdivision) accounts for the largest share of employment (32.5 per cent) followed by Professional, Scientific and Technical Services (12.3 per cent), Telecommunications services (12.1 per cent), Financial and Insurance Services (8.1 per cent) and Public Administration and Safety (8.0 per cent). While the ICT specialist industries are clearly the major employers of ICT professionals, just under half of ICT professionals are employed outside of these industries. This highlights the wide array of opportunities available to ICT professionals and the pervasive nature of demand for their skills across the economy.¹⁹

FIGURE 6 - SIZE OF ICT WORKFORCE (%), MEDIAN BASE SALARY (\$) AND MEDIAN ANNUAL SALARY MOVEMENTS (%) BY INDUSTRY



RESPONSIBILITY LEVEL

Responsibility level is one of the strongest indicators of remuneration with salaries rising as responsibility level increases. The median annual base salary for a Level 1/SFIA Level 3 ICT professional, which is roughly equivalent to a graduate level role, was \$60,196 and the median annual total package figure was \$66,327. Wages at the lowest level of responsibility are constrained by a high level of entry-level staff and graduates. Not surprisingly, remuneration was greatest at Level 5/SFIA Level 7 where the median annual base salary reached was \$165,000 and the annual total package figure was \$185,820. This level is comprised primarily of upper management level employees.

Median annual salary growth was greatest at responsibility level 2 and trended towards 0 per cent at Level 5. For a description of the responsibility levels refer to the definitions at the end of the report.

FIGURE 7 - ICT PROFESSIONAL MEDIAN BASE SALARY AND TOTAL PACKAGE BY LEVEL OF RESPONSIBILITY (\$)

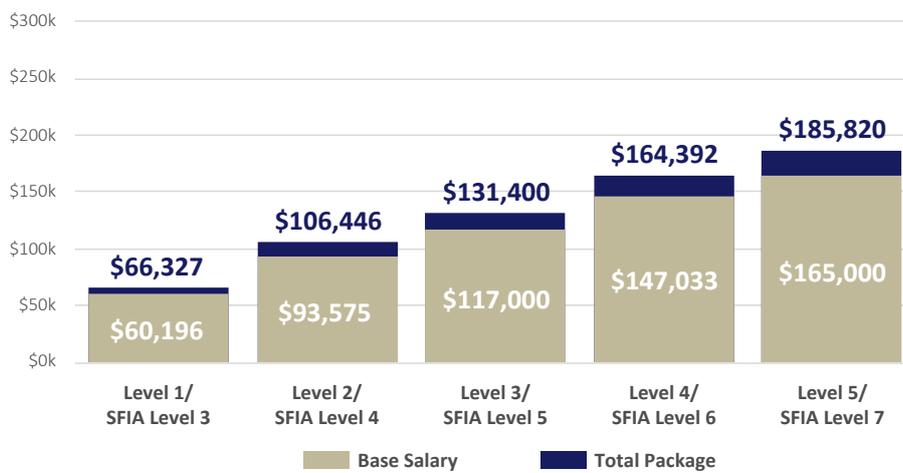


FIGURE 8 - ICT PROFESSIONAL MEDIAN ANNUAL SALARY MOVEMENTS BY RESPONSIBILITY LEVEL (%)

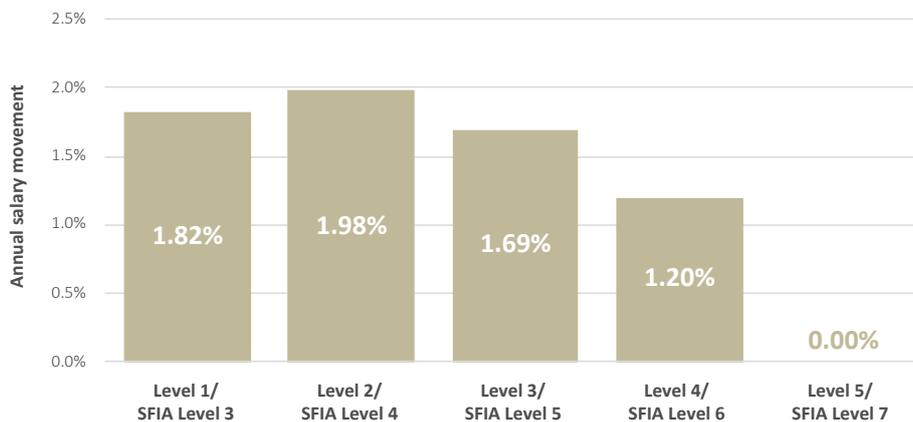


TABLE 1 - ICT PROFESSIONAL BASE SALARY AND TOTAL PACKAGE BY RESPONSIBILITY LEVEL (\$)

	BASE SALARY				TOTAL PACKAGE			
	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
Level 1/SFIA Level 3	\$55,000	\$60,196	\$80,000	\$67,827	\$60,225	\$66,327	\$87,600	\$75,268
Level 2/SFIA Level 4	\$80,000	\$93,575	\$115,556	\$99,254	\$88,191	\$106,446	\$136,478	\$112,984
Level 3/SFIA Level 5	\$97,000	\$117,000	\$135,000	\$118,615	\$114,477	\$131,400	\$161,400	\$134,355
Level 4/SFIA Level 6	\$127,250	\$147,033	\$160,690	\$144,713	\$141,255	\$164,392	\$183,188	\$164,612
Level 5/SFIA Level 7	\$146,000	\$165,000	\$198,000	\$173,773	\$165,727	\$185,820	\$242,740	\$206,048



JOB FUNCTION

By job function, remuneration was greatest in Sales and marketing roles with an average median base salary of \$163,000 and a total package of \$177,235, suggesting ICT professionals with a skill set that helps them sell their businesses products and services are highly valued in the industry.

Annual salary growth was low across the board, but greatest in Development and implementation roles at 2.1 per cent.

FIGURE 9 - ICT PROFESSIONAL MEDIAN BASE SALARY AND TOTAL PACKAGE BY JOB FUNCTION (\$)

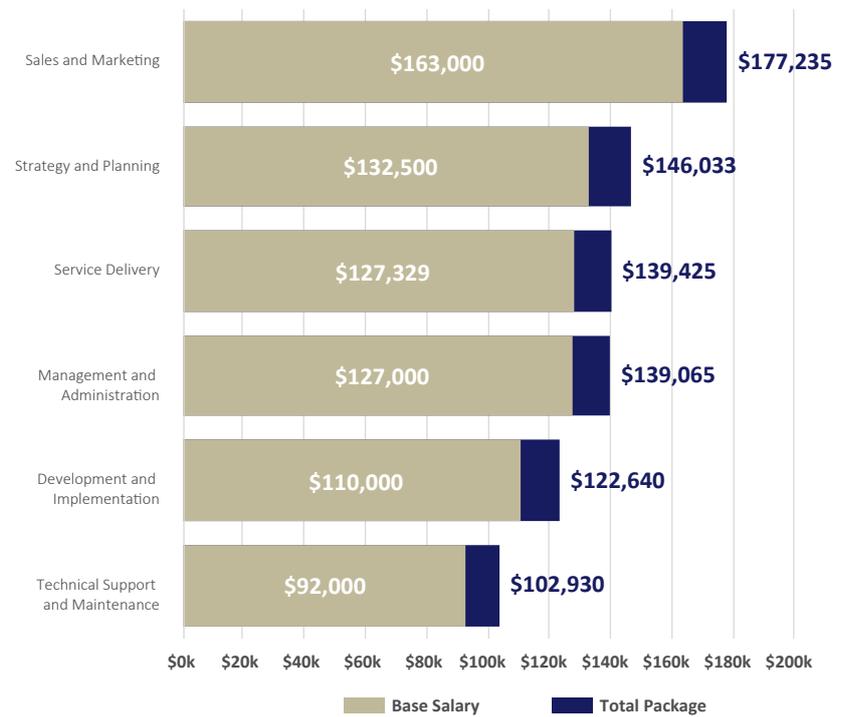
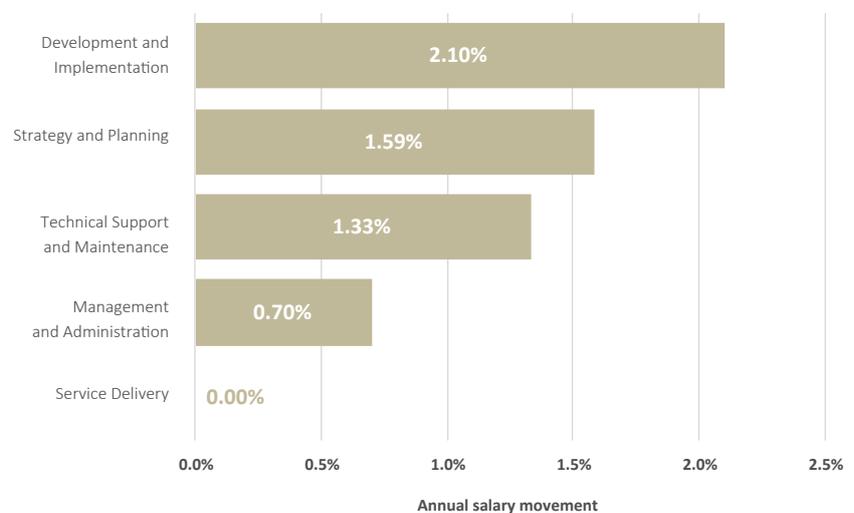


FIGURE 10 - ICT PROFESSIONAL MEDIAN ANNUAL SALARY MOVEMENT BY JOB FUNCTION (%)



* Too few ICT professionals in sales and marketing roles provided information on previous salaries or had remained in the same role for more than 12 months to determine annual salary movements.

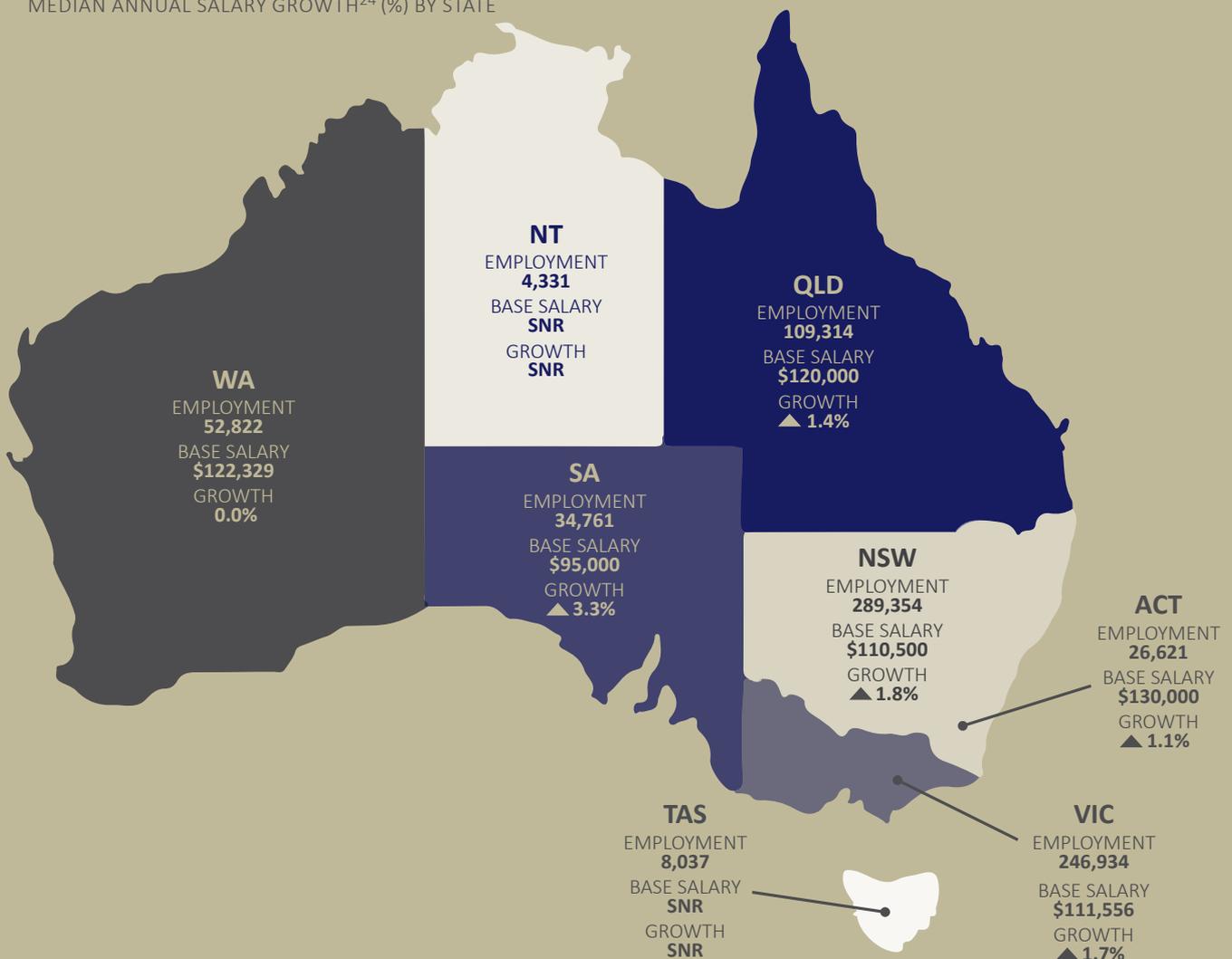
STATE

The eastern seaboard states continued to dominate ICT employment with NSW, VIC and QLD accounting for 83.7 per cent of all ICT jobs.²⁰ Major ICT firms and larger employers of ICT professionals (e.g. financial services firms) tend to be located in the major capitals and head-office locations in these areas are particularly large employers. ICT consulting firms also tend to be located close to their market and the high number of client businesses in Sydney, Melbourne and Brisbane make these cities high-employing locations. Relative to its size, the ACT is also a major employer, with many large public-sector organisations employing ICT professionals and agencies providing ICT contract labour to the Federal Government.

Across Australia, the highest average wage was recorded in the ACT with remuneration in this state edging out other states. While wages in South Australia were not the highest comparatively, annual wage growth exceeded that in other states. Annual salary growth appeared flatlined in Western Australia.

Job losses, border closures and restrictions and lockdowns are likely to continue to impact state economies as the pandemic unfolds and wage growth is likely to be affected. The extent of the downturns and subsequent recoveries in particular states will depend on factors such as the number of cases, the size of the population, the size of cities and degree of urbanisation, whether the state has large older or indigenous populations, the concentration of workers in at-risk occupations and industries, the success of lockdown measures, the extent and impact of stimulus measures, the extent to which the state relies on overseas arrivals and/or international students for growth, the extent to which the state public sector can provide a floor to job losses, the health of the state's economy prior to the crisis and the impact on markets for particular state-manufactured products and services.²¹

FIGURE 11 - ICT EMPLOYMENT²², MEDIAN BASE SALARY²³ (\$) AND MEDIAN ANNUAL SALARY GROWTH²⁴ (%) BY STATE



Employment data based on ABS Census 2016. Wage and growth data sourced from survey respondents.
SNR - Sample not representative

SKILLS

The set of skills required by an ICT professional may differ significantly based on the nature of the employee's organisation or the specifics of the role. Different companies employ differing forms of technology and software and use technology to varying extents throughout their day-to-day operations. ICT roles may be used to support basic administrative functions, or they may play key enabling or transformative roles within organisations. As a result, skills are a key determinant of remuneration, as they effectively establish the specific functions that an employee performs.

Technology changes rapidly and in-demand skills can quickly become superseded. In order to optimally manage continuing professional development activities, ICT professionals should maintain a detailed understanding of which skills are currently in demand across the workforce, and in which skill areas demand is expected to increase and decline over the coming two to five-year period.

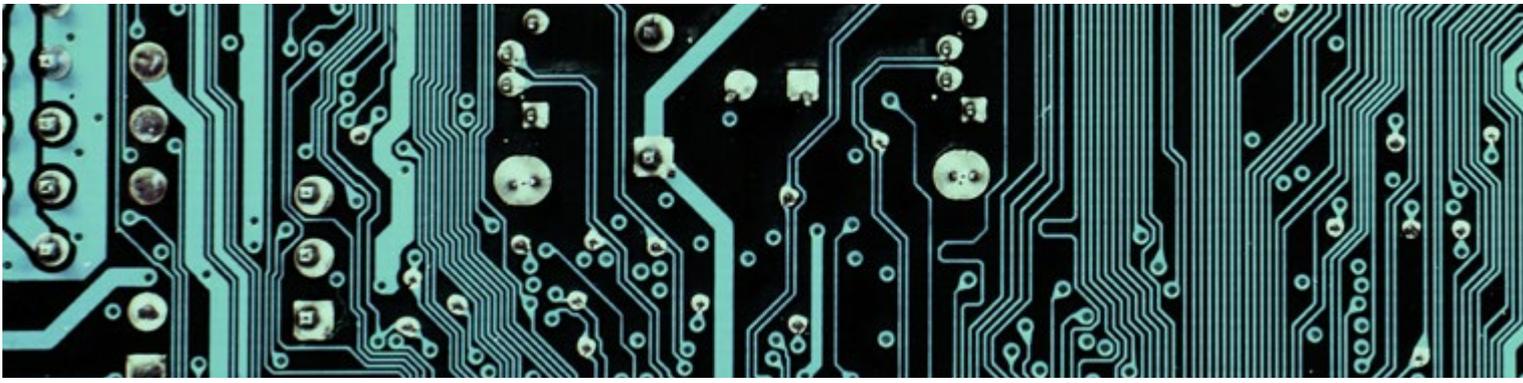
Table 2 below is a summary of base salaries and annual salary movements for a comprehensive range of ICT skills to assist ICT professionals make an informed assessment of increasing and declining demand.

TABLE 2 - ICT PROFESSIONAL BASE SALARY AND SALARY MOVEMENT BY SKILLS USED IN ROLE

	N	BASE SALARY				ANNUAL SALARY MOVEMENT
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	MEDIAN
Cloud Services	103	\$85,000	\$122,000	\$146,000	\$119,447	1.82%
Software Development	96	\$85,000	\$120,000	\$138,250	\$114,924	2.10%
SQL	85	\$85,000	\$120,000	\$141,553	\$114,691	2.24%
System Architecture	85	\$107,165	\$126,500	\$150,000	\$127,977	2.06%
Information Security	84	\$92,539	\$123,829	\$146,399	\$120,974	1.69%
Project Management	82	\$96,000	\$120,000	\$147,065	\$123,722	1.30%
System Administration	80	\$85,000	\$107,750	\$145,000	\$112,002	1.67%
Testing	78	\$90,000	\$120,000	\$141,553	\$118,669	1.85%
Linux	73	\$86,800	\$120,000	\$136,500	\$115,998	1.89%
Technical Writing	61	\$100,000	\$124,657	\$146,000	\$123,776	1.45%
Database Management	60	\$85,000	\$116,000	\$135,500	\$111,902	2.00%
Management	59	\$107,500	\$128,000	\$150,000	\$130,246	0.00%
HTML/CSS/JavaScript	57	\$72,000	\$110,000	\$135,000	\$107,871	2.50%
Analytics	55	\$101,500	\$126,500	\$150,000	\$125,872	2.11%
Compliance & Risk	55	\$94,000	\$127,000	\$150,000	\$126,294	1.08%
Data Analytics	53	\$87,000	\$120,000	\$145,000	\$117,761	2.10%
Team Leader	53	\$119,000	\$135,000	\$162,000	\$138,622	1.20%
Python	52	\$99,806	\$126,750	\$147,500	\$122,905	2.00%
Training	48	\$98,000	\$130,000	\$150,000	\$127,277	1.20%
Network Administration	47	\$80,000	\$100,000	\$130,000	\$106,921	1.44%
Engineering	44	\$98,000	\$123,000	\$147,648	\$124,976	0.00%
Sharepoint	40	\$84,778	\$106,023	\$142,500	\$109,748	1.99%
Desktop Support	39	\$62,000	\$85,000	\$108,000	\$90,776	1.98%
Network Design	39	\$91,000	\$126,500	\$150,000	\$121,875	0.91%

TABLE 2 - ICT PROFESSIONAL BASE SALARY AND SALARY MOVEMENT BY SKILLS USED IN ROLE (CONTINUED)

	N	BASE SALARY				ANNUAL SALARY MOVEMENT
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	MEDIAN
.NET	36	\$85,977	\$111,000	\$130,000	\$111,354	2.53%
Business Intelligence	36	\$99,250	\$122,500	\$152,500	\$127,389	1.82%
C/C++	33	\$94,548	\$126,500	\$146,000	\$124,890	1.90%
Production Management	33	\$84,555	\$120,000	\$145,000	\$119,914	1.69%
UNIX	33	\$107,267	\$127,000	\$146,000	\$123,504	1.84%
Account Management	32	\$93,000	\$129,000	\$150,000	\$126,972	0.00%
UI/UX	31	\$78,047	\$113,606	\$136,500	\$109,605	2.37%
ETL	29	\$120,000	\$130,000	\$150,000	\$133,454	2.50%
Java/J2EE	29	\$113,606	\$126,000	\$150,000	\$129,057	1.40%
Data Warehousing	26	\$98,500	\$128,500	\$160,000	\$128,577	3.14%
Other skills	26	\$94,548	\$120,000	\$150,000	\$121,256	2.00%
Business Development	25	\$124,657	\$143,500	\$150,000	\$141,219	0.00%
Android	24	\$84,250	\$115,000	\$140,500	\$114,423	2.17%
VOIP/Telephony	24	\$89,000	\$107,750	\$132,250	\$110,065	2.00%
Citrix	22	\$95,000	\$120,000	\$150,000	\$122,131	2.25%
iOS	22	\$88,000	\$112,803	\$150,000	\$121,435	2.25%
Oracle	18	\$93,079	\$124,329	\$150,000	\$121,613	2.00%
PHP	17	\$80,000	\$119,000	\$128,000	\$108,986	2.29%
TCP/IP UML	17	\$86,953	\$108,000	\$136,500	\$107,756	3.01%
E-Commerce	16	\$69,219	\$104,500	\$160,690	\$112,572	2.54%
Modelling	16	\$106,250	\$130,000	\$152,500	\$130,728	1.14%
RF/Wireless	15	\$86,800	\$108,000	\$130,000	\$110,297	1.47%
SCCM/SCOM	15	\$98,500	\$124,657	\$150,000	\$125,581	2.37%
ASP	13	\$84,555	\$120,000	\$145,000	\$116,964	2.10%
Sales	13	\$124,657	\$146,000	\$186,500	\$148,640	0.00%
Perl	12	\$109,000	\$119,500	\$130,000	\$116,272	1.94%
Graphic Design	11	\$60,392	\$78,047	\$128,000	\$94,794	4.56%
IdAM	11	\$96,000	\$124,657	\$150,000	\$124,634	1.94%
SAP	11	\$112,000	\$124,657	\$148,230	\$127,186	2.04%
Marketing	7	\$60,000	\$135,000	\$150,000	\$115,786	0.00%
Ruby on Rails	7	\$72,000	\$113,606	\$130,000	\$103,944	1.35%
MS Dynamics	5	\$86,800	\$108,000	\$145,000	\$127,271	-
Social Media	5	\$72,000	\$113,606	\$148,230	\$108,767	-
SEO	4	-	\$80,000	-	\$104,375	-



MOST WIDELY HELD SKILLS

In our regular survey of ICT Professionals' employment and remuneration we asked respondents to identify which skills they used in their current role from a list of technology and role-specific skills. Cloud services was the most commonly held skill among respondents, followed by software development, SQL, System architecture and Information security. The high prevalence of these skills confirms their relevance across a wide range of roles.

HIGHEST PAYING SKILLS

The skills attracting the highest median base salary was Sales followed by Business development, Team leader and Marketing. Technical skills tended to attract less generous remuneration than general business skills reinforcing that ICT professionals looking to push their career forward need to look at broadly applicable skills that improve an organisations bottom line.

TABLE 3 - TOP 10 SKILLS BY MEDIAN BASE SALARY

Rank	Skill	Median base salary
1	Sales	\$146,000
2	Business Development	\$143,500
3	Team Leader	\$135,000
4	Marketing	\$135,000
5	Training	\$130,000
6	ETL	\$130,000
7	Modelling	\$130,000
8	Account Management	\$129,000
9	Data Warehousing	\$128,500
10	Management	\$128,000

GREATEST GROWTH IN PAY FOR SKILLS

The skills attracting the highest wage growth over the past year were graphic design followed by data warehousing, TCP/IP UML, E-commerce and .NET. The high rate of growth indicates that demand for these skills is increasing with employers offering more attractive remuneration to skilled staff. High-quality employees with skills in growth areas can be difficult to attract and the rapid rate of change in ICT exacerbates this issue. Interestingly, although technical skills attracted lower base rates of pay, growth rates for technical skills were higher.

TABLE 4 - TOP 10 SKILLS BY MEDIAN ANNUAL SALARY MOVEMENT

Rank	Skill	Median annual salary movement
1	Graphic design	4.6%
2	Data warehousing	3.1%
3	TCP/IP UML	3.0%
4	E-Commerce	2.5%
5	.NET	2.5%
6	HTML/CSS/JavaScript	2.5%
7	ETL	2.5%
8	UI/UX	2.4%
9	SCCM/SCOM	2.4%
10	PHP	2.3%

CHANGING DEMAND FOR SKILLS

Participants were also asked to rate how demand for the skills they employed in their current role would change over the next three years. Respondents identified Business intelligence, RF/Wireless, ASP, TCP/IP UML and Data warehousing as the most likely to increase in demand. ICT professionals are in the best position to identify potential areas of growth in the profession as they are directly responsible for incorporating new technology into businesses. The ability to effectively manage the transition from older technology to newer technologies requires in-depth knowledge and may provide a competitive edge for ICT professionals that maintain a strong commitment to ongoing professional development.

TABLE 5 - SKILLS IDENTIFIED AS MOST LIKELY TO EXPERIENCE INCREASED DEMAND*

Skill	% of respondents who believe demand will increase
Business Intelligence	87.5%
RF/Wireless	86.7%
ASP	84.6%
TCP/IP UML	82.4%
Data Warehousing	81.5%
UI/UX	81.3%
SCCM/SCOM	81.3%
C/C++	80.6%
ETL	80.0%
RF/Wireless	70.8%

* Excludes skills with five or less respondents

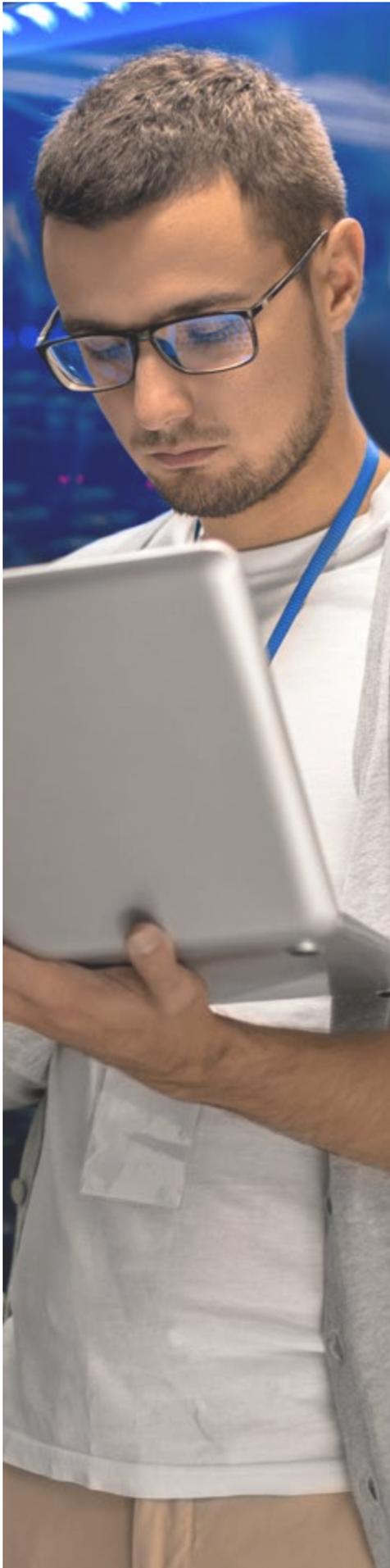
SKILLS MOST LIKELY TO BE OFFSHORED

Offshoring is a serious issue in the ICT landscape, with many organisations opting to minimise short-term costs by outsourcing functions overseas. It is difficult to forecast how the COVID-19 pandemic will impact the extent of offshoring but it is possible that it may lead to an increase in onshoring. Survey respondents were asked about the skills they thought were most likely to be offshored over the next three years. Respondents identified IdAM as the skill most at risk from offshoring over the next three years followed by Oracle, Perl and UNIX.

TABLE 6 - SKILLS IDENTIFIED AS MOST AT RISK OF OFFSHORING OVER THE NEXT THREE YEARS*

Skill	% of respondents who believe skill is at risk of offshoring over the next three years
IdAM	38.5%
Oracle	33.3%
Perl	33.3%
UNIX	25.7%
System Administration	25.3%
Network Administration	25.0%
Desktop Support	25.0%
Database Management	24.2%
E-Commerce	22.2%
PHP	22.2%

*Excludes skills with ten or less respondents



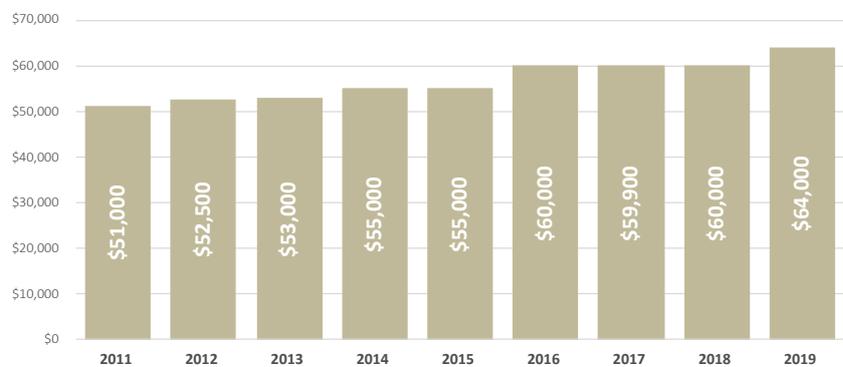
GRADUATES

WAGES

According to the latest Graduate Outcomes Survey,²⁵ graduate wages rose 6.6 per cent over the past year. The latest data places the average ICT graduate wage at \$64,000 after the completion of a Bachelor degree, up on \$60,000 the previous year. Over the longer-term, graduate ICT wages have trended upwards, with annualised growth of around 2.5 per cent recorded over the past seven years.

The impact of the COVID-19 pandemic on graduate salaries is difficult to forecast. The fall in skilled migration and the number of international students remaining in Australia to gain experience after completing their degrees may have a positive effect on salaries, but the pandemic may also impact graduate hiring intentions.

FIGURE 12 - UNDERGRADUATE MEDIAN FULL-TIME SALARIES 4 MONTHS AFTER COMPLETION OF DEGREE - COMPUTING AND INFORMATION SYSTEMS



Note: From 2016, the Australian Graduate Survey conducted by Graduate Careers Australia (GCA) was replaced by the Graduate Outcomes Survey as part of the QILT suite of surveys. The 2015 figure in this graph was brought forward from the GCA survey and this figure reflects the QILT definitions while the data pre-2015 does not. The new data series therefore begins in 2015.

GRADUATE ENROLMENTS AND COMPLETIONS

The number of domestic undergraduate enrolments in IT degrees has risen steadily since 2009, with growth accelerating in recent years. Completions have followed a similar trend overall holding steady in 2018. This growth has come after almost a decade of decline, which followed the burst of the dot-com bubble in 2001. Post-graduate enrolments are also increasing coming off a low point in 2009 with post-graduate completions increasing from a low in 2010 and holding steady to 2018.

While the rate of enrolments is increasing steadily, there is still significant room for growth, as ICT roles become more pervasive across the economy. While this has encouraged more school leavers to choose ICT degrees when entering tertiary study, attrition is higher for IT degrees than for any other field of education and this keeps completions down.²⁶

While opportunities for ICT professionals are likely to be solid over the years ahead even as the COVID-19 pandemic unfolds, skill and experience will be major factors in determining the prospects available to each professional. In-demand skills change rapidly and students will need to be well-informed and up-to-date on the needs of the workforce, tailoring their training and resumes to reflect in-demand skills, upskilling in areas of increasing demand and building a compelling portfolio to enhance their employability.

FIGURE 13 - DOMESTIC ENROLMENTS IN IT DEGREES²⁷

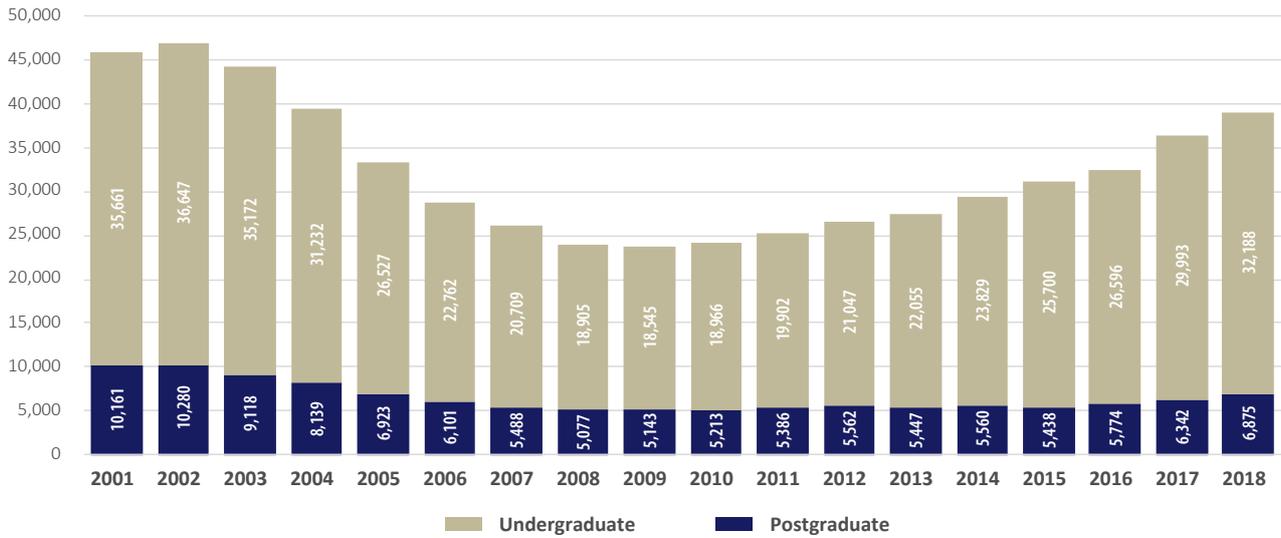
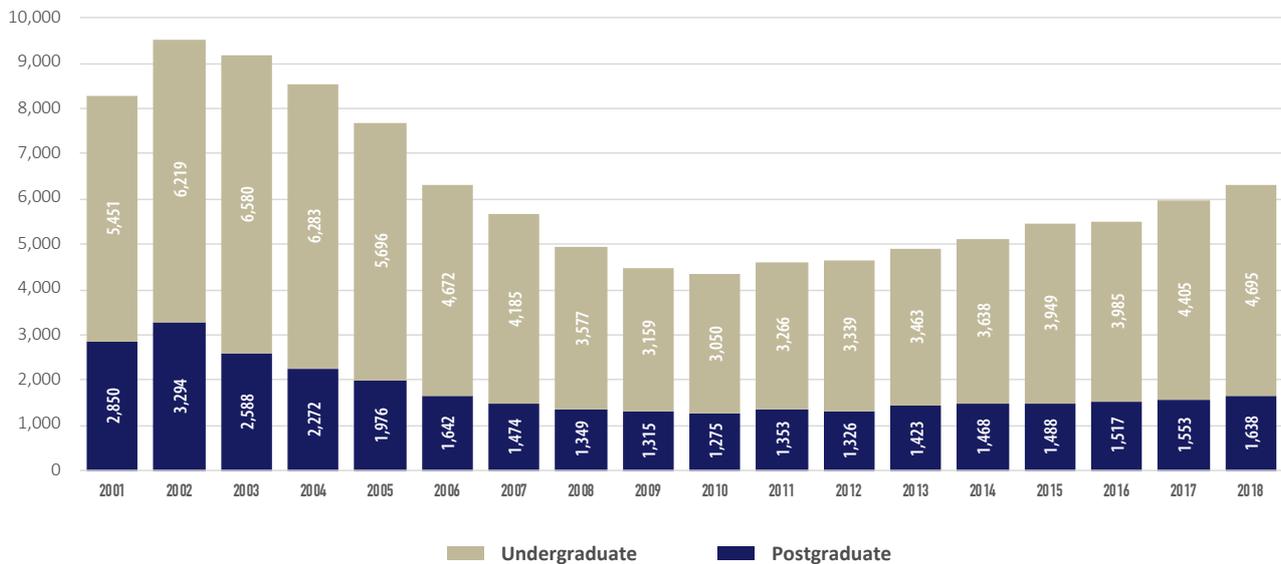


FIGURE 14 - DOMESTIC COMPLETIONS OF IT DEGREES²⁸

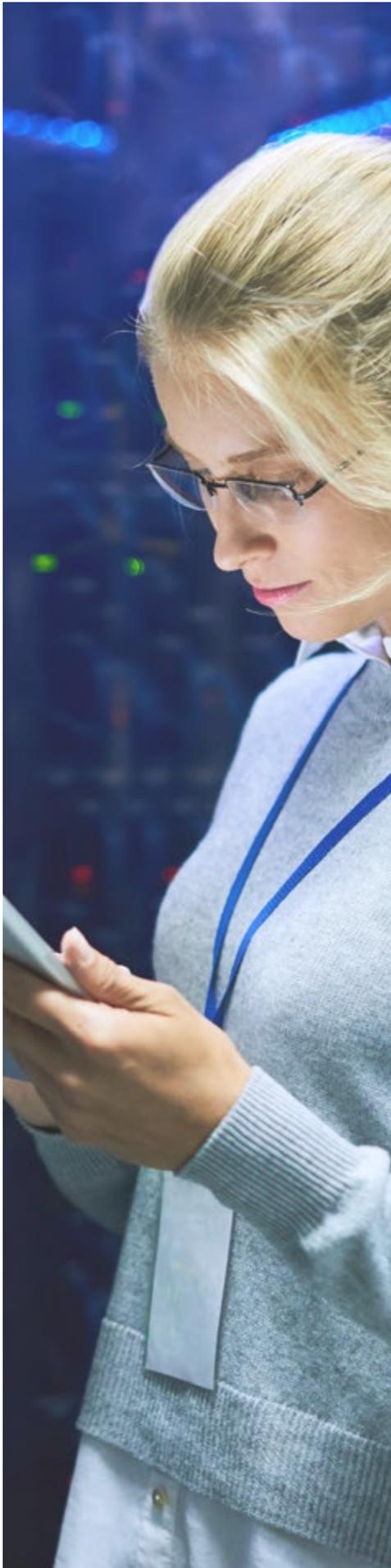


EMPLOYMENT FOR GRADUATES

Employment prospects for IT graduates remain lukewarm with many IT graduates struggling to find full-time work following graduation and a significant number working in areas not related to their qualification. 75.9 per cent of undergraduates were in full-time work four months after graduation, slightly up on last year’s figure of 73.2 per cent. Computing and information systems was one of the study areas with the lowest proportion of graduates employed with an overall employment rate of 82.9 per cent compared to 86.8 per cent for all study areas (total employment).²⁹

Employers have also suggested that they struggle to find IT graduates with suitable skills suggesting a mismatch between what is being taught in IT degrees and the needs of industry. A LinkedIn study found that the skills most in demand from those moving jobs included relationship management, customer service and contract negotiations.³⁰ Graduates would be well-advised to consider avenues for gaining experience and doing training in these areas to maximise their employability.

Graduates would also be well advised to pursue training and further development in the skill areas most in demand including Business intelligence, RF/Wireless, ASP and TCP/IP UML.



GENDER

Women continue to be seriously underrepresented in the ICT workforce. Females account for only 25 per cent of those with post-secondary ICT qualifications in Australia.³¹ Female participation in the ICT labour force is also lower than across other occupations with a participation rate of only 29 per cent of ICT workers compared to 44 per cent of female workers in professional industries and 47 per cent of the total workforce. This figure is unchanged from the previous year.³²

GENDER PAY GAP

The latest WGEA Gender Equality data shows a gender pay gap of 17.2 per cent in the Information media and telecommunications industry.³³

Female ICT graduates in full-time roles at both the Bachelor and Doctorate level are less likely to earn an income in the highest wage bracket (\$104,000 and over). At the Bachelor level, only 17 per cent of females reported earnings in the top pay bracket compared to 29 per cent of males, and at the Doctorate level, 31 per cent of females reported earning in the top pay bracket compared to 42 per cent of males.³⁴

Our survey identified a modest gender pay gap with male respondents' median base salaries at \$113,606 while female respondents' median base salaries were \$109,000, indicating female respondents earned 95.9 of male respondents' earnings - a pay differential of 4.1 per cent.

DISCRIMINATION

56.5 per cent of female respondents said they had experienced bias or discrimination on the basis of gender in the previous three years compared to 2.8 per cent of male respondents. 12.0 per cent of respondents had experienced discrimination on the basis of age - 17.4 per cent of female respondents and 10.8 per cent of male respondents. 3.5 per cent of respondents reported having experienced racial discrimination or discrimination on the basis of sexual identity.

TABLE 7 - FORMS OF DISCRIMINATION EXPERIENCED IN THE WORKPLACE OVER THE LAST THREE YEARS

	Form of discrimination						
	Age	Disability	Gender	Race	Religion	Sexual identity	None of the above
Male	10.8%	1.7%	2.8%	3.4%	0.6%	1.7%	85.2%
Female	17.4%	4.3%	56.5%	4.3%	0.0%	13.0%	34.8%
All respondents	12.0%	2.0%	9.0%	3.5%	0.5%	3.5%	79.0%

SEXUAL HARASSMENT

20.1 per cent of female respondents and 3.1 per cent of male respondents reported having been sexually harassed during their careers.

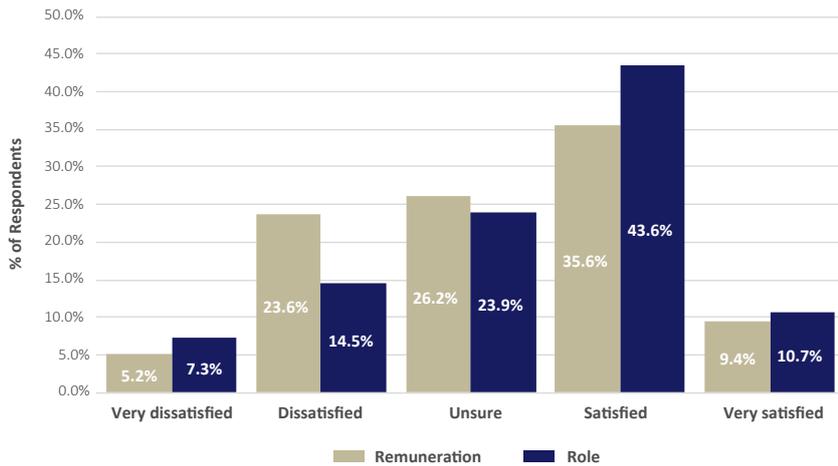
DIVERSITY POLICY AND STRATEGY

63.9 per cent of respondents indicated their employer had formal policies in place to promote diversity and 76.2 per cent reported their employer had policies to deal with discrimination. While these results appear positive, 30.8 per cent of respondents also said their employer did not have strategies in place to actually implement policies relating to diversity and discrimination.

SATISFACTION LEVELS AND SALARY EXPECTATIONS

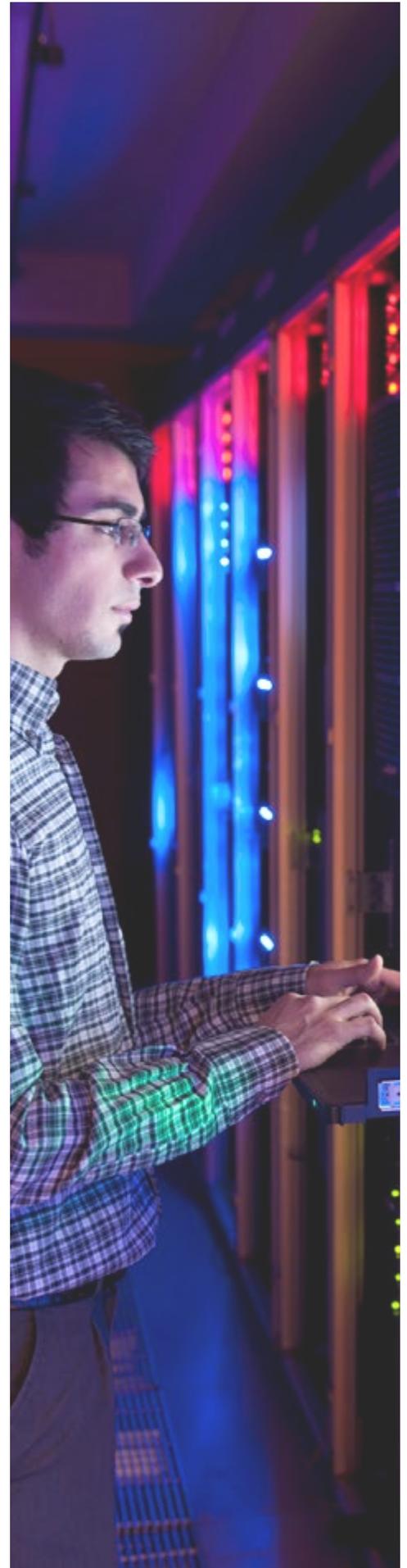
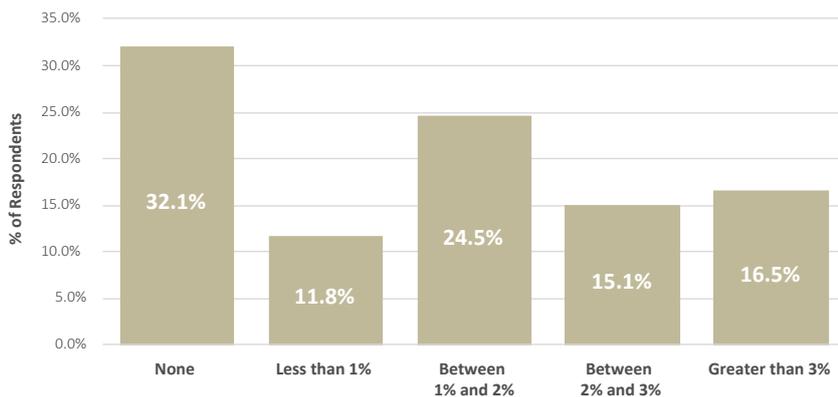
The survey asked respondents how satisfied they were with their current level of remuneration and role. Only 45.1 per cent of respondents reported being satisfied or very satisfied with their current remuneration, with 28.8 per cent reporting being dissatisfied or very dissatisfied. 54.3 per cent of respondents reported being satisfied or very satisfied with their current role, with 21.8 per cent reporting being dissatisfied or very dissatisfied.

FIGURE 15 - LEVEL OF SATISFACTION WITH CURRENT REMUNERATION AND ROLE (%)



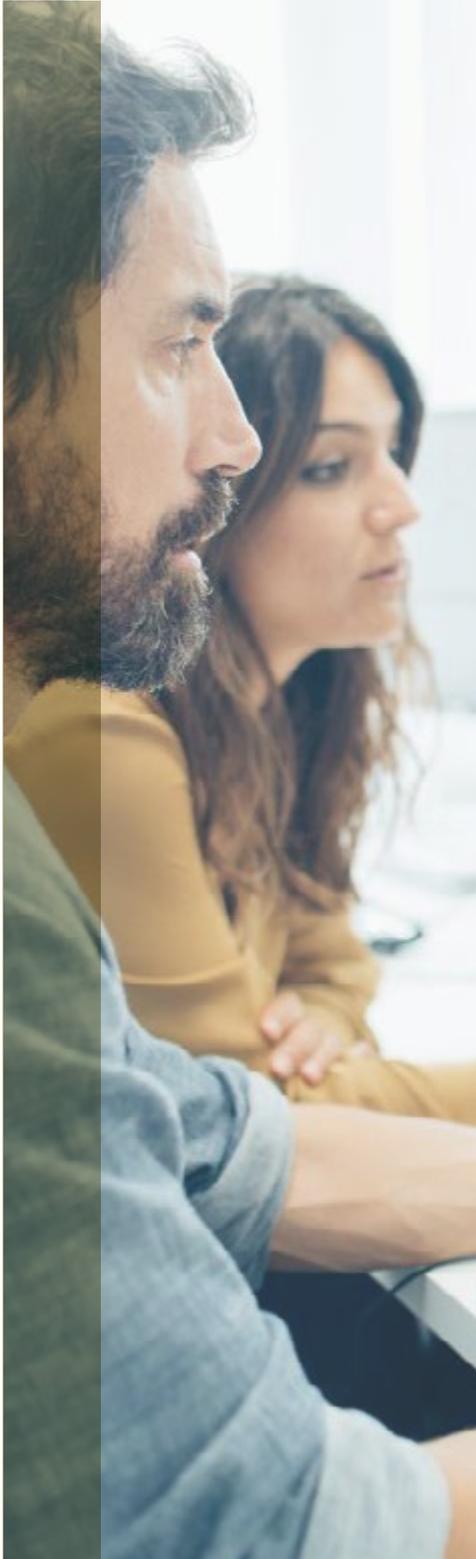
The survey also asked ICT professionals to report their expectations for growth in base salaries over the coming 12 months. Respondents were less optimistic than they have been in the past, with 32.1% of respondents expecting no growth over the next twelve months. Those who did expect growth, were most likely to expect between 1 and 2 per cent wage growth. These results illustrate the impact COVID-19 is having on employee outlooks in the ICT sector.

FIGURE 16 - EXPECTATIONS OF WAGE GROWTH OVER NEXT 12 MONTHS (%)





WORKPLACE ISSUES

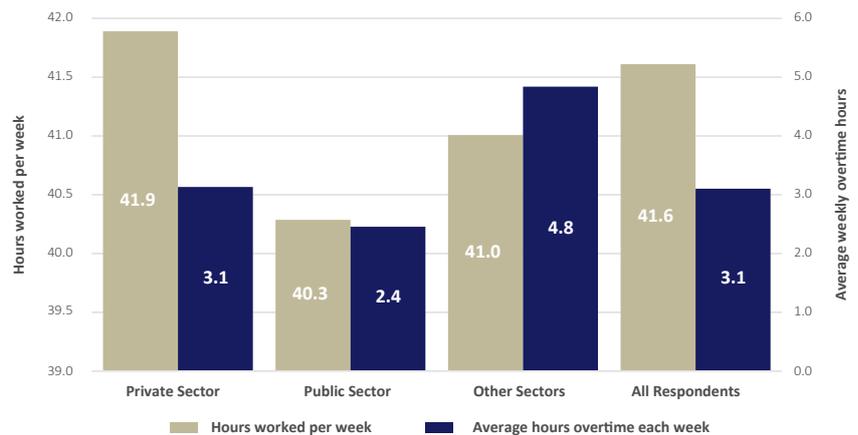


WORKING HOURS AND OVERTIME

WORKING HOURS

Respondents reported working an average of 41.6 hours per week, with an average of 3.1 hours of overtime. Overtime was more prevalent in the private sector where average reported additional hours were 3.1 hours compared with 2.4 hours in the public sector. More interestingly, the mean hours worked each week in the private sector was greater than in the public sector by a factor more than accounted for by overtime, suggesting an inherent acceptance of longer working weeks.

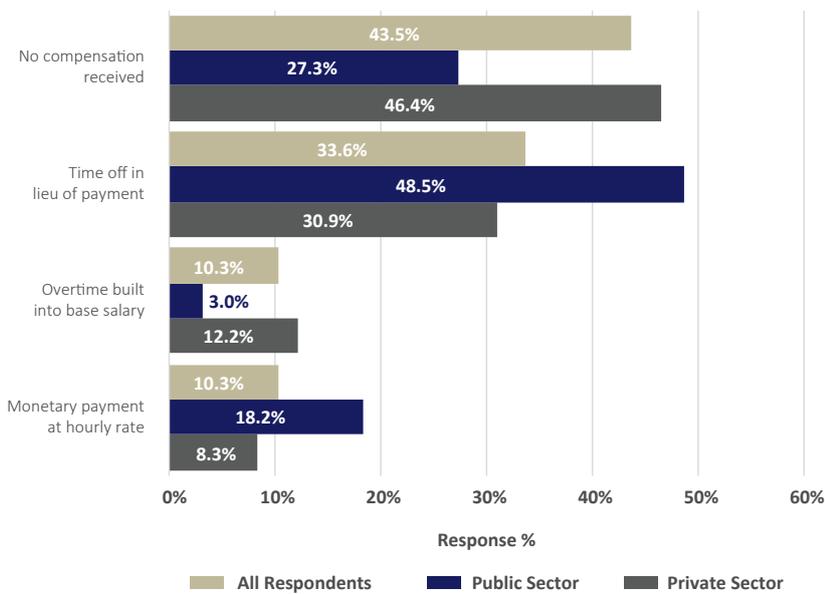
FIGURE 17 - MEAN HOURS WORKED AND OVERTIME PER WEEK BY SECTOR



OVERTIME

Overtime and the way employees are compensated for additional work forms an important part of an employee's remuneration structure. Overall, a concerning 43.5 per cent of respondents reported receiving no compensation for overtime. Non-payment for additional hours was much more prevalent in the private sector than the public sector. Time off in lieu of payment was the most common form of compensation for overtime in the public sector.

FIGURE 18 - METHOD OF OVERTIME COMPENSATION BY SECTOR OF EMPLOYMENT (%)

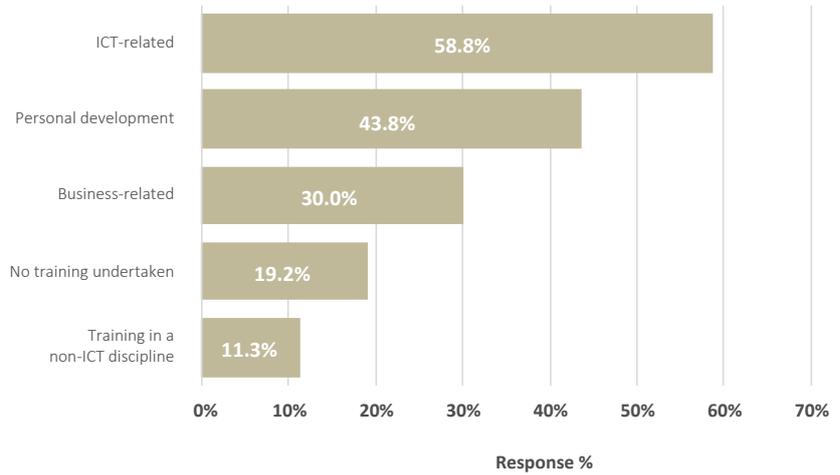




PROFESSIONAL DEVELOPMENT

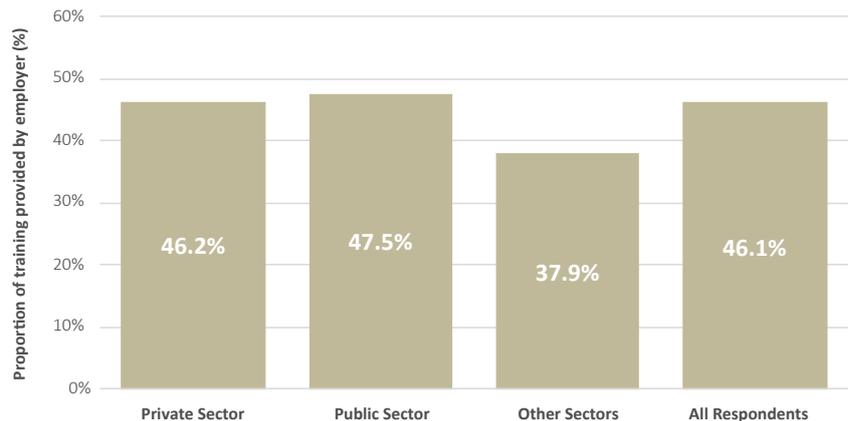
Respondents to the survey had undertaken predominantly ICT-related training in the previous 12 months.

FIGURE 19 - TYPES OF TRAINING UNDERTAKEN BY ICT PROFESSIONALS OVER THE LAST 12 MONTHS (%)



Of those who had undertaken professional development activities, close to half had training provided by their employer. The level of employer-provided training was similar in both the private and public sector, marking a decline in training provided by public sector employers. While the high proportion of ICT professionals undertaking CPD is a positive sign, there are opportunities for additional employer support with up-to-date ICT skills potentially making a significant difference to an organisation's efficiency and bottom line. Given the decline in the public sector, hopefully the professional development for ICT professionals does not get treated as a cost to be cut.

FIGURE 20 - MEAN PROPORTION OF TRAINING PROVIDED BY EMPLOYER (%)



INDIVIDUAL AND WORKPLACE PRIORITIES

Survey participants were asked to rank their top ten workplace priorities listed below in order of how important they were to them. On average, respondents identified work/life balance as their highest workplace priority, followed by job satisfaction, a pay increase and job security. The 4th to 7th priorities were all ranked similarly on average.

TABLE 8 - RANKING OF WORKPLACE PRIORITIES

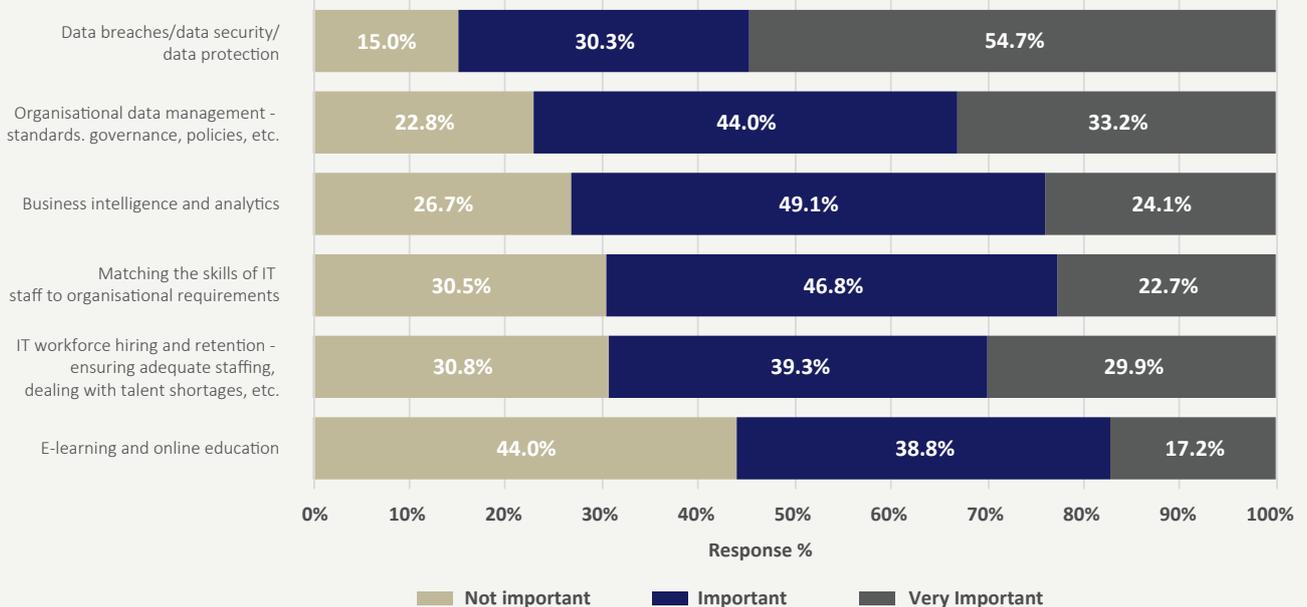
Ranking	Priority
1	Work/life balance
2	Job satisfaction
3	A pay increase
4	Job security
5	Professional development opportunities
6	Effective management
7	Improved workplace culture
8	Flexible working arrangements
9	Working from home
10	Promotion
11	Challenging workloads

ICT professionals are also uniquely placed to understand the issues likely to affect their workplace over the coming year that may have a major impact on employers and the wider economy.

When asked about the anticipated importance of several key issues over the coming year, ICT professionals identified data breaches/data security/data protection as the most important issue with 85.0 per cent indicating that it was likely to be an important or very important issue in their workplace.

Organisational data management standards came in second with 77.2 per cent rating the issue as important or very important, followed by business intelligence and analytics at 73.3 per cent.

FIGURE 21 - ISSUES OF IMPORTANCE IN THE WORKPLACE OVER PREVIOUS 12 MONTHS (%)





PROFESSIONAL INTENTIONS

Survey respondents were asked whether they intended to leave the ICT profession, and if so the time frame in which they expected that to occur as a basis for adding to our understanding of the stability or otherwise of the workforce. Overall, 6.9 per cent of respondents said they were considering leaving the profession permanently, and 5.1 per cent said they were considering leaving temporarily. Those that intended to leave the profession most commonly intended to leave in under 12 months (30.8 per cent).

FIGURE 22 - PROPORTION OF ICT PROFESSIONALS THAT INTEND TO LEAVE PROFESSION

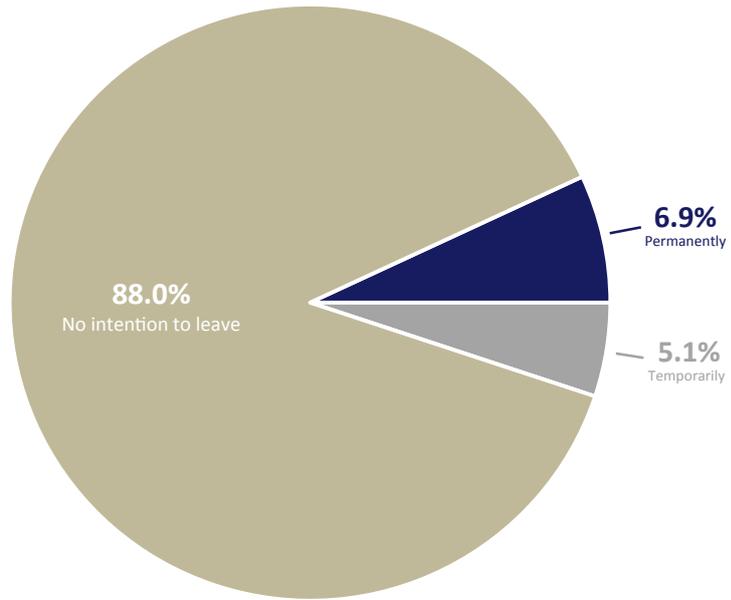
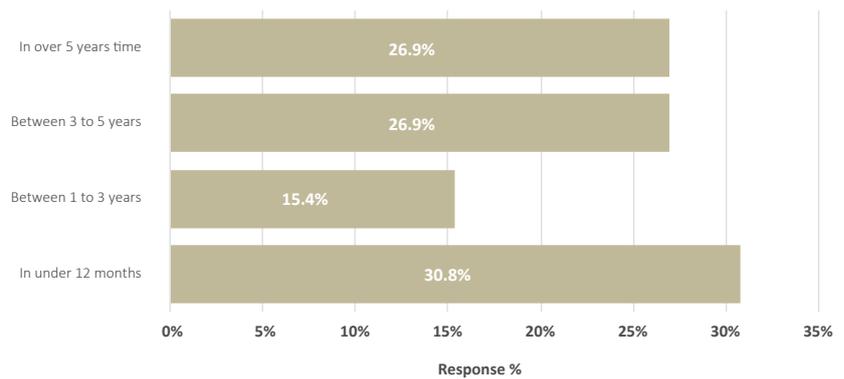
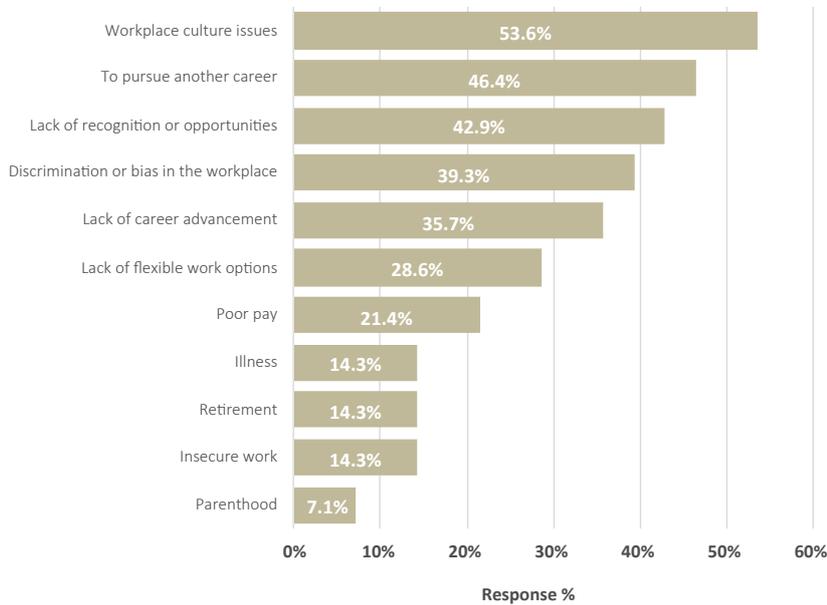


FIGURE 23- INTENDED TIME UNTIL LEAVING PROFESSION



The most common reason for wanting to leave the profession was workplace culture issues. Pursuing another career was another common reason cited alongside a lack of recognition or opportunities. Employers of ICT professionals need to be aware of the risk of losing talented staff when they fail to provide a positive workplace environment and/or do not promote and support career development opportunities for those professionals.

FIGURE 24 - REASONS FOR INTENTION TO LEAVE PROFESSION

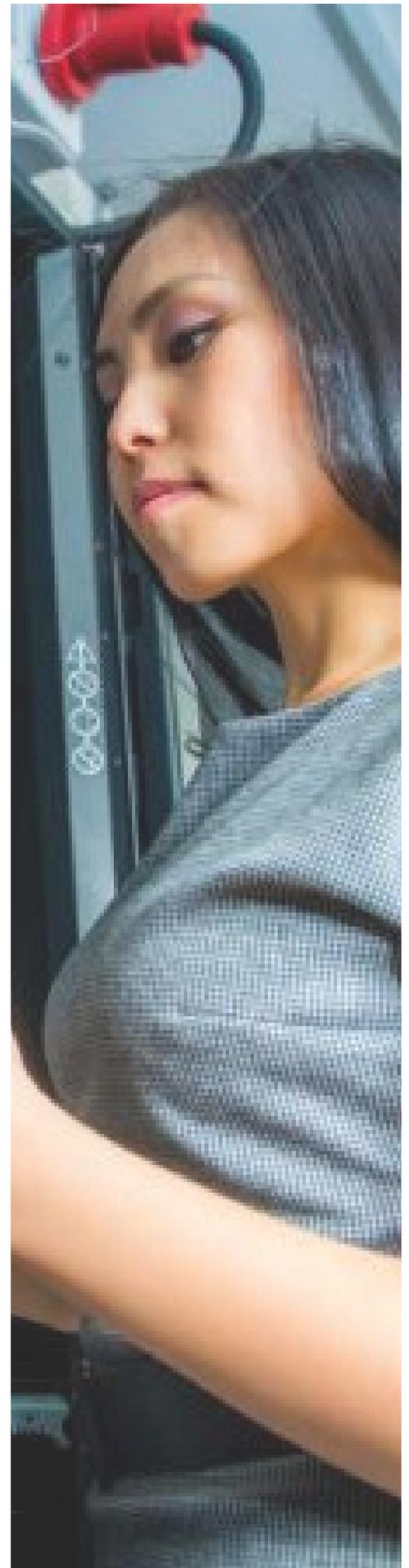


STAFF MORALE, WORKER FATIGUE AND PRODUCTIVITY

51.1 per cent of respondents said that staff morale had declined in their organisation over the previous year and 51.9 per cent reported that worker fatigue had increased. 24.5 per cent said overall productivity in their workplace had declined over the previous year, but a similar number also said it had increased, 22.7 per cent.

TABLE 9 - PERCEPTION OF CHANGES IN WORKFORCE AND ORGANISATION

	Decreased	Stayed the same	Increased
	% Response	% Response	% Response
Staff morale	51.1%	39.6%	9.4%
Worker fatigue	5.1%	43.0%	51.9%
Overall productivity	24.5%	52.8%	22.7%



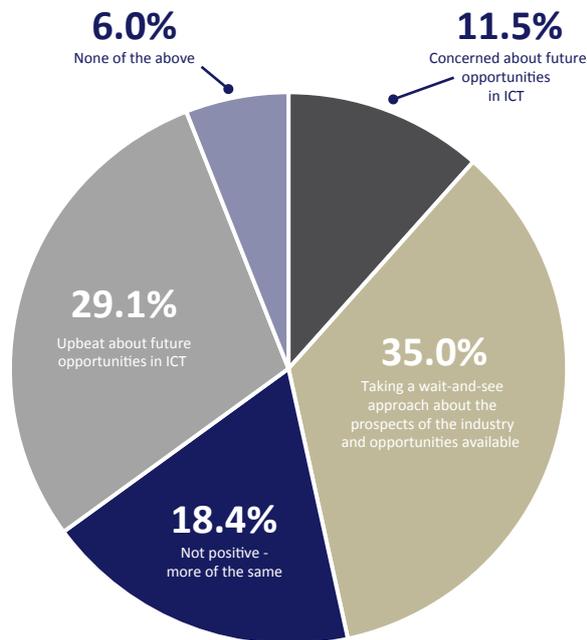


FUTURE PROSPECTS AND VALUE TO ORGANISATION

FUTURE PROSPECTS

When asked about their approach to employment in their profession, 11.5 per cent of respondents were concerned about future opportunities, 18.4 per cent expected more of the same, while 35.0 per cent were taking a wait-and-see approach to future prospects. 29.1 per cent reported being upbeat about future prospects in the profession, an increase from last year. Given the employment climate created by COVID-19, it is good to see more positivity amongst the ICT workforce who are becoming ever more important for business success.

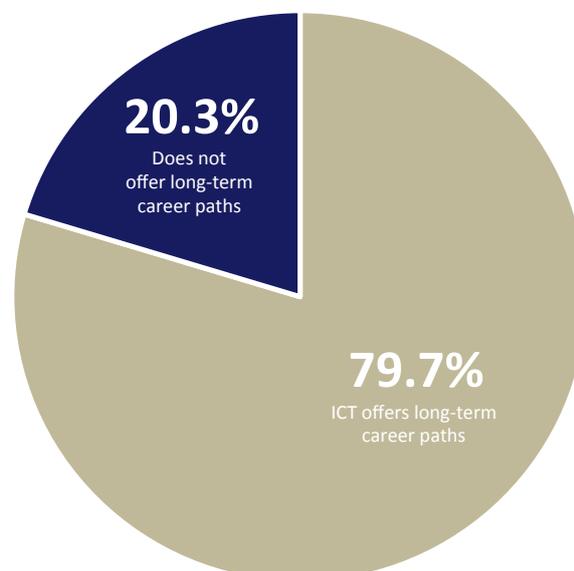
FIGURE 25 - APPROACH TO EMPLOYMENT IN ICT PROFESSION (%)



LONG-TERM PROSPECTS

When asked about their long-term prospects in ICT, 79.7 per cent reported that they believed the profession provided a long-term career path, compared with 20.3 per cent who did not see a long-term future in ICT.

FIGURE 26 - PERCEPTION THAT ICT PROFESSION OFFERS LONG-TERM CAREER PATHS (%)



OPPORTUNITIES

A total of 39.1 per cent of respondents expected an increase in opportunities for ICT professionals over the next year, while only 23.5 per cent expected an increase in opportunities in decision-maker roles. As the profession grows there is some suggestion that those working in ICT are hitting a ceiling that prevents them from moving into senior, management or leadership roles.

FIGURE 27 - CHANGE IN ICT JOB OPPORTUNITIES OVER THE NEXT 12 MONTHS (%)

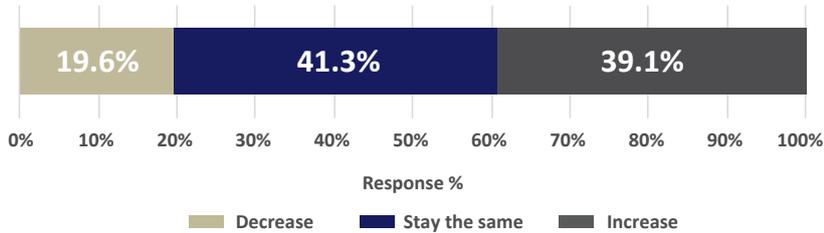
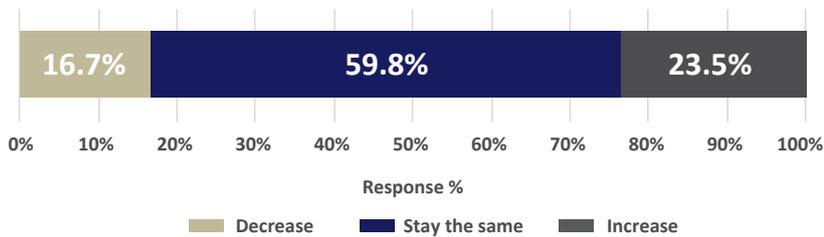


FIGURE 28 - CHANGE IN DECISION-MAKER OPPORTUNITIES OVER THE NEXT 12 MONTHS (%)

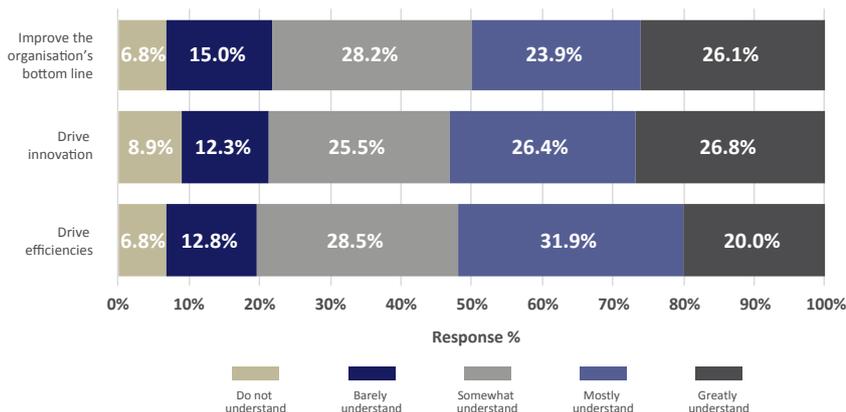


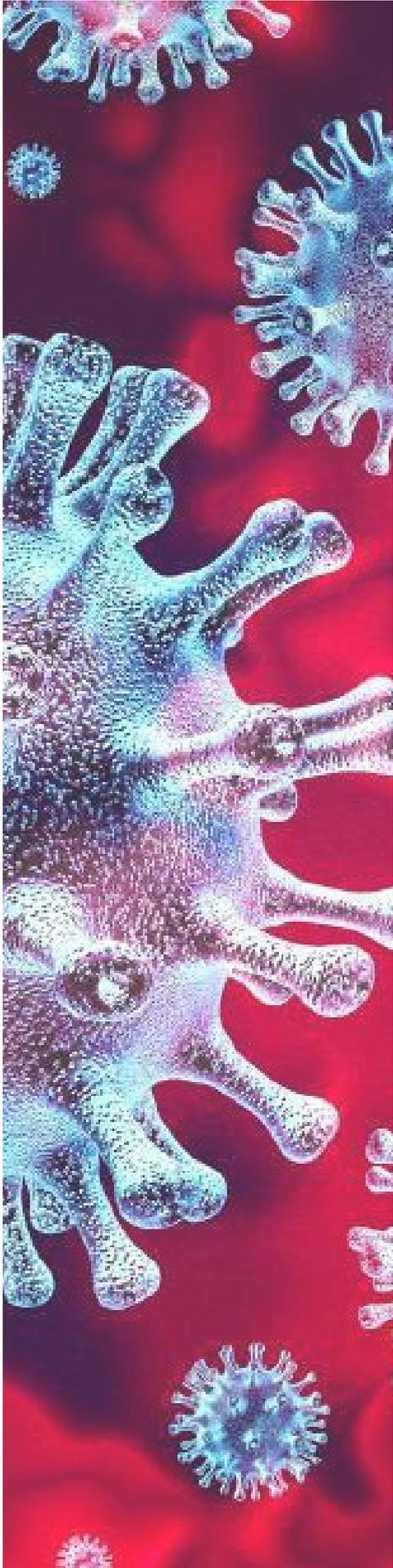
VALUE TO ORGANISATION

Participants were also asked the extent to which they felt their employers recognised the contribution that an ICT professional could make towards driving profitability, innovation and efficiencies. Overall, ICT professionals believed that their employers value the ICT profession, generally viewing ICT professionals as a source of efficiency, innovation and profit. There is however potential for employers to better utilise their ICT capability with still a significant proportion not sufficiently understanding the extent to which ICT professionals can assist their organisations in these areas.

- 19.6 per cent of respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive innovation.
- 21.3 per cent of respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive profit.
- 21.8 per cent of respondents believe their employers do not understand or barely understand the ability of ICT professionals to drive efficiencies.

FIGURE 29 - EMPLOYER PERCEPTIONS OF ICT PROFESSIONALS TO DRIVE INCREASED PROFITS, INNOVATION AND EFFICIENCIES (%)





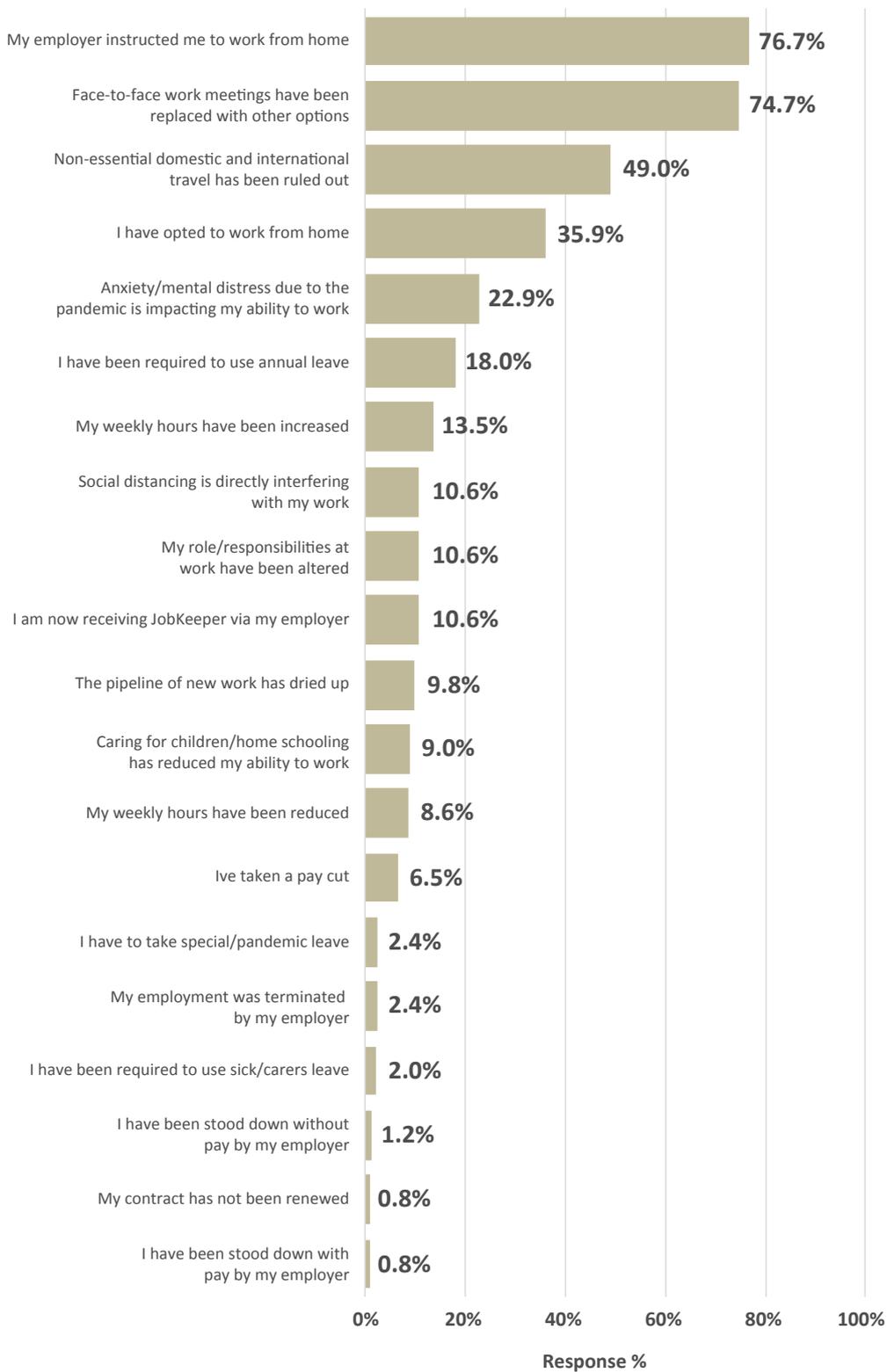
IMPACTS OF COVID-19 ON ICT PROFESSIONALS

2020 has been a uniquely challenging year for the employment market. Mass shutdowns of workplaces due to the pandemic, particularly in Victoria, have simultaneously put a lot of people's employment into a precarious situation while pushing people into more flexible working arrangements. ICT professionals enable these flexible working arrangements by supporting and deploying technologies for workplaces. Expecting the pandemic to have had notable effects on ICT professionals we asked survey respondents to indicate how the pandemic had impacted them from a wide range of common outcomes.

Not surprisingly, the biggest impact on ICT professionals was through employers instructing them to work from home, cited by 76.7 per cent of respondents. Face to face work meetings being cancelled and non-essential travel were the other impacts cited by most respondents. Of concern, 22.9 per cent of survey respondents indicated experiencing anxiety/mental distress due to the pandemic's impact on their ability to work. It is incumbent on employers to ensure they offer resources to help professionals manage the mental health impacts of the pandemic.

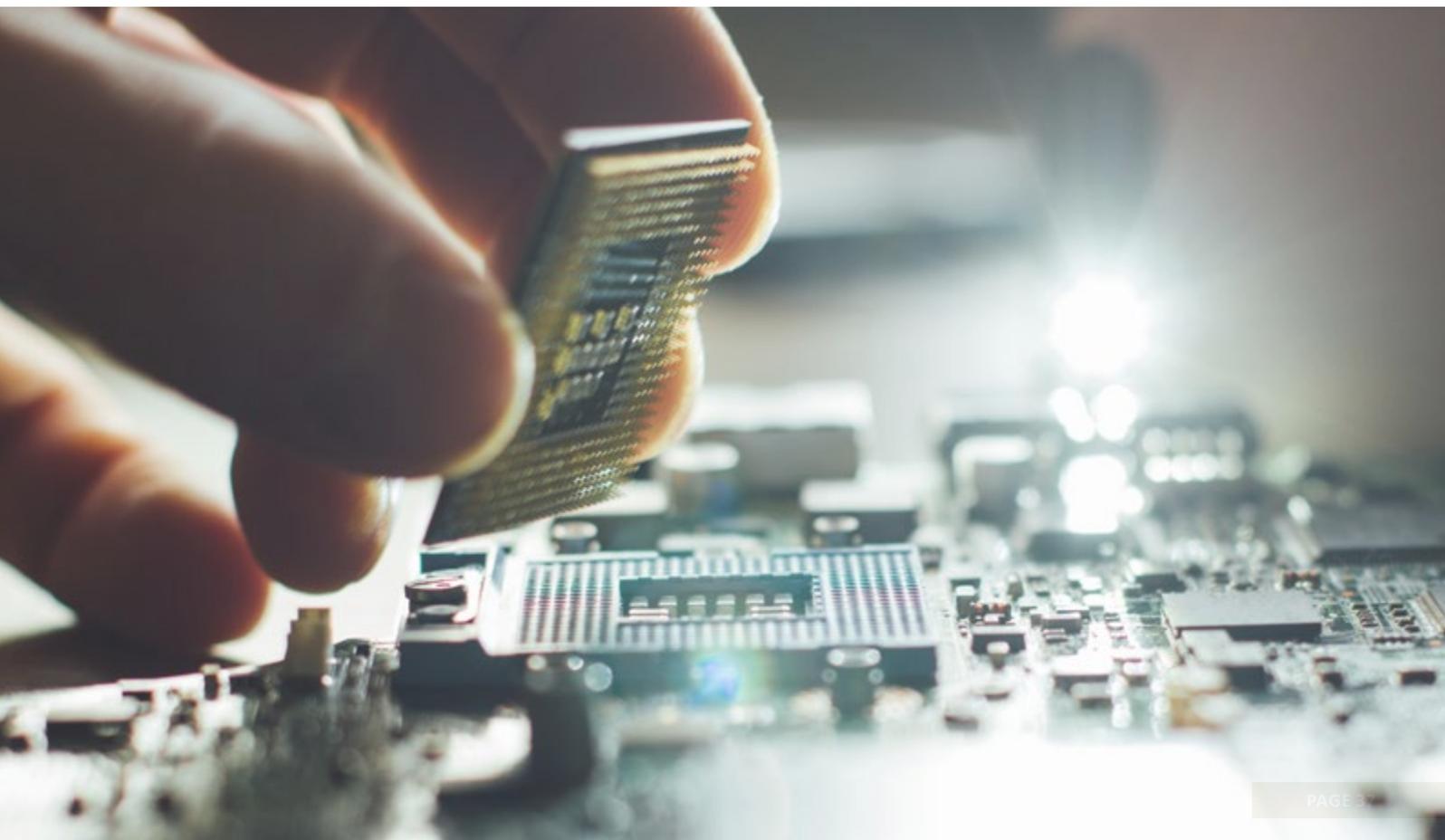
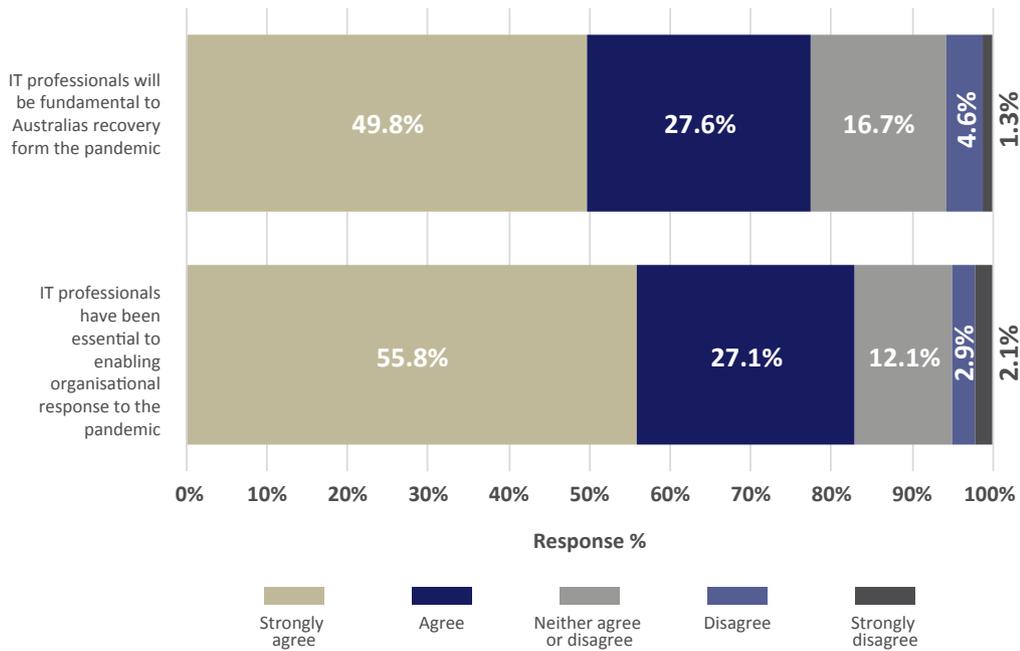
Despite the core importance of the roles performed by ICT professionals during the pandemic, they were not immune from the negative employment impacts. Roughly one in ten survey respondents reported receiving JobKeeper, the Commonwealth employee subsidy program to encourage employers to keep staff on the books. Being required to use annual leave was reasonably common, cited by 18.0 per cent of respondents.

FIGURE 30 - IMPACTS OF THE COVID-19 PANDEMIC ON ICT PROFESSIONAL'S EMPLOYMENT



In addition to the impact of the pandemic, survey respondents were asked to indicate the extent to which they agreed with two statements. That ICT professionals will be fundamental to Australia’s recovery from the pandemic, to which 77.4 per cent of participants were in agreement, and that ICT professionals have been essential to enabling organisational response to the pandemic which an even greater 82.9 per cent agreed to. Throughout the social and economic upheaval caused by the pandemic, ICT professionals have been instrumental in keeping businesses, public services and the economy moving. It will be important that those same professionals are properly recognised for their significant contribution to keeping jobs and the economy on track as the pandemic unfolded.

FIGURE 31 - IMPORTANCE OF ICT PROFESSIONALS IN RESPONSE AND RECOVERY FROM THE PANDEMIC



INDEPENDENT CONTRACTORS



An ongoing trend in the engagement of ICT professionals is the number appointed under independent contractor arrangements. Employers of ICT professionals are making greater use of such arrangements as a means of meeting peak workloads or to engage contract professionals for specific projects or tasks.

The Australian Bureau of Statistics estimates that up to 20 per cent of the workforce is now engaged in non-standard work arrangements with professionals operating as independent contractors or consultants among the fastest growing group.

Ultimately, the hourly rate charged by independent contractors depends on the market for the service provided and there is no substitute for specific knowledge of the particular industry and the value of the service being offered to a client, but these rates can be used as a benchmark to ensure that contractors don't undercharge for their services.

These recommended hourly rates should be read in conjunction with Professionals Australia's Standard Terms of Engagement and Professionals Australia's Guide to Writing Contracts for Independent Contractors and Consultants. Both documents take account of important issues arising from changes to Personal Services Income (PSI) rules effective July 2000. The PSI rules potentially impact contractors and consultants engaged on an hourly basis. These documents are available to members from Professionals Australia's website at: www.professionalsaustralia.org.au/contractors-consultants/

The hourly rates for ICT contractors take into account the conditions of employment which apply to employee ICT professionals, as professionals operating under independent contractor arrangements must meet these costs themselves.

ICT Professionals engaged as employees have access to the Australian Industrial Relations Commission and receive annual leave, sick leave, paid public holidays, long service leave, superannuation, jury leave, compassionate leave, family leave, professional development and retrenchment/ redundancy provisions.

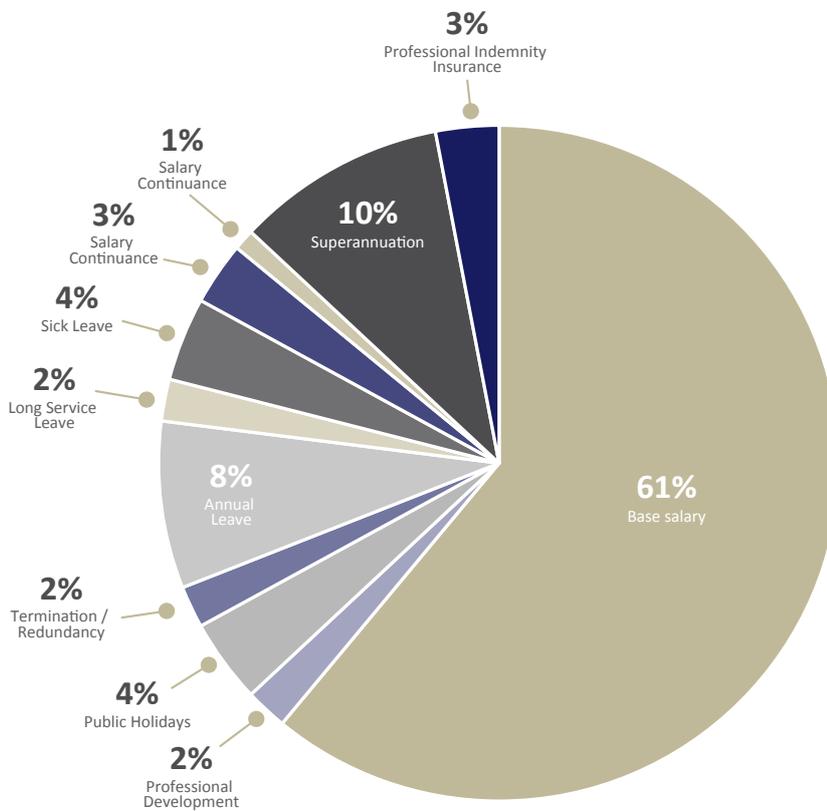
Independent contractors may be engaged on an hourly basis and generally do not have access to these provisions. The ICT contractor must therefore take such provisions into account when determining the hourly fee to be charged. Based on a 38-hour week, the hourly fee is calculated using a 1980 hour year (i.e. 38 hours by 52.1 weeks) and deducting from the year the following factors:

TABLE 10 - VALUE OF ITEMS INDEPENDENT CONTRACTORS DO NOT RECEIVE

Item	Value	Value in Hours
Public Holidays	12 days	92
Annual Leave	20 days	152
Long Service Leave	4.3 days	33
Sick Leave	10 days	76
Salary Continuance	3%	60
Superannuation	10%	198
Professional Indemnity Insurance	3%	60
Miscellaneous Leave	3 days	23
Professional Development	5 days	38
Termination/Redundancy	5 days	38
Total		770 hours

Thus the hourly rate should be calculated on the basis of about 1210 hours (1980 - 770).

FIGURE 32 - PROPORTIONAL VALUE OF COMPONENTS IN A FULL-TIME EMPLOYMENT CONTRACT



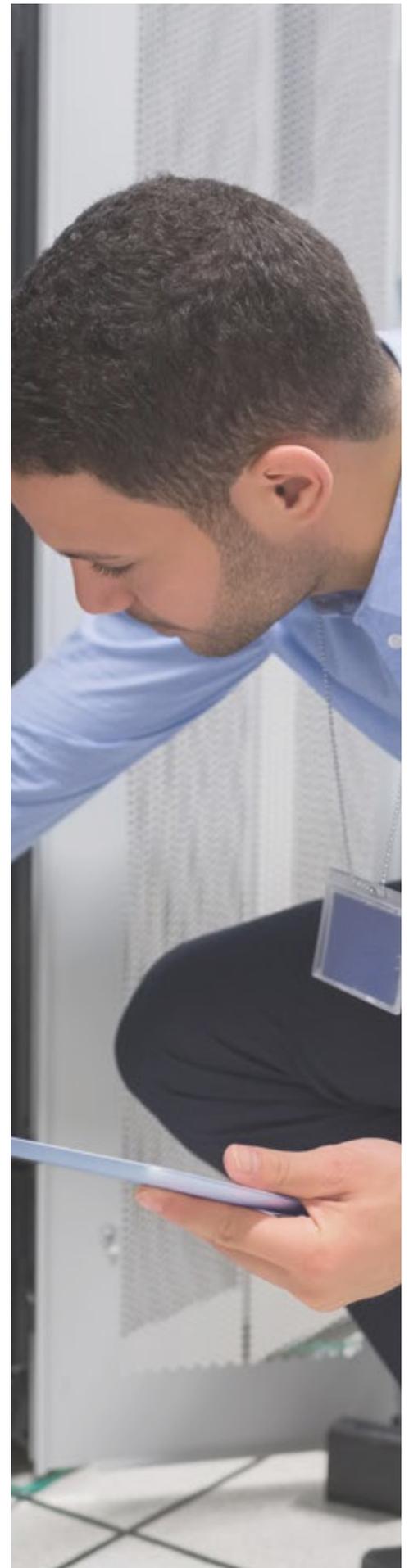
Any travel costs and workers' compensation would be on top of these rates, and it may be necessary to factor in an additional charge to cover legal and accounting fees. Care should also be taken to allow for professional indemnity insurance premiums. ASIC fees may also need to be covered depending on the particular business entity or structure the consultant or contractor has in place.

If the ICT contractor is engaged on a short-term basis, a further factor should be included to allow for the time and overheads involved in seeking contracts. A factor of 20 per cent would not be unreasonable for this purpose. The hourly rate should then be based on 1000 hours. Short-term contracts are considered to be those which last for less than 12 months.

Using the formula described here, an ICT contractor seeking a salary equivalent of say \$100,000 per annum would calculate the hourly fee as follows:

Short-term contract $\$100,000\text{p.a.} / 1000 \text{ hours} = \100.00 p/h

Long-term contract $\$100,000\text{p.a.} / 1210 \text{ hours} = \82.65 p/h





RECOMMENDED HOURLY RATES

Based on full-time ICT Professional remuneration identified in this survey and the methodology outlined in this section, Professionals Australia recommends rates in the following ranges for short-term and long-term contracts if contractors wish to be remunerated commensurate with their full-time employed peers at each responsibility level. (These rates are derived using the methodology set out in this section and from the data set out in Table 1.)

TABLE 11 - CONTRACTOR HOURLY RATES CHARGED BY DURATION OF CONTRACT AND RESPONSIBILITY LEVEL (DERIVED FROM FULL-TIME EQUIVALENT SALARIES)

	Long-term					Short-term				
	Recommended hourly rate					Recommended hourly rate				
	N	Lower quartile	Median	Upper quartile	Mean	N	Lower quartile	Median	Upper quartile	Mean
Level 1/ SFIA Level 3	22	\$45.45	\$49.75	\$66.12	\$56.06	22	\$55.00	\$60.20	\$80.00	\$67.83
Level 2/ SFIA Level 4	56	\$66.12	\$77.33	\$95.50	\$82.03	56	\$80.00	\$93.58	\$115.56	\$99.25
Level 3/ SFIA Level 5	71	\$80.17	\$96.69	\$111.57	\$98.03	71	\$97.00	\$117.00	\$135.00	\$118.62
Level 4/ SFIA Level 6	44	\$105.17	\$121.51	\$132.80	\$119.60	44	\$127.25	\$147.03	\$160.69	\$144.71
Level 5/ SFIA Level 7	11	\$120.66	\$136.36	\$163.64	\$143.61	11	\$146.00	\$165.00	\$198.00	\$173.77
All Respondents	209	\$72.23	\$95.04	\$120.49	\$96.28	209	\$87.40	\$115.00	\$145.80	\$116.50

Note: Sample size precludes deriving rates Above Level 5/SFIA Level 7.

CONTRACTOR AGENCY RATES

If the independent contractor is engaged through a contractor agency, some components such as workers' compensation/disability insurance and superannuation contributions would normally be paid for by the agency. These components would be removed from calculations.

A typical calculation made by a contract agency might see the annualised hours rise to around 1600 after the removal of superannuation from the calculation as it is provided by the agency, so that the hourly rate for an equivalent \$100,000 annual base salary would be:

$$\$100,000\text{p.a.} / 1600 \text{ hours} = \$62.50 \text{ per hour}$$

EMPLOYMENT FRAMEWORK

INDIVIDUAL EMPLOYMENT CONTRACTS

The market rates information in this survey report provides a snapshot of remuneration for scientists and the current science employment market. The information contained in this report is a good starting point for those looking to negotiate or renegotiate their package and understand their position in the market. Where individuals are engaged under an individual employment contract, the remuneration information contained in this report can provide a basis for negotiating a base salary and total remuneration package to be included in the contract. The rates set out in the report are a reliable snapshot of market rates and salary movements across the profession over the previous 12 months.

EMPLOYMENT CONDITIONS

Employment conditions to be included and referred to in a contract can be negotiated and agreed so long as employers observe the National Employment Standards (NES) or the relevant underpinning Award which must apply (see below). Some enterprise agreements also provide for employees to enter into individual agreement/contracts in relation to some aspects of their employment so in these cases the employment conditions set out in the enterprise agreement underpin the employment conditions set out in the employment contract.

NATIONAL EMPLOYMENT STANDARDS

The NES are 10 minimum employment entitlements that must be provided to all employees. The national minimum wage and the NES make up the minimum entitlements for employees in Australia. An Award, employment contract, enterprise agreement or other registered agreement can't provide for conditions that are less than the national minimum wage or the NES. They cannot exclude the NES.

The 10 minimum entitlements of the NES are:

- maximum weekly hours;
- requests for flexible working arrangements;
- parental leave and related entitlements;
- annual leave;
- personal/carer's leave, compassionate leave and unpaid family and domestic violence leave;
- community service leave;
- long service leave;
- public holidays;
- notice of termination and redundancy pay; and
- Fair Work Information Statement.

All full-time and part-time employees in the national workplace relations system are covered by the NES regardless of the award, registered agreement or employment contract that applies. For further information on the National Employment Standards and their application, visit the Employee entitlements section of the Fair Work Ombudsman's website at <https://www.fairwork.gov.au/employee-entitlements>.

MODERN AWARDS

Professional employees are covered by a range of Modern Awards and particular Awards underpin Enterprise Agreements. The major Award covering Professional Engineers in the Private sector is the Professional Employees Award 2010.

The major provisions of a modern award will most commonly relate to:

- rates of pay;
- classification levels;
- working hours and public holidays;
- overtime and penalty rates;
- allowances;
- annual leave;
- personal leave;
- rest breaks;
- engagement and termination of employment;
- superannuation; and
- dispute settlement procedures.

For a list of relevant Awards and links to the Awards, visit the Modern Awards section on the Professionals Australia website at <http://www.professionalsaustralia.org.au/support/rights-wages-conditions/modern-awards/>.

ABOUT THE SURVEY

The 2020 ICT Professionals Employment and Remuneration Survey was conducted by Professionals Australia in June/July 2020. The survey is a continuation of a series conducted by the Association since 1993.

Participants were recruited from Professionals Australia's IT-based membership using a combination of direct e-mail, promotion through regular newsletters, and social media. Non-members were also advertised to using social media. Only participants that identified as being employed as an ICT professional, based in Australia and employed full-time were included in the analyses above.

The survey asks a range of questions regarding an individual's employment, remuneration, and experiences within the ICT Profession. Participants are not required to answer all questions and their responses are included for all analyses where they provided data.

In total, 343 questionnaires were submitted by individuals.

The findings of this report are based on a combination of this survey data and data from a range of other sources.

METHODOLOGY

Base salary

Participants were asked to provide both their base salary and an hourly rate of pay. Where a participant did not provide a base salary, but did provide an hourly rate, this was used in conjunction with their reported hours worked each not including overtime to determine an equivalent base salary.

Annual salary movement

Annual salary movements were calculated by taking the percentage change from a participant's annual base salary 12 months ago to their annual base salary at the time of the survey. The calculation is only performed for participants indicating they had not received a promotion or changed employers in the last 12 months. The calculation was also not performed for individuals with less than 1 year of experience.

Statistics used

For the purposes of salary analysis, the following statistical terms were used:

- **SNR** (Sample Not Representative) is given for categories below the reporting threshold;
- **Lower quartile** (25th percentile): The value below which 25 per cent of observations were recorded. Not reported where N is less than 5;
- **Median** (50th percentile): The value below which 50 per cent of observations were recorded. Not reported where N is less than 4;

- **Upper quartile** (75th percentile): The value below which 75 per cent of observations were recorded. Not reported where N is less than 5;
- **Mean**: The sum of individual salary values divided by the number of observations;
- **Response %**: Proportion of the survey sample represented by the number of observations in a given category.

Statistics for Base Salary and Annual Salary Movement are calculated separately for each of the sample respondents, and then ranked. The median is not, therefore, a reflection of the middle-ranked respondent across all categories, but rather, the middle value of the particular component when all values of that component are ranked. As a consequence, the component statistics will not add up to the value given by the overall statistic.

Where a significant difference exists between the value of the mean and the median, this will indicate the following:

- Where the mean is higher than the median, a number of high values were recorded, sufficient to skew the mean upwards away from the median;
- Conversely, if the mean is lower than the median, a number of low values were recorded, sufficient to skew the mean downwards, away from the median.

If the mean and median are relatively close, the distribution was approximately normally distributed.

ENDNOTES

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33. WGEA Gender Equality Agency, February 2020. Australia's gender pay gap statistics. Available at <https://www.wgea.gov.au/data/fact-sheets/australias-gender-pay-gap-statistics>.
34. Office of the Chief Scientist (2016). Australia's STEM Workforce, p.132.

OTHER REMUNERATION REPORTS

Professionals Australia conducts a range of salary surveys and has available reports for Professional Engineers, Scientists and Pharmacists. You can download summary reports or purchase extended reports for Engineers and Scientists at <https://www.professionalsaustralia.org.au/survey-salary-reports/>

RESPONSIBILITY LEVEL DEFINITIONS

SKILLS FRAMEWORK FOR THE INFORMATION AGE (SFIA)

SFIA LEVEL 3

Autonomy – Works under general direction. Uses discretion in identifying and resolving complex problems and assignments. Usually receives specific instructions and has work reviewed at frequent milestones. Determines when issues should be escalated to a higher level.

Influence – Interacts with and influences department/project team members. Has working level contact with customers and suppliers. In predictable and structured areas may supervise others. Makes decisions which may impact on the work assigned to individuals or phases of projects.

Complexity – Performs a broad range of work, sometimes complex and non-routine, in a variety of environments. Applies methodical approach to problem definition and resolution.

Business skills – Understands and uses appropriate methods, tools and applications. Demonstrates an analytical and systematic approach to problem solving. Takes the initiative in identifying and negotiating appropriate personal development opportunities. Demonstrates effective communication skills. Contributes fully to the work of teams. Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation and procedures. Absorbs and applies technical information. Works to required standards. Appreciates the wider field of information systems, and how own role relates to other roles and to the business of the employer or client.

SFIA LEVEL 4

Autonomy – Works under general direction within a clear framework of accountability. Exercises substantial personal responsibility and autonomy. Plans own work to meet given objectives and processes.

Influence – Influences team and specialist peers internally. Influences customers at account level and suppliers. Has some responsibility for the work of others and for the allocation of resources? Participates in external activities related to own specialism. Makes decisions which influence the success of projects and team objectives.

Complexity – Performs a broad range of complex technical or professional work activities, in a variety of contexts. Investigates, defines and resolves complex problems.

Business skills – Selects appropriately from applicable standards, methods, tools and applications. Demonstrates an analytical and systematic approach to problem solving. Communicates fluently orally and in writing, and can present complex technical information to both technical and non-technical audiences. Facilitates collaboration between stakeholders who share common objectives. Plans, schedules and monitors work to meet time and quality targets and in accordance with relevant legislation and procedures. Rapidly absorbs new technical information and applies it effectively. Has a good appreciation of the wider field of information systems, their use in relevant employment areas and how they relate to the business activities of the employer or client. Maintains an awareness of developing technologies and their application and takes some responsibility for personal development.

SFIA LEVEL 5

Autonomy – Works under broad direction. Work is often self-initiated. Is fully accountable for meeting allocated technical and/or project/ supervisory objectives. Establishes milestones and has a significant role in the delegation of responsibilities.

Influence – Influences organisation, customers, suppliers, partners and peers on the contribution of own specialism. Builds appropriate and effective business relationships. Makes decisions which impact the success of assigned projects i.e. results, deadlines and budget. Has significant influence over the allocation and management of resources appropriate to given assignments.

Complexity – Performs an extensive range and variety of complex technical and/or professional work activities. Undertakes work which requires the application of fundamental principles in a wide and often unpredictable range of contexts. Understands the relationship between own specialism and wider customer/organisational requirements.

Business skills – Advises on the available standards, methods, tools and applications relevant to own specialism and can make appropriate choices from alternatives. Analyses, designs, plans, executes and evaluates work to time, cost and quality targets. Assesses and evaluates risk. Communicates effectively, both formally and informally. Demonstrates leadership. Facilitates collaboration between stakeholders who have diverse objectives. Understands the relevance of own area of responsibility/specialism to the employing organisation. Takes customer requirements into account when making proposals. Takes initiative to keep skills up to date. Mentors colleagues. Maintains an awareness of developments in the industry. Analyses requirements and advises on scope and options for continuous operational improvement. Demonstrates creativity and innovation in applying solutions for the benefit of the customer/ stakeholder. Takes account of relevant legislation.

SFIA LEVEL 6

Autonomy – Has defined authority and responsibility for a significant area of work, including technical, financial and quality aspects. Establishes organisational objectives and delegates responsibilities. Is accountable for actions and decisions taken by self and subordinates.

Influence – Influences policy formation on the contribution of own specialism to business objectives. Influences a significant part of own organisation. Develops influential relationships with internal and external stakeholders at senior management level. Makes decisions which impact the work of employing organisations, achievement of organisational objectives and financial performance.

Complexity – Performs highly complex work activities covering technical, financial and quality aspects. Contributes to the formulation and implementation of IT strategy. Creatively applies a wide range of technical and/or management principles.

Business skills – Absorbs complex technical information and communicates effectively at all levels to both technical and non-technical audiences. Assesses and evaluates risk. Understands the implications of new technologies. Demonstrates clear leadership and the ability to influence and persuade. Has a broad understanding of all aspects of IT and deep understanding of own specialism(s)? Understands and communicates the role and impact of IT in the employing organisation and promotes compliance with relevant legislation. Takes the initiative to keep both own and subordinates' skills up to date and to maintain an awareness of developments in the IT industry.

SFIA LEVEL 7

Autonomy – Has authority and responsibility for all aspects of a significant area of work, including policy formation and application. Is fully accountable for actions taken and decisions made, both by self and subordinates.

Influence – Makes decisions critical to organisational success. Influences developments within the IT industry at the highest levels. Advances the knowledge and/or exploitation of IT within one or more organisations. Develops long-term strategic relationships with customers, partners, industry leaders and government.

Complexity – Leads on the formulation and implementation of strategy. Applies the highest level of management and leadership skills. Has a deep understanding of the IT industry and the implications of emerging technologies for the wider business environment.

Business skills – Has a full range of strategic management and leadership skills. Understands, explains and presents complex technical ideas to both technical and non-technical audiences at all levels up to the highest in a persuasive and convincing manner. Has a broad and deep IT knowledge coupled with equivalent knowledge of the activities of those businesses and other organisations that employ IT. Communicates the potential impact of emerging technologies on organisations and individuals and assesses the risks of using or not using such technologies. Assesses the impact of legislation, and actively promotes compliance. Takes the initiative to keep both own and subordinates' skills up to date and to maintain an awareness of developments in IT.

PROFESSIONAL EMPLOYEES AWARD 2010 LEVEL STRUCTURE

AWARD LEVEL 1

Graduate information technology employee

(a) An employee at this level undertakes initial professional tasks of limited scope and complexity, such as minor phases of broader assignments, in office, plant, field or laboratory work.

(b) Under supervision from higher level professional information technology employees as to method of approach and requirements, the employee performs normal professional work and exercises individual judgment and initiative in the application of principles, techniques and methods.

(c) In assisting more senior professional information technology employees by carrying out tasks requiring accuracy and adherence to prescribed methods of professional information technology analysis, design or computation, the employee draws upon advanced techniques and methods learned during and after the undergraduate course.

(d) Training, development and experience using a variety of standard procedures, enable the employee to develop increasing professional judgment and apply it progressively to more difficult tasks at Level 2.

(e) Decisions are related to tasks performed, relying upon precedent or defined procedures for guidance. Recommendations are related to solution of problems in connection to the tasks performed.

(f) Work is reviewed by higher level professional information technology employees for validity, adequacy, methods and procedures. With professional development and experience, work receives less review, and the employee progressively exercises more individual judgment until the level of competence at Level 2 is achieved.

(g) The employee may assign and check work of technical staff assigned to work on a common project.

AWARD LEVEL 2

Following development, the experienced professional plans and conducts professional work without detailed supervision but with guidance on unusual features and is usually engaged on more responsible assignments requiring substantial professional experience.

AWARD LEVEL 3

(a) An employee at this level performs duties requiring the application of mature professional knowledge. With scope for individual accomplishment and coordination of more difficult assignments, the employee deals with problems for which it is necessary to modify established guides and devise new approaches.

(b) The employee may make some original contribution or apply new professional approaches and techniques to the design or development of equipment or products.

(c) Recommendations may be reviewed for soundness of judgement but are usually regarded as technically accurate and feasible. The employee makes responsible decisions on matters assigned, including the establishment of professional standards and procedures. The employee consults, recommends and advises in specialty areas.

(d) Work is carried out within broad guidelines requiring conformity with overall objectives, relative priorities and necessary cooperation with other units. Informed professional guidance may be available.

(e) The employee outlines and assigns work, reviews it for technical accuracy and adequacy, and may plan, direct, coordinate and supervise the work of other professional and technical staff.

AWARD LEVEL 4

(a) An employee at this level performs professional work involving considerable independence in approach, demanding a considerable degree of originality, ingenuity and judgement, and knowledge of more than one field of, or expertise (for example, acts as their organisation's technical reference authority) in a particular field of professional information technology field.

(b) An employee at this level:

(i) initiates or participates in short or long range planning and makes independent decisions on professional information technology policies and procedures within an overall program;

(ii) gives technical advice to management and operating departments;

(iii) may take detailed technical responsibility for product development and provision of specialised professional information technology systems, facilities and functions;

(iv) coordinates work programs; and

(v) directs or advises on the use of equipment and materials.

(c) An employee at this level makes responsible decisions not usually subject to technical review, decides courses of action necessary to expedite the successful accomplishment of assigned projects, and may make recommendations involving large sums or long-range objectives.

(d) Duties are assigned only in terms of broad objectives, and are reviewed for policy, soundness of approach, accomplishment and general effectiveness.

(e) The employee supervises a group or groups including professionals and other staff, or exercises authority and technical control over a group of professional staff. In both instances, the employee is engaged in complex professional information technology applications.

AWARD LEVEL 5

(a) An employee at this level usually responsible for an information technology administrative function, directing several professional and other groups engaged in interrelated information technology responsibilities, or as an information technology consultant. Achieving recognition as an authority in a field of major importance to the organisation.

(b) An employee independently conceives programs and problems to be investigated and participates in discussions determining basic operating policies, devising ways of reaching program objectives in the most economical manner and of meeting any unusual conditions affecting work progress.

(c) The employee makes responsible decisions on all matters, including the establishment of policies and expenditures of large sums of money and/or implementation of major programs, subject only to overall policy and financial controls.

(d) The employee receives administrative direction based on organisation policies and objectives. Work is reviewed to ensure conformity with policy and co-ordination with other functions.

The employee reviews and evaluates technical work; selects, schedules, and co-ordinates to attain program objectives; and/or as administrator, makes decisions concerning selection, training, rating, discipline and remuneration of staff.

REPORT PREPARATION

This report was compiled by Dr Kim Rickard and Mr Alex Crowther.



IT
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ICT PROFESSIONALS EMPLOYMENT AND REMUNERATION REPORT

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