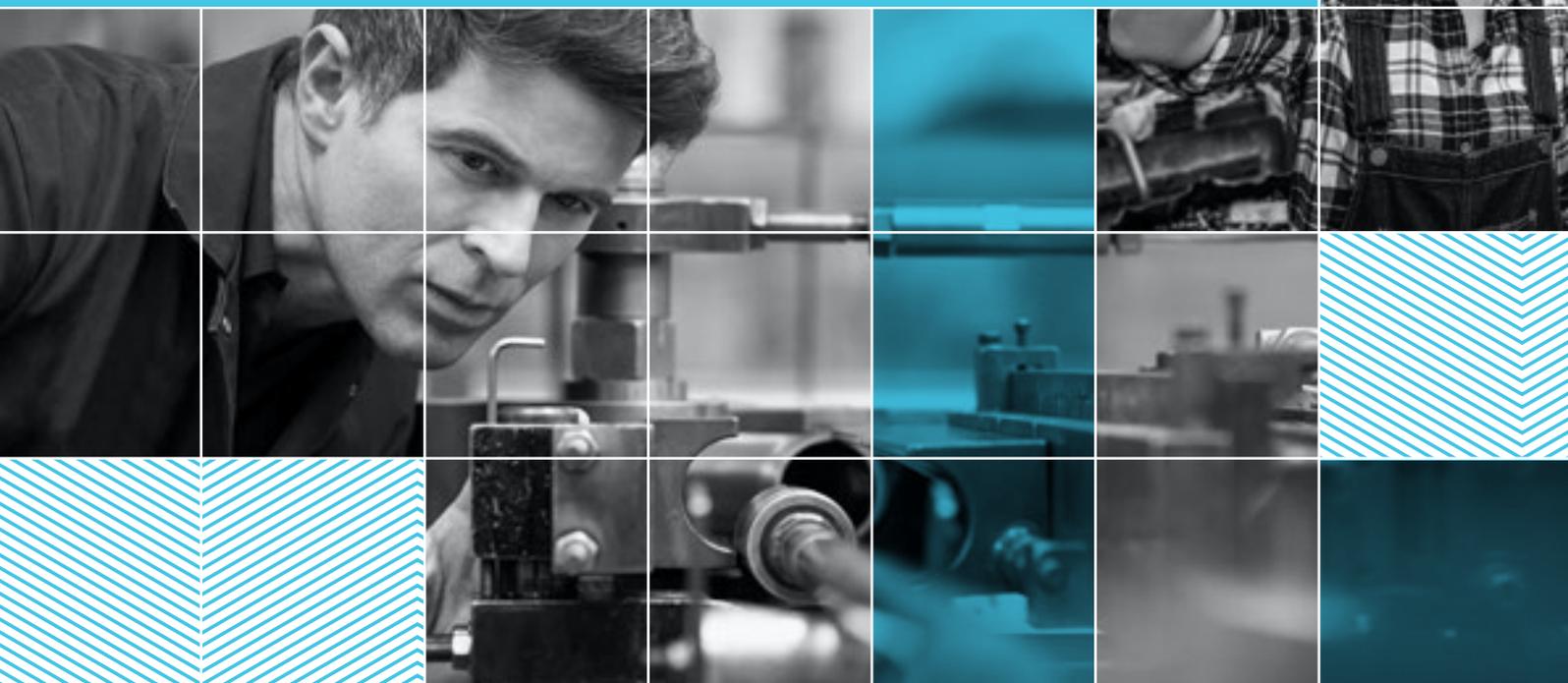




The Association of  
**Professional  
Engineers  
Australia**

# PROFESSIONAL ENGINEERS EMPLOYMENT AND REMUNERATION REPORT 2020/21





The Association of  
**Professional  
Engineers  
Australia**

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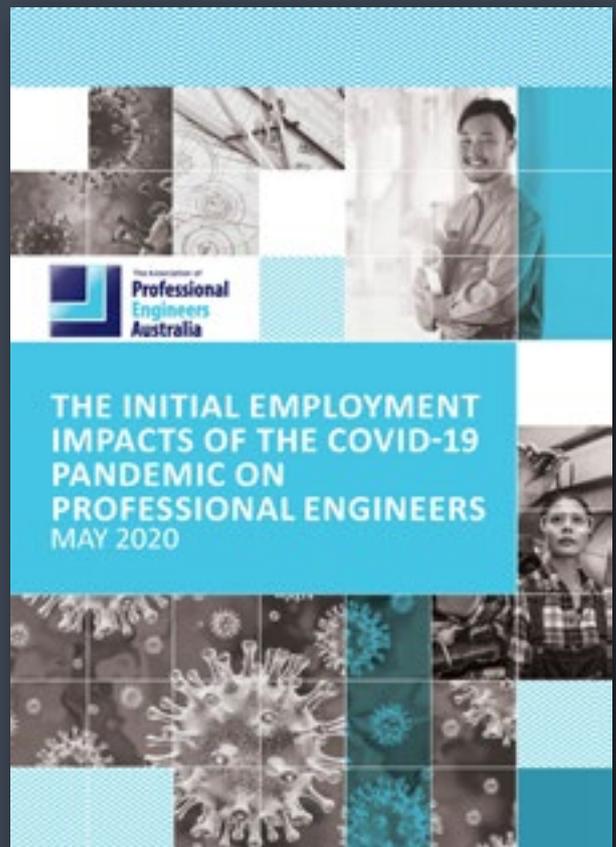
## A NOTE ABOUT THIS SURVEY

*The aim of this annual survey is to allow us to report on pay and work trends in the professional engineering workforce. As part of a longitudinal data series of over 30 years, it will provide a strong evidence-base for understanding the position of the engineering workforce and the changes to the engineering workforce over the previous and upcoming 12 months.*

The data referred to in this report was captured as the economic downturn following the COVID-19 began and, as such, provides a benchmark of pay levels we want to return to or exceed as we rebuild the economy.

The data reflects only the initial impact of the COVID-19 pandemic on wages and while engineers appear to be faring reasonably to the point at which this snapshot was taken, engineering salaries in the coming 12 month period are unlikely to be immune from the effects of the health crisis itself and the economic penalties that arise from the lockdown.

In response to the developing crisis, the 2020 survey included a question looking specifically at the work impact of COVID-19 on professional engineers. For a comprehensive report on the initial employment impacts of the COVID-19 pandemic on professional engineers, visit the APEA website at [www.professionalengineers.org.au/impacts-covid-19-pandemic-engineers-report/](http://www.professionalengineers.org.au/impacts-covid-19-pandemic-engineers-report/)



# ABOUT THE ASSOCIATION OF PROFESSIONAL ENGINEERS, AUSTRALIA

The Association of Professional Engineers Australia is a division of Professionals Australia (formerly the Association of Professional Engineers, Scientists and Managers, Australia). This organisation is registered under the Fair Work Act 2009 representing over 23,000 professionals including professional engineers, scientists, veterinarians, surveyors, architects, pharmacists, information technology professionals, managers, transport industry professionals and translators and interpreters throughout Australia.

Professionals Australia began as the Association of Professional Engineers, Australia (APEA) which formed in 1946 and was registered as an industrial association in 1948. APEA was the first organisation to ensure that professional engineers were recognised and rewarded for the high-value work they do. The Professional Engineers Case, finalised in 1961, saw engineers across Australia receive salary increases averaging more than 40 per cent. Even more importantly it set the precedent for work value and benchmark salaries for professionals.

Professionals Australia's engineering members are employed across all sectors of the Australian economy. Engineering-based industries are worth \$479 billion or 32 per cent of national gross value added and exports from engineering-based industries excluding mining totalled \$92 billion<sup>1</sup> or 29 per cent of total exports. This figure swells to \$249 billion or 78 per cent of exports if mining is included. Engineers perform design, scoping and project management roles in a diverse range of industries throughout the private and public sectors including roads, rail, water, electricity, information technology, telecommunications, construction, mining, oil and gas exploration, defence, shipbuilding and manufacturing. Engineers are largely responsible for designing, building and maintaining Australia's infrastructure. The contribution of our engineers and their ability to derive new ideas and develop solutions to our challenges as a nation will be fundamental to a successful transition to a competitive high-skill, knowledge-based economy.

Professionals Australia has Government approval as an assessment entity for the only mandatory engineering registration scheme in Australia – the Registered Professional Engineers of Queensland (RPEQ). Professionals Australia offers assessment in the areas of Civil, Electrical, Information Technology and Telecommunications, Management, Mechanical and Structural Engineering.

Professionals Australia is a not-for profit organisation and is owned by its members.



# FOREWORD

Australia is experiencing a significant downturn in economic activity with high levels of unemployment, underemployment and low GDP growth expectations as the waves following the COVID-19 pandemic unfold. Australian GDP growth slowed to 2.3 per cent in the 2019 financial year and is likely to fall well short of the 2.75 per cent predicted for the 2020 financial year.<sup>2</sup> It is clear that the pandemic will have a major impact on the engineering and construction labour market in the coming 12 months but the magnitude of the changes, the long-term impact on employment levels and the speed of the recovery are obviously difficult to forecast.

While the Grattan Institute estimates comparatively low levels of unemployment in the Professional, Scientific and Technical Services industry (10 per cent) as the COVID-19 pandemic plays out, stand-downs, staffing cuts and reduced hours have still had a significant impact. We've seen people taking or being asked to take unpaid leave or furloughs and leave on full or half pay, professionals reallocated to different roles in areas of demand, alternative arrangements for fly-in-fly-out workers, vastly expanded remote work/work from home arrangements and the use of other flexibility provisions. We've also seen some employers trying to shut down proper consultation with their employees on the changes to work practices they want to implement to deal with the crisis.

Engineers have expressed concern about performance measures with shifting deadlines as projects are delayed for a range of reasons including site shutdowns, domestic and international supply chain interruptions and bottlenecks, shortages of equipment and materials and travel restrictions.

While the COVID-19 crisis presented massive challenges, there are also a range of opportunities in engineering as Australia moves into post-health crisis phase – and the remuneration and employment snapshot revealed in this survey show that we were reasonably well placed to withstand the impacts of the pandemic.

The ongoing design and delivery of critical infrastructure and major nation-building projects will help drive economic recovery as we emerge from the Coronavirus health emergency as well as the drought and bushfire emergencies. Keeping engineering skills up-to-date will help ensure a well-trained and agile engineering workforce as the crisis subsides and governments invest in fiscal stimulus measures and both new and suspended or delayed infrastructure and construction projects, manufacturing, mining, construction and agriculture projects ramp back up.

Now more than ever, engineers are looking to their work for the opportunity it gives them to participate in wealth-generating activities for their organisation and contribute to the nation's economic recovery. They develop solutions to complex problems and positively impact people and processes. For Australian industry to lead the way to economic recovery, we need to recognise the role of the professional engineering workforce in value creation, continue to provide proper incentive for the next generation to aspire to professional engineering careers and, most critically, give engineers the opportunities and recognition they need to make a real difference in their day-to-day work – our strength as a nation as well as a competitive Australian economy depend on it.



**Gordon Brock**  
CEO, Association of Professional Engineers, Australia

# JOB MARKET

When this snapshot was taken, the size of the professional engineering workforce continued to hold at historically high levels (bachelor and post-graduate degree qualified). According to Australia's most recent census data<sup>3</sup>, there were 140,391 professional engineers employed across Australia in 2016 remaining fairly constant with the 2011 level of 140,425 up from around 108,000 in 2006. The number of qualified engineers throughout Australia totalled 393,000 to 2019<sup>4</sup> and, based on historical growth, would normally have increased to around 412,000 to 2020 (including graduate diploma and graduate certificate level engineers). The pandemic is likely to have an impact on employment growth but the extent of that impact is at this stage difficult to forecast.

The most recent figures show that the number of students commencing a degree in engineering increased by 0.2 per cent on the previous year driven by a 3.8 per cent increase in entry-level commencements offsetting a 14.8 per cent decline in post-graduate commencements. Completions were up, driven by a 7.3 per cent increase in entry-level course completions that offset a 2.6 per cent decline in post-graduate completions. It is also noteworthy that there was an increase in completions of 4.5 per cent marking a record high for completions of engineering courses by domestic students.<sup>5</sup> The decline in international students able to continue their studies in Australia as a result of the pandemic is likely to impact completions and the impact is likely to have a long tail, but again the magnitude of the impact is difficult to predict.

The Department of Employment, Skills, Small and Family Business reported that overall, the number of employed engineering professionals had increased by 5.1 per cent to February 2019 compared with 2.3 per cent across all occupations. Demand was strongest for civil engineers across most states but the market eased with shortages limited to Queensland, Tasmania and the two territories. A national shortage of electrical engineers also emerged for the first time since 2012 with shortages identified in New South Wales, Victoria and Queensland. Employers filled less than half of the mining engineer vacancies and shortages were identified for the first time since 2013<sup>6</sup>.

The latest figures show disappointing progress in the participation of women with only 14.6 per cent of the engineering workforce women, lower than the 2001 figure.

Engineering vacancies in Australia to June 2019 contracted by 9.2 per cent compared to a decline of 7.4 per cent for the overall vacancy rate.<sup>7</sup> Consistent with long-term trends, vacancy levels were highest in Civil engineering followed by Industrial/Mechanical/Production engineering vacancies and Mining and ICT engineers. The strongest growth in engineering vacancies was in New South Wales followed by Victoria, Queensland and Western Australia driven largely by major infrastructure spending on roads and rail projects. (see Table 1 below).

**Table 1 – Engineering vacancies by state**

STATE	AVERAGE MONTHLY ENGINEERING VACANCIES	PERCENTAGE GROWTH/ DECLINE OVER 2019 (%)	PROPORTION OF ENGINEERING VACANCIES (%)
NSW	1,161	-21	28
VIC	930	-14.7	23
QLD	839	-2.5	20
WA	836	Less than 1	20
SA	172	-10.3	4
ACT	78	(% too small to report)	2
NT	44	(% too small to report)	1
TAS	35	(% too small to report)	1

Department of Employment, Skills, Small and Family Business figures show that the main reasons employers found applicants for engineering roles unsuitable were lack of experience in a particular specialisation, insufficient technical skills and poor application, interview or work history.<sup>8</sup>

The current supply of engineers provides a firm foundation of engineering capacity. However, a range of initiatives will be needed to create a sustainable Australian engineering capability for the future and ensure engineers play the central role they should in the economic recovery phase following the COVID-19 crisis. These include ensuring an adequate talent pool of engineers with five to ten years' experience, equipping engineers with up-to-date specialist technical skills in existing and emerging areas, making efforts to boost engineering course commencements and completions to maintain the latest upturns and initiatives in the face of the pandemic and to encourage greater participation of underrepresented groups including women in the engineering workforce.

# KEY FINDINGS



## REMUNERATION

- Average wages for professional engineers over the 12 months to April 2020 rose by 2.4 per cent, outpacing a CPI increase of 2.2 per cent over the 12 months to 31 March 2020 and the Wage Price Index increase of 2.1 per cent across all professions over the same period.
- Engineers in the Education and training industry fared best in terms of growth rate with an average annual increase of 3.4 per cent.
- Wages in the Consulting and technical services industry, Transport, postal and warehousing and the Mining industry also rose strongly, increasing between 2.6 and 2.7 per cent.
- Gas supply as well as Manufacturing exhibited the weakest growth, both at 1.5 per cent.
- Respondents in the Education and training industry reported the highest average wage with a median total package of \$203,954, followed by engineers in Gas supply and Information Media and telecommunications with packages of \$191,625 and \$171,804 respectively.
- Engineers in the Defence industry recorded the lowest average total package at \$115,263, followed by Manufacturing with an average package of \$126,272.
- The survey found almost one-third (30.5 per cent) of respondents were dissatisfied with their current level of remuneration.
- 6.7 per cent of respondents said they were considering leaving the profession permanently and the most common reason for wanting to leave the profession was lack of career advancement.
- 45.6 per cent said they believed their remuneration package was falling behind what others undertaking similar work were being paid.
- 47.1 per cent said they did not believe their package appropriately reflected the level of responsibility they undertook in their day-to-day work.
- The survey found that accreditation in the form of RPEng, CPEng or RPEQ delivered a premium of 24.7 per cent higher remuneration. Respondents holding an accreditation reported a median total package of \$157,850, compared with \$126,625 among those respondents not holding an accreditation.
- A Masters degree delivered a wage premium of 13.6 per cent when compared with a Bachelor degree, while a Graduate Diploma delivered a wage premium of 16.6 per cent. Respondents with a doctorate received the highest wage premium, at 32.4 per cent.
- 41.0 per cent of respondents received no pay rise at all in the previous 12 months – 43.2 per cent in the private sector and 37.5 per cent in the public sector.
- Average annual salary movements were greatest for engineers qualified in the Mechatronics and Aeronautical disciplines with increases of 4.9 and 4.2 per cent respectively.
- Movements were lowest for engineers qualified in Systems, Geological and Information technology and communications engineering with movements of 0.0, 1.3 and 1.5 per cent respectively.



## STATE

- Respondents from Western Australia reported the highest median total package at \$155,700, followed by the ACT at \$153,181 and Tasmania with \$142,499.
- The Northern Territory and Tasmania performed the strongest in terms of wage growth, with average salary movements of 4.8 and 3.3 per cent respectively.



## WORKPLACE ISSUES

- 50.0 per cent of public sector respondents saw an increasing lack of in-house engineering capacity as a major issue in their workplace over the last 12 months, compared with 24.6 of private sector respondents.
- 45.9 per cent in the public sector saw poorly scoped or designed projects as an issue impacting their workplace compared with 38.0 per cent in the private sector.
- Insufficient skills development was seen as a factor affecting engineering workplaces by a similar number of public and private sector respondents at 49.7 and 46.1 per cent respectively.
- A lack of engineers in decision-maker roles was reported as a serious workplace issue by 38.5 per cent of public sector respondents, compared with 19.4 per cent of private sector respondents.
- Survey respondents confirmed changes in staff morale and levels of fatigue in their workplaces with 40.0 per cent of respondents reporting that staff morale at their workplace had declined in the previous 12 months and 39.2 per cent reporting that worker fatigue had increased.
- 25.2 per cent of public sector respondents said their organisation did not actively regard engineering capability as a source of innovation compared with 11.2 per cent of engineers in the private sector.
- Respondents ranked job satisfaction, remuneration, job security and work/life balance as their top four work priorities.
- Workplace stress and poor workplace management were the main factors negatively affecting respondents' mental health.



## SECTOR

- A sector comparison shows that the public sector marginally outperformed the private sector in terms of wage growth, delivering a 2.4 per cent increase compared with an increase of 2.3 per cent for the private sector.
- Public sector respondents reported a slightly higher median total package at \$139,921 compared with \$136,061 for the private sector.



## WOMEN IN ENGINEERING

- 50.9 per cent of female respondents reported that they had experienced discrimination on the basis of gender.
- While 81.7 per cent of respondents said their employer had in place formal policies to deal with discrimination and 75.3 per cent said their employer had in place formal policies to promote diversity, 12.8 per cent said that their employer did not have strategies in place to actually implement the policies.
- 32.5 per cent of female respondents reported having experienced sexual harassment in the course of their employment compared to 1.9 per cent of male respondents.



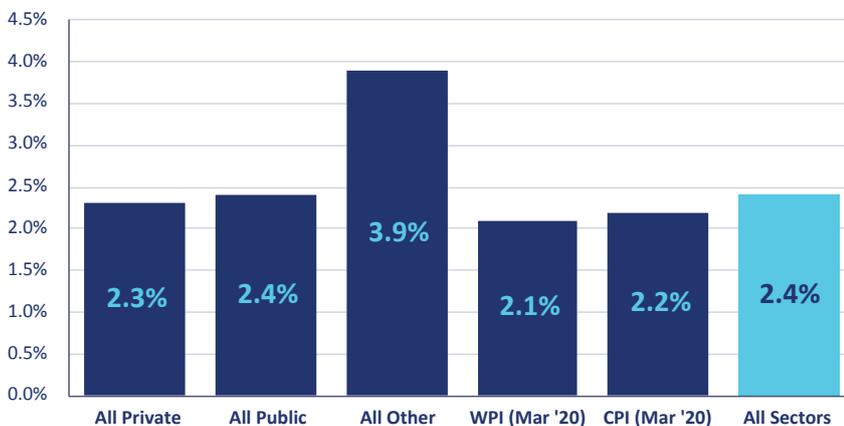
# ENGINEER REMUNERATION

Over the 12 months to end May 2020, engineering remuneration continued its trend of growth, with wages rising steadily at a similar rate to that reported last year. Salaries across each industry increased to varying degrees, with the median salary across the profession increasing by 2.4 per cent - 2.3 per cent in the private sector and 2.4 per cent in the public sector, outpacing the Wage Price Index (WPI)<sup>9</sup> at 2.1 per cent. Engineering salaries marginally outperformed the Consumer Price Index (CPI)<sup>10</sup> over the past year, which increased by 2.2 per cent.

This result indicates engineering salaries has remained ahead of the cost of living. The March 2020 CPI figures include the first effects of COVID-19 and are notably increased from the March 2019 result of 1.3%. Prices may continue to rise faster than they have in the past, particularly in response to emergency fiscal policy. While engineers are well positioned to weather the effects of the pandemic, they will not be immune to the effects on wages and income.

For a more comprehensive report on the initial employment impacts of the COVID-19 pandemic on professional engineers, visit the APEA website at [www.professionalengineers.org.au/impacts-covid-19-pandemic-engineers-report](http://www.professionalengineers.org.au/impacts-covid-19-pandemic-engineers-report).

**Figure 1 - Median percentage increase in salaries by sector of employment**



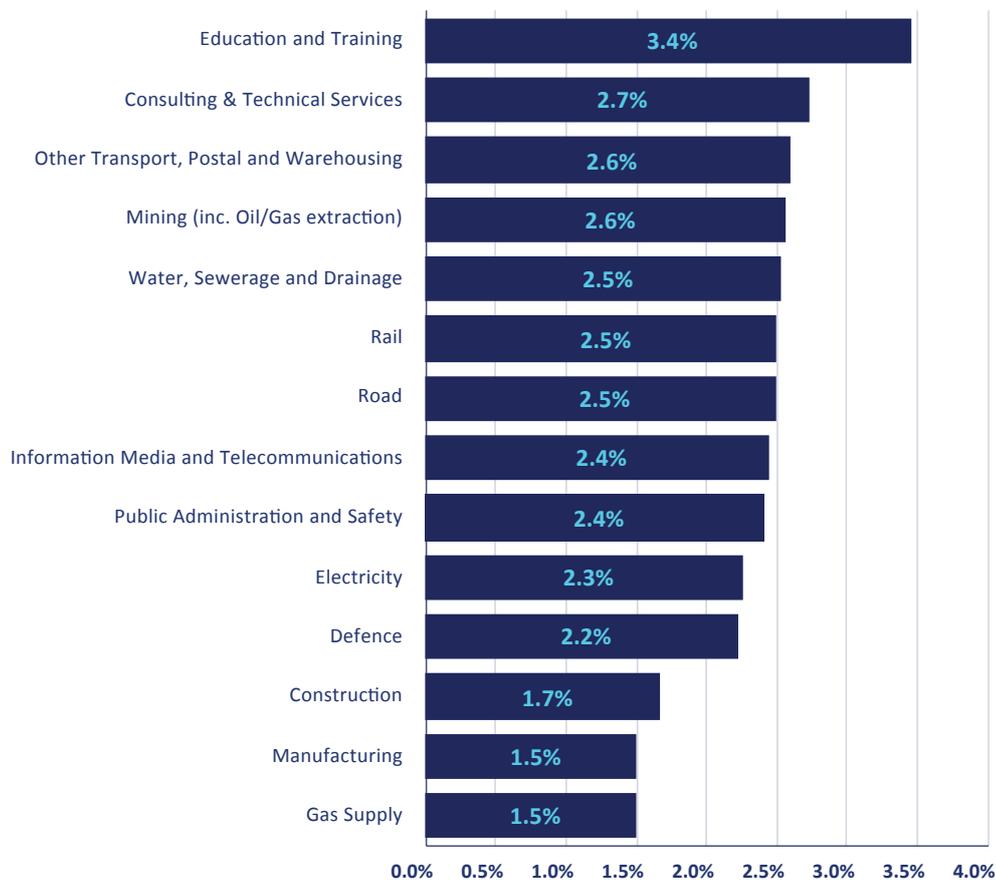
## Wage growth by industry

Growth in salaries across the engineering profession is closely linked to the performance and strength of each industry.

Strong wage growth in Education and training is explained by the experience engineers in that field have and the ongoing strength of demand for employment in the industry to the point this snapshot was taken.

Wages growth in Consulting and technical services was strong reflecting large-scale investment in transport infrastructure and renewable energy projects in the last 12 months. Consulting Engineers have expressed concern about project delays for a range of reasons including site shutdowns, domestic and international supply chain interruptions and bottlenecks, shortages of equipment and materials and travel restrictions but it is likely stimulus measures will support this industry as a means of driving economic recovery over the coming 12 months.

**Figure 2 - Median percentage increase in salaries by industry**

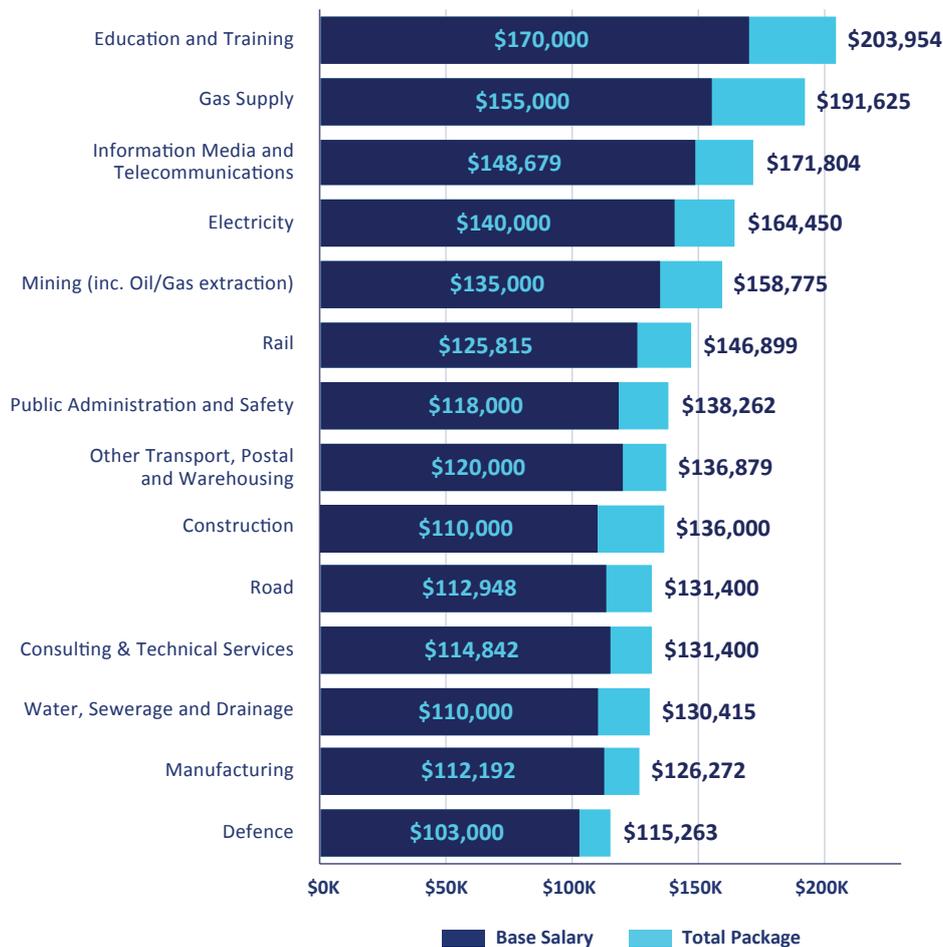


## Average wages by industry

Respondents in Education and training reported the highest total remuneration package (\$203,954), followed by engineers in Gas supply (\$191,625) and Information media and telecommunications (\$171,804). While engineers in Gas supply reported the second highest overall wages, they also reported the lowest wage growth of 1.5 per cent (see Figure 2). Education and training's comparative strength in both pay levels and pay growth are likely the result of the experience engineers employed in that field have, moving into lucrative teaching roles within tertiary institutions.

Conversely, engineers in Defence reported the lowest median total packages (\$115,263), a concern given lower wage growth in this industry despite its importance to Australia. Manufacturing was also low in both total packages and wage growth (\$126,272, 1.5 per cent), but with the focus on manufacturing as a potential source of recovery from the COVID-19 crisis there may be an opportunity for growth in the future.

**Figure 3 - Median base salary and total package by industry**



Differences in pay reported by industry are influenced by both remuneration levels and the distribution of respondents across responsibility levels. Table 2 below provides a breakdown of salaries by industry as well as responsibility level for further reference. Responsibility level definitions can be found in the About the survey section.

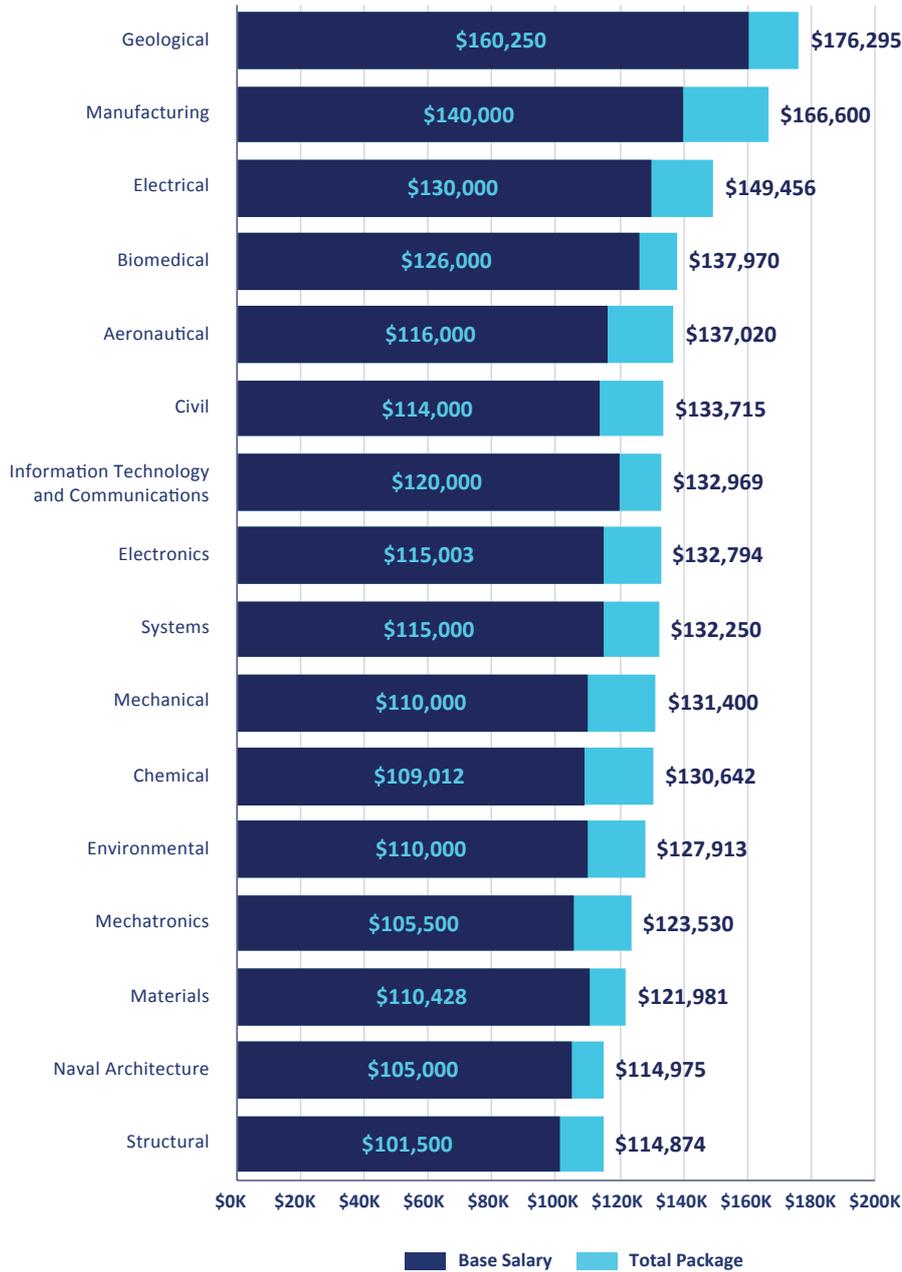
**Table 2 - Median base salary and total package by industry and responsibility level**

	LEVEL 1		LEVEL 2		LEVEL 3		LEVEL 4		LEVEL 5		ABOVE LEVEL 5	
	BASE SALARY	TOTAL PACKAGE	BASE SALARY	TOTAL PACKAGE								
Consulting & Technical Services	\$67,000	\$73,365	\$80,000	\$89,539	\$106,000	\$121,545	\$135,000	\$159,229	\$174,039	\$202,626	\$225,000	\$246,375
Construction	\$72,302	\$82,241	\$85,500	\$93,623	\$100,228	\$129,244	\$138,542	\$167,477	\$172,500	\$219,864	-	-
Mining (inc. Oil/Gas extraction)	\$82,000	\$89,790	\$81,000	\$88,855	\$130,275	\$153,300	\$159,932	\$184,200	\$159,000	\$194,848	-	-
Electricity	\$87,078	\$96,808	\$100,156	\$116,070	\$135,657	\$157,445	\$151,400	\$176,480	\$192,843	\$230,447	-	-
Gas Supply	-	-	-	-	-	-	\$180,000	\$202,575	-	-	-	-
Water, Sewerage and Drainage	\$67,653	\$74,080	\$87,756	\$98,540	\$110,000	\$138,375	\$127,700	\$145,293	\$156,723	\$193,410	-	-
Information Media and Telecommunications	-	-	-	-	\$110,000	\$123,200	\$160,000	\$193,090	-	-	-	-
Defence	\$71,400	\$78,183	\$85,000	\$93,130	\$106,000	\$116,070	\$142,544	\$162,353	\$175,000	\$216,425	-	-
Public Administration and Safety	-	-	-	-	\$102,500	\$113,833	\$118,000	\$138,336	\$145,813	\$199,616	-	-
Road	\$69,500	\$76,103	\$102,500	\$116,009	\$107,524	\$124,968	\$118,438	\$139,220	\$162,000	\$186,150	-	-
Rail	\$68,298	\$77,897	\$90,500	\$103,348	\$120,000	\$137,635	\$151,150	\$170,826	\$194,500	\$214,042	-	-
Other Transport, Postal and Warehousing	-	-	\$90,000	\$98,550	\$124,400	\$137,414	\$129,000	\$160,694	-	-	-	-
Education and Training	-	-	-	-	-	-	\$143,478	\$169,774	\$180,000	\$212,054	-	-
Manufacturing	\$70,000	\$76,775	\$83,000	\$93,349	\$101,857	\$128,115	\$130,920	\$153,035	\$164,250	\$185,603	-	-
Other	-	-	-	-	\$97,500	\$111,763	\$121,325	\$132,851	-	-	-	-
All industries	\$70,000	\$76,900	\$85,000	\$94,972	\$112,598	\$132,920	\$140,000	\$163,155	\$174,039	\$206,517	\$216,000	\$251,988

# DISCIPLINE

Average annual total packages were highest for engineers qualified in the Geological and Manufacturing disciplines but low responding in these categories limit the drawing of any serious inferences. Total packages were lowest for those qualified in the Structural discipline where there was substantial responding.

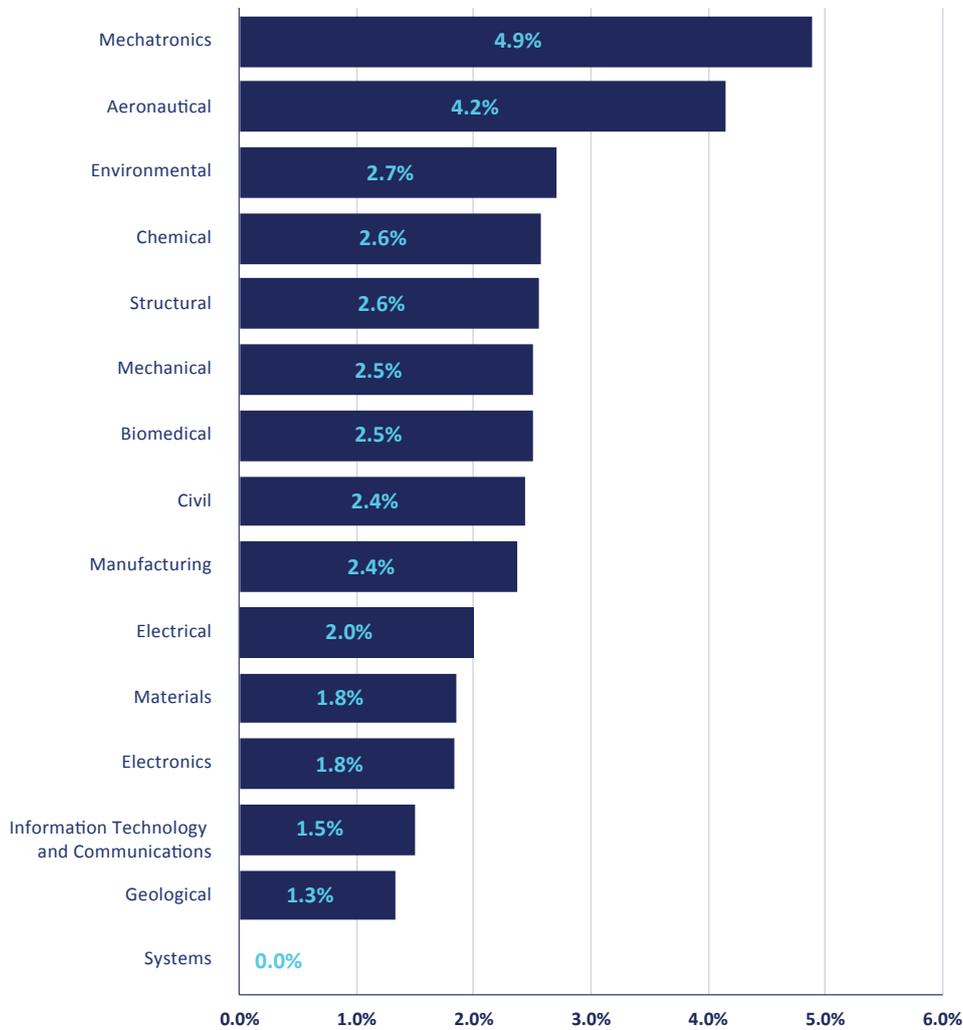
**Figure 4 - Median annual base salaries and total package by engineering discipline**



Average annual salary movements were greatest for engineers qualified in the Mechatronics and Aeronautical disciplines with increases of 4.9 and 4.2, per cent respectively. These were followed by Environmental engineering at 2.7 per cent.

Movements were lowest in the Systems, Geological and Information technology and communications disciplines with movements of 0.0, 1.3 and 1.5 per cent respectively.

**Figure 5 – Median annual percentage base salary movements by engineering discipline**



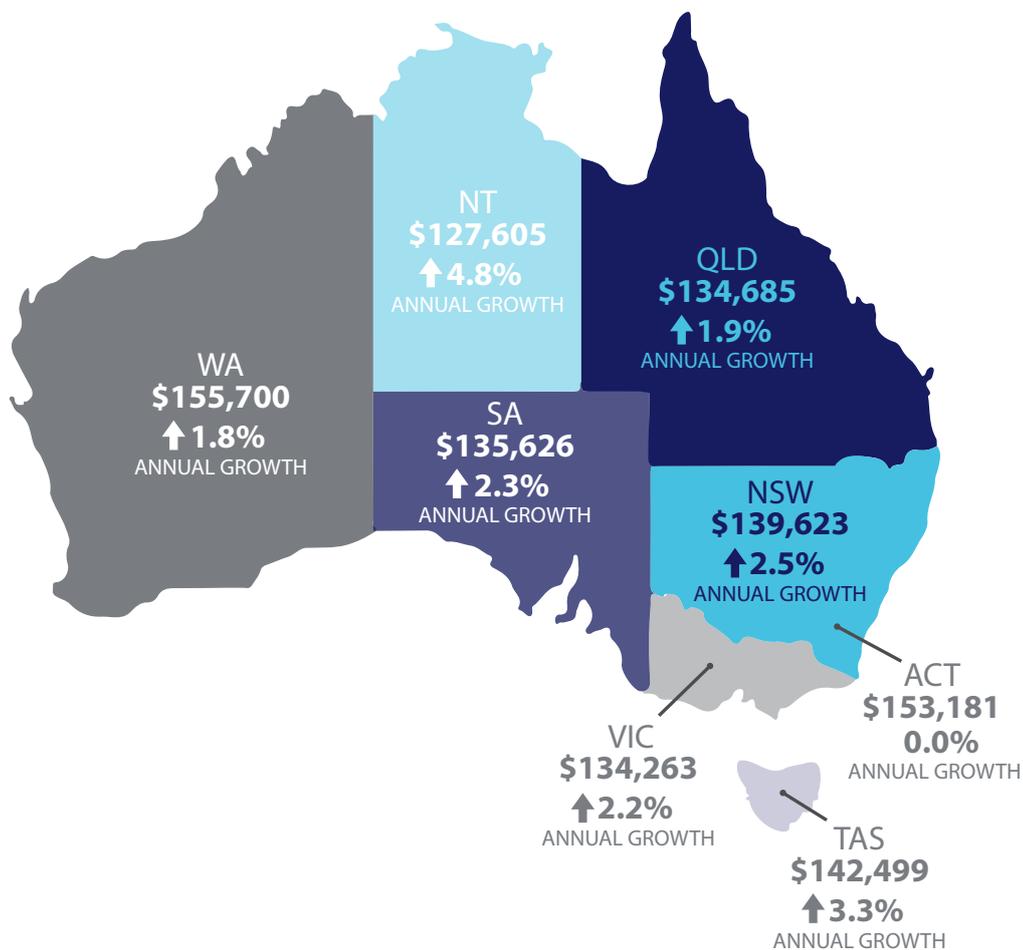
# STATE

In 2020, the respondents from Western Australia reporting the highest median total package at \$155,700, followed by the ACT at \$153,181 and Tasmania with \$142,499.

Annual salary movements were greatest in the Northern Territory and Tasmania with growth of 4.8 and 3.3 per cent respectively.

The extent of the impact and recovery 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 such as tourism, 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 state of the state's economy prior to the crisis and the impact on markets for particular state-manufactured products and services.<sup>11</sup>

Figure 6 - Median total package and percentage increase in salary by state



# SECTOR

There was very little difference in the performance of participants from the public and private sector in 2020 in terms of median base salary, total package and salary growth. Private sector respondents reported increases of 2.3 per cent compared to 2.4 per cent in the public sector (see Figure 1). Public sector respondents reported a median total package of \$139,921, compared to \$136,061 in the private sector.

**Figure 7 - Median base salary and total package by sector**



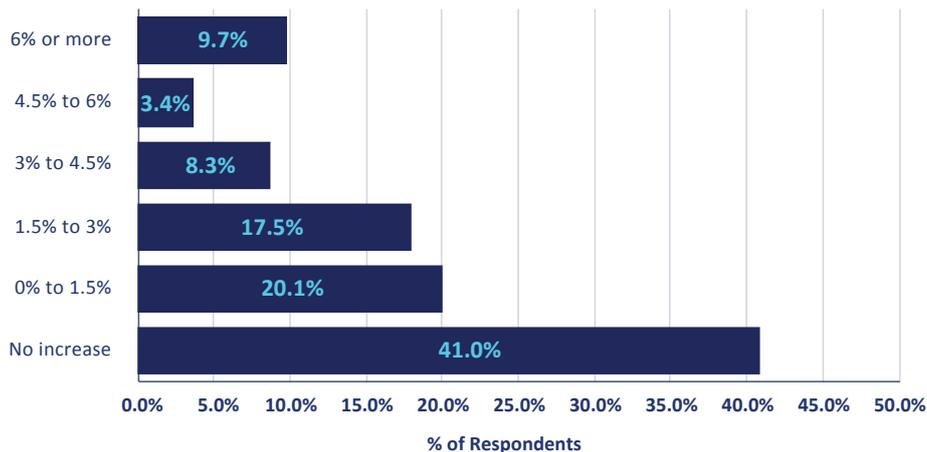
Differences between the remuneration of participants in the private and public sector were much more apparent looking across standard levels of responsibility (see About the survey section for level definitions). Public sector engineers tended to report superior base salaries at Levels 1 and 2, which represent more junior roles with few to no subordinates. At Levels 3 to 5 and beyond, the private sector tended to offer better base salaries. These roles are typically more senior and involve exercising marked autonomy, judgement, management skills and authority. The premium for working in the private sector was greater the more responsibility a role involved.

**Figure 8 - Median base salary by sector across levels of responsibility**

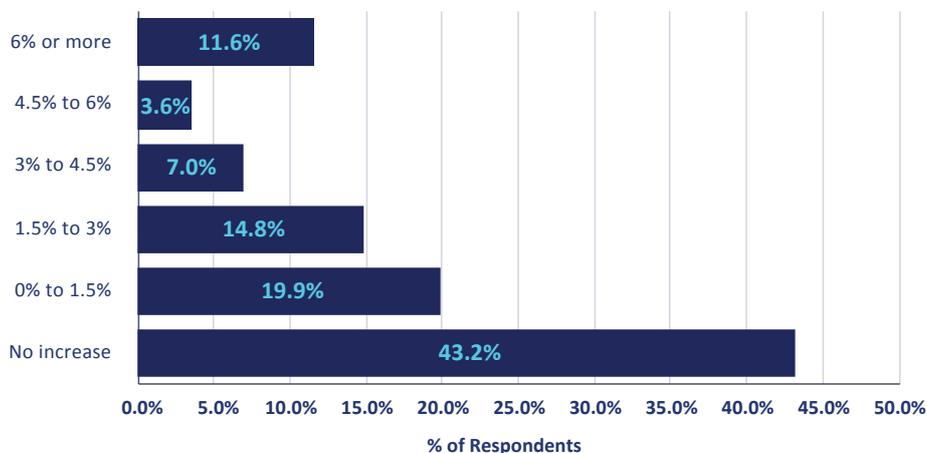


The survey found that 41.0 per cent of respondents received no pay rise at all in the previous 12 months. However, this issue was more prevalent in the private sector, with 43.2 per cent of respondents receiving no pay rise, compared with 37.5 per cent in the public sector. Positively, the gap between receiving a pay rise in the public and private sector has shrunk in 2020. Still, the rate overall is surprisingly high and indicates that wages for a large portion of the nation's engineers are failing to keep up with the basic cost of living. This will be a big concern as we recover from the crisis. Engineering skills will be critical to the government's plan for growth and employers that fail to maintain market pay rises will likely face the prospect of losing skilled staff, potentially costing more over the longer-term due to the cost of recruiting and training new staff, and/or outsourcing with short-term savings but higher whole of life/long-term costs.

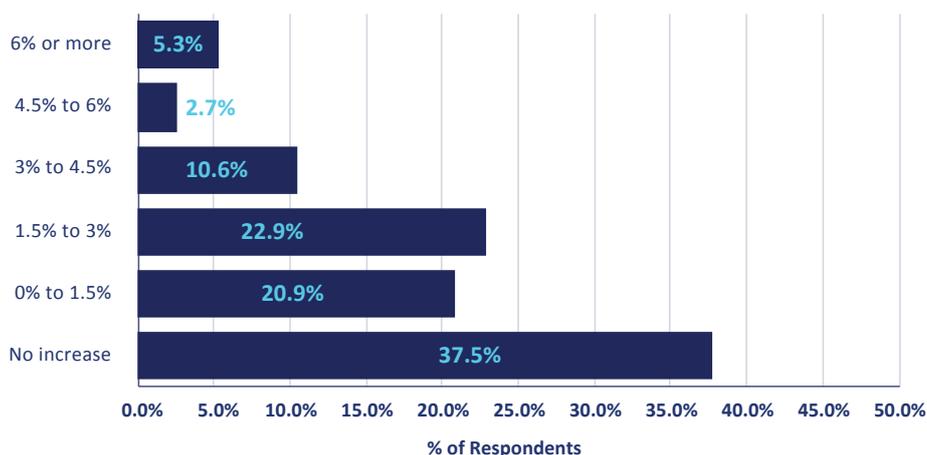
**Figure 9 - Annual salary movements - All sectors**



**Figure 10 - Annual salary movements - Private sector**



**Figure 11 - Annual salary movements - Public sector**

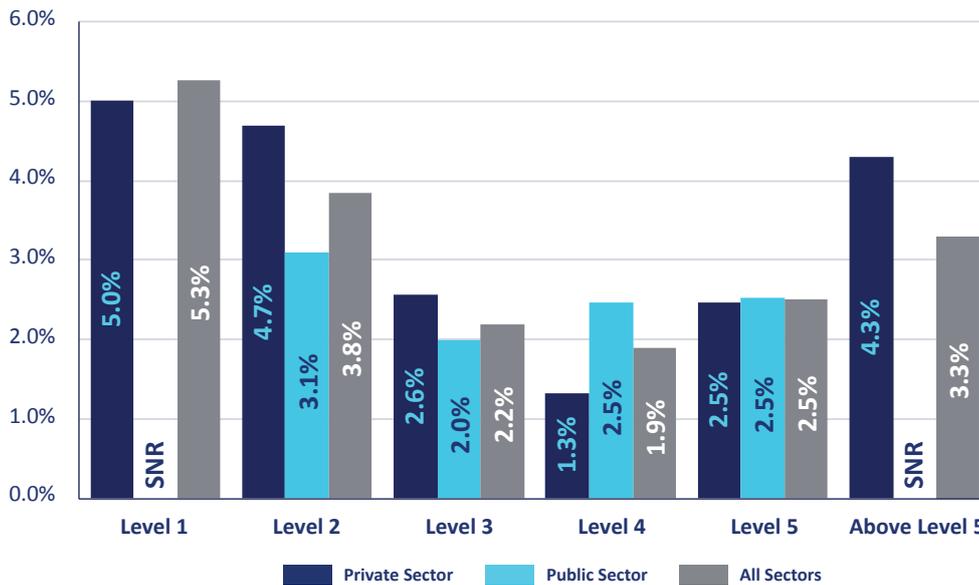


# RESPONSIBILITY LEVEL

The Professional Employees Award 2010, which covers the majority of professional engineering positions, defines standard levels of responsibility for engineering roles. Individuals can place their unique role within this broadly applicable structure for the purpose of comparison to other roles. Descriptions of each level can be found in the About the survey section at the end of this report.

Average annual movements in median base salary were highest at Level 1 with a median increase of 5.3 per cent. This result is not surprising, as larger percentage movements are required at this level in order to have a tangible effect on take-home pay and professionals tend to acquire experience at the greatest rate at this stage in their career. The average salary increase tended to fall as responsibility level rose, with respondents at Level 4 reporting an average 1.9 per cent increase. Growth recovered slightly amongst the most senior engineers.

**Figure 12 - Median annual salary movements across responsibility levels by sector**





The median base salary for a Level 1 engineer across all sectors was \$70,000 with a median total package of \$76,900. Salaries not surprisingly were greatest above Level 5 where the median base salary was \$216,000 and the median total package was \$251,988. Median base salaries ranged from \$70,000 at Level 1 to \$225,000 above Level 5 for the Private sector, \$71,500 at Level 1 to \$184,272 above Level 5 for the Public sector.

**Table 3 - All full-time respondents - base salary and total package by responsibility level - All sectors**

	N	BASE SALARY				TOTAL PACKAGE			
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
LEVEL 1	79	\$65,000	\$70,000	\$74,603	\$70,905	\$72,270	\$76,900	\$84,233	\$80,022
LEVEL 2	140	\$77,000	\$85,000	\$95,000	\$87,520	\$85,895	\$94,972	\$109,514	\$98,909
LEVEL 3	296	\$99,246	\$112,598	\$131,000	\$116,206	\$112,785	\$132,920	\$153,300	\$135,256
LEVEL 4	275	\$120,000	\$140,000	\$155,000	\$140,834	\$137,400	\$162,660	\$184,199	\$163,195
LEVEL 5	99	\$150,000	\$174,039	\$192,843	\$175,621	\$175,450	\$206,517	\$227,507	\$205,184
ABOVE LEVEL 5	20	\$185,000	\$216,000	\$269,000	\$232,915	\$232,673	\$251,988	\$349,623	\$284,475
ALL RESPONDENTS	909	\$93,500	\$120,000	\$150,000	\$124,340	\$105,120	\$138,336	\$171,688	\$144,209

**Table 4 - All full-time respondents - base salary and total package by responsibility level - Private sector**

	N	BASE SALARY				TOTAL PACKAGE			
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
LEVEL 1	58	\$65,000	\$70,000	\$73,500	\$70,618	\$71,550	\$76,650	\$83,106	\$78,849
LEVEL 2	110	\$75,159	\$82,686	\$92,000	\$84,800	\$84,315	\$93,343	\$102,930	\$96,104
LEVEL 3	185	\$99,120	\$115,000	\$130,000	\$116,547	\$112,785	\$131,988	\$153,300	\$135,348
LEVEL 4	160	\$125,000	\$144,300	\$160,000	\$145,350	\$142,350	\$164,250	\$186,533	\$166,917
LEVEL 5	62	\$152,640	\$177,000	\$195,000	\$177,438	\$175,450	\$208,077	\$227,802	\$205,866
ABOVE LEVEL 5	13	\$200,000	\$225,000	\$315,000	\$248,498	\$239,000	\$296,815	\$376,425	\$301,205
ALL RESPONDENTS	588	\$87,000	\$118,000	\$150,000	\$123,253	\$98,177	\$136,061	\$171,400	\$142,126



**Table 5 - All full-time respondents - base salary and total package by responsibility level - Public sector**

	N	BASE SALARY				TOTAL PACKAGE			
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
<b>LEVEL 1</b>	19	\$67,595	\$71,500	\$74,603	\$71,823	\$74,460	\$80,966	\$85,410	\$83,585
<b>LEVEL 2</b>	29	\$84,000	\$95,000	\$108,000	\$97,924	\$91,980	\$113,500	\$120,450	\$109,640
<b>LEVEL 3</b>	109	\$99,372	\$107,612	\$131,000	\$115,282	\$112,785	\$133,390	\$152,384	\$134,632
<b>LEVEL 4</b>	109	\$112,000	\$130,000	\$149,000	\$133,765	\$131,400	\$149,175	\$173,272	\$157,049
<b>LEVEL 5</b>	31	\$143,000	\$160,000	\$190,000	\$170,299	\$169,418	\$199,633	\$226,005	\$201,854
<b>ABOVE LEVEL 5</b>	4	-	\$184,272	-	\$184,955	-	\$233,183	-	\$229,631
<b>ALL RESPONDENTS</b>	301	\$100,000	\$120,000	\$143,000	\$124,151	\$115,082	\$139,921	\$168,714	\$145,305

**Table 6 - All full-time respondents - base salary and total package by responsibility level - Other sectors (inc. Education)**

	N	BASE SALARY				TOTAL PACKAGE			
		LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
<b>LEVEL 1</b>	SNR	-	-	-	-	-	-	-	-
<b>LEVEL 2</b>	SNR	-	-	-	-	-	-	-	-
<b>LEVEL 3</b>	SNR	-	-	-	-	-	-	-	-
<b>LEVEL 4</b>	6	\$140,000	\$144,978	\$160,000	\$148,836	\$164,450	\$169,774	\$199,200	\$175,599
<b>LEVEL 5</b>	6	\$170,000	\$185,000	\$200,000	\$184,333	\$205,108	\$215,527	\$223,323	\$215,345
<b>ABOVE LEVEL 5</b>	3	-	-	-	\$229,333	-	-	-	\$285,102
<b>ALL RESPONDENTS</b>	19	\$140,000	\$165,000	\$190,000	\$164,264	\$164,450	\$199,200	\$223,323	\$195,318



## JOB FUNCTION

Average annual base salaries and total packages were highest for engineers employed in management functions, followed by those employed in Teaching or training and Sales and marketing. The high total package for engineers employed in Sales and marketing was driven by more valuable additional benefits than annual base salary.

Average annual salary movements were also greatest for engineers in Teaching or training, followed by Construction supervision with increases of 4.3 and 3.8 per cent respectively.

Movements were lowest in the Sales and marketing function with annual salaries holding level with the 12 months prior (0.0 per cent)

**Figure 13 - Median annual base salaries and total package by job function**





Figure 14 - Median annual percentage base salary movements by job function





## UNION/PROFESSIONAL ASSOCIATION MEMBERSHIP

A 2017 study using data from the Household, Income and Labour Dynamics in Australia (HILDA) survey from 2001-2013 with a sample of 80,000 workers showed that union members earned higher wages per hour than non-union members.<sup>12</sup>

Our survey data is consistent with the findings of the HILDA survey, with members of Professionals Australia earning more than their non-member peers from Levels 1 to 5. Professionals Australia membership delivered a median premium of 13.9 per cent in base salaries and total packages.

**Figure 15 – Median base salary by Professionals Australia membership – Levels 1 to 5**





The Association of  
**Professional  
Engineers  
Australia**

To look at the  
benefits of  
Professionals  
Australia  
membership, visit:

[PROFESSIONALENGINEERS.ORG.AU/JOIN](https://www.professionalengineers.org.au/join)

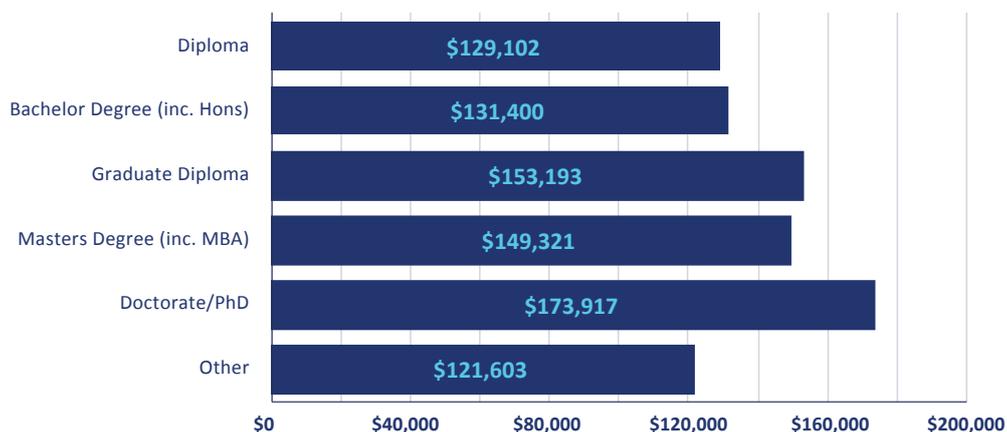


## POST-GRADUATE QUALIFICATIONS

In investigating the impact of post-graduate qualifications on salary levels the survey found that additional qualifications deliver a real wage premium for professional engineers. Respondents holding a Masters degree delivered a wage premium to their total package of 13.6 per cent when compared with a Bachelor degree, while a Graduate diploma delivered a wage premium of 16.6 per cent. Respondents with a Doctorate/PhD received the highest wage premium at 32.4 per cent.

These results highlight the importance of growing the technical skill and knowledge base of the engineering workforce, with employers willing to pay a premium for highly-skilled engineers with post-graduate qualifications. The results are also useful for employees seeking to improve their remuneration with skill acquisition linked to career opportunities and higher wages.

**Figure 16 - Median total package by qualification**





## ACCREDITATION

Accreditation is a critical risk management mechanism for organisations. It ensures recognition of qualified, competent and up-to-date engineers which in turn ensures high standards of engineering output, current skill and knowledge, a strong capacity to protect community safety and the efficient movement of engineering capability across domestic and international boundaries.

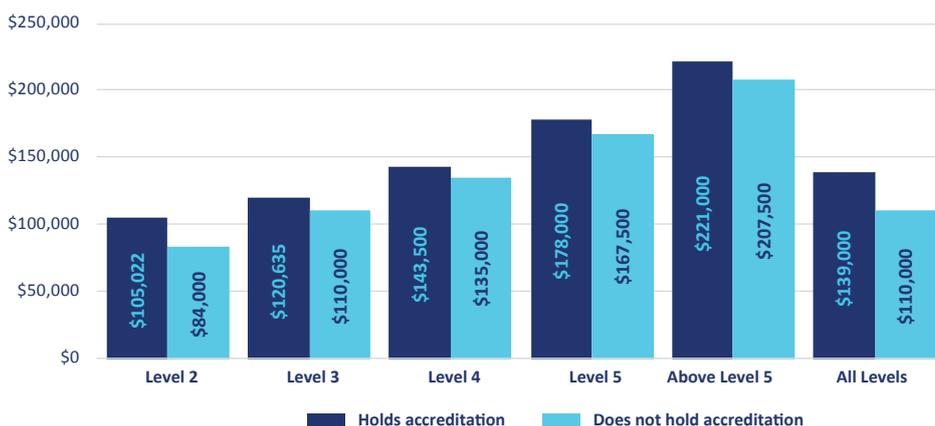
The survey found that the remuneration of engineers who hold accreditation was significantly higher than those who did not. The extra remuneration received by accredited engineers demonstrates the additional value that these engineers provide to their employers. Accredited engineers are recognised as experts in their field providing a high-level of engineering capability and high standards of engineering practice. Accredited engineers are also required to continuously improve their engineering skills through CPD, ensuring that they are up-to-speed on changes in engineering practice and standards. By employing accredited engineers, employers can be sure they are maintaining a superior level of engineering skill that is highly regarded by clients and other stakeholders.

**The survey found that accreditation in the form of RPEng, CPEng or RPEQ delivered a premium of 26.4 per cent higher remuneration (\$29,000 higher as measured by median base salary across levels of responsibility).**

### Accreditation by responsibility level

Across all levels, respondents holding accreditation reported earnings greater than their non-accredited counterparts. Respondents with accreditation reported a median base salary of \$139,000, compared with \$110,000 for those respondents not holding an accreditation. This premium was evident across all levels of responsibility from Level 2, the point at which accreditation becomes available.

**Figure 17 - Median base salary by accreditation across responsibility levels**



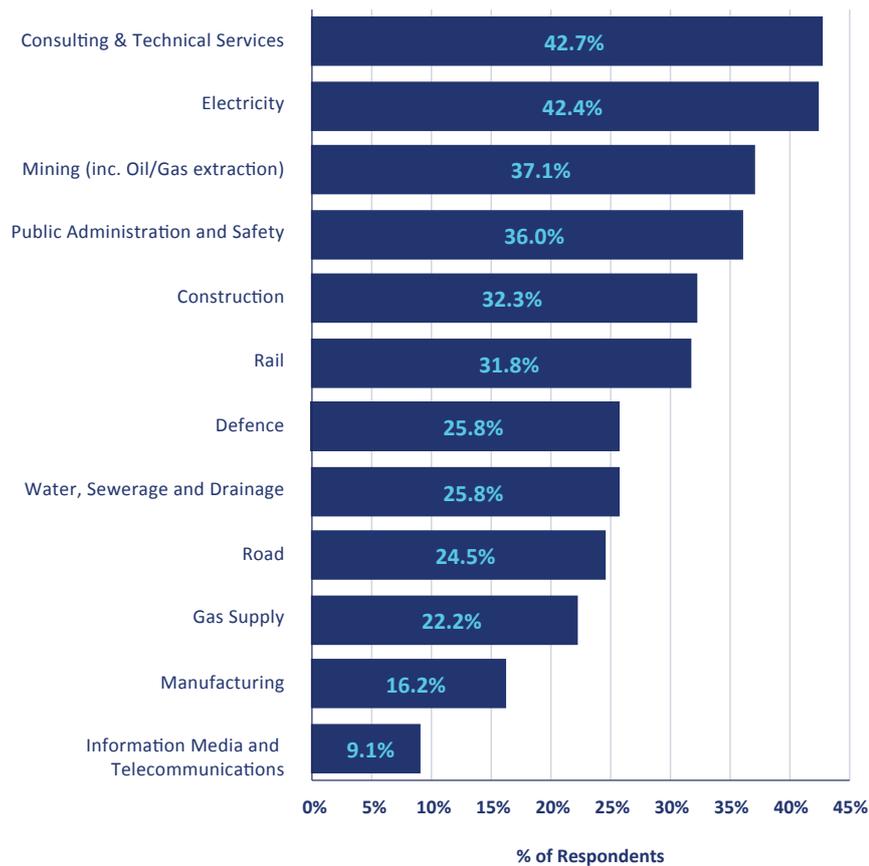


## Accreditation by industry

The survey found solid rates of accreditation across industries. Engineers in the Consulting and technical Services industry reported the highest proportion of engineers who held accreditation at 42.7 per cent of respondents, followed by the Electricity industry at 42.4 per cent, Mining at 37.1 per cent and Public administration and safety at 36.0 per cent.

Information media and telecommunications reported the lowest rate of accreditation, followed by Manufacturing.

**Figure 18 - Proportion of engineers holding an accreditation by industry**

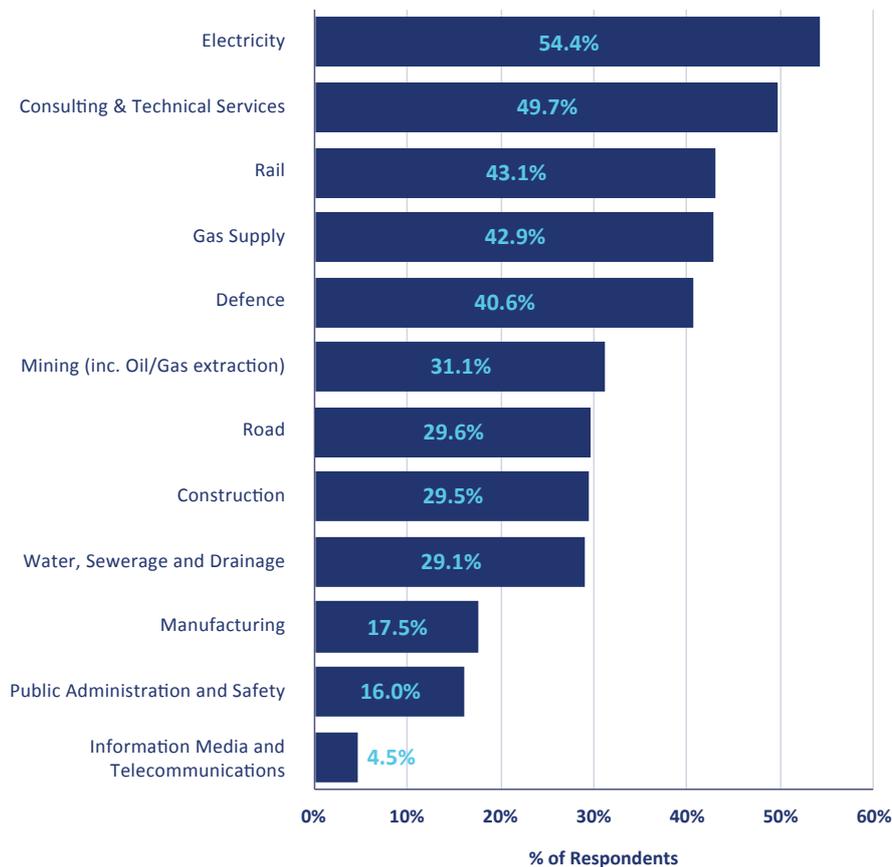




## Accreditation cost

Engineers in the Electricity industry were most likely to have their accreditation paid for by their employer, followed by engineers in Consulting and technical services, Rail, Gas supply and Defence. Engineers in Information media and telecommunications, Public administration and safety and Manufacturing industries were least likely to have their accreditation paid for by their employer.

Figure 19 – Proportion of engineers whose employer pays for accreditation by industry



# HOW MUCH MORE DO ACCREDITED ENGINEERS EARN?

Accredited engineers earn 26.4% more on average than non-accredited engineers as measured by median base salary across levels of responsibility from 2020 Professional Engineers Employment and Remuneration Report.

Visit the RPEng website at [www.professionalengineers.org.au/RPEng](http://www.professionalengineers.org.au/RPEng)

# \$29,000





## RECENT GRADUATES

By sector, recent graduates in the public sector reported higher median commencing salaries, at \$69,600, compared with \$65,000 in the private sector. Commencing salaries in the public sector tend to be set by enterprise bargaining agreements that often include graduate commencing salaries that are higher than in the private sector.

Civil and Mechanical engineers accounted for the largest group of recent graduate respondents, suggesting that these roles are providing the largest number of entry-level opportunities for graduate engineers.

By discipline, graduates qualified in Structural engineering reported the highest median commencing salaries at \$70,000, followed by Mechanical engineering at \$69,199.

In terms of industry, Consulting and technical services accounted for the largest share of respondents. This result is not surprising as consulting engineers effectively provide their services across the whole economy. Manufacturing and Water sewerage and drainage also accounted for a large proportion of graduate respondents.

By industry, recent graduates in Electricity reported the highest median commencing salaries, at \$84,000 followed by engineers in Mining (\$80,000) and Road (\$70,000). The Consulting and technical services industry employs a large number of graduate engineers, but unfortunately offers some of the lowest median commencing salaries among those surveyed at \$61,644.

Table 7 - All full-time recent graduates commencing salaries

		COMMENCING SALARY				
		N	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
SECTOR	PRIVATE	54	\$60,000	\$65,000	\$72,000	\$66,252
	PUBLIC	18	\$63,100	\$69,600	\$74,000	\$71,357
DISCIPLINE	AERONAUTICAL	3	-	-	-	\$75,833
	CHEMICAL	6	\$60,000	\$62,500	\$74,000	\$63,920
	CIVIL	21	\$60,000	\$67,000	\$70,000	\$67,055
	STRUCTURAL	6	\$67,000	\$70,000	\$70,000	\$68,282
	INFORMATION TECHNOLOGY AND COMMUNICATIONS	6	\$58,000	\$65,000	\$72,000	\$67,667
	ELECTRICAL	13	\$62,000	\$67,595	\$75,000	\$69,507
	ELECTRONICS	6	\$60,000	\$63,500	\$84,000	\$68,500
	MECHANICAL	21	\$62,000	\$69,199	\$80,000	\$69,660
	MECHATRONICS	8	\$55,500	\$62,550	\$69,406	\$63,364
	OTHER	5	\$62,000	\$70,000	\$74,000	\$71,400
JOB FUNCTION	OTHER JOB FUNCTIONS	4	-	\$64,000	-	\$63,500
	ASSET MANAGEMENT	7	\$69,199	\$72,000	\$84,000	\$74,314
	DESIGN	28	\$57,913	\$64,007	\$67,798	\$63,860
	MANAGEMENT	3	-	-	-	\$73,500
	PRODUCTION, QUALITY, MAINTENANCE	6	\$53,066	\$62,000	\$70,000	\$61,844
	PROJECT MANAGEMENT	10	\$67,653	\$71,209	\$80,000	\$72,611
	RESEARCH AND DEVELOPMENT	10	\$60,000	\$69,406	\$87,000	\$74,858
INDUSTRY	CONSULTING AND TECHNICAL SERVICES	12	\$57,680	\$61,644	\$66,500	\$62,054
	CONSTRUCTION	6	\$60,000	\$66,209	\$75,000	\$72,014
	MINING (INC. OIL/GAS EXTRACTION)	6	\$75,000	\$80,000	\$82,000	\$77,917
	ELECTRICITY	7	\$65,000	\$84,000	\$87,155	\$77,464
	WATER, SEWERAGE AND DRAINAGE	10	\$55,000	\$61,000	\$69,199	\$60,926
	DEFENCE	7	\$63,100	\$66,000	\$72,000	\$65,871
	ROAD	6	\$60,000	\$70,000	\$72,795	\$67,299
	RAIL	5	\$62,000	\$67,595	\$72,000	\$66,531
	MANUFACTURING	10	\$60,000	\$63,500	\$70,000	\$64,775



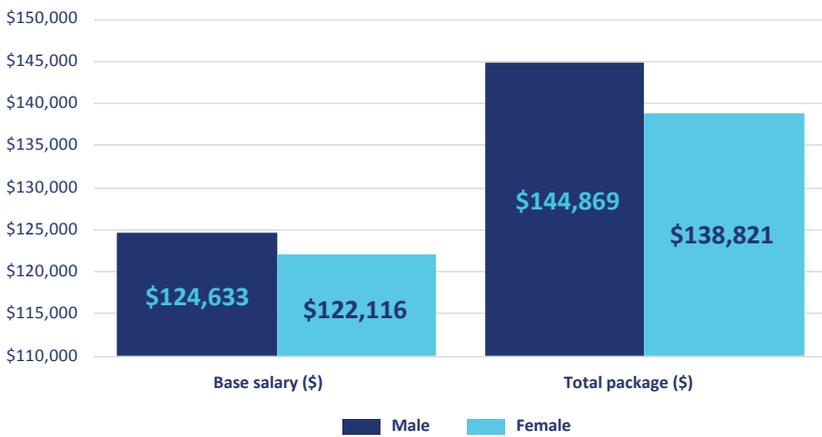
# GENDER

The contribution that a diverse workforce makes to organisational effectiveness is well-documented, and higher levels of participation and retention for female engineers remains one of the most significant challenges in achieving a diverse and sustainable engineering workforce. Women are one of the largest under-represented pools of talent in engineering and organisations will need to devote greater attention to addressing the employment practices that create disadvantage for women if they wish to attract and retain highly-skilled women to the engineering profession, especially in the post-COVID-19 recovery period.

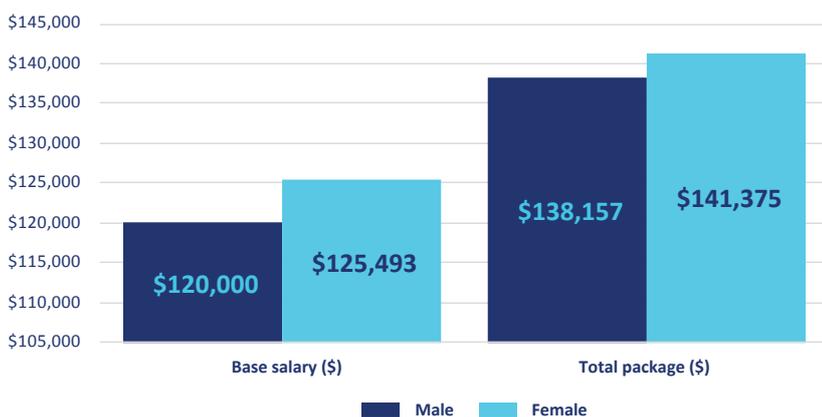
## Gender pay gap

The gender pay gap figures in this year's survey were inconclusive. While the survey found a gender pay gap of 2.1 and 4.4 per cent for base salaries and total packages favouring men respectively when looking at the mean pay figures, the medians were inconsistent with those findings. Previous surveys have consistently found a gender pay gap favouring men when considering median pay figures so it is unfortunately not possible to make conclusive findings about the gender pay gap based on this year's data.

**Figure 20 - Mean male and female base salary for all respondents across survey sample**



**Figure 21 – Median male and female base salary for all respondents across survey sample**

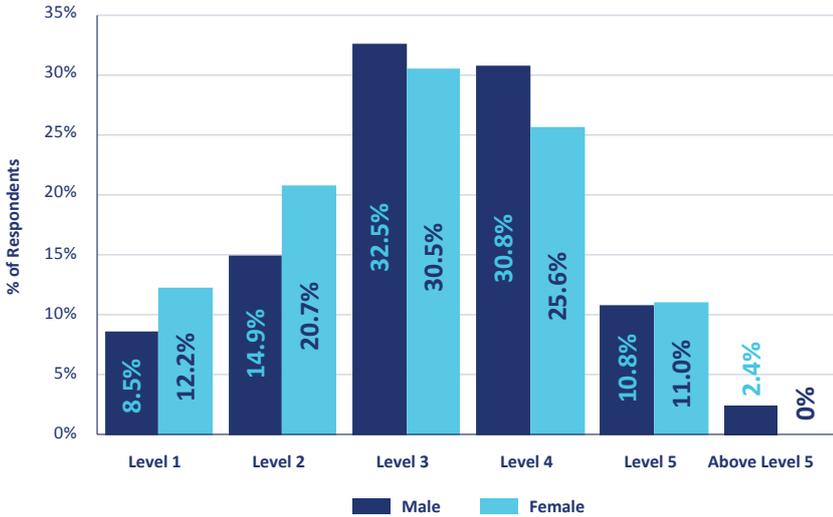


Rather than suggesting the gender pay gap has been reduced or no longer exists, this is likely due to sampling issues that skewed results including the effects of the COVID-19 pandemic on respondency patterns. The pandemic contributed to overall lower levels of responding in 2020 than in 2019. Responding declined in a proportionate manner across most demographics, but there was a clear decline in the number of women responding to the survey employed at lower levels of responsibility. In 2019 only 20.8 per cent of women reported being employed in a Level 4 role, and 3.3 per cent in a Level 5 role, compared with 25.6 and 11.0 per cent respectively in 2020. Similarly, the percentage of women that reported being employed in a Level 1 or Level 2 role was noticeably less in the 2020 survey compared to the 2019 survey. While this is the clearest impact, other factors may also be at play.

## Workforce distribution - responsibility level and age

Despite more female respondents being represented at higher levels of responsibility in 2020 than previous surveys, this year's data continues the trend of male respondents being more likely to be employed at higher levels of responsibility, and females more likely to be employed at less senior responsibility levels. 63.4 per cent of female respondents reported being employed at Level 3 or below, and only 36.6 per cent were employed at Level 4 or above. By comparison, 56.0 per cent of males were engaged at Level 3 or below, while 44.0 per cent were employed at Level 4 and above. Ensuring women's workforce participation and representation at senior levels is a critical factor in addressing the gender pay gap.

**Figure 22 - Workforce distribution by responsibility level and gender**

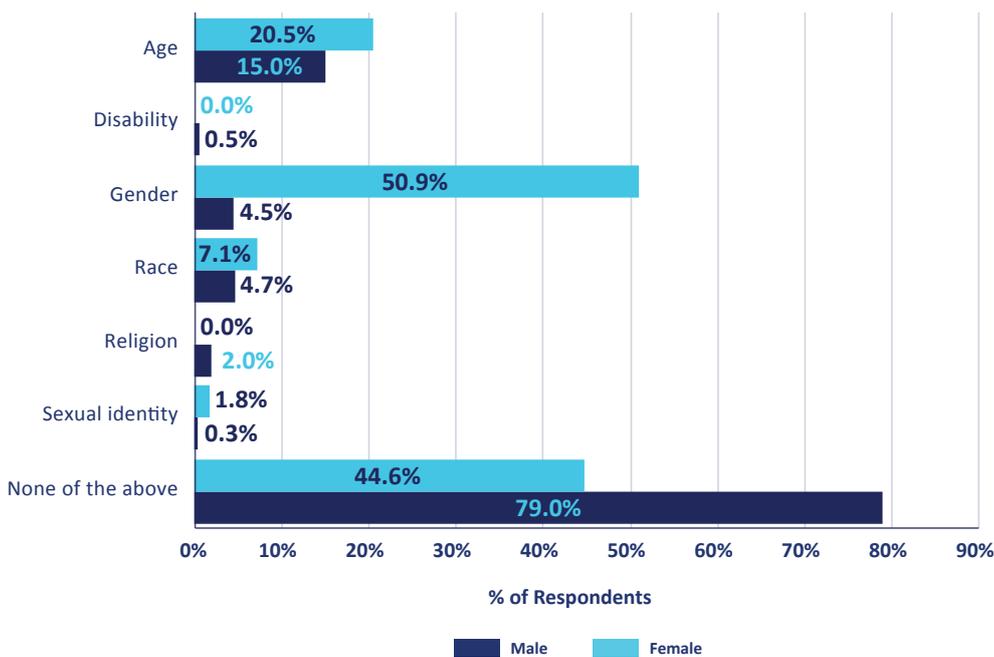




## Discrimination by gender

The survey asked respondents to report on whether or not they had experienced discrimination in their workplace over the previous three years, and, if so, the type of discrimination they had experienced. A disturbing 50.9 per cent of female respondents reported that they had experienced discrimination on the basis of gender. Discrimination on the basis of age was the second most frequently reported type of discrimination but still more common for women (20.5 per cent) than men (15.0 per cent). Males were much more likely to have not experienced discrimination on any of the bases listed with 79.0 per cent of male respondents reporting no discrimination, compared with 44.6 per cent of female respondents.

**Figure 23 - Types of discrimination experienced in the workplace over previous three years by gender**



Discrimination on the basis of race, religion, sexual identity and disability were also highlighted as issues of serious concern.



## Gap between policy and implementation

- 81.7 per cent of respondents said their employer had in place formal policies to deal with discrimination.
- 75.3 per cent said their employer had in place formal policies to promote diversity.
- 12.8 per cent said that while their employer had formal policies in place around diversity and discrimination, they did not have strategies in place to actually implement them.

The survey confirmed that while over two-thirds of workplaces had policies in place to support diversity and deal with discrimination, many did not have the strategies in place to give effect to the policies. The challenge remains to ensure that policy, strategy and workplace culture are integrated and support the implementation of diversity and anti-discrimination policies.

## Sexual harassment

32.5 per cent of female respondents reported having experienced sexual harassment in the course of their employment compared to 1.9 per cent of male respondents.

These figures highlight sexual harassment as a serious workplace health and safety issue in the engineering workforce.

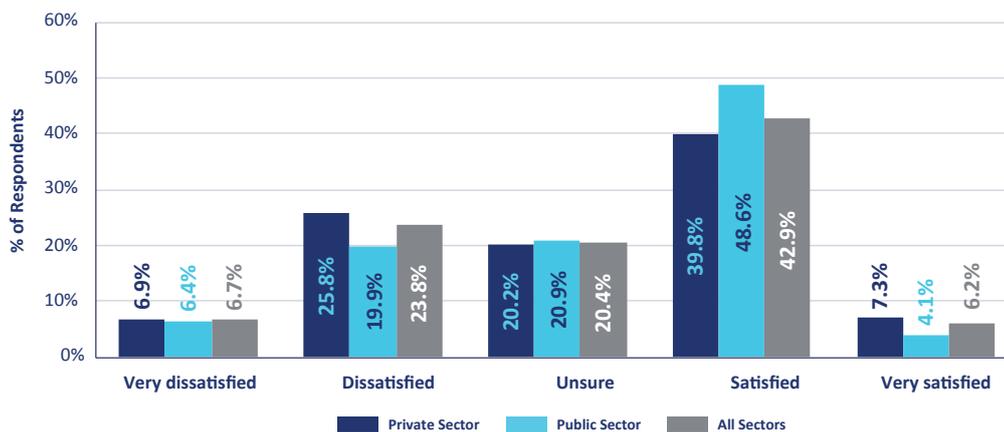


## SATISFACTION WITH CURRENT REMUNERATION

Maintaining strong job satisfaction among employees is a major challenge for many organisations and effective recognition and reward strategies are vital for businesses if they wish to attract and retain skilled staff. The survey however found a concerning level of dissatisfaction with remuneration – 30.5 per cent of respondents across all sectors reported being dissatisfied or very dissatisfied with their current level of remuneration. This result represents a small decrease on last year’s figure of 35.3 per cent.

A total of 49.0 per cent said they were satisfied or very satisfied with their level of remuneration, slightly up on the result of last year (45.7 per cent) and the previous year (46.5 per cent). Satisfaction levels were a little higher amongst public sector engineers at 52.7 per cent than their private sector peers at 47.1 per cent.

**Figure 24 - Satisfaction with current remuneration by sector**



In addition, respondents were asked about how they saw their remuneration package in the context of others undertaking similar work and whether or not they saw their package as adequately reflecting their responsibilities. The survey found that around half the respondents did not feel their remuneration was keeping up and did not adequately reflect the responsibility level of their role.

- 45.6 per cent said they believed their remuneration package was falling behind what others undertaking similar work were being paid.
- 47.1 per cent said they did not believe their package appropriately reflected the level of responsibility they undertook in their day-to-day work.



Figure 25 – Perception remuneration package is falling behind others undertaking similar engineering work

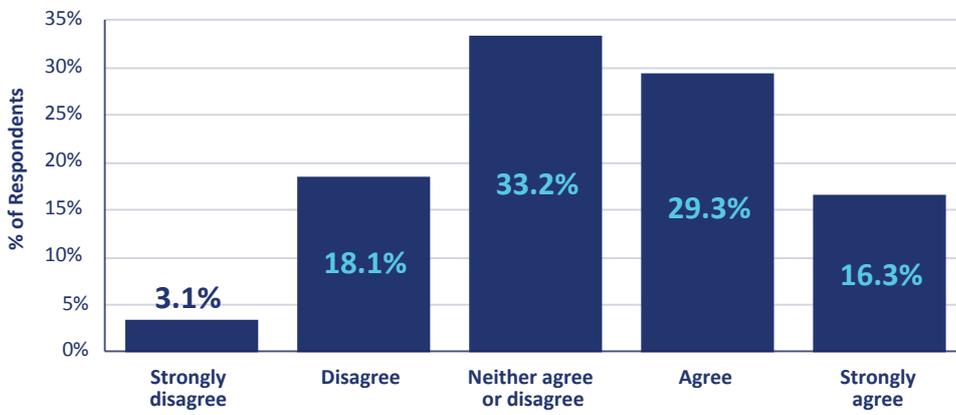
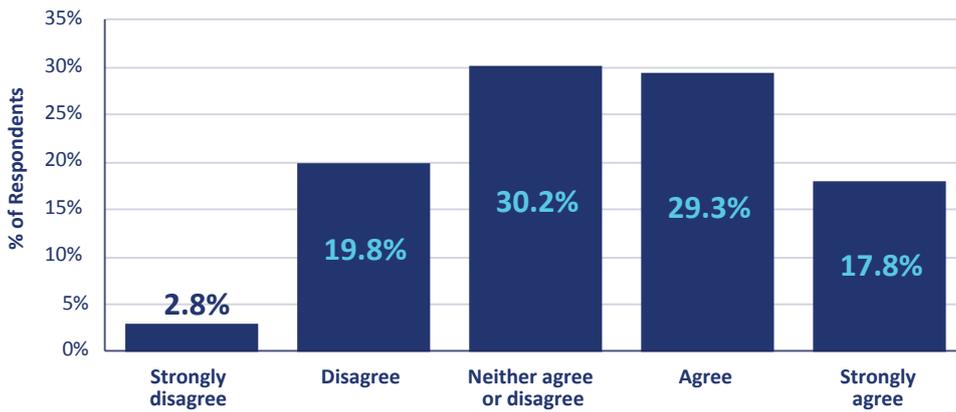


Figure 26 – Perception remuneration package does not reflect level of responsibility undertaken in day-to-day work



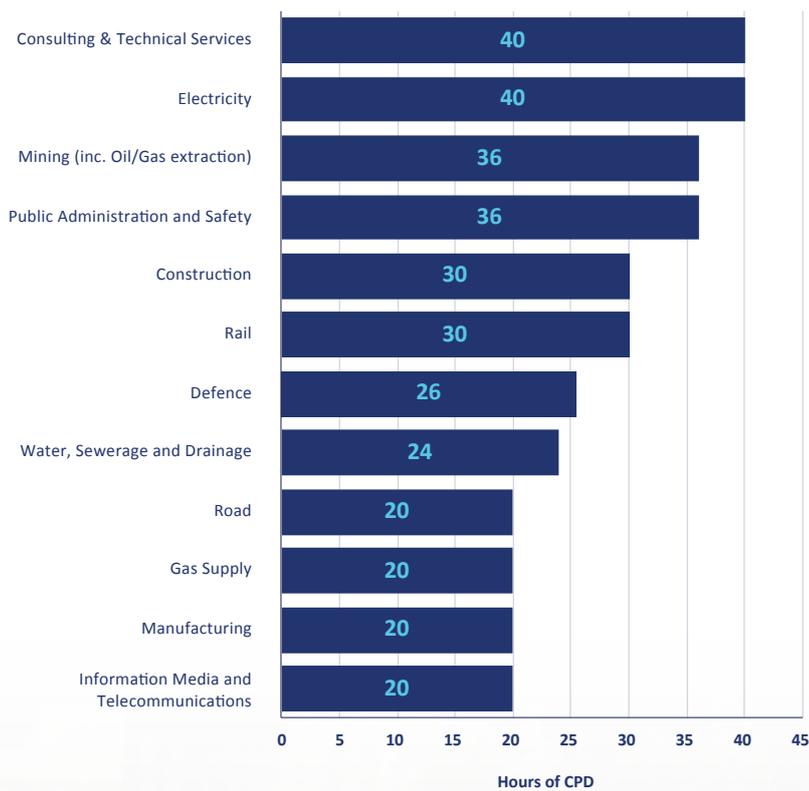


# WORKPLACE ISSUES

## PROFESSIONAL DEVELOPMENT

Engineers in the Consulting and technical Services and Electricity industries engaged in a greater number of hours of continuous professional development (CPD) than their counterparts in other industries, both reporting a median of 40 hours in the previous 12 months. These industries correspond closely with those industries more likely to be engaged in CPD with the exception of Rail where CPD is regularly engaged in but rarely provided by the employer.

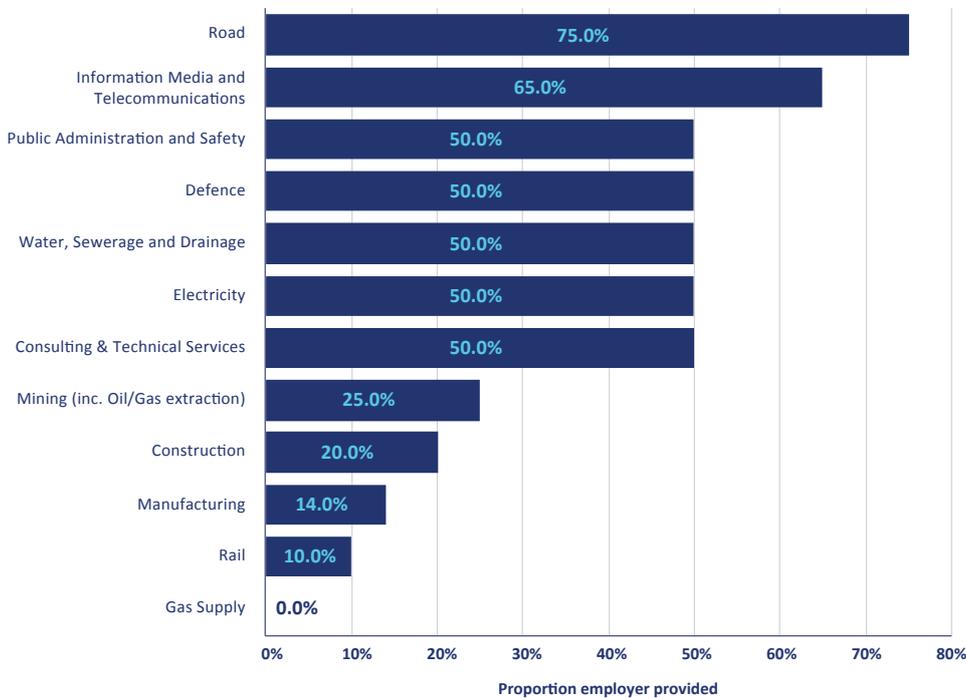
**Figure 27 - Median hours of CPD engaged in over last year by industry**





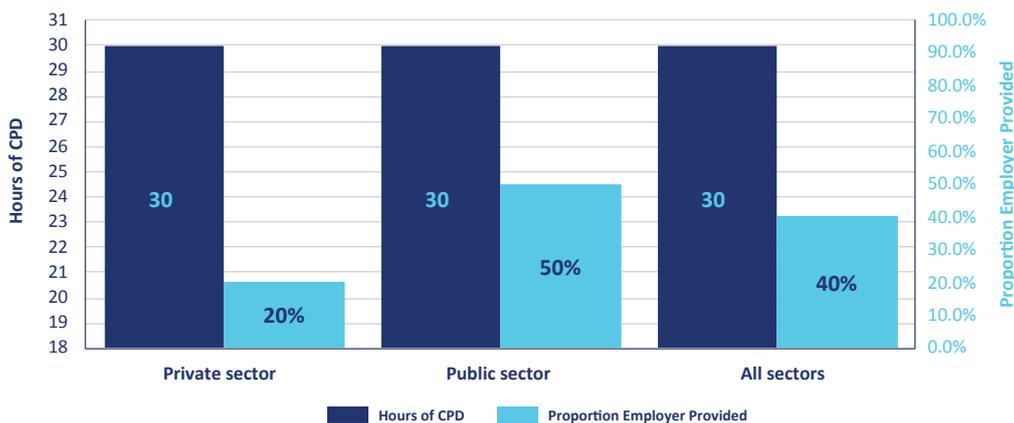
The Road industry and predominantly government-owned or heavily-regulated areas such as, Public administration and safety and Defence reported the highest proportion of CPD provided by their employer, other than Information media and telecommunications where technology and standards are constantly changing.

**Figure 28 - Median proportion of CPD provided by employer by industry**



The median number of hours was consistent across sectors (30 hours) with employers in the private sector most likely to cover the cost of CPD.

**Figure 29 – Median hours of CPD and proportion of CPD provided by employer by sector**





## HOURS OF WORK

Respondents reported working a median 40.8 hours per week in the public sector and 43.6 hours in the private sector, longer than the standard 38-hour week in both cases. This included an average of 3.4 hours overtime in the public sector and 5.2 hours in the private sector.

Figure 30 - Mean hours worked and overtime per week by sector



Table 8 - Hours worked per week by sector

	HOURS WORKED PER WEEK				
	N	LOWER QUANTILE	MEDIAN	UPPER QUANTILE	MEAN
PRIVATE SECTOR	663	40.0	42.0	45.0	43.6
PUBLIC SECTOR	332	38.0	40.0	42.3	40.8
ALL SECTORS	995	40.0	40.0	45.0	42.6

Table 9 - Average overtime hours per week by sector

	AVERAGE OVERTIME PER WEEK				
	N	LOWER QUANTILE	MEDIAN	UPPER QUANTILE	MEAN
PRIVATE SECTOR	660	2.0	4.0	7.0	5.2
PUBLIC SECTOR	332	0.0	2.5	5.0	3.4
ALL SECTORS	992	1.0	4.0	7.0	4.6



By job function, engineers employed in Teaching or training roles reported working the longest hours (outside of those employed in 'other' roles), at 46.6 per week including an average of 7.7 hours overtime, followed by those employed in Sales and marketing who worked a mean of 45.6 hours per week including 7.7 hours of overtime. By comparison, those employed in Asset management reported the shortest weekly hours, with a mean of 41.1, including 3.5 hours of overtime per week.

**Figure 31 - Mean hours worked and overtime per week by job function**

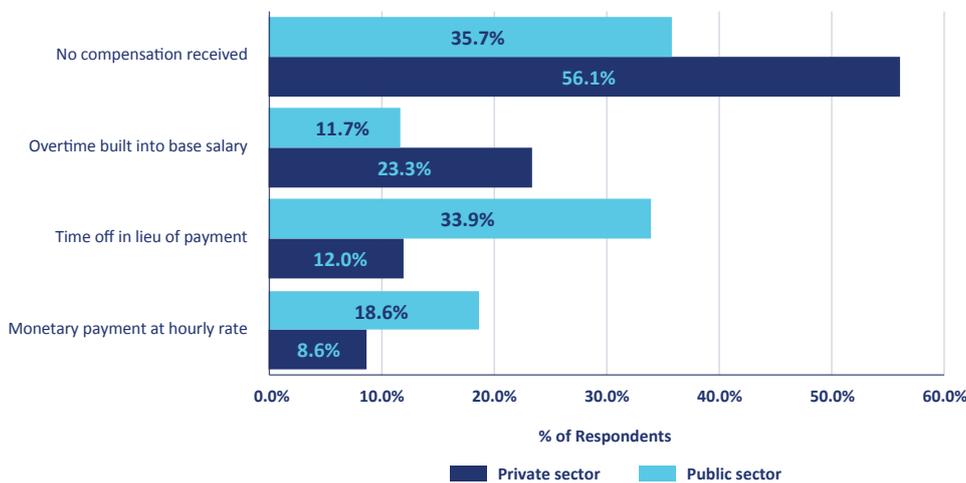




## Overtime compensation

The way in which overtime is compensated differs significantly by sector. Public sector engineers are more likely to receive time off in lieu of payment, with 33.9 per cent of respondents citing this form of compensation, compared with only 12.0 per cent in the private sector. Conversely, 23.3 per cent of private sector engineers reported that overtime was built into their base salary, compared with 11.7 per cent in the public sector.

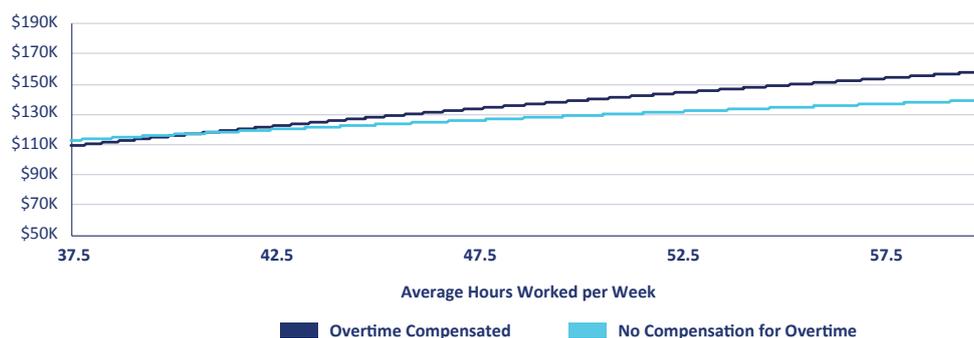
**Figure 32 - Compensation for overtime worked by sector**



Overall, engineers in the public sector are less likely to receive no payment for overtime worked, with 35.7 per cent of respondents reporting no compensation, compared with 56.1 per cent in the private sector.

Among those who reported some form of compensation for overtime, remuneration tended to be higher no matter how many hours were worked in an average week. Although longer hours tended to be associated with higher incomes for those that did not receive overtime compensation, those with explicit overtime compensation tended to be remunerated better if they worked more than 40 hours in an average week. Given the average engineer works 42.6 hours a week, more explicit forms of compensation for working additional hours tend to benefit professional engineers.

**Figure 33 - Median base salary by hours worked per week and overtime compensation**





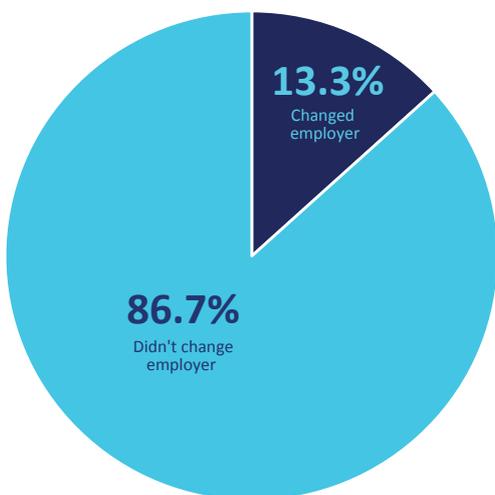
## PROFESSIONAL INTENTIONS

To understand respondents' professional intentions for their potential impact on the engineering workforce and achievement of organisational objectives, survey participants were asked whether they were considering leaving the profession either permanently or temporarily. 6.7 per cent said they were considering permanently leaving the profession in the next five years suggesting that measures to increase and/or incentivise retention of engineering talent are likely to be critical to meeting workforce demand for engineering skills over this period.

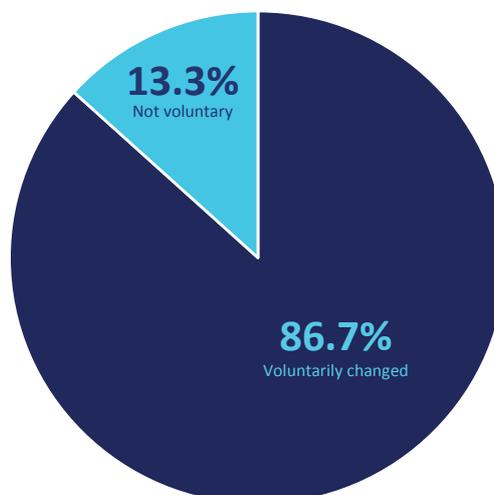
### Leaving employer

13.3 per cent of respondents had already changed employer over the past year, with 86.7 per cent of them having done so voluntarily.

**Figure 34 - Proportion of engineers that changed employer in last 12 months**

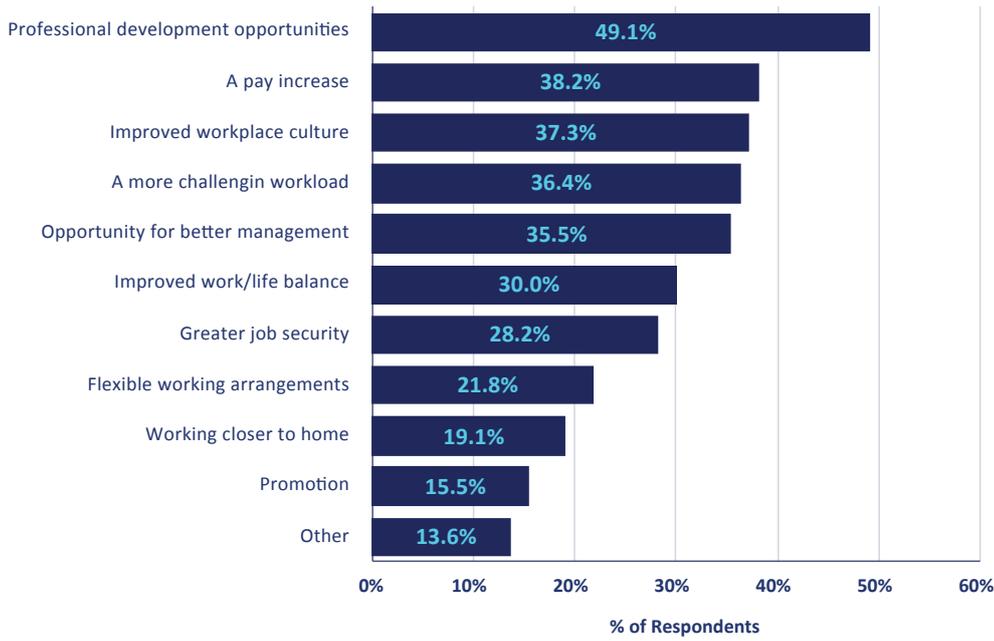


**Figure 35 - Proportion of engineers that voluntarily changed employer**



The survey provides useful insights into the factors that influence engineers changing employer. Of those who voluntarily changed, professional development opportunities were the most commonly reported factor, followed by improved pay and an improved workplace culture.

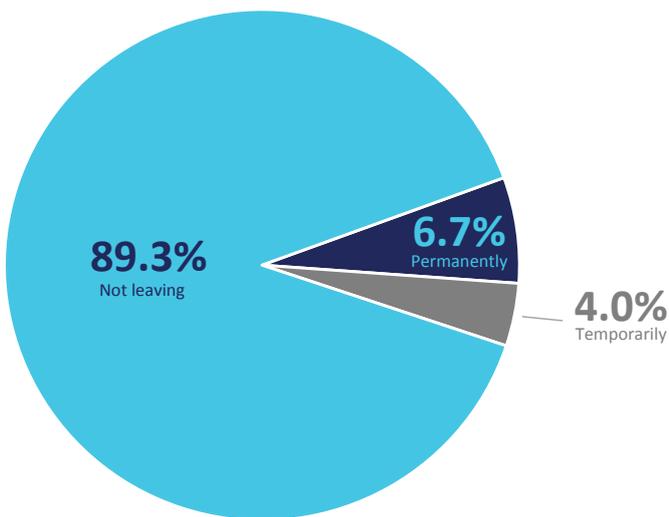
**Figure 36 - Reasons for voluntarily changing employer**



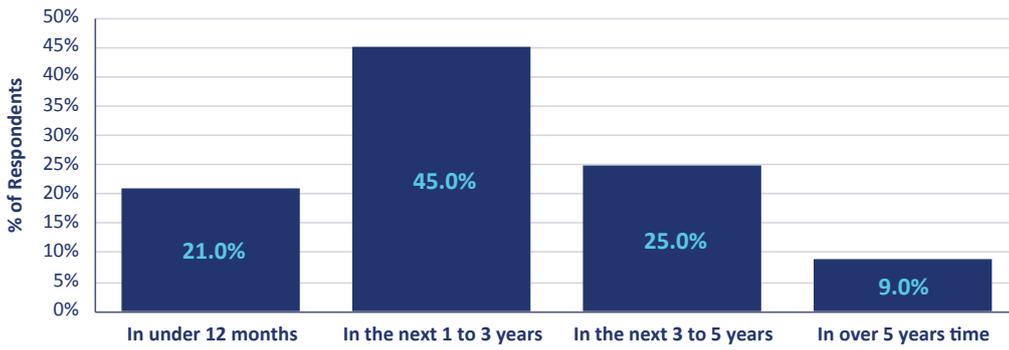
## Leaving profession

Survey respondents were asked whether they intended to leave the engineering 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 engineering workforce. Overall, 6.7 per cent of respondents said they were considering leaving the profession permanently, and 4.0 per cent said they were considering leaving temporarily. 89.3 per cent did not intend to leave the profession. Those that intended to leave the profession most commonly had an outlook of only remaining for another one to three years (45.0 per cent).

**Figure 37 – Proportion of engineers that intend to leave profession**

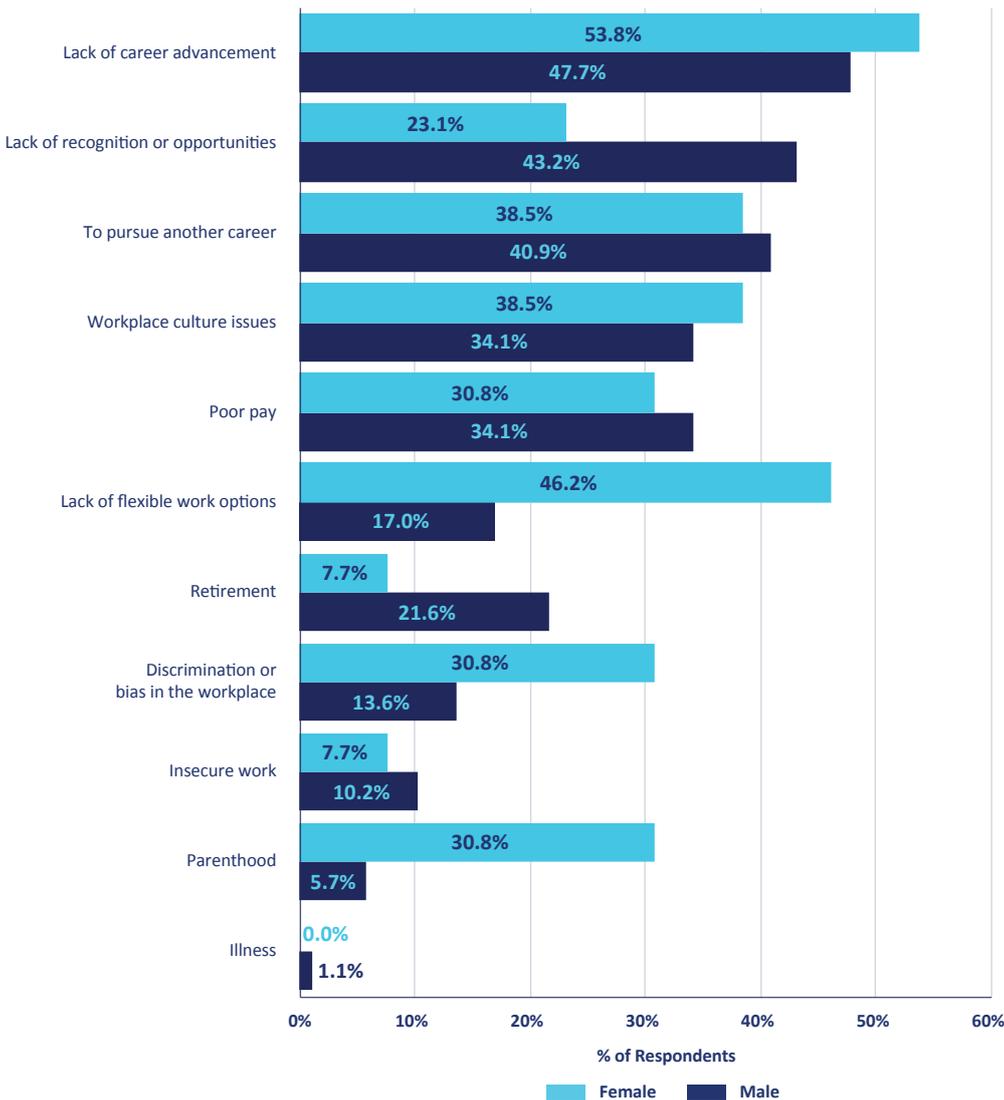


**Figure 38 – Intended time until leaving profession**



The most common reason for wanting to leave the profession was a lack of career advancement, however there were noticeable differences in the reasons for wanting to leave the profession by gender. Men were much more likely than women to cite intending to leave the profession due to a lack of recognition or opportunities. In comparison, women were much more likely than men to cite intending to leave the profession due to a lack of flexible work options, discrimination or bias in the workplace, or parenthood. Men were also more likely to cite intending to leave due to retirement. This is likely due to a combination of historically low representation of women in the engineering profession, and a tendency for women to leave the profession earlier.

**Figure 39 – Reasons for intention to leave profession by gender**



# WORKER FATIGUE, STAFF MORALE AND PRODUCTIVITY

Survey respondents were asked to consider how the attitudes and output of their peers had changed over the previous 12 months in the areas of worker fatigue, staff morale and overall productivity.

- 39.2 per cent said worker fatigue had increased while 57.4 per cent said it had remained the same as the previous year.
- 40.0 per cent of respondents said staff morale had declined while 50.5 per cent said it had remained the same as the previous year.
- 20.5 per cent said overall productivity in their organisation had declined while 65.4 per cent said it had remained the same as the previous year.

**Table 10 - Changes in worker fatigue, staff morale and productivity by sector**

	WORKER FATIGUE (RESPONSE %)			STAFF MORALE (RESPONSE %)			OVERALL PRODUCTIVITY (RESPONSE %)		
	DECREASED	STAYED THE SAME	INCREASED	DECREASED	STAYED THE SAME	INCREASED	DECREASED	STAYED THE SAME	INCREASED
<b>PRIVATE SECTOR</b>	3.6%	57.5%	38.9%	38.2%	52.2%	9.6%	18.1%	65.6%	16.3%
<b>PUBLIC SECTOR</b>	2.8%	57.3%	39.9%	43.5%	47.3%	9.2%	25.2%	65.0%	9.8%
<b>ALL SECTORS</b>	3.3%	57.4%	39.2%	40.0%	50.5%	9.5%	20.5%	65.4%	14.1%

# WORK PRIORITIES

Due to feedback on last year's report, a new item 'job satisfaction' was added to the list of work priorities in place of 'being close to home'. Overall, respondents ranked job satisfaction, remuneration, job security and work/life balance as their top four work priorities.

**Table 11 - Ranking of work priorities - All respondents**

RANK	PRIORITY
1ST	Job satisfaction
2ND	Remuneration
3RD	Job security
4TH	Work/life balance
5TH	Positive workplace culture
6TH	Flexible work arrangements
7TH	Career progression
8TH	Continuing professional development
9TH	A challenging workload

The top four work priorities of remuneration, job security, work/life balance and positive workplace culture were shared across gender lines and converged on the same rankings, although remuneration, job security and work/life balance were almost interchangeable for female respondents.

**Table 12 - Ranking of work priorities by gender**

MALE		FEMALE	
RANK	PRIORITY	RANK	PRIORITY
1ST	Job satisfaction	1ST	Job satisfaction
2ND	Remuneration	2ND	Remuneration
3RD	Job security	3RD	Job security
4TH	Work/life balance	4TH	Work/life balance
5TH	Positive workplace culture	5TH	Positive workplace culture
6TH	Flexible work arrangements	6TH	Flexible work arrangements
7TH	Career progression	7TH	Career progression
8TH	Continuing professional development	8TH	Continuing professional development
9TH	A challenging workload	9TH	A challenging workload

Across the private and public sectors the top four priorities remained the same, but engineers employed in the public sector tended to see job security as more important than remuneration while the reverse was true for those in the private sector.

**Table 13 - Ranking of work priorities by sector**

PRIVATE SECTOR		PUBLIC SECTOR	
RANK	PRIORITY	RANK	PRIORITY
1ST	Job satisfaction	1ST	Job satisfaction
2ND	Remuneration	2ND	Job security
3RD	Job security	3RD	Remuneration
4TH	Work/life balance	4TH	Work/life balance
5TH	Positive workplace culture	5TH	Positive workplace culture
6TH	Flexible work arrangements	6TH	Flexible work arrangements
7TH	Career progression	7TH	Career progression
8TH	Continuing professional development	8TH	Continuing professional development
9TH	A challenging workload	9TH	A challenging workload

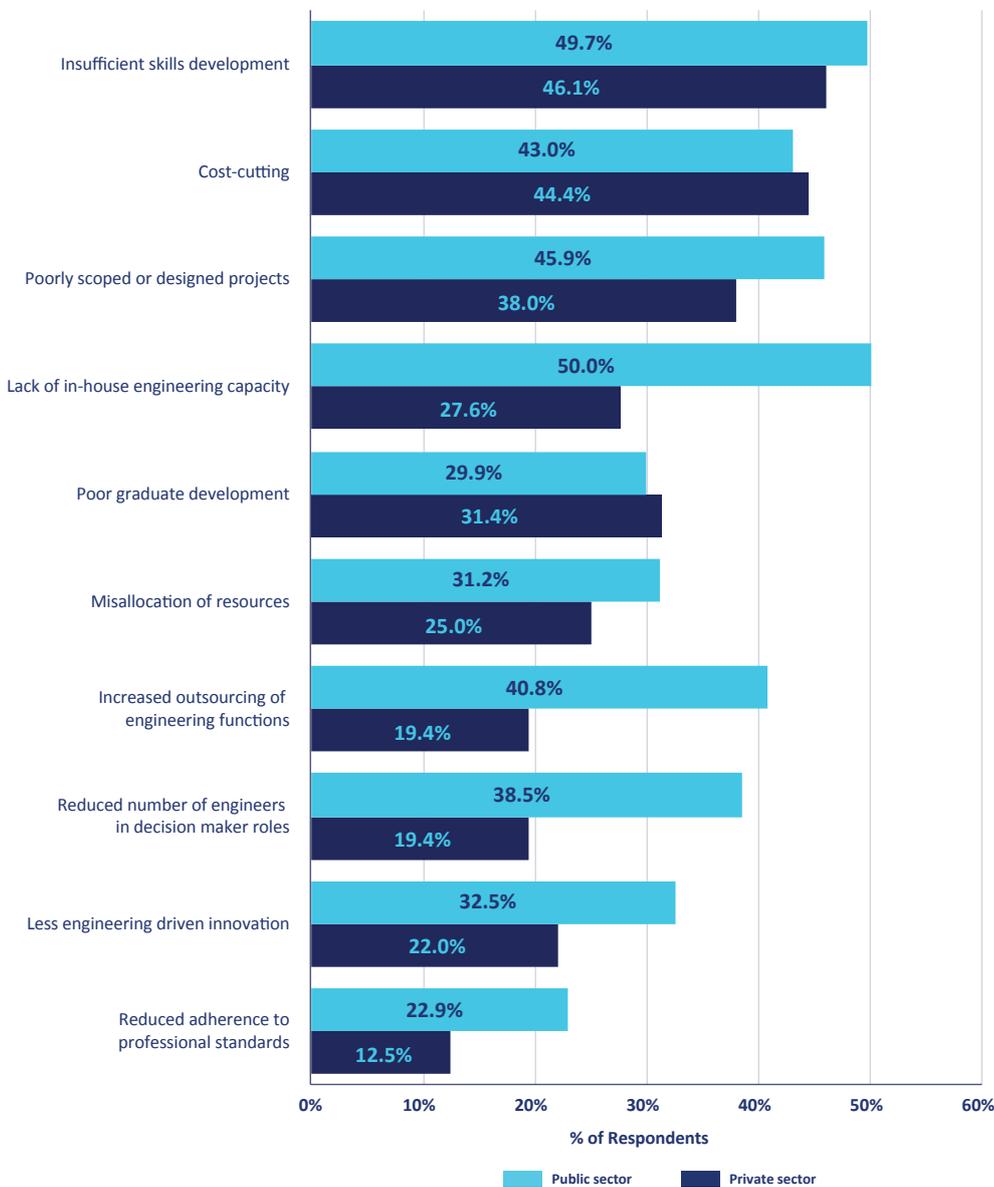
# FACTORS IMPACTING ENGINEERING CAPABILITY

Survey participants were asked about the factors that impacted engineering capability in their organisation.

In the public sector, the clearest change over the last 12 months impacting engineering capability was the lack of in-house engineering capacity, noted by 50.0 per cent of respondents. Poorly scoped or designed projects, insufficient skills development and cost-cutting were also key concerns in the public sector (noted by 45.9, 49.7 and 43.0 per cent of respondents respectively). The reduced number of engineers in decision-maker roles and increased outsourcing of engineering functions were also changes commonly reported by public sector engineers (38.5 per cent and 40.8 per cent of respondents respectively).

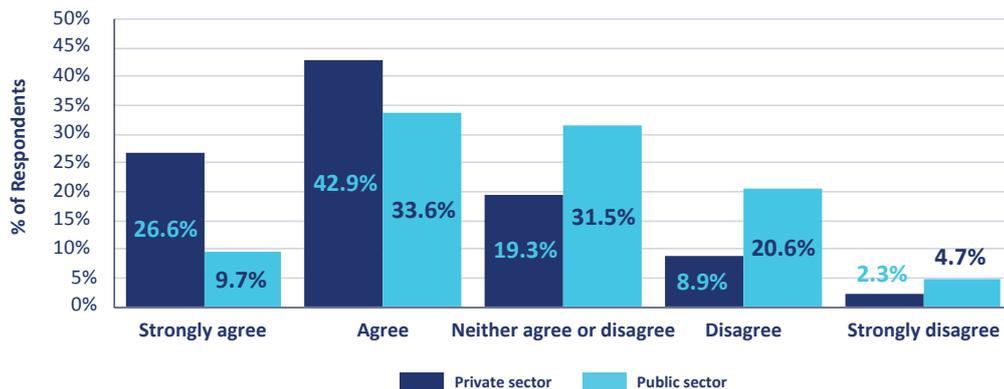
The private sector shared insufficient skills development, cost-cutting and poorly scoped or designed projects as issues occurring over the previous 12 months with the public sector (46.1, 44.4 and 38.0 per cent respectively).

**Figure 40 – Changes occurring in engineering workplaces over last 12 months**



The survey also asked respondents about the extent to which they agreed engineering capability was regarded as a source of innovation within their organisation. 25.3 per cent of public sector respondents said their organisation did not regard engineering capability as a source of innovation compared with 11.2 per cent of engineers in the private sector. On a more positive note, 43.3 per cent of public sector and 69.5 per cent of private sector respondents said their organisation did see engineering capability as a source of innovation. These findings suggest that the public sector may be lagging behind the private sector when it comes utilising their engineering capability to drive innovation. It may also suggest that innovation is a higher priority for private sector businesses, and public sector organisations may need to review the way they support innovation.

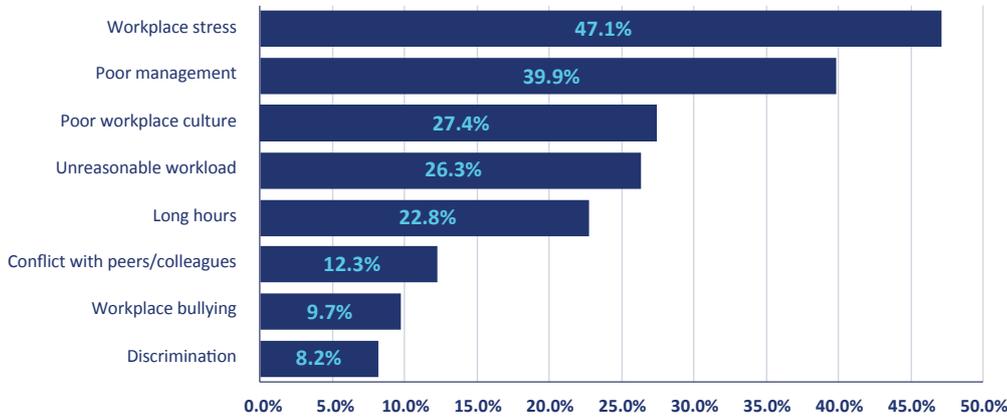
**Figure 41 – Extent to which engineers agree they are seen as a source of innovation in their workplace**



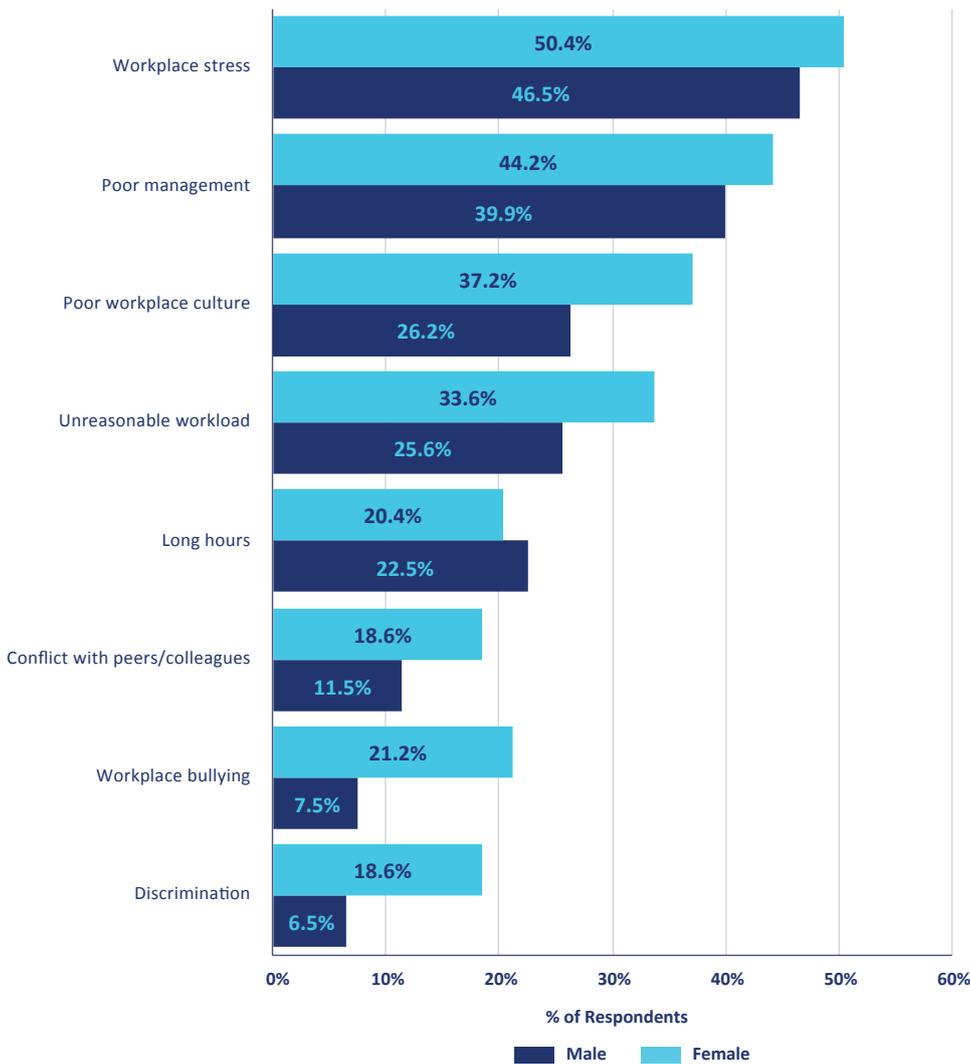
# FACTORS IMPACTING MENTAL HEALTH

Survey respondents identified workplace stress and poor workplace management as the key factors negatively impacting their mental health. With the exception of long hours, the extent of each of the factors was greater for female respondents than male respondents.

**Figure 42 – Factors negatively impacting mental health**



**Figure 43 – Factors negatively impacting mental health by gender**



# INDEPENDENT CONTRACTORS

A trend in the engagement of professional engineers is the increasing number appointed under independent contractor arrangements. Employers of professional engineers 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.

The hourly rate for contract engineers takes into account the conditions of employment which apply to employee professional engineers, as professionals operating under independent contractor arrangements must meet these costs themselves.

Professional engineer 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.

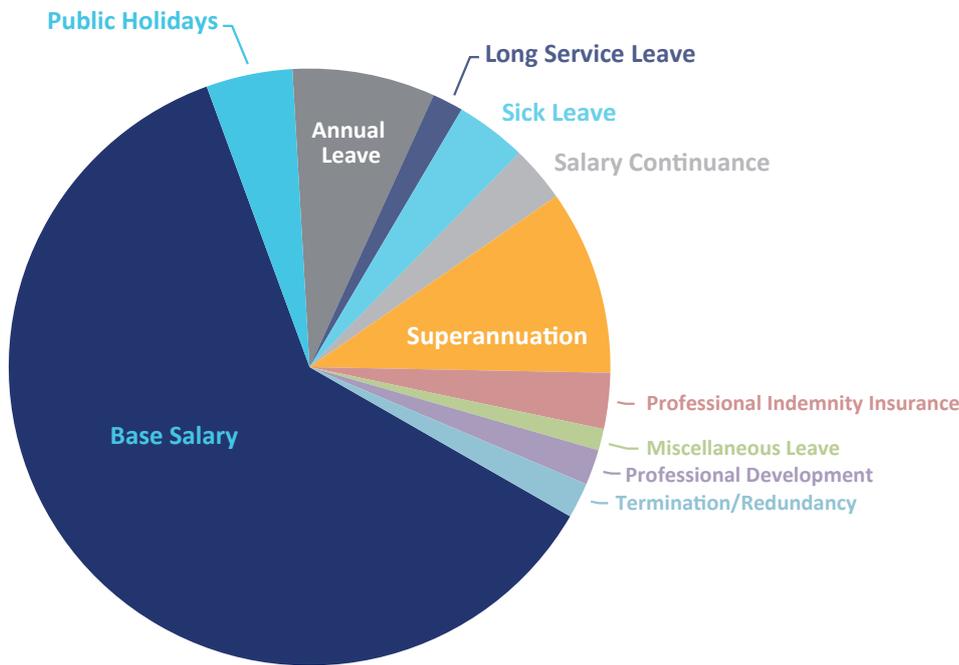
Independent contractors may be engaged on an hourly basis and generally do not have access to these provisions. The contract engineer must therefore take such provisions into account when determining the hourly fee to be charged. Based on a 38-hour week, the hourly fee is calculated using a 1980 hour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

**Table 14 - 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
<b>TOTAL</b>		<b>770 hours</b>

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

Figure 44 - 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 contract engineer 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, a contract engineer seeking a salary equivalent of say \$100,000 per annum would calculate the hourly fee as follows:

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

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

## Recommended hourly rates

Based on full-time Professional Engineer 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 2.)

**Table 18 - Contractor hourly rates charged by duration of contract and responsibility level (derived from full-time equivalent salaries)**

	LONG TERM				SHORT TERM			
	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
LEVEL 1	\$53.72	\$57.85	\$61.66	\$58.60	\$65.00	\$70.00	\$74.60	\$70.90
LEVEL 2	\$63.64	\$70.25	\$78.51	\$72.33	\$77.00	\$85.00	\$95.00	\$87.52
LEVEL 3	\$82.02	\$93.06	\$108.26	\$96.04	\$99.25	\$112.60	\$131.00	\$116.21
LEVEL 4	\$99.17	\$115.70	\$128.10	\$116.39	\$120.00	\$140.00	\$155.00	\$140.83
LEVEL 5	\$123.97	\$143.83	\$159.37	\$145.14	\$150.00	\$174.04	\$192.84	\$175.62
ABOVE LEVEL 5	\$152.89	\$178.51	\$222.31	\$192.49	\$185.00	\$216.00	\$269.00	\$232.91

**Table 19 - Contractor hourly rates charged by duration of contract and responsibility level (as reported by respondents)**

	LONG TERM					SHORT TERM				
	N	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN	N	LOWER QUARTILE	MEDIAN	UPPER QUARTILE	MEAN
LEVEL 1	SNR	-	-	-	-	-	-	-	-	-
LEVEL 2	3	-	-	-	\$313.14	SNR	-	-	-	-
LEVEL 3	4	-	\$76.88	-	\$91.19	7	\$86.87	\$100.00	\$180.00	\$122.41
LEVEL 4	10	\$82.00	\$92.50	\$130.00	\$103.70	8	\$105.00	\$137.00	\$177.50	\$142.88
LEVEL 5	5	\$110.00	\$140.00	\$190.00	\$153.00	9	\$125.00	\$140.00	\$350.00	\$196.78
ABOVE LEVEL 5	3	-	-	-	\$781.67	SNR	-	-	-	-
ALL LEVELS	26	\$80.00	\$102.50	\$165.00	\$210.81	30	\$86.87	\$135.00	\$185.00	\$152.40

The rates set out in the table above were those actually reported by respondents and while sample size was limited, they generally indicate that contractors charge near the rate Professionals Australia's methodology would suggest.

## Contract agency rates

If the independent contractor is engaged through a contract 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:

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



# WHAT HAPPENS IF I CANCEL MY PROFESSIONAL INDEMNITY COVER? CAN I DO WITHOUT IT?

IF YOU SELL YOUR CAR YOU CAN STOP INSURING IT; MOTOR VEHICLE INSURANCE COVERS RISKS ON AN “OCCURRENCE” BASIS AND ONCE THE CAR IS GONE SO IS THE RISK.

## Professional indemnity is different.

Professional Indemnity works on a “claims made” basis and you must have insurance in place at the time a claim is made against you. This means that even if your business has wound down or you have ceased providing service entirely, you still carry ongoing exposure for past work.

This is especially true for professional engineers, with many claims relating to building or construction work coming several years after the member had completed their part of the work, in fact in April 2020 a Professional Indemnity claim was lodged for a Professionals Australia member relating to engineering work undertaken in 2014!

## Example:

Work for a client is completed on 4 February. Your Professional Indemnity Insurance is due for renewal on 20 June but you choose to lapse it. That client decides on 1 August they were unhappy with the service and alleges problems arising from it have caused them losses, so they make a demand against you for compensation. In this scenario there would be no Professional Indemnity Insurance protection even though insurance was in place when the work was done.

## Key considerations towards maintaining Professional Indemnity Insurance

- Ongoing protection for past claims – if you lapse or cancel all protection for past work ceases
- Professional licensing or accreditation – Many professional engineers will have their licence or registration (eg VBA or NSW BPB) conditional upon holding valid professional indemnity insurance
- Contractual liabilities – there may be a requirement to maintain professional indemnity for several years after the work
- Reduced future cover – if you lapse or cancel and seek to re-purchase in the future, some cover like Retroactive Cover for past work and Continuous Cover may not be available

## Get professional advice. There may be other avenues to consider to assist you

- Reviewing your premium on renewal due to reduced actual income and reduced projected income
- If your business has reduced to zero, discuss “run off” cover at renewal which reduces your insurance to covering past work only
- Reviewing your sum insured (buy less cover) where not restricted by professional licence or contracts
- Review your excess (retain more risk) which reduces your premium



# RISING INSURANCE COSTS

## About the professional indemnity insurance market

The professional indemnity market has come under pressure in 2019 and 2020 with premiums increasing, and insurers reducing capacity. Some PA members may have been forced to change insurer due to their prior insurer no longer offering cover. These market pressures have particularly affected any professionals involved in the construction space. Given the myriad of issues surrounding cladding, non-compliant building products, the Opal Tower, and Mascot Towers insurers have been reducing their capacity and seeking to increase premiums between 20%-40%.

## What can I do?

Get advice on how to manage the best outcome from the Insurance market. With Insurers taking a more conservative and selective approach to their underwriting, a good broker and quality submission to insurers can often be the difference between turning a decline into getting your business a favourable quote.

It is no longer about just a standard proposal form. Some elements that make a quality insurance submission include:

- CVs of Directors
- Risk management plans
- Advice on your contractual engagements, do you use a standard contract form, or do you limit liability or consequential loss?
- Advice on how your business has been impacted by COVID-19 and what changes you have made such as changes to on-site inspections, changes to cyber security and working from home, and remote peer review processes



**Professionals  
Australia**

INSURANCE BROKING AND SUPERANNUATION SERVICES

**Professionals Australia Insurance Broking & Superannuation Services gives advice to clients - not just Professional Indemnity Insurance but also on contractual indemnity clauses, their insurance implications and the adequacy of professional services descriptions contained within insurance policies.**

**If you would like an obligation free professional indemnity insurance quotation, please contact Professionals Australia Insurance Broking and Superannuation Services on 1800 800 998, complete the online form here: <http://www.professionalsaustralia.org.au/contractors-consultants/financial-edge/professional-indemnity-insurance/> or let them know your renewal date and they can contact you at the appropriate time to provide you with a quotation.**

# ABOUT THE SURVEY

The Professional Engineer Remuneration Survey was conducted online during April/May 2020 using the present engineering member base of Professionals Australia. Non-members were also invited to participate in the survey through a combination of social media and direct e-mail. Non-member engineers contacted were those that had previously demonstrated interest in the association's remuneration reports, surveys or campaigns. In total, 1,563 responses were used for the analyses contained in this report.

Social media was notably less effective in 2020 than previous years due to additional restrictions placed on communications through these platforms because of the COVID-19 pandemic. It is unclear how these restrictions impacted on responding beyond reducing the overall sample size.

Duplicate respondents were screened for using a variety of variables collected during the survey in conjunction with IP addresses associated with each response. Where a duplicate was identified the most complete response was retained.

Participants were not required to answer all questions in full. As a result many questions have a different sample size reported and the sum of all returned data in any given table may not add up to the total number of responses received. Where a specific analysis has less than three responses no results are reported. Means are reported where there are three or more responses, medians where there are four or more responses and quartiles where there are five or more.

Professionals Australia has been conducting regular salary surveys of members since 1974.

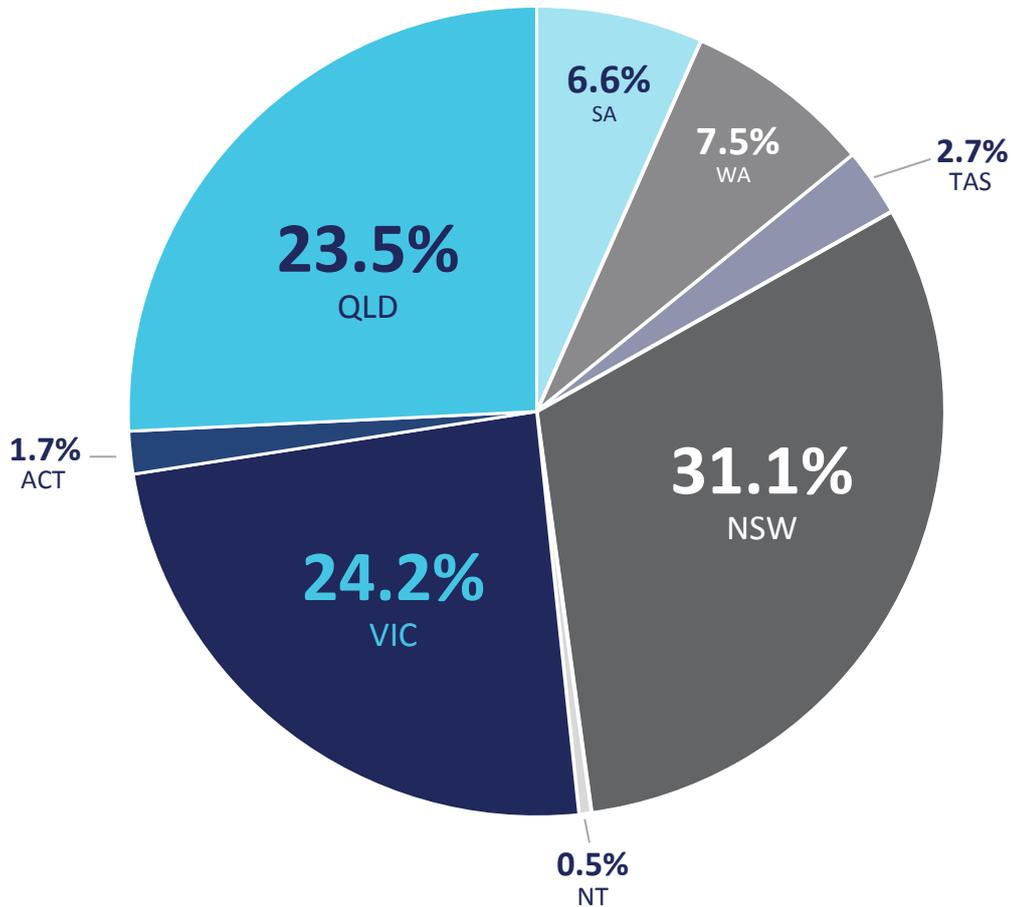
In order to provide comprehensive information on professional engineers' remuneration, Professionals Australia publishes its detailed survey report annually. The survey is the largest of its kind undertaken in Australia and as such represents an authoritative picture of the remuneration of professional engineers.

## Sample characteristics

The gender breakdown of survey respondents was 89.8 per cent male and 10.2 per cent female.

New South Wales was the most strongly represented state across respondents accounting for 36.1 per cent of participants, with each state receiving similar levels of representation to their population as a proportion of the Australian population.

**Figure 44 - Geographic breakdown of survey population**



The Consulting and technical services industry was the most strongly represented industry in the survey at 19.4 per cent of respondents, followed by the manufacturing industry with 13.0 per cent of respondents. Civil was the most common branch of engineering for respondents to be qualified in (37.4 per cent) followed by Mechanical (19.1 per cent) and Electrical (18.3 per cent).

## Terms used

### Base salary

Refers to the annual salary component of the contract of employment for a participant, exclusive of any additional allowances, payments or non-cash benefits.

### Total package

The total remuneration package received by a participant, including the value of all components of remuneration. Total package includes the following:

- Base salary;
- Annual leave loading;
- Overtime;
- Award allowances;
- Employer superannuation contributions;
- Motor vehicle;
- Parking;
- Performance pay;
- Fringe Benefits Tax (FBT);
- Other items eligible for FBT; and
- Other items not eligible for FBT.

Where a non-cash benefit such as a motor vehicle is provided, an estimate is made of the salary equivalent value of the benefit.

### SNR

Sample Not Representative - indicates a category for which there were not enough respondents to produce reportable statistics.

### Statistical terms used

For the purposes of salary analysis, the following statistics were used:

- **N:** The number of observations recorded for each category;
- **Lower Decile (10th Percentile):** The value below which 10 per cent of observations were recorded. Not reported where N is less than 10;
- **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;
- **Upper Decile (90th Percentile):** The value below which 90 per cent of observations were recorded. Not reported where N is less than 10;
- **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 Total Package 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.

# Responsibility level definitions

## Level 1 Professional Engineer

*The graduate engineer (as defined) commencement level.*

The graduate engineer (as defined) commencement level.

The engineer undertakes initial professional engineering tasks of limited scope and complexity, such as minor phases of broader assignments, in office, plant, field or laboratory work.

Under supervision from higher-level professional engineers as to method of approach and requirements, the professional engineer performs normal professional engineering work and exercises individual judgement and initiative in the application of engineering principles, techniques and methods.

In assisting more senior professional engineers by carrying out tasks requiring accuracy and adherence to prescribed methods of engineering analysis, design or computation, the engineer draws upon advanced techniques and methods learned during and after the undergraduate course.

Training, development and experience using a variety of standard engineering methods and procedures enable the professional engineer to develop increasing professional judgement and apply it progressively to more difficult tasks at Level 2.

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.

Work is reviewed by higher-level professional engineers for validity, adequacy, methods and procedures. With professional development and experience, work receives less review, and the professional engineer progressively exercises more individual judgement until the level of competence at Level 2 is achieved.

The professional engineer may assign and check work of technical staff assigned to work on a common project.

## Level 2 Professional Engineer

Following development through Level 1 he/she is an experienced engineer (as defined) who plans and conducts professional engineering work without detailed supervision, but with guidance on unusual features and who is usually engaged on more responsible engineering assignments requiring substantial professional experience.

## Level 3 Professional Engineer

A professional engineer performing duties requiring the application of mature professional engineering knowledge. With scope for individual accomplishment and co-ordination of more difficult assignments, the professional deals with problems for which it is necessary to modify established guides and devise new approaches.

The professional engineer may make some original contribution or apply new professional engineering approaches and techniques to the design or development of equipment or special aspects of products, facilities and buildings.

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

Work is carried out within broad guidelines requiring conformity with overall objectives, relative priorities and necessary co-operation with other units. Informed professional engineering guidance may be available.

The professional engineer outlines and assigns work, reviews it for technical accuracy and adequacy, and may plan, direct, co-ordinate and supervise the work of other professional and technical staff.

## Level 4 Professional Engineer

A professional engineer required to perform professional engineering 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 his/her organisation's technical reference authority) in a particular field of professional engineering.

The professional engineer:

- initiates or participates in short-range or long-range planning and makes independent decisions on engineering policies and procedures within an overall program;
- gives technical advice to management and operating departments;
- may take detailed technical responsibility for product development and provision of specialised engineering systems, facilities and functions;
- co-ordinates work programs; and
- directs or advises on use of equipment and material.

The professional engineer 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.

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

The professional engineer supervises a group or groups including professional engineers and other staff, or exercises authority and technical control over a group of professional staff, in both instances engaged in complex engineering applications.

## Level 5 Professional Engineer

A professional engineer usually responsible for an engineering administrative function, directing several professional and other groups engaged in inter-related engineering responsibilities, or as an engineering consultant. Achieving recognition as an authority in an engineering field of major importance to the organisation.

The professional engineer 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.

The professional engineer 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.

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

The professional engineer 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.



## Methodology

The Professional Engineers Employment and Remuneration Survey tracks annual changes in compensation for full-time professional engineers in Australia. In addition to presenting national trends, it includes analysis by separate indices including engineering discipline, levels of responsibility, years of experience and job function.

The survey was conducted online during April/May 2019.

To avoid duplication of data arising from a participant starting multiple survey sessions due to technical difficulties, incomplete questionnaires were discarded where multiple responses had been submitted from a single IP address, at least one questionnaire was completed in full, and responses to the incomplete questionnaires mirrored responses in the completed survey.

Incomplete surveys were included in the analysis for any item where respondents provided enough information for that item.

### 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.

### Superannuation

The dollar value of a participant's superannuation as a component of their total package was calculated by multiplying their employer's contribution percentage by their base salary. Where a participant did not specify their employer's contribution percentage but did indicate they received superannuation as part of their role the government mandated minimum rate of 9.5 per cent was used.

### 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 one year of experience.

### Valuation of motor vehicles

The value given to a motor vehicle provided as part of a salary package has been determined based on the following formula:

*22.5 per cent of Cost of Vehicle + 25 cents per km.*

Cost of vehicle is the original cost of the car inclusive of government taxes and charges and dealer delivery fees. Capital costs within the formula are based on 22.5 per cent straight-line depreciation over 4 years with a 10 per cent salvageable value at the end of those 4 years.

Vehicle running costs are based on an average derived from the Royal Automobile Club of Victoria annual survey of car running costs. These costs include registration, insurance, fuel and servicing.

For the purposes of the analysis contained in this report, the Fringe Benefits Tax statutory rate of 20 per cent is used in calculating the FBT liability component of a motor vehicle.

### Report preparation

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# EMPLOYMENT FRAMEWORK

## 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:

<http://www.professionalsaustralia.org.au/support/rights-wages-conditions/modern-awards>.

## Individual employment contracts

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. Employment conditions to be included and referred to in the contract can be negotiated and agreed so long as employers observe the NES or the relevant underpinning Award which must apply. 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.



## Remuneration packaging

Remuneration packaging is a legitimate way for employees to increase their take-home pay and improve their overall remuneration at no additional cost to their employer. Employees agree to forgo part of their future salary in return for a benefit provided by their employer.

It is important to review salary packaging arrangements each time income tax thresholds are adjusted or the salary is increased beyond the next income tax bracket. Different strategies are appropriate for different levels of income. This is particularly important given the top marginal tax is only payable on income above \$180,000. As a consequence, many employees now pay income tax at a lower rate than the Fringe Benefits Tax rate.

### Personal income tax rates 2019–20\*

INCOME	RATE
0 – \$18,200	Nil
\$18,201 – \$37,000	19c for each \$1 over \$18,200
\$37,001 – \$90,000	\$3,572 plus 32.5c for each \$1 over \$37,000
\$90,001 – \$180,000	\$20,797 plus 37c for each \$1 over \$90,000

\*Rates do not include 2 per cent Medicare Levy, low income tax offset

While the government charges employers Fringe Benefits Tax (FBT) equal to the top marginal tax rate plus Medicare levy (47 per cent) on most non-salary benefits provided to an employee or an associate of the employee (usually a family member) in respect of the employee's employment, there are still ways to structure your remuneration to benefit from salary packaging.

However, it is important for employees to ensure the terms of their salary sacrifice arrangement includes an agreement to retain the normal (pre-sacrificed) salary as the basis for calculating benefits such as employer superannuation, overtime payments, annual leave loading and the like.

To determine if it is in your interests to salary package a specific benefit, you need to compare the amount of FBT charged as a proportion of the total salary sacrifice with the amount of income tax as a proportion of gross income required to obtain that benefit.

The salary sacrifice required to package a benefit = cost of benefit + (cost of benefit \* FBT rate \* gross-up factor) – input tax credit.

Note there should be no difference in the salary sacrifice required to package GST-inclusive and GST-exclusive items that are subject to the same rate of FBT. For all benefits subject to the full rate of FBT, the amount of salary sacrifice required to pay for each \$1.00 of benefit is \$1.961.

Example 1: Employee wishes to package \$1,100 worth of school fees (nil GST)

Salary sacrifice required = \$1,100 + (\$1,100 \* 0.47 \* 1.8868) – 0 = \$2,075

Example 2: Employee wishes to package \$1,100 worth of home renovations (full GST)

Salary sacrifice required = \$1,100 + (\$1,100 \* 0.47 \* 2.0802) – (\$1,100 \* 1/11) = \$2,075

Due to FBT being charged at a rate equivalent to the top marginal tax rate plus Medicare, it is generally only effective to package FBT-exempt and concessional taxed items.

## Motor vehicles

Motor vehicles are one of the most popular items to be included in a salary package, partially because of their concessional Fringe Benefits Tax (FBT) treatment.

FBT is calculated using either the ATO Statutory Rate or Operating Cost method. Generally the Statutory Rate method is used due to its greater simplicity and lesser record-keeping requirement.

Since April 2014 the FBT charge for a salary packaged motor vehicle has become a flat 20 per cent fraction, irrespective of the distance travelled by the vehicle.

FBT = purchase price \* statutory rate \* FBT rate \* gross-up factor

Generally the greatest tax saving accrues to those employees in the highest income tax bracket (those earning more than \$180,000 per year). There are, however, methods to deliver additional savings to employees on a lower marginal tax rate.

If the amount of salary sacrificed for a car would otherwise have been subject to income tax of less than 47 per cent (including Medicare levy), the employee will gain a benefit from making an after-tax contribution equivalent to the taxable value of the car benefit, as they will be effectively taxed at their lower marginal tax rate instead of the FBT rate.

For example, an employee on a salary of \$60,000 who makes an after-tax contribution equivalent to the taxable value of the car benefit effectively pays only 32.5 per cent tax instead of 47 per cent tax on the taxable value of packaged motor vehicle.

Limitations on the type and number of motor vehicles that can be packaged include:

- Any car, either new or second-hand, can be packaged but most finance companies will not create a lease for a low-value second-hand car. They will also generally charge a higher rate for second-hand vehicles;
- Luxury cars and four wheel-drive vehicles may be packaged - there is no upper limit in terms of the value of the car;
- There is no restriction on the number of vehicles that can be packaged, although multiple vehicle packaging would only be worthwhile from a taxation perspective by those earning sufficient income; and
- Motorcycles, goods-carrying vehicles with a capacity of one tonne or more and vehicles designed to carry nine or more passengers cannot be packaged as they are specifically excluded from the ATO definition of a car and do not attract concessional FBT treatment.

## How Fringe Benefits Tax is calculated

FBT is not calculated on the direct cost of the benefit but rather to a “grossed-up” taxable value that reflects the amount of pre-tax income an employee on the top marginal tax rate (including Medicare) of 47 per cent would have to earn to obtain the same benefit.

Gross-up rates also take account of whether benefits are subject to GST, this reflects the fact that employers are able to recover the cost of the GST paid on a benefit supplied to an employee as an input tax credit.

FBT payable by employer = cost of benefit \* gross-up factor \* FBT rate

For the period April 2018 to 31 March 2019 the gross-up factor applying to items subject to GST is 2.0802 and the gross-up factor applying to items not subject to GST is 1.8868.

## FBT exempt items

One laptop, notebook or similar portable computer can be packaged each year without incurring a Fringe Benefits Tax liability. Devices that are packaged must be primarily used for business.

To qualify as a laptop, the computer must be small in size, portable and able to be operated without an external power source. Built-in internal features (such as a modem or fax), external accessories required for basic operation of the computer, (such as a mouse) and preloaded software part of the basic operating system can be included as part of the laptop cost.

Salary-packaged laptop cannot also be depreciated for the extent it is used for income producing purposes.

Other FBT exempt items include:

- Employer-provided child care;
- Briefcase, calculators and other tools of trade;
- Income protection insurance, professional subscriptions, business software, home office expenses and mobile phones used mainly for business; and
- Superannuation.

## Superannuation

Contributions to superannuation made under a salary sacrifice arrangement are considered employer contributions. They are exempt from FBT but incur a 15 per cent employer contributions tax. The contributions tax is well below the usual marginal tax rates of professionals, which is generally at least 34.5 per cent (inclusive of Medicare levy).

Employees should be aware that if they sacrifice \$10,000 of pre-tax salary for superannuation, for example, only \$8,500 will be credited to their superannuation account due to the contributions tax. If an employee wishes to ensure \$10,000 was credited to a superannuation account, they would need to sacrifice \$11,765 of pre-tax salary.

Employer superannuation contributions are preserved until retirement and cannot be accessed unless significant financial hardship can be demonstrated.

## Superannuation Guarantee Legislation

Under Superannuation Guarantee legislation, employers are required to contribute a minimum 9.5 per cent of an employee’s ordinary time earnings, as defined, to a complying superannuation fund or retirement savings account of the employee.

Superannuation Guarantee applies for full-time, part-time and casual employees, including those who work under a contract principally for the labour of the person.

There are some limited exceptions including:

- Employees paid less than \$450 gross in a calendar month;
- Employees aged under 18 years working 30 hours or less per week;
- Non-resident employees paid for work done outside Australia;
- Resident employees paid for work done outside Australia for a non-resident employer;
- Employees covered by a Bilateral Superannuation Agreement;
- Some foreign executives who hold certain visas or entry permits;
- Members of the Army, Navy, or Air Force Reserve for work carried out in that role;
- Employees receiving salary or wages under the Commonwealth Government Community Development Employment Program; and
- Employees paid to do work of a domestic or private nature for 30 hours a week or less.

Many professionals already receive additional employer-sponsored superannuation well in excess of the legislated minimum amount.

Employers must report on employee payslips the amount of superannuation paid into the employee’s superannuation account, and superannuation funds will notify employers and employees if regular payments cease.

### Employees over preservation age

Employees who are under the age of 65 and have reached preservation age (55 for those born before 01/07/1960 increasing up to 60 for those born after 30/06/1964) but remain gainfully employed on a full-time or part-time basis, may access their preserved benefits and restricted non-preserved benefits as a non-commutable income stream.

This enables them to sacrifice salary (subject to a maximum of \$100,000 per annum) into superannuation where it is taxed at only 15 per cent, while drawing an income subject to no or concessional tax to live on from their superannuation fund. This can result in substantial tax savings and increase in retirement benefits.

Anyone considering this should discuss their options with a registered financial planner.

### Car parking

Generally, a car parking benefit will exist where an employer provides car parking facilities within business premises owned or leased by the employer.

A car parking fringe benefit arises if a commercial car parking facility available for all day parking and which charges more than \$8.95 per day (FBT year ending 31 March 2020) is located within one kilometre of the employer-provided car parking facility.

If there is no commercial car parking facility within a one kilometre radius, there will be no benefit.

### Company loans

A loan fringe benefit arises from the provision of a loan to an employee where low or no interest is charged on the loan. A loan includes:

- an advance of money;
- the provision of credit; and
- the payment of an amount on behalf of a person.

Whether or not a fringe benefit arises depends on whether the interest charged is less than the Australian Tax Office “statutory interest rate”. The statutory rate for the year ending 31 March 2019 is 5.20 per cent and the year end 31 March 2020 is 5.37 per cent.

### Payment summary disclosure

Fringe benefits provided to employees must be reported on group certificates where the grossed-up value of benefits exceeds \$2,000 in this FBT year. These benefits must be grossed-up using a factor of 1.8868.

The amount disclosed on the group certificate will have no bearing on income tax liability. The information is to be used by the Australian Tax Office to calculate employee liability in respect of the following:

- Medicare levy surcharge;
- HECS;
- Family allowances;
- Social security benefits; and
- Personal superannuation contributions.

The taxable value of a benefit will normally be based on the actual cost of the benefit however some benefits may be valued using existing valuation guidelines produced by the ATO (e.g. motor vehicles).

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## Further reading

Professionals Australia has a range of other publications for engineers:

- [Engineering a better future](#)
- [Engineering our Economic Prosperity](#)
- [Better Infrastructure](#)
- [Women in Engineering: Realising Productivity and Innovation Through Diversity](#)

## Other remuneration and employment reports

Professionals Australia conducts a range of salary surveys and has available reports for Scientists, Pharmacists and ICT Professionals. [Download here](#)

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## Endnotes

- 1 IBISWorld Australia Industry Reports (ANZSIC).
- 2 Australian Construction Market Report, October 2019. Available at <http://wtpartnership.com.au/wp-content/uploads/2019/10/WT-Australian-Construction-Market-Report-28-Oct-2019.pdf>.
- 3 Australian Bureau of Statistics, 2016 Census.
- 4 Australian Bureau of Statistics, 2016 Census.
- 5 Engineers Australia (2020). Australia's Next Generation of Engineers, University Statistics for Engineering, pp.2,3.
- 6 Australian Government (2019). Department of Employment, Skills, Small and Family Business, Engineering Professions Australia, 2019.
- 7 Engineers Australia (July 2019). Australian engineering vacancies report: Trends to June 2019 and Trends to February 2020.
- 8 Australian Government (2019). Department of Employment, Skills, Small and Family Business, Engineering Professions Australia, 2019.
- 9 ABS Catalogue 6345.0, March 2020 (Trend)
- 10 ABS Catalogue 6401.0, March 2020 (All groups)
- 11 Deloitte Access Economics, Weekly Economic Briefing, 28 April 2020.
- 12 Daehoon Nahm, Michael Dobbie & Craig MacMillan (2017) Union wage effects in Australia: an endogenous switching approach, Applied Economics, 49:39, 3927-3942, DOI: [10.1080/00036846.2016.1273492](https://doi.org/10.1080/00036846.2016.1273492). Available at <https://theconversation.com/why-union-members-earn-higher-wages-than-their-non-union-colleagues-93122>.



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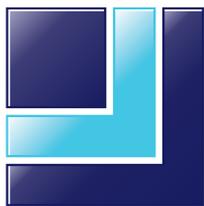
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