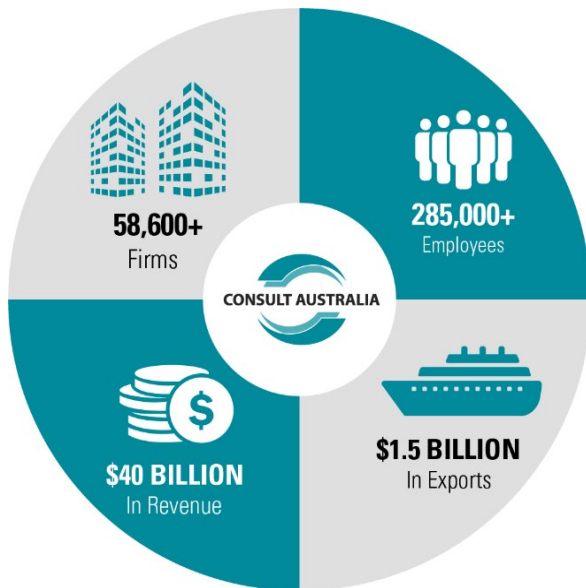




# CAPACITY CRUNCH

Consult Australia's  
Skills Survey Report — May 2023

## ABOUT US



Consult Australia is the industry association representing consulting businesses in design, advisory and engineering, an industry comprised of over 58,600 businesses across Australia. This includes some of Australia's top 500 companies and many small businesses (97%). Our members provide solutions for individual consumers through to major companies in the private sector and across all tiers of government. Our industry directly employs over 285,000 people in architectural, engineering and technical services and many more in advisory and business support. It is also a job creator for the Australian economy, the services we provide unlock many more jobs across the construction industry and the broader community.

## Consult Australia's latest skills survey

Consult Australia's latest skills survey, undertaken from the end of 2022 into the start of 2023, looked at workforce challenges, including capacity and confidence of respondent members that together employ over 21,000 people across Australia. The findings of the survey outlined in this report provide a data snapshot for members, government and interested stakeholders.



# SNAPSHOT

The results from Consult Australia's latest Skills Survey provide insights into **capacity constraints, industry confidence, staff movements, global recruitment, occupational profiles in highest demand and future skills challenges**. Respondent members employ over 21,000 people across Australia, but the results apply to our entire membership and sector.

## A capacity crunch

We know capacity constraints are putting pressure on the skills critical to the delivery of projects across the profession. This pressure is likely to be highest where the pipeline of work is strongest and where our members report 'too much work'. The sectors where the highest number of members report **'too much work' include water and dams (47%), rail (44%), as well as energy and resources (including mining) (43%)**.

**More than 60% of respondents noted that skills shortages are felt Australia-wide**, having significant impacts on project delivery, project cost overruns, increased labour costs and overall supply chain issues.

## Strong pipeline needed now for industry confidence and capacity planning

Most members in most sectors expect to have **more capacity within six to twelve months**. This suggests limited certainty of the pipeline beyond 6-12 months for those sectors, in comparison to rail and defence sectors where a good proportion of members do not anticipate having more capacity in the foreseeable future. Consult Australia therefore continues to advocate for pipeline transparency and certainty across all Australian jurisdictions to strengthen industry confidence in future planning and recruitment needs.

## Staff movement continues to disrupt business planning

Businesses continue to experience disruption from staff movement, with 70% of respondents having a **voluntary turnover rate of between 10% - 20%**, aligning with our findings in the [June 2022 Industry Health Check](#).

Some of the challenges of retaining staff include market competition and inability to match salary offers, the limited supply of qualified engineers (especially at the mid-level), and lack of internal resources to fill the number of vacancies.

## Global recruitment continues to grow

Around 81% of respondents undertook global recruitment in the past twelve months. Most expect to **recruit more from the global market in the next twelve months**.

More than 80% of respondents had used employer sponsored visas and 70% of respondents are accredited sponsors. **A visa processing time of three months was most common among respondents, although it is concerning that around 10% had to wait six months or more**. The focus of the Australian government on visa processing times should therefore remain an ongoing priority to support infrastructure delivery.

## Demand for skills hits all career levels

Respondents report that all career levels (graduate, early career, mid-level and senior) were difficult to recruit in the past 12 months. Of the top ten known in-demand disciplines, **hydrology is in highest demand across the board** on average.

## Looking to the future

Businesses report confidence in their ability to deliver and participate in future projects. **90% of respondents predict that the skills in demand will remain unchanged for the next three years**.

# SURVEY RESULTS

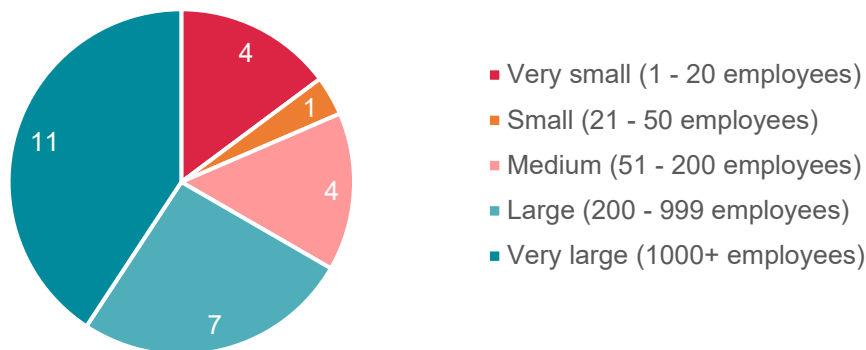
## Business operation – size, location and sector

For this survey, we broke down business sizes into five categories to get a better sense of where skills shortages occur:

- very small businesses (up to 20 employees)
- small businesses (21-50 employees)
- medium businesses (51-200 employees)
- large businesses (200-999 employees)
- very large businesses (more than 1000 employees).

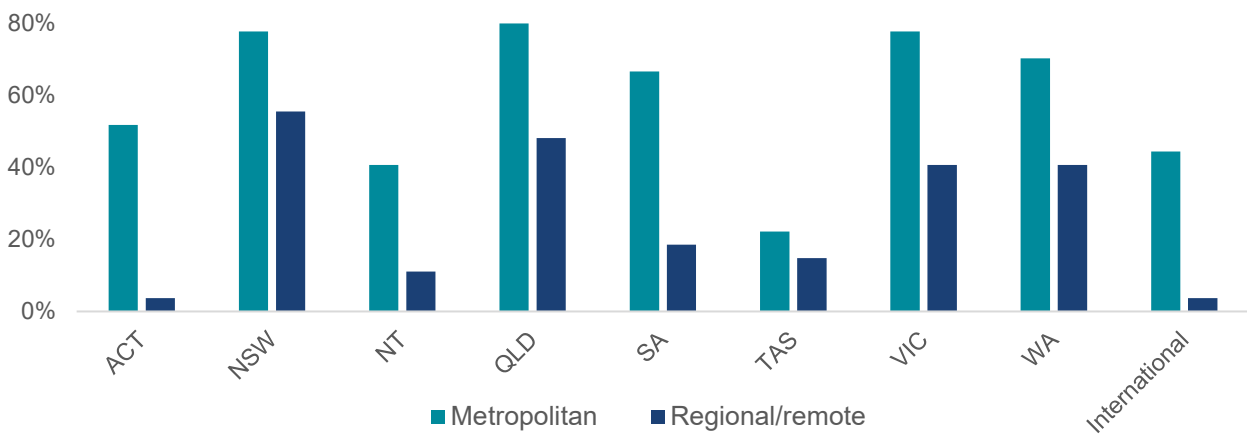
Twenty-seven member businesses participated in the survey with most responses from large and very large businesses. The respondents together employ over 21,500 people in Australia.

**Member Participants by business size**

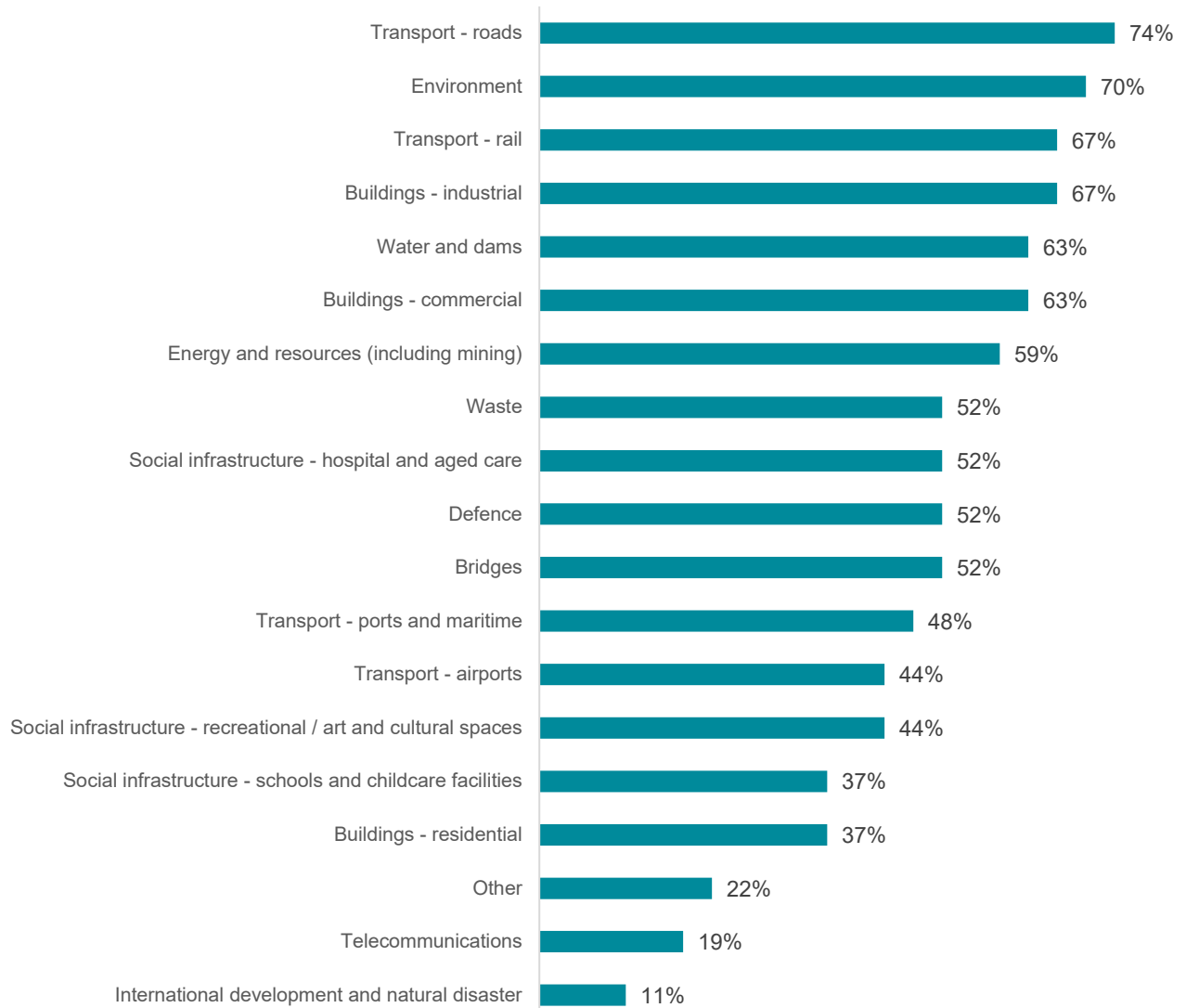


The participating member businesses operate across Australia and internationally. Unsurprisingly, most respondents work in metropolitan areas with differing levels of regional/remote work. Not all businesses that provide services in the metropolitan areas also provide services in regional/remote areas.

**Business jurisdiction of operation**



The participating member businesses operate across a wide variety of sectors, as demonstrated in the graph below.<sup>1</sup> A significant percentage of respondents operate in the various transport sectors (74% in roads, 67% in rail and 48% in ports and maritime). The 'other' category includes land development, urban regeneration, energy transition, sustainability, digital engineering, remedial engineering and heating, ventilation and air conditioning.



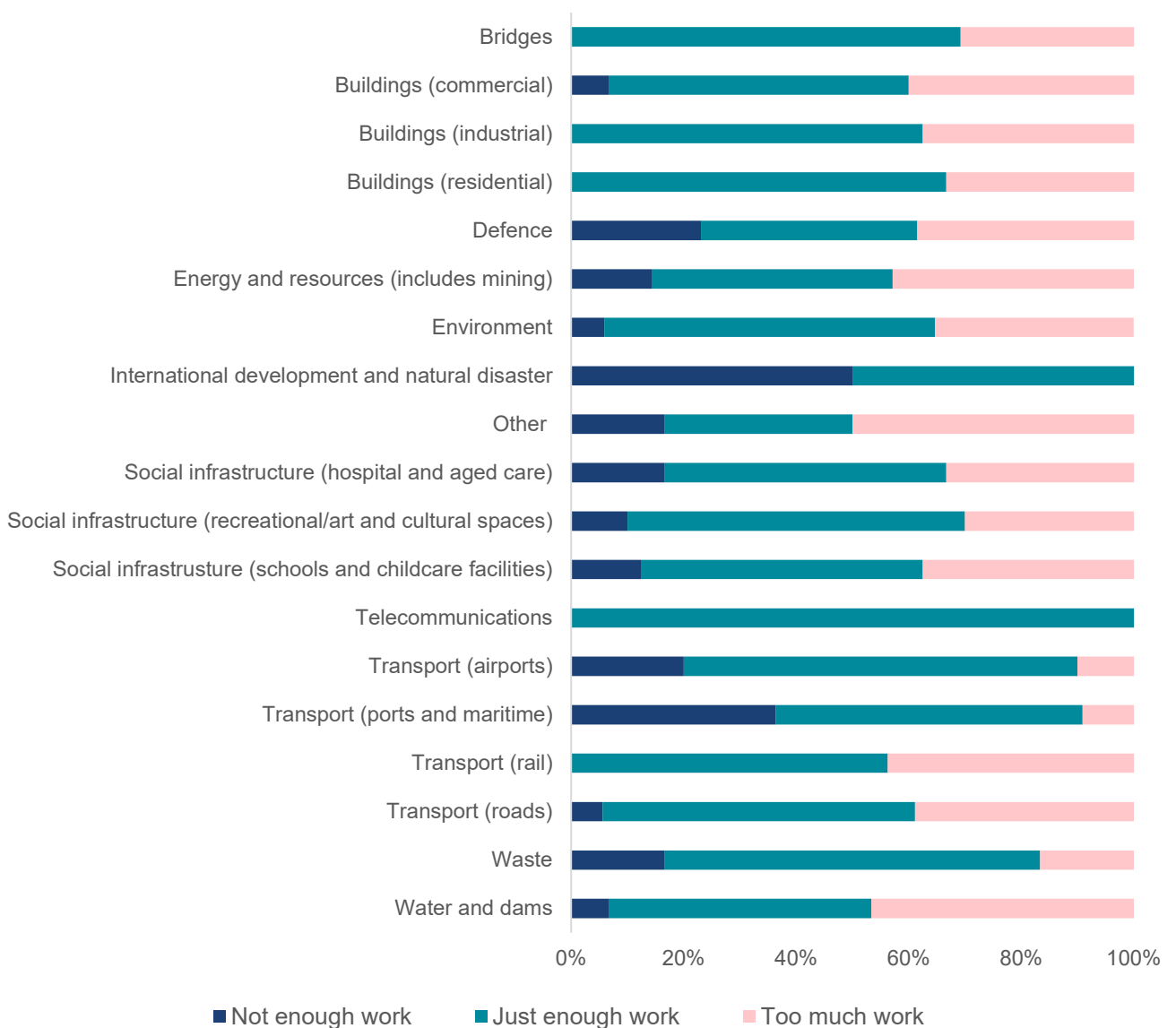
<sup>1</sup> Percentages combined will exceed 100% as many member businesses provide services across multiple sectors.

## Current levels of work

We know capacity constraints are putting pressure on the skills critical to the delivery of projects across sectors. Member businesses were asked to report on the current level of work in the sectors in which they operate, whether there is 'not enough', 'just enough' or 'too much' work in the sector. Consult Australia is concerned where there are significant pockets of 'not enough' or 'too much' work in a sector. Not enough work speaks to a lack of industry confidence in having enough future projects in a sector to plan and invest for the longer term. Too much work in a sector could indicate too many of the same types of projects are in the pipeline, which would strain available capacity.

In general, respondents are not concerned about there being not enough work – some outliers however are in international development and natural disaster (50% of responses) as well as transport (ports and marine) (36% of responses).

More respondents report too much work in many sectors, with water and dams (47% of responses), transport (rail) (44% of responses) and energy and resources (43% of responses) leading the way.

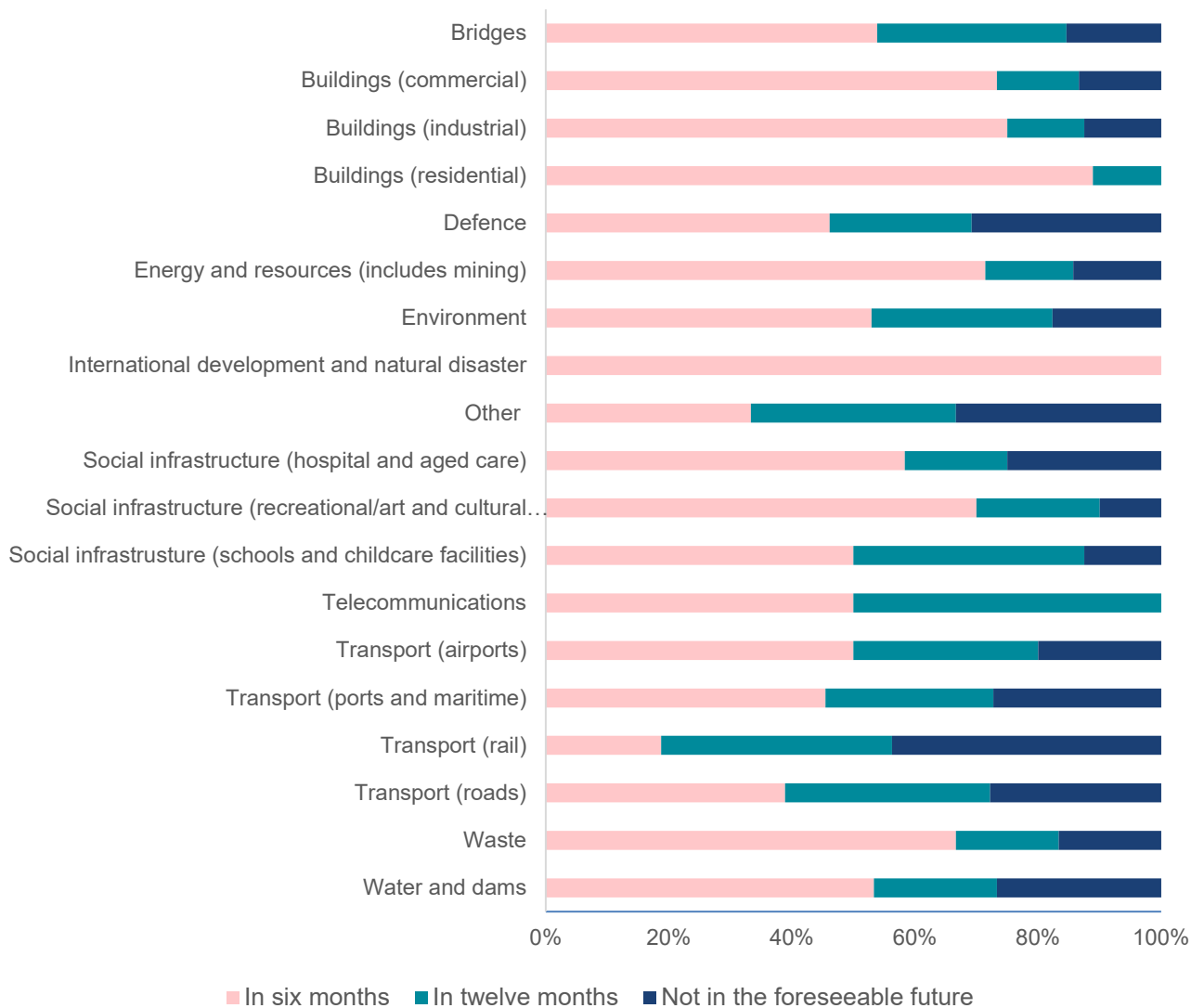


## Future capacity

Member businesses were asked to report when they expect to have capacity in their sectors, whether in six months, twelve months or not in the foreseeable future.

In all sectors most members expect to have capacity within six to twelve months. This indicates that the future pipeline for those sectors is less certain than in sectors such as transport (rail) and defence where a strong proportion of respondents (44% and 31% respectively) do not see themselves having more capacity in the foreseeable future.

This confirms what member businesses report in Consult Australia committees, roundtables, and open forums, and demonstrates why there is continued need for pipeline transparency and certainty across all Australian jurisdictions to strengthen industry confidence in future planning and recruitment needs.



## Staff movement

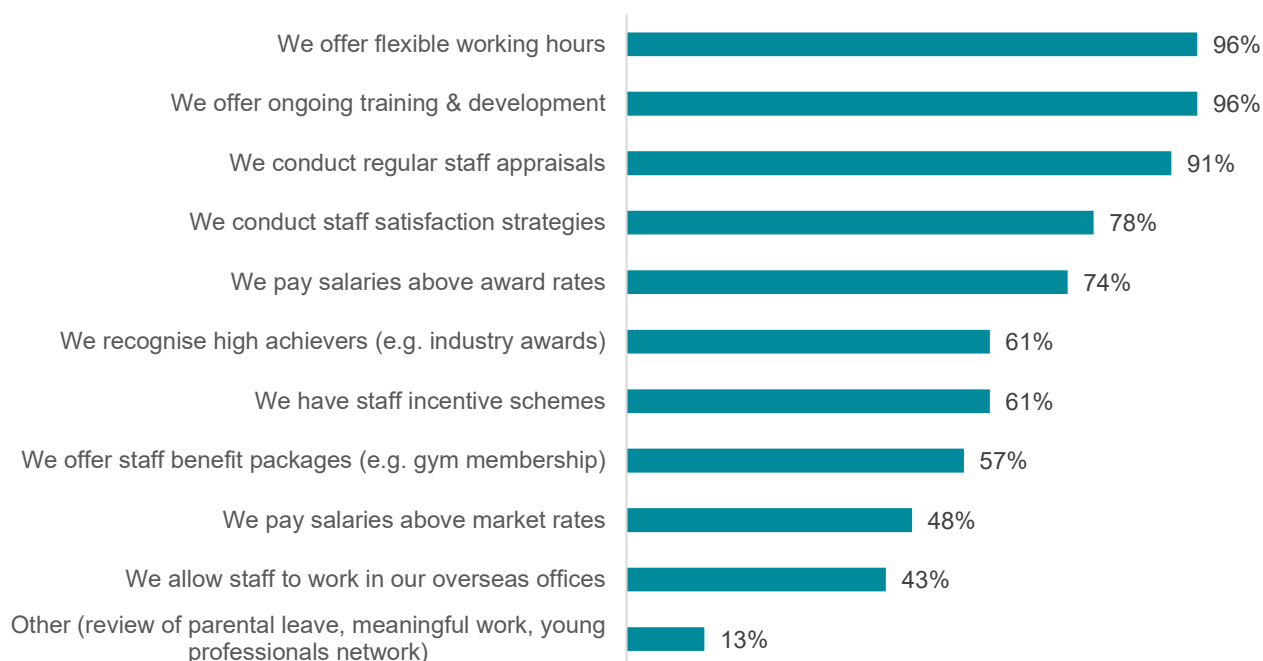
In our [June 2022 Industry Health Check](#), the majority of businesses had a voluntary staff turnover rate of between 10% to 20%. In this skills survey we asked if this was still accurate. Most of the respondents (70%) note an ongoing voluntary turnover rate between 10% to 20%. However, some businesses (17%) report their voluntary turnover rate now exceeds 20%.

Members highlight the following key challenges in retaining staff:

- **significant market competition** with an inability to match salaries and other benefits (including career advancement) offered by competitors (including government)
- **limited supply of qualified engineers** given the high demand for candidates with between 5-15 years of work experience to support organisational growth and capability
- **lack of internal resources** coupled with numerous vacancies.

## Retention strategies

The following graph shows the staff retention strategies being adopted by our participating member businesses, and the percentage of responses.<sup>2</sup>



All respondents have some form of retention strategy in place. The vast majority of respondents (over 90%) offer flexible working hours, ongoing training and development, as well as regular staff appraisals. More than 70% of the respondents pay salaries above award rate and conduct staff satisfaction strategies. A further 61% recognise high achievers and have staff incentive schemes.

<sup>2</sup> Percentages combined will exceed 100% as many member businesses use multiple retention strategies.

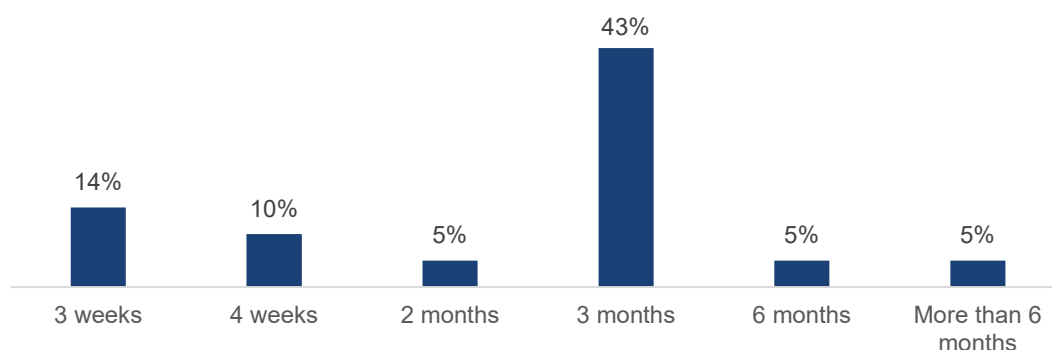


## Global recruitment

Member businesses were asked to identify the percentage of staff recruited from the global market in the past twelve months and likely to be recruited from the global market in the next twelve months. Approximately 81% of businesses undertook global recruitment in the past twelve months. Most respondents expect to increase the use of global recruitment from 'less than 5%' of staff in the past twelve months to 'up to 10%' in the next twelve months.

### Employer sponsored visas and accredited sponsors

More than 80% of the respondents had used employer sponsored visas, with a three-month visa processing time being the most common experience (43% of responses). It is concerning to note that some businesses have waited six months or more to get visas processed.



More than 70% of our members are an accredited visa sponsor and report the following benefits and challenges:

#### Benefits:

- priority processing and reduced visa processing times
- increased likelihood of approvals (pre-qualification)
- reduced paperwork required in submitting financial information attached to sponsorship applications
- ability to use company career site as evidence of labour market testing
- having a talent pool beyond local talent.

#### Challenges:

- requires a lot of paperwork which is extremely resource intensive
- uncertainty in processing times especially with rules changing post-COVID
- reapplication of visa when visa types change
- delays, uncertainties and increasing costs in hiring overseas candidates
- expenses associated with multiple accreditations.

## Domestic recruitment

Member businesses were asked about the career levels and corresponding locations where it had been difficult for them to recruit in the last twelve months.<sup>3</sup>



It is clear from the above graph that all levels of career were difficult to recruit in the past twelve months. The mid-level career candidate was the most difficult to recruit.

Members were asked to report geographical recruitment difficulties. Given the anticipated levels of infrastructure spending on the east coast of Australia, it is not surprising that NSW, QLD and VIC are the most difficult places to recruit.



### Issues encountered in recruiting employees

Below are some of the key issues highlighted by participating member businesses in recruiting employees:

- lack of talent and experience in the current market to meet demand
- competitive market with inflated market salary expectations
- difficulty shortlisting with very low numbers of suitable applicants
- struggle to attract high calibre candidates (some fail job expectations at interview stage)
- high migration and sponsorship costs
- rapid changes in technological skills required
- declining graduate availability
- low regional appetite and university support for firms practising outside engineering.

<sup>3</sup> Percentages combined will exceed 100% as many member businesses recruit staff at all career levels.

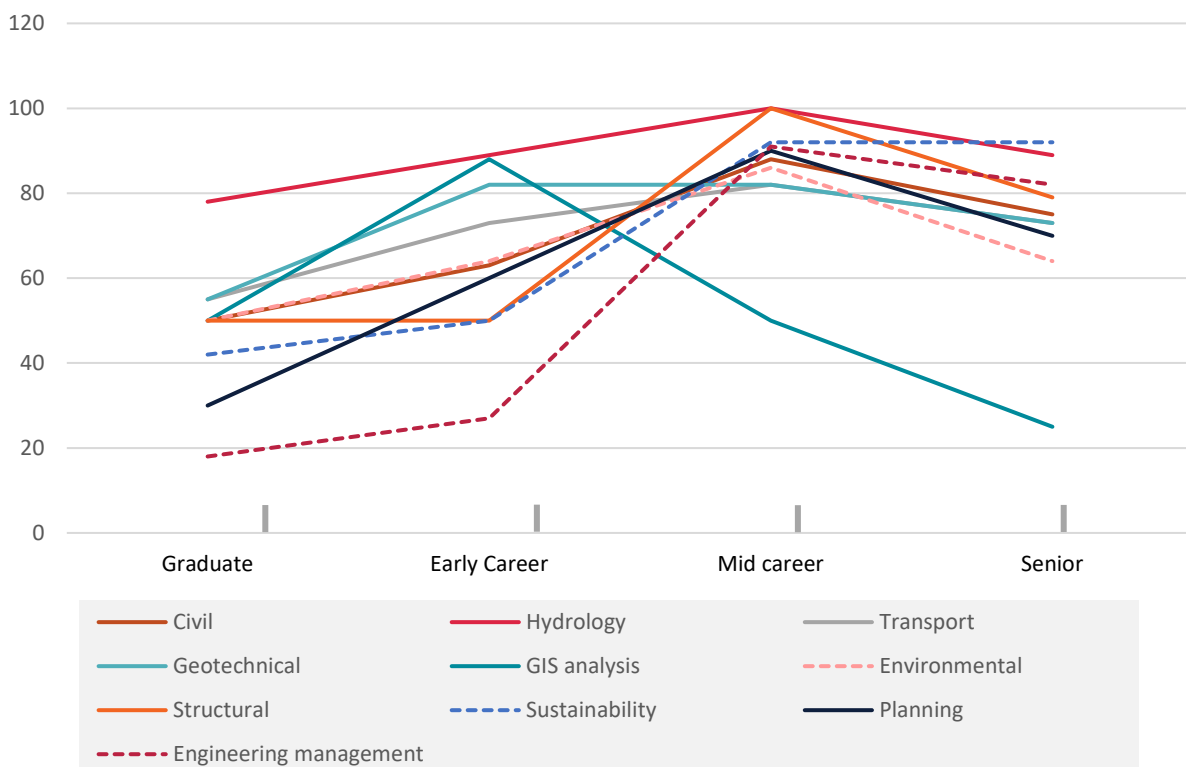
## Disciplines in need

Based on past surveys, we presented members with the top ten disciplines in demand and asked them to advise in what career stage shortages are the most acute (graduate, early career, mid-level and senior). The top ten disciplines in demand were:

- civil engineering
- engineering management
- environmental science, environmental engineering, and environmental consulting
- geotechnical engineering
- GIS analysis
- hydrology
- hydrology
- planning (transport, environmental, urban etc)
- transport engineering (or traffic engineering)
- structural modelling and engineering (or bridge design)
- sustainability consulting.

### Taking a 'career path' view

If we map respondents' need for the above ten disciplines across the career path (starting with graduate and ending with senior level) we see hydrology as leading the way with the highest demand across all career levels (only equal with structural at mid-level and below sustainable consulting at the senior level). We can also see that the mid-career level is in very high demand (with over 80% of respondents in need) across all but one discipline. Below we explore each career level separately.



## The link between disciplines and how we structure university courses

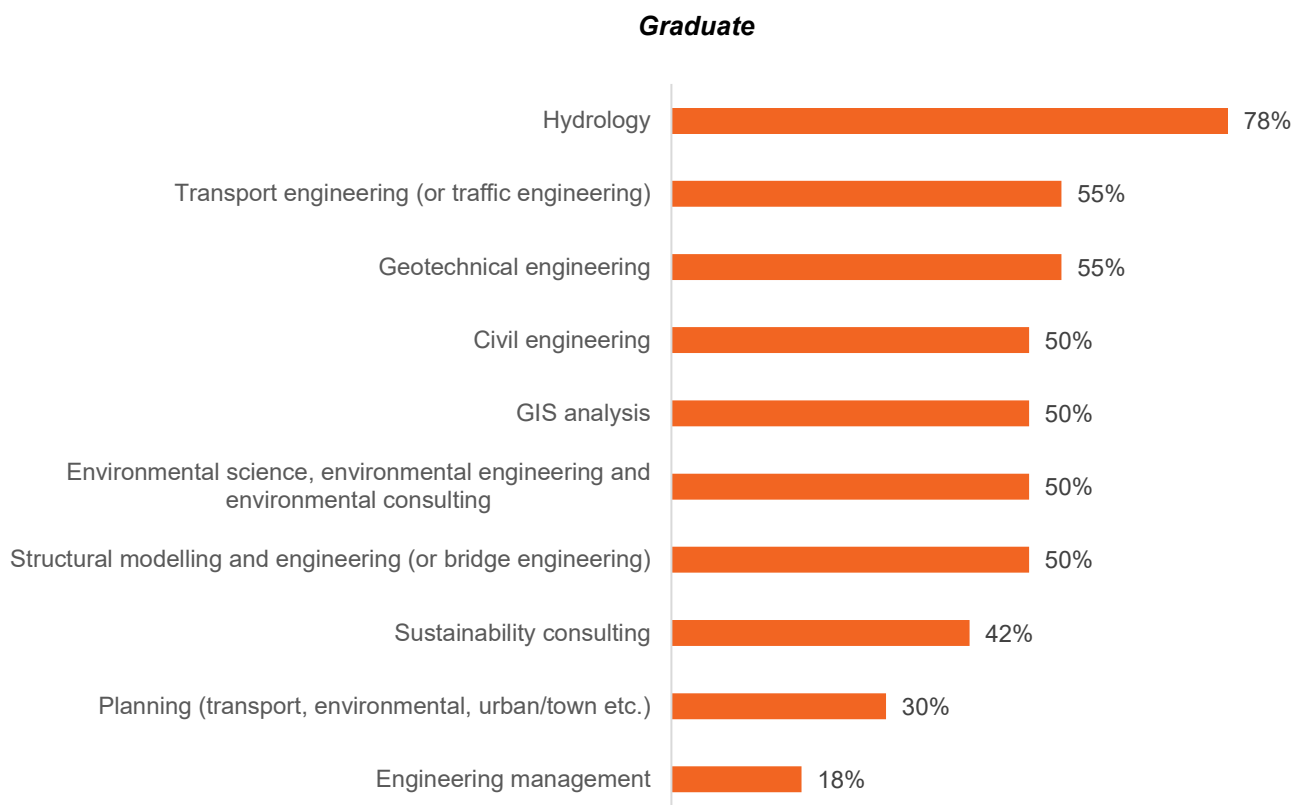
Consult Australia members have noted some interesting aspects about the disciplines in need and university courses:

- Most universities do not deliver geotechnical engineering or hydrology as a separate course, rather as electives within the civil engineering discipline.
- For an individual to transition into hydrology as a speciality in the workforce they need knowledge of GIS analysis and civil engineering.
- Sustainability consulting has not historically been delivered as a full course by all universities, although most universities are now offering a masters level qualification allowing interested individuals to pursue education in this area.

## Graduate shortages by discipline

Respondents were asked to provide the percentage of their technical workforce (e.g., engineers, architects, surveyors etc) that are currently at graduate level. Most respondents (76%) have fewer than 10% of their technical workforce as graduates.

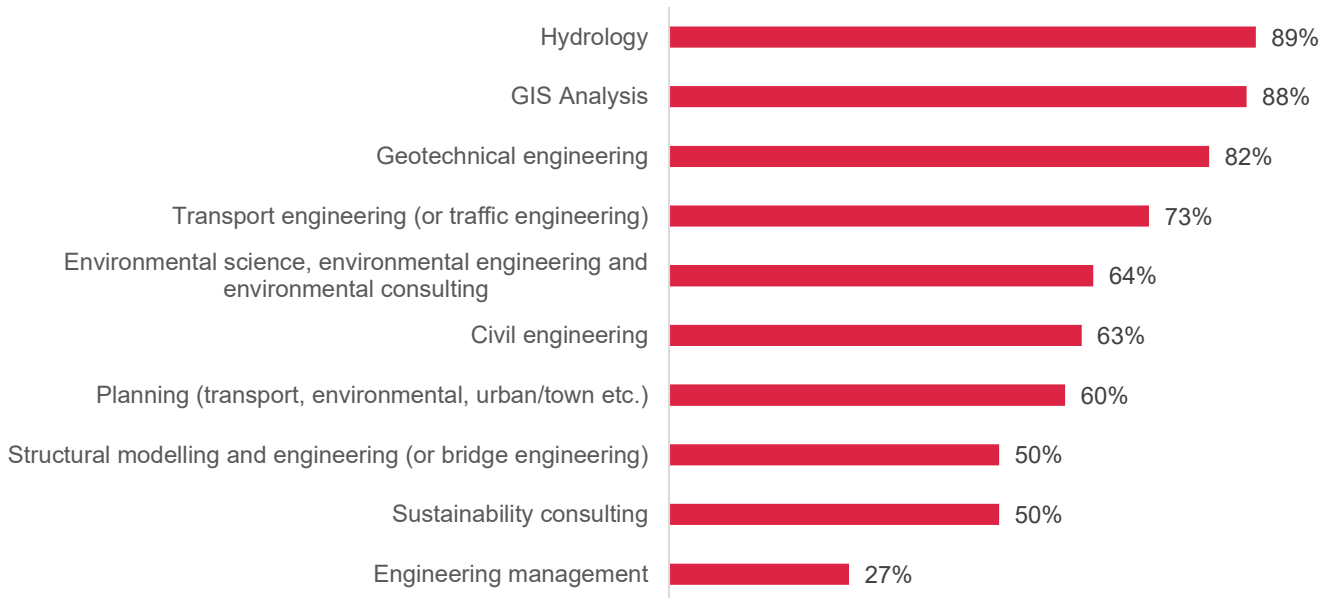
Hydrology is the discipline in highest demand at the graduate level (78% of respondents), significantly more than transport engineering and geotechnical engineering (both 55% of respondents).



### Early career

Respondents report hydrology is the discipline in highest demand at the early career stage (89% of respondents), sitting only marginally above GIS Analysis (88% of respondents).

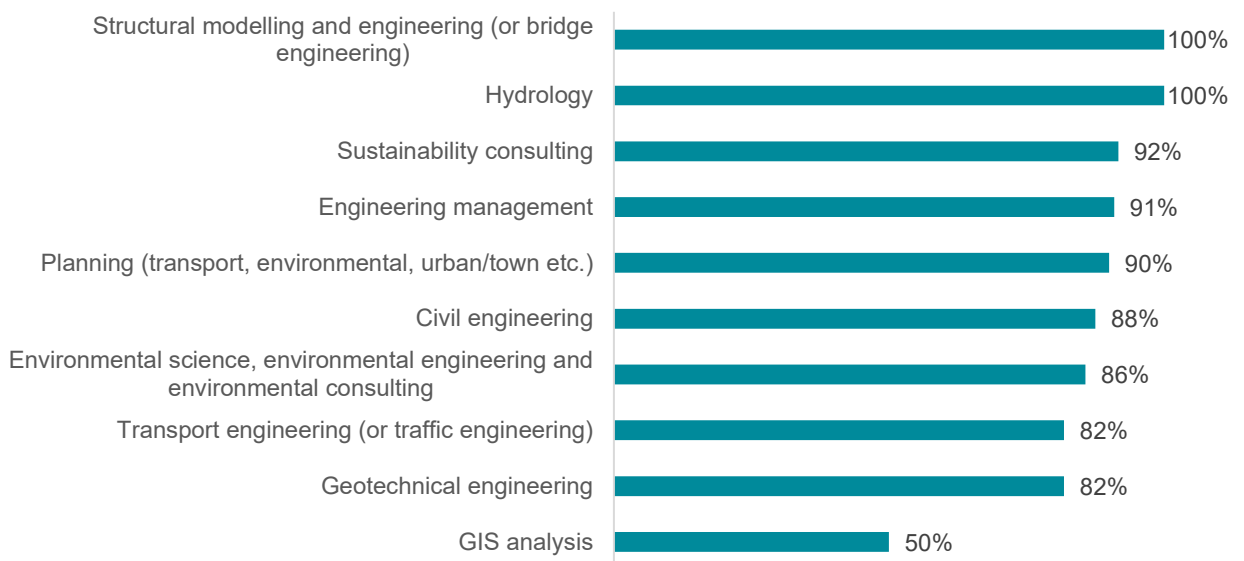
#### Early career



### Mid-level

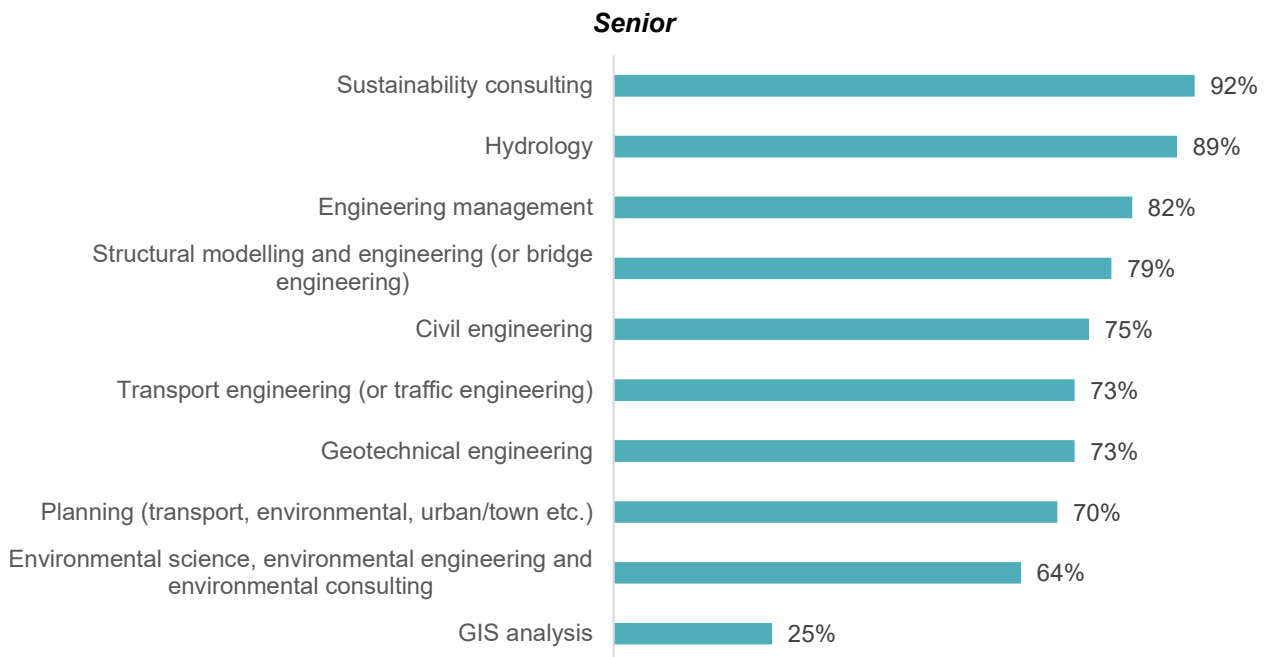
At mid-level, hydrology shares top spot with structural modelling and engineering, with all respondents needing people in these disciplines.

#### Mid-level



## Senior

Sustainability consultants are in highest demand at the senior career level (92% of respondents).



## Discipline shortages by jurisdiction

The participating member businesses were asked to report if shortages across different disciplines and career stages were most relevant to a particular jurisdiction within Australia. The majority of businesses (above 60%) noted that shortages across disciplines are felt Australia-wide.

These shortages can have significant impacts on project delivery, project cost overruns, increased labour costs and overall supply chain issues.

## Future skills

Member businesses were asked what skills they anticipated being needed over the next three years. The vast majority of respondents (90%) reported that the skills required by their businesses would remain the same for this timeframe.

Respondents report the future skills needed include digital engineering (including building information modelling), data analytics and transformation, cyber security, sustainability, environmental, strategic thinking, creativity, socio-emotional intelligence, business development and leadership skills.

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We acknowledge the Traditional Custodians of the land on which we work and live which includes the lands of the Gadigal, Kuarna, Kulin, Turrbal and Wurundjeri people.

We pay our respect to Elders: past, present and emerging.