

Finding, Creating and Educating the Next Generation of Surveyors

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SUMMARY

The shortage of surveyors is being felt across the world and it is time we as an industry come together to solve this problem. We can no longer leave it to the government, or education bodies - only the profession can create change within the profession.

Since 2012, the Association of Consulting Surveyors (ACS) in Australia has been carrying out research to prove statistically that there are not enough surveyors and geospatial professionals in our country to carry out the work that is required across the property, construction and mining sectors. The most recent report will be available for discussion at FIG Working Week revealing a significant shortage for the next 10 years and a workforce capability gap adding pressure to an already stretched profession. (See Abstract 11926: Determining the Future Demand, Supply and Skills Gap for Surveying and Geospatial Professionals for Australia: 2022-2032)

Surveyors have come together across Australia to address the issue and we have seen an increase in the number of surveyors since 2012. This presentation will highlight how the profession has worked together nationally to address the skills shortage issues.

This presentation will highlight the success stories being achieved across Australia as together, the industry seeks to promote the value of surveying and show the general public, politicians and government and the next generation the important role of surveying.

It starts with us. The current generation of surveying and geospatial professionals. We must acknowledge the value we bring to the broader economy and work more closely together within our regions, our states, our country and our world to ensure that the surveying profession remains strong. Only we can tell the stories that will attract the next generation to our profession. Only we can showcase the value we add to the economy. Surveyors are the problem solvers of the world and now it's time we start solving our own problems - finding and creating the next generation of surveyors.

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1. THE NEED FOR SURVEYORS

The Association of Consulting Surveyors (ACS) is the peak body representing businesses who employ surveyors and allied professionals across Australia. Surveyors play a fundamental role in major infrastructure and housing projects across the nation.

Surveyors define, manage and protect the space around us. From the smallest plot to multimillion dollar developments, the world in which we live is organised and legal ownership parameters are determined through the expertise of surveyors.

Registered/Licensed Surveyors are the only practitioners warranted with direct management of our land boundary system. They are the pre-eminent experts in their field and do far more than just measure space. These surveying professionals interpret and navigate legal aspects of land ownership, they provide a comprehensive understanding of land, water and the air above it, its surrounds and its environment; thus protecting development from impediments and unlocking latent value.

The Association of Consulting Surveyors is committed to protecting and ensuring the longevity of the surveying profession by delivering vital statistics and research impacting the industry to its professionals and key stakeholders, including government and education providers.

In March 2023, ACS released its fourth study into the workforce gap for surveying and geospatial professionals, with the past three inciting change and the development of key initiatives to overcome the issues highlighted in these studies.

In each study, BIS Oxford Economics was engaged to review the economic drivers for Australia and within each State and Territory to determine the surveying and geospatial skills required to meet the demand in the property and construction sectors. (See Abstract 11926: Determining the Future Demand, Supply and Skills Gap for Surveying and Geospatial Professionals for Australia: 2022-2023)

As a direct result of these studies, the surveying profession have come together over the past few years to boost the number of school leavers entering the profession, and the recent report shows this has accelerated. The state-based Surveying Careers Taskforces with Industry Promotion has had a real impact on the numbers of young people entering the profession, which is reflected in these latest statistics.

However, with current and predicted future elevated levels of construction, this report also highlights continued national significant skills shortages, especially given the decline in numbers of registered/licensed surveyors.

There is so much more to be done; with a need for industry, government and the education sectors to work cohesively, planning and executing further targeted initiatives aimed at combating shortages. The Association of Consulting Surveyors is committed to supporting our members and we will continue to advocate on their behalf to ensure this work is carried out.

2. CREATING A TASKFORCE TO TACKLE THE SKILLS CHALLENGE

The initial report from BIS Oxford Economics highlighted what the industry knew – we had a significant skills shortage. Students, teachers, parents and the broader community didn't know what a surveyor was or why they mattered.

Starting in Victoria, the profession gathered and developed a marketing approach to build the profile of surveying in their local high schools. Starting with Year 10, 11 and 12 students who are thinking about their career options, surveyors began visiting schools to showcase a career in surveying.

A brand was developed – the Surveying Careers Taskforce was created with a new website www.alifewithoutlimits.com.au and #trysurveying #suitstoboots and other social media campaigns were launched.

Victoria saw such success that the other states quickly got on board with new Taskforces created in New South Wales and the Australian Capital Territory, South Australia, Queensland and Western Australia.

Each jurisdiction carried out its own activities with Tasmania working directly with schools on developing content to be taught in the classroom and on field excursions. New South Wales had a “Math's in Surveying” Day held three times a year in Sydney thanks to a local surveyor whose best friend was a Math's Teacher. This day attracts 100's of students each year with each event being booked out.

There was also another large project being undertaken by the NSW State Government around the Centenary of ANZAC in 2018 which provided an opportunity to create a “Women in Surveying” day modelled similarly to the Mathematics excursion.

- NSW Governor on Surveying <https://www.youtube.com/watch?v=VUDi71GMe3Y>
- NSW Surveyor General on Surveying https://www.youtube.com/watch?v=AbpXHeL_4EA

In Queensland they focused on the geospatial profession and created a new website www.geospatialscience.com.au. And SheMaps was also created to encourage girls to choose a STEM career. www.shemaps.com

South Australia also created a website and ran projects for students across their state - www.surveyingsa.com.au

Our Taskforces have also embraced Get Kids Into Survey and actively promote and provide the materials to local primary schools.

3. SURVEYING CAREERS PROVIDES A NATIONAL APPROACH WITH LOCAL CONNECTION

The COVID19 Pandemic saw all our schools activities closed down. Whilst we were able to carry out some online webinars for students, it caused a significant downturn in interest.

- Schools information session, May 2020 - <https://www.youtube.com/watch?v=fRTNy5y6AeY>

We were able to hold what has become a regular event, renamed Diversity in Surveying Day. Students rotate through three activities:

- Laser Scanning and UAV
- Geodetic and Positioning
- Cadastral and Land Administration

The day includes a lunch panel of Industry presenters, with students having lunch with surveyors and work experience opportunities provided – see the outcomes on this clip Diversity Day 2021 - <https://www.youtube.com/watch?v=ffUSAopXbUo>

The pandemic has brought our various state bodies together to remove duplication of activities to promote surveying to schools. The following has and is being implemented:

1. New website – one only for all of Australia – www.surveyingcareers.com.au
2. Surveying in STEM programs – In NSW we have worked with the Department of Education to develop a “Surveying and Geospatial Engineering” course that is being delivered in 2023 to 10,000 students across the state. At the end of the year we hope to promote to all states and share the curriculum nationwide.
3. Math’s in Surveying and Diversity in Surveying Days delivered in regional areas and available for all states.
4. Coordinated approach to career expos and schools presentations, organized nationally but delivered on the ground on a state by state basis with local surveyors.
5. Coordinated approach to work experience for students. A one-stop-shop is being created nationally for parents, teachers, and students to arrange their work-experience.
6. A fully staffed approach to career promotion. Each state is combining their resources to pay a dedicated project manager to carry out the work above to ensure we have a streamlined approach to managing students through to study or work in surveying.

7. Shared connectivity with Education providers and teachers associations with sponsorship and keynote presentations at their state and national conferences – geography, mathematics, STEM and careers events.

4. EDUCATION PATHWAYS CALLS FOR NEW SURVEYORS ACADEMY

In Australia only licensed and registered surveyors are required to hold qualifications in all jurisdictions. The approach varies state by state, but there are still many who work as survey technicians with no qualification or training. As governments change and failures in the building sector occur, ACS feels strongly that more regulation and a requirement for qualifications will include surveying in the not to distant future.

The pathway for study in Australia is:

1. Certificate II in Surveying and Spatial Information (for high school students)
2. Certificate III in Surveying and Spatial Information
3. Certificate IV in Surveying and Spatial Information
4. Diploma in Surveying OR Diploma in Spatial Information
5. Advanced Diploma in Surveying OR Advanced Diploma in Spatial Information
6. Associate Degree in Surveying and Spatial Information (Similar to Diploma)
7. Degree in Surveying and Spatial Science (at one of 8 universities)
8. Registration and Licensing with the Board of Surveyors (State Based)

Whilst we are fortunate to have 8 universities offering a degree qualification, not all students wish to undertake a University Degree. Unfortunately, the Certificate and Diploma courses are also not available in every state/territory. In recent years, despite the significant skills shortage (1,400 this year) we have seen registered training organisations and education bodies close down the surveying courses.

ACS saw this as a significant problem and in July 2021 employed our first National Training and Development Manager. Peta Cox, a fully qualified professional educator and surveyor spent 12 months developing core content that will meet the requirements of not only the government, but the profession.

The profession once again came together and provided valuable input into the course content and provided their insights into what makes a productive and useful surveyor in the field and in the office.

In September 2022 we launched our first pilot cohort of students. This unique offering requires all students to be fully employed and employers must sign up to provide support and training to their students. Students undertake one day online training with Peta and other industry trainers, from their home anywhere in Australia. The other four days they learn on the job in true vocational education style.

Full details about the program can be found on our website
<https://www.consultingsurveyors.com.au/our-industry/surveyors-academy/>

Currently we have more than 250 students on a waiting list. In Australia, the government provides funding support for Certificate and Diploma courses, but there is a process to gain this funding and ACS are currently in the middle of that process. Which means students and employers are currently paying the full fee to undertake the training.

This is a significant commitment by businesses across Australia and we appreciate their support and commitment to see the next generation of surveyors educated.

The unique approach we have taken to train our own profession has been seen by other industry groups and bodies who are talking with us about how to develop similar programs for their professionals.

We will also continue to encourage students through to a degree course and onto registration and licensing. That process, with the State Board of Surveyors, is lengthy with the average candidate taking 7-10 years to complete the process after their Degree. ACS is tackling this challenge also, working with our Surveyors General in each jurisdiction to ensure the benchmark is never lowered, but candidates are encouraged through the registration and licensing process.

5. INTRODUCING A BUSINESS ACADEMY FOR SURVEYORS

ACS is committed to helping surveying businesses thrive. But one of the challenges we face is the lack of business training provided during the Surveying Degree. Surveyors attend university to learn surveying – not business.

But there is an expectation, certainly in Australia, that once you've achieved your license or registration the next step in your career will be to buy into the business as a shareholder, or run the business, or completely take over when the current owner retires. Or as we see often, once registered, or licensed, the surveyor then goes out on their own and starts a new surveying business.

In Australia, we often hear concerns about the rates being charged, the lack of knowledge of the work being undertaken by a surveyor or in surveying, management of people can be problematic and financial management can be a headache for the business owner.

ACS identified a need to train our emerging leaders in 2019 and created the Business Academy. Not trying to recreate a Masters Degree, but to provide practical knowledge and

insight into running a surveying firm with current thought leadership principles on business for the 2020s.

The course provides 7 key modules:

1. Strategy
2. Story (Marketing)
3. Sales
4. Pricing
5. Profitability
6. People
7. Succession

At the completion of the program participants must present an assessment of their business on one of the seven areas they believe to be a concern and in need of change to help them build a thriving surveying business.

65 surveyors, planners and engineers have been through the program. Graduates have bought into the business, become shareholders and directors, stepped up into a management position and expanded to other regions.

There is ongoing training for graduates and we are continuing to review the program with a view to adding more content to support our member firms.

The Business Academy is also reaching into our partner industries and we are looking forward to expanding the reach of surveyors through other avenues.

6. RAISING THE PROFILE OF SURVEYING

If we are to find, create and educate the next generation of surveyors, we must, as an industry raise the profile of surveying. This is not the responsibility of the government, the Board of Surveyors or any other group. Only Surveyors can promote Surveying.

Advocacy is a key tool available to our industry bodies – to take the voice and message of surveying to partner groups such as engineers, planners, infrastructure, construction, conveyancing, legal, spatial and space.

There is great value in the role of a surveyor. No land project starts or finishes without a surveyor on site. There are new and exciting tools of the trade. The future may be data

analysis but we are the keepers of the cadastre and the professionals that ensure people's biggest investment, their home, is accurately placed.

We must come together and speak positively about the work we do. Promote the positive opportunities facing the profession and how we can help solve many of the challenges faced in the built environment.

Surveyors – Vital to Australia's Development

REFERENCES

www.consultingsurveyors.com.au

www.surveyingcareers.com.au

BIOGRAPHICAL NOTES

Michelle Blicavs is the Chief Executive Officer at the Association of Consulting Surveyors in Australia. As the peak body representing nearly 500 businesses they exist to promote, represent and support surveyors and their businesses across Australia. Their strategic goals are to:

1. Encourage and grow membership nationally
2. Expand training and support to meet the needs of the surveying profession across Australia
3. Be the voice for surveyors on a national level
4. Build a structure for a sustainable future for the surveying industry across Australia

Michelle is a Certified Association Executive and has been with CSN for 5 years and during that time has carried out this research twice and has used the results to ensure the profession maintains a strong profile in the broader community. With a place on the Australian Construction and Infrastructure Forum and the Australian Chamber of Commerce and Industry, surveying is sure to have a bright future.

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