

27 February 2023

Submission via: productivityfeedback@treasury.nsw.gov.au

Attention: Expert Panel

Dear Panel Members,

On behalf of the Geospatial Council of Australia (currently trading as Surveying & Spatial Sciences Institute) we congratulate the NSW Productivity Commission's New thinking on continuing professional development discussion paper.

The Geospatial Council of Australia (Geospatial Council) is the new national peak industry body for the Australian geospatial sector. The Geospatial Council is in the process of forming as a result of a recent well-supported decision to merge two existing industry bodies, the Surveying & Spatial Sciences Institute (SSSI) which advocated for individual members, and the Spatial Industry Business Association (SIBA|GITA), which advocated for business members. Both SSSI and SIBA|GITA have long histories serving the national geospatial community and sector within Australia to create impactful advocacy, sector-wide recognition and certification, provision of relevant skills-based events and CPD, and many other member services. The official launch of the Geospatial Council is planned for late March 2023.

The Geospatial Council represents both individuals and organisations working in or aligned to the geospatial sector. We are representative of all the disciplines that encompass geospatial such as surveying, hydrography, remote sensing, photogrammetry, geographic information system (GIS), to name a few. Our priority is workforce development with a focus on building industry capability and capacity to ensure long term sustainable growth of our sector.

The Australian geospatial sector is small but has a significant foundational impact on Australia's economy. It is through the maintenance of cadastral boundaries by land surveyors that Australia's property industry thrives; through the sea bed mapping that hydrographers undertake that Australia's maritime industry allows many industries to flourish. The engineering and mining surveyors of Australia facilitate the resources industry to operate safely and profitably, and the environmental management insights obtained from satellite imagery and GIS analytics allows for small and large infrastructure projects to support sustainable cities and protect our natural resources effectively.

Within the Australian geospatial sector, cadastral surveying is regulated, while the other geospatial disciplines are not, although some jurisdictions have various regulations applying to mining surveying including NSW. Each jurisdiction holds various legislative requirements for the regulation of registered (cadastral) surveyors, and within NSW this falls under the remit of BOSSI (the Board of Surveying and Spatial Information).

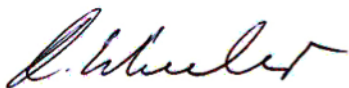
Within NSW and Australia more broadly, the career pathway of a surveyor or other geospatial professional does not have great visibility generally but specifically to primary school and high school students, a challenge the industry has been struggling with for several decades. Additionally, over

time we are witnessing tertiary education providers closing surveying qualifications due to low numbers of students, despite there being a skills shortage in industry. For existing geospatial professionals, CPD is vital for registered surveyors to maintain their registration (through BOSSI), and is also vitally important for the career progression of GIS and other geospatial professionals to maintain relevance in their technical skills and knowledge of this fast-moving industry.

The Geospatial Council welcomes the opportunity to provide feedback on this important review, with a specific focus on CPD related to the Australian geospatial sector. Find below responses to the proposed questions:

1. What is the role of CPD: skill maintenance or upskilling?
2. What is the right balance between initial education requirements and CPD? How could CPD be used to facilitate progression through graduated occupational licensing?
3. How could CPD be used to enable upskilling and improved labour market flexibility? What barriers must be overcome?
4. How can digital technology be better used to facilitate and deliver CPD?
5. Does the framework appropriately guide regulators as to whether mandatory CPD is the right policy?
6. What design features should be included in the framework to ensure CPD is well-designed and maximises net benefits?

Thank you once again for the opportunity to provide feedback. If you have any questions please do not hesitate to contact us at ceo@sssi.org.au. The Geospatial Council of Australia looks forward to receiving feedback on the outcomes of this review.



Tony Wheeler
Chief Executive Officer

Question 1: What is the role of CPD: Skill maintenance or upskilling?

- The Geospatial Council of Australia is of the view that CPD is aligned with life-long learning by playing a significant role in both skilling, re-skilling, up-skilling, and cross-skilling to support relevance and maintenance of skills particularly across regulated occupations.
- CPD is instrumental in supporting professionals to maintain and grow their skills based on technological, legislative, and regulatory changes
- CPD is vital for the Surveying profession in that the public's confidence in the cadastre is essential and underpins the basis of land law
- CPD plays an important enablement function for regulatory compliance (applied to regulated occupations for compliance) as well as professional skills development, maintenance and recognition as adopted by industry
- CPD can comprise a variety of learning activities such as: workshop participation, lectures, presentations (delivery and attendance), coursework, reading, webinars and mentoring

Question 2: What is the right balance between initial education requirements and CPD? How could CPD be used to facilitate progression through graduated occupational licensing?

- The Geospatial Council believes that formal education from school to tertiary is essential to build the foundations of knowledge and skills to enable career progression in and across the geospatial sector and aligned sectors. Industry experience along with the continuation of learning supports the currency of skills, knowledge and experience needed across the industry to support greater productivity returns. Ensuring there is a multifaceted approach to skilling through different modalities, supports the greater connection between a professional, the regulatory environment and employers. CPD programs, when delivered through different modalities and when needed, would attract greater adoption for professionals through occupational licensing arrangements. The benefit would be currency is maintained and compliance is assured.
- Establishing and building on the connection between industry (employers) and regulators is important to support the development of industry experience which builds on formal education.
- The role of industry and professional associations is equally important and provides a connection to industry standards that may not be represented in legislation or regulation – this is applied when industry self-regulates through standards. Establishing and maintaining the connection between industry and the regulator underpinned by current and relevant CPD provides an essential platform to promote professional standards
- Ideally CPD should incorporate a blend of activities aligned to varying elements impacting the profession such as:
 - capability (legal, technical, and industry knowledge)
 - attributes and performance
 - professional conduct (ethics)
 - connection between the profession and the industry
 - critical thinking
 - business skills
 - soft skills (communication, team leadership, mentoring, etc.)

Question 3: How could CPD be used to enable upskilling and improved labour market flexibility? What barriers must be overcome?

- The Geospatial Council is of the view that a purposefully designed CPD system can contribute to driving a professional culture of lifelong learning (comprising skilling, up-skilling, re-skilling and cross-skilling). When supported by industry and regulators this can provide greater labour-market flexibility but does need to align to and recognise skills developed or attained across aligned industry sectors. When endorsed by regulators and industry (employers), this can provide a significant impact in meeting the productivity needs of a sector such as Geospatial and Surveying (regulated occupation).
- Establishing and building on a close relationship between regulators, industry standards and trends, CPD programs support greater relevance to reflect the government (regulator), industry (user), community (beneficiary) and professional (practitioner) in developing and maintaining skills for the workforce of today and the future. In order for this to deliver impact is a need to ensure CPDs (the development and maintenance) are market relevant and kept current. The suggested Framework does provide levels to evaluate the purpose, need and effectiveness of CPDs across

industry sectors. Regular evaluation of the effectiveness of the application of the Framework would need to be undertaken to ensure the agreed impact is achieved.

- Within the NSW Surveying sector, there are rapidly dwindling numbers of registered surveyors gaining and/or renewing their registration each year. The requirements for NSW surveyors (and surveyors in other states) to gain their registration are steep and extremely time-consuming over multiple years, and also require the candidate to secure a mentoring surveyor who gives of their time to support them on this journey. Mentoring surveyors need only be registered surveyors, and with an industry that is already severely short-staffed, are few. While there is clear recognition that the registration process is required to maintain the credibility and high standing of a profession that facilitates the upholding of land law, the barrier to getting registered is so steep that it is putting the industry at severe risk. No matter how much effort is put into creating visible career pathways for school and tertiary students, this barrier continues to be a strong obstacle to people entering the surveying industry and getting registration.
- While the GIS/geospatial professions are not regulated like the cadastral surveying profession is, it remains ubiquitous with laypeople often not knowing what the industry does and how to get into it. There are effective industry organisations to work on creating career pathway visibility here, however, this overall lack of visibility to the public (compared to professions such as engineering) poses a strong barrier to workforce development.
- Essential to the profession of Surveying, given the shortage of regulated professionals, is the need for the sector to recognise skills across aligned industries, particularly those specialising in the built environment (engineers, building, architects, designers, IT/infrastructure). CPD can assist in facilitating greater labour-market flexibility across aligned sectors by recognising attained Industry skills and applying credit arrangements and recognition of prior learning to support a more rapid transition of skills into regulated occupations. For this, formal recognition of aligned skills across sectors would need to be implemented and supported by the Government, education and training providers and industry.
- Removing barriers is essential to support greater adoption of aligned skills in areas experiencing critical shortage, as previously mentioned, this is essential when barriers to entry impact regulated occupations resulting in a diminishing workforce. Applying CPD across more levels within the workforce from entry-level to licensed professionals will support a greater understanding and therefore recognition of skills across the workforce. In addition, recognition of skills and experience from aligned industries underpinned by credit arrangements and recognition of experience and prior learning can support a more agile approach to skilling and to specifically address the skills gap needed to attain the recommended CPD targets to meet professional standing.

Question 4: How could digital technology be better used to facilitate and deliver CPD?

- Digital technology plays an essential role in delivering, tracking and reporting on CPD. It can enable greater adoption of CPD but does need to be accessible and relevant.
- Digital technology and content offered need to be designed to reflect the modality of online learning and ensure it is maintained to reflect changes in legislation, regulation, community sentiment, industry practice, technology and application thereof. Importantly, it needs to be accessible to ensure equity and fairness is applied across the profession to support regional and remote--based professionals to have the same access as urban-based professionals.
- Digital technology allows for greater market relevance and interactivity leading to skills development and maintenance. It allows for one-to-many as well as one-to-one mentoring when required.
- Technology Enabled and Enhanced Training (TEET) supports greater adoption and connectivity through mobile devices applying a more agile approach to learning when and where needed. It allows for greater enhanced learning including video, simulation, images and graphics and can be accessed via learning management systems that provide automated and accessible learning options suiting a larger cohort.
- It enables an accessible, dynamic environment of learning and development to underpin life-long learning across a profession. It can be supported by industry, government, regulators, professionals, education and training and the community.
- Within the NSW environment, for both surveying and geospatial professions, the delivery of CPD continues to be delivered largely as face-to-face events (seminars and conferences) or webinar-style events. There is a significant opportunity, in leveraging the online environment and its tools

to create more engaging online CPD which uses technology more fully, e.g., micro-credentialing courses available for participants to complete at their own pace each year.

Question 5: Does the framework appropriately guide regulators as to whether mandatory CPD is the right policy?

- The geospatial sector and specifically cadastral surveyors rely on the successful delivery of symmetric information to ensure transparency and confidence by the public in the cadastre.
- The Geospatial Council supports the framework as a guide for regulators and industry to evaluate the need and effectiveness of CPD.
- Stage 1 of the framework is critical in evaluating need and impact. Incorporating productivity outcomes (which would include the evaluation of WHS) would enhance the framework and support greater take-up from the industry (employers) to support the adoption
- Stage 2 would be enhanced by including productivity evaluation to balance the changing population needs, technology and regulation. GCA believes this additional evaluation or context would enhance regulatory reviews to reflect the market's ability to deliver and would support a greater focus on the output over the process which is often the case in system-driven solutions.
- Stage 3 – GCA agrees that the presented components would benefit

Question 6: What design features should be included in the framework to ensure CPD is well-designed and maximises net benefits?

- The design features which should be included in the framework include:
 1. Productivity outputs: The framework would benefit from having steps to ensure impact is evaluated not only in line with regulatory compliance but also with productivity outcomes to support the value for professionals and employers investing in learning
 2. Clear objectives and outcomes: The framework should clearly define the objectives and outcomes for CPD activities relative to the occupation;
 3. Diverse range of CPD activities: The framework should provide a diverse range of CPD activities that cater to the individual's preferred learning style and provide a mix of formal and informal learning opportunities;
 4. Needs assessment: The structure of the framework should trigger the regulator to conduct a needs assessment aligned to legislative, regulatory and industry changes impacting the workforce;
 5. Structured evaluation and feedback: The framework should include mechanisms for evaluating the effectiveness of the application of the framework in delivering CPD activities and collecting feedback from stakeholders to continuously improve the design of the framework for greatest impact.
 6. Support and guidance: The framework should provide support and guidance to individuals to help them navigate and access the range of CPD activities available.
 7. Flexibility and accessibility: The framework should be flexible and accessible, accommodating the needs of individuals with diverse work and personal commitments, and providing a range of learning opportunities that can be accessed remotely or on-demand.
 8. Recognition and accreditation: The framework should provide recognition of prior learning and accreditation for CPD activities, enabling individuals to demonstrate their learning and development to employers and professional bodies.