ARC LP190101218

Constructing Building Integrity: Raising Standards Through Professionalism

Industry Factsheet: Engineers

October 2024

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Overview

Engineers in the building industry are required to be registered in most states and territories in Australia. However, statutory registration is only relatively recent, introduced since 2021 in many jurisdictions. Historically, engineers have had a greater degree of self-regulation than other professions in the building industry. This has led to Engineers Australia (EA), the main organisation representing engineers in Australia, to set its own standards for qualifications, competence, continuing professional development (CPD), and professional ethics and conduct.

The fact sheet outlines engineering goals, values, and professional standards before summarising the various ethical challenges that the profession in Australia faces. It should be read in parallel with the industry report – *Constructing Building Integrity: Raising Standards Through Professionalism* – which describes the full scope of this work, methods used and recommendations, as well as the supplementary resource document that outlines the integrity system maps (high-level and detailed) for engineers.

Goals and values of peak professional bodies

Engineers Australia's (EA) core values, outlined in their Code of Ethics are:

- Demonstrate integrity
- Practice competently
- Exercise leadership
- Promote sustainability

EA's purpose is "advancing society through great engineering" (EA 2024). The engineers interviewed for this project supported this purpose, stressing the profession's responsibility to promote public safety.

Integrity system analysis – Engineers

This section will outline the integrity enablers that promote high ethical and professional standards for engineers, and the various ethical tensions that negatively impact the profession in various aspects of their work.

Integrity Enablers

Strong governance: Engineers work in accordance with state and national regulations, as well as national and international standards. Strong governance and accountability regimes enable engineers to behave more ethically.

Strong Professional Association: Beyond representing the interests of engineers and engineering, EA has a co-regulatory role, assessing engineers' competence for registration by government regulators.

Professionalism: EA's purpose, values and strategic plan emphasise the importance of maintaining high ethical and professional standards.

Education and training: tertiary degrees accredited to international standards; high accreditation standards and Continuing Professional Development (CPD) requirements.

Healthy business design: Engineering businesses generally have strong ethical business processes and systems, stemming from their history as a self-regulated profession.

Personal Values: Interviewees' values were aligned with EA's values, including a consciousness that their professional knowledge confers upon them a responsibility and obligation to the public.

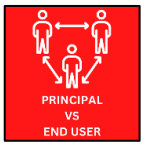
Ethical Tensions

Client vs public tension: While engineers are engaged by clients, they are also conscious of a higher duty to the public. Tensions can arise if the client's interest conflicts with the public interest.

Lack of regulatory oversight: Insufficient or inexpert oversight can be a barrier to ethical behaviour for engineers. If the minimum standard is not enforced, there may be pressure to cut corners.

Aggressive competition tension: Commercial pressure to charge as little as possible drives a 'race to the bottom' for the profession and the industry. Market demand for the lowest price can make performing professional obligations ethically difficult or even economically unsustainable.

Principal vs end-user tension Where the engineer is not engaged by the building owner, the principal's short-term interest in the building can conflict with the owner's long-term interest.



Collaboration tension: Lack of understanding and collaboration between construction industry professionals (including engineers) reduces project coordination, and is a contributing cause of defects in completed buildings.

Key findings

Engineers noted the vital role played by EA in self-regulating the profession and raising the standard of engineering practice. While legislation defines minimum standards, professional associations can define more aspirational standards of competence and conduct, thus raising the average standard of practice above the minimum.

EA also plays a pivotal role in registering engineers in Australia as an assessment entity in every jurisdiction that uses a co-regulatory model to register engineers, including Queensland, Victoria, the ACT, and Western Australia. EA has tailored its assessment to fit the regulatory requirements in each state and territory, and assesses both members and non-members for registration. The co-regulatory model harnesses the technical expertise of EA to assess the competence of engineers to be registered, while the government licensing body investigates complaints and undertakes monitoring and enforcement. Partnering with professional associations allows government to regulate engineers more efficiently.

There is potential for using co-regulation to strengthen the auditing and monitoring of engineers. EA investigates complaints against its members, however as a peak industry body EA's sanctions are weaker than those available to government regulators.

Professional associations working with government regulators can ensure that unprofessional conduct is identified and proportionate responses made.

Government has limited technical expertise, but registration laws generally empower it to use third parties to assist in investigations. Government could use the technical expertise within professional associations to assess conduct and prove offences. EA reviewed its complaints processes in 2022 and is making changes to enable better co-regulation of registered engineers.

Other ethical risk factors

Other ethical risks and challenges for engineers identified in the research include:

- Insufficient or incompetent regulatory oversight.
- Inconsistent statutory registration requirements across Australia.
- Inconsistent uptake of automatic mutual recognition.
- Commercial pressures driving a 'race to the bottom' for the industry and the profession.
- Insufficient understanding or availability of regulatory requirements and building standards.
- Industry attitudes that low standards are adequate.
- Difficult for engineers to appreciate the impact of their work on the community, which can blur the importance of ethical behaviour, enabling engineers to justify less ethical decisions.

Pathways to action

It is recommended that the following actions (which are derived from the main recommendations that are outlined in the *Final Industry Report* and profession-specific findings) are taken to address the ethical tensions and strengthen the integrity enablers for engineers:

RECOMMENDED PATHWAYS TO ACTION

Regulatory Framework (*Final Industry Report* Rec. 4)

- Consistent, competent enforcement action by each state and territory regulator to uphold the legislated minimum standard.
- Promote national consistency in statutory registration requirements, and widespread adoption of automatic mutual recognition.

Professional Associations (*Final Industry Report* Rec. 5)

- Leverage Engineers Australia's technical expertise to assist government regulators in investigating complaints against registered engineers.

Cross-Professional Collaboration (*Final Industry Report*, Section 4)

- Develop and promote more effective contracting practices that enhance collaboration within the design team.
- Promote collaborative relationships and mechanisms with other construction professions, professional associations, regulators and academic institutions.

FURTHER READING

Engineers Australia (2024), *Engineers Australia annual plan 2024-2025*. viewed 25/9/2024
https://www.engineersaustralia.org.au/publications/engineers-australia-annual-plan-2024-2025

PROJECT RESEARCH

Additional research arising from the project (including the Final Industry Report) can be found at:
https://www.griffith.edu.au/law-futures-centre/institute-ethics-law-governance/our-research/construction-building-integrity

CITATION

Bazen, E. (2024). *Industry Fact Sheet: Engineers*. Griffith University, October 2024.