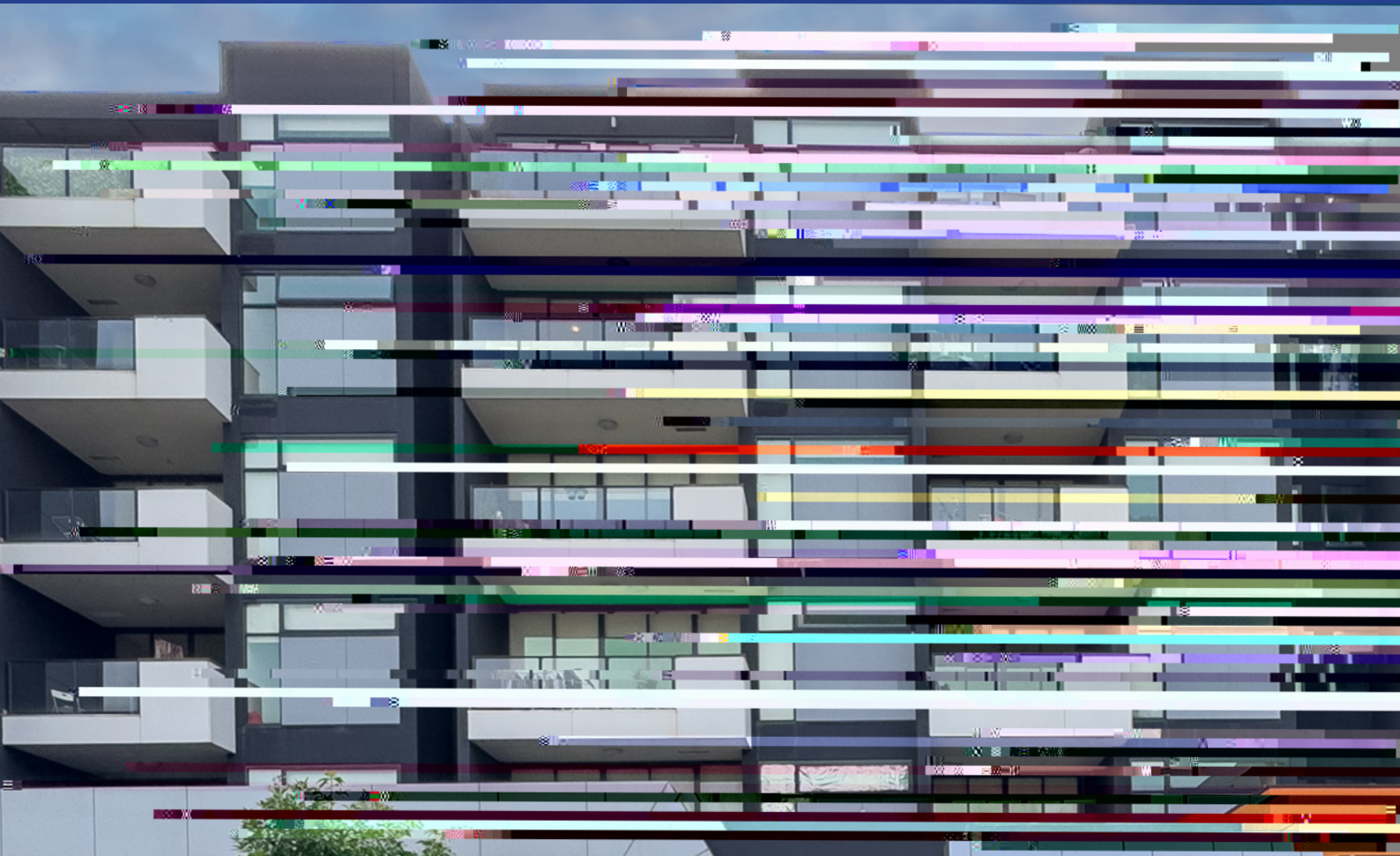


ARC LP

Final Industry Report

# Constructing Building Integrity: Raising Standards through Professionalism



# Acknowledgments

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# Preface

Governments around Australia are grappling with a chronic residential apartment housing shortage—exacerbated by construction sector delays and increasing costs associated with the aftermath of the COVID-19 pandemic, extreme weather events and uncertain geopolitics. Overall, too many people are chasing too few dwellings. Central to the government response is the rapid and at-scale building of multi-storey apartment buildings—generating greater density and more vertical cities. However, a series of scandals has rocked confidence in those apartments.

Several widely reported national and sector-based reviews have highlighted concerns about the quality and, in some circumstances, habitability of new apartments. This quality problem leads to apartment owners' and occupants' distress at the frequency and scale of building defects. Coupled with quality concerns is the limited accountability and action in fixing them—undermining trust in the industry and the dwellings it produces. This is despite the involvement of numerous long-standing, emerging and aspiring professions who are intimately involved in planning, designing, constructing, selling and managing residential apartment buildings—all of whom are formally committed to furthering the public good. These include architects, building designers, building surveyors/certifiers, engineers, quantity surveyors, project managers, real estate agents, and others.

## What we did (Section I)

Multi-storey apartment buildings that are fit for purpose, free from major defects, and effectively managed are more likely if they are the product of robust 'integrity systems'. An 'integrity system' is an inter-linked set of ethical standards, legal regulation, economic incentives and institutions to improve accountability and governance to deliver socially desired outcomes.

Because the building industry integrity system involves many professions, we investigated the role that professionals can and do play in delivering high quality buildings. We explored how the industry professionals, and their associated frameworks and standards, support and encourage 'working together' and how they deal with problems, individually and collectively, during and after construction.

Researchers from the four participating universities examined ten residential building sector professions: architects, building designers, building surveyors/certifiers, construction managers, engineers, landscape architects, property valuers, real estate agents, strata managers and town planners.

The research was guided by four research questions mapped to four phases, including desktop review, empirical interviews, integrity system modelling and recommendation development. We conducted more than fifty interviews with individual professionals, six focus group sessions with private sector professionals and regulators in Queensland, New South Wales and Western Australia, and a Practitioner Session gathering industry and regulator feedback. We also identified the key factors and associated ethical tensions that affect professional standards in the residential apartment sector.

## What we found (Sections II, III and IV)

Project researchers mapped the overall building industry 'integrity system', and the interactions and connections between its many elements. We observed key features that made ethics and quality outcomes less likely or more likely. Researchers examined the standards, regulations and practices within each profession, and the quality of interactions and collaborations across professions. The Summary Findings table shows the key findings.

## What can be done (Section V)



Establish national Centres of Excellence  
in Residential Apartment Housing

# I. Introduction

In 2017, a catastrophic fire in London's Grenfell Tower, caused largely by the building's polyethylene cladding material, claimed the lives of 62 people. Australia has also experienced a series of recent building disasters caused by defects, including the Bankstown apartment fire

## II. Mapping professional standards and professionalism

The project employed an integrity system approach for analysing the institutional structures governing construction industry professionals, and developed an ethical tensions framework for describing key features of the system that impacted on professional standards.

### Integrity systems

Integrity systems comprise a combination of state institutions and agencies (courts, parliament, prosecutors), state watchdog agencies (industry regulators, statutory registration bodies, ombudsman, auditor general, parliamentary committees), NGOs, laws, norms and incentive mechanisms. This combination of mutually supportive norms, institutions and mechanisms aims to promote the positive goal of integrity and high ethical standards, rather than the negative goal of preventing bad behaviour. The goal is to make the desired behaviour clear and easy to follow, while also making it hard and risky to do the wrong thing. It has been applied to national and sub-national governance, industries and professions. In this project they are applied to the building

industry and the various professions studied. In both cases, the relevant integrity system recognises that ethics and integrity cannot be left to individual professionals. The public good values of the profession need to be supported by ethical norms, legal regulation, economic incentives and institutional design.

To identify the strengths and weaknesses in the integrity system for building professionals, two separate maps were developed that outline the industry components that drive professionalism: a high-level map focusing on the system's core components (Figure ); and a detailed map (see Figure ) outlining all the integrity system components.

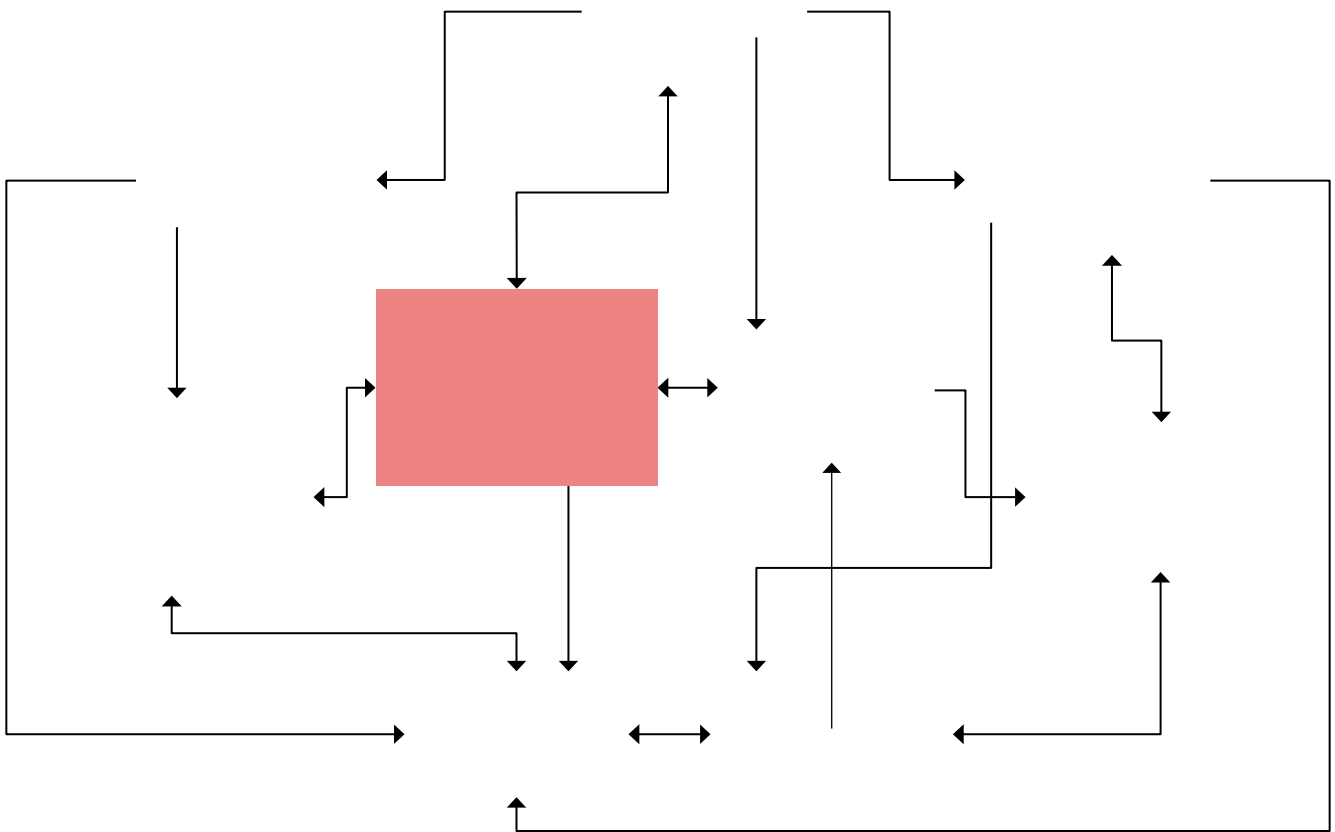
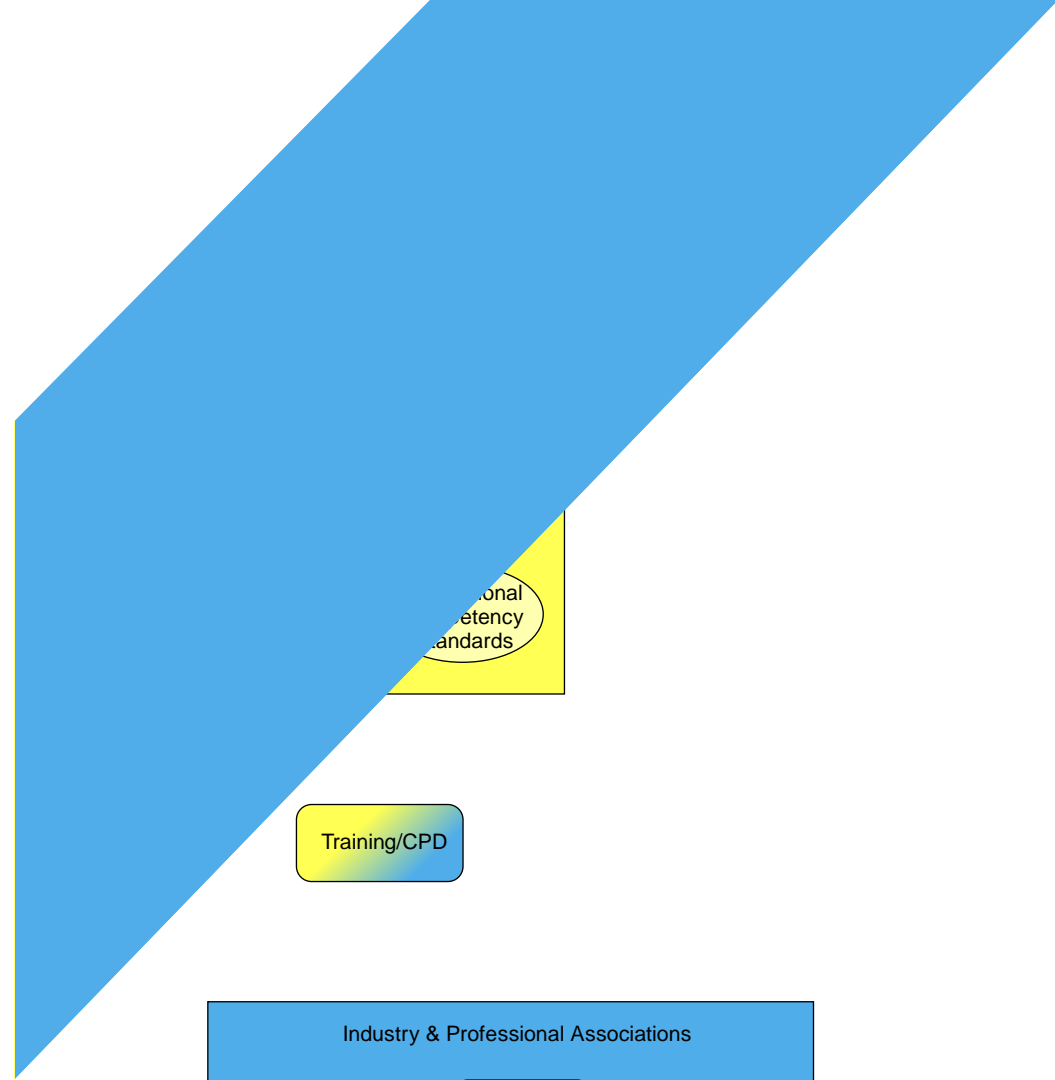


Figure : High level professional integrity system map for the Building Industry



Professional  
Competency  
Standards

Training/CPD

Industry & Professional Associations

Complaints  
process

Building Industry Regulator

Businesses/Organisations



## Factors driving professional standards: ethical tensions and integrity enablers

The project found that, in the construction sector, individual professionals and their professional associations are trying hard to deliver quality, professionally sound outcomes but are being dragged down by a fractured, dysfunctional and poorly understood system that generates 'ethical tensions'. Ethical tensions between integrity system elements tend to drive professionals to ignore, minimise or shirk their professional obligations, and otherwise contribute to substandard building outcomes. An ethical tension does not guarantee a bad outcome, but—especially if the tension is widespread, and exacerbated by other tensions—it does make bad outcomes more likely.

However, we also observed many factors that facilitate high standards and good quality outcomes. These mutually reinforcing 'integrity enablers' help professionals deliver quality outcomes to clients, end-users and the public, helping sustain professionalism and trustworthiness. Integrity enablers—especially when combined strategically—make good outcomes more likely.



## INTEGRITY ENABLERS

Ethical behaviour, professional standards and high-quality building outcomes



## KEY FINDINGS

Table shows that while most of the examined professionals require a tertiary education (bachelor and/or post-graduate degree) and additional training/CPD to become industry practitioners, the overall quality and robustness of qualification, education and training standards varies across the professions, potentially leading to competency tensions.

As a registered profession, architects have some of the most stringent qualification, education and training standards, while real estate agents have the lowest: the average duration to attain a Certificate IV in Real Estate Practice is months, but courses can range from days to months.

Skills shortages and other barriers to entry to professional practice can also result in the professional being 'stretched too thin' to conduct work to a high professional standard:

"Some of them [certifiers] are getting a huge volume of work, so they're pushed to the absolute limit and they don't have time for some of their clients and that is very sad." (Building Certifier)

Architects' critical response to the inclusion of building designers in the National Registration Framework (NRF) and NSW Design and Building Practitioners Act (DBP Act) also highlights existing controversies over professional competencies:

"There is no point equating two entities that are fundamentally different. Architects have greater education and a wider set of skills. Building designers are not qualified to be architects and architects should not be identified as building designers of any level."

([NRF Discussion Paper Response](#))

Other identified weaknesses in the training/education pipeline include: ) lack of opportunities to undertake M-15 (s (c)-7 (hp5kb36. pipeline included:



## PATHWAYS FOR ACTION

e research suggests ( ) more

## Regulatory frameworks

Table provides a broad-brush overview of the regulatory framework within which construction professionals operate (in NSW, QLD, VIC and WA as well as nationally).

### KEY FINDINGS

Architects and real estate agents are the most highly regulated professions, followed by building surveyors, engineers and property valuers. While the property valuation profession has started to retreat from statutory registration in state jurisdictions, its robust co-regulatory arrangements with professional associations (API, Australian Valuers Institute and RICS) and additional regulatory mechanisms support its status as a highly regulated profession.

Most of the established professions (e.g. architects, engineers) have profession-specific acts/regulations, statutory codes of conduct, and statutory registration

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profession has statutory co-regulatory arrangements (API, As (-7 (40 f)-16.9 (6s1(AP)( srgF(e)-8or)-

problem is it's around more strength, around licensing. It's not. It's got nothing to do with that... You've got to get back to actually allowing [the] right people, the right time, the right lane, the right processes to do it, free of commercial swaying." (Civil Contractor)



## IV. Addressing ethical tensions in professional interactions

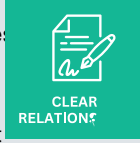
Building industry professionals interact with a wide range of industry stakeholders during the planning, design, building and sales and management phases of a residential apartment building. For

## Professional-principal relationship

Ethical tensions can also arise when principals exploit their powers over professionals, including ( ) exploitation/ work overload when working on construction projects with tight budgets or with construction companies that need to maintain their profit margins to remain competitive, ( )

## PATHWAYS FOR ACTION

Construction professionals, professional associations and regulators should address these cross-professional collaboration weaknesses by:



Developing best practice procurement and contracting practices, including standard-form contracts for the key relationships [see Recommendation . ]

Implementing contracting practices that discourage aggressive competition and risk avoidance, and promote more collaborative and equitable contracting practices [see Recommendation . ]

Creating a national professional development program for public and private sector clients (including developers) aimed at best practice leadership behaviours [see Recommendation . ].



## Recommendation

How	<p>e types of standard form contracts that may be developed include:</p> <ul style="list-style-type: none"> <li>» consultant engagement conditions of contract for use between developers and design consultants for the various stages of design development and documentation</li> <li>» design-and-construct conditions of contract for use between developers and builders</li> <li>» matching subcontract conditions of contract for use between builders and key subcontractors</li> <li>» certifier conditions of contract for use between building surveyors (and other certifiers) and principals who engage them to do a statutory role</li> <li>» strata management conditions of contract for use between the strata corporation and a strata manager</li> <li>» facilities management conditions of contract for use between the strata corporation and a building or facilities manager.</li> </ul>
	<p>. Client leadership best practice training program through AIDA</p>
	<p>AIDA will also have a range of additional functions, such as:</p> <ul style="list-style-type: none"> <li>» Creating a national professional development program, including training programs and a suite of resources that incorporate ethical matrices and trustworthiness indexes (similar in theme to the <a href="#">iCIRT star rating system</a>) for public and private sector clients (developers) aimed at best practice leadership behaviours</li> <li>» developing benchmarks for global best practice in client behaviours.</li> </ul>

Fair, standard-form contracts and procurement guides developed by AIDA will clarify government policies and legal relationships, reduce the **aggressive competition, collaboration, exploitation, and problematic culture ethical tensions** and enhance the **healthy business design, informed ethical clients, clear relationships,** and

## Recommendation

What	<p>A Centre of Excellence is a mechanism for developers, designers, builders, suppliers and building managers to work together to:</p> <ul style="list-style-type: none"><li>» incorporate exemplary planning and development practices and supply chain integration</li><li>» develop physical prototypes that exemplify quality technical designs and construction methods and resolve conflicts in standards</li><li>» integrate design and construction principles to resolve constructability challenges</li><li>» underpin prototypes with sound business models and professional integrity principles.</li></ul>
Why	<p>Business models that underpin quality residential apartment housing outcomes demonstrate that profit, quality and ethics are mutually reinforcing. This may be particularly important in modular housing.</p>
Who	<p>The Commonwealth Government, in partnership with state and territory governments, will establish a national network of collaborative Centres of Excellence in Residential Apartment Housing.</p>



## Recommendation

What	Regulatory frameworks should be improved and implemented for more building professions.
Why	Regulatory weaknesses in the integrity system arise in cases where ( ) professional standards are not enforceable, and

Promoting, protecting and improving professional standards through regulation and clear and enforced codes of ethics will improve government and regulator functions, reduce the **client vs. public, professional vs. client, principal vs. client, principal vs. statutory function, exploitation and competence ethical tensions**, and strengthen the **governance and accountability** and **practical ethical codes integrity enablers**.

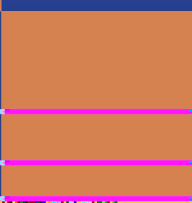


Enhancing and supporting professional associations' ethical standards frameworks will deliver greater support in co-regulation and clearer understanding of professional obligations, reduce the **client vs. public, professional vs. client, principal vs. end user, exploitation and competence ethical tensions**, and enhance the **strong governance and accountability regimes, practical ethical codes, professionalism and quality education integrity enablers.** and

## A FINAL WORD ON COSTS

Adopting these recommendations will involve additional costs both to government and to the construction industry, some of which will be passed on to consumers. However, failure to adopt these recommendations will have a far greater cost. One estimate of the costs to building owners and governments of addressing structural and safety defects in the Australian apartment market over a ten-year period ( - ) place the cost of rectification at \$ . billion ([Equity Economics](#) ). Reduced government regulatory oversight of construction and the failure of the construction industry to adequately self-regulate (including the failure of insurers and financiers to properly price risk) has resulted in a system characterised by risk-shi ing and cost-shi ing to consumers (Crommelin et al. ). is has ultimately resulted in market failure manifest in the lack of consumer confidence in the new build apartment market in Australia (e.g. [NSW Government](#) ). Similarly, the reported % reduction in defects as a result of Multiplex's improved practices (p. Recommendation above) translates to saved costs that would have otherwise been borne by the company or by the end user. Ultimately, improving the





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