



Australian Government
Australian Research Council

Exploring Plausible Futures in Architecture, Design, and Engineering

A Human-Led, AI-Supported Scenario Analysis

Research Report, June 2026

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Published by Arch_Manu

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Research conducted by the ARC Centre for Next-Gen Architectural
Manufacturing (IC220100030), funded by the Australian Government. The
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01 Executive Summary

Architectural practice in Australia is entering a period of significant uncertainty. Technological change, climate risk, regulatory instability, housing pressure, construction-sector volatility, and shifting client expectations are changing how projects are designed, delivered, and valued.

This report forms part of the Arch_Manu research project *Exploring Plausible Futures in ADE: A Human-Led, AI-Supported Scenario Analysis*. It presents a consolidated set of trends, uncertainties, and plausible future scenarios for the Australian architecture, design, and engineering (ADE) sector over a ten-year horizon to 2036. Findings are synthesised from a series of scenario analysis workshops held with Australian architecture and design-sector professionals.

The future scenarios are not predictions. They are structured prompts intended for strategic discussion. Given the wide range of plausible future conditions architectural practice is likely to face in the next decade, useful strategic planning should be tailored to each organisation based on factors such as scale, market position, capabilities, project mix, risk exposure, and strategic ambitions.

This report therefore provides a framework for partners to challenge assumptions, consider which futures are most material to their organisation, where they are most exposed, and what capabilities or strategic choices they need to prioritise to prepare for longer-term uncertainty.

02 Background

What is Scenario Analysis?

Scenario analysis is a structured foresight approach used to examine multiple plausible future conditions and their implications for an industry, organisation, or policy area. In industries facing rapid change, such as ADE, it provides a way to examine how current trends, critical uncertainties, and emerging drivers may interact over time and shape future operating environments.

This is particularly valuable where digitalisation, automation, and sustainability pressures are reshaping professional roles, organisational structures, and long-term coordination. By encouraging decision-makers to challenge assumptions about their sector, consider alternative futures, and reflect on potential disruptions, scenario planning strengthens an organisation's strategic foresight capability and supports more adaptable, resilient planning.

Methodology

The workshops used an established and published human-led, AI-supported scenario analysis methodology¹. Participants first identified trends and uncertainties shaping the sector. These were compared against AI-generated outputs², then discussed, refined, and used as the basis for scenario development. Through multiple rounds of facilitated analysis and discussion, participants tested and tuned the scenarios, with each workshop producing a set of plausible futures.

Participants

Participants were drawn from a cross-section of 11 Australian ADE organisations, including small, medium, and large practices with local, national, and international practice footprints, as well as member and regulatory bodies.

A significant proportion of participants had over 10 years of experience in the sector (37%), and almost half had over 20 years of experience (47%). Collectively, participants brought expertise across practice leadership, design, delivery digital systems, sustainability, regulation, education, finance, business strategy, project governance, accreditation, and professional standards.

¹ Shinkle, G. A., Gujarati, C., & Sharry, P. (2026). Scenario analysis in the AI era: Redefining human involvement. *Organizational Dynamics*, 55(1), 101197. <https://doi.org/10.1016/j.orgdyn.2025.101197>

² AI Model: GPT 5.4 Thinking

03 Trends

In scenario analysis and foresight, trends are observable patterns of change that are already underway and can be tracked over time. They are relatively persistent and can be supported by evidence such as data, repeated events, or long-term shifts in behavior, technology, markets, politics, or society. Trends help describe what is likely to continue if current dynamics and conditions persist

AI-Augmented Practice	Generative and agentic AI move into routine practice across visualisation, option generation, bid preparation, documentation, administration, etc., with increased in-house tool building via vibe-coding solutions.
Automation of compliance work	Code compliance, checking, scheduling, coordination, clash detection, and reporting are becoming increasingly automated, reshaping production workflows and the scope of work for junior professionals.
Data-rich, model-based delivery	Architectural outputs shift from drawings toward structured data, BIM content, live models, digital twins, and downstream asset information.
Higher Client Expectations	Clients expect faster turnaround, richer data, more detail, easier access to knowledge, and clearer justification of design decisions.
Regulatory Pressure	Architects face changing codes, NCC shifts, planning reform, increased professional liability, compliance complexity, and increased scrutiny of responsibility.
Fee Compression	Faster production expectations, AI-enabled competition, risk transfer, and client cost pressure compress margins and challenge conventional fee structures.
Role Fragmentation	The role of the architect splits across compliance, strategy, design authorship, systems governance, advisory work, and delivery coordination.
Industrialised Construction	Prefabrication, modular construction, 3D printing, platform systems, design-for-assembly, and offsite production gain momentum under cost, labour, speed, and housing pressures.
Cost Pressure	Material and labour costs, productivity challenges, builder instability, and delivery inefficiency continue to shape design decisions and procurement models.
Climate-Responsive Design	Heat, flood, bushfire, storm, coastal risk, and insurance exposure increasingly affect site selection, detailing, material choice, retrofit, and long-term asset planning.

Circular Material Practice	Embodied carbon, circular construction, material traceability, reuse, sustainable materials, adaptive reuse, and design for disassembly become more central to practice.
Supply Chain Exposure	Global disruption, regionalised supply chains, local sourcing, material availability, offshoring, and talent mobility increasingly become strategic practice concerns.
Skills Recomposition	Firms need new skills in AI governance, carbon, computation, coding, data management, sustainability, procurement, and technical compliance, while graduate readiness remains under pressure.
Housing Delivery Shift	Higher density housing, build-to-rent, property-as-a-service, institutional ownership, and faster housing delivery reshape briefs, typologies, and social outcomes.
Human-Centred Design	Designing with Country, designing for accessibility, gender inclusion, wellness, safety, community expectations, staff values, and social ethics become more visible practice requirements.

04 Uncertainties

Uncertainties are factors whose future direction, timing, scale, or impact cannot be predicted with confidence. They may be important drivers of future change, but there is insufficient knowledge to know which way they will evolve. In foresight work, uncertainties are often used to build alternative scenarios because different outcomes could lead to very different futures.

Will AI augment or commoditise architectural work?	AI may improve productivity and strategic capability, or it may erode the value of concept design, documentation, visualisation, feasibility, and coordination.
How far will AI automate existing workflows?	The extent of automation remains uncertain across compliance, documentation, checking, coordination, design iteration, and client reporting.
Will AI expand or narrow the architect's scope?	AI could free architects for higher-value advisory work, or it could reduce their role to oversight, editing, and liability management.
Who owns, controls, and is liable for design data?	Architects, clients, contractors, software vendors, insurers, asset managers, and AI platforms may compete for control of BIM models, digital twins, generated outputs, and compliance data.
How will future architects be trained?	If routine junior work is automated or outsourced, the profession must find new ways to teach judgement, decision-making, technical competence, and responsibility.
Will architects shift more toward a systems view or specialise?	The profession may remain centred on design authorship, shift toward spatial intelligence and systems coordination, or fragment into multiple specialised roles.
Will clients pay for design value or only delivery certainty?	The market may reward strategic design, long-term performance, carbon, beauty, and public value, or prioritise speed, risk transfer, certainty, and lowest fee.
Will architectural fee models remain viable?	Practices may need to move from hourly or deliverables-based fees toward value-based, data-based, advisory, licensing, assurance, or outcome-linked models.
Will modular and offsite construction become mainstream?	Prefabrication may scale through housing and industrialised delivery, or remain constrained by finance, transport, regulation, consumer perception, procurement, and quality concerns.
Will carbon and circularity become hard constraints?	Embodied carbon, circularity, biodiversity pricing, material passports, and reuse may become mandatory, or remain uneven, voluntary, and commercially tested.

Will climate resilience be properly funded?	Governments, insurers, banks, and asset owners may invest seriously in adaptation, or require resilience without providing sufficient budget.
How will geopolitical tensions and events impact supply chain?	War, pandemics, trade fragmentation, cyber shocks, material shortages, and regional instability may reshape costs, availability, design choices, and sourcing strategies.
Will regulation stabilise or remain volatile?	Planning systems, NCC requirements, professional registration, liability rules, AI regulation, and state-based approvals may either become clearer or more fragmented.
Will the profession polarise by scale and capability?	The market may favour large multidisciplinary firms with deep digital and compliance capacity, or small automated specialist studios and fluid project coalitions.
Will public trust in built outcomes deteriorate?	Defects, insolvencies, poor-quality development, AI errors, insurance issues, and fragmented accountability could undermine trust in built outcomes, or stronger regulation and evidence could restore it.

05 Scenarios

The scenarios for each workshop were developed from the agreed trends and uncertainties for that workshop. These inputs were provided to the AI model to generate an initial set of scenarios, which participants then tested for relevance and plausibility, tuned for fitness to purpose, and refined into a final set. Each workshop produced a final set of six to seven scenarios, which were consolidated through the same process as the trends and uncertainties, into the nine scenarios presented below.



Scenario 01

Design without Architects

Large parts of the built environment are led not by architects but by integrated platforms, developers, contractors, and productised systems.

By 2036, architecture has lost control over much of mainstream building production. Housing, logistics, education, health, and basic commercial work are delivered through standardised platforms run by contractors, manufacturers, developers, and software-enabled integrators, who offer speed, certainty, compliance, and lower cost through approved systems and repeatable templates.

Buildings are assembled from certified systems, insured components, approved suppliers, and pre-validated details, so design quality is constrained by what the system can insure, fabricate, ship, and warrant. Architects remain present, but often at the edges: as interface managers, façade stylists, compliance editors, or planning translators, or working only on prestige, civic, and complex-retrofit projects.

The profession becomes culturally visible but commercially narrower. This future is not anti-design; it treats much design as embedded product logic rather than bespoke service. Design judgement becomes optional unless someone

explicitly pays for it, and many architects feel they are servicing throughput rather than shaping the built environment.

What this means for architects

- Decide whether to compete with platforms, supply them, or specialise outside them
- Fight for early involvement before systems and suppliers lock in decisions
- Make design value defensible through outcomes that systems cannot provide
- Decide whether to defend design quality as a public good or accept and adapt to commodification

Scenario 02

The Fractured Profession

The title of “architect” survives but no longer describes one career. The market reorganises around project complexity, not practice size.

By 2036, the traditional role has fractured into separate careers. Some architects work as compliance and delivery specialists inside large project ecosystems. Others operate as spatial strategists at brief, policy, and precinct level. Others focus on public-facing concept work, storytelling, and identity. A smaller group builds the design systems, parametric libraries, and AI workflows the rest of the sector uses. This happened because regulation intensified, AI absorbed repeatable tasks, and clients demanded more bespoke solutions.

The large-versus-small distinction also fades. AI, automation, and specialist platforms let lean, highly toolled teams deliver large projects with repeatable, data-rich work once assumed to need large firms.

Stakeholder-heavy, politically sensitive, operationally intricate projects like hospitals, universities, and transport still demand deep teams, governance, and institutional trust. Scale matters less than coordination intelligence. The profession gains reach but loses shared norms, clear career progression, and agreement on who counts as the real architect.

What this means for architects

- Decide deliberately whether to compete as lead integrator, specialist contributor, or design-assurance actor
- Segment markets by complexity, repeatability, and stakeholder burden rather than size
- Build commercial, contractual, and systems-governance capability alongside design
- Expect registration and career structures to fragment; invent training models outside old office hierarchies.

Scenario 03

The Built Environment Orchestrator

Architects stop being mainly building designers and become trusted coordinators of spatial, environmental, and behavioural systems.

By 2036, the most valuable architects are not those who produce the most elegant objects, but those who can organise complexity across physical space, human behaviour, digital systems, climate performance, and long-term asset use. Architecture expands rather than contracts.

The profession absorbs work once seen as separate: operational planning, user analytics, adaptation strategy, digital-twin stewardship, carbon scenario modelling, and multi-stakeholder decision design. The main output is not drawings, and not even buildings, but structured spatial intelligence applied across projects, portfolios, and places.

Traditional design still exists, but as one part of a wider offer. This is plausible because data-rich environments and climate pressure make integrated spatial judgement more valuable than isolated form-making. It depends on architects claiming this ground before strategists, technologists, and asset managers do.

What this means for architects

- Broaden into advisory, systems, and operational domains beyond drawing production
- Treat spatial judgment, not deliverables, as the core asset
- Push for registration, education, and procurement reform that recognises the wider role
- Expect to compete with consultants, strategists, technologists, and asset managers, not just other designers

Scenario 04

Model is the Contract

Drawings have largely disappeared; architects work inside shared live models, and machine-readable regulation shapes projects as much as design does.

By 2036, the industry has moved beyond drawing sets, PDFs, and conventional documentation as its main currency. The legal, commercial, and technical centre of practice is now the federated model: live, machine-readable, and linked directly to approvals, procurement, fabrication, cost, carbon, and operations.

More legislation, codes, and planning overlays become machine-readable too, so briefing, feasibility, code checking, carbon reporting, and approval packaging run through regulatory-technology platforms. Clients expect instant model-based reporting, and builders prefer structured data over annotated drawings, so issuing drawings feels slow and secondary. Architects still shape space and form, but much of their value now lies in structuring information, setting design rules, defining tolerances, and controlling model integrity.

The real threat is not automation but disintermediation by those who own the rules engines and data environments every project passes through. The opportunity is to become translators between legal logic, public interest, building performance, and design quality.

What this means for architects

- Build capability in machine-readable legislation, rules-based compliance, and model governance
- Compete for influence earlier, where codes, digital standards, and approval logic are being written
- Expect new competitors from reg-tech, platform providers, and compliance-automation firms
- Reposition design expertise as interpretation, judgment, and exception-handling where rules alone fall short.

Scenario 05

Carbon Patchwork

Carbon becomes unavoidable, but Australia's response is politically uneven, inconsistent, and commercially contested.

By 2036, embodied carbon is central in some Australian markets and marginal in others. Some states, such as New South Wales, Victoria, as well as major institutions, and global investors demand carbon budgets, reuse strategies, material passports, and circularity reporting. Other jurisdictions are slow or resist, citing cost, housing affordability, regional development, or political backlash. Architects operate in a fractured regulatory landscape where the same design is exemplary in one state and commercially unviable in another.

Carbon pressure pushes reuse, lighter structural systems, material substitution, and more disciplined briefing, but it collides with safety requirements, insurance concerns, supply shortages, cost escalation, and accusations of greenwashing. Architects do not automatically gain authority: contractors, sustainability consultants, and digital platforms may dominate the carbon conversation, or architects may reclaim upstream relevance by linking carbon to form, lifespan, procurement, and social value.

Long-term climate logic collides with short-term procurement, consumer price sensitivity, and election cycles, so progress continues, but not as a clean arrow forward.

What this means for architects

- Integrate carbon into concept design, briefing, and procurement, not as a late validation step
- Design for multiple carbon-regulatory environments at once
- Translate carbon into cost, risk, insurance, finance, and asset-value terms
- Build adaptive reuse and substitution capability as a hedge, and do not assume progress is politically irreversible

Scenario 06

Uneven Climate Adaptation

Climate disruption increasingly shapes Australian development, but adaptation is patchy, politicised, and far from settled.

By 2036, climate pressures increasingly intrude on investment, insurance, infrastructure, and land-use decisions, but unevenly. Some jurisdictions move early on retreat, heat-proofing, and resilience standards. Others delay, negotiate exceptions, or keep rebuilding in exposed areas because the political and economic costs of harder choices stay too high.

As disasters accumulate, the built environment becomes a map of unequal adaptation: some assets are reinforced, some retrofitted, some stranded, and some stuck in a cycle of repair and exposure. Architecture is caught between urgency and institutional inertia. Schools, hospitals, aged care, transport interchanges, sports venues, tourist assets, and housing all face climate-related design pressure, yet no coherent national response settles what should be protected, relocated, redesigned, or relinquished.

Architects gain relevance where they can turn contested risk into legible spatial options but face hard ethical terrain: helping adapt assets that may not be viable long-term or taking part in decisions about which places remain investable at all.

What this means for architects

- Build capability in scenario planning, adaptation pathways, and design under partial failure, not ideal resilience
- Expect more triage, retrofit, temporary use, and staged withdrawal, not only permanent new builds
- Develop ethical and advisory positions on where not to rebuild, not just how
- Work across wider typologies where climate stress becomes operationally critical

Scenario 07

Licence to Proceed

Many projects are feasible and funded but stall because social legitimacy has become an unstable, volatile constraint.

By 2036, many projects are technically feasible and financially viable yet struggle to proceed because social legitimacy has become unstable. Trust in institutions, developers, and formal consultation keeps eroding, while public channels for resistance become faster, louder, and more networked.

Projects of many kinds, not only housing but sports and entertainment precincts, health campuses, transport, schools, cultural buildings, and energy infrastructure, face escalating contest over who benefits, who bears impacts, and whose identity is displaced. Some clients respond with deeper engagement and more adaptive design; others treat participation as reputation management and trigger backlash.

Governments sometimes override resistance and sometimes retreat. Projects increasingly succeed or fail on their ability to build enough public legitimacy to survive political cycles, media pressure, and organised opposition. Architects are not civic heroes by default, but they are among the few who can convert abstract conflict into visible trade-offs, alternative propositions, and credible public narratives.

What this means for architects

- Treat public legitimacy as a material project condition, not a peripheral consultation exercise
- Build skills in contested-brief design, visual negotiation, and option-testing under political pressure
- Apply these beyond housing, to major civic, sports, and infrastructure projects
- Advise clients on what is socially survivable, not only technically compliant or commercially optimal

Scenario 08

The Great Tech Reversal

After a major AI or quantum-enabled failure, society turns sharply against automated design systems.

By 2036, a sequence of technology failures triggers a political backlash. A quantum-enabled cyber breach exposes building data, AI-generated compliance errors contribute to serious defects, and automated tools are blamed for unsafe or socially damaging outcomes.

Governments respond with hard restrictions: explainability requirements, human sign-off rules, bans on some autonomous design tools, strict data-localisation laws, and criminal liability for reckless reliance on AI.

Some clients welcome the return of human accountability; others resent the cost and delay. Architects regain authority in theory, but inherit heavier liability, slower processes, and intense scrutiny over every technology-assisted decision. The episode resets the automation trajectory rather than ending it, and rewards firms that kept human-verifiable methods alive.

What this means for architects

- Maintain human-verifiable design and documentation processes
- Build cyber, data-governance, and AI-audit capability
- Prepare for sudden restrictions on tools now considered normal
- Use human judgement as a liability shield, not just a brand claim

Scenario 09

Licenced or Liberated

The legal status of architect becomes a contested battleground between consumer protection, competition, and design quality.

By 2036, the word architect is no longer a settled professional asset. After defects, climate failures, AI errors, and insurance disputes expose gaps in accountability, some Australian jurisdictions strengthen professional regulation. Others weaken it, arguing that architecture is anti-competitive and that digital platforms, engineers, certifiers, project managers, and design-build providers can deliver equivalent outcomes faster and cheaper.

The profession fragments: regulated architects dominate high-risk work, while lightly regulated design service providers capture lower-complexity markets. The public gains more choice, but also more confusion about quality, liability, and accountability. Registration, competency standards, and the boundary of reserved practice become live political battles rather than settled background.

What this means for architects

- Defend professional value through evidence of quality, safety, and accountability
- Prepare for divergent regulatory settings across states and territories
- Distinguish architectural judgement from generic design production
- Build public-facing trust, not just industry-facing credibility

Appendix A – All Workshop Outputs

Trends

1. Climate change & climate resilience
2. Technological change; Different procurement models
3. Productivity-centred delivery models, project delivery process fragmentation, Δ client expectations
4. Data modelling
5. Sustainability focus → Regenerative futures – lower-energy building expectations; embodied carbon enters practice ; circular construction logic; circular construction logic
6. Social ethics e.g. Ageing and Changing Demand
7. Prefab in housing, increasing cost of construction
8. Counter-globalisation
9. Regulatory changes on architects, accountability
10. More international competition
11. Housing Supply Imperative (affordability) Changing construction techniques e.g., modular construction, 3D printing, prefabrication adoption
12. De-globalisation/mentality shift (looking inward) – recentralisation of supply chain (materials & talent)
13. Skills shortage – restricted talent pool (more local focus) – quality of grads
14. Increasing cost of construction (materials & labour)
15. Changing/shifting regulatory expectations in skillset of architect (fragmentation) i.e., increasing risk and liability for architects
16. Generative AI development e.g., image generation tech – changing visualisation of projects, bid proposals, management, admin
17. Automation of tasks with objective but impactful outcomes e.g., code compliance; impacts career trajectory esp. for juniors
18. Increasing/enhancing skillset e.g., vibe coding in-house solutions
19. Democratisation of knowledge & increasing accessibility of data & analyses
20. Increased client expectations (faster, more data/detail)
21. Climate-responsive design (retrofit, reuse, embodied carbon)
22. Compliance Gets More Complex (Time Commitment required)
23. Fee compression & increased regulatory burden
24. Narrowing of the architect's role
25. Automation of work
26. AI replacing labour
27. Smarter use of data – recreation of data
28. Globalisation & offshoring
29. Offsite in every way – reduction of labour force
30. Prefabrication
31. Adaptive reuse
32. Use of sustainable materials
33. Wellness & human-centred design
34. Data-rich BIM content
35. Impact of climate change on design choices
36. Regulatory instability impacting design & future planning e.g., change of government & NCC
37. Higher (relative) density projects
38. Increasing build to lease housing – change in ownership models → property as a service e.g., office suites, apartments i.e., institutionalized property → impact of outcomes on society
39. Retrofit Over New Build – Digital Twins & BIM Integration

Uncertainties

40. Source of prefab
41. Disasters/global events; Climate Resilience Premium or Baseline?
42. Impact of AI & work role of humans; AI Margin or Commoditiser?
43. How to train/develop future workforce; Workforce Renewal or Shortfall
44. Emerging competitors from outside sector
45. Legislation – domestic policy; Housing Reform Breakthrough; Embodied Carbon Regulation Pace
46. Software environment
47. Material safety & availability in future; Cost uncertainty; Construction Sector Stability
48. Global Capital Geography; Industrialised Building Scale-Up
49. Economic Landing Conditions
50. Social Licence for Density
51. Geopolitical tensions/Global disruptions
52. Source of talent & resources – who will fill the slack?
53. Quality of education & content – job uncertainty and role uncertainty for grads; lack of fit-for-purpose skillset (may need to retrain grads)
54. What is or will be the role of the architect? Will creativity remain core work? How will the role expand or shift?
55. Rate of AI acceleration – where to invest and commit?
56. Increasingly fragmented and multiple systems → need for centralisation; but multi-cloud (often incompatible)
57. How will collaboration & communication with clients and other stakeholders change and evolve?
58. How will fees be charged? What are economically sustainable business models? How Will Clients Define Value?
59. What will the work-life balance of architects be like?
60. Ethics/morality of using AI – including costs (environmentally, economically).
61. Uncertainty of regional growth
62. Built environment quality and aesthetics if architectural work disperses & if modularisation (pattern book)
63. Extent that AI will automate existing workflow processes e.g., improve efficiency
64. Extent that AI will increase scope of work
65. Risk reduction through access to knowledge – e.g., what do insurance models look like? (can be opposite i.e., higher insurance premiums if AI is not used for checking)
66. Circularity mandates
67. Changes around pricing e.g., carbon/biodiversity credits
68. Drones & robots in construction – actively participating or observing/keeping track
69. If design for X occurs → subsequent skills gap? (X = assembly, deconstruction for ex.)
70. Supply chain shocks (e.g., 3 in last 5 years) – design for supply chain uncertainty
71. Future generation of staff motivation & needs
72. Geopolitical events e.g., impact on supply chain (stability, cost), values, policy
73. How to educate future designers & architects – how to teach judgment & decision-making → what will be the role of the architect?
74. Role of liability re: AI – who is accountable/responsible for decisions?
75. Traceability and transparency of information
76. Practice scale polarization e.g., winner takes all, free-form co-op w/ small practices
77. Trust in Built outcomes

Scenarios

Code in the Loop

By 2036, architecture may be shaped by machine-readable regulation as much as by design intent—without the profession necessarily controlling either.

Over the next decade, one plausible fork in the road is that legislation, codes, planning overlays, and compliance pathways become increasingly machine-readable. This does not mean the law becomes simpler. It means more of it is translated into structured rules that software can interpret, test, and apply at speed. Parts of briefing, feasibility, code checking, carbon reporting, accessibility review, and approval packaging could be automated or semi-automated through regulatory technology platforms. Some clients and governments may embrace this as a productivity breakthrough; others may find that machine-readable rules harden ambiguity, privilege measurable criteria over spatial judgement, and increase dependence on proprietary compliance systems.

For architects, the threat is not simply automation. It is disintermediation by those who own the rules engines, software pipelines, and data environments through which projects now pass. The opportunity is different: architects could become translators between legal logic, public interest, building performance, and design quality. But that requires a profession willing to engage the structure of regulation itself, not just respond to it after the fact. In this future, architectural agency may partly depend on whether the profession helps shape computable regulation—or is forced to work inside it.

Key Drivers

- Software environment
- Regulatory changes on architects, accountability
- Data modelling

Implications for Architects

- Build capability in machine-readable legislation, rules-based compliance, and regulatory data workflows.
- Compete for influence earlier, where codes, digital standards, and approval logic are being written.
- Expect new competitors from reg-tech, platform providers, and compliance automation firms.
- Reposition design expertise as interpretation, judgement, exception-handling, and public-interest mediation where rules alone are insufficient.

2. Managed Retreat, Unevenly

Climate disruption increasingly shapes Australian development decisions, but adaptation is patchy, politicised, and far from settled.

A more serious climate future for 2036 is not one in which resilience has neatly become the national organising logic. It is one in which climate pressures increasingly intrude on investment, insurance, infrastructure, and land-use decisions—but unevenly. Some jurisdictions move early on retreat, adaptation, heat-proofing, and resilience standards. Others delay, negotiate exceptions, or continue rebuilding in exposed areas because the political and economic costs of harder choices remain too high. As disasters accumulate, the built environment becomes a map of unequal adaptation: some assets are reinforced, some are retrofitted, some are stranded, and some continue in a cycle of repair and exposure.

Architecture in this future is caught between urgency and institutional inertia. There is demand for resilience expertise, but not always willingness to fund or act on it early enough. Schools, hospitals, aged care, logistics, transport interchanges, sports venues, tourist assets, and housing all face climate-related design pressures, yet no coherent national response fully settles what should be protected, relocated, redesigned, or relinquished. Architects gain relevance where they can turn contested risk into legible spatial options. But the profession also faces difficult ethical terrain: helping clients adapt assets that may not be viable long-term or participating in decisions about which places remain investable at all.

Key Drivers

- Climate change & climate resilience
- Disasters / global events
- Climate Resilience Premium or Baseline?

Implications for Architects

- Build capability in scenario planning, adaptation pathways, and design under conditions of partial failure rather than ideal resilience.
- Expect more work on triage, retrofit, temporary use, and staged withdrawal—not only on permanent new-build responses.
- Develop stronger ethical and advisory positions on where not to rebuild, not just how to rebuild.
- Work across wider typologies where climate stress is becoming operationally critical.

3. The Fractured Project

By 2036, the project may no longer have a single centre of authorship, responsibility, or control.

This scenario extends a pattern already visible in pockets of the market: the disaggregation of project delivery into shifting constellations of consultants, fabricators, digital platforms, specialist advisors, off-site manufacturers, contractor-led teams, and client-side integrators. Over the next decade, that fragmentation could become normal rather than exceptional. Instead of a relatively stable chain in which architects design and others follow, projects may be assembled through temporary networks in which design authority, liability, technical control, and commercial leverage are split across many actors.

The consequences are not merely organisational. They affect what design becomes. On some projects, concept authorship may sit with architecture but technical development with manufacturers and AI-assisted compliance tools. On others, contractor-led delivery models may reduce architects to one expert voice among many. In specialist sectors—health, infrastructure-adjacent civic work, stadia, logistics, education—the project could increasingly be governed through integrated but not necessarily architect-led systems. This future is plausible precisely because it does not require a total industry revolution; it only requires fragmented models to scale. For architects, the strategic question is acute: where in the fractured chain can the profession still hold authority, continuity, and value?

Key Drivers

- Different procurement models
- Project delivery process fragmentation
- Emerging competitors from outside sector

Implications for Architects

- Decide deliberately whether to compete as lead integrators, specialist contributors, or design-assurance actors.
- Build commercial, contractual, and systems-governance capabilities alongside design capability.
- Develop methods to preserve design continuity across fragmented teams, tools, and procurement stages.
- Recognise that defending legacy role boundaries may be less useful than identifying new leverage points.

4. Licence to Proceed

By 2036, many projects are technically feasible and financially viable, but struggle to proceed because social legitimacy has become unstable.

The fork in the road behind this scenario is not that communities suddenly become more empowered in a healthy, deliberative way. It is that trust in institutions, developers, and formal consultation processes continues to erode while public channels for resistance become faster, louder, and more networked. In that environment, projects of many kinds—not only housing, but sports and entertainment precincts, health campuses, transport projects, schools, cultural buildings, and energy infrastructure—face escalating contest over who benefits, who bears impacts, and whose identity is displaced.

By 2036, social acceptability has become neither a soft aspiration nor a solved capability. It is a volatile constraint. Some clients respond with deeper engagement and more adaptive design processes; others treat participation as reputation management and trigger backlash. Governments sometimes override resistance; sometimes they retreat. Projects increasingly succeed or fail on their ability to build enough public legitimacy to survive political cycles, media pressure, and organised opposition. Architects in this future are not civic heroes by default. But they may be one of the few actors able to convert abstract conflict into visible trade-offs,

alternative propositions, and more credible public narratives. Their influence grows where legitimacy itself becomes part of delivery risk.

Key Drivers

- Changing client expectations
- Social ethics / communities speaking up
- Social Licence for Density

Implications for Architects

- Treat public legitimacy as a material project condition, not a peripheral consultation exercise.
- Build skills in contested-brief design, visual negotiation, and option-testing under political pressure.
- Apply these capabilities beyond housing to major public, civic, sports, and infrastructure-related projects.
- Advise clients on what is socially survivable, not only technically compliant or commercially optimal.

5. Licensed by Carbon

Carbon increasingly operates as a hard constraint on what gets specified, funded, approved, and rebuilt.

In this future, embodied carbon does not become a neat, universally accepted framework. It becomes a harder-edged market and regulatory filter that some sectors adopt faster than others. Public projects, institutional portfolios, infrastructure-linked work, and global capital-backed developments increasingly require carbon disclosure and threshold management, while other parts of the market resist, delay, or game the system. The result is not a fully decarbonised profession but a two-speed industry in which carbon competence materially affects access to certain projects and clients.

This has broad consequences across typologies. Fit-outs, schools, commercial refurbishments, logistics facilities, civic buildings, stadia, and major adaptive reuse projects all become sites of carbon negotiation. Carbon pressure pushes reuse, lighter structural systems, material substitution, circularity, and more disciplined briefing. But it also produces tension: safety requirements, insurance concerns, supply shortages, cost escalation, and accusations of greenwashing all complicate decision-making. Architects do not automatically gain authority from this shift. In some contexts, contractors, sustainability consultants, and digital platforms may dominate the carbon conversation. In others, architects may regain upstream relevance by linking carbon decisions to form, lifespan, procurement, and social value.

Key Drivers

- Sustainability focus / regenerative futures
- Embodied Carbon Regulation Pace
- Material safety & availability / cost uncertainty

Implications for Architects

- Integrate carbon thinking into concept design, procurement strategy, and briefing rather than treat it as a later validation step.
- Build stronger capability in adaptive reuse, material substitution, and carbon trade-off communication.
- Expect disputes among carbon, cost, durability, and compliance objectives rather than neat optimisation.
- Use carbon literacy to reclaim earlier influence in project definition and not just downstream design response.

6. Synthetic Practice

By 2036, AI may not replace architects wholesale, but it could reshape practice so deeply that the profession no longer recognises its former centre.

A longer-horizon AI scenario is not simply faster drafting or cheaper documentation. It is a future in which synthetic design systems, project copilots, generative coordination tools, procurement intelligence, and automated compliance environments are embedded across the industry. In that world, the issue is not whether humans remain involved—they do—but what parts of practice remain distinctly architectural. Routine production, option iteration, coordination, visualisation, specification support, and parts of feasibility could

become dramatically less labour-intensive. That may improve margins for some firms, but it may also hollow out traditional pathways for training, judgement formation, and professional progression.

The more serious uncertainty is cultural and structural. If junior work is increasingly automated, how does expertise develop? If clients can access high-speed synthetic design environments directly, what remains proprietary about practice? If contractors, software firms, and developers can bundle design intelligence into vertically integrated offers, where does the architect sit? By 2036, the profession could become more strategic—or more marginal—depending on how it responds. The risk is not immediate extinction. It is a slower redefinition in which the economic centre of practice shifts away from where the profession historically built both revenue and capability.

Key Drivers

- Impact of AI & work role of humans
- Workforce Renewal or Shortfall
- Technological change / software environment

Implications for Architects

- Redesign training models so expertise can still develop when routine production work diminishes.
- Build value in judgement, briefing, synthesis, ethics, and decision-making under ambiguity.
- Prepare for business-model pressure as clients question fees for tasks machines increasingly assist with.
- Decide whether the firm will own AI-enabled workflows, rely on external platforms, or become dependent on them.

7. Model Is the Contract

Drawings have largely disappeared, and architects work inside shared live models rather than producing static packages.

By 2036, the industry has largely moved beyond drawing sets, PDFs, and conventional documentation as its main currency. The legal, commercial, and technical centre of practice is now the federated model: live, machine-readable, and directly linked to approvals, procurement, fabrication, cost, carbon, and operations. Clients expect instant model-based reporting, and builders prefer structured data over annotated drawings. Regulators have adapted unevenly, but enough of the market has shifted that “issuing drawings” feels slow and secondary. Architects still shape space and form, but much of their value now lies in structuring information, setting design rules, defining tolerances, and controlling model integrity. Many older firms struggle because their business systems, staffing, and fee models were built around document production.

Key Drivers

- Automation of objective tasks
- Increasing client expectations
- Increasingly fragmented systems vs need for centralisation

Implications for Architects

- Core output shifts from drawings to model governance, design logic, and structured information.
- Junior roles based on drafting and document production shrink sharply.
- Fees increasingly attach to data reliability, coordination control, and downstream usability.
- Practices need new legal positions on authorship, liability, and model ownership.

8. The Architect Splits

The profession breaks into separate roles: system designers, compliance custodians, spatial strategists, and brand creators.

The title “architect” still exists in 2036, but it no longer describes one recognisable career. The old, bundled role has fractured. Some architects operate as compliance and delivery specialists inside large project ecosystems. Others become spatial strategists working at brief, policy, and precinct level. Others focus on public-facing concept work, storytelling, and identity. A smaller group builds and manages design systems, parametric libraries, and AI workflows used by the rest of the sector. This fragmentation happened because regulation intensified, AI absorbed repeatable tasks, and clients stopped paying one consultant to do everything. The result

is a more specialised but less coherent profession. It offers more entry points, but fewer shared norms, less clear career progression, and growing tension over who is the “real” architect.

Key Drivers

- What is the role of the architect?
- Automation of tasks and AI acceleration
- Changing regulatory expectations and liability

Implications for Architects

- Career paths become specialised much earlier, with less linear progression.
- Professional institutes and registration systems face pressure to recognise multiple practice types.
- Firms reorganise around mixed specialist teams rather than generalist project architects.
- The profession risks losing a shared identity, even as its market footprint grows.

9. Design Without Architects

Large parts of the built environment are no longer led by architects at all, but by integrated platforms, developers, and productised systems.

In this scenario, architecture does not disappear, but it loses control over much of mainstream building production. Housing, logistics, education, health, and basic commercial work are increasingly delivered through standardised platforms run by contractors, manufacturers, developers, and software-enabled integrators. These groups offer clients speed, certainty, compliance, and lower cost through approved systems and repeatable design templates. Architects remain present, but often at the edges: reviewing, customising, advising on planning, or working only on prestige, civic, complex retrofit, and exceptional site conditions. The profession becomes culturally visible but commercially narrower. This future is not anti-design; it simply treats much design as embedded product logic rather than bespoke professional service. Many architects find themselves displaced from the centre of delivery.

Key Drivers

- Modular construction and prefabrication
- Skills shortage
- How clients define value and fees

Implications for Architects

- Large volumes of routine project work migrate to non-traditional market actors.
- Firms need to decide whether to compete with platforms, supply them, or specialise outside them.
- Design value becomes harder to defend unless linked to outcomes that systems cannot provide.
- Registration alone is no longer enough to secure relevance.

10. The Civic Return

After years of climate shocks and public dissatisfaction, society gives architects a broader civic mandate again.

By 2036, repeated heat events, flood losses, insurance retreat, housing failure, and poor-quality rapid development have produced a political shift. Public debate turns against short-term delivery logic and toward long-term settlement quality. Governments expand design review, climate adaptation mandates, and public-interest standards across housing, infrastructure, and urban renewal. Architects regain influence, but not as stylists. They are expected to work as stewards of public value: balancing resilience, liveability, beauty, repair, and social legitimacy. The profession becomes more trusted, but also more exposed. Architects are drawn deeper into public consultation, regional planning, retrofit strategy, and whole-of-life thinking. This is not a return to old authority. It is a new social licence, granted on the condition that the profession can prove it serves more than private clients.

Key Drivers

- Climate-responsive design
- Built environment quality and aesthetics
- How clients and society define value

Implications for Architects

- Public-interest capability becomes a commercial as well as ethical asset.
- Firms need stronger skills in engagement, adaptation planning, and post-occupancy evidence.
- Beauty and quality return as explicit policy issues, not optional extras.
- The architect's role expands beyond project delivery into civic mediation and stewardship.

11. Synthetic Studio Economy

Most firms are very small, highly automated, and globally capable, with AI doing much of the production once handled by teams.

In this future, the classic medium-sized practice has hollowed out. A handful of partners or even solo practitioners can now run work that once required a much larger office, because AI agents and workflow automation handle visualisation, options, coordination support, scheduling, client reporting, compliance pre-checking, and much routine production. This creates an explosion of micro-practices and loose project coalitions. The market becomes more fluid and entrepreneurial, but also more unstable. Talent moves between firms, platforms, and freelance networks. Graduates find entry harder because firms hire fewer juniors for production tasks. The profession becomes more distributed, less office-based, and less tied to geography. It is efficient, but mentorship, quality control, and long-term capability formation become major weaknesses.

Key Drivers

- Generative AI development
- Increasing/enhancing skillsets and in-house tools
- Quality of education and graduate readiness

Implications for Architects

- Small practices can compete at higher levels, but only with strong digital systems.
- Employment becomes less secure and more portfolio based.
- The profession must invent new apprenticeship and training models outside old office structures.
- Quality assurance and trust become major differentiators in a crowded automated market.

12. The Licensed Spatial Intelligence Profession

Architects stop being primarily building designers and become trusted coordinators of spatial, environmental, and behavioural systems.

By 2036, the most valuable architects are not those who produce the most elegant objects, but those who can organise complexity across physical space, human behaviour, digital systems, climate performance, and long-term asset use. In this world, architecture expands rather than contracts. The profession absorbs work once seen as separate: operational planning, user analytics, adaptation strategy, digital twin stewardship, carbon scenario modelling, and multi-stakeholder decision design. The output is not mainly drawings, and not even mainly buildings. It is structured spatial intelligence applied across projects, portfolios, and places. Traditional design still exists, but it is only one part of a wider offer. This scenario is plausible because data-rich environments and climate pressure make integrated spatial judgement more valuable than isolated form-making.

Key Drivers

- Democratisation of knowledge and data
- Collaboration and communication with clients and stakeholders
- What will the role of the architect be?

Implications for Architects

- The profession broadens into advisory, systems, and operational domains.
- Registration, education, and procurement frameworks would need major reform.
- Firms may compete with strategists, technologists, and asset managers, not just other designers.
- Spatial judgement becomes the core asset, while traditional deliverables become secondary.

13. Beauty Becomes Scarce

The industry delivers more building output than ever, but genuine design quality becomes a rare premium rather than a common expectation.

In this scenario, Australia solves parts of its housing and infrastructure delivery problem through standardisation, accelerated approvals, modular systems, and automated documentation. Projects move faster and more gets built. But a quieter shift occurs: most of the everyday built environment becomes technically competent yet visually thin, repetitive, and weakly connected to place. The market learns to accept adequacy rather than richness. High design quality does not vanish, but it retreats into limited civic projects, luxury commissions, and rare institutions willing to pay for it. The deeper question is cultural, not technical: society no longer agrees that beauty, delight, and public character are necessary at scale. Architects still work, but many feel they are servicing throughput more than shaping civilisation.

Key Drivers

- Modularisation and pattern-book logic
- Built environment quality and aesthetics
- Increasing cost pressures and fee pressure

Implications for Architects

- The profession must decide whether to defend design quality as a public good or accept commodification.
- Firms may split between high-volume technical service and rare high-design work.
- Arguments for beauty, identity, and civic character need new economic and social language.
- This future raises existential questions about what the profession is for.

14. Licensed or Liberated

The profession's legal status becomes a contested battleground between consumer protection, market competition, and design quality.

By 2036, the word “architect” is no longer a settled professional asset. Some Australian jurisdictions strengthen professional regulation after defects, climate failures, AI errors, and insurance disputes expose gaps in accountability. Others weaken protections, arguing that architecture is anti-competitive and that digital platforms, engineers, certifiers, project managers, and design-build providers can deliver equivalent outcomes faster and cheaper. The profession fragments: regulated architects dominate high-risk work, while lightly regulated “design service providers” capture lower-complexity markets. The public gains more choice, but also more confusion about quality, liability, and accountability.

Key Drivers:

- Regulation of the profession itself
- Trust in built outcomes
- Fee compression and increased regulatory burden

Implications for Architects:

- Defend professional value through evidence of quality, safety, and accountability.
- Prepare for different regulatory settings across states and territories.
- Distinguish “architectural judgement” from generic design production.
- Build public-facing trust, not just industry-facing credibility.

15. Complexity Splits the Market

The industry reorganises around project complexity, not practice size.

By 2036, the old distinction between large and small practices has become less useful. AI, automation, offshore production, and specialist platforms allow small expert teams to deliver technically repeatable work at high speed, including some project types once assumed to require large firms. The real split is complexity: stakeholder-heavy, politically sensitive, operationally intricate projects still require deep teams, governance, consultation, and institutional trust. Hospitals, universities, justice, transport, and complex urban renewal remain

difficult to compress. Data centres, industrialised housing, and repeatable commercial assets can be produced by lean, highly toolled teams. Scale matters less than coordination intelligence.

Key Drivers:

- AI-enabled productivity and specialist tooling
- Practice scale polarisation
- Project complexity versus project size

Implications for Architects:

- Segment markets by complexity, repeatability, and stakeholder burden.
- Build tools for repeatable project types or capability for complex governance-heavy work.
- Avoid assuming large firms automatically own large projects.
- Develop expertise in coordination, consultation, and operational complexity.

16. The Contractor's Architect

Design authority shifts decisively toward contractors, manufacturers, insurers, and platform owners.

By 2036, architecture's centre of gravity has moved away from independent design practice. Housing cost pressure, insurance risk, labour shortages, and speed-to-market demands push clients toward contractor-led and manufacturer-led delivery. Buildings are assembled from certified systems, insured components, approved suppliers, and pre-validated details. Architects are still present, but often as interface managers, façade stylists, compliance editors, or planning translators. Design quality becomes constrained by what the system can insure, fabricate, ship, and warrant. The scary part is not that buildings become ugly; it is that design judgement becomes optional unless someone explicitly pays for it.

Key Drivers:

- Offsite construction and prefabrication
- Insurance-driven risk reduction
- Narrowing of the architect's role

Implications for Architects:

- Fight for early involvement before systems and suppliers lock in decisions.
- Build expertise in industrialised delivery without surrendering design agency.
- Define where architectural judgement creates measurable value.
- Expect some traditional design roles to migrate to contractors and manufacturers.

17. The Carbon Patchwork

Carbon becomes unavoidable, but Australia's response is politically uneven, inconsistent, and commercially contested.

By 2036, embodied carbon is central in some Australian markets and marginal in others. New South Wales, Victoria, major institutions, and global investors may demand carbon budgets, reuse strategies, material passports, and circularity reporting. Other jurisdictions slow or resist, citing cost, housing affordability, regional development, or political backlash. Architects operate in a fractured regulatory landscape where the same design may be exemplary in one state and commercially unviable in another. Long-term climate logic collides with short-term procurement, consumer price sensitivity, and election cycles. Progress continues, but not as a clean arrow forward.

Key Drivers:

- Embodied carbon and circularity mandates
- Regulatory instability and politics
- Client willingness to pay for long-term value

Implications for Architects:

- Design for multiple carbon-regulatory environments.
- Translate carbon into cost, risk, insurance, finance, and asset-value terms.

- Build retrofit and reuse capability as a hedge against new-build uncertainty.
- Avoid assuming that sustainability progress is politically irreversible.

18. The Hollowed Pipeline

AI and outsourcing erase the work that once trained architects to think.

By 2036, the profession faces a capability crisis. First outsourcing, then AI, stripped away much of the repetitive documentation, coordination, scheduling, checking, and drafting work that once built architectural judgement. Graduates now review AI outputs, consultant models, automated code checks, and offshore documentation without having learned enough by doing. Some firms respond with deliberate apprenticeship, simulation studios, red-team reviews, and slower supervised learning. Others run leaner, faster, and more dangerously. The profession discovers that efficiency can destroy its own future talent base if no one protects the messy middle where judgement is formed.

Key Drivers:

- AI automation of workflow processes
- Globalisation and offshoring
- Education of future designers and architects

Implications for Architects:

- Rebuild training around judgement, critique, checking, and accountability.
- Treat graduate development as strategic infrastructure, not overhead.
- Create supervised AI workflows that teach, not just accelerate.
- Price the cost of professional formation into business models.

19. The Great Tech Reversal

After a major AI or quantum-enabled failure, society turns sharply against automated design systems.

By 2036, a sequence of technology failures has triggered a political backlash. A quantum-enabled cyber breach exposes building data, AI-generated compliance errors contribute to serious defects, and automated development tools are blamed for unsafe or socially damaging outcomes. Governments respond with hard restrictions: explainability requirements, human sign-off rules, bans on some autonomous design tools, strict data-localisation laws, and criminal liability for reckless reliance on AI. Some clients welcome the return of human accountability; others resent the cost and delay. Architects regain authority in theory, but inherit heavier liability, slower processes, and intense scrutiny over every technology-assisted decision.

Key Drivers:

- Political backlash against AI
- Quantum computing and cyber-security shock
- Liability, traceability, and trust in built outcomes

Implications for Architects:

- Maintain human-verifiable design and documentation processes.
- Build cyber, data-governance, and AI-audit capability.
- Prepare for sudden restrictions on tools now considered normal.
- Use human judgement as a liability shield, not just a brand claim

