



Australian
Institute of
Architects

The Climate Action and Sustainability Taskforce





De-carbonising the construction industry by 2030.

This proposal is an urgent appeal from the Climate Action and Sustainability Taskforce (CAST) of the Australian Institute of Architects.

We present, here, an offer to collaborate with the Institute's taskforce, outlining a rationale and recommendations to ensure the Institute and its partners are positioned as a frontrunner of sustainable innovation.

The Taskforce is committed to supporting the architectural profession in a decisive and active stance with regard to the twin crises of climate change and biodiversity loss.

The complexity of sustainable development and climate change mitigation/adaptation calls for coordinated transformative change across all sectors. This paper points to those broad systemic shifts, while articulating the critical first step – which is to commit to de-carbonising the construction industry by 2030.

This is an opportunity for architectural suppliers, in partnership with the Australian Institute of Architects, to show leadership across the community and join with us on this journey – an opportunity like no other that has ever presented.

Introducing the Taskforce

In 2020, the Australian Institute of Architects launched a national **Climate Action and Sustainability Taskforce** to scope, develop and recommend a range of policies and programs that will establish initiatives to create practical solutions for architects to deploy to address the challenges posed by climate change, population growth and the imperative for more connected, healthier communities that support and promote sustainability in architectural practice and in the community.

The built environment accounts for 39% of all carbon emissions, globally, with operational emissions accounting for 28%. Therefore, we have no choice but to recognise that architects are positioned as major contributors to the problem of climate change – and therefore a potential major contributor to its solution. We must take decisive, urgent action to reduce carbon emissions and help shape a different future.

The twin crises of climate change and biodiversity loss are the most urgent problems of our time. CAST are committed to supporting the Institute to realise its potential as a global leader with regard to sustainability as “peak body advocate” for an integrated, coordinated and holistic campaign to tackle climate change, starting with de-carbonisation of the construction industry by 2030.

The Taskforce has three urgent priorities:

1. Positioning the Institute and its partners as a champion for sustainability and as a global leader.
2. The articulation of an integrated and holistic sustainability agenda with specific targets for impact.
3. Commitment to the goal of a zero-carbon construction industry by 2030.

The activities of the taskforce include:

- Identifying direct actions that members can take on to address climate change and promote sustainability across the architectural profession.
- Developing and launching a toolkit that will enable architects to reduce carbon outputs and enhance sustainability goals.
- Developing a Design Excellence Policy for the profession that has sustainability and designing for country as fundamental principles.
- Leading the development of a Zero Carbon Australian Standard for the built environment. .
- Liaising with sustainability groups and organisations around Australia to share information and research on activities at a local level.
- Drafting policies directed to government (subject to National Council endorsement) on actions needed to address climate change.
- Provide input into national policy and programs.

The taskforce will also:

- Provide specific guidance on issues and barriers that affect the implementation of sustainable practice.
- Identify actions that would support increased awareness of the need for resilient communities and actions that can be taken to mitigate issues around climate change.
- Consider opportunities for members to contribute to the implementation of sustainability initiatives within architectural offices.
- Identify opportunities to recognise leadership within the architectural profession for developing initiatives that contribute to low carbon environments and improved sustainability outcomes.
- Provide comment on any other issue or activity the taskforce identifies should be under consideration.

Introducing the Taskforce Team



**Professor Helen Lochhead, LFRAIA,
Pro Vice-Chancellor, Precincts, UNSW Sydney
2019 National President, Australian Institute of Architects**

Chair, Climate Action & Sustainability Taskforce

Professor Helen Lochhead is an Australian architect, urban and landscape designer. She is Pro Vice-Chancellor, Precincts UNSW Sydney and expert advisor to government and industry. Formerly, Helen was Dean, Faculty of the Built Environment, UNSW, Sydney, Australia and 2019 National President of the Australian Institute of Architects. An architect and urbanist, combining professional practice, board and academic roles for over 25 years Her career has focused on the inception, planning, design and delivery of complex multidisciplinary projects and public works ranging from a 5-year city improvements program for the City of Sydney leading up to the 2000 Olympics to major urban renewal and waterfront projects.

She held a number of influential positions in the State Government and the City of Sydney including Executive Director roles at Sydney Olympic Park Authority and Sydney Harbour Foreshore Authority, and was most recently Deputy Government Architect in NSW.

Professor Lochhead maintains a high profile in the profession and her professional contribution has been recognized through many industry awards including AIA and AILA Urban Design and Sustainability Awards, the AIA Marion Mahoney -Griffin Prize, the NAWIC Vision Award for leadership in the construction industry and the AIA NSW President's Prize.

A graduate of both the University of Sydney and Columbia University in New York, Professor Lochhead's career has combined professional practice and teaching both in Australia and the United States, as an Adjunct Professor at the University of Sydney and also as visiting academic at Harvard, MIT and Columbia Universities. In 2014-15 Helen was also the Lincoln/Loeb Fellow at the Graduate School of Design at Harvard University and the Lincoln Institute of Land Policy.



**Professor Deo Prasad AO FRAIA, FSTE
Scientia Professor at UNSW**

Scientia Professor Deo Prasad AO FRAIA is recognised as a leader in the field of sustainable buildings and cities and among the leading advocates for sustainability in Australia, with his contributions having been widely acknowledged at all levels of government and professions in Australia. Among his many awards, in 2006 he received the Royal Australian Institute of Architect's National Education Award for contribution to 'sustainability education, research and design'. In 2004, he received the NSW State Government's individual GreenGlobe Award for 'leadership and commitment to the supply of renewable energy'. He has also won the Federal Government's national award for 'outstanding contribution to energy related research'. Deo has been the Chief Investigator and CEO of the Co-operative Research Centre for Low Carbon Living www.lowcarbonlivingcrc.com.au Deo was elected as a Fellow of the Australian Academy of Technological Sciences and Engineering in 2014.

The Taskforce Team



Caroline Pidcock, LFRAIA

Founder, PIDCOCK - Architecture + Sustainability

Caroline Pidcock is passionate about the importance of architecture and integrated design, and how they can contribute to a “culturally rich, socially just and ecologically restorative” future.

Her practice – PIDCOCK - Architecture + Sustainability – has been inspired by the possibilities of creating desirable places that demonstrate how the many issues that are fundamental to sustainability can be potent and profound influences. Her genuine interest and experience in sustainable built environments has been developed and enhanced through her involvement in a diverse range of professional, academic and community commitments. In 2018, Caroline transitioned her practice to another way of working, focusing on how to strategically accelerate the uptake of regenerative ideas.

Caroline’s previous roles as Chair of the Carriageworks and LFIA Boards; President of the Australian Sustainable Built Environment Council; President of the Royal Australian Institute of Architects in NSW and National Councillor; Industry Representative on the Australian Building Codes Board; Member of the South Australian Forest Industry Advisory Board, NSW Architects Registration Board, Greening Australia NSW, and Bicycle NSW Board; and adjunct professor/lecturer at a range of universities in NSW, exposed her to many government, business, academic and community arenas.

In 2014, Caroline was recognised by the International Living Future Institute as a Living Building Hero and in 2011 was awarded the Marian Mahony Griffin Award in recognition of her contribution to architecture in NSW. In 2009, Caroline was awarded a Byera Hadley Scholarship to study “The Architecture of (Net) Zero Emissions Housing”.



Ross Donaldson, FRAIA

Architect, Urbanist, Academic

Ross Donaldson was CEO and Chairman of Woods Bagot from 2006–2016, leading the practice to its dramatic growth internationally to become the world’s 6th largest practice in 2014 and in 2016 the 7th “Most Admired” firm (WA100), judged by its international peers.

Ross is a champion of the imperative for sustainable development and has presented numerous lectures internationally on sustainable models for cities and their liveability. In 2008, he established a partnership with Buro Happold to develop software for designing for zero emissions.

Prior to joining Woods Bagot in 2001, Ross operated his own architecture practice and taught at the University of Western Australia.

The Taskforce Team



Jeremy McLeod, RAIA
Founding Director, Breathe Architecture
Managing Director, Nightingale Housing

Jeremy McLeod is the founding Director of Breathe Architecture, a team of dedicated architects that have built a reputation for delivering high quality design and sustainable Architecture for all scale projects.

Breathe Architecture has been focusing on sustainable urbanisation and have been investigating how to deliver more affordable urban housing to Australians, creating world-class architecture with an enduring and meaningful impact on housing affordability, accessibility and sustainability. This area of focus has seen Breathe become Australia's most awarded sustainable architecture and design firm.

Breathe were the instigators of The Commons housing project in Brunswick and now are collaborating with other Melbourne Architects to deliver the Nightingale Model. Nightingale is intended to be an open-source housing model led by Architects.

Jeremy believes that architects, through collaboration, can drive real positive change with a key focus on sustainable design.



Dr Liz Brogden, Affilliate RAIA
Lecturer in Transdisciplinary Design,
Queensland University of Technology

Dr Liz Brogden is a Lecturer in Transdisciplinary Design and Architecture at the Queensland University of Technology. Her research focuses on innovative pedagogy and curriculum design to support the integration of sustainable development, climate change adaptation and disaster resilience within design education. She completed her PhD at QUT, and Master of Architecture and Bachelor of Environmental Design degrees at the University of Western Australia.

Prior to commencing her PhD, Liz worked in architectural practice on a range of residential, commercial, and public architectural projects. At QUT, Liz coordinates DYB201 Impact Lab 3: Planet, a transdisciplinary core unit in the design degree, spanning all seven design disciplines and incorporating 19 double degrees. Through this, she is conducting research to explore the overlap of sustainable development, resilience and design education.

The Taskforce Team



Stefan Preuss, RAIA
Associate Victorian Government Architect
Melbourne

Stefan Preuss is an architect with international experience and a sustainability expert. He was appointed as the Associate Victorian Government Architect in 2016.

Stefan's appointments include:

- NABERS National Steering Committee
- Green Star Technical Advisory Group
- IBA Melbourne Advisory Board
- Green Star Assessor, Chair and Faculty Member
- IEA Executive Committee, Energy in Buildings and Communities Program

Stefan has a special interest in sustainability, health and wellbeing through design. Stefan has been involved in the development of various Green Star tools and taught sustainability and rating tools at various Universities and to industry.

The key to success is a comprehensive “campaign” like framework.

Schedule of Tasks

This is presented as an indicative schedule of actions to achieve the goal of de-carbonising the construction industry.

We do not underestimate the magnitude of this challenge. Whilst the overall challenge seems insurmountable, once broken down in this way to individual actions, each one is quite manageable. Having the organisational capacity to deliver each action is the key.

The key milestones in the programme include:

- The completion of a new zero carbon Australian Standard (here referred to as (AS:ZC)
- The reference to this standard in the NCC and BCA
- Mandatory zero carbon design programmes in all certified Tertiary Education curricula
- Mandatory training for architects in zero carbon design for their ongoing registration

A summary of the scope of these actions is provided below and the detailed programme chart is appended.

The Institute’s Carbon Neutral approach – getting our house in order 12/2020

The first task in the Institute’s demonstrated leadership is of course getting its own house in order by becoming a carbon neutral organisation. This is already well underway through the following initiatives:

- Carbon Auditor briefing
- Quote preparation
- Undertaking due diligence to select Auditor Recommendations for Board approval
- Carbon audit commences
- Complete audit and issue report
- Offsets purchased

Tools & Benchmarks

There is a great deal of work currently being undertaken in surveying data on buildings and climate zones within the country, as well as getting across the existing benchmarks being used and the tools for measuring performance. The current work by the UNSW will provide a basis for the Institute to provide some valuable tools for members.

This work includes

2020

Benchmarks (state of play for all building types and climates in Australia)

- Data collection on building performance
- Data analysis of carbon in buildings now – embedded and operational

Develop pathways for zero carbon (embedded and operational)

- Modelling scenarios for building types to zero carbon – operational
- Modelling scenarios for building types and climates to zero – embedded
- Including scenarios for on-site generation and storage with potential for offsets

2021

Comprehensive scan of tool capabilities

- Summary and SWOT analysis of tools for measuring carbon
- A user guide on tools to help guide designers to zero carbon outcomes

Development of the GUIDE for designers

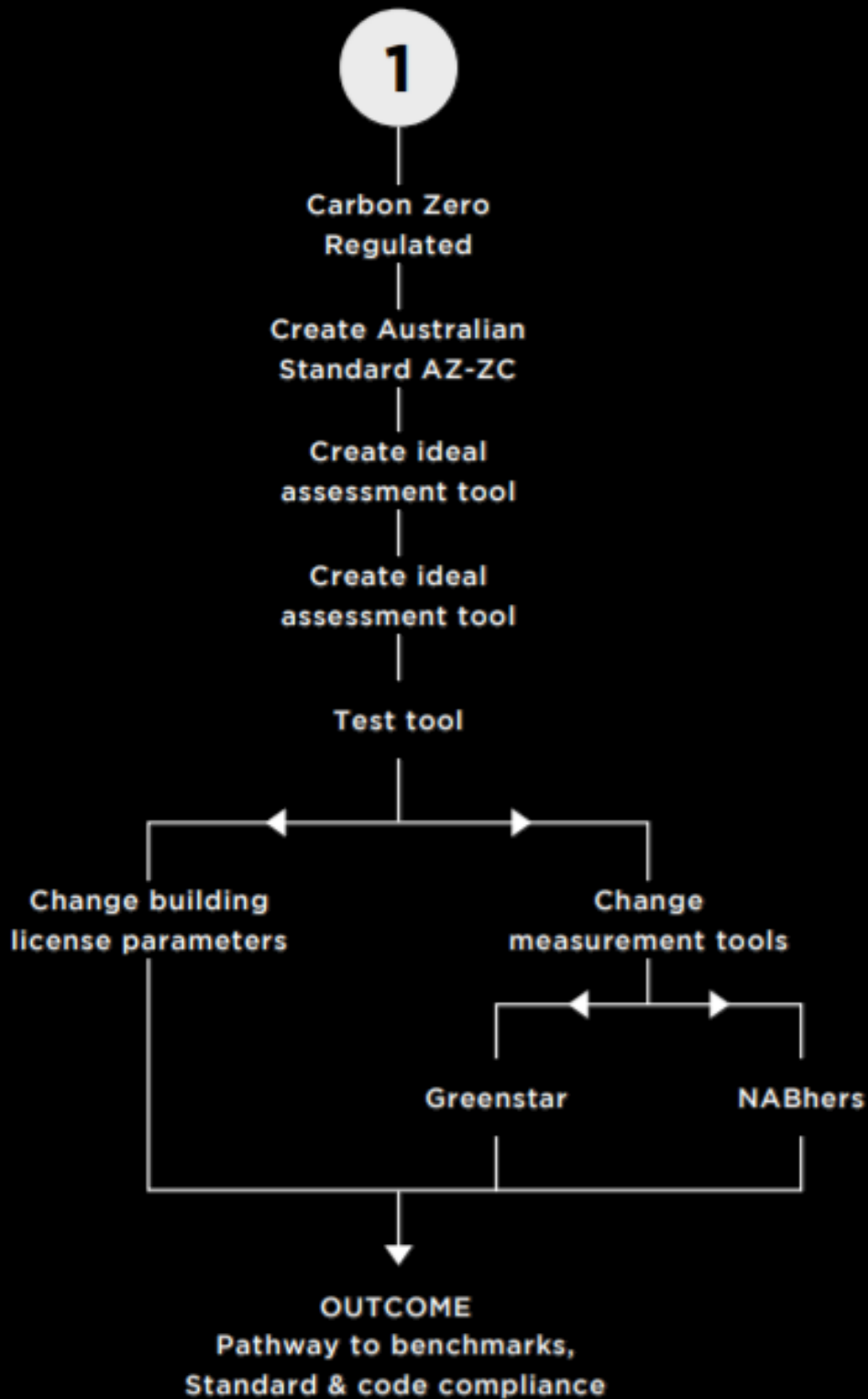
- Definitions and glossary
- Guide Structure and Effective Communication (consultations)
- The Framework
- Benchmarks, Pathways and Tools
- Guidance on use

2022- onwards

Other support activities

- Embedding guidance for tertiary education curricula
- Embedding guidance into CPDs
- Developing pre standards
- Supporting building Code development
- Supporting advocacy efforts

Tools & Benchmarks



Education & Research

Australian Institute of Architects CPD programme

Assumptions:

All architectural practitioners will have fully developed capacity and technical knowledge to undertake zero carbon design by 2025.

- **By 2021/22**

The introduction of a new (optional) “Climate Action” programme to be in place:

- _ Buildings zero carbon training
- _ Life Cycle Assessment
- _ Circular economy
- _ Urban zero carbon

Development of detail for full Certificate-based CPD programme

- Mandatory fully developed Certificate (assessed) programme in place

- **By 2023**

Registration contingent upon Certificate (renewed every 3 years)

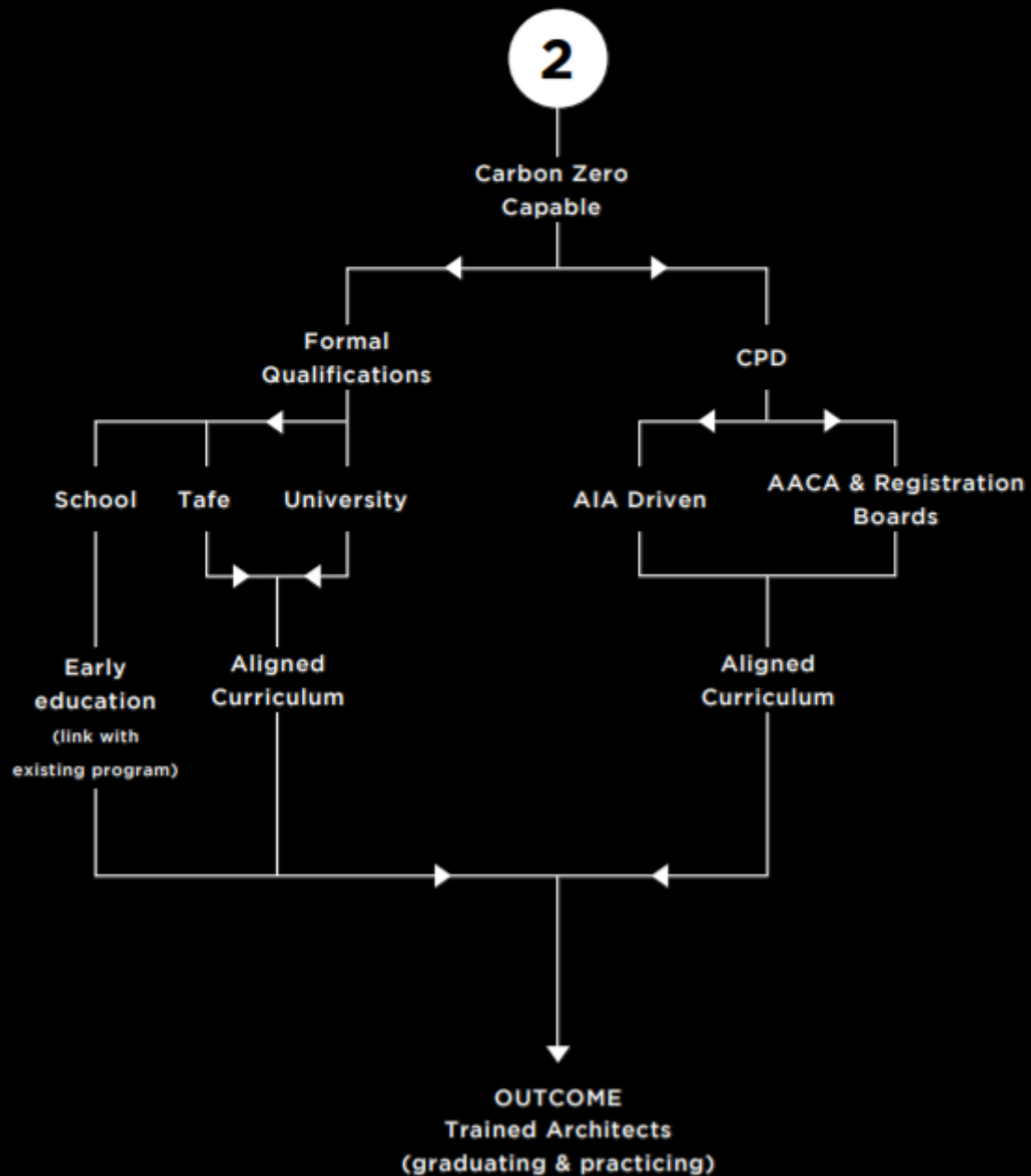
Tertiary Education

Assumptions:

(a) all Masters programme graduates to have introductory level zero carbon competency to enter “retrained” practice workforce by 2023

(b) all graduates to be fully enabled to enter “re-engineered” practice by January 2025

Education & Research



Advocacy

Having the advocacy capacity support from CAST and other professional resources to sit alongside the organisation is a key element in the success to the project.

For example, knowing in advance that there are upcoming new policies or policy and code reviews, enables contribution to these in a timely manner. This form of “opportunistic” advocacy for zero carbon will enable us to anticipate and prepare for our contribution. Having a co-ordinated resource of eyes and ears on the ground at a national and state level will significantly enhance the efficiency of our impact.

Advocacy is the key to success and we cannot underestimate the magnitude of this task and the potential hurdles. There will be a lot of work to be done to develop and refine the following indicative very high level summary:

- Identify chapter council committee lines of communication – now till end
- Form local contact in each Chapter Council
- (ongoing) CAST provide support to state Chapters
- Communicate CAST/Institute target aspiration to chapter councils to move towards the goal of de-carbonising the construction industry by 2030
- State Chapters advised of NSCA review recommendations
- Identify/Forecast upcoming policy reviews for input at state and federal level
- Institute design awards to include Climate action criteria

Construction Industry advocacy

| Phase 1 Introduction of (Australian Standard) “AS:ZC”

- ASBEC
- Australian Institute of Architects
- AIE
- UDIA
- AACA (engineering equivalents)
- Government Architects
- Universities
- Schools
- CSIRO
- Property Council

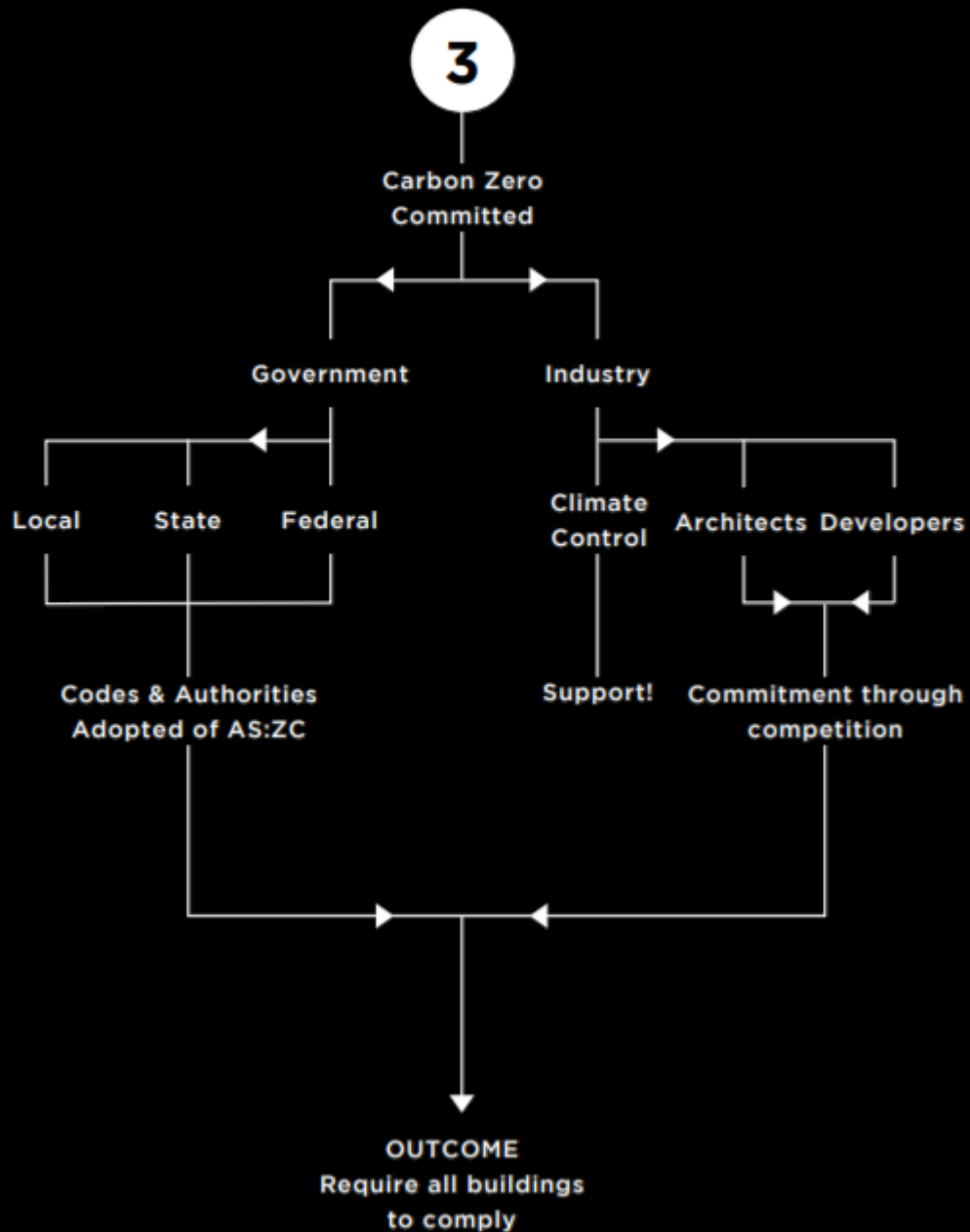
| Phase 2 Development of Certification framework

- GBC
- Nabers
- Climate Action
- TEFMA
- CEDA
- Committees for (capital cities)
- Developers (e.g. Lend Lease, Mirvac, SOPA, etc)

| Phase 3 Adoption by Codes and Authorities

- NCC
- BCA
- Federal Government
- State Governments (Ministers and Departments)
- Local Governments
- Master Builders Associations
- HIA

Advocacy



How you can get involved

Through partnership with the Australian Institute of Architects and the CAST, you'll see how your organisation's support directly shapes the future of the architectural profession in such a critical area.

We work with organisations that champion sustainability, a commitment to a greener future, innovation and originality. We are committed to providing sponsorship opportunities that deliver maximum value to your company, clients and employees. Our sponsorships provide a wealth of rewarding benefits, and the unique opportunity to align yourself with Australia's peak body for architecture.

Becoming an Institute sponsor will help raise your organisation's profile amongst our 12,500 members and influencers in the field of architecture, design and beyond. Our aim is to create meaningful relationships in line with your organisations' strategic objectives. We deliver the opportunity to engage with our members in authentic ways that highlight your brand objectives while also providing valuable, exciting and memorable experiences.

CAST Sponsorship Packages start from just \$30,000 per annum, elevating your brand into a critical area of focus and priority for the Australian architectural profession. This engagement provides you with a wide range of partnership and brand activations, enabling you to contribute to such initiatives as:

- Development and inclusion of your brand into the CAST toolkit, enhancing your profile to key architects and decision makers across Australia
- Contribution to key policy and advocacy submissions related to sustainability and climate change pertaining to the architectural profession
- Partnership on delivery of key CPD and education programs, showcasing products and organisations that are on the journey to de-carbonisation.
- Partnering with the Institute to undertake research into trends and analysis of the profession's current approach and views on key climate and sustainability initiatives
- Contribute and add your brand to online calculators, tools and services that enable the profession to move towards de-carbonisation.

The benefits of partnering with us.

→ Brand Awareness

Partnering with the Institute gives your brand exposure to over 12,500 Industry Professionals across Australia and overseas.

→ Build Relationships

Gain access and build quality relationships with key decision makers within the industry through networking events, publications and more.

Brand Alignment

→ Align your brand with the peak industry body for architecture and design, with a particular focus on the critical issues of climate action and sustainability.

→ Promote your services

Develop dedicated meeting, learning and networking platforms to facilitate dialogue and showcase your products and services; promote your latest products and business in our publications.

Find out more.

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