Global sustainability trends
Our sector is crucial to delivering global goals

The challenge we face

104 of 194 countries that signed the Paris Agreement have committed to improve building energy efficiency to meet mitigation targets. Only 68 countries currently have building energy codes.

By 2050, global population will increase 27% to 9.8bn and global floor area will increase by 100%.

Climate action
- Buildings are responsible for 39% of global carbon emissions
- Energy demand will increase by 50% by 2050

Resource efficiency
- Buildings are responsible for 50% of global material use
- 42.4bn tonnes of materials consumed annually

Health and wellbeing
- 91% of people live where air pollution levels exceed World Health Organization limits
- People are 40% more likely to have asthma due to living in a home with damp or mould

Source: IEA, World Resources Institute, World Health Organization
Our Strategy: drive sector impact

Introducing:
Global Net Zero Carbon Buildings Commitment

Launched September 2018 and celebrated in 2019 with new signatories.

“This new Commitment is a huge step forward on the path towards net zero. The Commitment will help to create unprecedented demand, stimulating the market to deliver net zero carbon buildings at scale.”

Cristina Gamboa
Chief Executive Officer
WorldGBC
Organisations

AESG
AMP Capital Wholesale Office Portfolio
Armstrong Fluid Technology
Bennetts Associates
Berkeley Group
Bionova
Brandix
Bruntwood
Cbus Property
Commonwealth Bank
Cundall
Dexus
EcoREAL Oy
Foster + Partners
Frasers Property Australia
GPT Wholesale Office Fund
Integral Group
JLL UK
Kilroy Realty Corporation
Kingspan
LG Super
Majid Al Futtaim
Monash University
Multiplex Global
Natural Resources Defense Council
Nightingale Apartments
Salesforce
Salesforce
Shaw Contact
Signify
Stockland - Retirement Living & Logistics
Sydney Opera House

Cities

Cape Town
City of Melbourne
Copenhagen
eThekwini
Heidelberg
Johannesburg
London
Los Angeles
Medellin
Montreal

States

Baden-Württemberg, Germany
California, USA
Catalonia, Spain
Navarra, Spain
Scotland, UK
Yucatan, Mexico

The Commitment in Australia

609 buildings
1,220 homes
8.0 million square meters
562,000 tCO2e portfolio emissions

14,420,370 tree seedlings grown for 10 years
0.14 coal-fired power plants in one year
120,427 passenger vehicles driven for one year
60,734 homes' energy use for one year
Introducing:

Bringing embodied carbon upfront

Coordinated action for the building and construction sector to tackle embodied carbon.

- **2030** Net zero carbon in operations, 40% less upfront embodied carbon.
- **2050** Net zero carbon in operations, net zero embodied carbon.

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**Market trends – investor**

WORLD ECONOMIC FORUM
Market trends in Retail – Taskforce on Climate related Financial Disclosures

- Strong investor concern that corporations are underestimating financial risks from climate change
- TCFD provides a framework for investors to demand consistent and transparent
Market trends in Retail – Taskforce on Climate related Financial Disclosures

- The Task Force was established as part of the G20 Financial Stability Board to enhance organisational consideration and reporting of financial risks related to climate change.

- The TCFD recommendations are designed to solicit consistent, decision-useful, forward-looking information on the material financial impacts of climate-related risks and opportunities, including those related to the global transition to a lower-carbon economy. They are adoptable by all organizations with public debt or equity in G20 jurisdictions for use in mainstream financial filings.

- Published recommendations for climate-related financial disclosures, including typology of ‘transition’ and ‘physical’ risks and opportunities.

- Recommends integrated of climate-related disclosures into mainstream financial reporting.

Modern Slavery & Procurement risk

- Modern Slavery Act 2018 – both Federal and NSW requirements

- Managing the complexity of modern supply chains

[Image of Modern Slavery statistics and examples]
Market trends in Retail – Green finance

Global trends linked to property trends
Market trends in property– consumer brands

We’ve brought together a panel of special guest speakers to contribute to a passionate discussion on sustainability.

Volume Trends

Retailers like Commbank and Westpac have developed their retail branch design standards around Green Star. Part of this is to ensure the best possible customer experience for clients and staff.

This has been taken to the next level at Barangaroo South, where the vision of the world’s most sustainable precinct comes to life with every single retailer (over 80) registered to achieve a rating thanks to Volume certification.
Renewables trends

EVERY BUILDING COUNTS

A practical plan for emissions reduction
More evidence to validate the use of sustainability rating tools.

More evidence available for Green Star quick facts

Since 2003, Green Star has been improving the places where Australians live, work, and play:

- **42,000** people living in Green Star rated homes and apartments
- **725,000** people working in Green Star rated offices
- **425,000** more people living in Green Star rated communities

When compared to buildings constructed to meet minimum standard, Green Star rated buildings:

- Produce **55%** fewer emissions
- Use **66%** less electricity
- Use **51%** less water
- Recycle **96%** of waste

Cost of Green Star validated
Delivering Green Star rated buildings makes economic sense.

+0.9%  
To achieve a 4 star Green Star rated building Per square metre

+2.6%  
To achieve a 5 star Green Star rated building Per square metre

+2.7%  
To achieve a 6 star Green Star rated building Per square metre

Based on a sample of 71 projects, as at December 2018

Government procurement: energy savings

Using data from NABERS, which is embedded in Green Star, government buildings have decreased energy consumption by close to 50% over the last decade.

On a typical commercial office building of 30,000sqm this could be over $400,000 dollars per annum.
Economic benefits validate in valuations

Green Star rated buildings deliver a 5.6% premium in value and a 13.4% premium in net income*

Increased tenant demand is reflected in lower vacancy rates for Green Star rated buildings, with an 26.4% increase in Weighted Average Lease Expiry*

Research out of the US in 2018 found that by designing for the occupant, owner-occupants and tenants can gain $3,395 per employee in annual profit**

Global trends link to future rating tools …and materials
Future of new buildings tool

What we asked:

- 100% Meet Paris Agreement obligations
- 97% Address social sustainability
- 97% Guarantee minimum outcomes
- 97% Set tenant benchmarks
- 97% Drive change in the supply chain
- 84% Mandate operational rating
- 80% Promote better best practice
- 93% Bring back nature to our built environment

The five things you should know about greenstar for New Buildings

1. A new definition of a sustainable building
2. Meets the Paris Agreement targets
3. A clear definition of best practice
4. A rating tool for a diverse built environment
5. A showcase for exceptional achievements
A new definition of a sustainable building

Green Star for New Buildings features eight new categories representing the issues that will define the next decade of the built environment.

**RESPONSIBLE**

- Collaborative design and construction
- Sustainable procurement
- Sustainable products
- Responsible construction practices
- Verification and monitoring
- Handover and tenant engagement

**HEALTHY**

- Green air
- Light quality
- Exposure to toxins
- Noise levels
- Amenity and comfort
- Mobility

**RESILIENT**

- Climate change resilience
- Infrastructure dependency
- Resilience to other impacts
- Stakeholder engagement
- Community resilience
- Resilience communication and review

**PLACES**

- People movement
- Goods movement
- Enjoyable places
- Access to amenity
- Contribution to place

**PEOPLE**

- Community engagement
- Culture and heritage
- Design for diversity
- Aesthetics
- Privacy

**NATURE**

- Impacts to nature
- Human connection to nature
- Water pollution and runoff
- Habitat creation
- Nature connectivity
- Offsite restoration

**LEADERSHIP**

- Exceptional performance
- Leadership in sustainability
- Innovation Challenges

**POSITIVE**

- Energy and peak demand
- Energy source and fossil fuels
- Other carbon sources
- Using water sustainably
- Carbon in materials
- Impacts from resources

Materials

- Responsible design and construction
- Sustainable procurement
- Sustainable products
- Responsible construction practices
- Verification and monitoring
- Handover and tenant engagement

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A clear definition of best practice

Low energy and water use, with good indoor environment, and designed to be mindful of future climatic conditions. Green Star for New Buildings requires this of every building.

The 10 things expected from every Green Star rated building:

1. 10% more energy efficient than 2019 code.
2. Designed and built with climate change in mind.
3. Installed water efficient fixtures and appliances
4. Commissioned and tuned to operate optimally over time.
5. Reduced environmental impacts from construction practices
6. Meters and monitors the building’s energy and water use.
7. Has active transport facilities
8. Improved air, light and noise quality in regularly occupied spaces
9. Reduced or eliminated materials with toxic chemicals
10. Transferred sustainability-related information at handover
What was described in the consultation paper in Green Star for New Buildings

<table>
<thead>
<tr>
<th>Credit</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Sustainable products</td>
<td>Incentivises environmentally responsible selection of materials for major building components through the use of products with eco-labels, Environmental Product Declarations (EPDs), and responsible sourcing schemes. It also promotes other circular economy solutions.</td>
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Initial proposal

**Sustainable products**

% of materials that have as much of each as possible

- **Responsible**: Environmental impact reduction
  - Environmental responsibility certification (FSC or PEFC, Better PVC, Manufacturer EMS, Carbon Neutral Certification)
  - Stewardship: Socially responsible products
    - ResponsibleSteel, PVC stewardship, FSC / PEFC / Responsible Wood, Human rights verification, B Corp, etc.
  - Transparency: Disclosure of impacts and high quality products
    - EPDs, ILFI Declare, REACH declaration, Health product declaration, Type 1 ecolabels (GECA, Greentag, C2C)
- **Foresight**
  - Material investment in innovation to reduce carbon footprint
  - Design of products, Durability, Low-impact maintenance, waste minimisation in production and installation, ‘Next life’ philosophy: enabling reuse and recovery for recycling
Thank you