

# Bates Smart Interior Fitout Sustainability & Wellbeing Guide

Bates Smart

August 2021

Find it on Insite / Design Guides / SAP

BATESSMART™



# Contents

- 0. Call To Action 03
- 1. Purpose Of The Bates Smart Fitout Sustainability Guide 05
- 2. The 5 Guiding Principles 06
  - 2.1 Circularity 07
  - 2.2 Challenge the Status Quo 09
  - 2.3 Planning For Wellbeing 11
  - 2.4 Carbon Reduction 13
  - 2.5 Sustainable Supply Chains 15
- 3. Integrating the Guiding Principles into Our Process 17
- 4. Our Roles & Responsibilities 18
- 5. Sustainability: Programmed In 19
- 6. Understanding Embodied Carbon Content 20

# Call To Action

Since the 1970s, humanity has been in ecological overshoot, with annual demand on resources exceeding Earth's biocapacity.

Today we use the equivalent of 1.6 Earths to provide the resources we use and absorb our waste. This means it now takes the Earth one year and eight months to regenerate what we use in a year.<sup>1</sup>

The twin crises of climate breakdown and biodiversity loss are the most serious issue of our time. Globally, buildings and construction play a major part, accounting for nearly 40% of energy-related carbon dioxide (CO<sub>2</sub>) emissions whilst also having a significant impact on our natural habitats.<sup>2</sup>

1. <https://www.footprintnetwork.org/our-work/ecological-footprint/>

2. [au.architectsdeclare.com](http://au.architectsdeclare.com)



# Call To Action

Over the lifecycle of a building, studies have shown the cumulative embodied carbon of interior renovations can surpass the emissions of both structure and envelope.<sup>1</sup>

Whilst initially interiors are usually below 10% of a building's overall carbon footprint, the regularity of fitout change and churn creates major impact.

Interior designers have great power to create change. This starts with the need to adopt structural changes in the profession. Since the biggest carbon impact of the profession is through the churn and fitout changeover process, reuse and reclamation of furniture and interior elements needs to become mainstream. Similarly, end-of-life strategies and design for disassembly must be adopted as basic ethics of the profession. None of this should stall the vital focus interior design places on human wellness, health, inclusivity and good design.<sup>2</sup>

1. Research conducted by CLF and Seattle-based LMN Architects

2. <https://www.metropolismag.com/interiors/interior-designers-climate-carbon/>

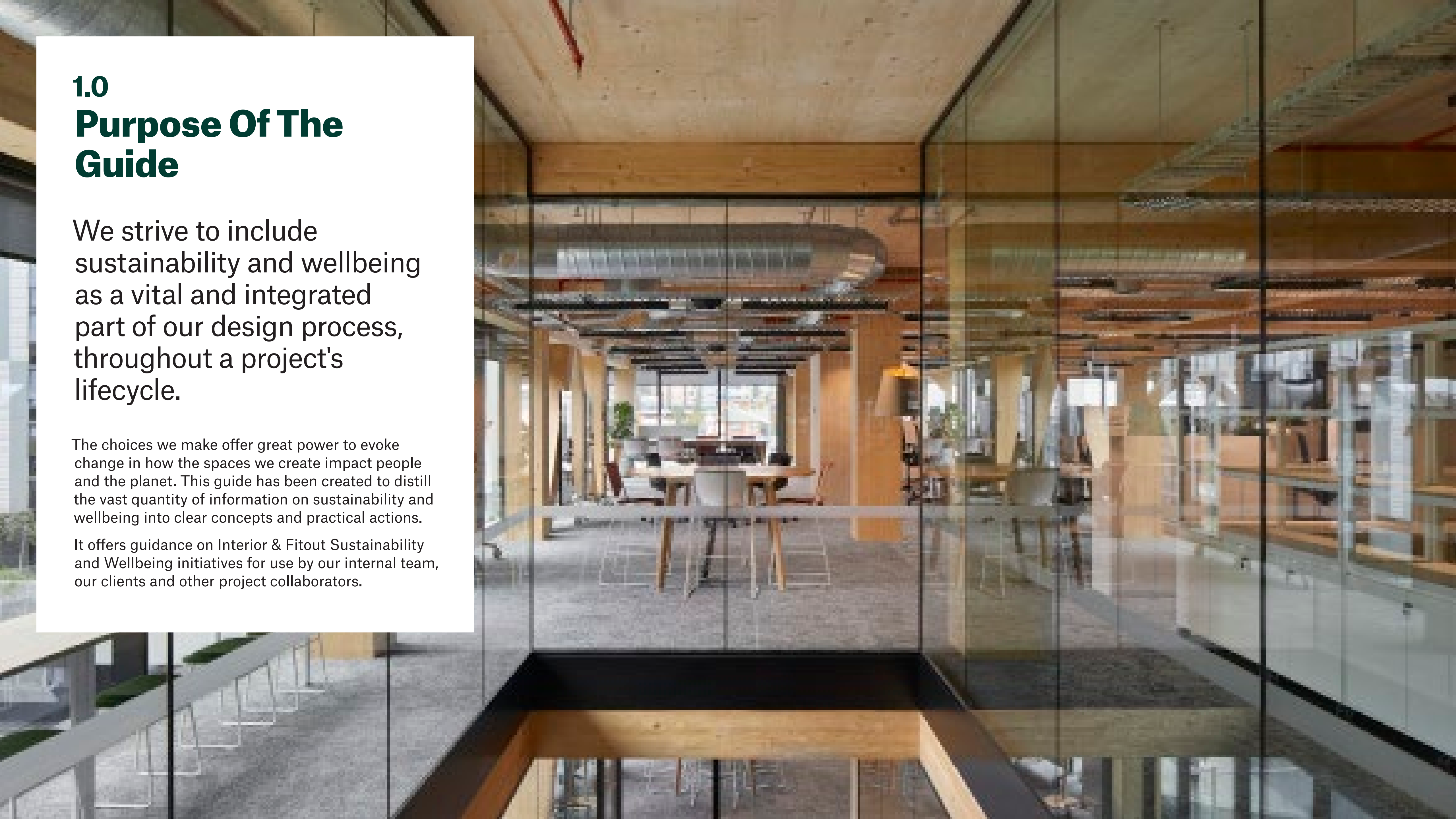


# 1.0 Purpose Of The Guide

We strive to include sustainability and wellbeing as a vital and integrated part of our design process, throughout a project's lifecycle.

The choices we make offer great power to evoke change in how the spaces we create impact people and the planet. This guide has been created to distill the vast quantity of information on sustainability and wellbeing into clear concepts and practical actions.

It offers guidance on Interior & Fitout Sustainability and Wellbeing initiatives for use by our internal team, our clients and other project collaborators.



# 2.0 Bates Smart's 5 Fitout Sustainability Principles



### 1. Circularity

Design With The End In Mind.



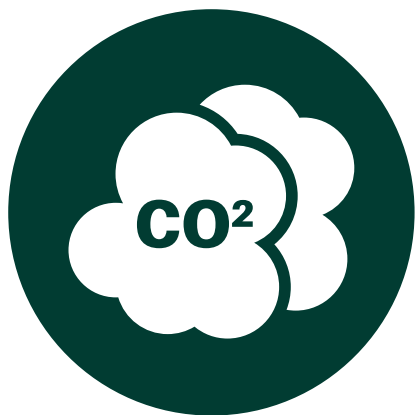
### 2. Challenge The Status Quo

Evolve Our Approach.



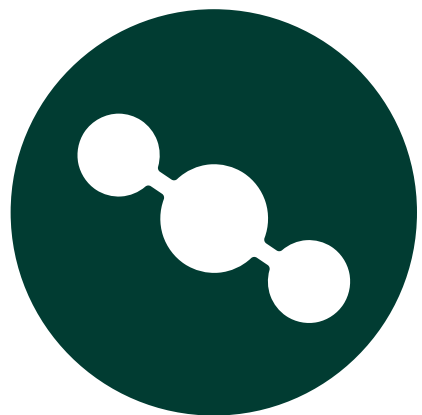
### 3. Plan For Wellbeing

The Greatest Wealth Is Health.



### 4. Reduce Carbon

A Lesser Footprint For A Better Earth.



### 5. Sustainable Supply Chains

Engage, Understand, Support.

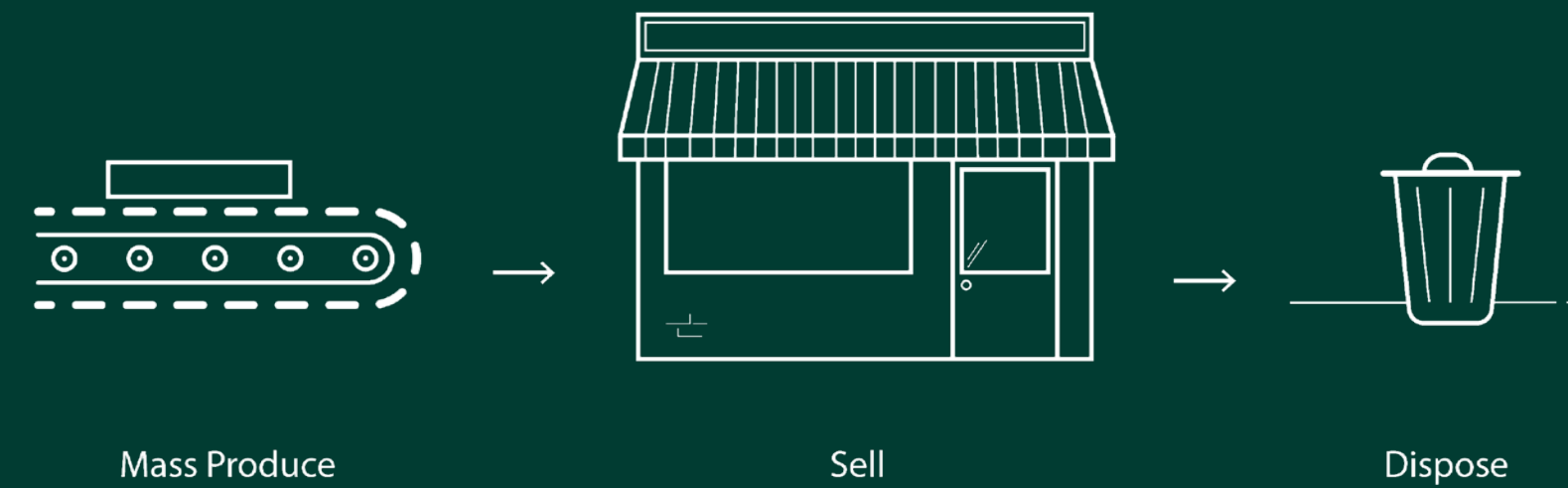
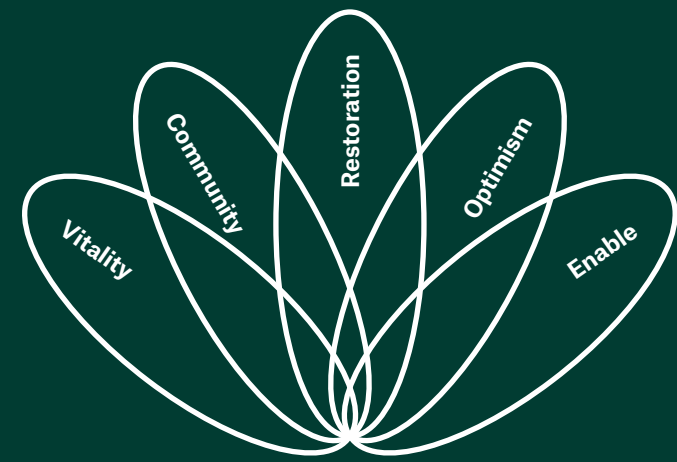
## 2.1

# A Circular Economy.

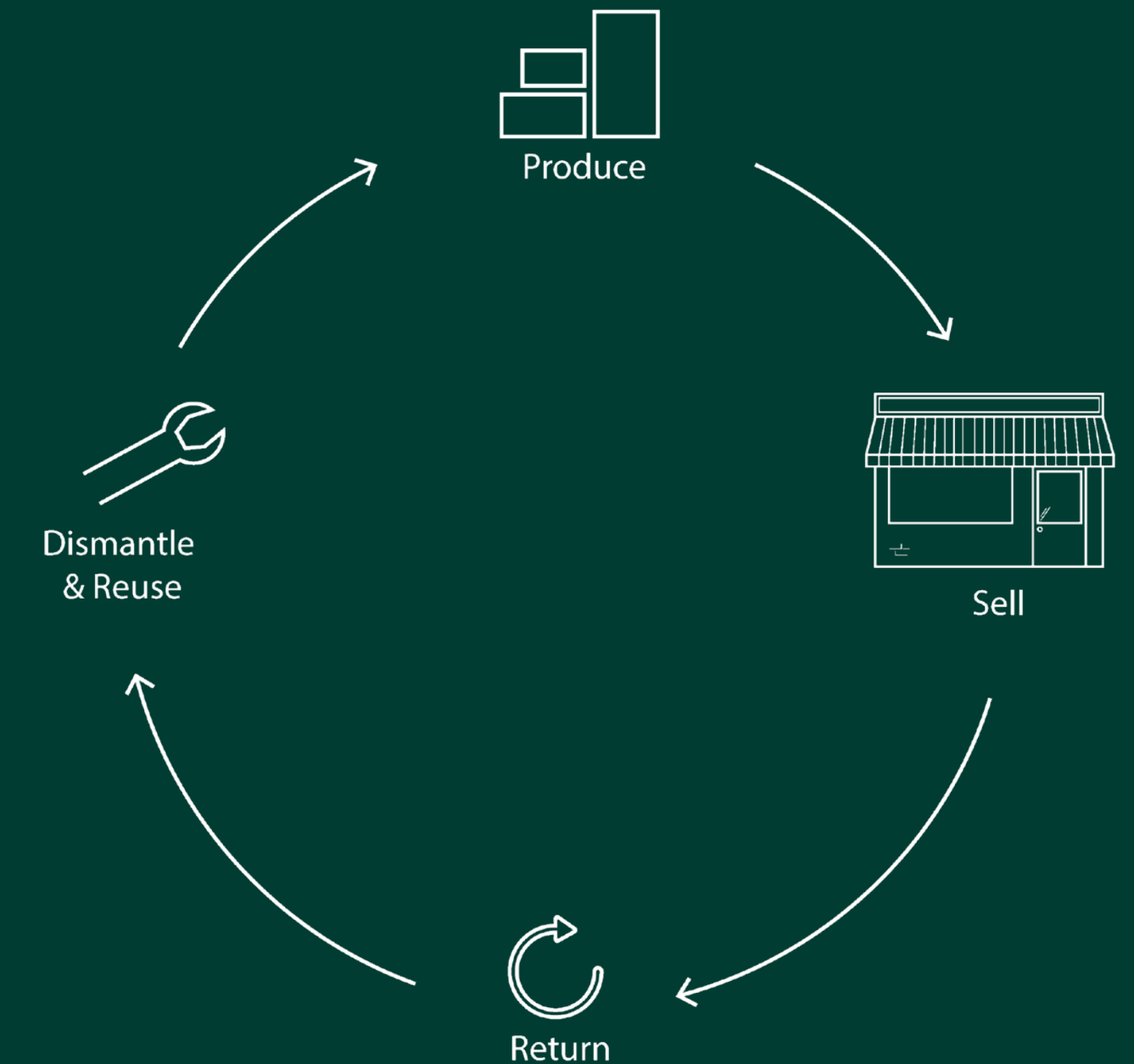
## Designing With The End In Mind

" A circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems. "

It is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models.



**The Current Production - Consumption Cycle**



**The Circular Economy**

## 2.1 A Circular Economy. Guidelines



### Rethink Lifestyles



- Consider adaptive re-use and flexibility where possible.
- Agree on strategies with stakeholder so as to avoid sending products and materials to landfill.
- Reuse as much as viable from within the existing site.

### Reduce, Reuse



- Reduce wastage by designing to suit material dimensions.
- Choose materials that maximise recycled content
- Seek opportunities to re-purpose existing elements.
- Seek alternative furniture solutions For example leasing, second hand, take back schemes.

### Dematerialise



- Use less material overall, and in its raw state whenever possible.
- Simplify: the more layers, treatments, coatings, weight added, the more carbon.
- Use renewable resources and products with regenerative strategies.
- Minimise movement of existing or addition of HVAC

### Supply Chain



- Seek out low carbon/no carbon supply chain options
- Seek to work with companies that can demonstrate ethical labour practises throughout their supply chain.
- Seek cradle to cradle certification on products.

## 2.2

# Challenge The Status Quo Evolution Of Approach



“Only swift and drastic action will save our children from a bleak future. Business leaders have a key role in pivoting business models to reduce our impact on the planet, get to net carbon zero and be part of the circular economy. There is no business on a dead planet. To survive, organisations must respect the communities in which they operate, the health of their employees, their stakeholders, and the environment.” <sup>1</sup>

Embracing change and evolution around sustainable practices isn't simply a choice, it is critical to business, (and the planet's) survival. Our approach needs to continually question how things “are” or “have always” been done, and why. We need to challenge and change existing processes that don't support circularity and a sustainable future.

1. Reference: Abigail Forsyth, Co-founder and Managing Director, KeepCup

**Disrupt**

**Shake Up**

**Challenge**

**Evolve**

**Change**

## 2.2

# Challenge The Status Quo Guidelines



### Challenge the Fitout Model



- Consider a shift of ownership and purchase model to one of access, rental, subscription & sharing. It is more sustainable to lease customers access to products for however long they need, rather than selling products that will be discarded at the end of the only purchaser's use period.
- Challenge the CAPEX (capital expenditure) verses OPEX (operational expenditure) model: It is less sustainable for a business to outlay a big sum of money upfront for a shiny new fit out, that degenerates over the following 5 – 10 years, then gets demolished, than a model where expenditure occurs over a longer period of time, with a focus on maintenance & refurbishment of quality design, built to last.

### Challenge the Designer's Role



- Consider how thinking sustainably may change the role of a designer. Perhaps a designer is better placed as a long term partner to a business, to support a sustainable approach to evolution of their space needs over their tenancy life span and beyond. Continuity creates great opportunities for sustainability, due to long term vision and buy in.
- Challenging traditional processes may require a shift in mentality for designers, clients and others around a project table. From aspiring to design to a net zero carbon footprint, to embracing what already exists, designing with sustainability in mind may mean different project objectives to what's been set in the past.

### Change perspective



- “Churn” is not a dirty word! It's a challenge to create a great space within tighter constraints, without compromising withstanding project objectives. Let's rise to the challenge!

### Tip



- Raise these questions early with the client. Workshop Sustainability & Wellbeing with a Client Questionnaire [\[link to be added\]](#)
- Question how things are done, and why. Challenge existing processes that don't support circularity.
- Target carbon neutral or carbon positive for new fitouts. Consider the longevity and the end of life process for every new material, finish, and furniture piece you specify.

## 2.3

# Plan For Wellbeing

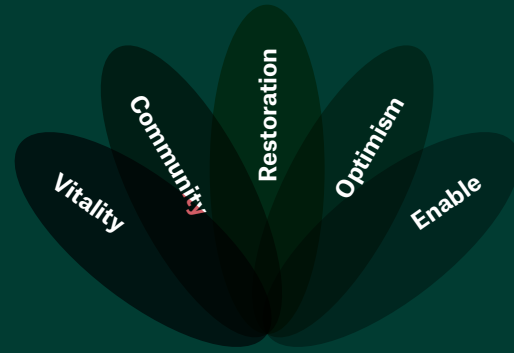
## The Greatest Wealth Is Health



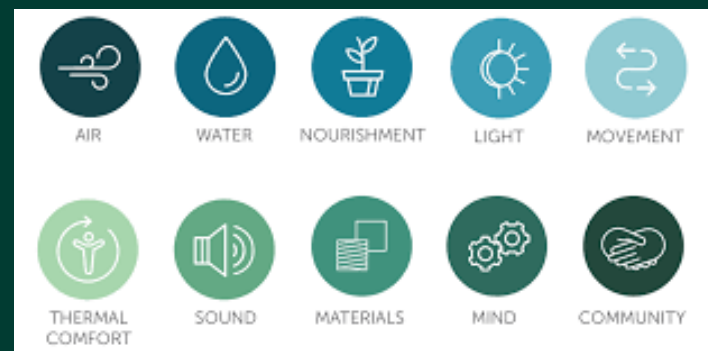
" How do we as designers create healthier and more equitable spaces for all? Spaces that increase the wellbeing of people, as well as reducing negative impact on the planet? "

Through implementing principles of the WELL Building Standard we can create greater health for buildings and the people who inhabit them.

Other useful reference documents on Insite:  
The Bates Smart Wellbeing Index

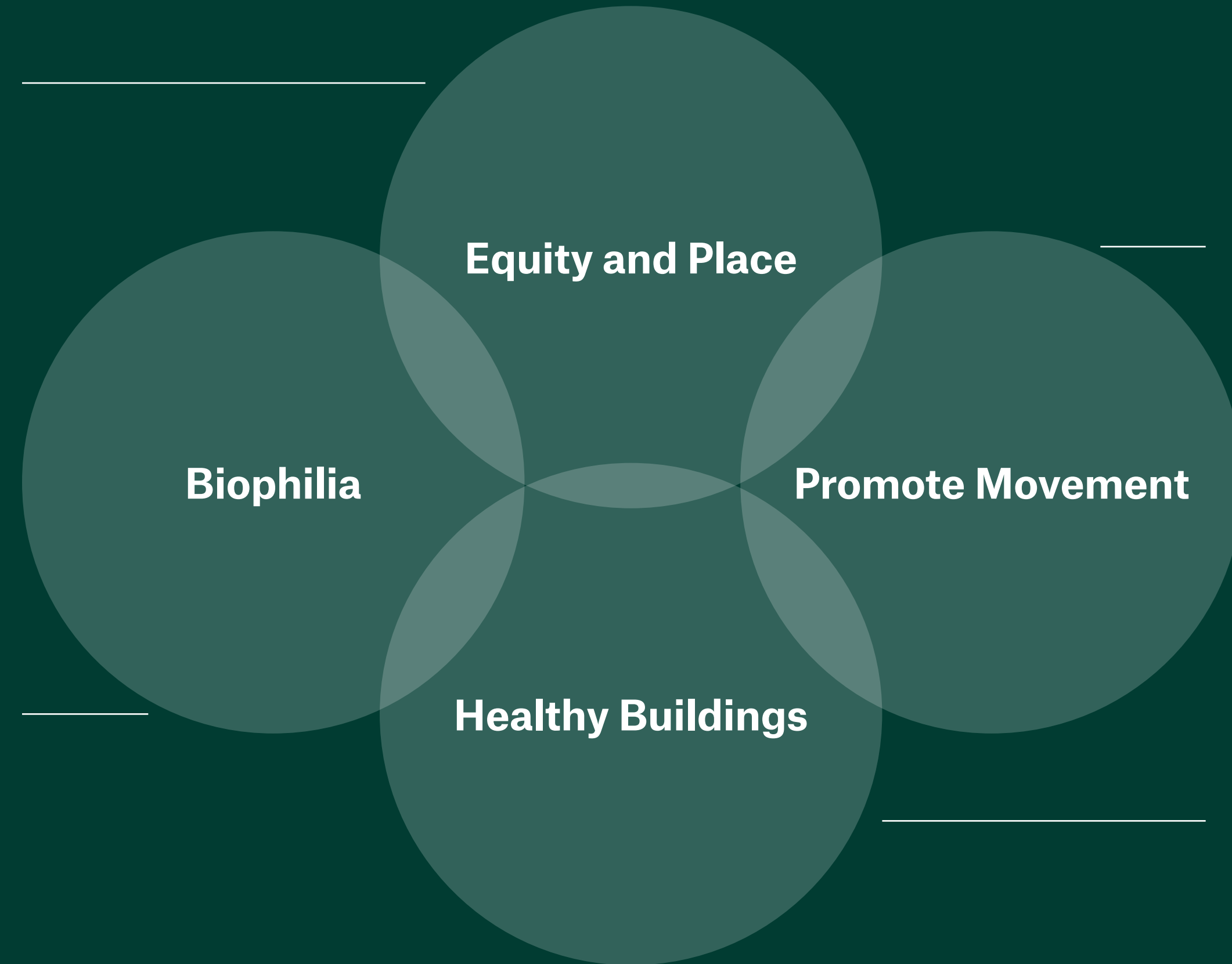


The WELL Building Standard  
Bates Smart Summary Document



- The development of just and equitable communities, with equal access and fair treatment for all.

- The innate connection between humans and the natural world. Inclusion of natural elements in the built environment has been proven to increase building occupant's productivity due to improved well being, mental and physical health, ability to heal and be creative.



- Sedentary behavior has been linked to poor health outcomes, including obesity, type II diabetes, cardiovascular risks and premature mortality.

- Indoor Environmental Quality
- Provision of amenity that enables improved health outcomes for building occupants.

## 2.3 Plan For Wellbeing Guidelines



### Equity and Place



- Ensure equitable access to natural light and views.
  - Design for all types of building users, allow flexibility for changing needs. Don't design just to minimum standards for accessibility.
    - Look beyond the brief when considering the impacts of your design on occupants and the environment.
  - Create a connection to place and community.
  - Consider glare from internal and external light sources. Enable occupants to control their environment.

### Healthy Buildings



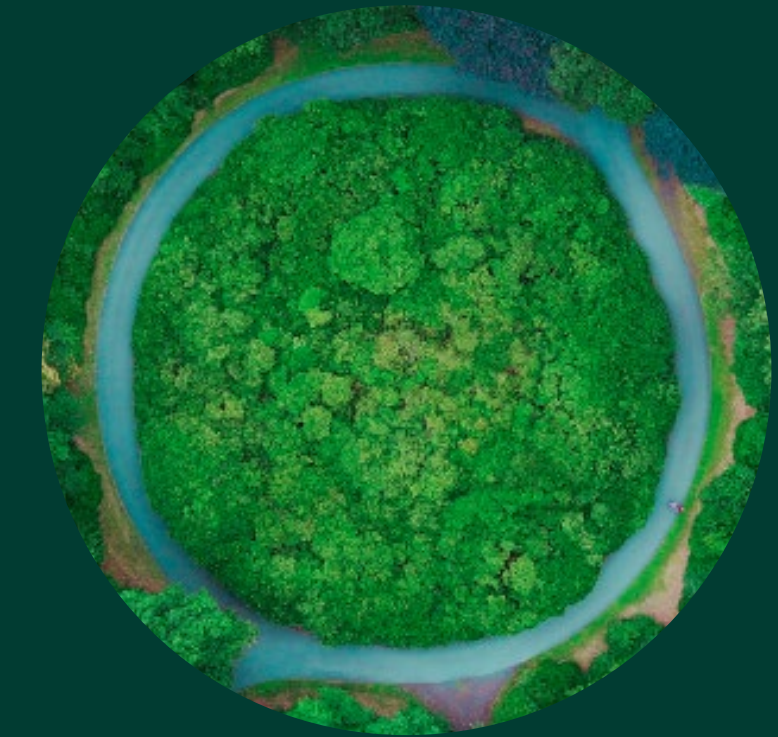
- Reduce VOC content in all materials to improve indoor air quality. Ensure project allows time for off-gassing.
  - Encourage water consumption of building users and promote hand washing and hygiene with high quality kitchen and bathroom design.
    - Separate and exhaust printers, chemicals or fittings that can create humidity.
  - Ask mechanical engineers to include zoning and allow occupants to control temperature.
  - Create mixed mode areas providing natural ventilation or increased outdoor air supply.

### Movement



- Include interconnecting stairs in places they will be utilised.
  - Provide End of Trip Facilities.
  - Provide a choice of work settings including sitting or standing desk options.
- Enhance connections to pedestrian or bicycle amenity.
- Provide lockers with ample storage.

### Biophilia



- Enhance humans connection with nature through use of materials in their natural state.
  - Provide views to nature or direct access to open space with natural elements.
    - Create spaces for retreat.
- Consider organic patterns and forms when designing.



## 2.4 Reduce Carbon Guidelines



### Manage and Measure



- Can you measure the embodied carbon content in your fitout? For more information click [here](#).
- Be aware of the choices you are making in material and product selection, and how they are contributing to the embodied carbon total.
- Consider the design life of materials and products. Longer equals better.
- Have approaches to reduce end-of-life impact of materials and products been considered?

### Reduce Material Complexity



- Reuse of materials and furniture with minimal intervention is best.
- Preference light weight finishes; they have less embodied carbon than heavier finishes.
- Vitrified tiles should be avoided or areas minimised.
- Single layers are encouraged, the more structure, backing and glueing, the more carbon.
- Trend of timber 'click' systems are four times higher than straight timber panelling.

### Tip 1



- Quality products built to last and classic designs that won't date are more sustainable than churn. Think of the Opera House...it's longevity makes it highly sustainable!

### Tip 2



- What amount of embodied carbon should my fitout aim for?
- Under 75kg CO<sup>2</sup>-e / m<sup>2</sup> is considered standard and acceptable.
- Under 60kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards current best practice

## 2.5

# Sustainable Supply Chains

## Engage, Understand, Support



" Any designer will know that it's hard to manage the entire supply chain. "

Regardless, the intersection between material, manufacturing and design choices plays a significant role in the life-cycle impacts of a product, since these decisions ultimately impact the type of materials extracted from nature, the impacts of manufacturing, and the end-of-life implications. <sup>1</sup>

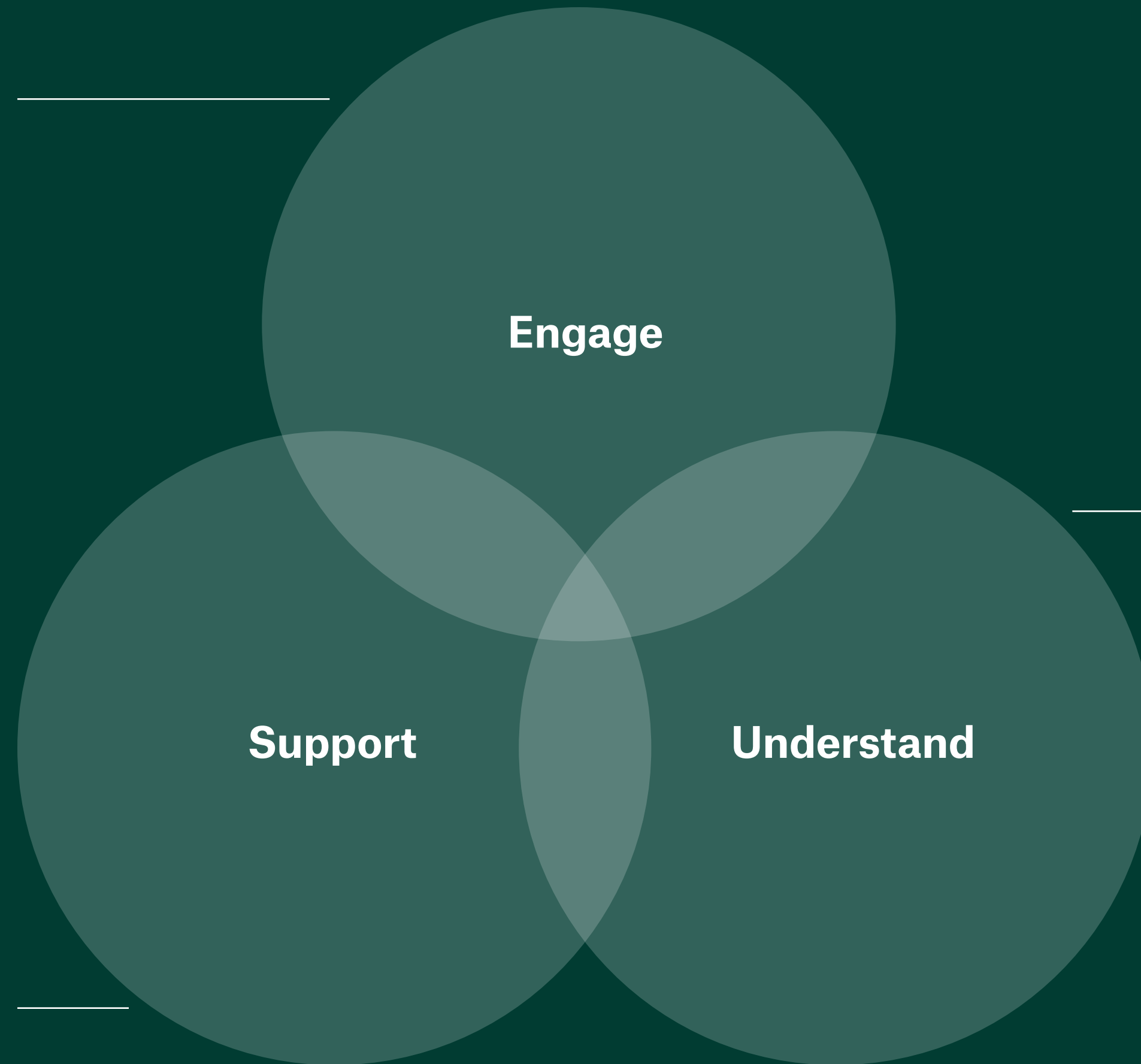
Sustainable Procurement is a complex concept, but it starts with enquiry, and a desire to make change. Look for evidence of the below Supply Chain Initiatives & formal ratings:

- Environmental Initiatives include:
- Material Stewardship Schemes
- Forest Stewardship Council
- Modern Slavery

1. Circular Systems Design, A Toolkit for the Circular Economy, Leyla Acarolgu

- With materials, furniture and finishes suppliers on what sustainable procurement processes they have in place.

- The companies that are doing good things, disclosing information and working to improve their supply chains. Vote with your specification



- Look to understand the information you receive back from these companies, to determine where positive impact is being made.

## 2.5 Sustainable Supply Chains Guidelines



### Environmental



- What recycled / re-used materials are involved in a product / range?
  - What plans / trajectory does the supplier have to bring recycled materials into their product range?
- Does the company use any materials stewardship schemes to source parts & materials
- Can the companies product be made with modular design for ease of refurbishment?
  - What measures has the company taken to ensure that the products provided have the longest design life possible for the value provided?
  - Does the company manufacture locally?

### Social



- Does the company provide good transparency credentials around Modern Slavery reporting?
- Does the company have a diversity and inclusion strategy in place to provide equal opportunities to all employees?

### Certifications



- Relevant information sources and certificates for products include;
  - GECA
  - BPI Rating
  - AFRDI
  - ILFI Declare
  - SMART Certified
- Environmental Choice New Zealand
  - EPD Australiasia

### Tip

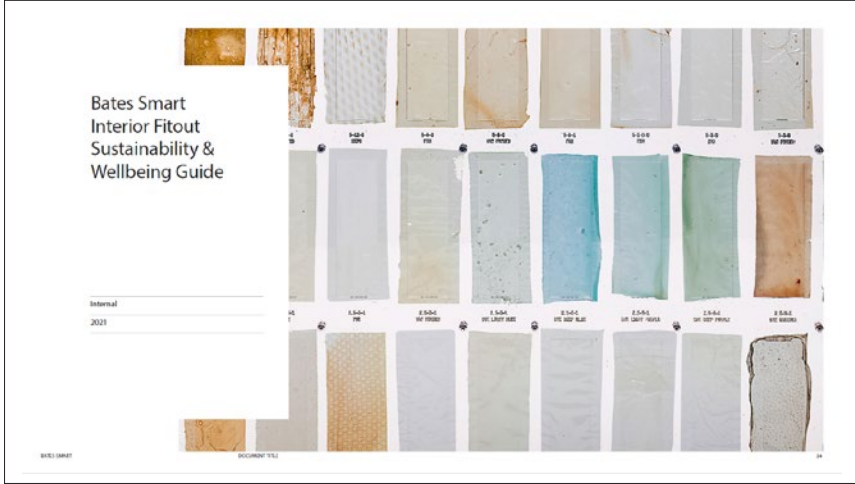


- Use the Bates Smart **Supplier Sustainability Questionnaire** found on Insite to ask material & furniture suppliers the right questions. Use it as part of your assessment criteria in tender reviews!

# 3. Our Design Process

## 1 Guide & Fitout SAP Checklist

To be presented to clients & design team at commencement of project.



## 2 Sustainability Review

Undertaken at each stage of all projects. Held with Project Team & chaired by a Fitout SAP Working Group member



## 3 Supply Chains Collaboation

Issue our [Supplier Sustainability Questionnaire](#) to determine SAP & Supply Chain credentials of product supplier. Used to compare and select materials, finishes and furniture.

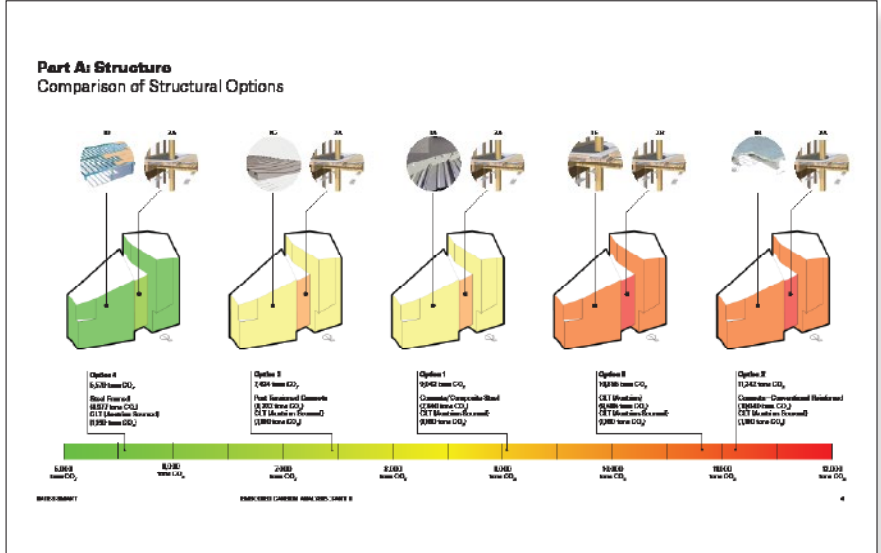
Review [BS Sustainability Supplier List & Sustainable Materials List](#)

All documents on Insite / Design Guides / SAP

Have any opportunities for building users been identified?	
Have public spaces and offer opportunities for recreation been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	
Have all user team communities and ensure the fitout value been considered?	

## 4 Embodied Carbon Assessment

To be carried out on selected projects using BIM data. This is how we create a tangible measurement of carbon content in a project.



## 5 Formal Sustainability Rating

Encourage clients to seek formal ratings. Where projects target a rating, design team to work collaboratively with client and SAP / WELL consultants to achieve a design in line with the targetted points



# 4. Our Roles & Responsibilities

## Project Director

- Workshop project sustainability & Wellbeing Vision & Objectives with client.
- Challenge Status Quo.
- Champion support throughout duration of project.

## Project Lead

- Review Guide, Checklist, disseminate to team.
- Set up Sustainability Reviews at each project phase, track progress
- Record objectives, track throughout project life
- Manage documentation & co-ordination of any formal ratings & Embodied Carbon tracking committed to
- Co-ordinate with external consultants & contractors to ensure implementation of Sustainability objectives.

## Project Team Members

- Review Guide, Checklist,
- Attend Sustainability Reviews
- Incorporate agreed sustainability actions into design & documentation
- Collaborate with suppliers to better determine ESD & Supply Chain credentials. Co-ordinate issuing of supplier questionnaires & responses.
- Review Bates Smart Sustainability & Sustainable Suppliers Lists found here

## Sustainability Auditor

- Undertake Sustainability reviews with team at each phases of project
- Make project specific suggestions to assist team in incorporating sustainability initiatives
- Be available for guidance, queries and support on the process to the team

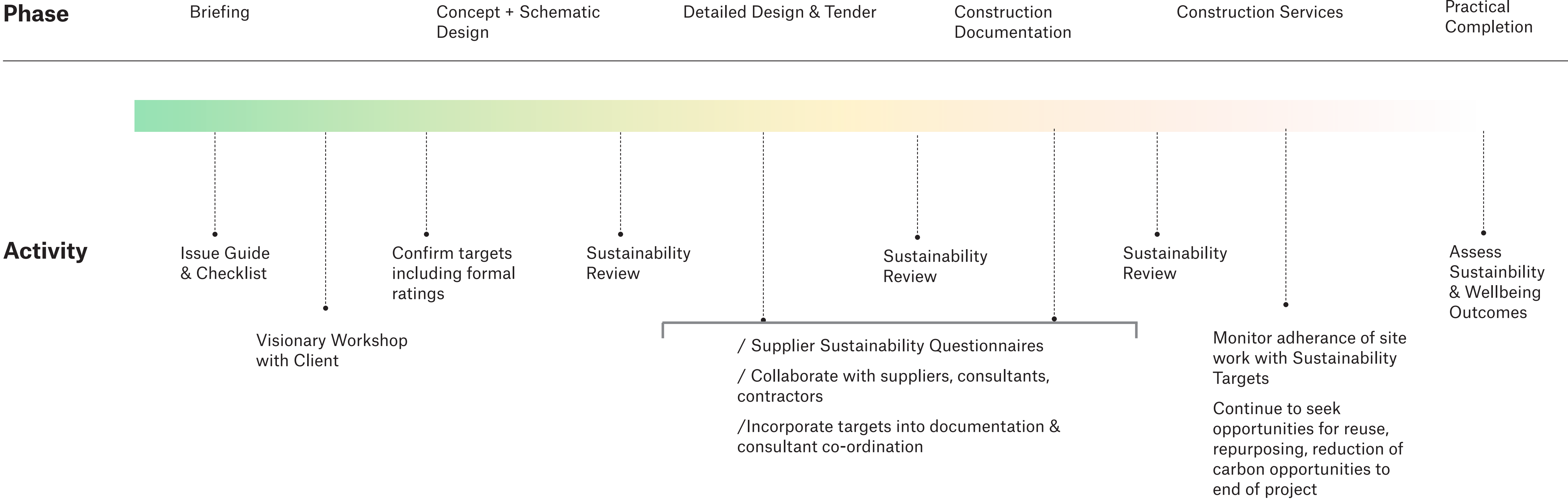
Current Sustainability Audit Team Members include:

Lucy Sutton, Mark OJ, Jess Page, Kaitlin Gordon, Diana Espiritu

## External Key Roles:

- Client
- Consultants & Project Manager
- Contractor
- ESD and / or WELL Consultant

# 5. Sustainability: Programmed in



## 6. Understanding Embodied Carbon Content

This section of the guide examines the highest to lowest embodied **carbon values for materials and products**, and identifies the key consistencies across wall, floor, ceiling and joinery finishes. It is essential to consider the 'whole' assembly and not just the visual surface finish layer.

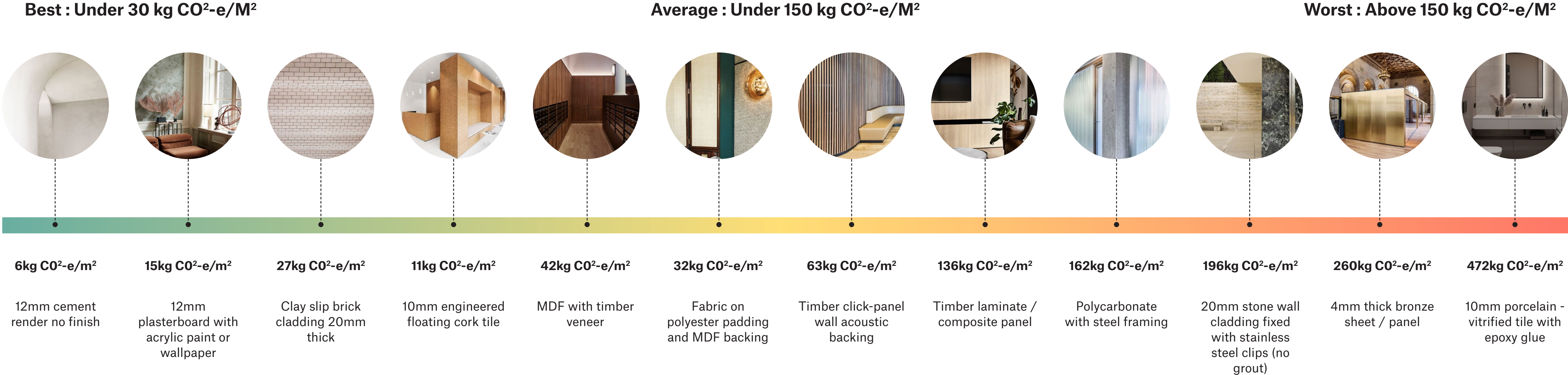
By understanding the carbon sink of materials, manufacturing methods & locations, our designer's can make **informed choices to reduce as best possible**.



# 6.1 Wall Finishes

Anything under 75 kg CO<sup>2</sup>-e / m<sup>2</sup> can be considered as standard and acceptable.

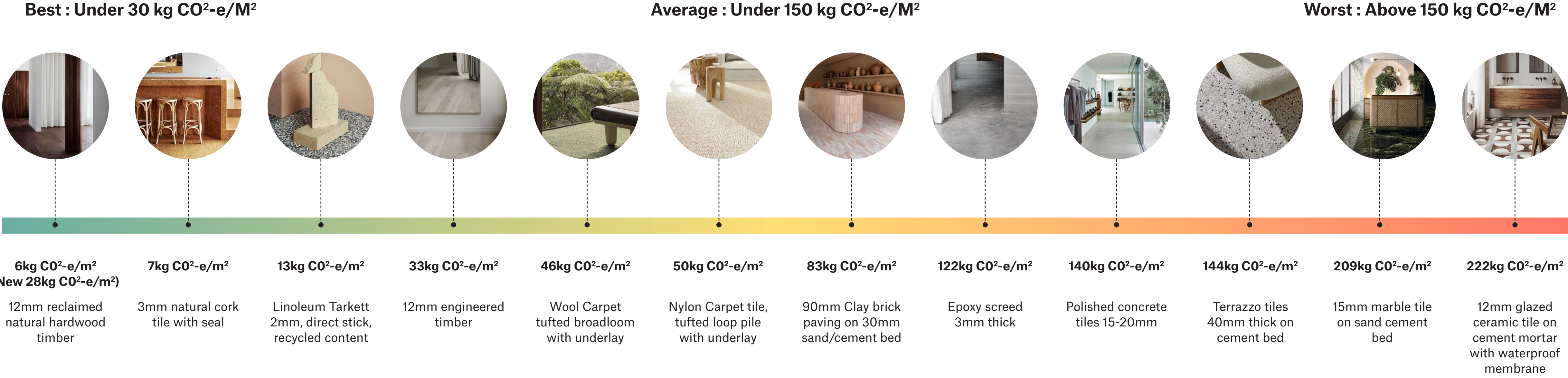
Under 60 kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards a good design and below 45-50 is current best practice.



# 6.2 Floor Finishes

Anything under 75 kg CO<sup>2</sup>-e / m<sup>2</sup> can be considered as standard and acceptable.

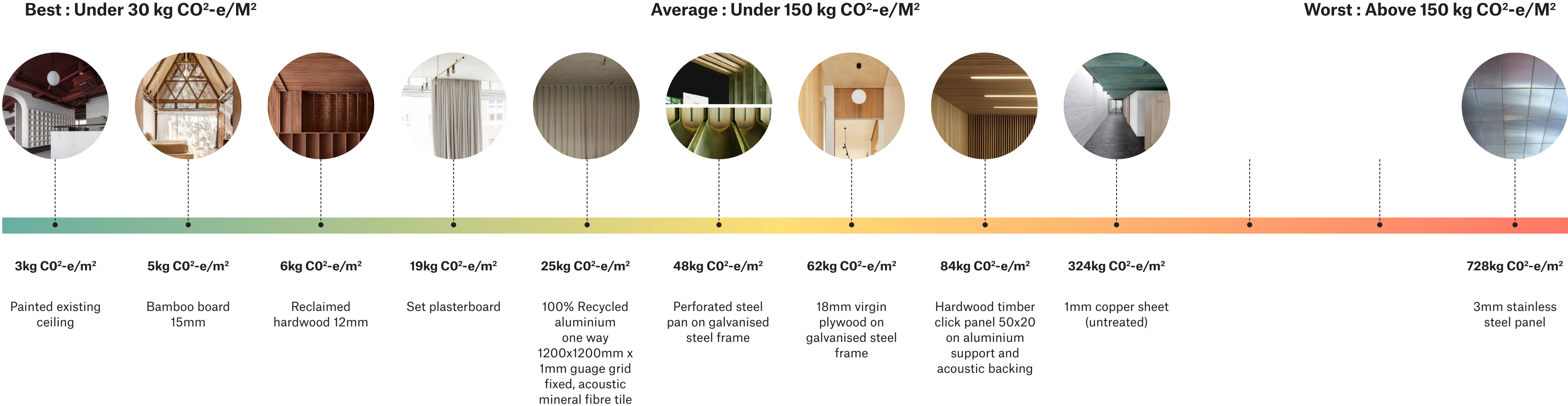
Under 60 kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards a good design and below 45-50 is current best practice.



# 6.3 Ceiling Finishes

Anything under 75 kg CO<sup>2</sup>-e / m<sup>2</sup> can be considered as standard and acceptable.

Under 60 kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards a good design and below 45-50 is current best practice.

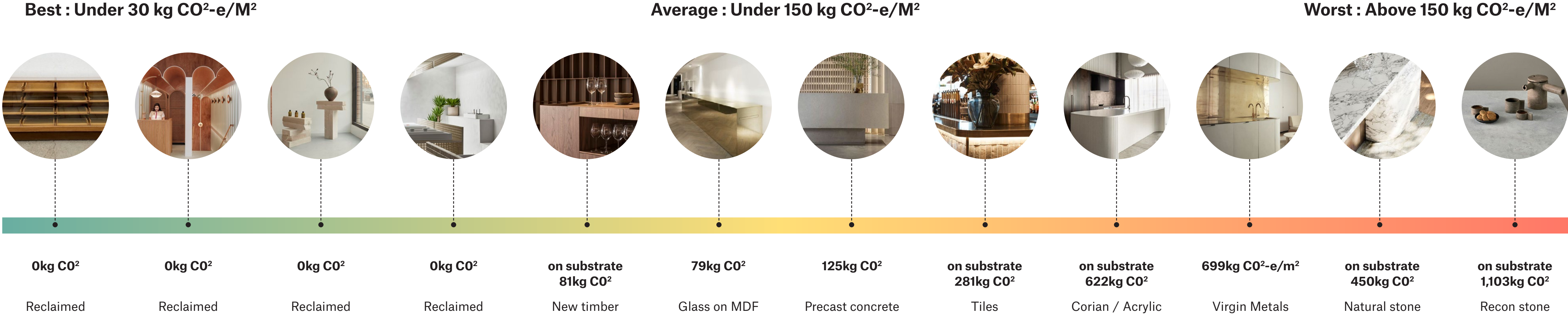


# 6.4 Joinery

Anything under 75 kg CO<sup>2</sup>-e / m<sup>2</sup> can be considered as standard and acceptable.

Under 60 kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards a good design and below 45-50 is current best practice.

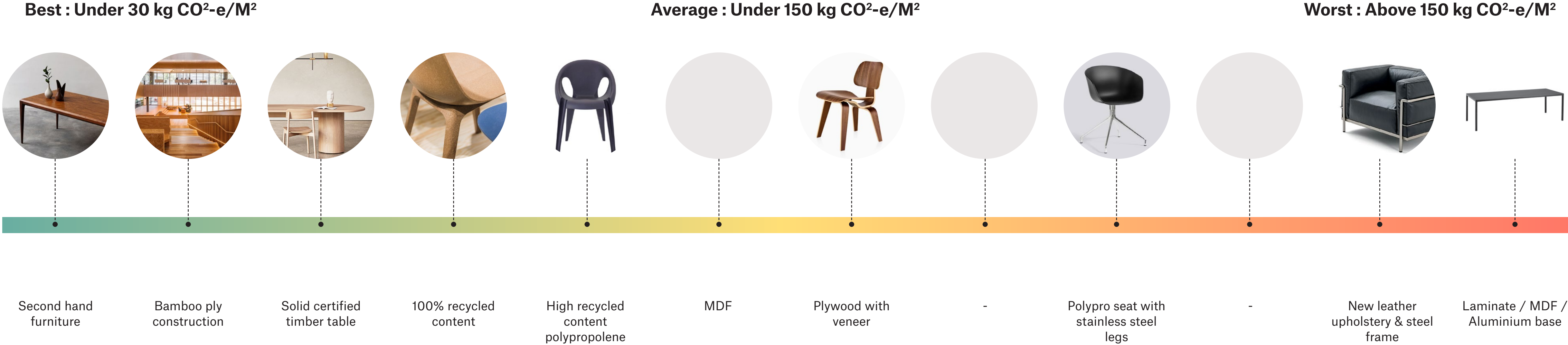
Joinery & furniture is dominated by plastics and metal from a carbon perspective and timber from an ecological footprint, and whilst most furniture manufacturers may have 'eco-labels' and have transitioned to higher recycled content, their end-of-life treatment is always poor,



# 6.5 Furniture

Anything under 75 kg CO<sup>2</sup>-e / m<sup>2</sup> can be considered as standard and acceptable.

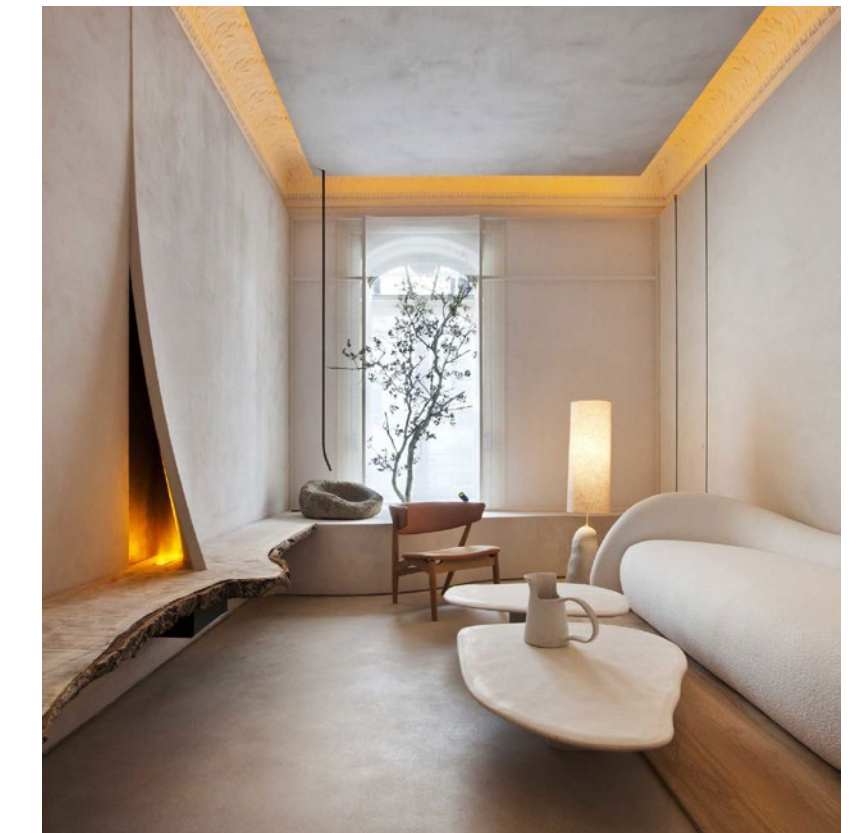
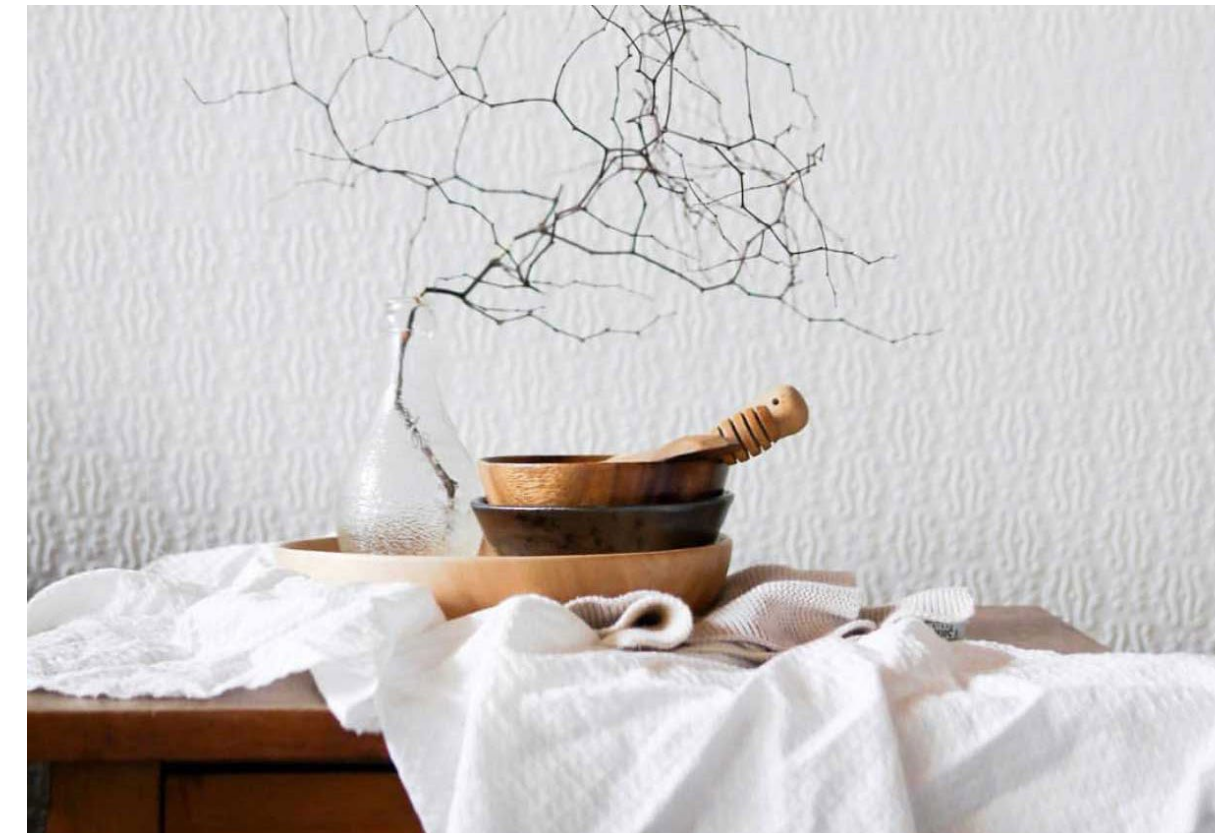
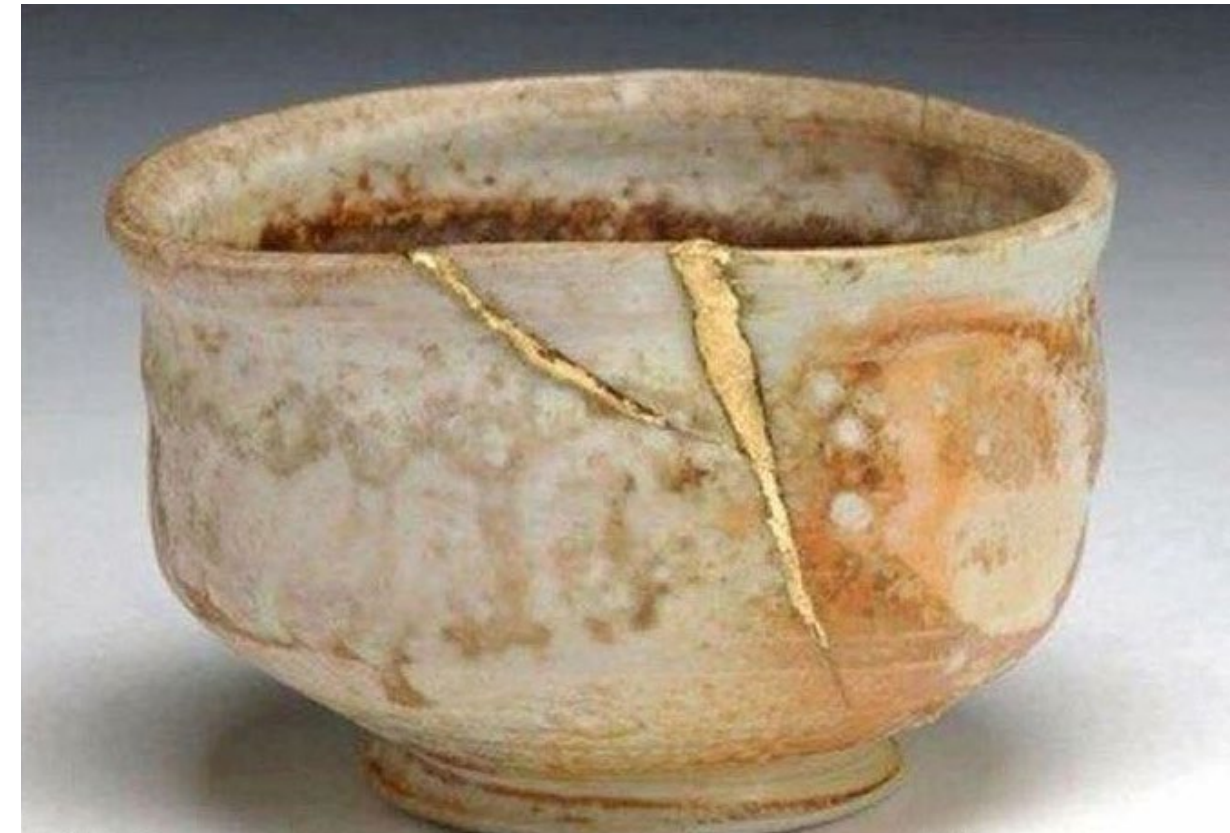
Under 60 kg CO<sup>2</sup>-e / m<sup>2</sup> is moving towards a good design and below 45-50 is current best practice.



"When the Japanese mend broken objects, they aggrandize the damage by filling the cracks with gold. They believe that when something's suffered damage and has a history it becomes more beautiful."

The Japanese art of Wabi Sabi is about finding beauty in imperfection, accepting the passing of time and understanding the value of authenticity. Let's approach our treatment of the Earth & it's resources in this same way.

Quote by Barbara Bloom



# Thank you

**BATESSMART™**

**Melbourne**

1 Nicholson Street  
Melbourne  
Victoria 3000  
Australia

T +61 3 8664 6200  
F +61 3 8664 6300

[batesmart.com](http://batesmart.com)

**Sydney**

43 Brisbane Street  
Surry Hills  
New South Wales 2010  
Australia

T +61 2 8354 5100  
F +61 2 8354 5199

ABN 68 094 740 986