

**BUILDING
PERFORMANCE**

Developing an Embodied Carbon methodology for New Zealand: *How did we get here, and what's next?*

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Building for Climate Change (BfCC) programme
Building System Performance (BSP)
Ministry of Business Innovation and Employment (MBIE)



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

New Zealand Government

New Zealand Climate Change Policy Landscape

Climate Change Response (Zero Carbon) Amendment Act 2019



Climate Change Commission



National Emissions Reduction Plan (May 2022) – Government action in all major sectors of economy

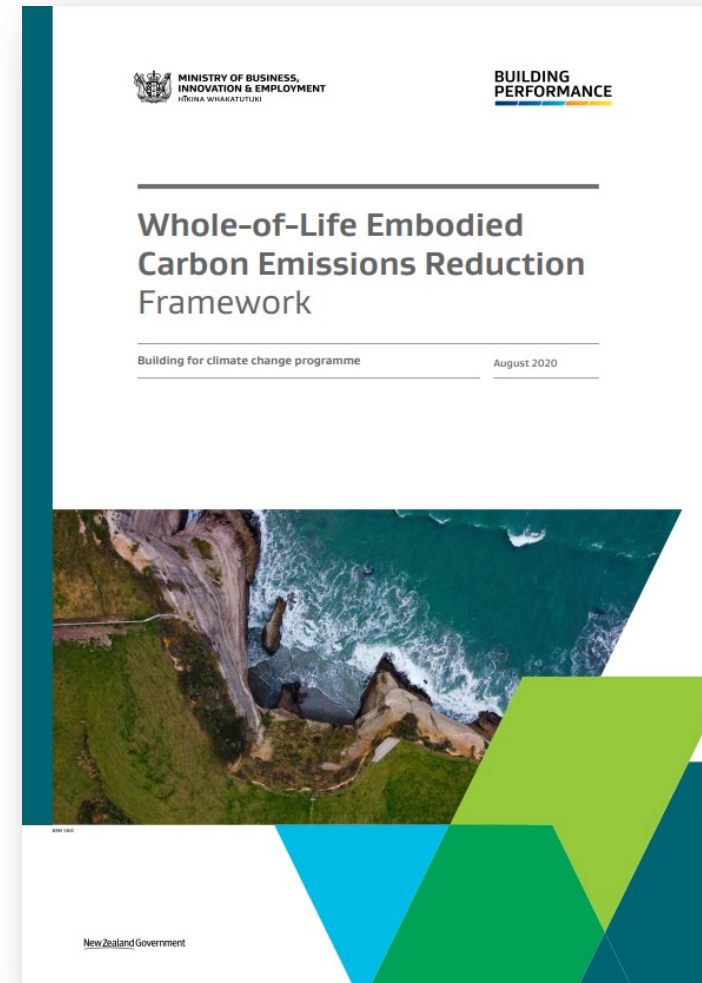
15% of NZ annual emissions driven by buildings: of this, over half are embodied emissions



Framework Public Consultation (2020)

Proposed new regulatory requirements to...

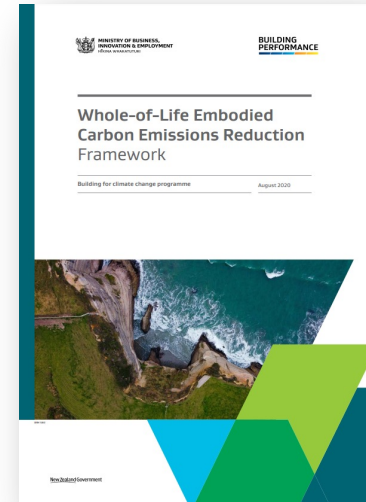
- **Assess,**
 - **Report,** and
 - (eventually) **Cap**
- ...embodied carbon emissions of buildings.



Response to Embodied Carbon Framework:

From 374 submissions:

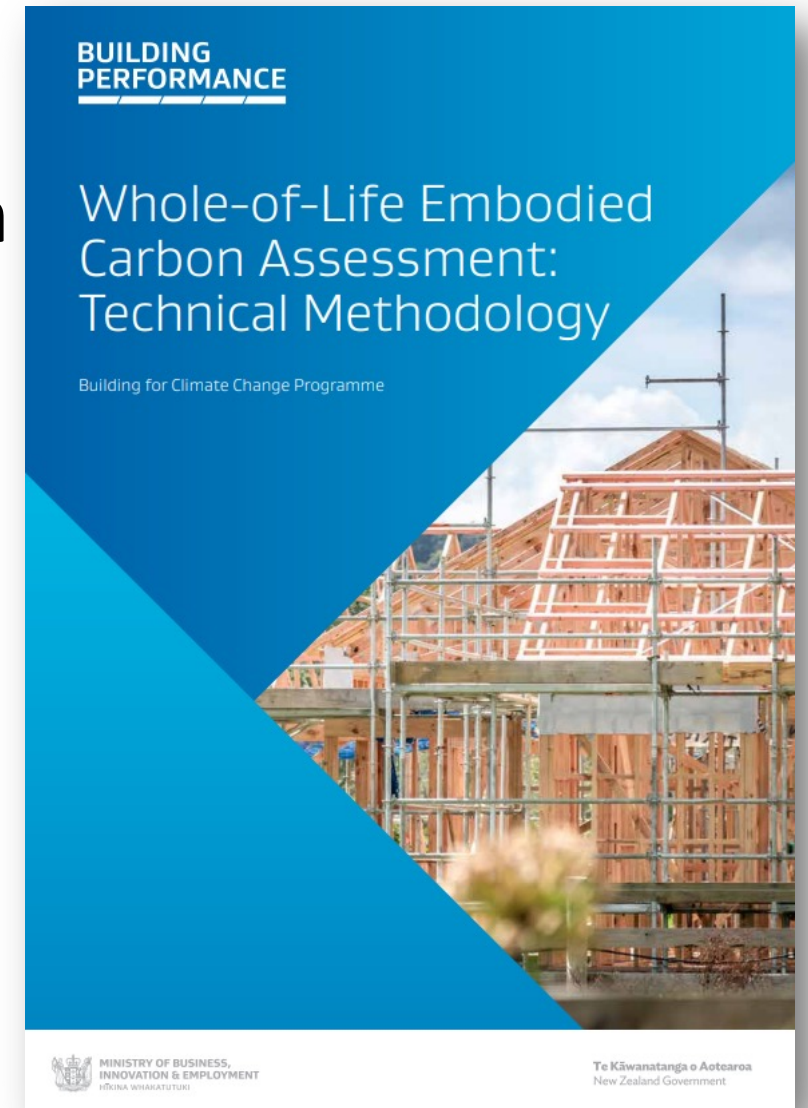
- 87% agreed we need initiatives to reduce embodied carbon of buildings,
- 74% supported a cap on whole-of-life carbon of buildings,
- 79% said there are barriers to assessing embodied carbon of buildings; most cited “***lack of an agreed methodology***”.



Technical Methodology (2022)

Developed following a **targeted consultation** in 2021.

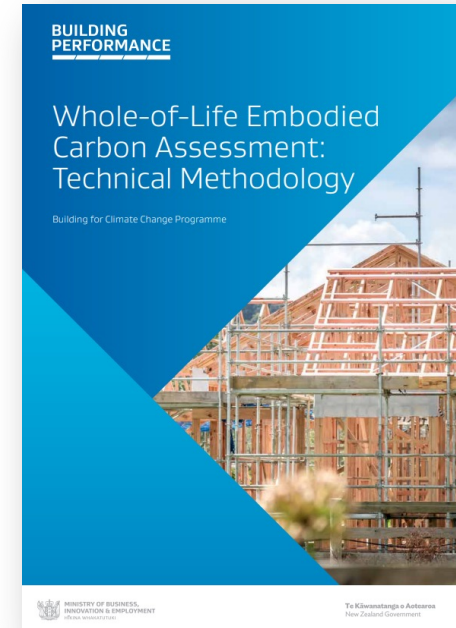
- Give direction on technical issues,
- Support consistency of embodied carbon assessments already happening in NZ,
- Introduce the idea of embodied carbon assessments to those not familiar with the concepts.



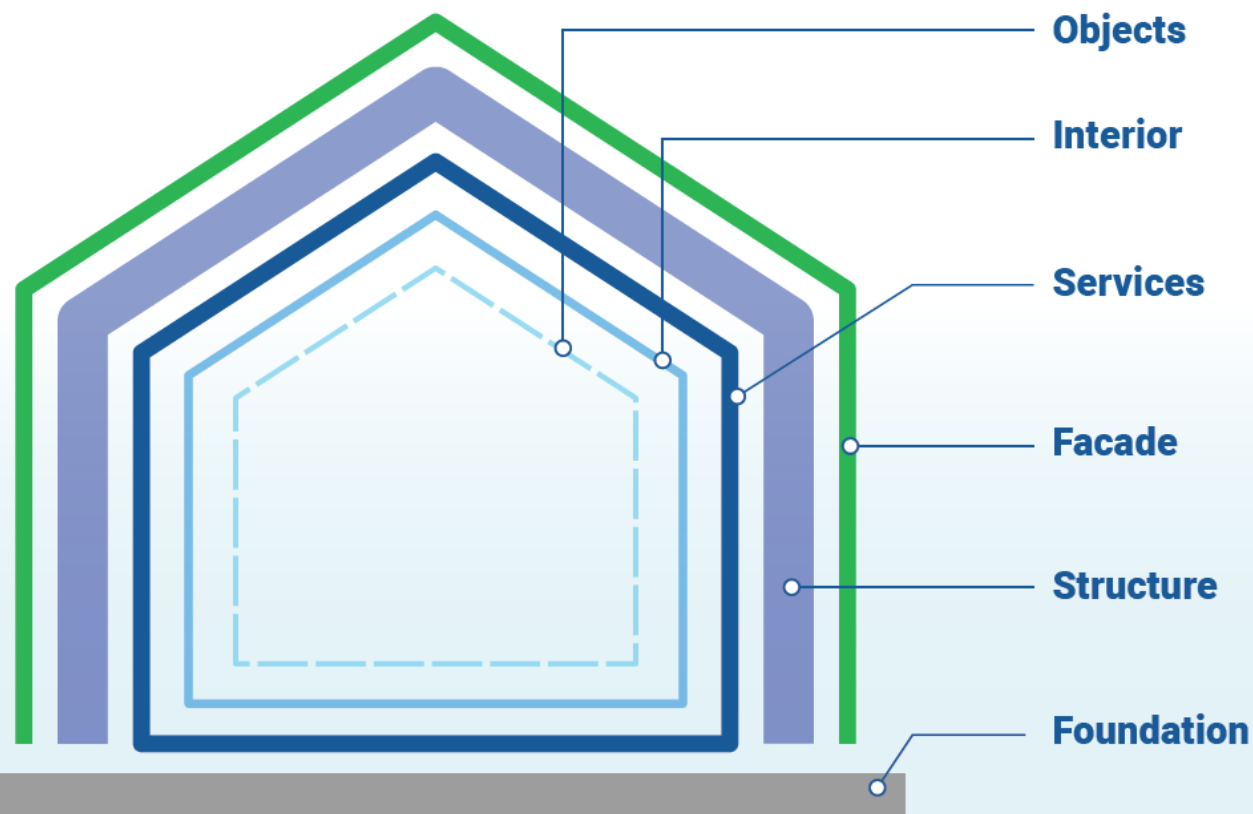
Objective and Principles

*Establish a **consistent** assessment methodology for embodied carbon, which will ultimately lead to **reductions** of those emissions in New Zealand.*

Consistent	Transparent
Accessible/ Understandable	Outcome-driven



Scope area: 1. Building Elements



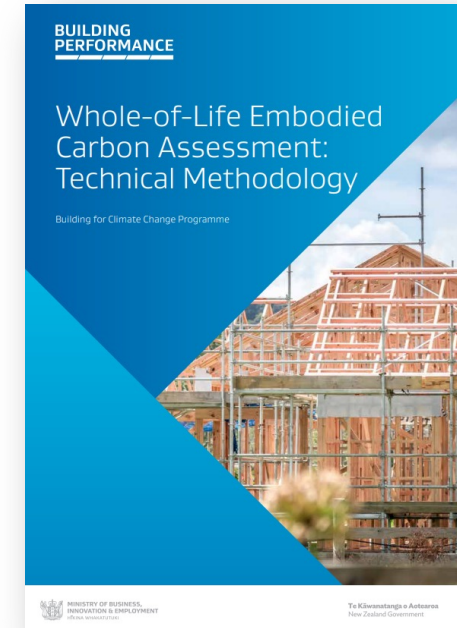
Systems



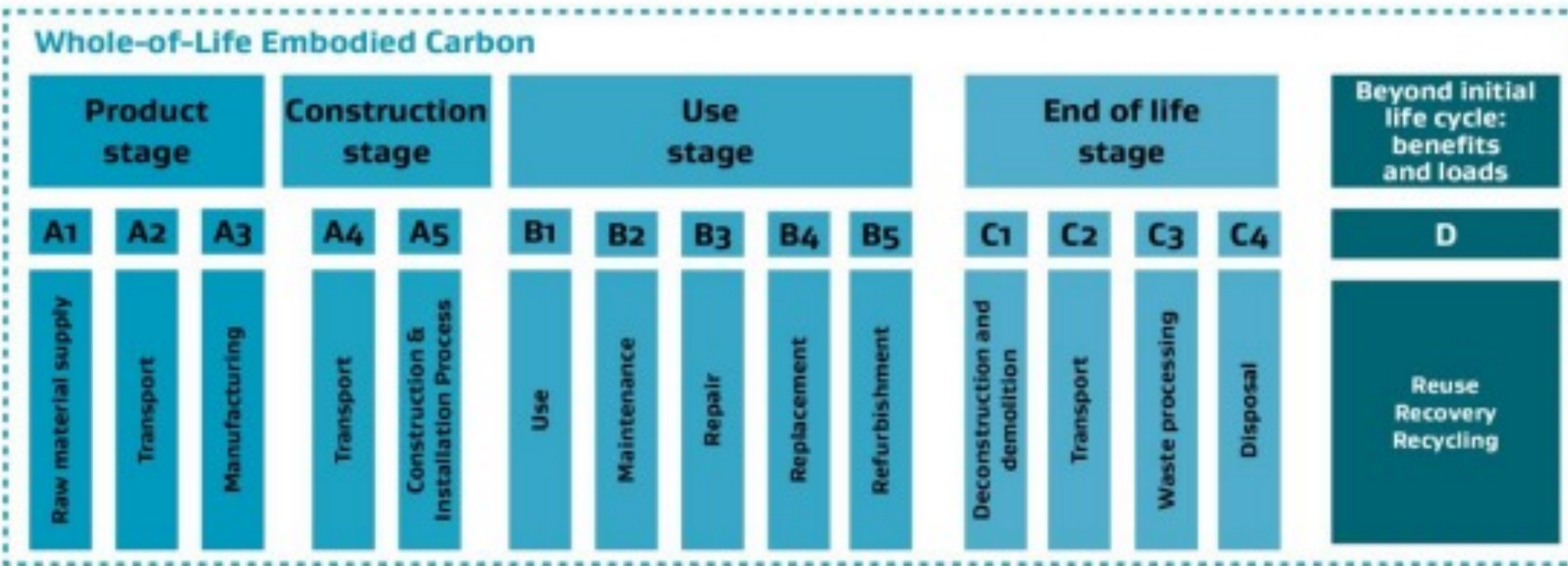
Elements

- Mandatory
- Voluntary

World Green Building Council,
Bringing Embodied Carbon Upfront, 2019

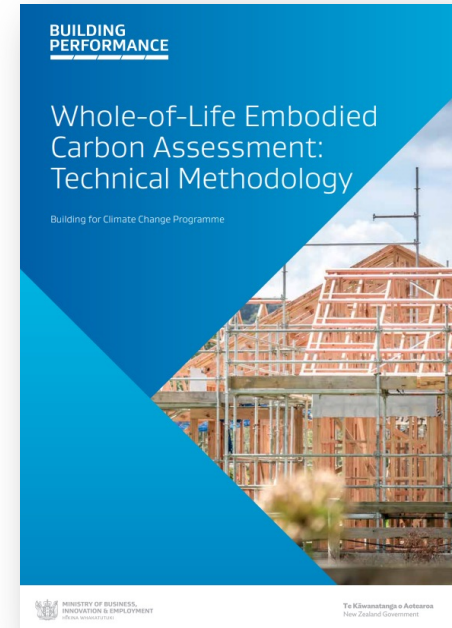


Scope area: 2. Life Cycle Stages

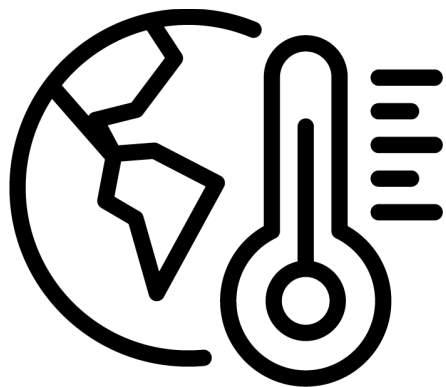


Emissions today

Future emissions



Scope area: 3. Emissions & Removals

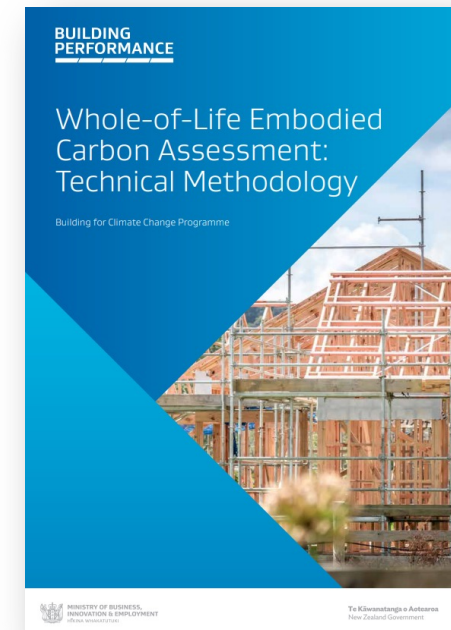


Emissions



Removals

To be reported separately

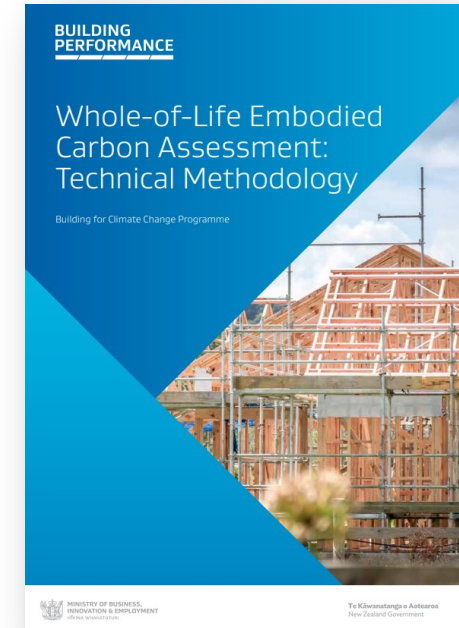
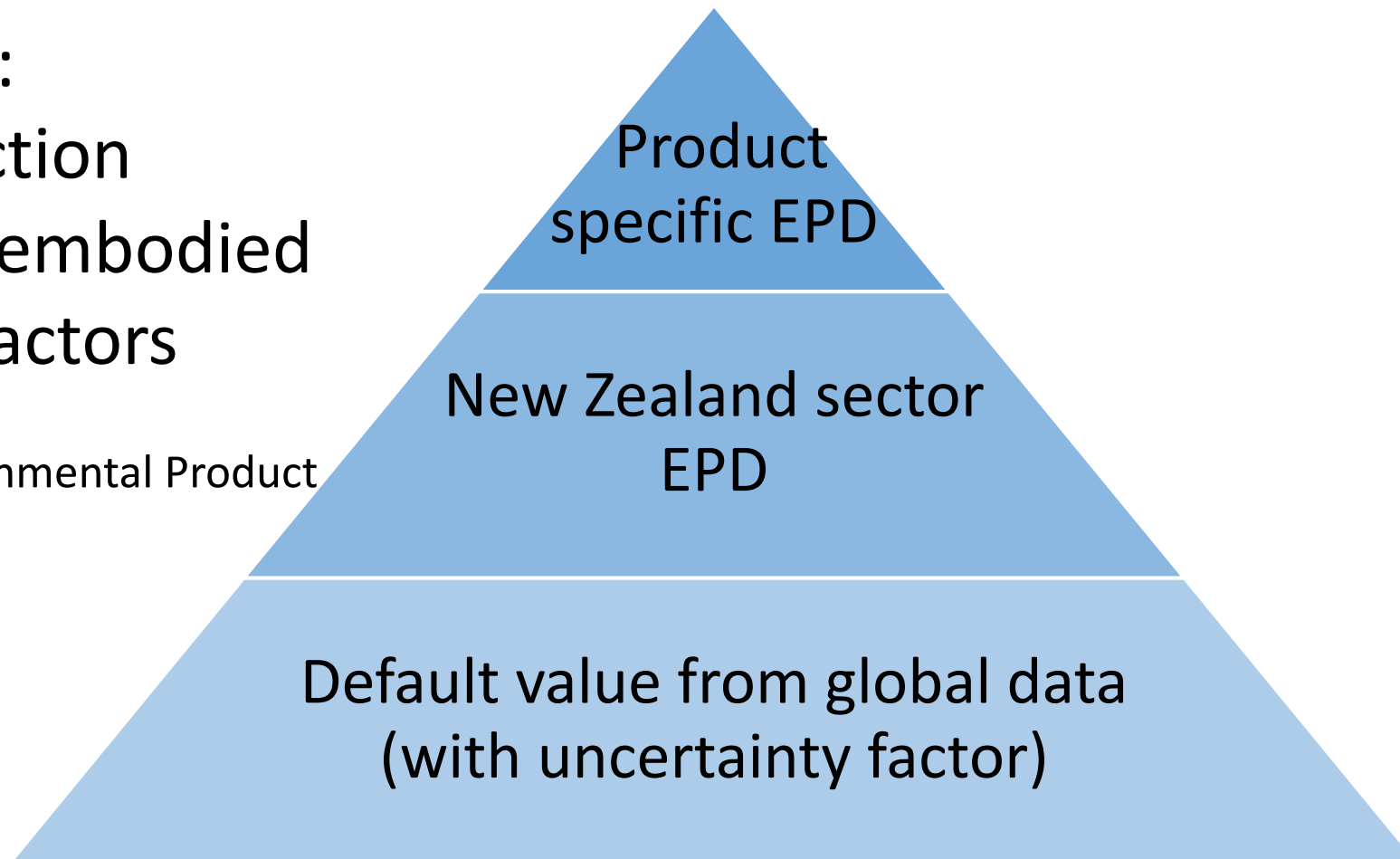


Scope area: 4. Data Hierarchy

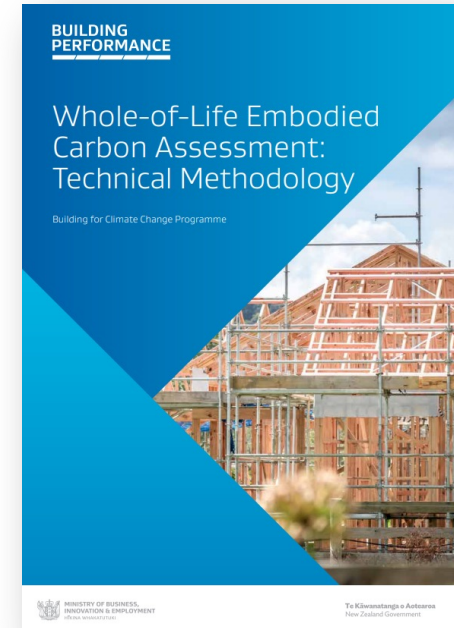
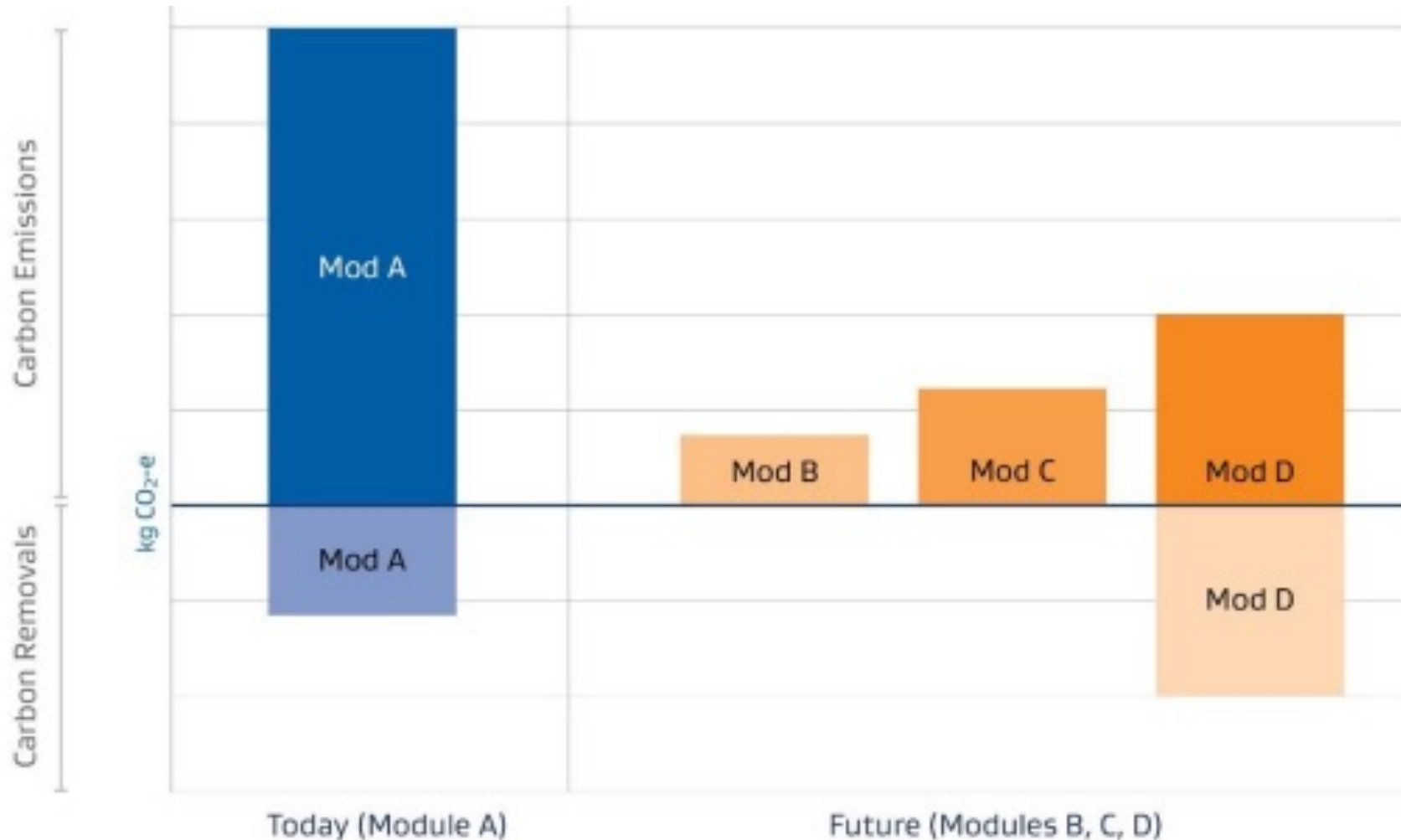
Example:

Construction
product embodied
carbon factors

(EPD = Environmental Product
Declaration)

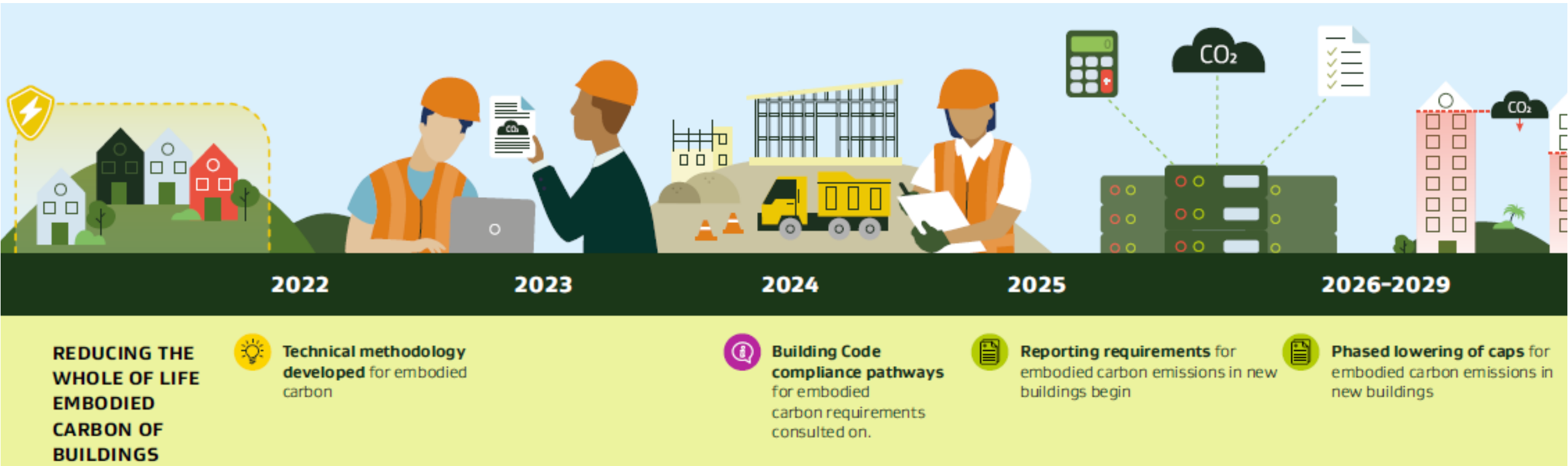


Scope area: 5. Results Format



Extract from methodology document

Roadmap



Next steps:

What?	How?
Fill gaps in current methodology to develop into a 'tight' regulatory instrument	Engage with industry through a Technical Advisory Group
Develop 'technical infrastructure' to enable compliance, <ul style="list-style-type: none">• National platform for input carbon data,• Tools (new/existing) that comply with methodology,• Capture assessment results in public database, will inform development of caps,	Procure data management services Work with existing providers of NZ data
Address non-technical issues: enforcement, verification, penalties, implementation planning etc.	Policy processes, consultation, cost benefit analyses

Questions
