

5<sup>th</sup> RECBE on-line Meeting

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Low Carbon Concrete Group

(LCCG)



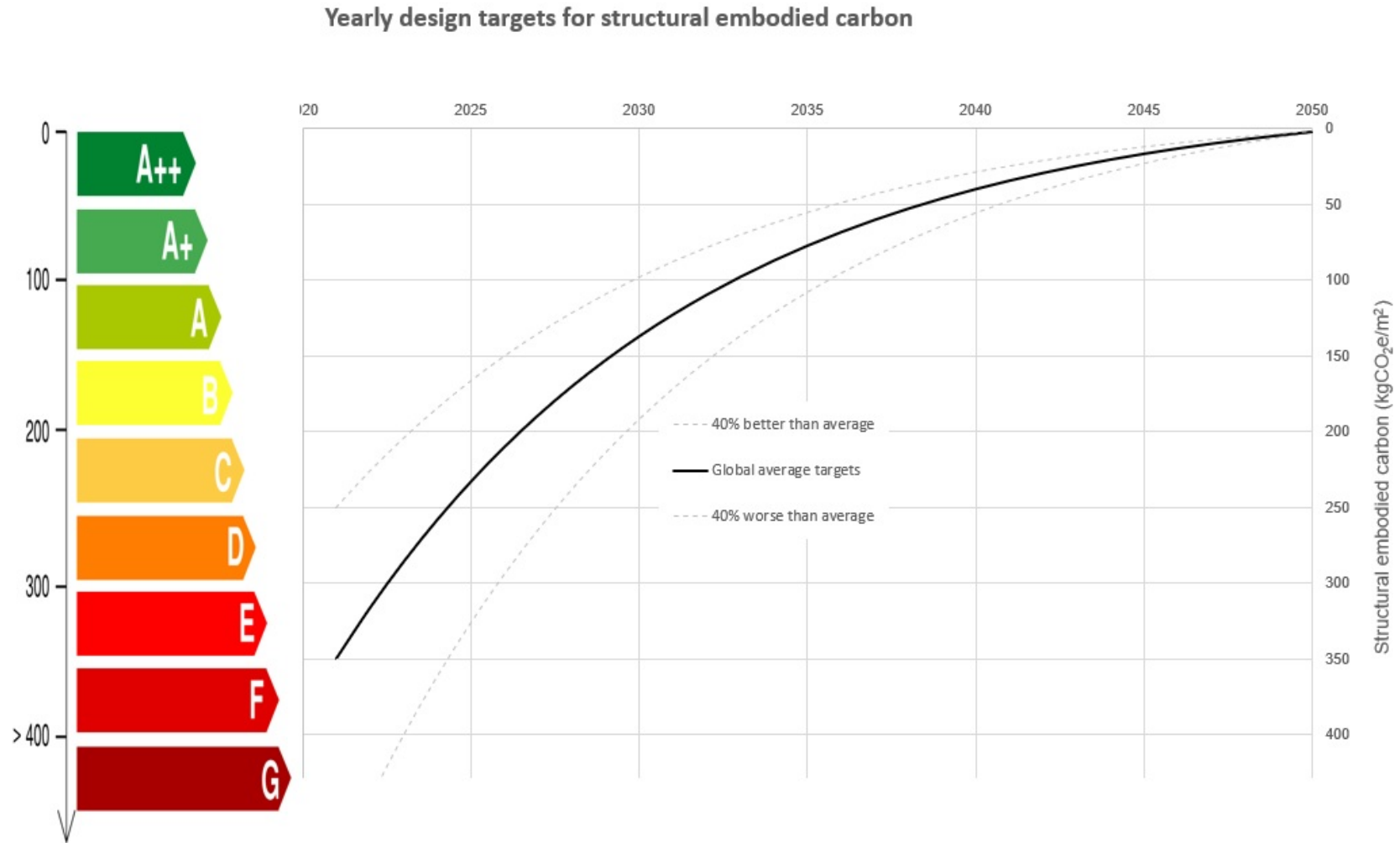
The IWG has brought together industry participants to form the Low Carbon Concrete Group (LCCG) to create a Routemap to signpost and guide clients and the wider construction sector through the steps necessary to understand the benefits of low carbon concrete and develop their own strategy to utilise low carbon concrete in the correct manner and for appropriate applications.



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# Why is there a focused and concentrated effort to reduce carbon?

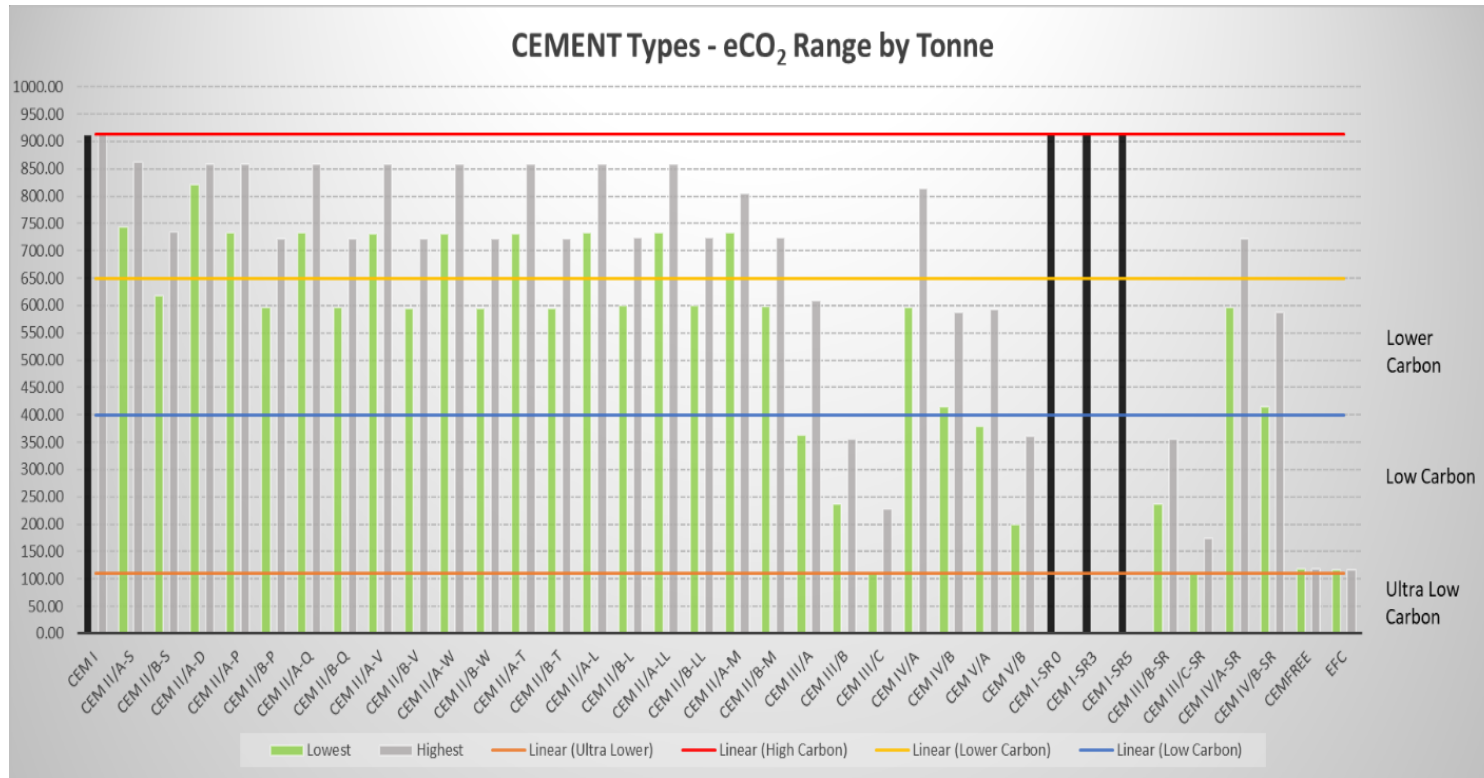


Extract from draft paper “Setting Carbon Targets” by Will Arnold (Arup), Mike Cook (Buro Happold), Duncan Cox (Thornton Tomasetti), Orlando Gibbons (Arup), John Orr (Cambridge University). The paper is focussed on defining kg CO<sub>2</sub>e / m<sup>2</sup> in the structure of buildings. However, the approach can be applied to concrete more widely.

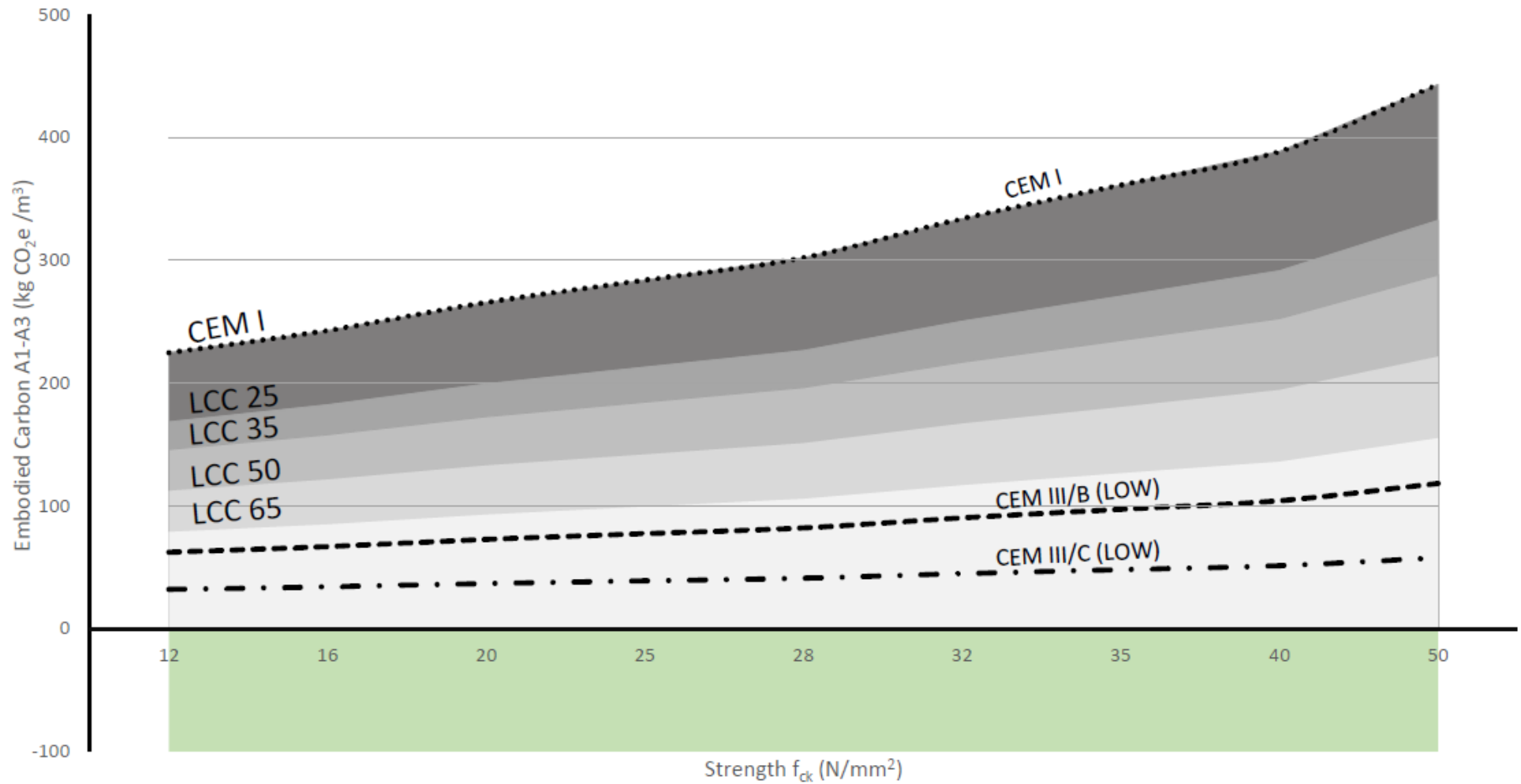
The figure shows a pathway “in order to stay within 1.5°C of warming” ... “The curve shows ‘design emissions’ – i.e. real (construction) emissions come roughly two years later”.



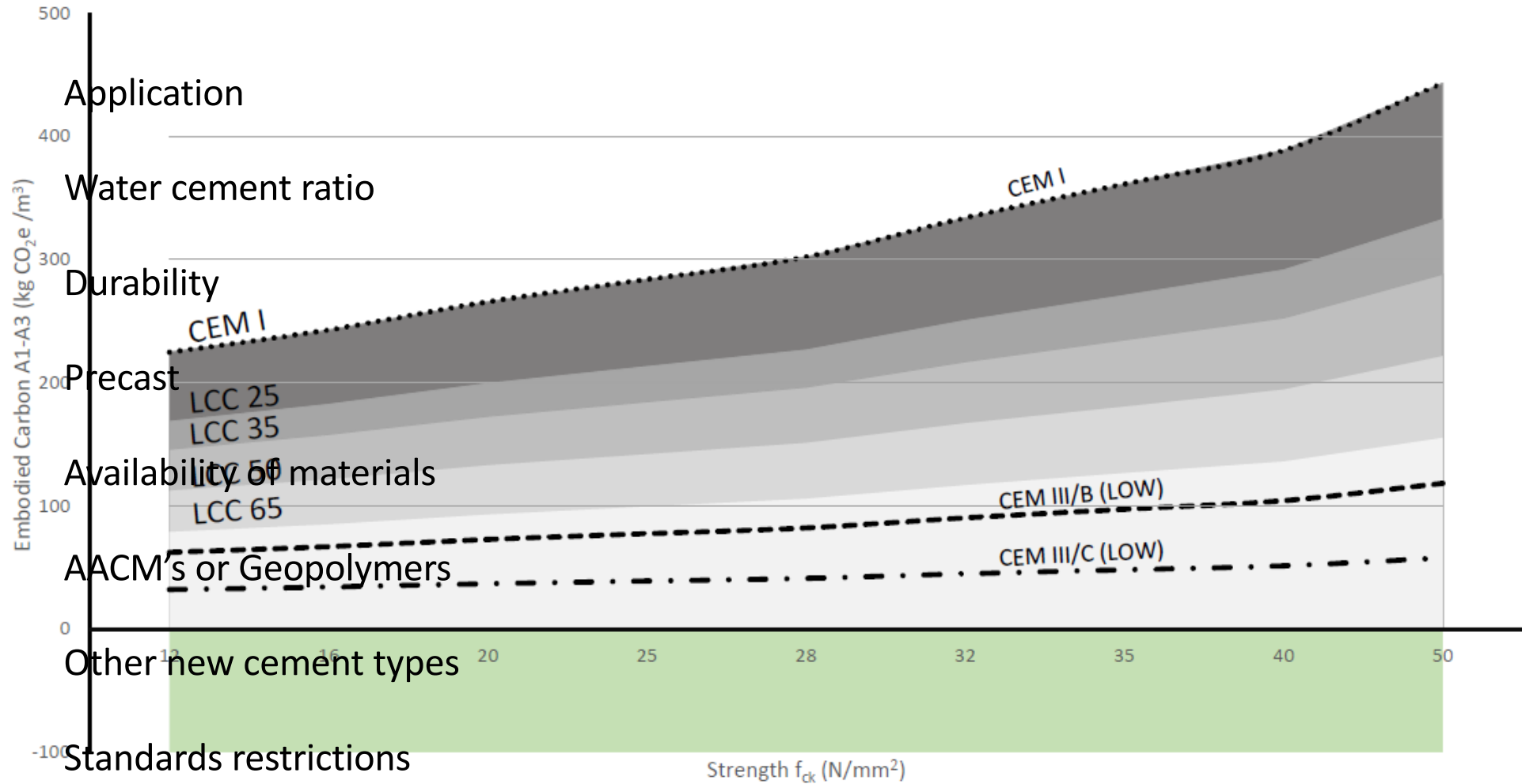
# What is Low Carbon Cement?



# What is Low Carbon Concrete?



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## LCCG Strands

Strand 1 - Technical Strand.

Strand 2 - Perceptions and Facts.

Strand 3 - Compliance and Standards.

Strand 4 - Operational Strand.

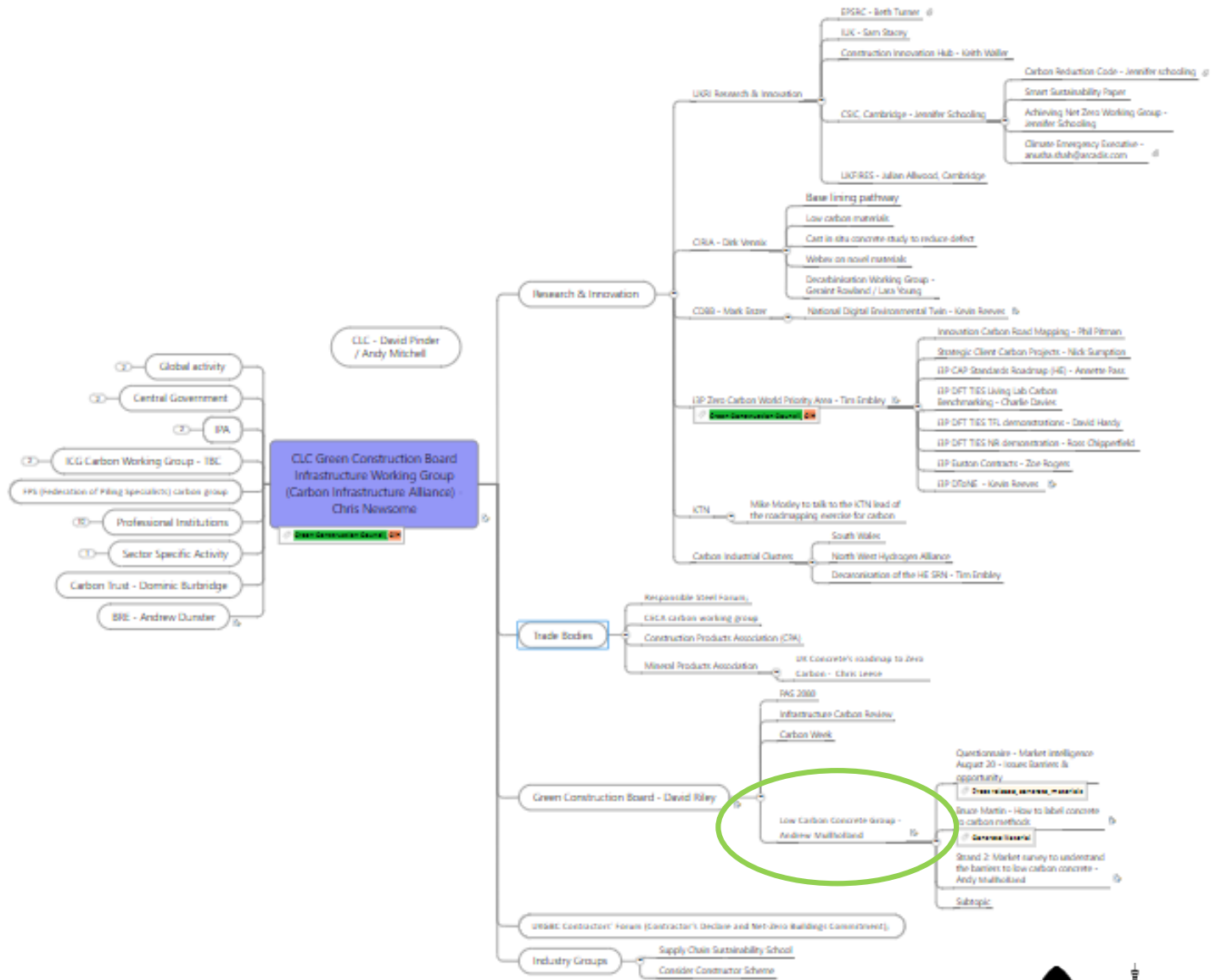
Strand 5 - Complimentary Designs and Materials.

Strand 6 - Ownership.

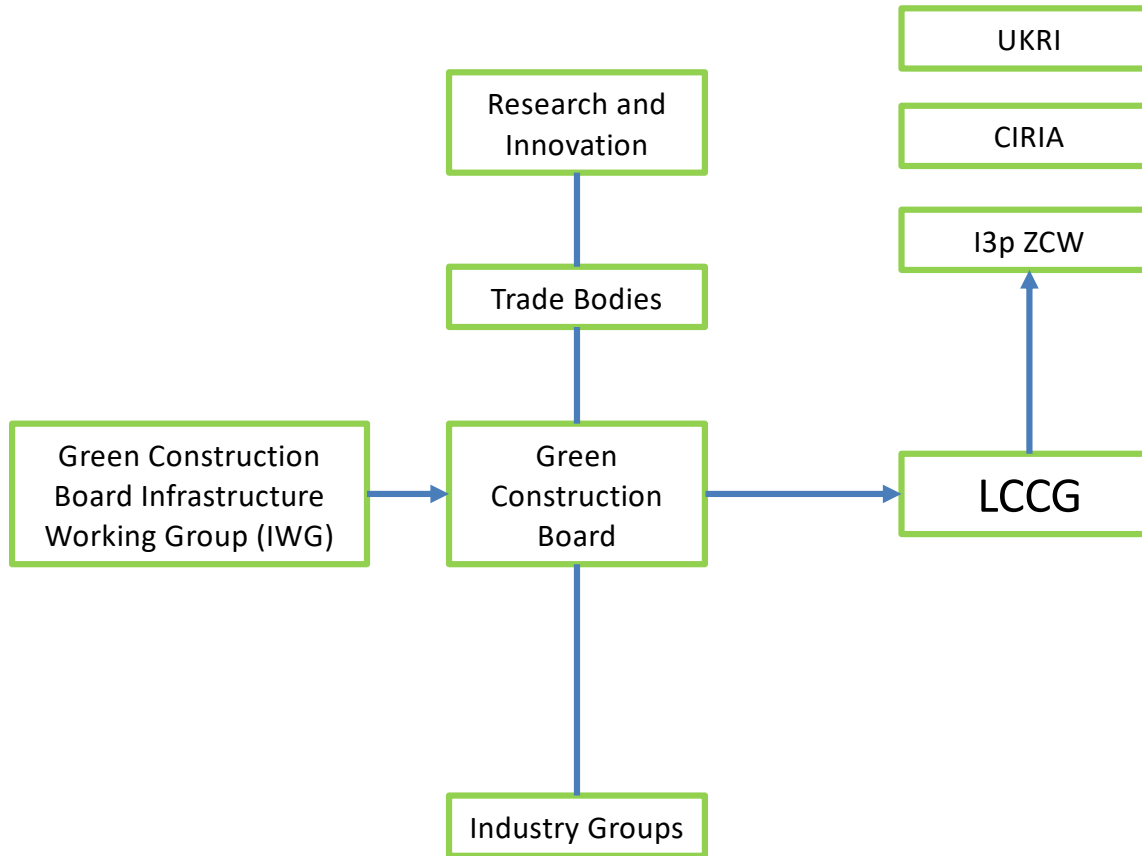




# Where the LCCG fits in



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## Developing a Strategy

TRL 1 - Basic Principles Observed.

TRL 2 – Technology Concept Formulated.

TRL 3 – Experimental Proof

TRL 4 – Technology Validated in Laboratory.

TRL 5 – Technology Validated in Relevant Environment.

TRL 6 – Technology Demonstrated.

TRL 7 – System Prototype Demonstration.

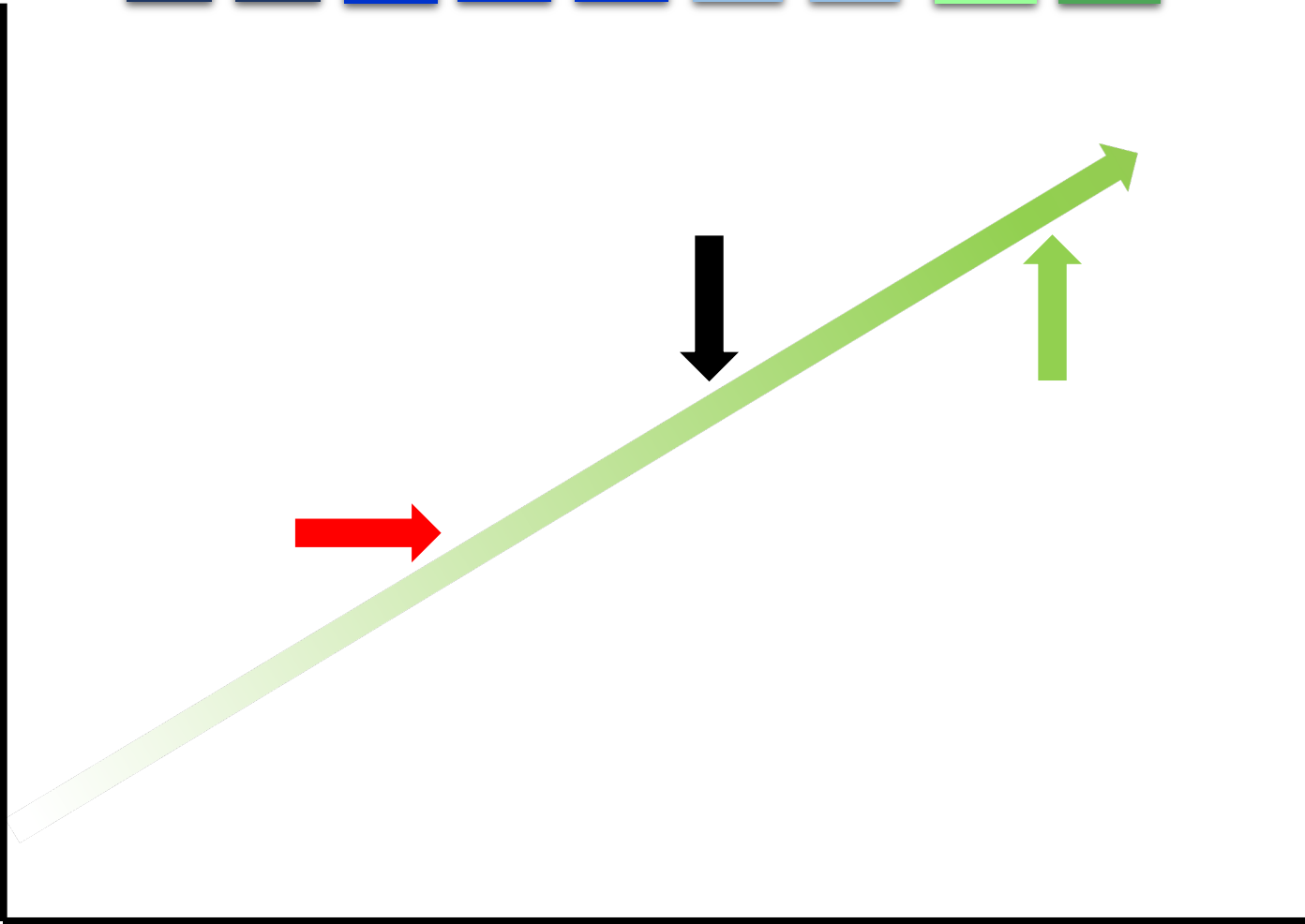
TRL 8 – System Complete and Qualified.

TRL 9 – System Approved.



- TRL1
- TRL2
- TRL3
- TRL4
- TRL5
- TRL6
- TRL7
- TRL8
- TRL9

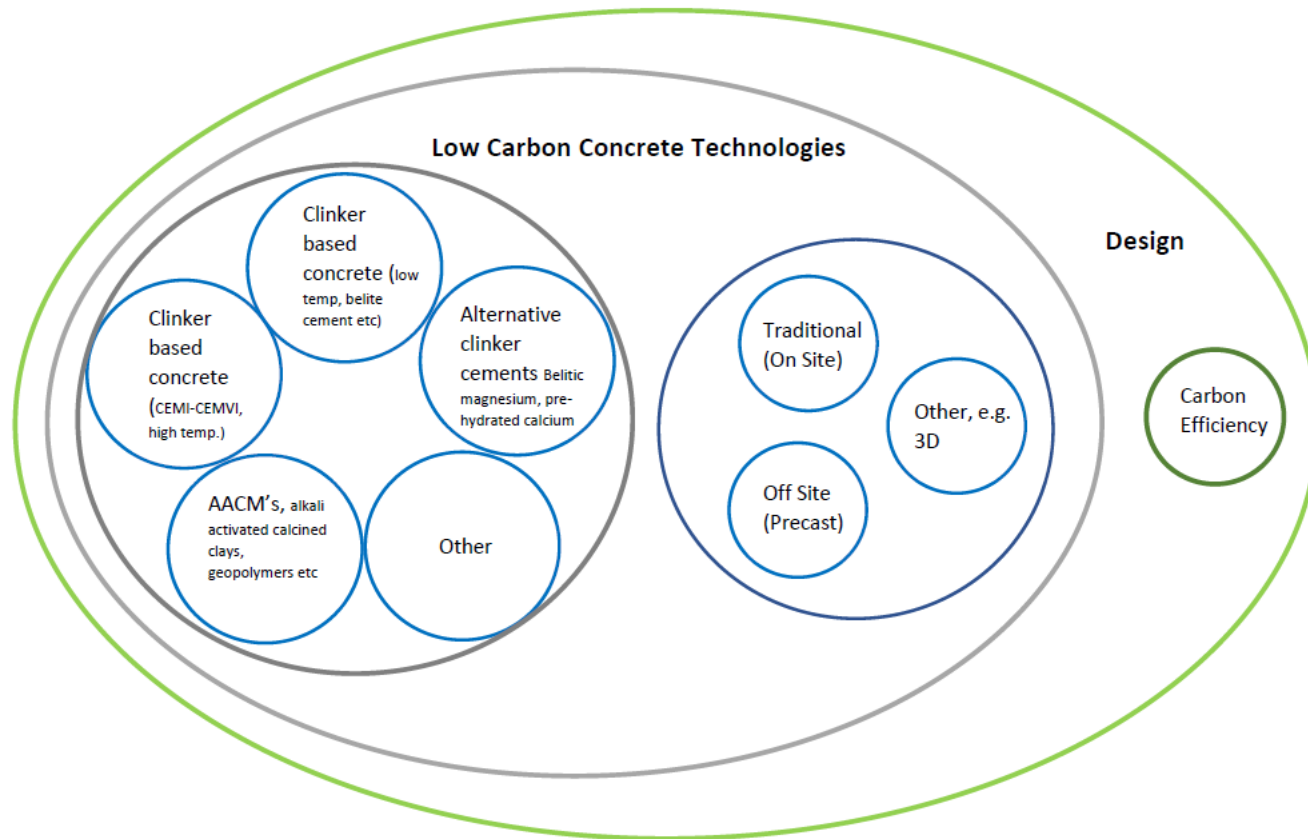
Time



Progress



## Low Carbon Concrete: Formulations and Use



Thank you for your time

Questions

