MDB Heads of Procurement Sustainable Procurement Forum- 17 Sept 2024

Session 3: Engaging with construction market to advance resource efficiency and circular economy agenda – perspectives from industry, government and MDB

Introducing Our Panel

Jenny Yan Yee Chu,
Procurement Specialist,
Asian Development Bank

Sonia Da Fonseca,
Senior Procurement Specialist,
European Investment Bank

Dr Mervyn Jones,
Circular Economy and Sustainable Procurement Expert

Dr Andrew Minson,
Director of Concrete and Sustainable Construction, GCCA

Miguel Portilla Bullido,
Infrastructure Sustainability Manager,
ACCIONA

Soledad (Sol) Reeve,
Sustainable Procurement Expert
UNIDO- IDDI

Sustainable Public Procurement Forum

Session 3: Role of Public Procurement in Circular Economy

17 September 2024

Dr Mervyn Jones,
Senior Adviser, Circular Economy
Rijkwaterstaat, Netherlands

Rijkswaterstaat
Ministry of Infrastructure and Water Management

London – Stratford regeneration

- 145 mixed industrial buildings - 9 buildings re-used
- 445,000 tonnes (98%) material reused or recycled
- 20,000 lorry movements avoided
- Over 80% of soil has been cleaned & re-used on the Olympic Park
- Foundations for Aquatic Centre, Handball Arena have concrete with >30% recycled materials.
- Recycled content levels of 22% (170,000 tonnes)
- Reduced concrete design saved 65,000cu metres, 120,000 tonnes aggregate and 20 tonnes CO_2eq.

2006

2008

2012

2022

Sustainable and circular procurement requires a cost-effective solution

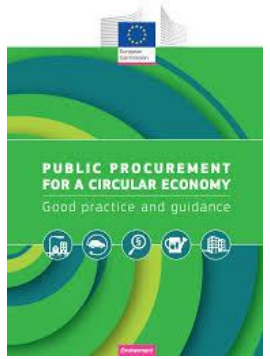
SDGs, circular economy & procurement

Sustainable Development Goals

Sustainable Consumption & Production SDG12

Circular Economy policy

Circular Economy Action Plan



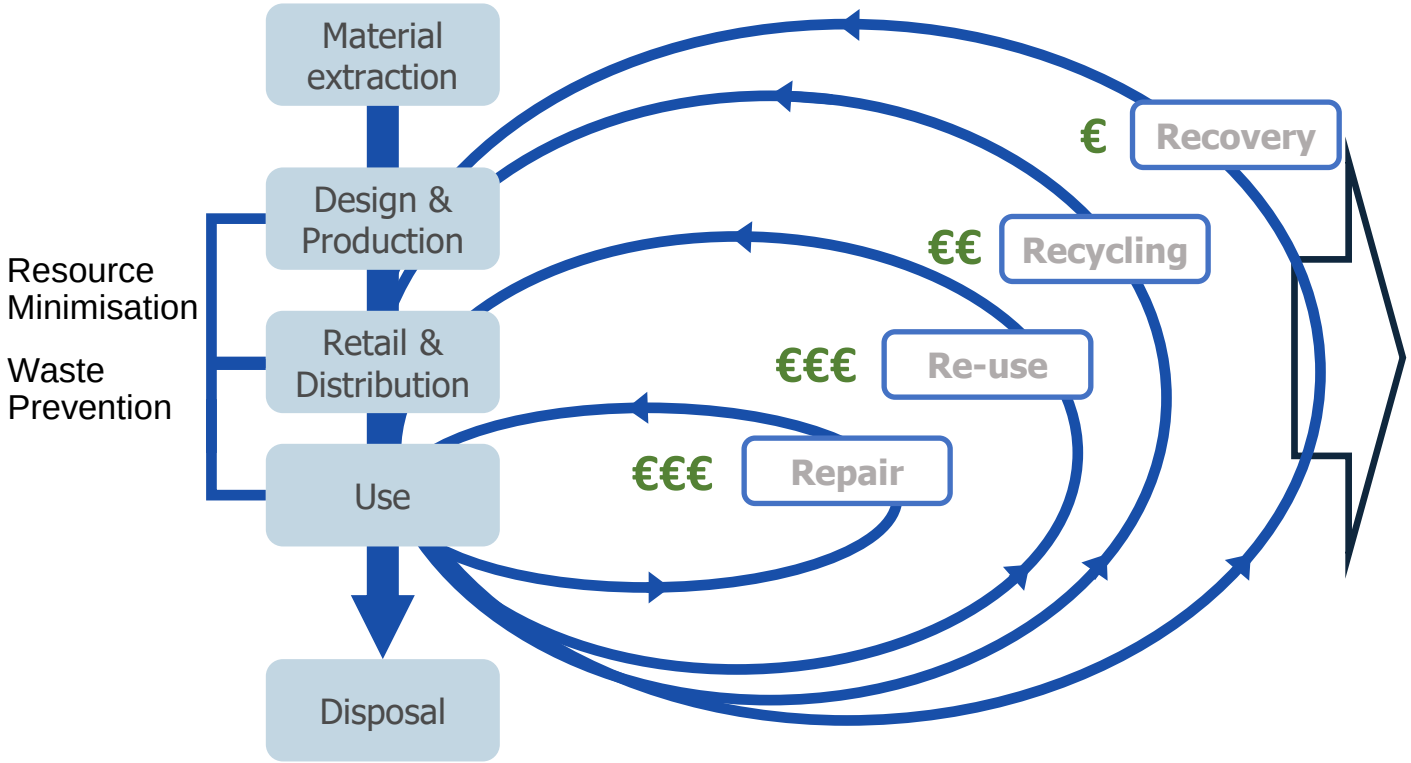
Circular Procurement Delivery Mechanism

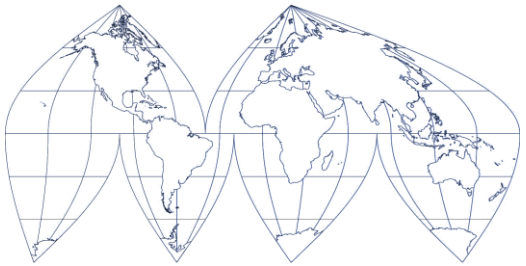
Why a circular economy?

Carbon

Water

Materials





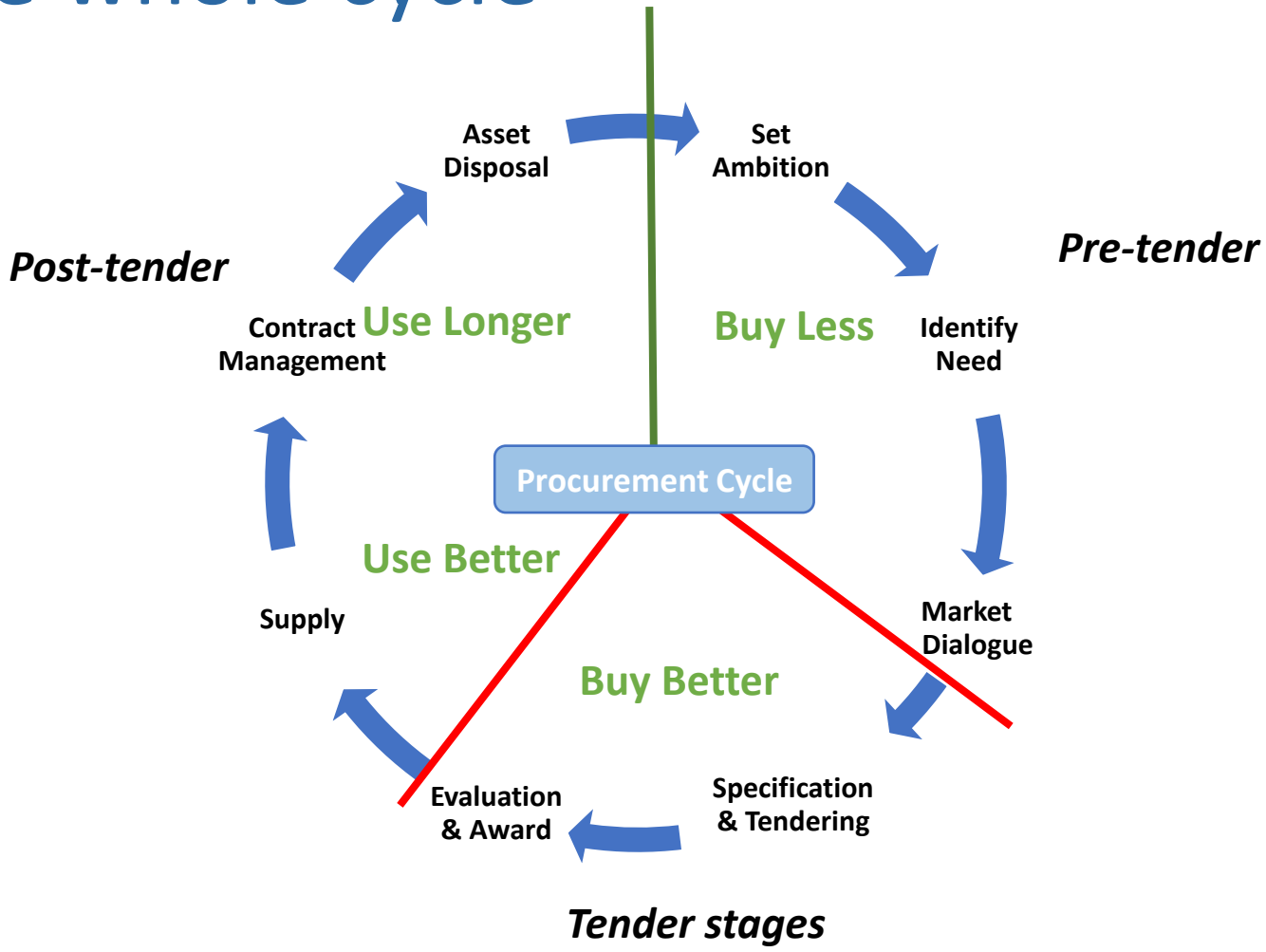
Stability

Resilience

Competition

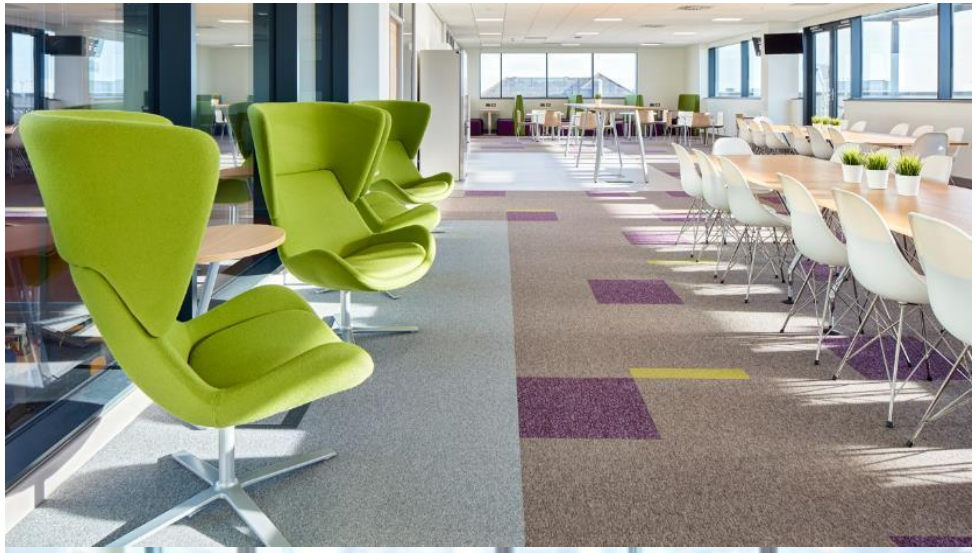
Source: Sustainable Global Resources Ltd

How to use procurement as a strategic tool across the whole cycle



Adopting CP also has positive benefits in terms of social value

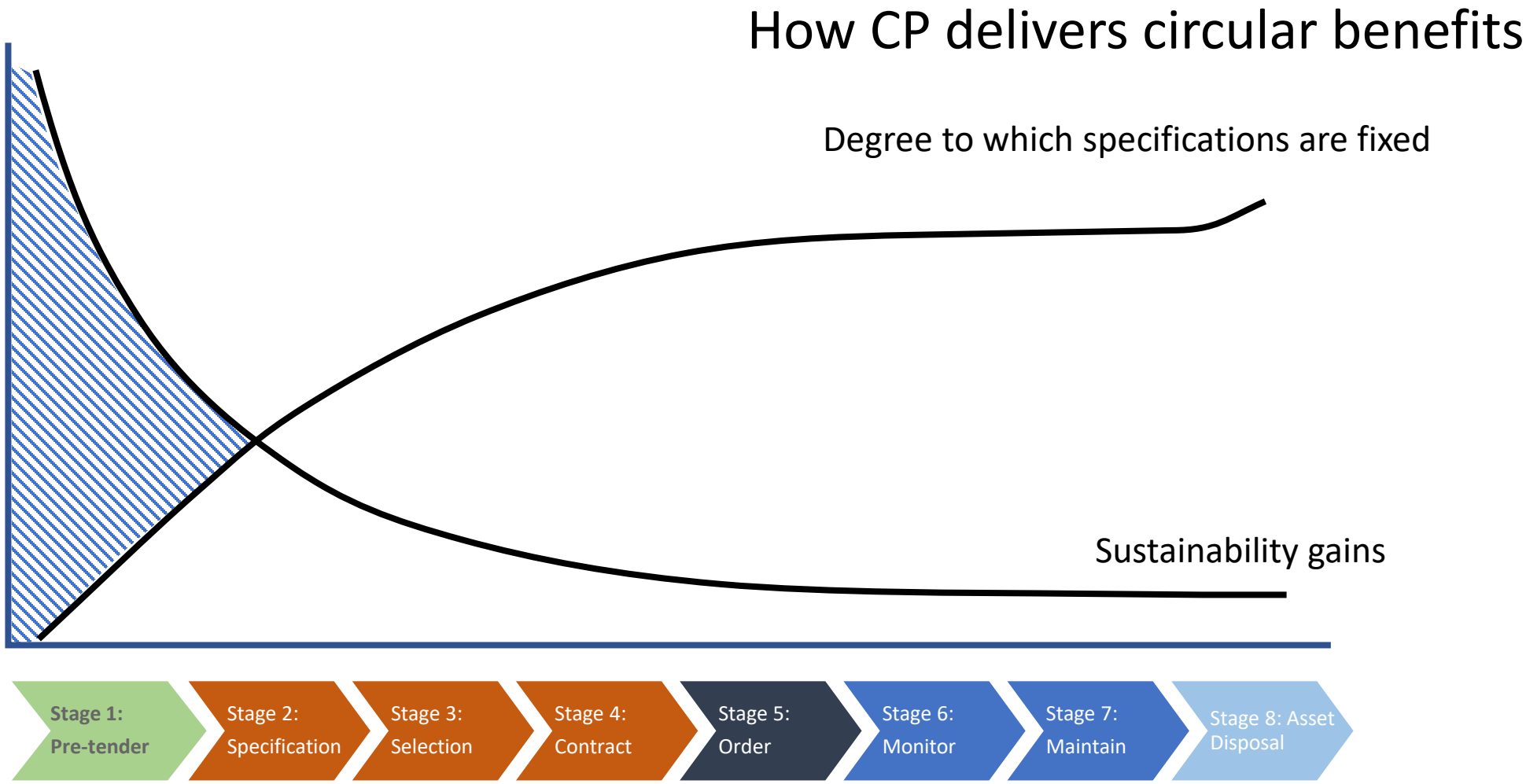
Public Health Wales



- 1,143 items re-used
- 1,270 re-manufactured
- Impacts:
  - Product lifetime optimised
  - 134 tonnes CO_2e saved which equals 400,000 car miles
  - 41 tonnes landfill diversion
  - 2,435 employed hours for 8 people
  - Employment & training led to real jobs for 3 people
  - Virgin material displaced

Early market engagement is key to maximising sustainability gains

Procurement cycle impacts



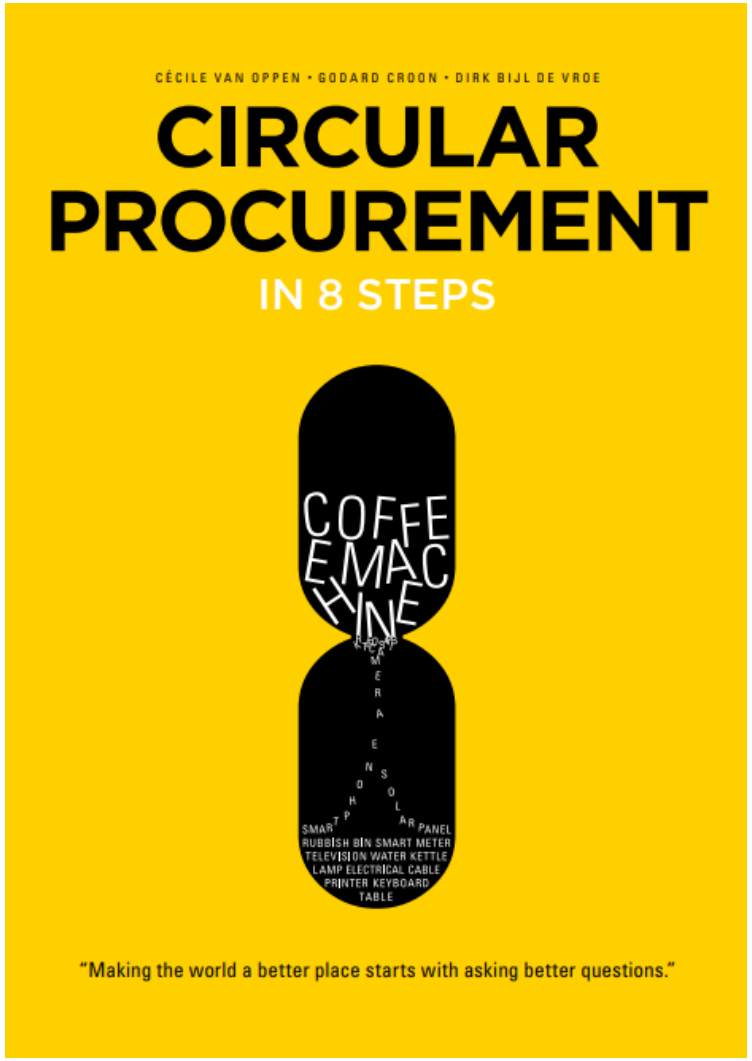
Engage across the whole procurement cycle

Pre-Procurement	During Tender	Post Tender
• Communicating policy objectives • Publishing forward plans • Understanding market maturity • Understanding market opportunities • Identifying innovation opportunities • Identifying alternative business models	• In line with regulatory and legal requirements	• Policy KPIs– monitoring and reporting • Key suppliers – reducing ongoing impact e.g. carbon • In contract performance indicators and performance improvement • Market innovations • Take-back / disposal

Kamp C office building, Belgium

- Two stage competitive market dialogue.
- Communicated ambitions through market dialogue to get right bidders.
- Organised circular construction masterclass for interested bidders
- Design, build, maintain and ensure energy for 20 years for a fixed budget
- Circular business models part of evaluation.
- Net positive CO_2 building
- Shortened build time to 11 months
- User feedback indicates healthy, pleasant & facilitating workplace.

How to implement SPP



1. Set your level of ambition (policy)
2. Internal procurement cycle & stakeholders

STRATEGIC

3. Define your need
4. Identify circular business models
5. Market collaboration
6. Tender procedure

OPERATIONAL

7. Measuring and awarding
8. Contract management

www.copper8.com/wp-content/uploads/2018/10/Circular-Procurement-in-8-steps-Ebook.pdf

MDB Heads of Procurement
Sustainable Public Procurement Forum

Engaging with construction market to advance resource efficiency and circular economy

LONDON - October 18, 2024

ACCIONA AT A GLANCE

A company that manages a broad portfolio of solutions that contribute to the achievement of the Sustainable Development Goals

- €1,285m EBITDA (-4% yoy)
- 13.5 GW Installed Capacity (+1.7GW yoy)
- 24.9 Twh production (+4% yoy)
- > 40 countries
- > 100 years of experience
- > 40,000 employees

- €551m EBITDA (+49% yoy)
- €34bn aggregated backlog (+12% yoy)
- 6,000 km roads
- 3,000 km high-speed rail
- 600 major bridges

- €1,805m GAV (+17% yoy)
- 720 housing units delivered
- 1,393 units pre-sales backlog at year-end

- 92 desalination plants
- > 5.8 million m^3/d of capacity
- > 35 projects worldwide
- > 23 million m^3/d of capacity

- 950,000 m^2 health centres managed
- 200 cultural projects in 44 countries

- 850,000 t of urban waste eliminated
- 30 LEED & BREEAM certified buildings
- 9,178 Silence vehicles sold
- €709m orderbook of facility services

SUSTAINABLE INFRASTRUCTURES

Infrastructures as enablers of Sustainable development

Infrastructures are drivers of economic growth and enable access to the basic services and economic opportunities necessary to promote people's well-being.

THEY ENHANCE THE POSSIBILITIES FOR DEVELOPMENT AND GROWTH OF THE TERRITORIES.

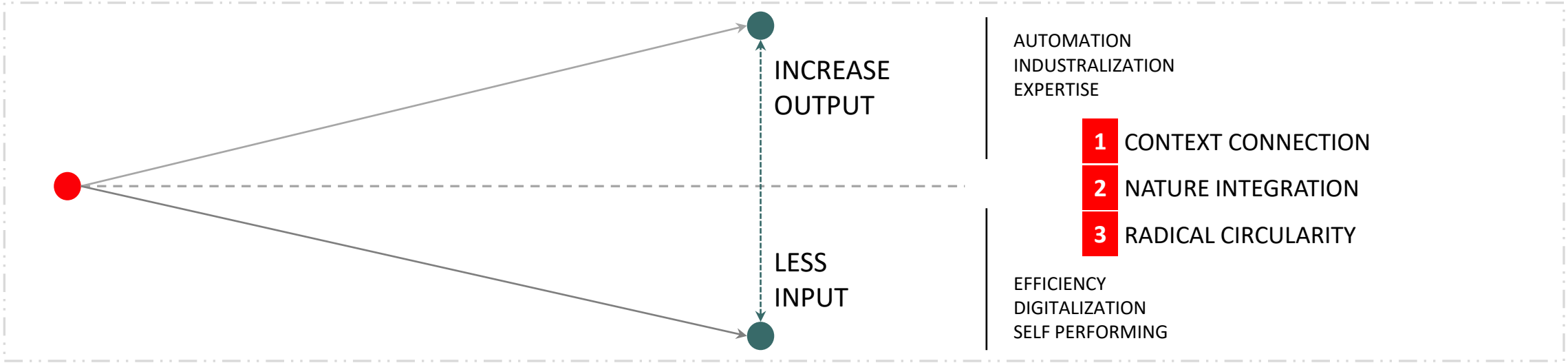
THE DEFICIT IN BASIC INFRASTRUCTURES (such as sanitation or connectivity) MAKES A STRONG INVESTMENT NECESSARY AND IS ON THE AGENDAS OF THE MAIN POLITICAL AND ECONOMIC AGENTS.

THE SUSTAINABILITY AND SUCCESS OF THESE INFRASTRUCTURES WILL BE BASED ON:

- Efficiency in their construction and operation
- Their usefulness, sufficiency and adaptation to the territory in which they are located and the social licence they obtain.
- Their link to the exclusive use of clean energy (decarbonisation).
- The circularity of the materials and resources used

OUR APPROACH – WORK STREAMS

The challenge…



1 Building local capabilities

- Procurement of **local supplies**. Building up of local **capabilities** in conjunction with local entities. Use of materials and sub-products from local industry.

2 Pavement stabilization

- Use of **Secondary Raw Materials** as **alternative road binder to cement** as solution with **no embedded CO_2** for soil stabilisation, providing durability and reducing emissions and maintenance costs

3 Concrete value chain

- The **use of cement** during the concrete value chain produce **high levels of CO_2 emissions**, to optimize this process ACCIONA has developed a **solution based on the use of industrial waste**

4 Engineering, construction and operation methods

- Use of **disruptive technologies** and **digitalization** as a tool for optimizing production, predicting trends and behaviors in construction processes, and implementation of ISO 50001:2018

5 Construction materials life cycle

- Through **analyzing the entire life cycle** of construction materials and **applying circular economy principles**, ACCIONA is looking to **reuse and recycle** most part of the materials on site

SUSTAINABILITY OPPORTUNITY – PRIVATE SECTOR ROLE

AVAILABILITY OF CAPITAL

[OFFER]

Capital markets have discovered the virtue of infrastructure. Huge global investment in infrastructure in next two decadaes.

Sonia's response

acciona

GREENFIELD DEVELOPERS

Only a few operators are able to mobilize supply to meet the global demand

SOLUTIONS IDEAS

EXPERTS INFRASTRUCTURE

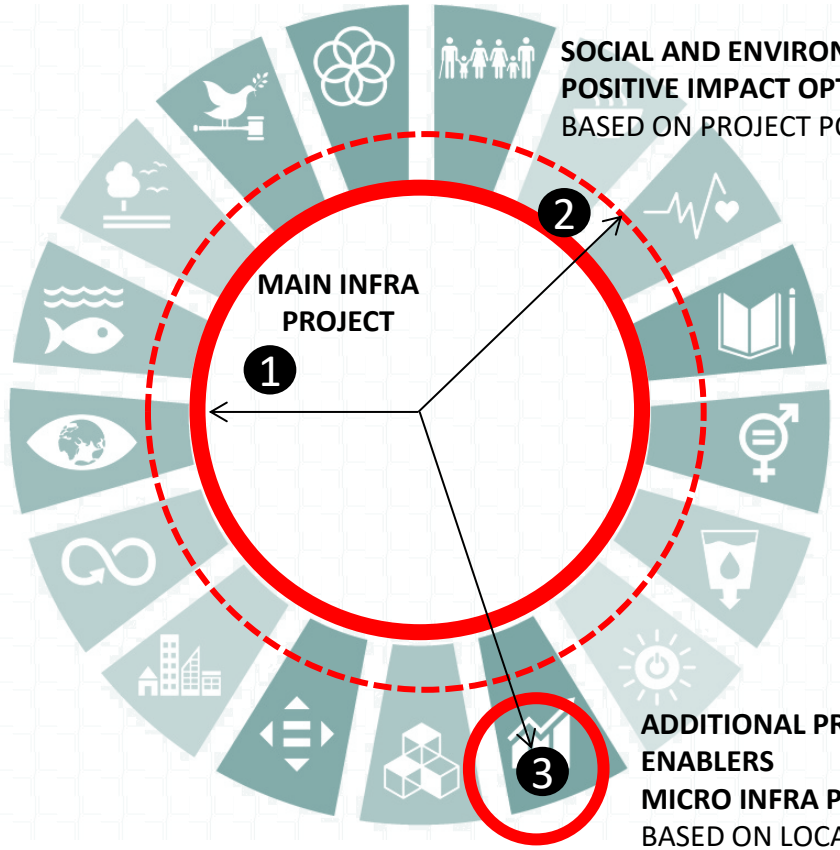
MARKETS CAPITAL

May give 2mins for any other MDB to add.

MEGATRENDS

[DEMAND]

The SDGs have defined the focus of the global agenda and have achieved an important driving effect of infrastructure investment



SOCIAL AND ENVIRONMENTAL POSITIVE IMPACT OPTIMIZATION
BASED ON PROJECT POTENTIALS

ADDITIONAL PROSPERITY ENABLERS
MICRO INFRA PROJECTS
BASED ON LOCAL NEEDS

LONG TERM VISION

INDUSTRIAL DEEP DECARBONISATION
AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

The CEM Industrial Deep Decarbonization Initiative

- Large and diverse **coalition** of governments and private sector, academia, civil society

- **Enabling** deep decarbonisation of heavy industry, focus on steel and cement
- Leverage **public procurement commitments** to create early markets for low-emission products (starting with steel, cement and concrete)
- **Emissions accounting** and **definitions for low/near zero emission products** are a key enabler for policy makers, producers and procurers

Harnessing the power of Green Public Procurement

- Public procurement accounts for 13 to 20 per cent of global GDP.[8]
- Governments are the top buyers of concrete and steel for major infrastructure projects, such as new roads, bridges, housing, schools and hospitals.
- IDDI aims to harness governments' immense purchasing power to ignite a thriving market for low and near-zero emission cement, concrete and steel.
- When governments commit to buy low- and near-zero products it sends a crucial signal to companies and investors that demand for these products is rising.

8. World Bank (2020): *Global Procurement Data Base: Share, Compare, Improve!*

MDBs and sustainable procurement

- Sept 2023 - 12 MDB Heads of Procurement released a joint statement on sustainable procurement.
- MDBs are also committing to working with partner countries to implement national-level reforms to mainstream sustainability into domestic procurement activity.
- MDBs will work with partner countries to achieve a broad set of sustainability objectives, including achieving the **goals set out in the Paris Agreement with a particular focus on decarbonizing supply chains**.
- A working group established between the development banks will work together including on: Awareness building, outreach, and partnership, and Building a common approach and identifying opportunities for harmonization

“If you make it we will buy it”

The Green Public Procurement Pledge

Over three years IDDI expects to enable at least ten governments to pledge to begin reducing embodied carbon emissions in major public construction projects towards net zero by 2050.

Governments joining IDDI choose their starting point and level of ambition

Statement of Intent

Start now to work towards key aspects of the pledge without timebound commitments.

Level One

Starting no later than 2025, require disclosure of the embodied carbon in cement/concrete and steel procured for public construction projects.

Level Two

Starting no later than 2030, conduct whole project life cycle assessments for all public construction projects, and, by 2050, achieve net zero emissions in all public construction projects.

Level Three

Starting no later than 2030, require procurement of low emission cement/concrete and steel in public construction projects, applying the highest ambition possible under national circumstances.

Level Four

Starting in 2030, require procurement of a share of cement and/or crude steel from near zero emission material production for signature projects.

IDDI pledge makers will provide annual progress updates and share learnings with other participating governments.

Public procurement 101 in context of IDDI GPP commitments

- Applicable procurement principles of openness, transparency and encouraging healthy competition
- Trade Agreements – WTO GPA
- Policies and commitments
- Centralized construction procurement
- Procedure manuals and standard technical specifications
- Market readiness – analysis and consultations, RFIs, supplier support and first customer programs

World Trade Organization - Agreement on Government Procurement

IDDI member governments do not have to be party to the GPA, however the IDDI GPP Pledge is aligned with the principles of the GPA, and it leverages Article X – Technical Specifications and Tender Documentation:

"For greater certainty, a Party, including its procuring entities, may prepare, adopt or apply technical specifications to promote the conservation of natural resources or protect the environment."

IDDI and MDB green procurement

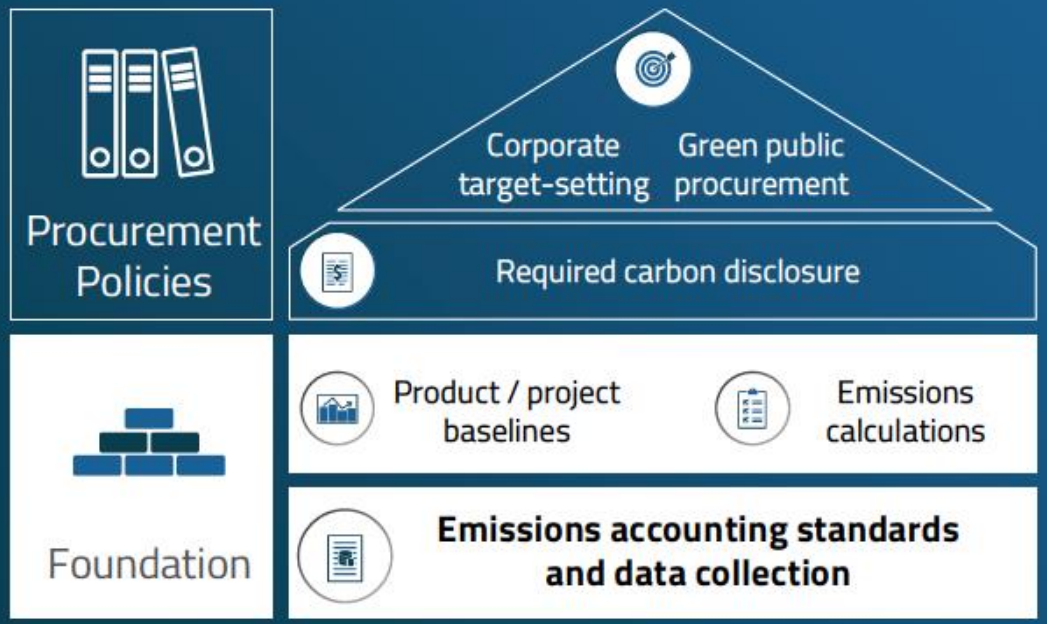
Examples of various commitments for low emission projects and materials – broad range in levels of ambition but growing.

	Economy-wide	Gov Operations/ GPP	International	Project (IDDI L2)	Product (IDDI L3/4)	Start date(s)
EU Energy Performance Buildings Directive	X	X		X		2025/27/30
EU Construction Product Reg.	X	X			X	2024/27
US Buy Clean Policy		X			X	2023
Germany BNB	Funded projects	X		X	x	2013/25
UK (BREEAM)		X		X	x	2022/25
Australia Environmentally Sustainable Procurement Policy		X		X	x	2024
World Bank rated criteria		***Funded projects***	***X***	***X***	***X***	***2023***
Blue Dot Certification		***ESG rated funding***	***X***	***X***	***x***	***2024***

- World Bank references a "project-level carbon reduction strategy", including materials and supply chain, in its rated criteria
- Blue Dot Certification includes a "Best in Class criteria to achieve a reduction in embodied carbon as calculated across the lifecycle of the project.
  - Note: This requirement will be updated when new methodologies, benchmarks and standards in calculating embodied carbon emerge."

Improving standards

Robust emissions accounting standards can allow companies to differentiate their products based on emissions and invest in critical technologies to achieve net-zero



However, there are challenges that must be addressed to create a **robust and trustworthy accounting system**

1. **Inconsistency**: Emissions accounting methodologies for industrial products are inconsistent, resulting in different data outputs for the same product

2. **Gaps**: Most major reporting methodologies do not address a set of key accounting questions

3. **Limited uptake**: Use of reporting methodologies varies significantly, with limited use of standards in many geographies and sectors

These concerns expected to become more salient as demand for green products continues to grow, requiring immediate reform in the standards 'foundation' – **including updates to ISO standards**

INDUSTRIAL DEEP
DECARBONISATION

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

UNIDO

iddi@unido.org

Global Cement and Concrete Association

CONCRETE FUTURE

Low carbon and near zero: GCCA definitions for cement and concrete procurement

The MDB Sustainable Procurement Forum

September 17th

Contents

Global Cement and Concrete Association

CONCRETE FUTURE

GCCA and Global Roadmap

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GCCA Membership

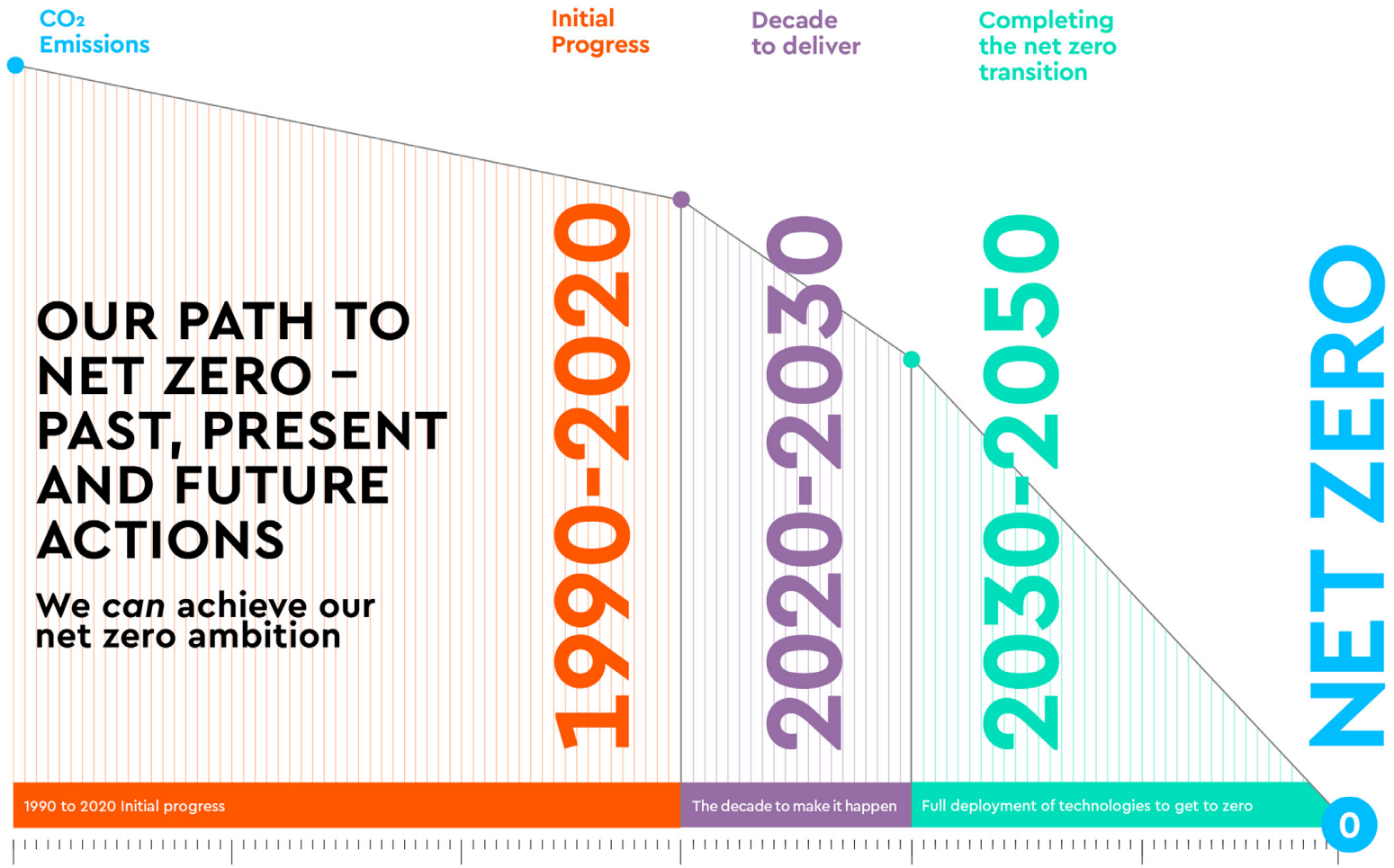
Our Members

Asia Cement Corporation
Breedon Group
BUA Cement
Buzzi
Cementir Holding
Cementos Argos
Cementos Moctezuma
Cementos Pacasmayo
Cementos Progreso
CEMEX
Cimenterie Nationale
Çimsa Cement
CNBM
CRH
Dalmia Cement
Dangote
Emirates Steel Arkan
Fletcher Building
GCC
Heidelberg Materials
Holcim
Hima Cement
Huaxin Cement
JK Cement
JSW Cement
Medcem
Misr Cement Group
Molins
Nesher Israel Cement Enterprises
Norm Cement
Northern Region Cement Company (Saudi Arabia)
Orient Cement
PT Solusi Bangun Indonesia
SCHWENK Zement
Secil
Siam Cement Group
Siam City Cement
Taiheiyo Cement
Taiwan Cement Corporation
TITAN Cement Group
TPIPOLENE
UltraTech Cement
UNACEM
Vassiliko Cement
Votorantim Cimentos
YTL Cement
Yura Cement

National & Regional Association Partners

Asociación de Fabricantes de Cemento Portland – Argentina
Asociación de Productores de Cemento – Peru
Associação Brasileira de Cimento Portland – Brazil
Association of German Cement Manufacturers (VDZ) – Germany
Association Professionnelle des Cimentiers – Morocco
Betonhuis – Netherlands
BIBM – Europe
CANACEM – Mexico
Canadian Precast Prestressed Concrete Institute
Cement Association of Canada
Cement Concrete & Aggregates Australia
Cement Industry Federation – Australia
Cement Manufacturers Association – India
Cement Manufacturers Ireland
China Cement Association
Concrete NZ – New Zealand
European Cement Association (CEMBUREAU)
European Federation Concrete Admixtures
European Ready Mixed Concrete Organisation
Federación Iberoamericana del Hormigón Premezclado – LatAm
Federación Interamericana del Cemento (FICEM) – LatAm
Japan Cement Association
Korea Cement Association
Mineral Products Association – United Kingdom
National Ready Mixed Concrete Association – USA
Portland Cement Association – USA
South India Cement Manufacturers Association
Thai Cement Manufacturers Association
The Spanish Cement Association (Oficemen)
Turkish Cement Manufacturers Association (TürkÇimento)

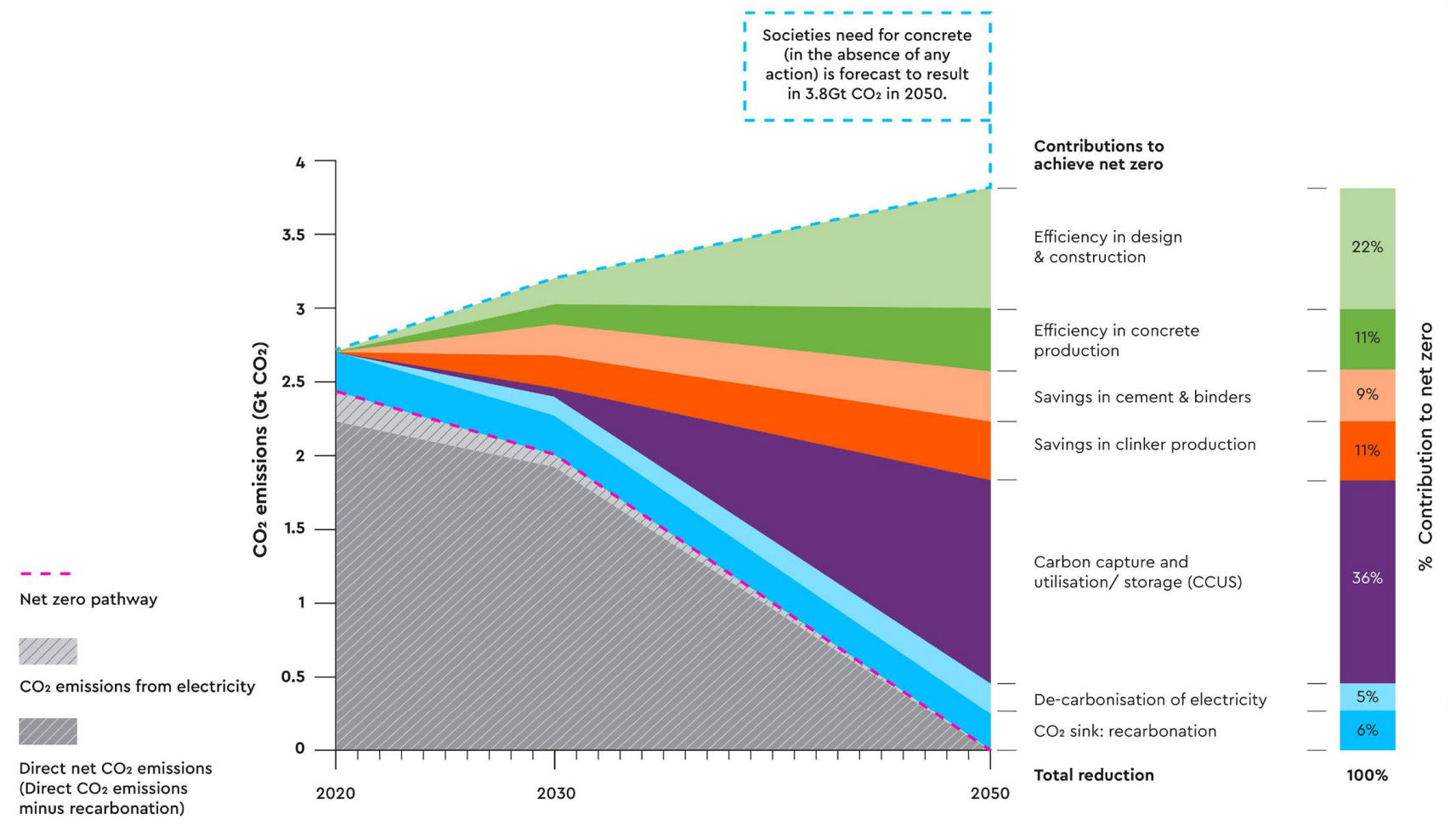
Global Roadmap to Zero



CONCRETE FUTURE

Global Roadmap to Zero

https://gccassociation.org/cement-industry-net-zero-progress/



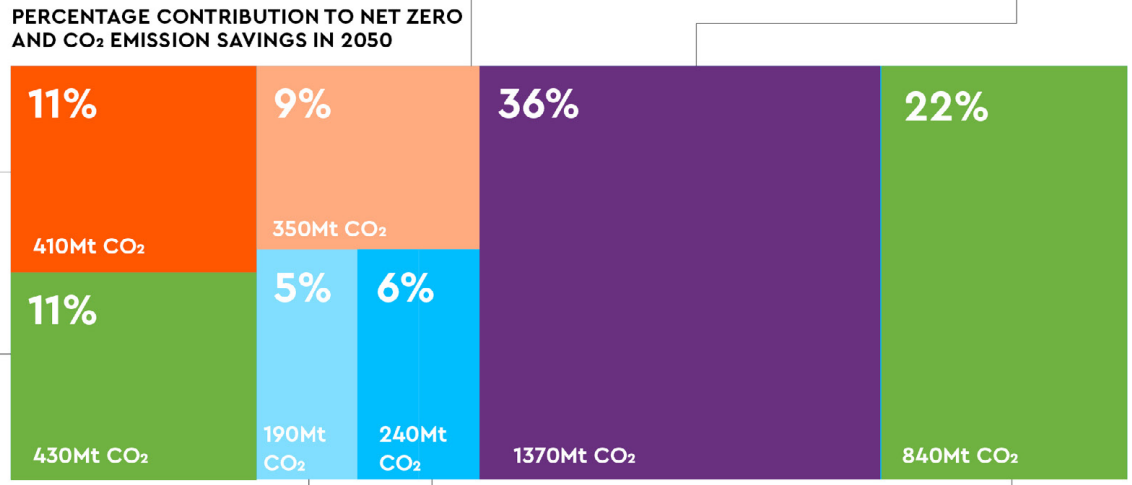
CONCRETE FUTURE

Global Roadmap to Zero

Savings in clinker production
- thermal efficiency
- savings from waste fuels ("alternative fuels")
- use of decarbonated raw materials
- use of hydrogen as a fuel

Savings in cement and binders
- Portland clinker cement substitution. Also expressed through clinker binder ratio
- alternatives to Portland clinker cements

Carbon capture and utilisation/storage
- carbon capture at cement plants



Efficiency in concrete production
- optimised mix design
- optimisation of constituents
- continue to industrialise manufacturing
- quality control

Decarbonisation of electricity
- decarbonisation of electricity used at both cement plants and in concrete production

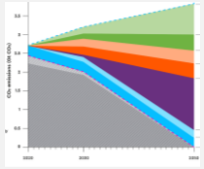
CO_2 sink: recarbonation
- natural uptake of CO_2 in concrete – a carbon sink

Efficiency in design and construction
- client brief to designers to enable optimisation
- design optimisation
- construction site efficiencies
- re-use and lifetime extension

Country Roadmaps: Accelerator Initiative by GCCA

- GCCA initiative launched March 2022: catalyst for country roadmaps
- Initiative is showing good progress
- A key step in regulatory transition and financing discussion

KEY DELIVERABLES

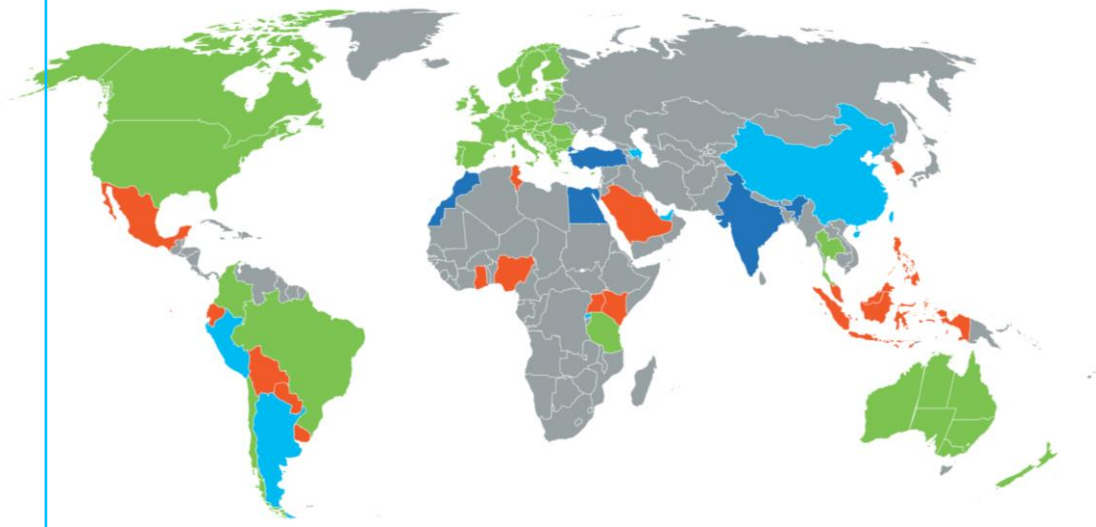


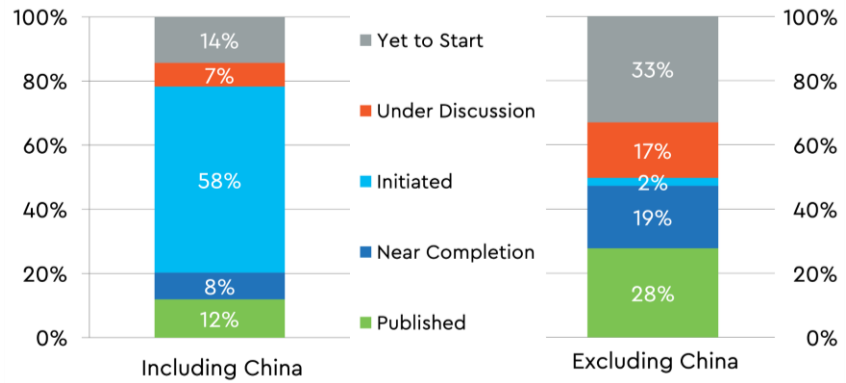
Roadmap Levers and CO_2 impact
Per lever, quantification of potential CO_2 reduction 2030 & 2050

Policy
Per lever, identification of enabling policies

Lighthouse Projects
Per lever, identification of lighthouse projects

Progress of Roadmaps around the globe





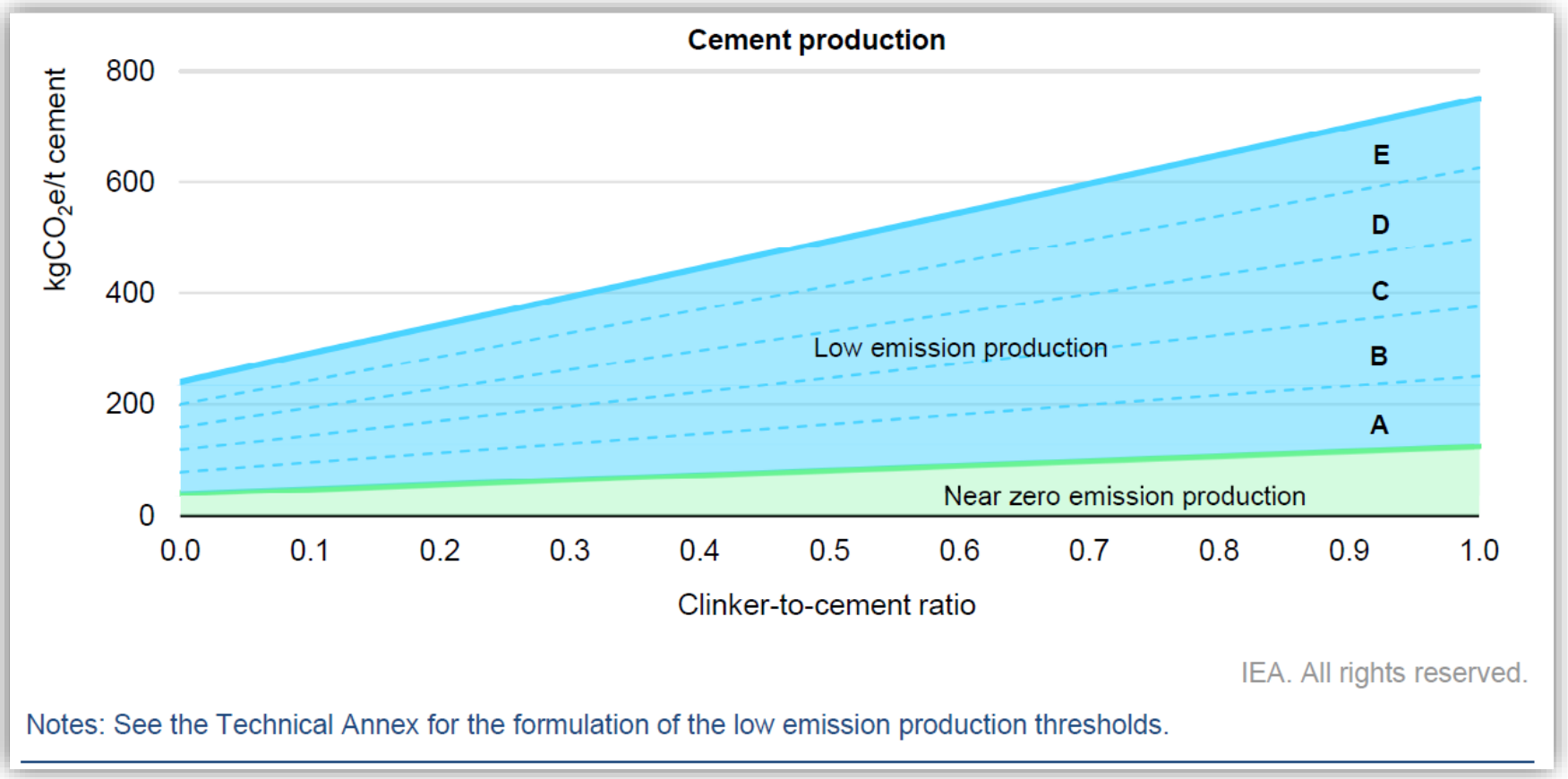
Global Cement and Concrete Association

CONCRETE FUTURE

Low Carbon and Near Zero Cement

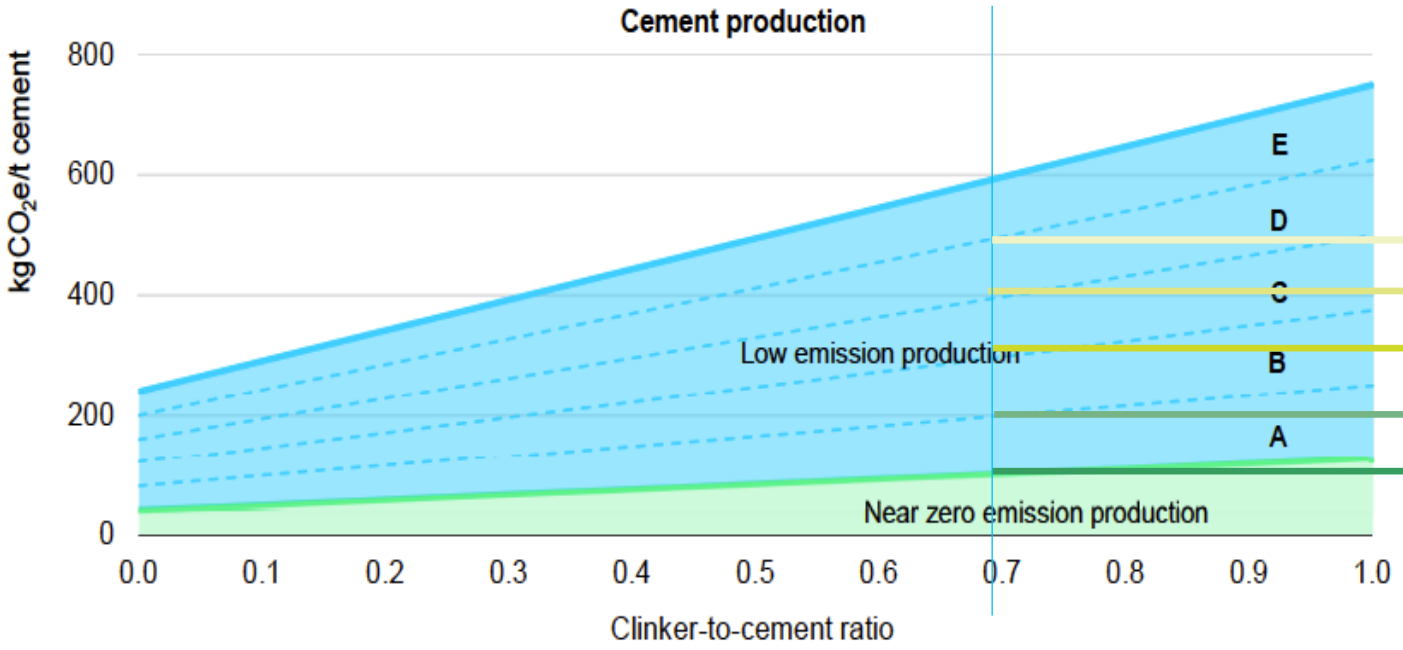
2

IEA definitions for low and near zero emission cement

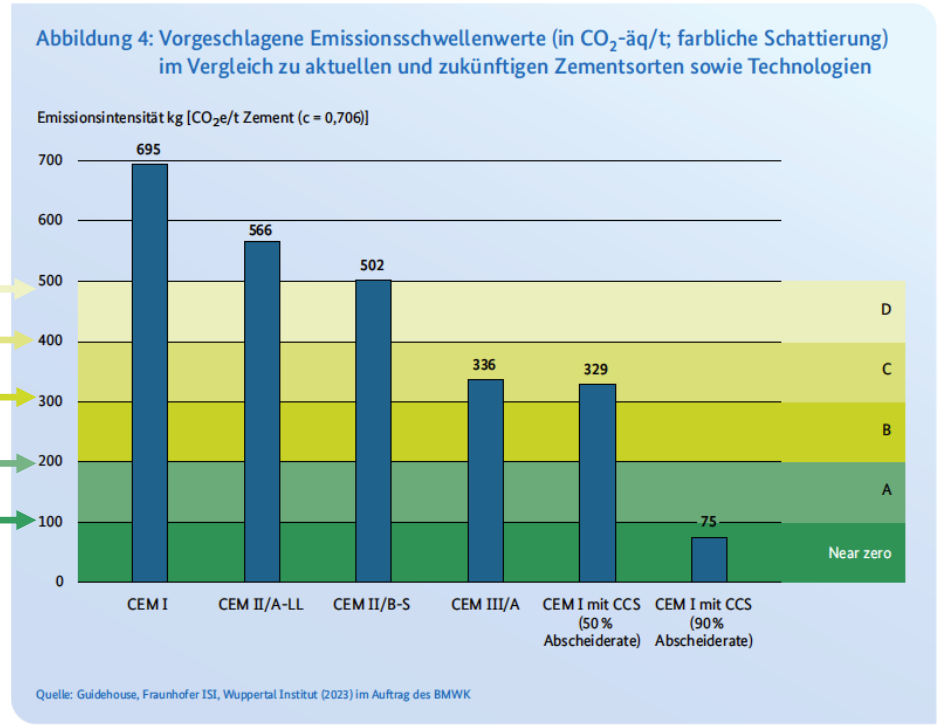


IEA Report: "Achieving Net Zero Heavy Industry Sectors G7 Members", May 19th 2022

IEA Cement Definition and German Application as member of IDDI



Notes: See the Technical Annex for the formulation of the low emission production thresholds.



- Exercised option to fix clinker cement ratio. Chose 0.706
- Guidance to use EPD values of product to determine what band product is in

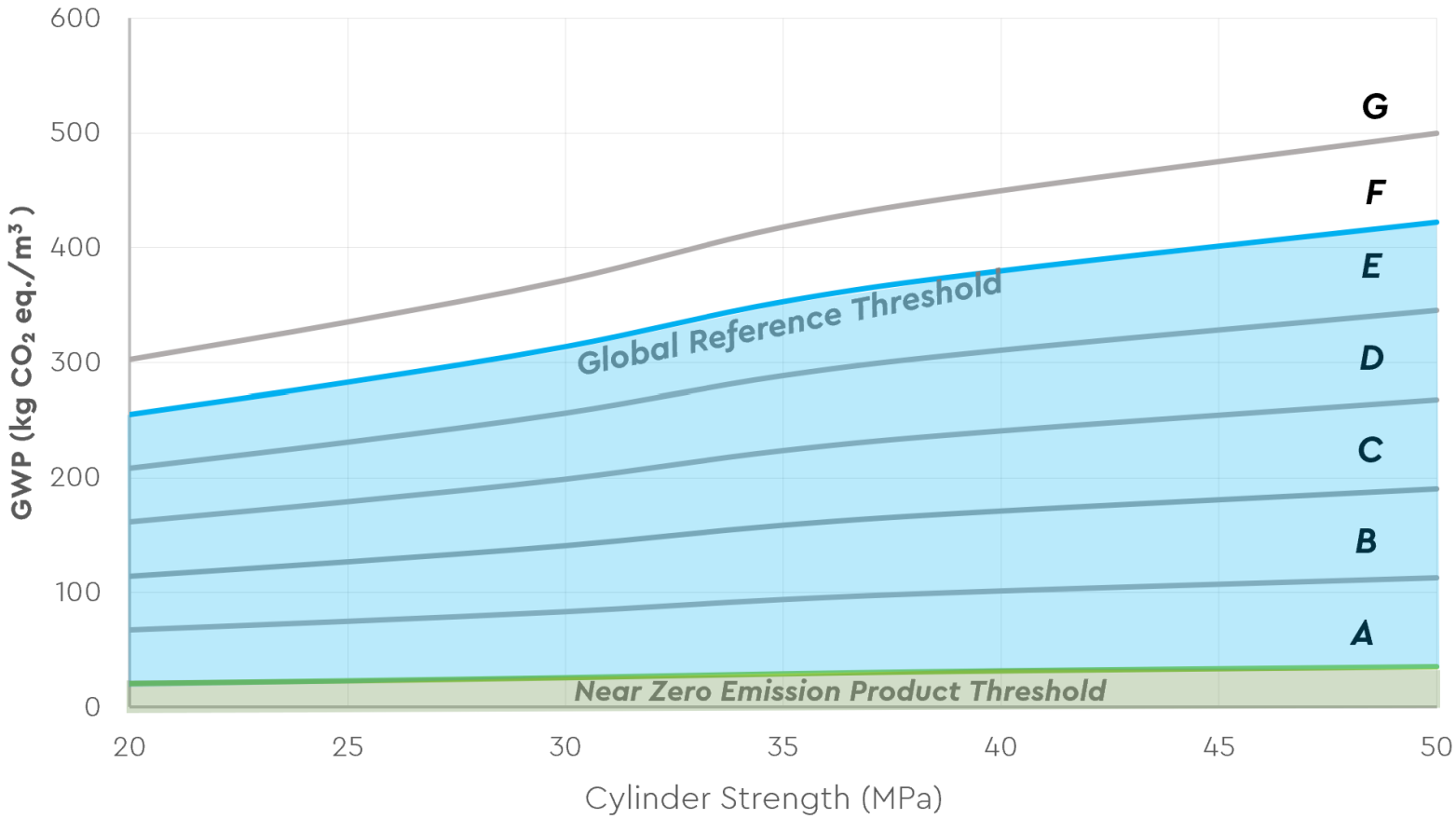
Global Cement and Concrete Association

CONCRETE FUTURE

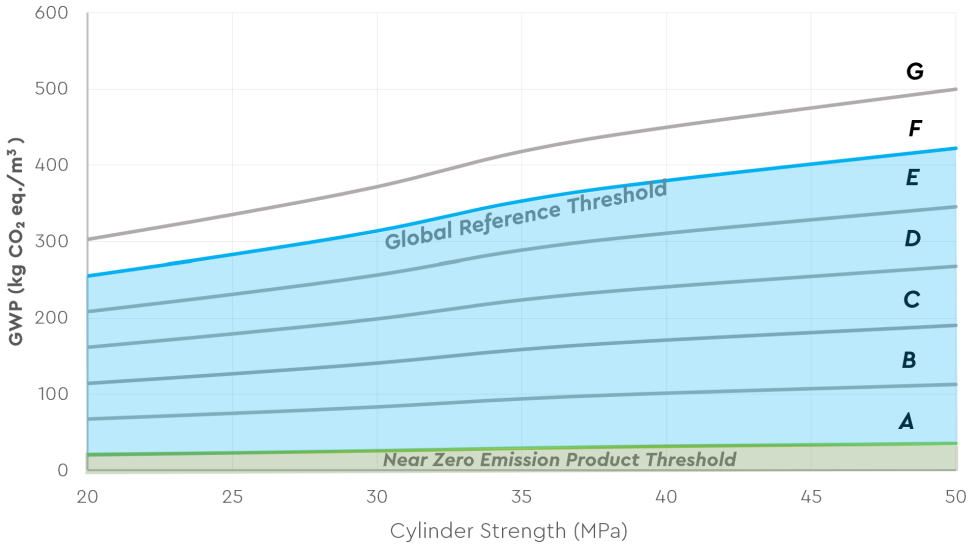
Low Carbon and Near Zero Concrete

3

GCCA Methodology for Concrete (IDDI yet to have concrete definitions)



GCCA Methodology for Concrete



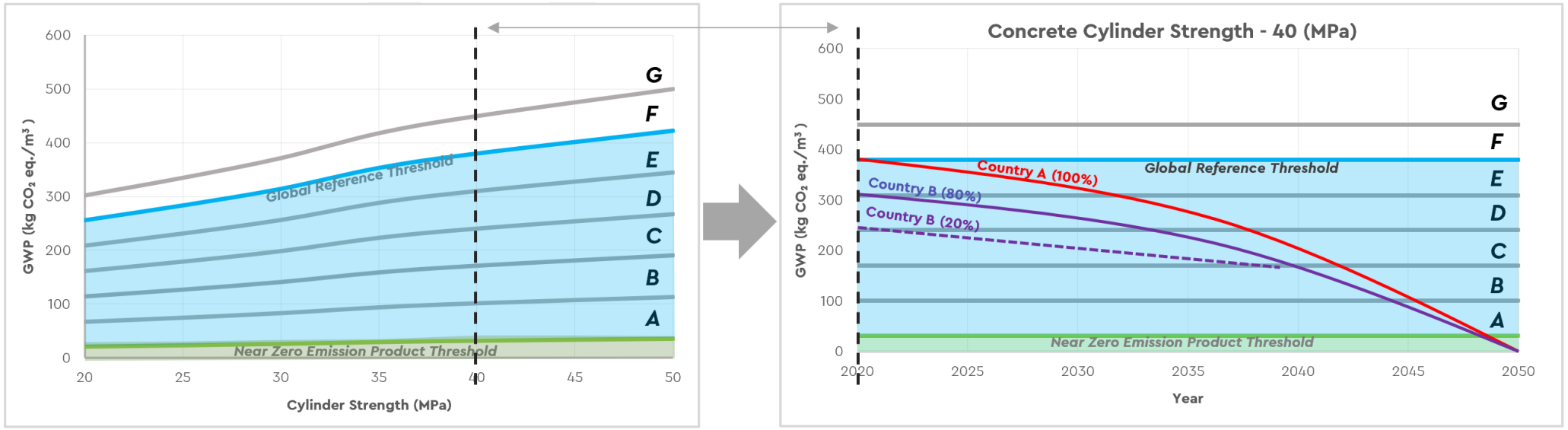
Be congruent with IEA definitions for Cement, in terms of:

- Separation of definitions and targets
- Same static bands for all countries
  - Five low carbon emission bands “A to E” , with equal spacing/range
  - “Near zero” band defined by destination at 2050
  - Upper bound of band “E” defined, recognising current good practice

In addition:

- “F” and “G” bands introduced to allow wider engagement
- Based on EPDs of readymixed concrete
- Categorised on strength
  - Special readymixed concrete which is defined by other performance characteristics excluded

Application of Global Banding by countries



- Country A target is for 100% of concrete with a GWP value below a decreasing target starting at the global reference threshold in 2020.
- Country B, being more advanced in the decarbonisation journey, has a more ambitions starting point: a target to procure 80% of concrete with a GWP below band D and 20% below band C.