



Global Cement and Concrete
Association

CONCRETE
FUTURE

From Innovation to Impact: GCCA's Global Approach to Net Zero

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EPD International Stakeholder Conference 2026

Members operate in most countries in the world

GCCA is the leading global cement & concrete association

Our Members

- Asia Cement Corporation
- Arkan
- Breedon Group
- BUA Cement
- Buzzi
- Cementir Holding
- Cementos Argos
- Cementos Pacasmayo
- Cementos Progreso
- CEMEX
- Cimenterie Nationale
- Cimsa
- City Cement
- CNBM
- CRH
- Dangote
- Fletcher Building
- GCC
- Heidelberg Materials
- Hima Cement
- Holcim
- Huaxin Cement
- JSW Cement
- Kartuli Cement
- Limak Cimento
- Medcem
- Moctezuma
- Molins
- Neshor Israel Cement Enterprises
- Norm Cement
- SCHWENK Zement
- Siam Cement Group
- Siam City Cement
- Taiheiyo Cement
- TITAN Group
- TPI Polene
- UltraTech Cement
- UNACEM
- Vassiliko Cement
- Votorantim Cimentos
- Yura Cement

National & Regional Association Partners

- American Cement Association
- 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
- Azerbaijan Cement Producers Association (ACPA)
- Betonhuis – Netherlands
- BIBM – Europe
- CANACEM – Mexico
- Canadian Precast Prestressed Concrete Institute
- Cement Association of Canada
- Cement Concrete & Aggregates Association – Australia
- Cement Europe
- Cement Industry Federation – Australia
- Cement Manufacturers Association – India
- Cement Manufacturers Ireland
- China Cement Association
- Concrete NZ – New Zealand
- European Federation Concrete Admixtures Organisation
- Federacion Iberoamericana del Hormigon Premezclado – LatAm
- Federacion Interamericana del Cemento (FICEM) – LatAm
- France Ciment
- Japan Cement Association
- Mineral Products Association – United Kingdom
- National Ready Mixed Concrete Association – USA
- South Indian Cement Manufacturers Association
- Thai Cement Manufacturers Association
- Agrupación de Fabricantes de Cemento de España: Oficemen – Spain
- Turkish Cement Manufacturers Association (Turkcimento)

GCCA mission and strategic priorities



Our Mission

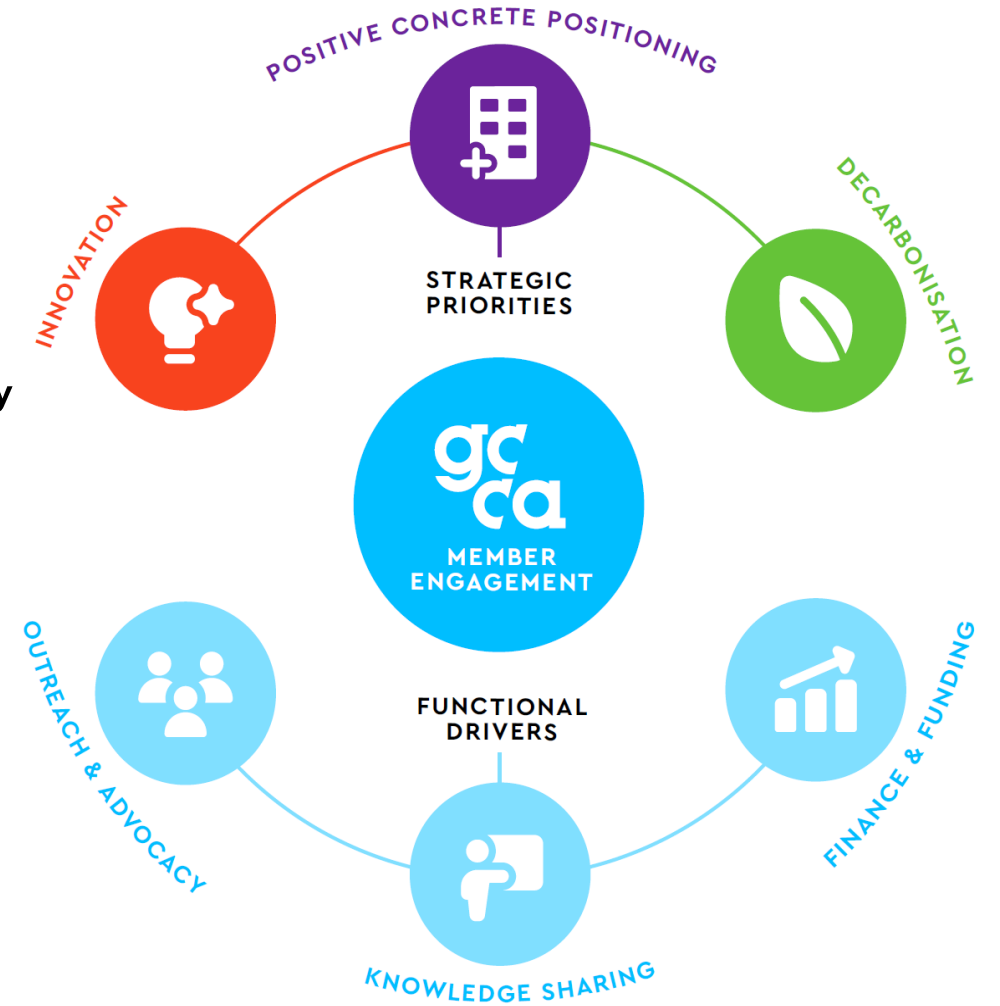
To position concrete as the sustainable building material of choice, today and into the future.

Three strategic themes

- Positive concrete positioning
- Innovation
- Decarbonisation & Sustainability

Three functional drivers

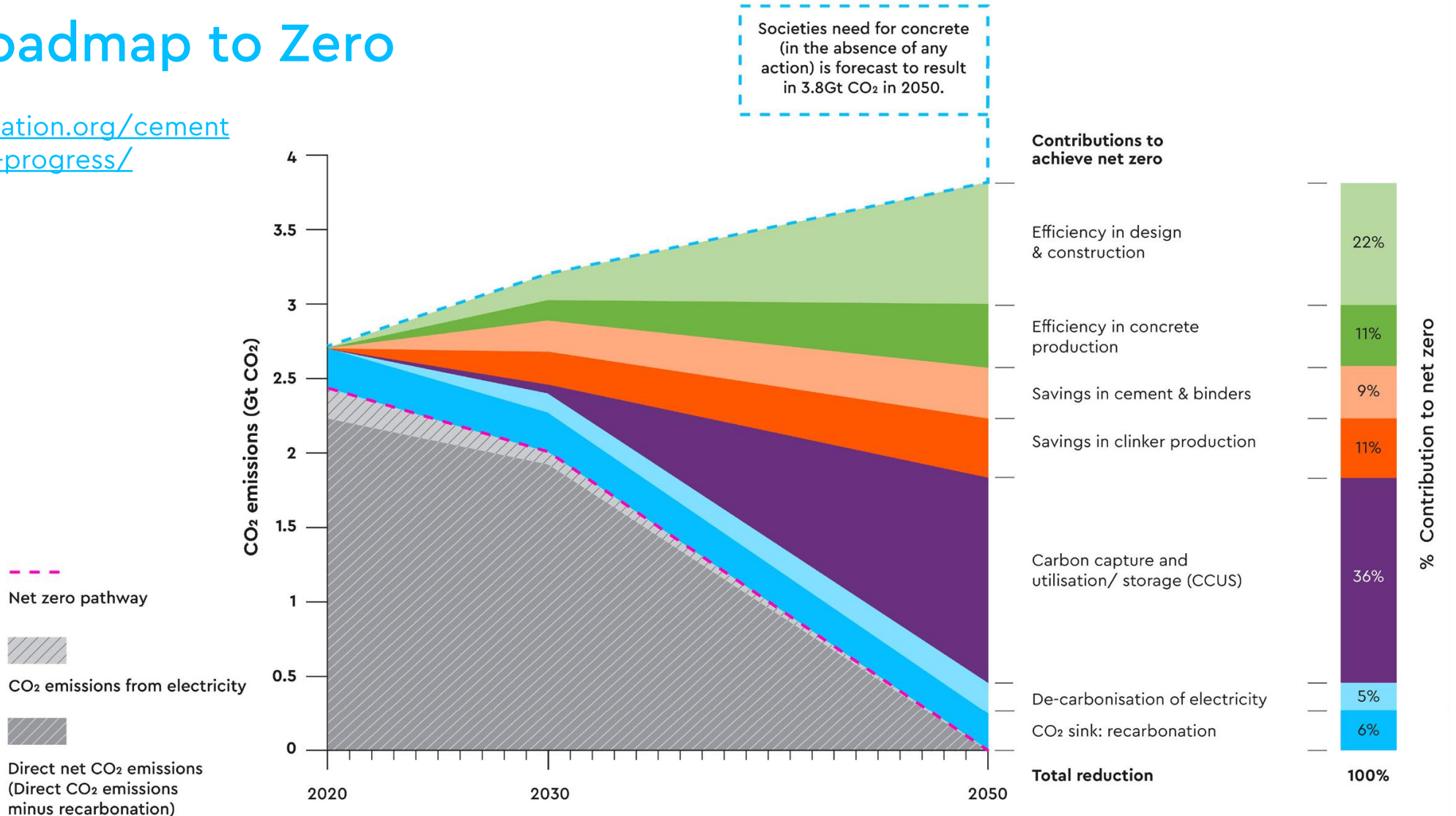
- Advocacy & outreach
- Knowledge sharing
- Finance & funding



Our decarbonising mission ...in a changing World

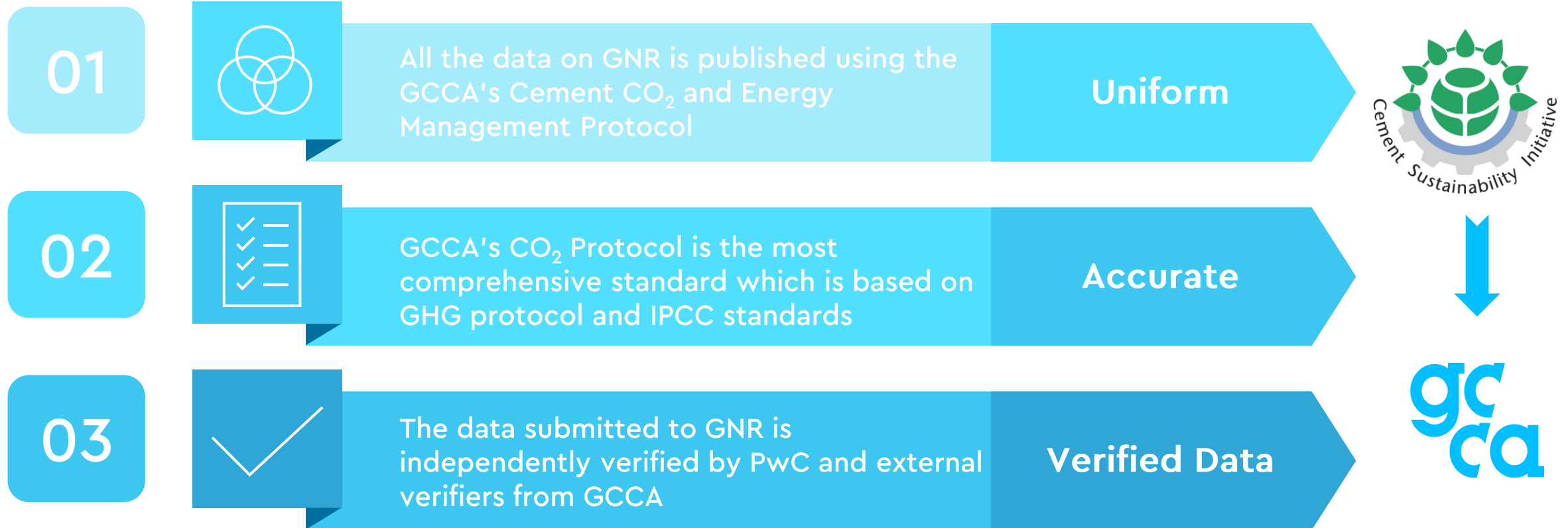
Global Roadmap to Zero

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

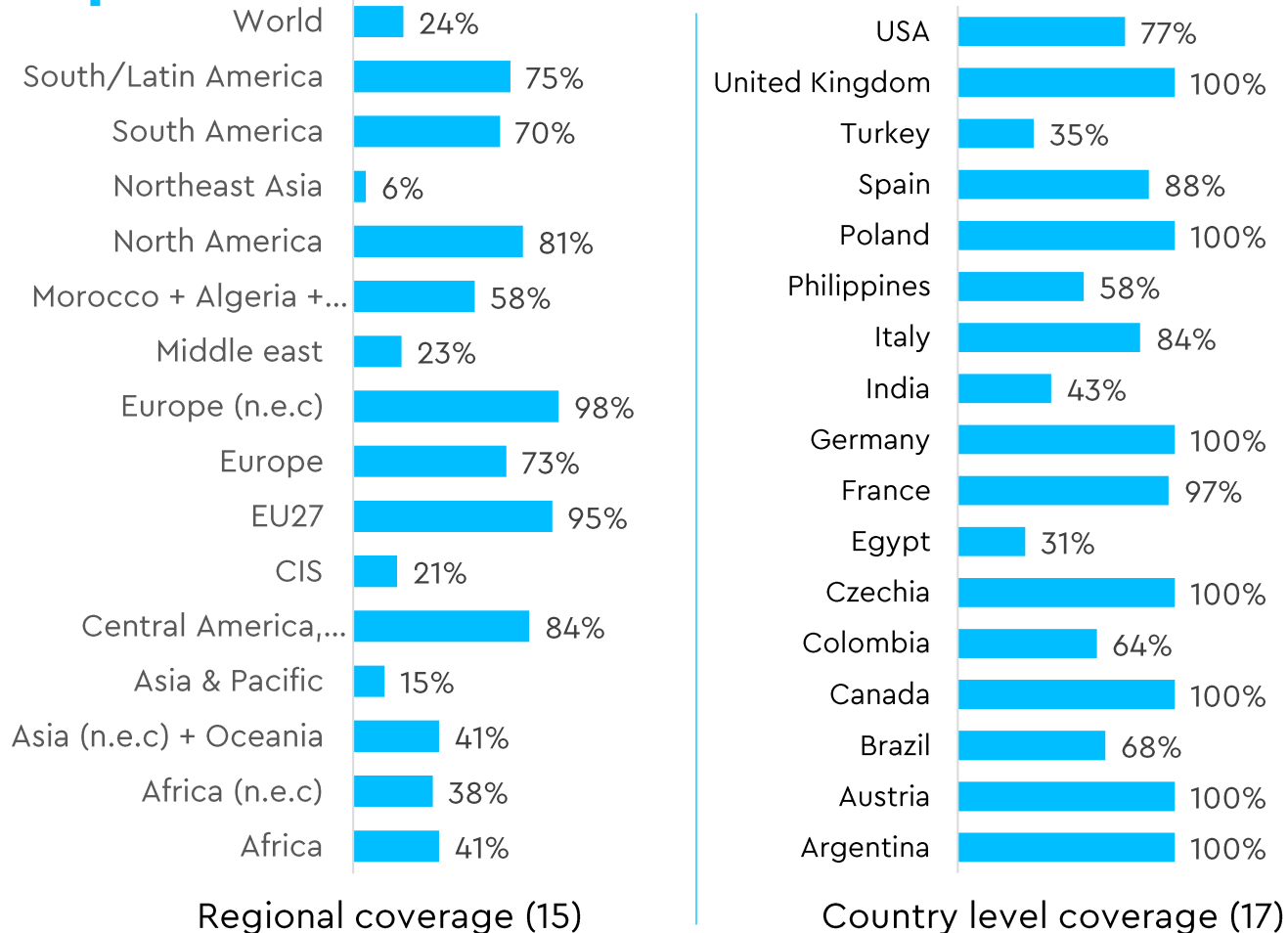


Introducing the GCCA GNR – Our Global Measurement Tool

GCCA in Numbers (GNR) is one of the most reliable sources of truth for the cement and concrete sector. A "well-oiled" data engine to monitor the sector's performance towards Net Zero



Our Global GNR Coverage – Percentage of global production represented on GNR



Having a comprehensive coverage allows for effective data driven discussions about various climate initiatives especially with policy makers and investment firms

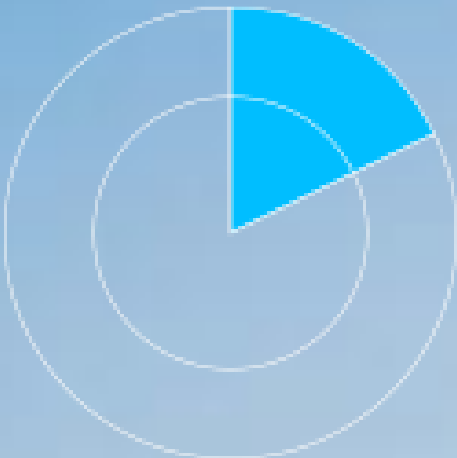
Our Progress – mapped through GNR



CO₂ emissions*

25%

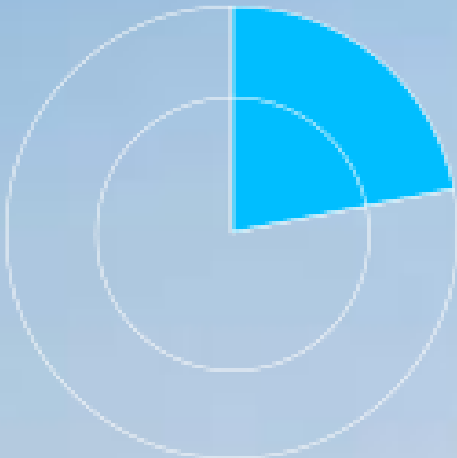
Reduction in net CO₂ emissions per tonne cementitious (1990 baseline)



Energy

18%

Energy efficiency improvement (1990 baseline)



Fossil fuel

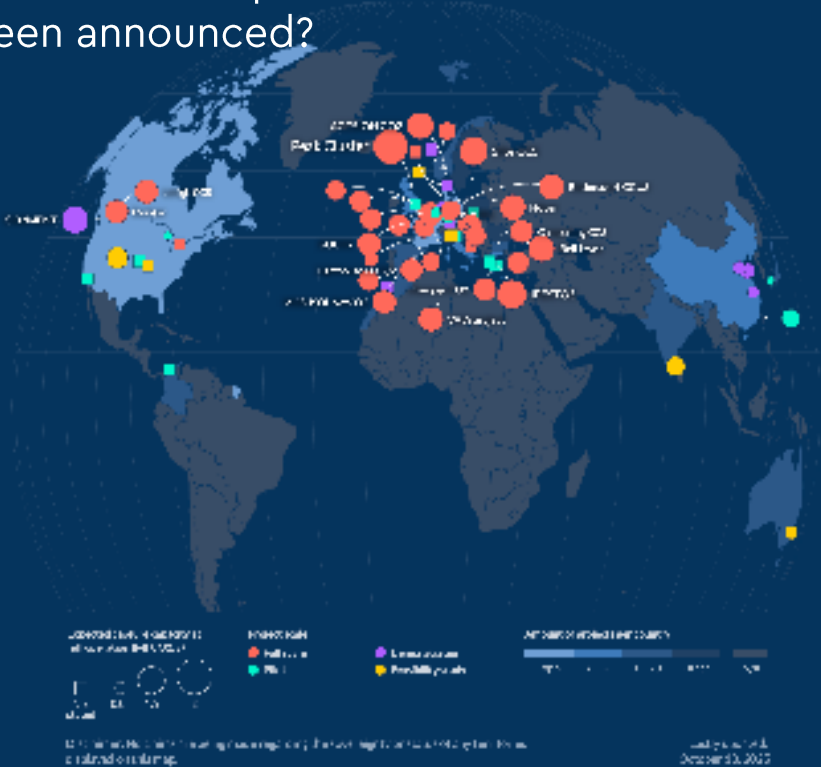
22%

Reduction in fossil fuel consumption (1990 baseline)

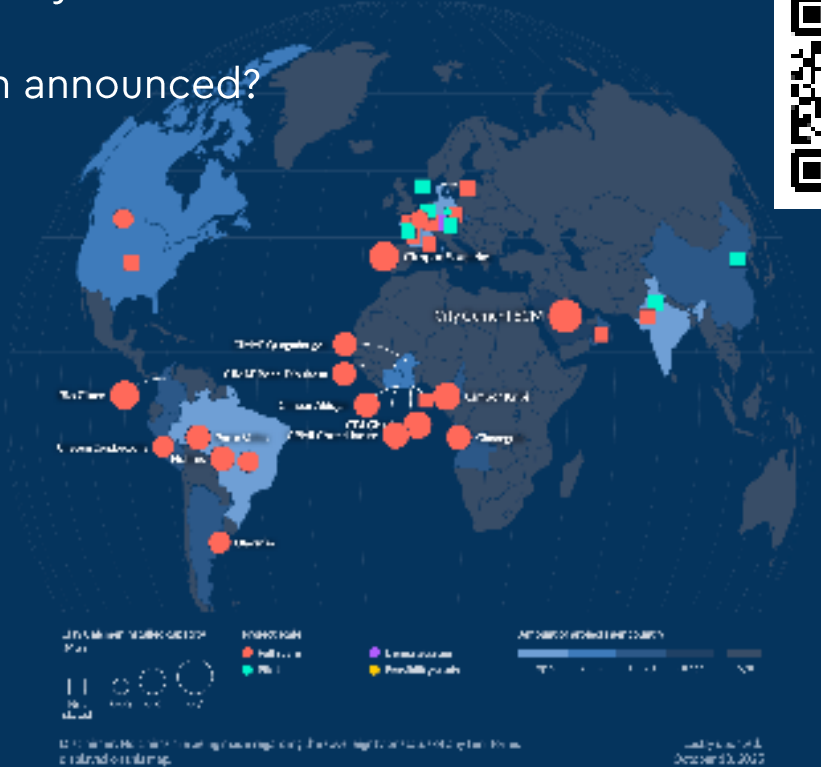
* Note figures are rounded. Please refer to GCCA website for exact figures and comparisons and full GNR database.

Green Cement Technology Tracker

Where have Carbon Capture
projects been announced?



Where have Clay Calcination
Kiln
projects been announced?



Update since May 2026

Ethiopia → Under Discussion

Zambia → Under Discussion

Zimbabwe → In Progress

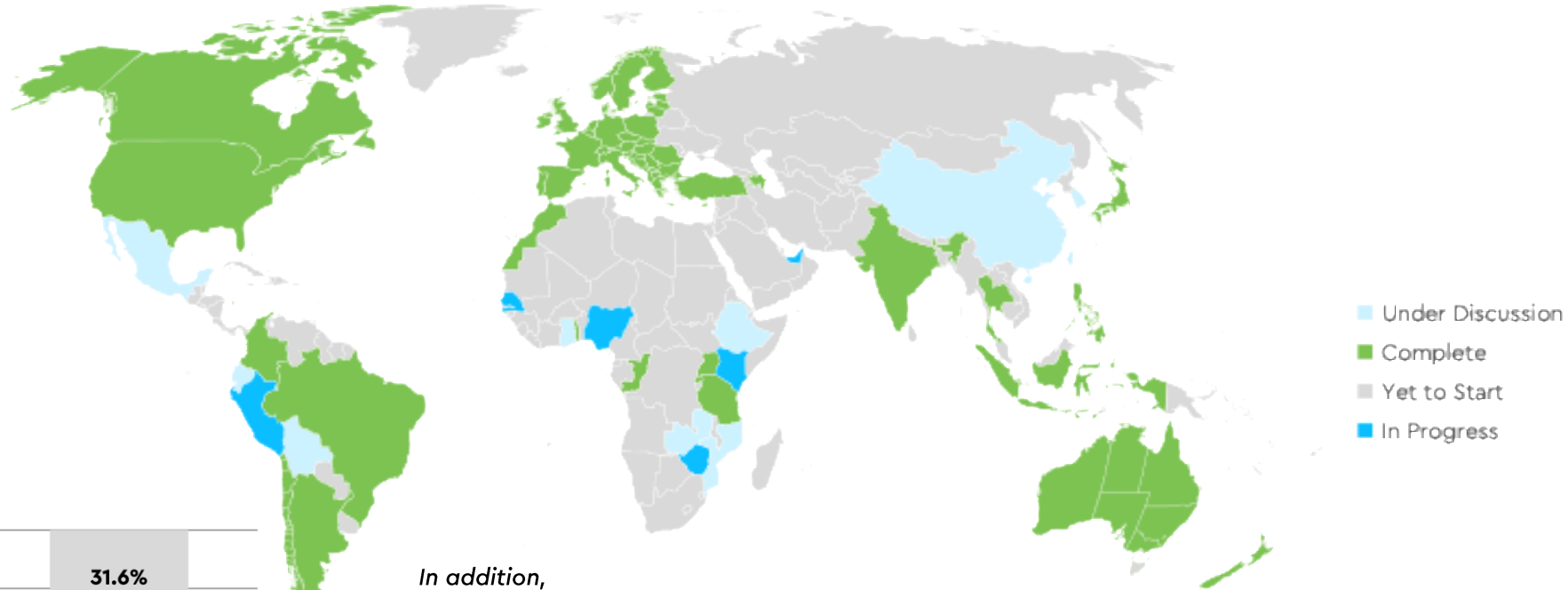
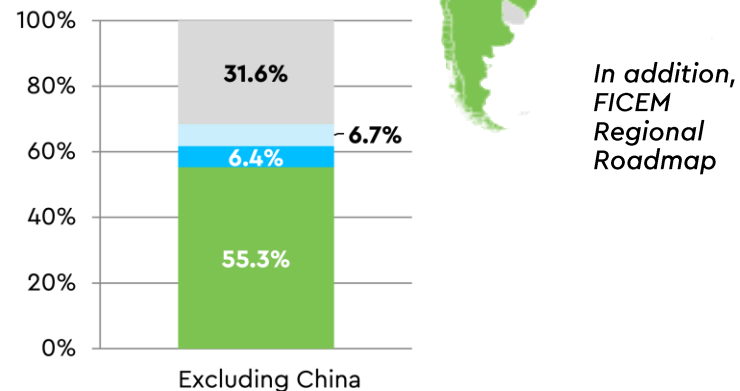
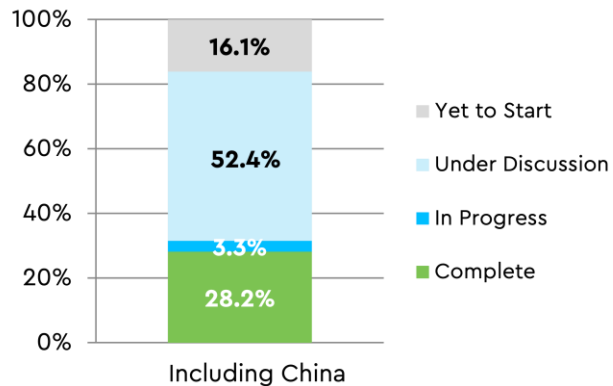
Senegal → In Progress

Kenya → In Progress

Morocco → Complete

Philippines → Complete

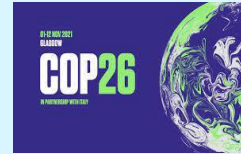
**Note* Uganda, Rwanda, Togo, Congo Brazzaville
→ **Complete** (but will not be published)*



Our key policy requirements

We call on governments and policymakers to support us across these five key policy areas:

01. Supplementary Materials
02. Low Carbon Procurement
03. Waste Treatment in Cement Kilns
04. Carbon Pricing
05. Carbon Capture Use and Storage



European Bank
for Reconstruction and Development





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Low Carbon Ratings

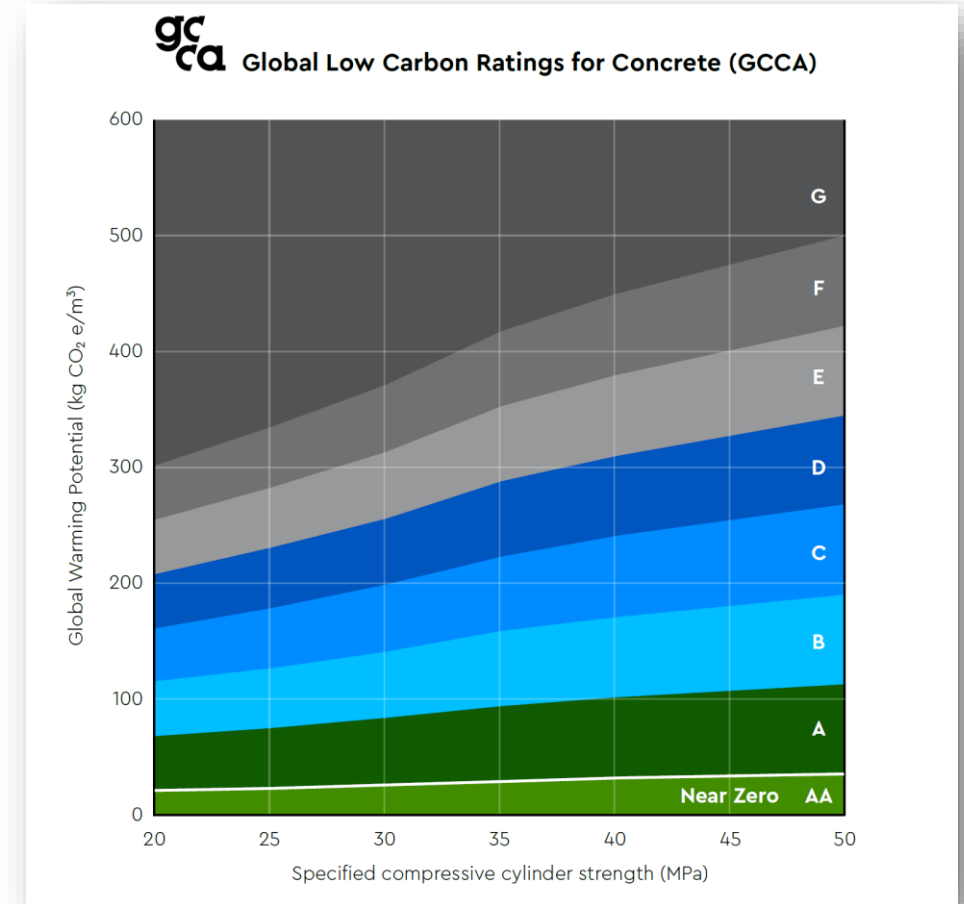
Concrete Ratings – Overview

Ratings classify concrete based on:

- **Global Warming Potential (GWP):** Measured in kg CO₂e per cubic meter (ECO₂e/m³)
- **Specified Concrete Strength:** Higher strength generally implies more cement and hence higher emissions
- **Local determination** of what ratings are defined as low carbon, and expectation is progressive reduction

The system includes **8 ratings**:

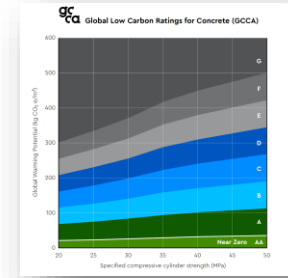
- **AA:** Near-Zero Emissions (aligned with IEA's near-zero definition)
- **A–F:** Divided into equal GWP intervals
- **G:** Open ended



These ratings provide a clear, **globally consistent** way to classify concrete based on carbon emissions.

How to use the concrete ratings

1. Calculate GWP using EPD methodology
2. Refer to GCCA global graph or table to determine rating



(kgCO ₂ e/m ³)	Specified Concrete Cylinder Strength (MPa)					
	20	25	30	35	40	50
Top of F	302	335	372	418	450	500
Top of E	255	283	314	353	380	422
Top of D	208	231	256	288	310	345
Top of C	161	179	199	224	241	268
Top of B	115	127	141	159	171	190
Top of A	68	75	83	94	101	113
Top of AA-Near Zero Product	21	23	26	29	32	36

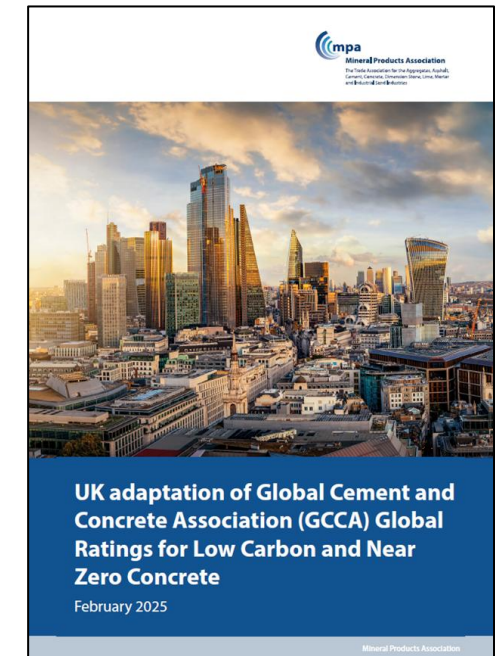
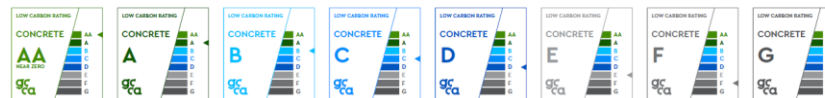
Country Adaptation if needed

EPD Methodology for Global Low Carbon Ratings

To compare against the ratings the GWP of the concrete product first needs to be calculated according to the EPD methodology , and more specifically:

- **Standards:** EN 15804+A2, PCR-001 - Cement and building lime (EN 16908), PCR-003 - Concrete and concrete elements (EN 16757)
- **Database:** ecoinvent
- **Scope:** cradle-to-gate (A1-A3)
- **"Net GWP":** Emissions from treated waste accounting as per ISO 21930 and EN 15804+A2 (some countries, contrary to the standards, choose to account for emissions from treated waste and report gross GWP)

If a country has a different custom and practice for EPD, then Country (cement association/government/other) adapts ratings to national EPD custom and practice. Example already of UK.



Innovation 2 world class programmes

3

INNOVANDI Global Research Network - GCCRN

the global industry and academia together to drive and support innovation in cement and concrete



**Leveraging
the collective skills
and resources** of our
worldwide network



**Benefit from
work funded in
academia by other
sources**



**Projects are aligned
with
the Innovandi Research
Roadmap created by
Industrial Partners**



**Strong presence in the
most important
conferences** in the
cement, concrete, and
construction sector

32
industrial
partners



44
academic
partners



450+
scientists

in the cement &
concrete field

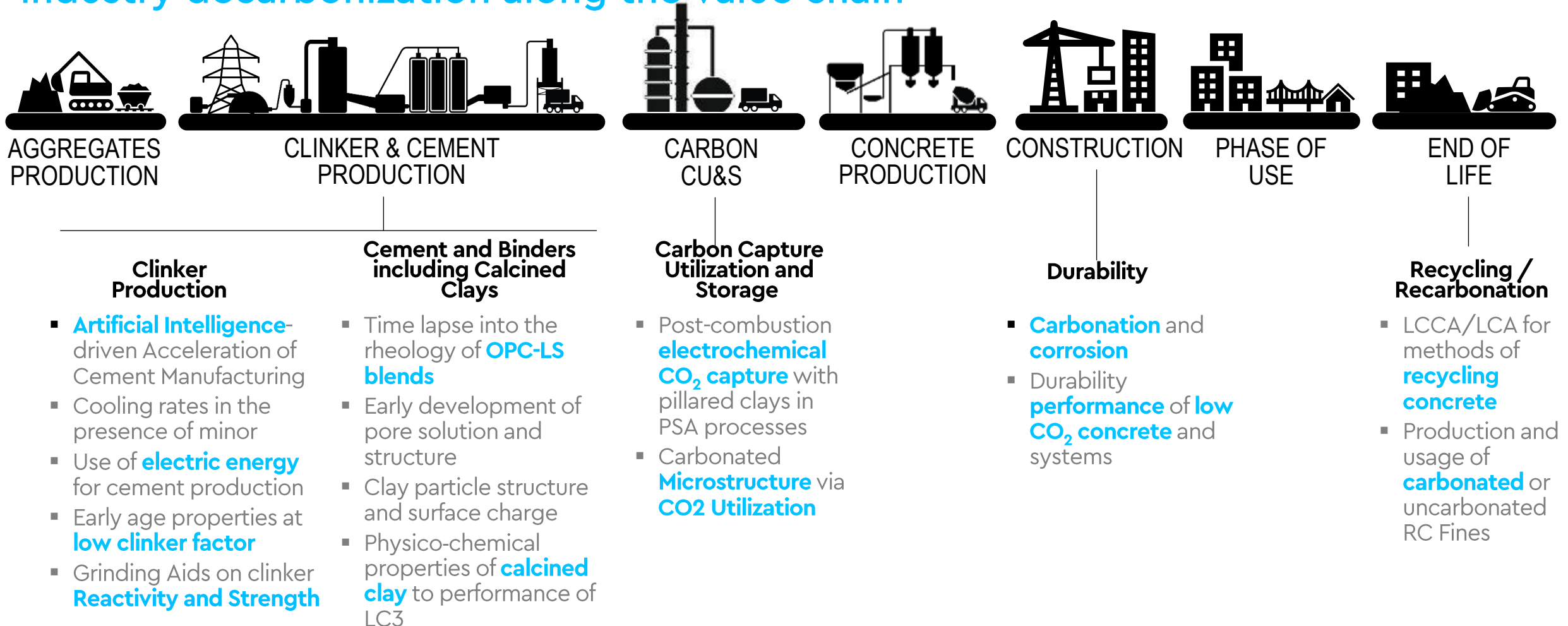
10
million
€/year

value of its research

1.2
million
€/year

funds in research focused
on concrete CO2
reduction

Core Project thematics addresses: industry decarbonization along the value chain





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INNOVANDI OPEN CHALLENGE – Overview

Challenge themes are dealing with deep tech innovations requiring substantial investment for implementation and with an impact at scale on climate change.

2022 Challenge

- Examined **CCUS innovations**
- Over 100 start-ups were sourced, 20 were invited to pitch and
- **6 made it to consortia with GCCA members**



2023 Challenge

- Focussed on **new materials/ingredients for low carbon concrete**
- Over 70 start-ups were sourced 15 were invited to pitch.
- **4 consortia formed**



2024 Challenge

- Focus on **CCUS technology**
- **29 start-ups shortlisted** out of 96
- High quality of start-ups
- *1 consortium agreed and another one on-going consortia discussions for pilot and material testing. Final consortiums to be announced soon*



2025 Challenge

- Focus on next generation materials towards net zero concrete (e.g. **low-carbon admixtures, SCMs, activators, or binders**).
- **4 consortia formed**





VERSION 6 • NOW LIVE

GCCA CONCRETE FUTURE

The GCCA EPD Tool

Credible environmental product declarations
for aggregates, clinker, cement, concrete and
precast, built by the industry.



GCCA EPD Tool: One pre-verified tool for the whole value chain

The industry's shared, pre-verified route to Environmental Product Declarations for **clinker, cement, concrete, aggregates and precast**.

1st

pre-verified EPD calculation engine,
recognised by EPD International

Simple

Online tool. No LCA expertise needed. Draft EPD, background report and digital EPD in one step.

Pre-verified

lower third-party verification cost per
EPD

Credible

Independently verified. Accepted by EPD programme operators. Producers keep control of their data.

100+

organisations worldwide

Consistent

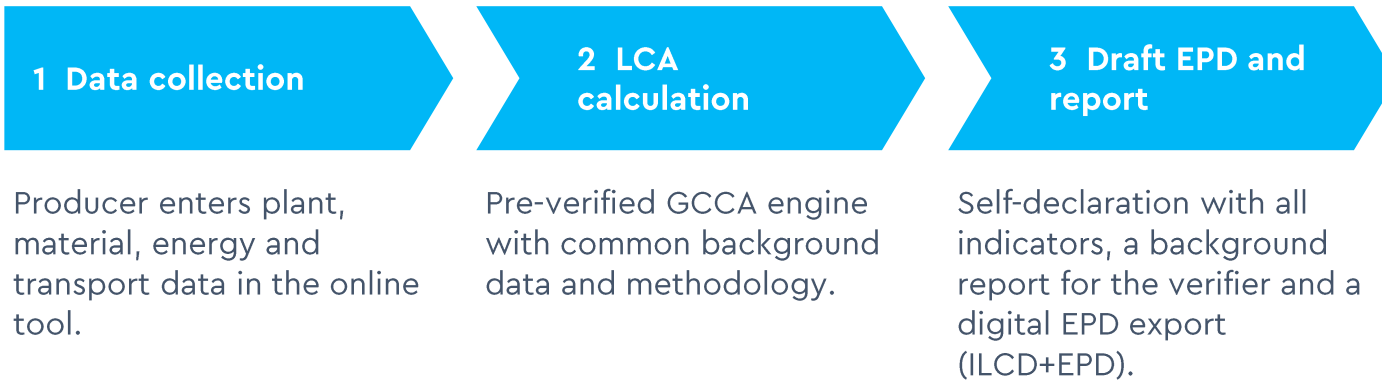
One methodology aligned with European and North American PCRs, so results are comparable across the sector.

Used by the largest producers and associations, including Heidelberg Materials, Cemex, CRH and Holcim.

gccaepr.org

From plant data to a published EPD

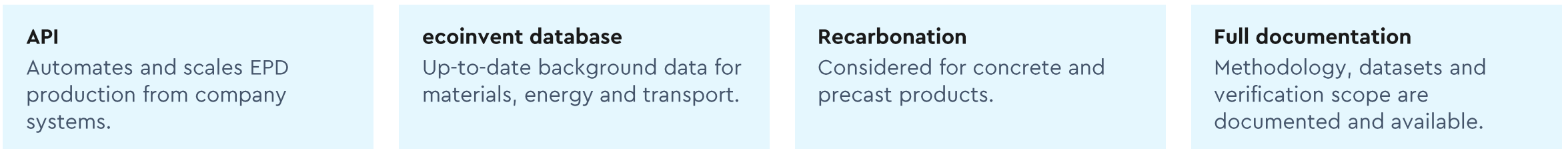
INSIDE THE TOOL



WITH INDEPENDENT PARTNERS



ALSO BUILT IN



Visit gccaeprd.org for more information

WALKTHROUGH

Enter, calculate, report, share, export.

- 01 **Enter data.** Materials, manufacturing, transport, storage, construction, use and end of life, with defaults fromecoinvent and the GCCA GNR database where you have no plant figure.
- 02 **Calculate.** The pre-verified model runs the LCA and reports every required indicator, with mass and energy balance checks as you go.
- 03 **Report.** Export the self-declaration as a PDF and the background report as an Excel file for the verifier.
- 04 **Share.** Manage EPDs in the dashboard, duplicate them for other plants or countries, and share them across your organisation.
- 05 **Export digitally.** ILCD+EPD files, or the API to push data in and pull results out of your own systems.



[← Back](#)

Select an EPD:

International version

[Hide help](#)

This starting section is the EPD management dashboard. It allows you to i) visualise your list of EPDs, ii) create a new cliniker, cement, concrete or precast EPD, iii) create a new cliniker, cement, concrete EPD from a self-declaration produced with this EPD Tool (provided e.g. by a supplier of yours), iv) duplicate, update or delete an existing EPD, v) export the background report or self-declaration or digital version in ICC-EPD format of the EPD, and finally vi) compare two EPDs of the same type.

While new cliniker, cement and concrete EPDs can be created as either empty, default (pre-completed) or from self-declaration, new aggregate and new precast are only as empty EPDs.

The filter and search engine will allow you to easily recover EPDs.

Any type
Any type
☐ Cliniker
☐ Cement
☐ Concrete
☐ Precast
☐ Third party
☐ Aggregate

Product name	Product code	Country	Created by	Permission
bcd	IN	mittal@greendelta.com	Edit	
est cement	IN	mittal@greendelta.com	Edit	
est 2	AI	mittal@greendelta.com	Edit	
est cliniker	CO	mittal@greendelta.com	Edit	
est mexico	MX	mittal@greendelta.com	Edit	

The dashboard: your EPDs by product type, with filter and search.

gc
ca

Click

Input data

Product description
AI-AI, Product

Materials

Manufacturing

Waste management

AI-AI, Construction

B. Use

C. End of life

Dismantle

Transport

Waste processing

Deposit

D. Benefits and loads

Analysis

Results

Calculate LPO results

Calculate detailed breakdown

Export

Raw materials

Specific cement

+ Add exchange Cement, user-defined

Default cement	Quantity	Transport mode	Distance
Cement, default	0 kg	Truck	100 km
		Rail	100 km
+ Add exchange Cement, default			

Primary raw materials (third party (EPD))

Primary raw materials (third party (EPD))	Quantity	Transport mode	Distance
Aggregates, natural, un			
Aggregates, natural, crushed	1073 kg	Truck	30 km
Aggregates, natural, alluvial		+ Add exchange +	
Anhydrites, natural			
Anhydrites, synthetic	606 kg	Truck	50 km
Bentonite		+ Add exchange +	
Clay, calcined			
Clay, expanded			
Ferrous silicate			
Filler, calcareous			
Filler, ultrafine			

Secondary materials:

+ Add exchange +

Secondary materials, co-product

+ Add exchange +

Secondary materials, waste

+ Add exchange +

Water	Quantity
Water	172.05 kg
+ Add exchange +	

Where we are heading

One trusted sector methodology, connected to the systems producers already use, and ready for the next generation of standards and regulation.

Version 6 now live: A new foundation

- Version 6 moves the tool to the openLCA calculation engine
- Updated methodology, PCRs and background data
- Independently verified before release

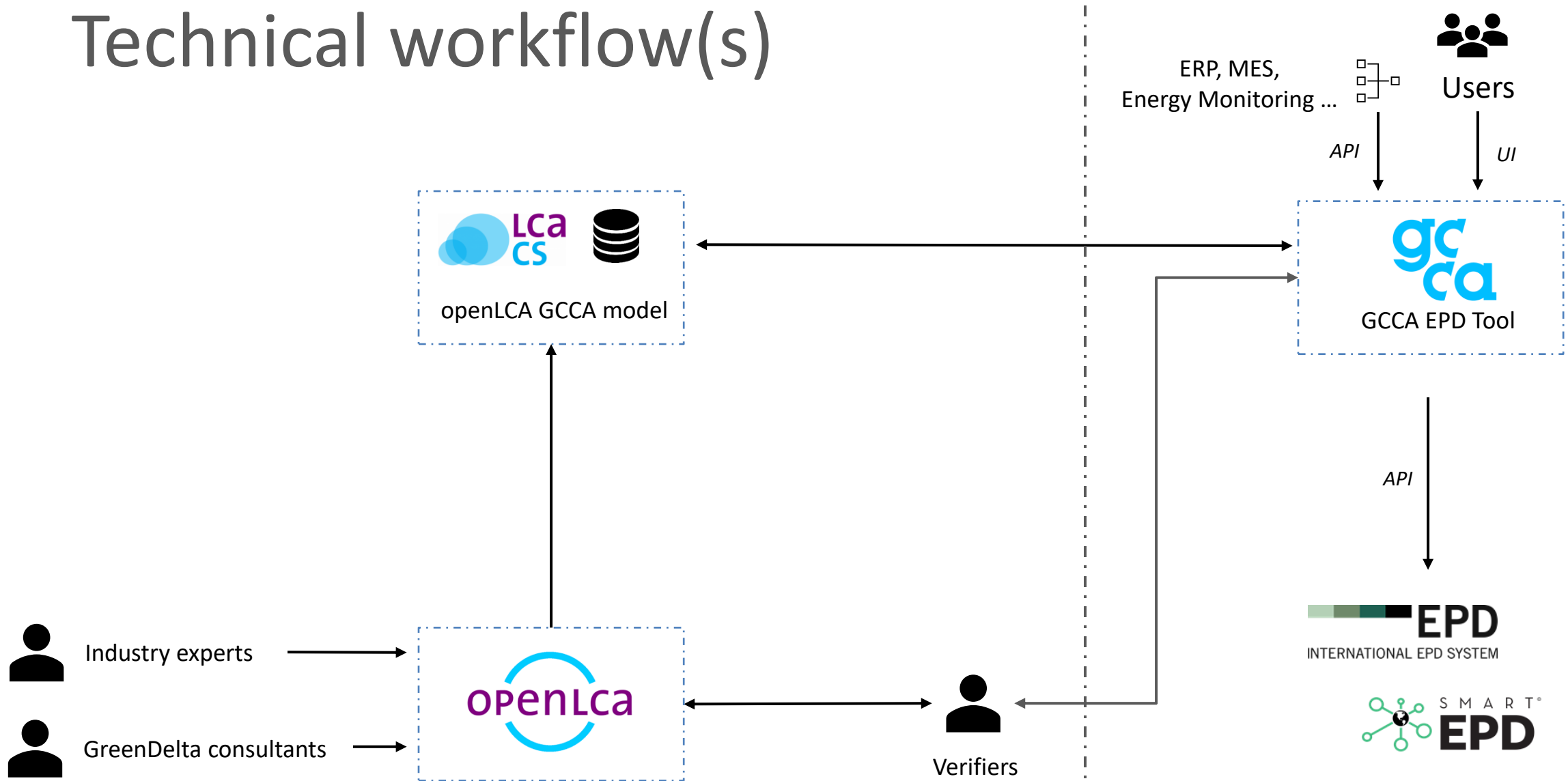
Connected

- An API so companies can link the tool to their own systems
- Machine-readable EPD data for building assessment and procurement
- Working with EPD programme operators and verifiers worldwide

Ready for what comes next

- Aligned with ISO 14025:2026, the first major revision of the EPD standard in twenty years
- Prepared for the revised EU Construction Products Regulation and digital product information
- One global core, with regional modules and local partners in new markets

Technical workflow(s)



Thank you

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Action & Progress Report