Heidelberg Materials

Einen Schritt weiter:
Wie Zukunftstechnologien und digitale Lösungen neue Maßstäbe im nachhaltigen Bauen mit Beton setzen.

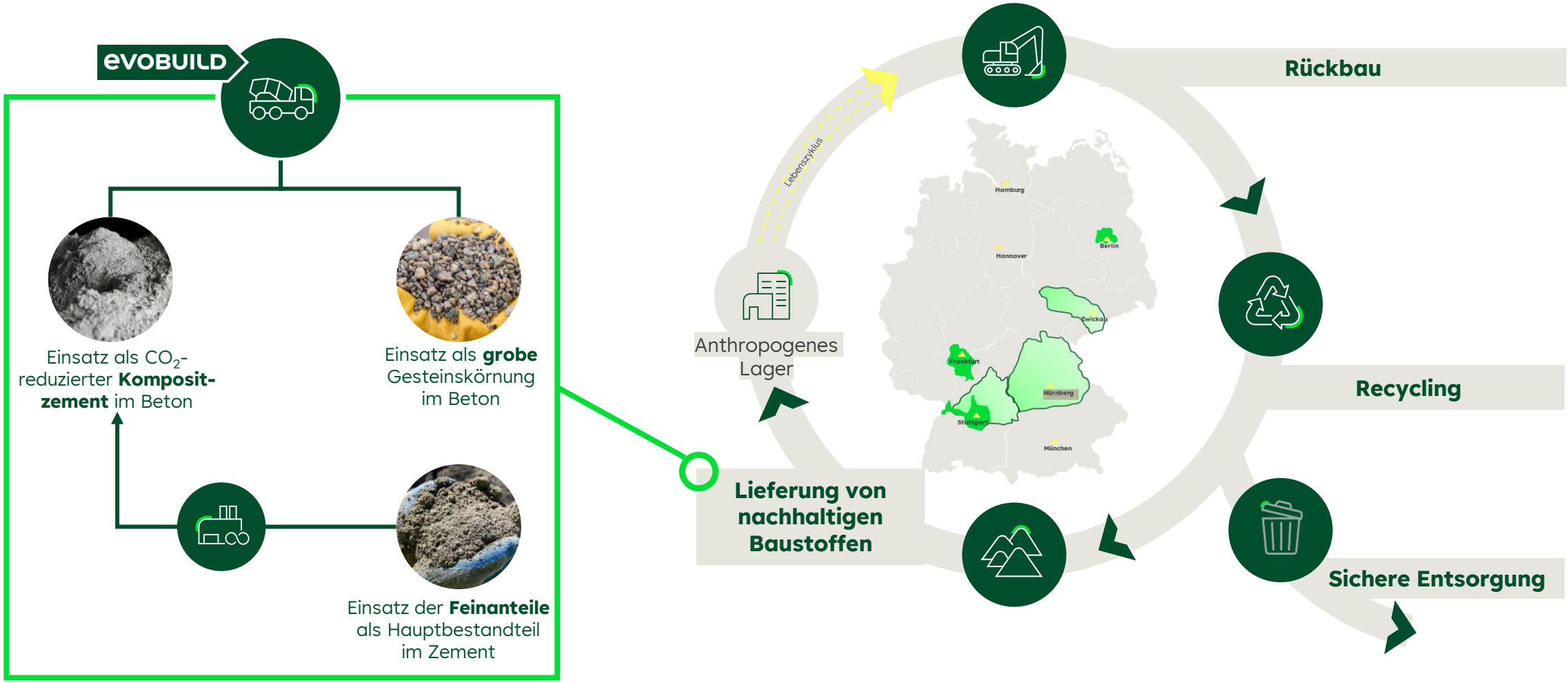
Construction Summit | Hamburg | Rebecca Waerder
06.03.2025

Heidelberg Materials

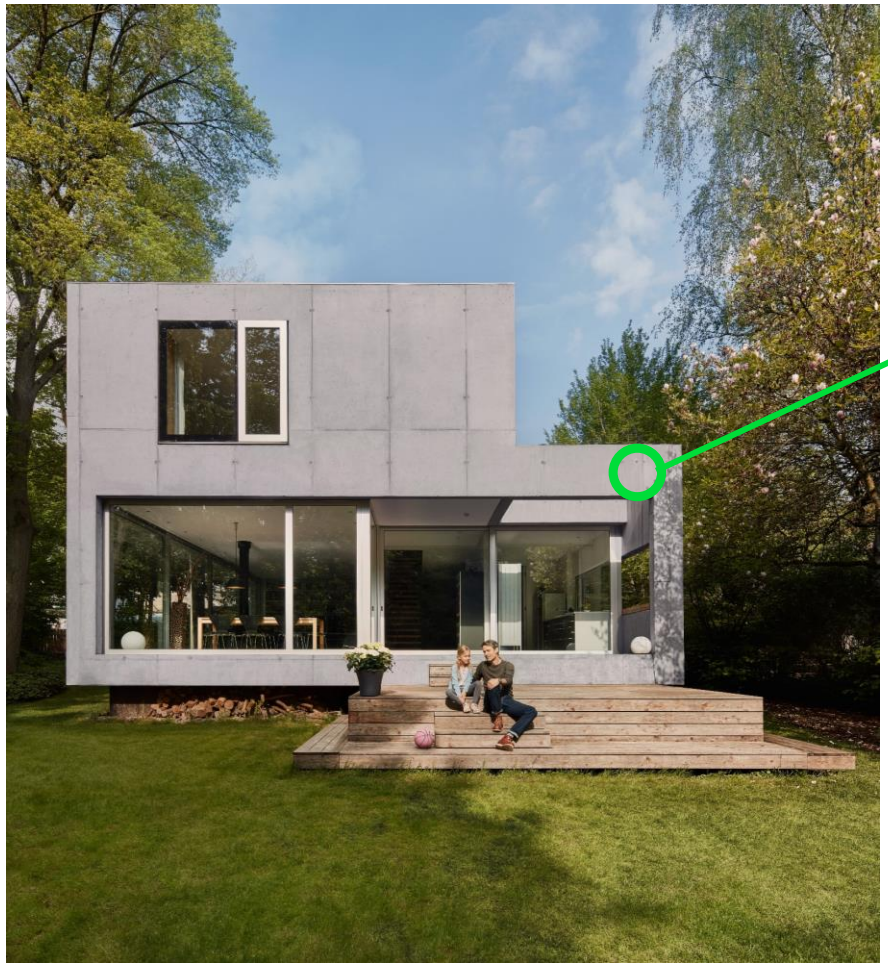

FAM

Heidelberg Materials

Wir bieten Kunden aktiv eine Komplettlösung an und schaffen innovative Einsatzpotenziale für Recycling-Materialien



Wir können den CO_2-Fußabdruck bereits heute deutlich reduzieren



EVOBUILD

Min. 30% CO_2-Reduktion nach CSC:

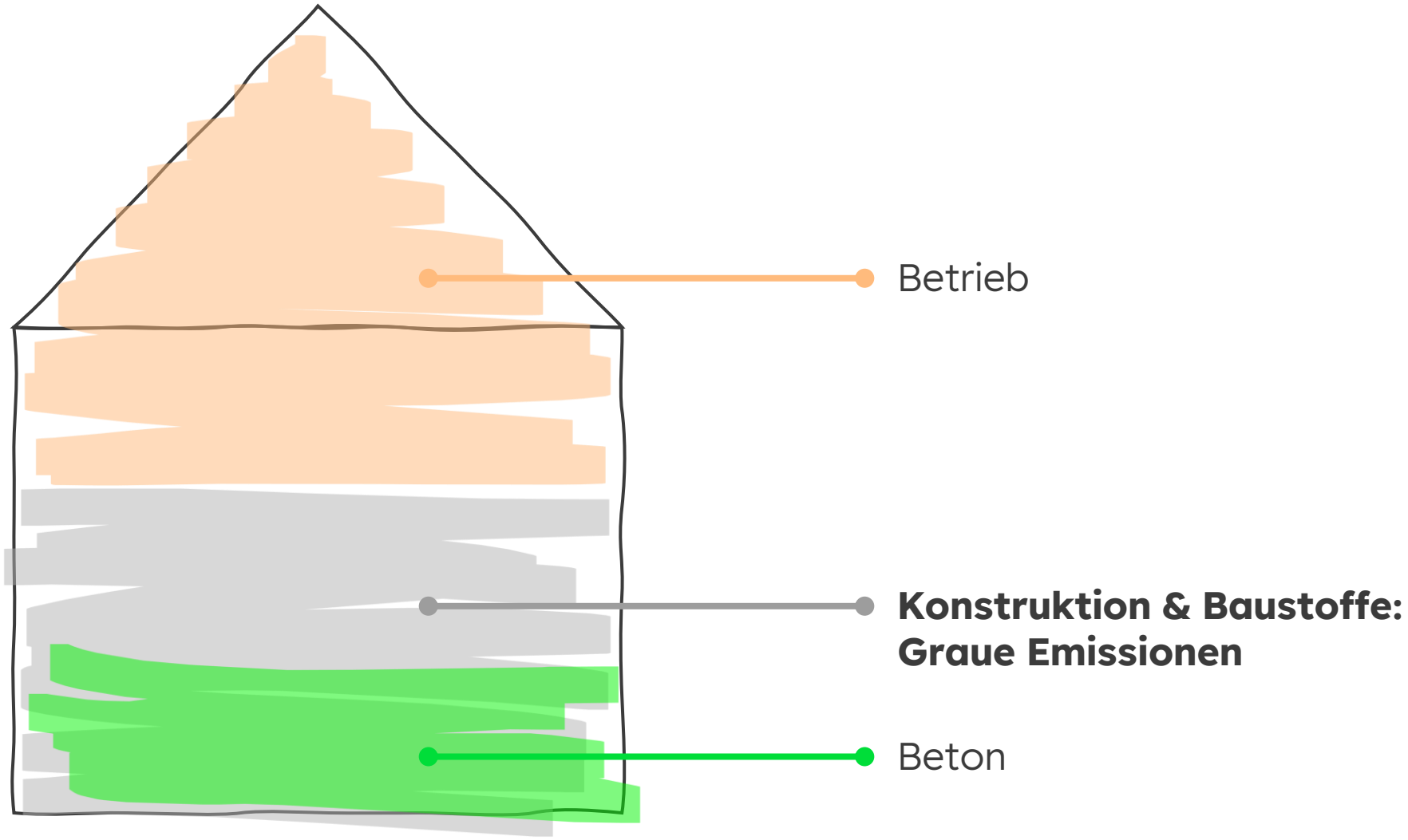
CO_2-Klasse	Beschreibung
Level 1 (↓ ≥ 30%)	Min. **30% Reduktion** ggü. dem Branchenreferenzwert
Level 2 (↓ ≥ 40%)	Min. **40% Reduktion** ggü. dem Branchenreferenzwert
Level 3 (↓ ≥ 50%)	Min. **50% Reduktion** ggü. dem Branchenreferenzwert
Level 4 (↓ ≥ 60%)	Min. **60% Reduktion** ggü. dem Branchenreferenzwert

⊕ Einsatz rezyklierter Gesteinskörnung möglich

Bereits heute flächendeckend anwendbar auf **ca. 80% der Betone in Deutschland**.

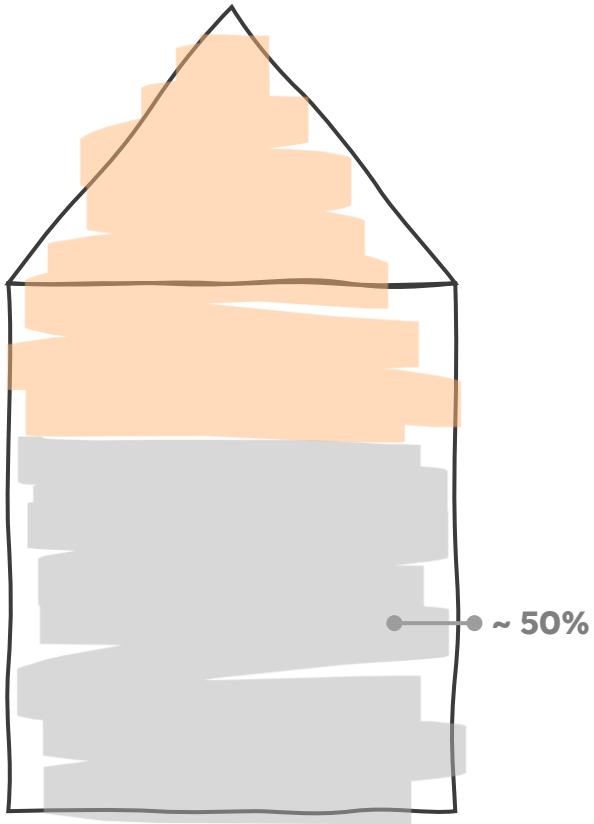
Wieso dann einen Schritt weiter?

Baustoffe und Betrieb sind die größten CO_2-Quellen im Gebäude-Lebenszyklus

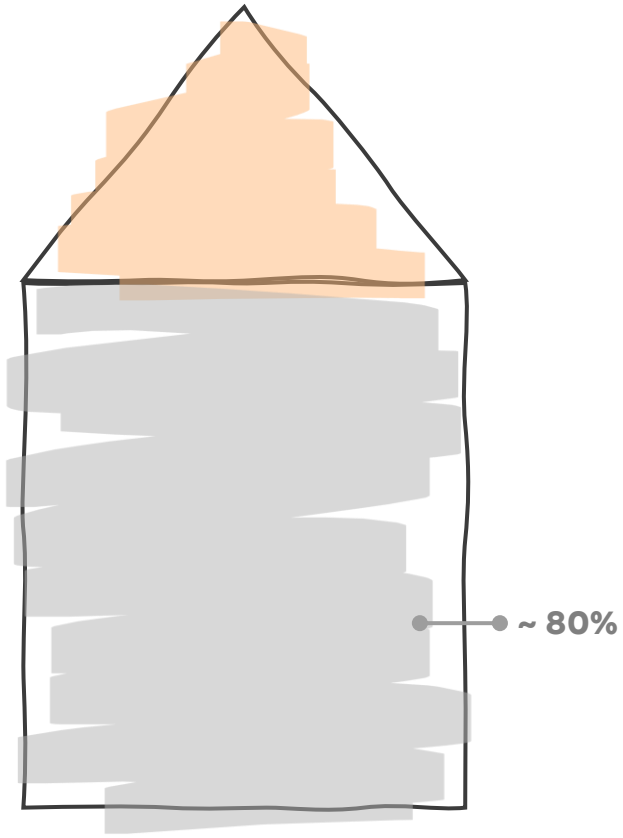


Die Bedeutung der „Grauen Emissionen“ im Gebäudelebenszyklus wird wachsen

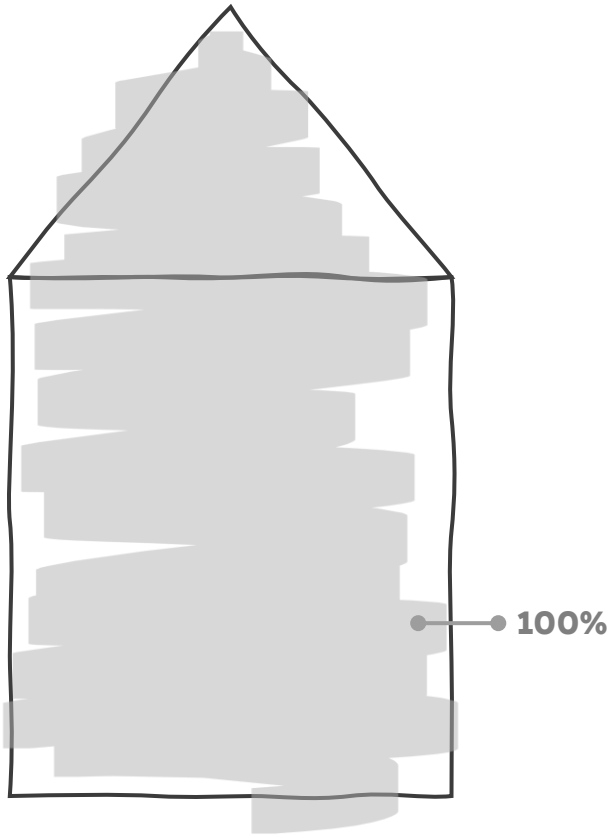
EU-Durchschnitt 2019



Energie-Effizienz-Haus (KfW 55)



Energieplus-Gebäude



Betrieb

Konstruktion

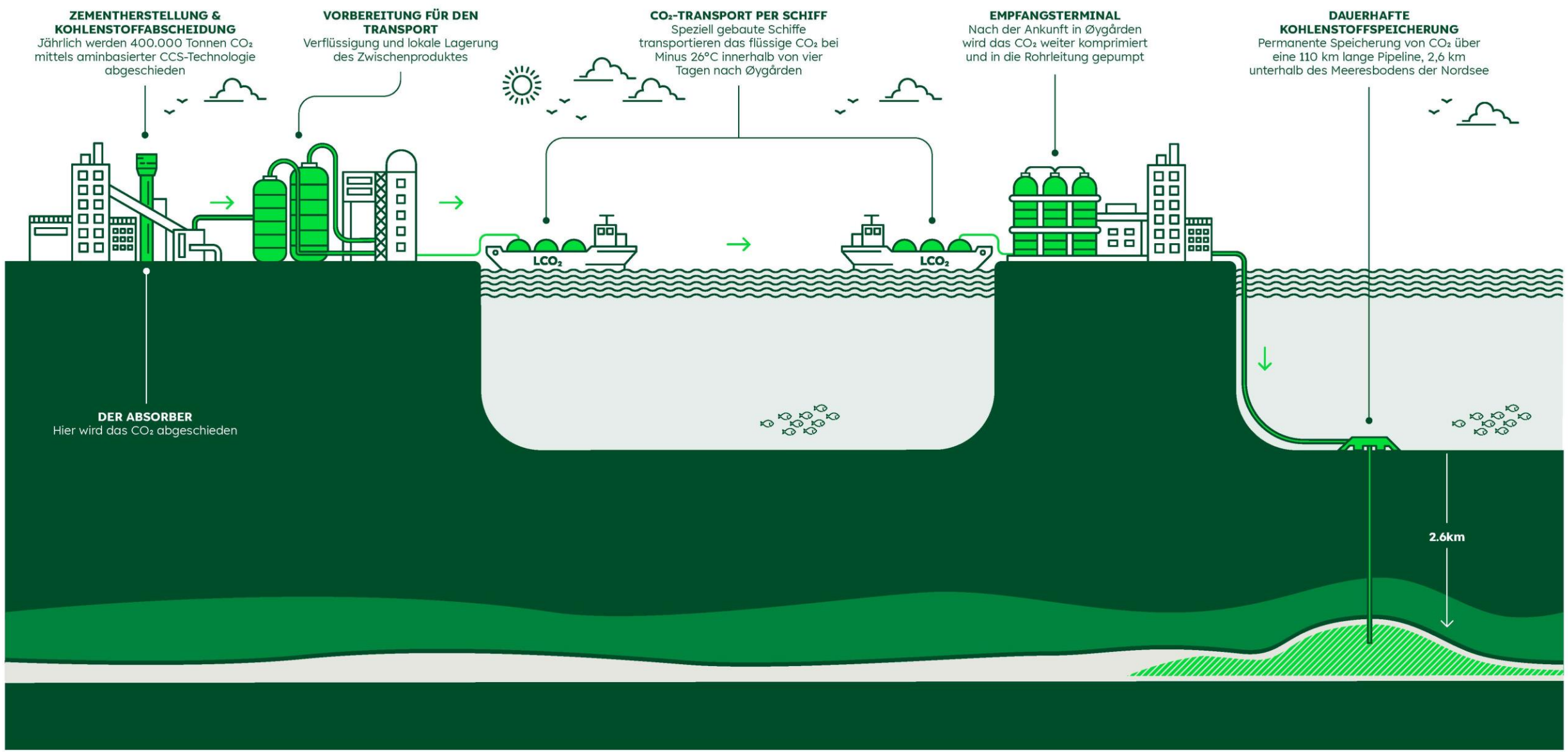
evozero

Capture the imagination

Heidelberg Materials


© Dag Jenssen
Heidelberg Materials

Brevic CCS Projekt von Heidelberg Materials



#1 CCS

Klinker - im industriellen Maßstab

2.600 m

unterhalb der Nordsee sicher eingespeichert

400.000 t/a

abgeschiedenes CO_2 jährlich

20 Jahre

Planung & Entwicklung

Lieferung

2025

Was hat das mit digitalen Lösungen zu tun?

CCS-Produkte sind als physische und virtuelle Variante verfügbar

evozero

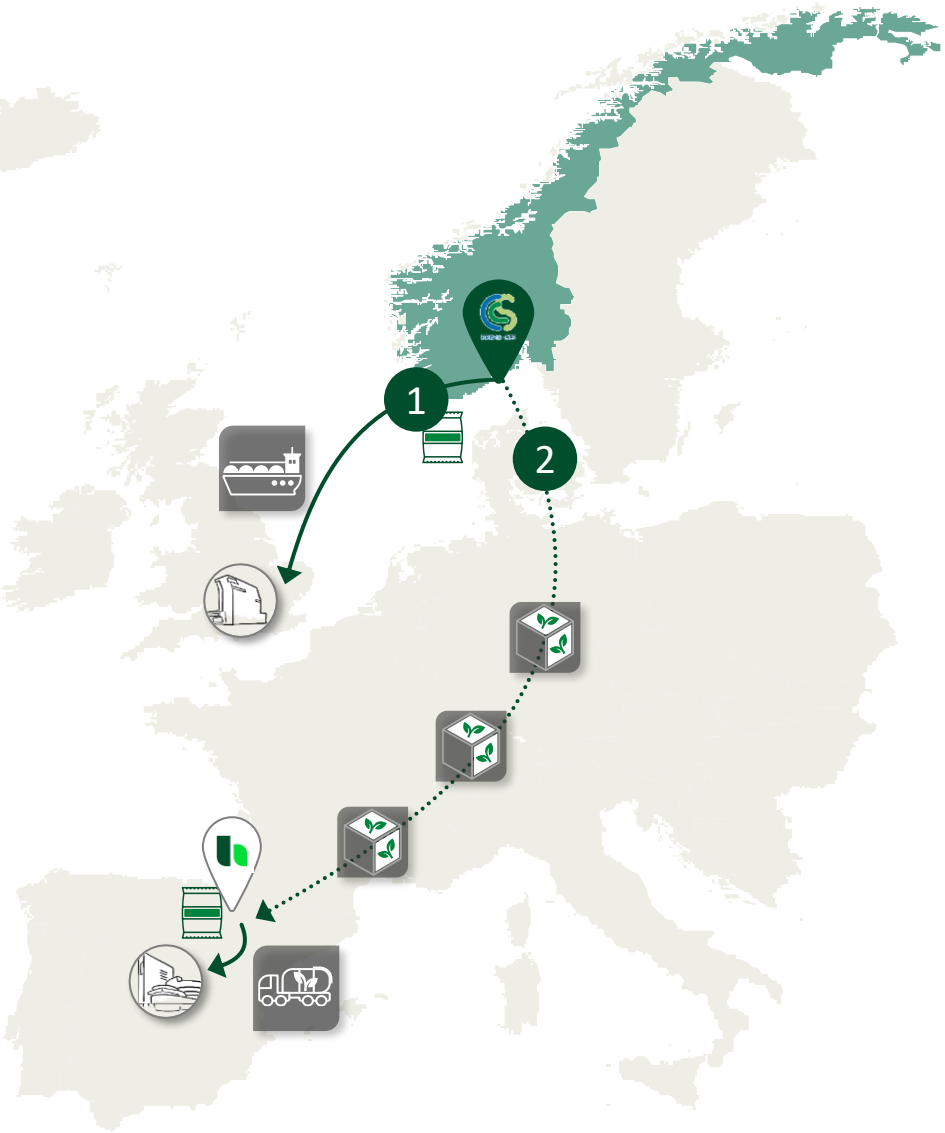
Carbon captured Brevik

Netto-Null-Zement aus dem Werk, der von Brevik zu Ihrem Bauprojekt geliefert wird.

evozero

Carbon captured

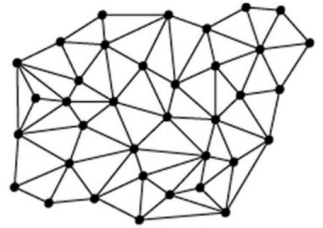
Bei weit entfernten Projekten können CO2-Einsparungen per Zertifizierung an einen HM-Standort in Ihrer Nähe übertragen werden.



Durch CCS ergeben sich neue Anforderungen an die Übertragung von Informationen

1. **Glaubwürdigkeit**
2. **Transparenz**
3. **Auditierbarkeit**
4. **Manipulationssicherheit**

centralised
(z.B. Excel)



distributed
(z.B. Hedera's distributed ledger)

New Nobel Center

Edit microsite | + Add certificate | Download certificates

Quantity
10.000 t

Carbon savings
5.870.000 kg CO_2

Make Your Carbon Savings Visible!

Our microsite allows everyone to access and verify the authenticity of your carbon savings. Simply download the QR code, place it in your building, and your visitors can learn about your project's carbon capture and storage during production, along with certification details.

Show microsite ×

Carbon captured attributes

Carbon capture and storage

Company name, street, zipcode, city, country
is the rightful holder of the reported carbon savings. ×

Material	Quantity	Product GWP Total	Bundled carbon savings	Remaining GWP	EPD for physical material
CEM II/A-LL 32,5 R evoZero carbon capture [1] Heidelberg Material Plant 1, Germany	10.000 t	5.870.000 kg CO_2	5.870.000 kg CO_2 Brevik, Norway	0 kg CO_2	Show

1) Carbon savings compensate for stages A1-A3 of the lifecycle inventory of cement.

Carbon savings assured by [Third party verifier]

Ensuring trust through third party assurance

Heidelberg Materials commissioned [Third party verifier] Business Assurance Germany GmbH to provide limited assurance over data and the methodology used by HM as the basis for issuing product carbon intensity certificates. Learn more about [Third party verifier]

Step 1

Cement manufacturing and carbon capture

The carbon is captured during the clinker process via amine-based technology

Time **03.02. - 01.04.2025**

Step 2

Temporary storage on the plant

Liquefaction of captured carbon and intermediate onsite storage

Time **03.02. - 01.04.2025**

Step 3

Preparation for transport

The carbon is pumped from the plant's silos to the ship, operated by Northern Lights

Time **03.02. - 01.04.2025**

Step 4

Carbon transport via ship

Purpose-built ships transport the liquid carbon at -26°C to Øygården for permanent storage.

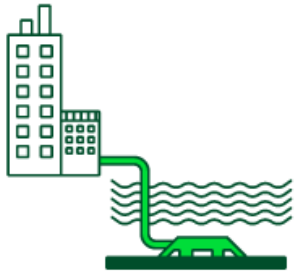
Time **03.02. - 01.04.2025**

Step 5

Receiving terminal

Upon arrival in Øygården, the liquid carbon is pumped into the pipeline.

Time **03.02. - 01.04.2025**



Step 6

Permanent carbon storage

The captured carbon arrives its permanent storage location, 2.6 km below the North Sea

Time **03.02. - 01.04.2025**

Step 7

Assurance by [Third party verifier], allowing a carbon bank deposit

Once the 3rd party Third party verifier [Third party verifier] has assured the stored captured carbon volume in a digital Monitor-Report-Verify system, a new deposit is made in the carbon bank.

Time **03.02. - 01.04.2025**

Step 8

evoZero delivery to [RMC Producer], triggering a carbon bank withdrawal

Upon the delivery of evoZero cement to [RMC Producer], a carbon bank withdrawal has been issued.

Time **03.02. - 01.04.2025**

New Nobel Center

Edit microsite | + Add certificate | Download certificates

Quantity
10.000 t

Carbon savings
5.870.000 kg CO_2

Make Your Carbon Savings Visible!

Our microsite allows everyone to access and verify the authenticity of your carbon savings. Simply download the QR code, place it in your building, and your visitors can learn about your project's carbon capture and storage during production, along with certification details.

Show microsite ×

Carbon captured attributes

Carbon capture and storage

Company name, street, zipcode, city, country
is the rightful holder of the reported carbon savings. ×

Material	Quantity	Product GWP Total	Bundled carbon savings	Remaining GWP	EPD for physical material
CEM II/A-LL 32,5 R evoZero carbon capture [1] Heidelberg Material Plant 1, Germany	10.000 t	5.870.000 kg CO_2	5.870.000 kg CO_2 Brevik, Norway	0 kg CO_2	Show

1) Carbon savings compensate for stages A1-A3 of the lifecycle inventory of cement.

Carbon savings assured by [Third party verifier]

Ensuring trust through third party assurance

Heidelberg Materials commissioned [Third party verifier] Business Assurance Germany GmbH to provide limited assurance over data and the methodology used by HM as the basis for issuing product carbon intensity certificates. Learn more about [Third party verifier]

Dreistufiger Verifizierungsprozess garantiert die sichere Allokation von CO_2-Einsparungen

01

Det Norske Veritas (DNV)

02

Distributed Ledger Technology

03

EPD Norway

NO **double counting**

NO **double selling**

NO **empty claims**

Neues Nobel-Center setzt auf weltweit ersten carbon captured net-zero Zement

Der Bau eines neuen Nobelzentrums in Stockholm beginnt im Jahr 2027 und das Gebäude wird ein Leuchtturmprojekt für Umwelt- und Klimaverantwortung sein.

Heidelberg Materials

Sprechen Sie uns an:

Dr. Robert Bachmann

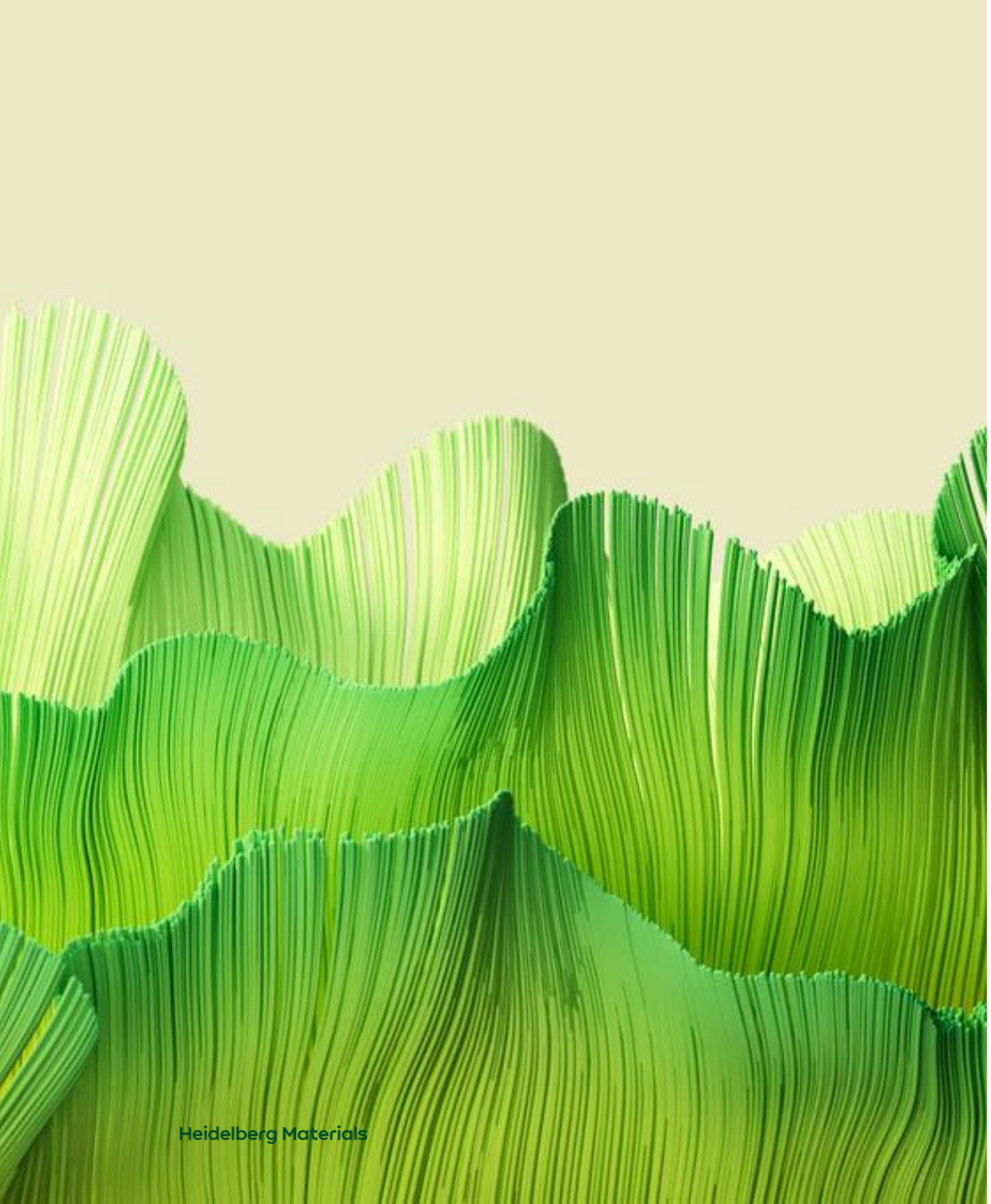
Leiter Technischer Vertrieb
evoZero Ambassador
T +49 1523 7612916
robert.bachmann@heidelbergmaterials.com

Rebecca Waerder

Projektmanagerin Nachhaltige Produkte
evoZero Ambassador
T +49 1515 4628877
rebecca.waerder@heidelbergmaterials.com

Stand D2

Heidelberg Materials



Unsere Ziele wurden wissenschaftlich überprüft und stehen im Einklang mit dem 1,5° Ziel

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Inkl. CCS

95% Reduktion der Scope 1 und Scope 2 Emissionen bis 2050

90% Reduktion der Scope 3 Emissionen bis 2050

01. Oktober 2025