BETOLAR

Investor Presentation

13 January 2023

Agenda

- **Betolar's Growth Strategy Progressing**
  - Riku Kytömäki - Chief Executive Officer
  - Riikka Ylikoski - Chief Financial Officer
- **Update on Geoprime® Sales and Marketing**
  - Ville Voipio - Chief Commercial Officer
- **Betolar's Technology and R&D Advancements**
  - Jarno Poskela - Chief Technology Officer

Challenge #1

The construction industry
is **one of the most polluting sectors**,
creating well over 20% of the global CO_2 emissions.

One of the biggest single contributor is **cement,** which generates more global GHG emissions than for example the aviation industry.

CO_2 emissions from cement

>8%

Challenge #2

Various industries are producing **billions of tons of industrial side streams** that end up in ponds and landfills. These side streams are often hazardous and pose a great risk if leaked into the environment.

Some annual numbers

Coal ash

>1B t

Mine waste (tailings)

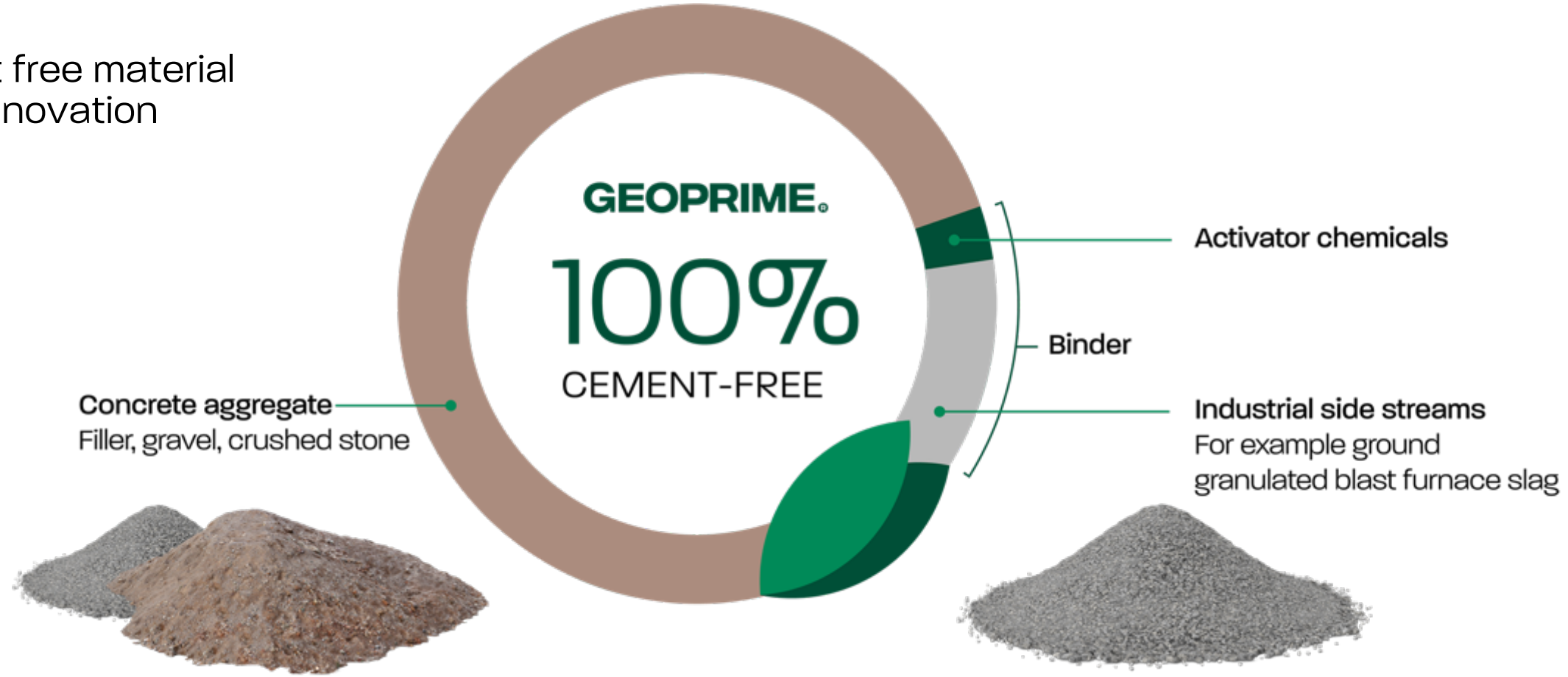
>12.7 B t

Slag

>400M t

Geoprime® Solution

100% cement free material technology innovation



GEOPRIME®

Mission

Betolar's mission is to help reduce CO_2 emissions and the use of virgin raw materials in construction.

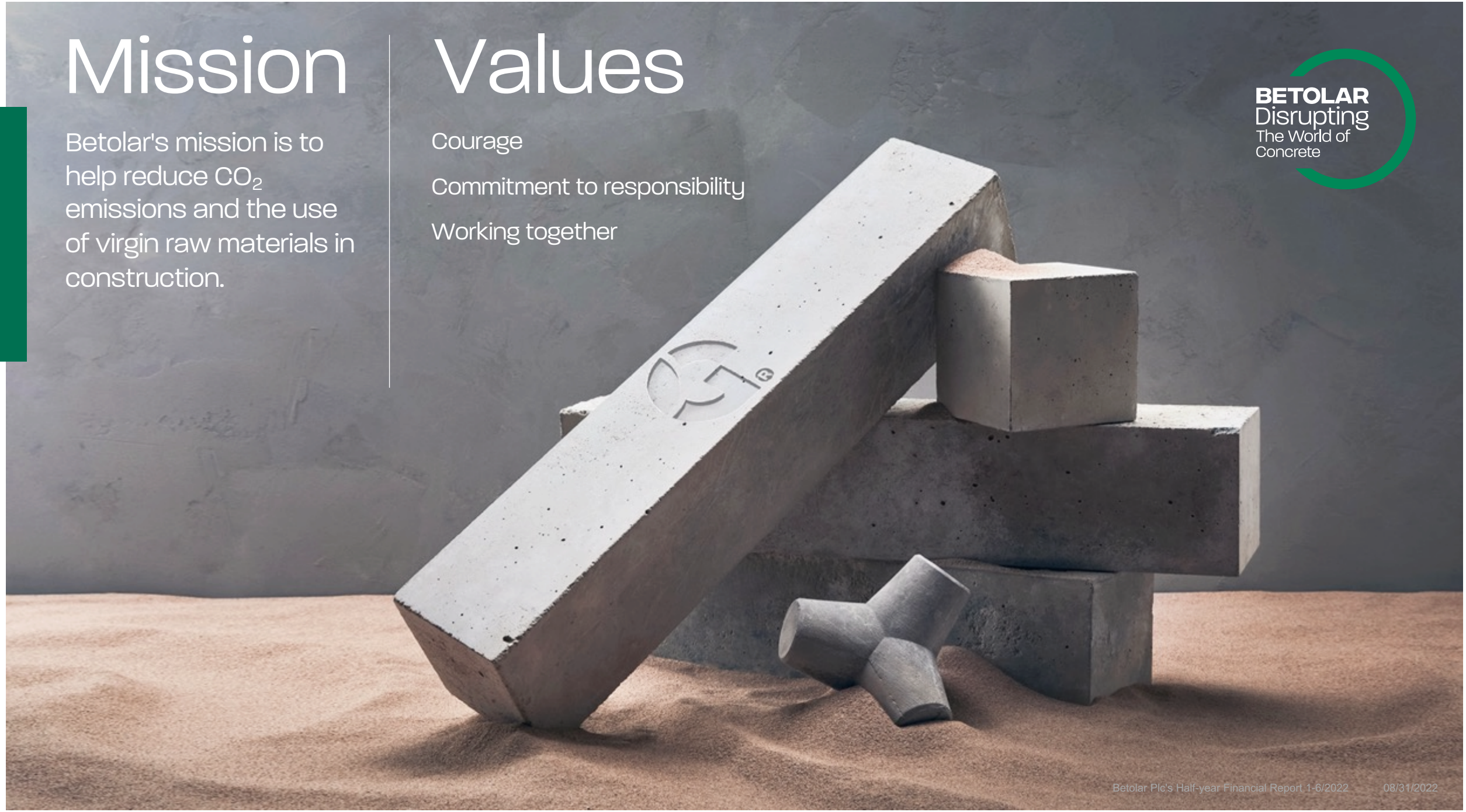
Values

Courage

Commitment to responsibility

Working together

BETOLAR
Disrupting
The World of
Concrete



Betolar's Journey

Product development

2016
Betolar is founded
Main product: small concrete products

2017
First significant investor **Ajanta Oy**

Focus on R&D of geopolymers

2018
First patent applications

Commercial viability

2019
First patent is granted

Concept validation starts

Sitra selects Betolar as one of the most interesting circular economy companies in Finland

2020
Successful pilots of paving stone products, production volume >300 tonnes

Successful funding round **Voima Ventures, Taaleri** and **Valve Ventures** as new venture capital investors

Commercialisation

2021
Partnership agreements
IBF, Denmark
TARA, India
Lujabetoni Oy, Finland

ISO 9001
ISO 14001
ISO 45000
certifications

Extensive pilot phase starts in European and Asian markets

Climate Fund capital loan of around €7M

Betolar raises >€35M and is listed on the **Nasdaq First North Growth Market**

2022
Commercial contracts are signed in Europe and Asia, with a total of 8 customers

Betolar signed strategic partnerships with major construction players

Strong capability growth

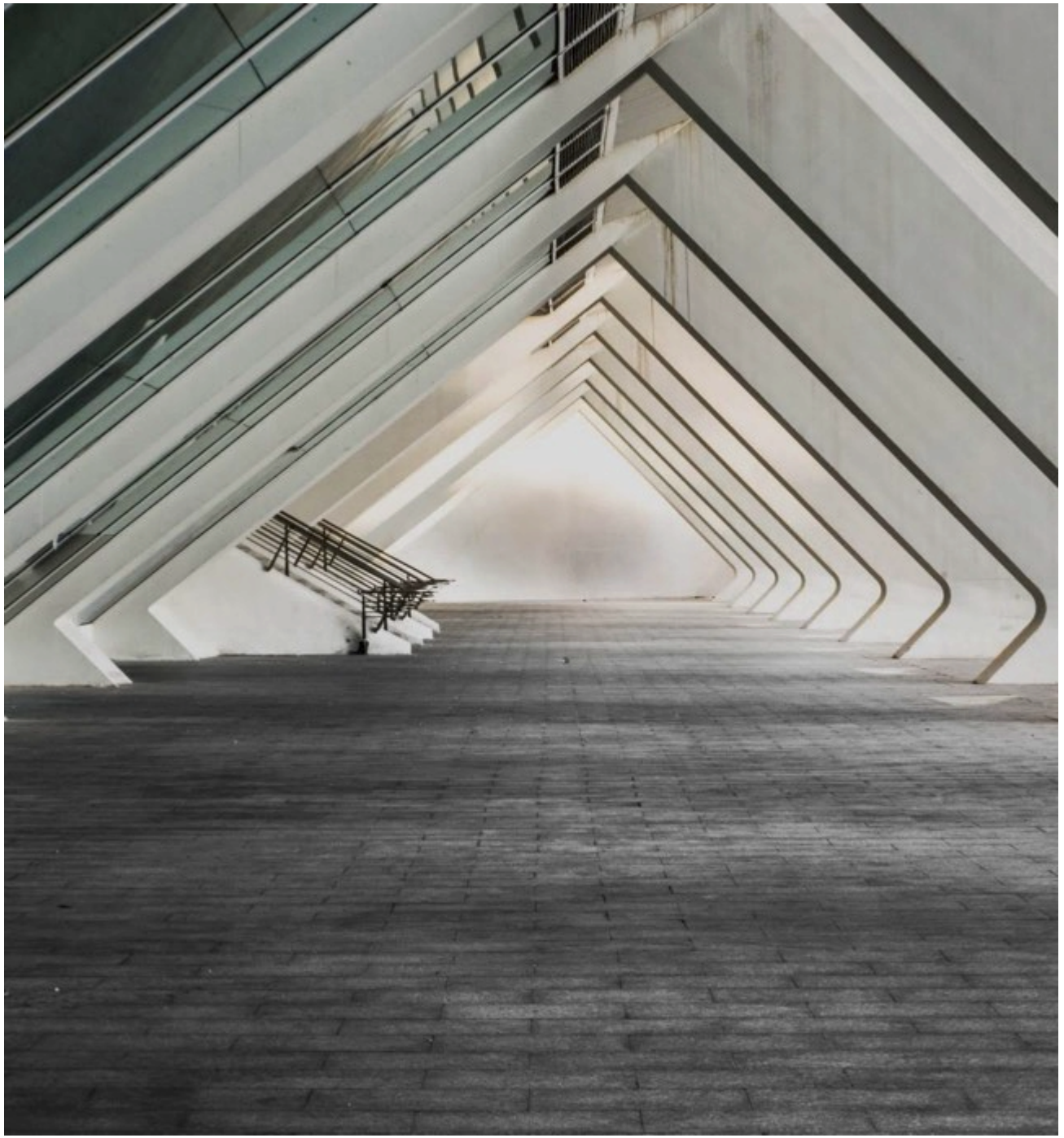
Production starts in customers' factories

2023
Strategy revision

>60
employees

Operating environment

- As the construction industry has adopted green and net zero targets, and due to increasing ESG regulation, the demand for low-carbon building materials is growing rapidly.
- The increasing number of Betolar pilot projects and other market feedback show that the construction industry is ready to adopt green solutions quickly.
- The global rise in energy prices and challenges in supply chains are driving up the price of traditional cement.

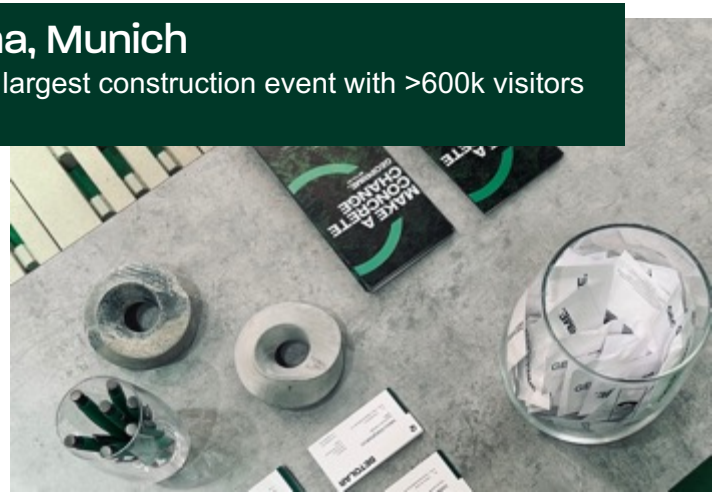


Betolar expanding internationally

Geoprime products were launched at key trade shows in APAC and EMEA

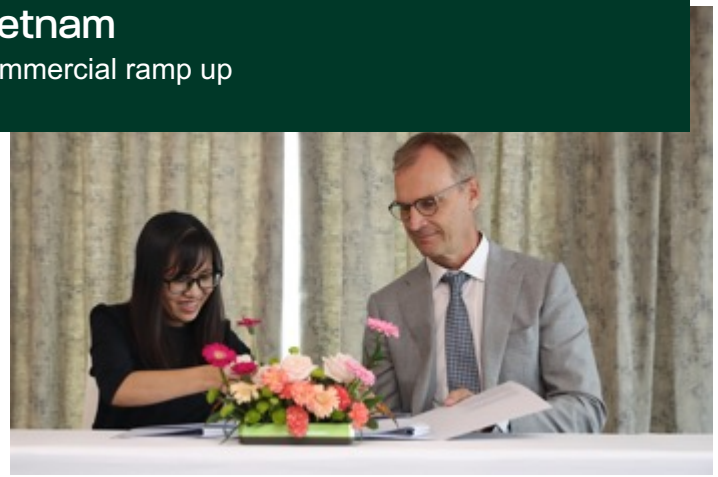
Bauma, Munich

World's largest construction event with >600k visitors



Vietnam

Commercial ramp up



World of Concrete, Mumbai

Leading concrete show in India

Nürnberg, Germany

International trade show for landscaping. Attended together with customer, FCN Nudling

Abhishek Bhattacharya

In September, Betolar appointed Abhishek Bhattacharya as the first Managing Director of Betolar India Plc.

Bhattacharya (MBA and M.Sc. in Civil Engineering) has 20+ years of experience in BD, commercialisation and production ramp-up in the cement and concrete industry in India.

Ex LaFargeHolcim, CRH, Hindustan Construction Company

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Betolar has a strong and experienced management team and board

Management Team

Riku Kytömäki

President & CEO

Riikka Ylikoski

Chief Financial Officer

Janne Rauramo

Executive VP Strategic Partnerships

Antti Uski

Chief Human Resources Officer

Jarno Poskela

Chief Technology Officer

Ilkka Iittiläinen

Chief Operating Officer

Ville Voipio

Chief Commercial Officer

Board

Tero Ojanperä

Chair

Inka Mero

Board Member

Ilkka Salonen

Board Member

Kalle Härkki

Board Member

Soile Kankaanpää

Board Member

Juha Leppänen

Board Member

Business and financial targets

Targets set in conjunction with the IPO

Short term
(within 1-2 years)

- 10–15 pilot projects annually with new customers of significant volume potential, based on the company's more than 150 identified potential customers;
- First commercial customer agreements;
- Increasing the size of the customer delivery and sales organisation;
- Expanding brand and marketing measures into the target markets;
- Strong solution-building and value chain development based on product development together with industrial partners and customers;
- Launch of the Geoprime Academy;
- Piloting an automated laboratory and development work on the AI platform.

Medium term
(within 4-6 years)

- Global scale-up of Betolar's solutions;
- Reaching 100 commercial agreements;
- Scale-up of the applications and production volumes of Betolar solutions with Betolar's AI platform and ecosystem;
- Strong global sales, marketing and delivery resources.

Long term
(within 10 years)

- R&D expenditure approximately 5% of the net sales targeted by the company;
- Geoprime is a leading brand in environmentally sustainable products in the construction materials industry;
- Reducing carbon dioxide emissions by 150 million tonnes cumulatively[1].

Medium term financial targets (by 2026)

- Revenue of EUR 200 million
- Positive cash flow from operating activities

Long term financial targets (within 10 years)

- Revenue of over EUR 1 billion
- EBITDA margin of 30 percent

GEOPRIME®

1) As compared to the average carbon dioxide emissions from Portland cement using the 2021 emissions level.

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Expenditure overview H1/2022

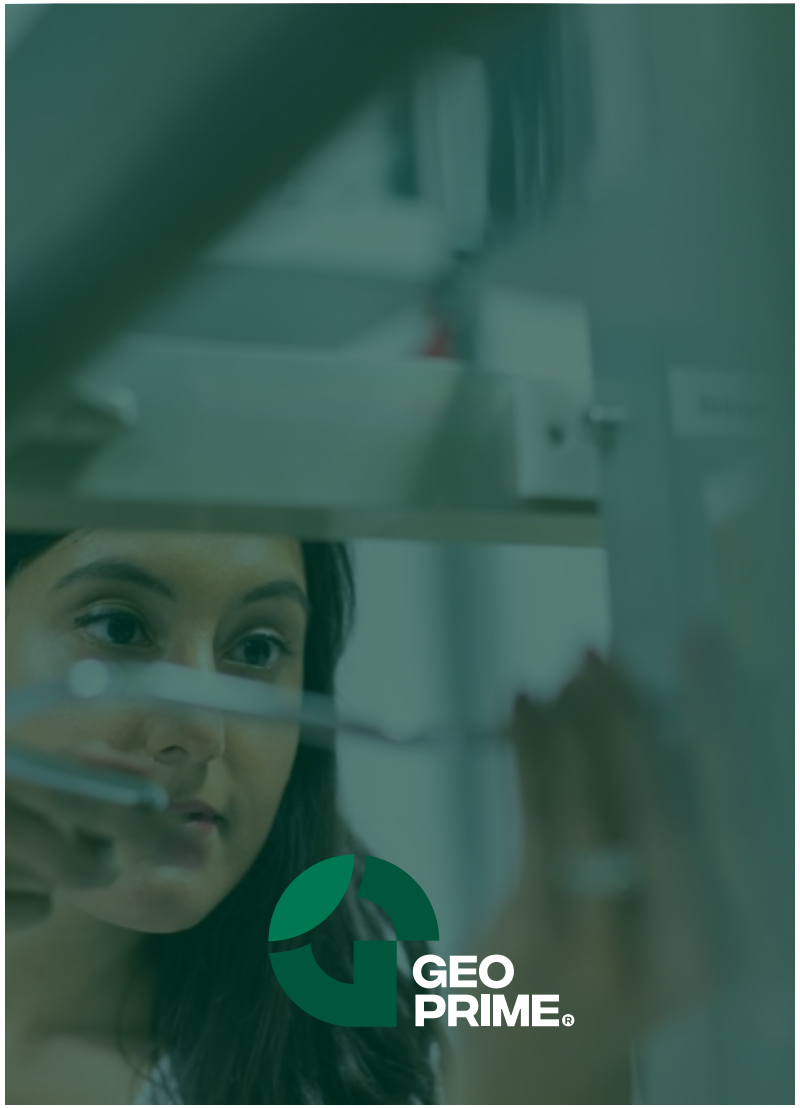
	Expenditure in H1/2022	Main items (in order of significance)	Estimated development / Cash burn management plan
CAPEX	EUR **0.8** million	1. Material Development 2. Digital infrastructure 3. AI Platform	• Continuous investments to RnD • Investments to innovation center • Project management
OPEX	EUR **5.7** million	1. Personnel costs 2. R&D operations 3. Sales and marketing 4. General Administration (incl. IPR portfolio management)	• Sharing piloting costs with pilot clients • Optimising outsourcing • Increasing cost control • Efficiency by business process engineering and integration

Establishing corporate processes

Betolar is transitioning from start-up company model to a resource efficient, more structured and controlled organising model. The organisational model will be as low hierarchy as possible.

New processes introduced in the last 12 months

- QEHS Quality System
- Risk policy and management process
- Process for Intellectual Property Rights management
- Forecasting and financial risk management process
- Common Business Processes (S&OP, Sourcing, Sales …)



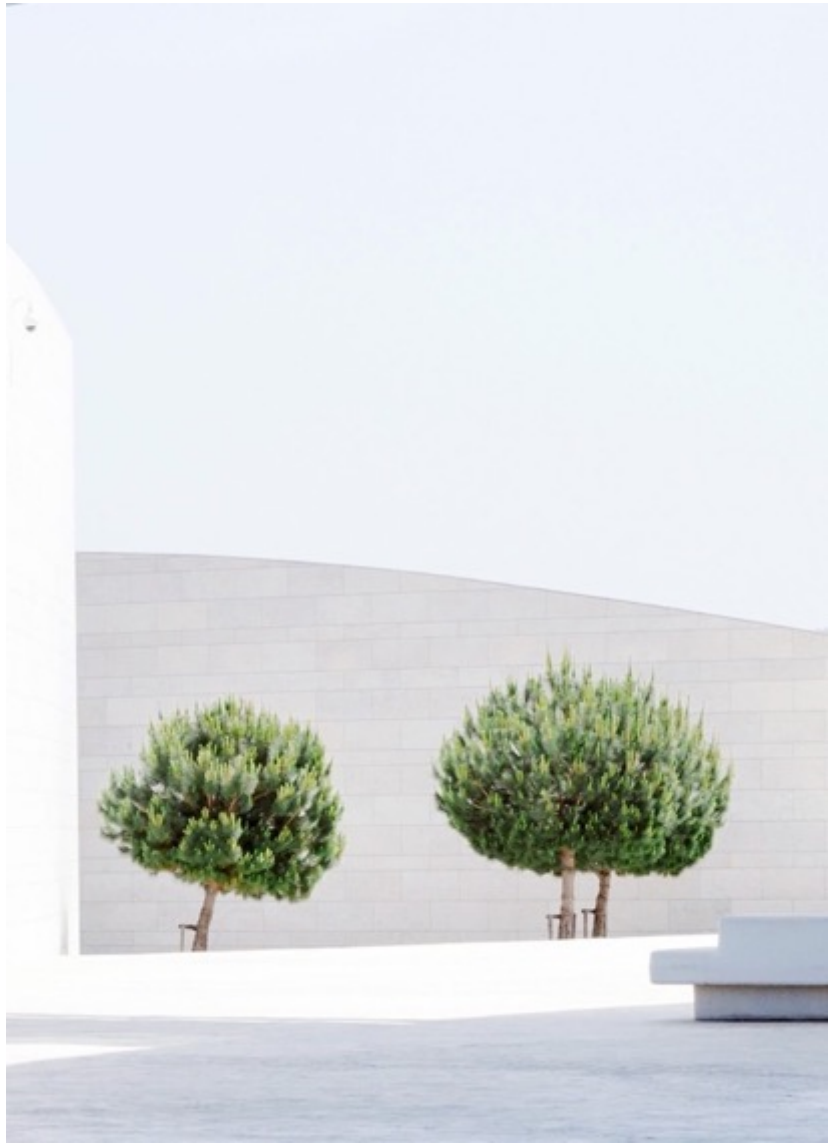
IFRS transition

The transition to IFRS reporting is estimated to support the company's growth strategy, increase the comparability of financial figures and increase the interest of international investors in the company.

- The IFRS transition date was 1 January 2021
- Annual report with IFRS financial statements for 2022 will be published in Q1/2023

Most significant changes

- **IFRS 16 Leases** –A right-of-use asset and a lease liability will be recorded on the balance sheet. These increase the balance sheet's long-term assets and financial liabilities.
- **IFRS 2 Share-based payments** – the fair value of stock options must be amortized as an expense in the income statement during the period in which the stock options are created. This has an impact on the EBITDA indicator.
- **IAS 32 Listing costs** – IPO expenses have been recorded to reserve for invested unrestricted equity.



Key Figures 1-9/2022

Financial key figures (1,000 € unless otherwise specified)	**1–9 2022**	**1–9 2021**	**1–12 2021**
Net sales	65	0	10
EBITDA[1]	-7,231	-1,837	-3,171
Cash and cash equivalents (at the end of the period)	30,328	2,892	37,355
Operational key figures	**1–9/2022**	**1–9/2021**	**1–12/2021**
Personnel (average number during the financial period)	42	21	20
Number of new pilot customers[1]	19	5	12

1) Betolar uses certain alternative performance measures (gross margin, EBITDA and number of pilot customers, EPS) as indicators of operational profitability and performance.

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Geoprime® Sales and Marketing

Ville Voipio

Geoprime®

Next-generation, low carbon construction material and a sustainable alternative to cement.

Low-carbon

80%

Up to 80% CO2 savings compared to cement-based materials.

Circular

95%

Enables circular business by utilizing up to 95% of side streams as raw materials.

High-quality

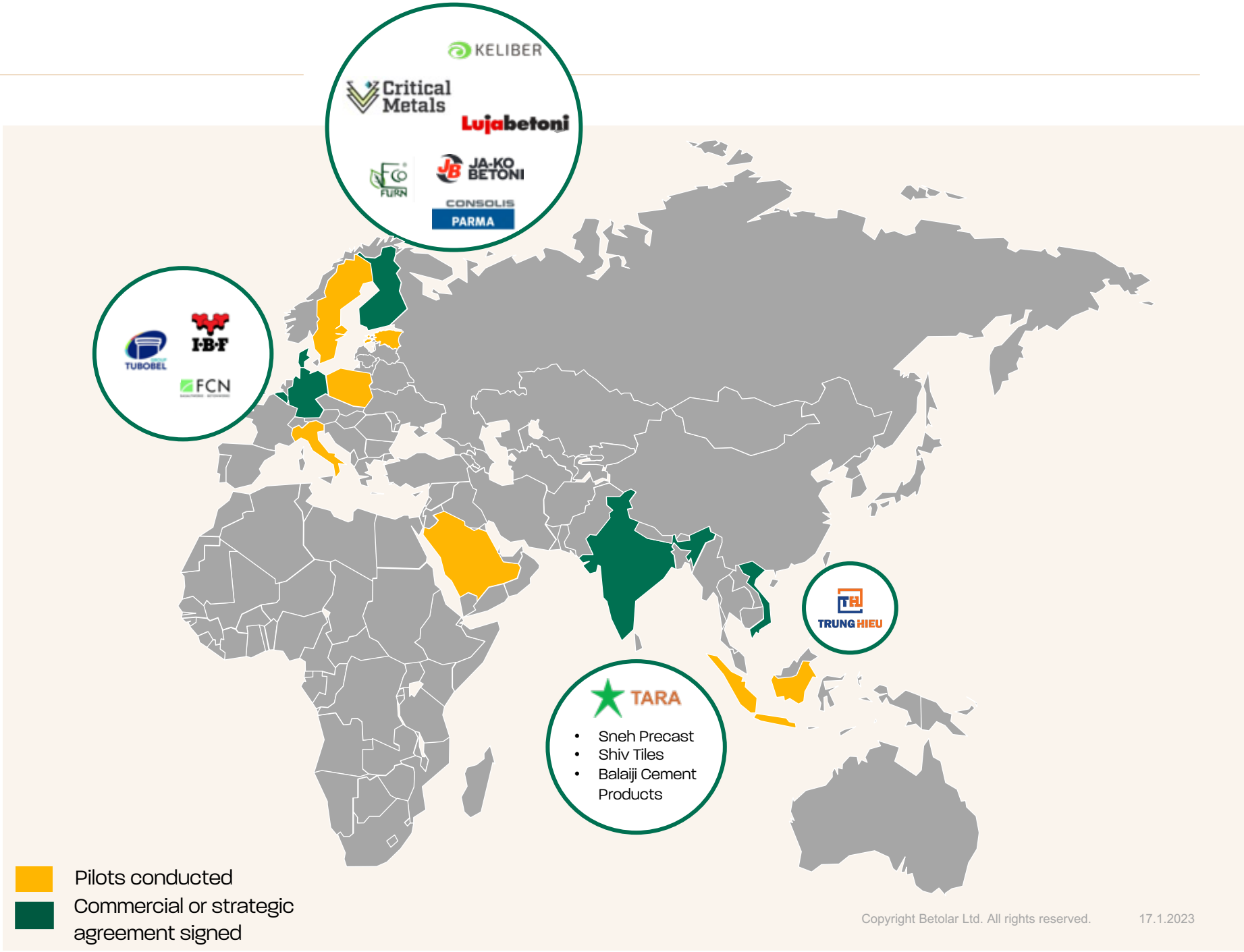
100%

Geoprime® meets all the required standards.

GEOPRIME.

Betolar Scaling Internationally

By Q3 '22



Moving with Geoprime from entry markets to three major industries in 2023-26

PRECAST

Non-structural small concrete products, e.g. paving blocks, sewage pipes, roof tiles, and infra products.

Piloting in 2020-21, first continuous productions started in 2022, market expansion to MEA and NAM in 2023.

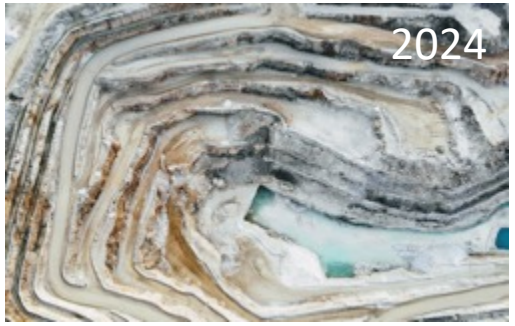
Ja-Ko Betoni, Sneh Precast, Shiv Tiles, IBF Denmark & FC Nüdling

CONSTRUCTION

Large structural concrete elements used in house building and urban development.

Solution development and piloting in 2022-23, first commercial projects expected in 2023/24.

Consolis, Lujabetoni



MINING

Concrete solutions used in global mining construction ranging from sprayed concrete to back-filling.

Solution development in 2023, first pilots and commercial projects expected in 2024.

Keliber

WASTE UPCYCLING

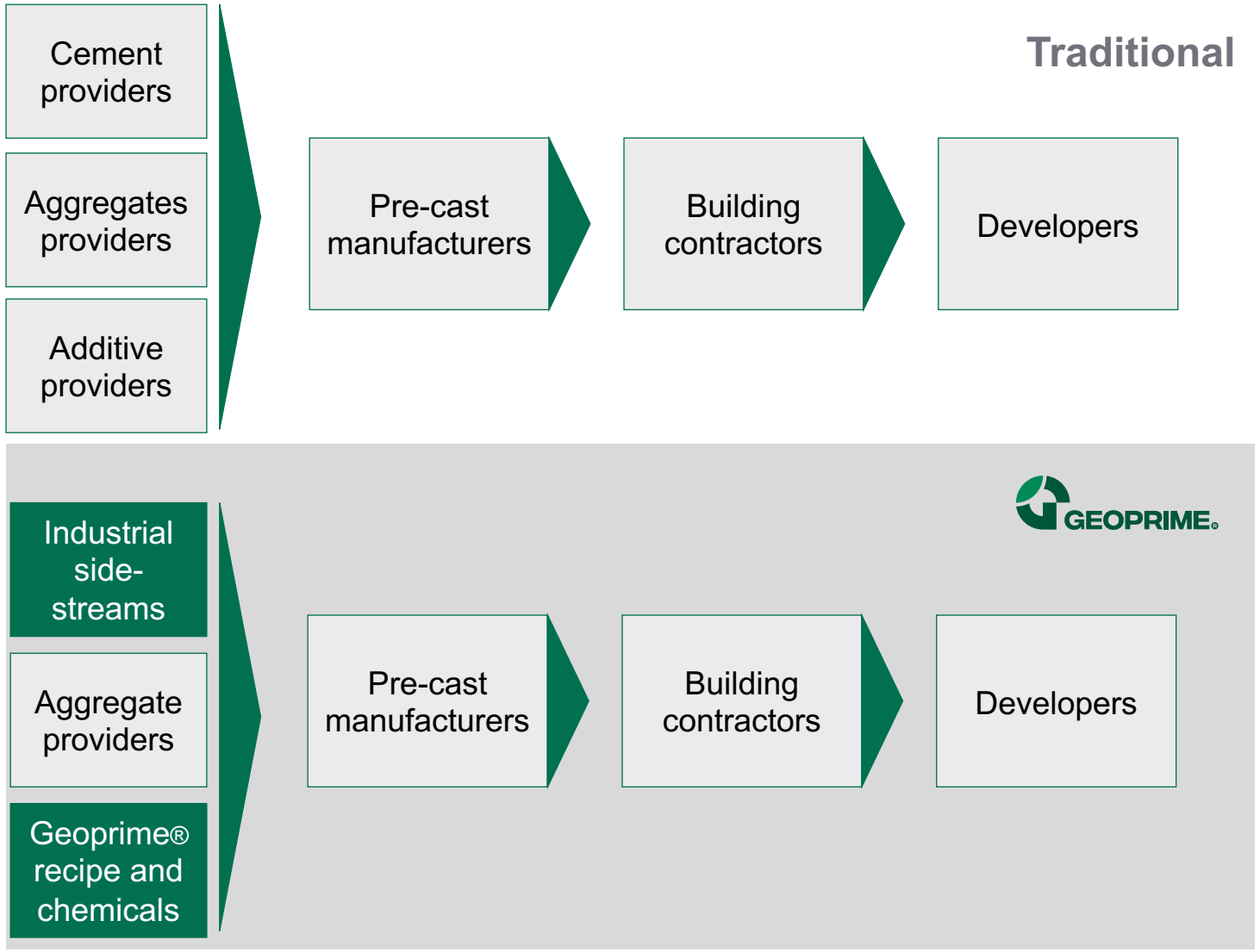
Industrial sidestreams requiring a solution to avoid land-fill and enable profitable manufacturing.

Solution development started in 2022, commercial revenue expected to start in 2025.

Critical Metals

Expanding the proven Geoprime solution to major industries

Geoprime is compliant with the current value chain

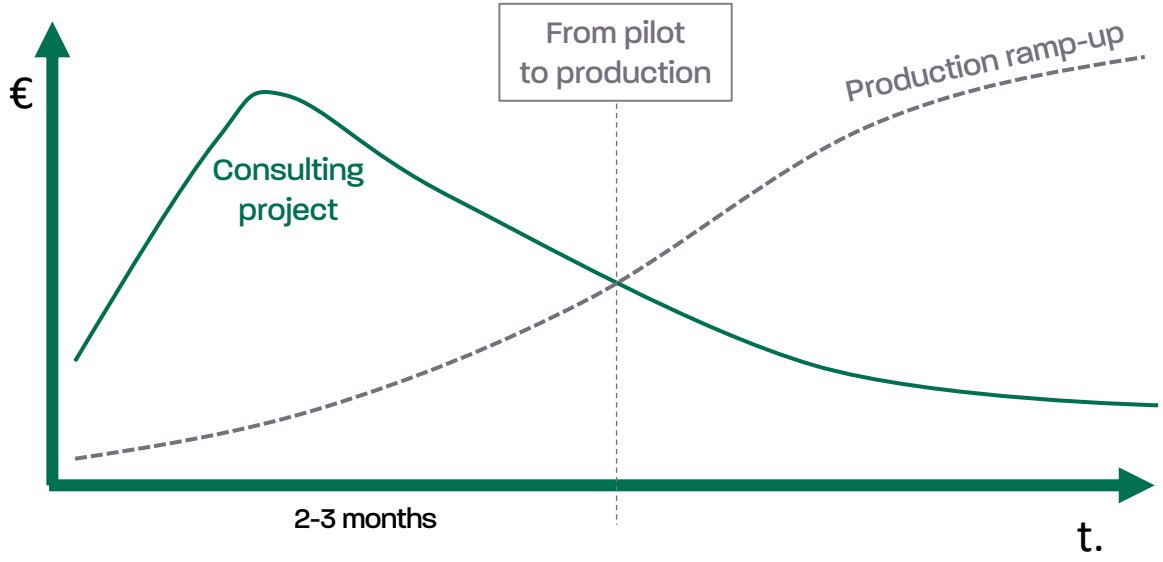


Compared to the traditional value chain in the pre-cast concrete market, Betolar completely sidesteps cement providers.

Betolar produces the required activator chemicals and provides the access to suitable industrial side-streams for the Pre-cast manufacturer to provide end clients with Geoprime® products.

The business model enables multiple revenue streams

PRECAST COMPANIES HAVE TYPICALLY SEVERAL PRODUCT LINES TO CONVERT



Recurring business

- License fee
- Chemical sales
- Technical support

Project business

- Feasibility study of Geoprime to local production conditions
- R&D and quality verification support
- Sidestream sourcing and logistics suppport
- Training and safety guidance to new materials
- ESG impact calculations and productisation support

Geoprime is a game-changer

IN THE SUSTAINABLE CONSTRUCTION INDUSTRY

- Low-carbon materials account for 40% of the emissions in a building life-cycle
- Construction industry is becoming increasingly committed to sustainability due to consumer and regulatory pressure
- Green financing supports shift in developing countries
- In Germany, Green Buildings collected 25% of the total commercial real-estate investment summing up to €12.4bn in FY21*
- Besides CO2 emission, companies are becoming increasingly interested in the circularity that supports biodiversity by combating waste and pollution

Slide: YIT Group, CMD November 2021

*) BNP Paribas Real Estate, Statista

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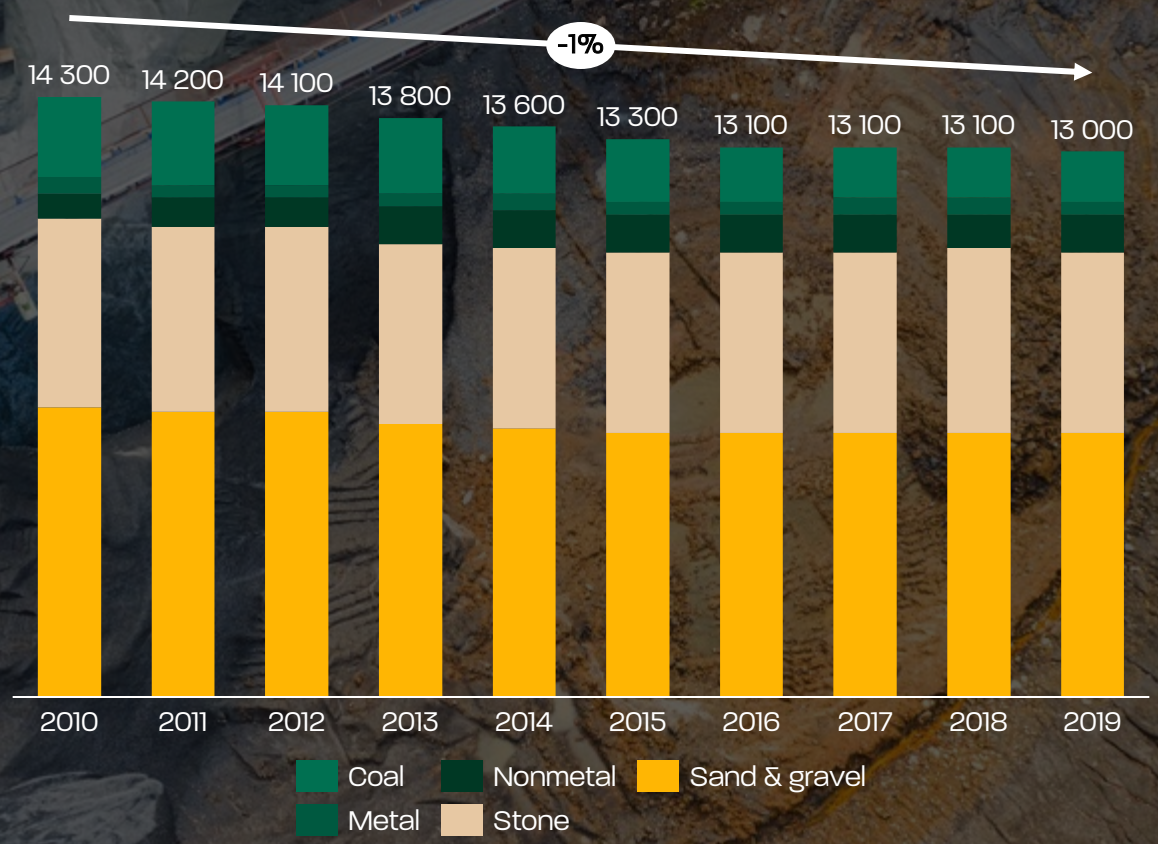
MINING

Global mining market

Global mining market expected to grow 8% p.a. by 2025

Global mining market size, 2020-2025, B$

Active mines globally, 2010-2019



Lähteet: KPMG, Global Mining Report 2021

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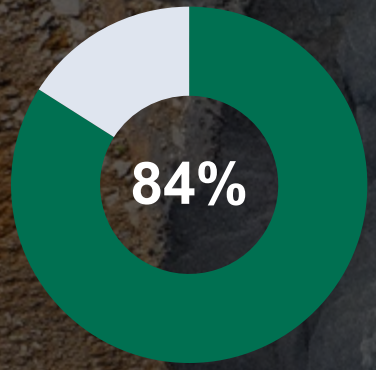
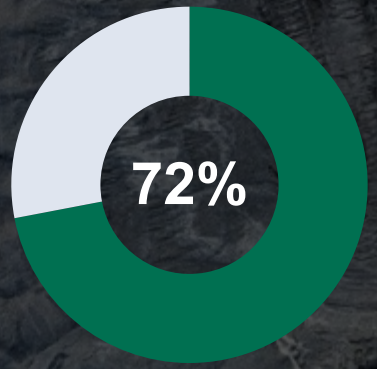
Global mining companies and social licence to operate

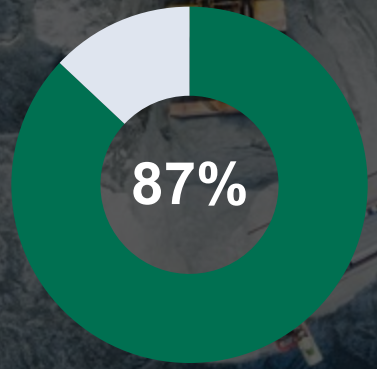
ESG will be the biggest driver of mining business model change in the next three years



of mining industry players believe the ability to achieve success in the long run is becoming increasingly dependent upon their ability to define success in a broader term than financial



of mining industry players expect disruption in the mining sector due to ESG in the next three years



of mining industry players believe that technology and innovation will play a key role in solving ESG challenges

Mining industry main risks, 2022

BETOLAR 1 Environmental risks, including new regulations

2 Commodity price risk

BETOLAR 3 Community relations and social license to operate

4 Political instability/nationalization

5 Global trade conflict

6 Ability to access and replace reserves

7 Permitting risk

8 Supply chain risks

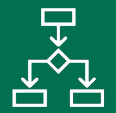
9 Talent risk

BETOLAR 10 Regulatory and compliance changes/burden

Source: KPMG Global Mining Outlook 2022

Key Themes in Commercial Unit, 2023

Tools, processes, and productization



- Internal capability development continues to support growth from a start-up to scale-up
- Deployment of modern tools and internal processes to support growing volumes
- Increasing the use of the digital channel in customer management and Geoprime community

Driving penetration with proven portfolio

- Geoprime provide a solid set of applications to support partners' green shift in concrete products
- New pilots and openings emerging in MEA and NAM
- Green certifications
- Focus on sustainable city initiatives, e.g. in Nusantara and NEOM

Transfering Geoprime approach to major industries

- Geoprime approach has been proven in small concrete products
- Same recipe and sidestream knowhow will be the game-changer in major industries of road & construction, mining, and waste upcycling
- Tomorrow is made together with key partners and relationships

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Betolar's Technology and R&D Advancements

Jarno Poskela

Technology development 2022

50%	of company employees working in technology development
5	Development teams (Innovation, Research, Product development, Digitalization, Laboratory)
20+	Ongoing RDI projects
200+	Implemented customer pilots

Material research at Betolar

MATERIAL ANALYSIS

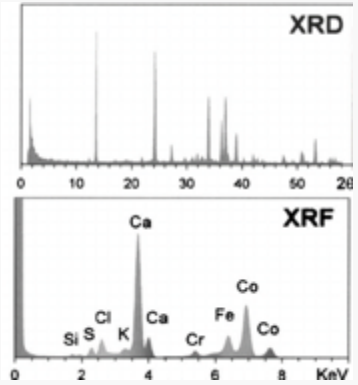
- Potential of side streams to be used as raw material in Geoprime solution are evaluated
- Utilization of scientific research and different characterization techniques

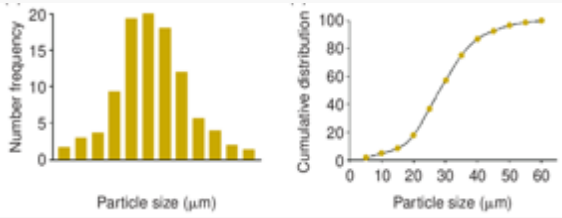
LABORATORY RESEARCH

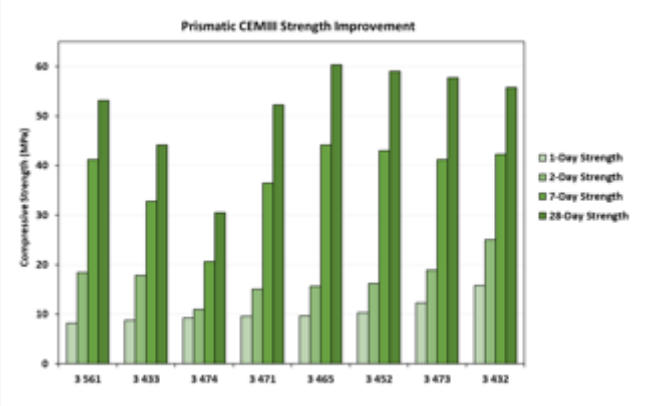
- Trials in lab scale based on characterization
- Testing the chemical and physical properties of the final material

PRODUCTION & PRODUCT TESTING

- Factory scale tests
- Tests required for certification and approval
- Tests for final product







Alternative side streams - examples

Overview of certain raw material substitutes in cement clinker production

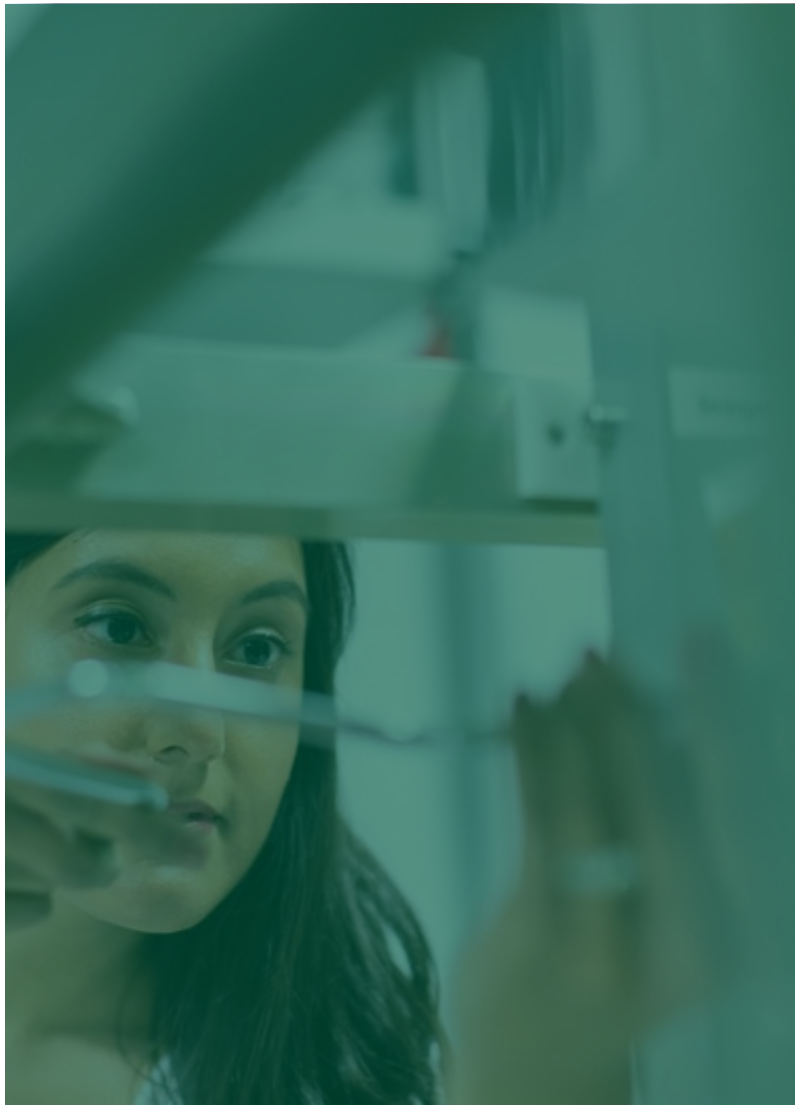
	 Fly ash (class F)	 Slag (GGBFS or SSM)	 Rice husk	 Clay	 Natural pozzolans	 Silica fume	 Bauxite
Annual[1] production, m tons	~600-900	~480-560	22	Widely available[3]	Good availability	1-2.5	55-74 bt[4]
Annual use (m tons)	~300	~290	n.a.	~2-3	~75	<1	100-150
Geographical availability	Global	Global	China, India, far-east	Global	Near volcanic activity	Global	Global
Expected future availability	Coal plants expected to be closed	Industry moving away from coal-fed blast furnaces	Good availability locally with no changes expected	Good long-term availability with no changes expected	Good availability locally near volcanic activity with no changes expected	Good availability, slight increase expected	Production of alumina expected to increase

Source: Global Cement and Concrete Association, Chatham House Report; Making Concrete Change, IEA; Energy Technology Perspectives 2020, Interviews, KPMG analysis

1) Excluding amounts in, e.g., landfills that are estimated at billions of tons globally
2) Varies greatly depending on location and transportation need
3) Calcinated clays require process facilities allowing calcination, and thus the availability is more limited
4) Bulk is already used for aluminum production

Example - Utilizing vanadium-purified slag (SSM slag) in Geoprime solution

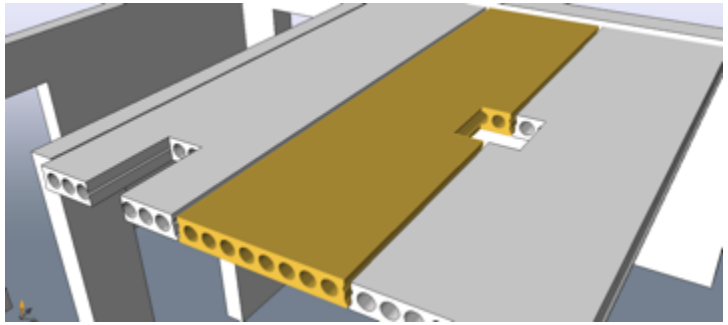
- Betolar started in 2020 a study on the utilization of vanadium-cleaned slag from the steel industry in the production of cement-free concrete.
- About 300 thousand tons of purified slag would be produced annually → end up into the landfilling since there is no further utilization technologies available.
- Betolar has found a potential to use SSM slag in the production of low-carbon Geoprime concrete.
- This would help Finnish concrete manufacturers to replace up to 10 percent of the cement used in Finland.



Product development – focus on more value-added products

The advantages of hollow-core slabs in construction

1 QUALITY	Products manufactured in factory conditions can be better optimized than the concrete recipe. Also, weather conditions do not cause any changes in hardening.
2 TIME	Prefabricated hollow-core slab speeds up construction on site.
3 MATERIAL SAVINGS	Due to the prestress, the hollow-core slab contains less steel and, thanks to the hollows, less concrete compared to the intermediate floor cast on site.
4 PRICE	A hollow-core slab midsole is a clearly cheaper solution in terms of cost than a cast-in-place midsole. Especially in countries with high labor costs.



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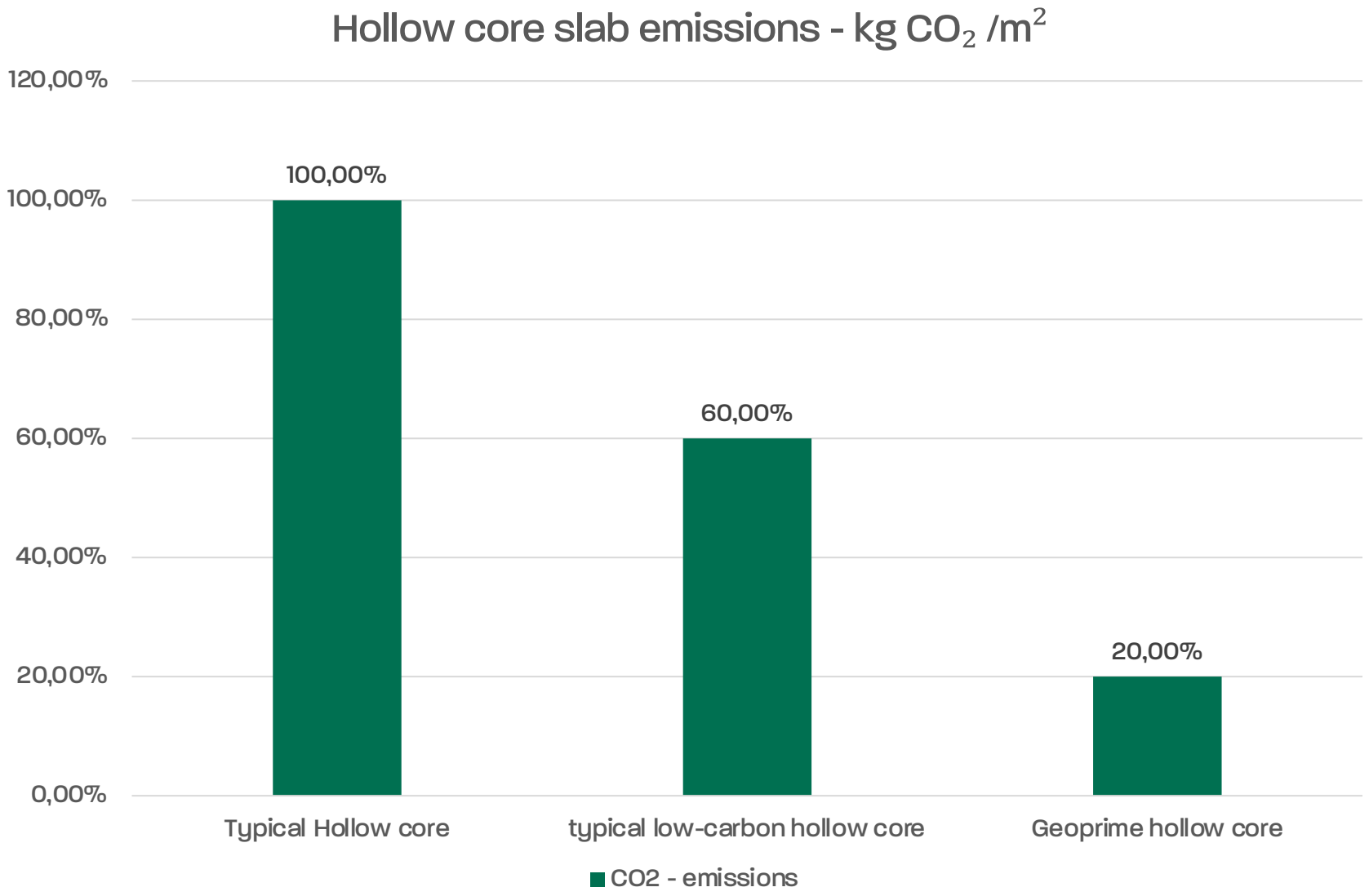

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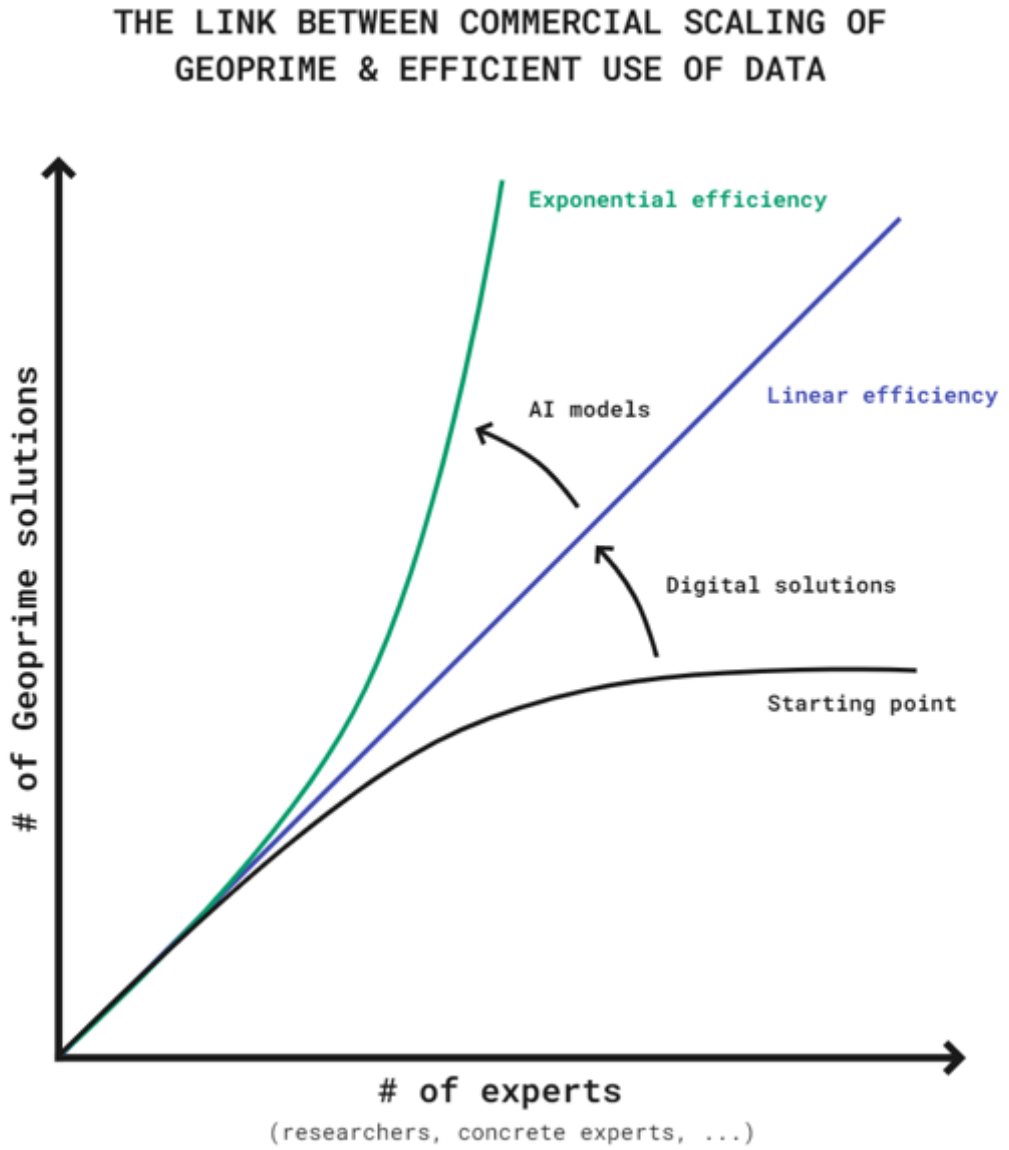
Digitalization at Betolar

A key goal for Betolar's digital platform team is to develop digital solutions and AI models necessary to scalably commercialize Geoprime and collect valuable data in the process.

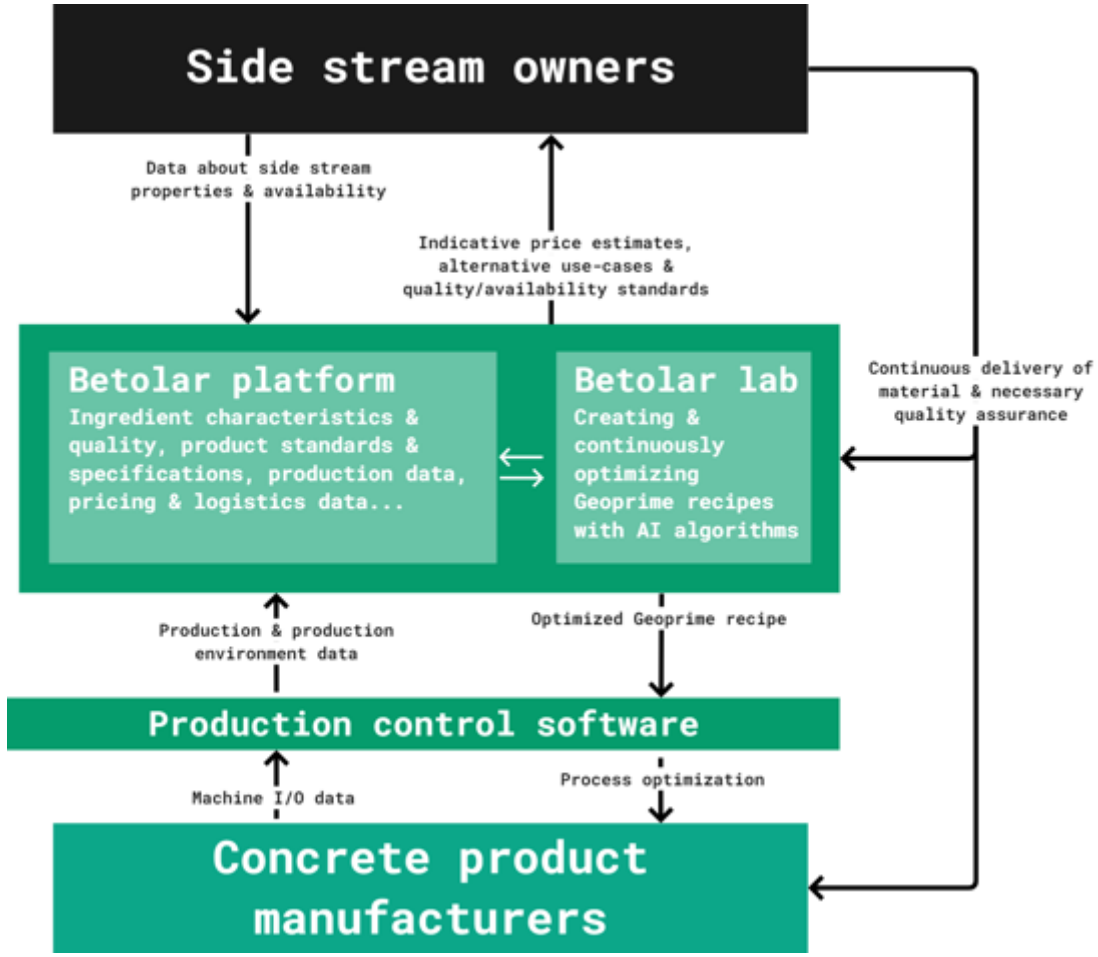
Development can be divided in 4 key focus areas.

1. Collecting high quality data
2. Leverage data efficiently
3. Geoprime value chain solutions
4. Create a scalable data architecture



Data platform progress

- Connected laboratory initiative 2022: focus on collecting high quality R&D data
  - Projects to improve our ability to collect high quality R&D data from our laboratories in Kannonkoski and Espoo
  - IoT solutions have been implemented at Kannonkoski laboratory
- Short-term focus on side streams
  - Platform development will focus on adding more scientific tests and related data to the platform to increase efficiency in side stream quality and viability analysis
  - Side stream data asset will further enhance Betolar's competitive position as an expert of different side streams and enable AI development in this area



Enabling innovations in the future - Investment in Innovation Center in Kannonkoski

1. Enabling new experiments
2. Developing demanding structural elements
3. Researching new side streams
4. Scaling of laboratory operations