FUTURECEM™
a limestone calcined clay technology

Rome, Nov 2021

https://www.cementirholding.com/en/our-business/innovation/futurecemtm.

… key values in a nutshell.

Reducing more than - 30% CO_2 emission through clinker replacement.

Green

Sustainable

Relying on natural raw materials readily available

FUTURECEM

Innovative and validated

Synergy between limestone and calcined clay enables clinker replacement.

Full scale trial in Denmark in Green Concrete II Project

Full Commercialization in Denmark

FUTURECEM

Developed by

Technology patented in US, Canada, Mexico, Brazil Europe, India, China and Australia;

Fully acknowledged for clinker ratio reduction by IEA in 2018 and as “low- clinker cements” by Cembureau. it is, also, formally recognized in EN 197-5 for CEM II/C-M with only 50% of clinker.

… Green Concrete II : bridges and indoor construction

FUTURECEM technology *is highly resistant to the most aggressive environmental exposure classes.*

FUTURECEM technology *is suitable for concrete industry, while maintaining conventional production and execution technologies.*

… at the forefront of limestone-calcined clay technology

FUTURECEM™

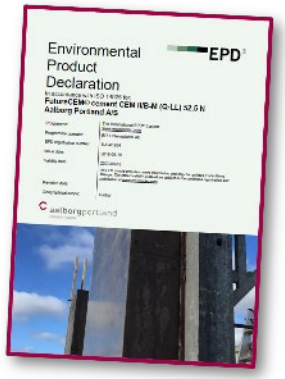
Environmental Product Declaration

Global warming potential

599 kg CO_2 pr. ton

Product stage:
- ✓ Raw materials
- ✓ Transport
- ✓ Manufacturing

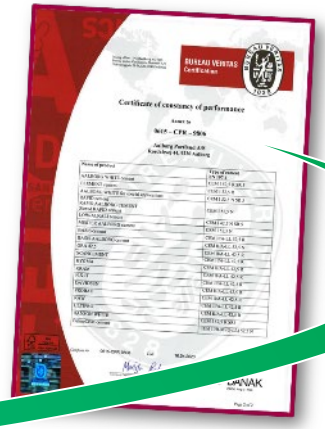
599 Kg CO_2-eqv



Certificate of consistency of performance

Compliance with the cement standard:

EN 197-1:2011

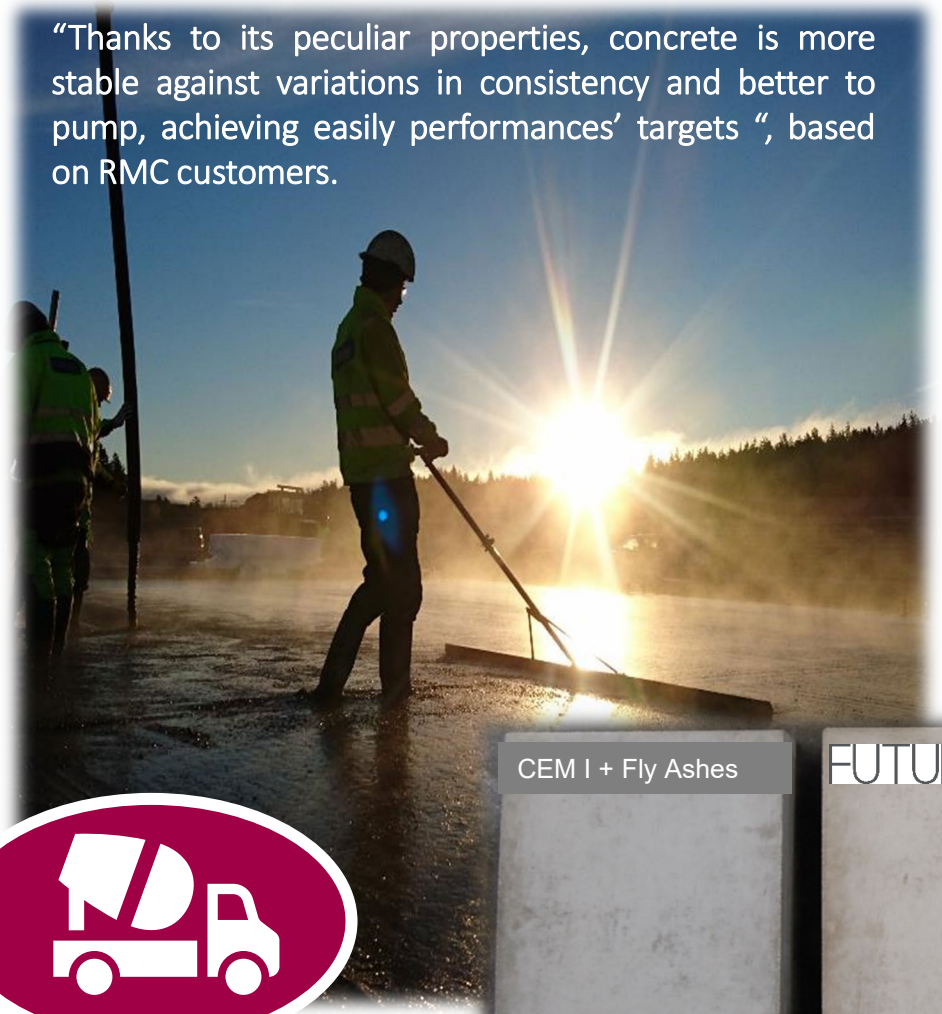


Inclusion into Danish Adaptation for European Concrete Standard DS/EN 206 DK NA:2020 since 1 January 2021

FUTURECEM™
CEM II/B-M(LL-Q) 52.5N
in the DK market
since January 2021

… feedbacks on field applications ….

FUTURECEM™



"Thanks to its peculiar properties, concrete is more stable against variations in consistency and better to pump, achieving easily performances' targets ", based on RMC customers.

And, also, been fully tested and implemented for precast: the light-brown color as indicator for sustainable elements.

NEWS FROM THE FACTORIES CONCRETE UNION

GREENER CONCRETE ELEMENTS WITH NEW CEMENT TECHNOLOGY

Ambercon and Spæncom, who implemented FUTURECEM in the production of concrete elements at the beginning of 2021, talk about the preliminary experiences with the new and more sustainable cement from Aalborg Portland.

By Birgitte T. Henriksen

A promising initiative in the cement technology of the future. This is how it sounds unanimously about FUTURECEM from the two concrete element manufacturers, Spæncom and Ambercon. And with a contribution of up to 30% CO_2 reduction in the cement manufacturing process, the new FUTURECEM is an important element in the Sustainable Concrete initiative's goal of halving CO_2 emissions from concrete over the next 10 years.

EXTENSIVE TESTING

In the autumn of 2020, Ambercon collaborated with Aalborg Portland and the Danish Technological Institute on several experiments using FUTURECEM in concrete element production. The trials turned out positively and Ambercon was ready to produce on a large scale in early 2021.

- Our first test with FUTURECEM showed that the cement behaved

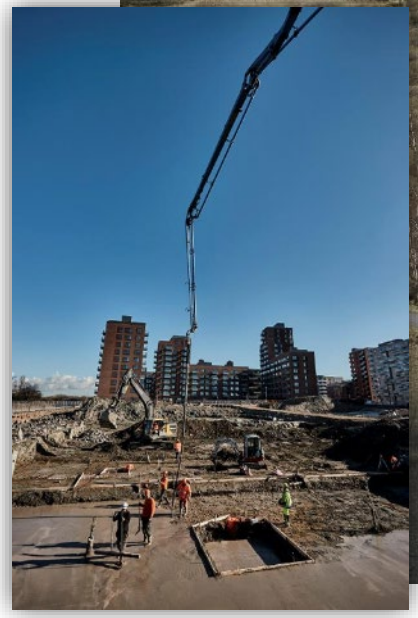
…n be cast with optimized cement. Photo Ricky John Mo

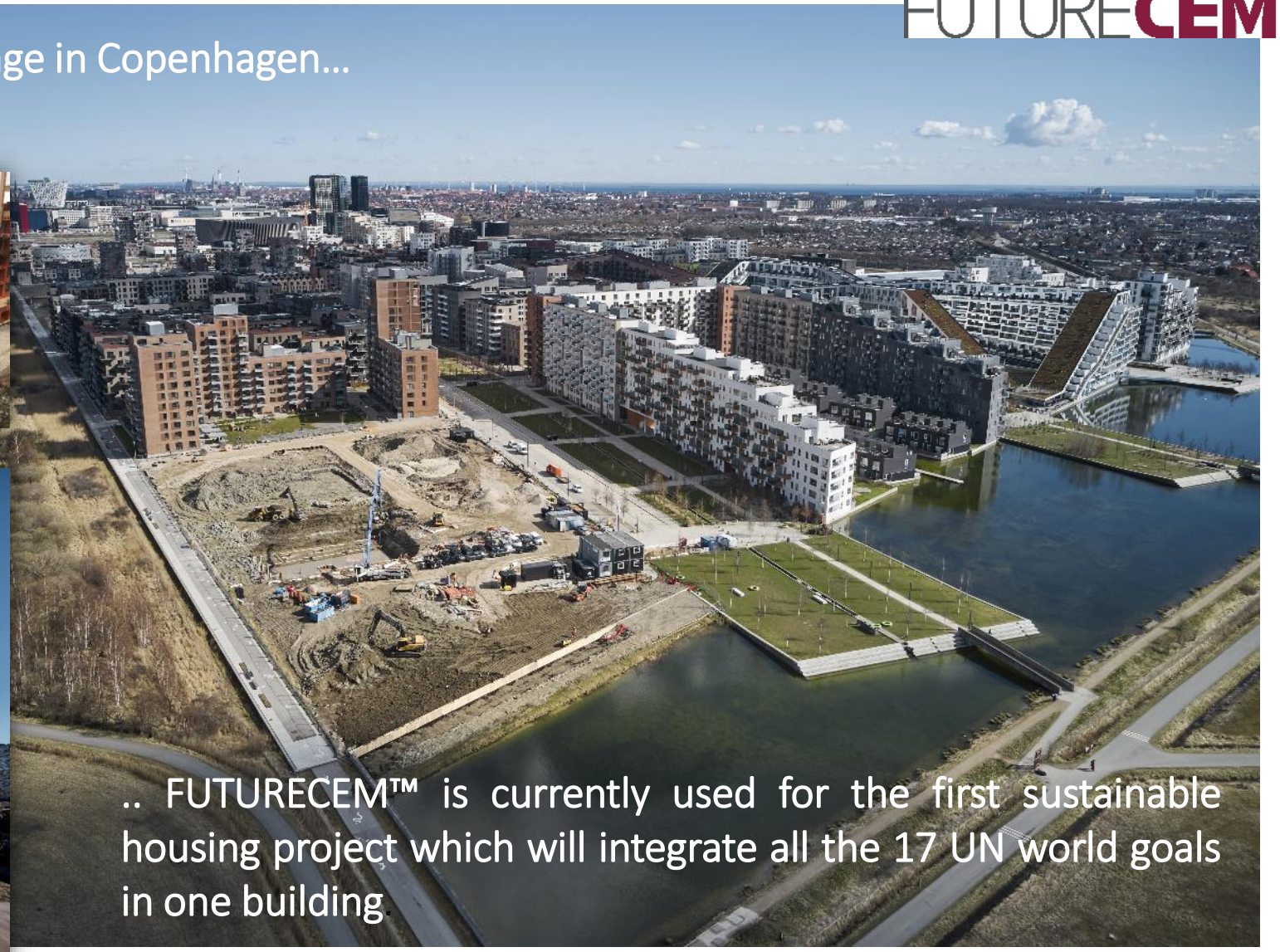
By Birgitte T. Henriksen

BÆREDYGTIG BETON
KAN MERE END DU TROR

FUTURECEM™

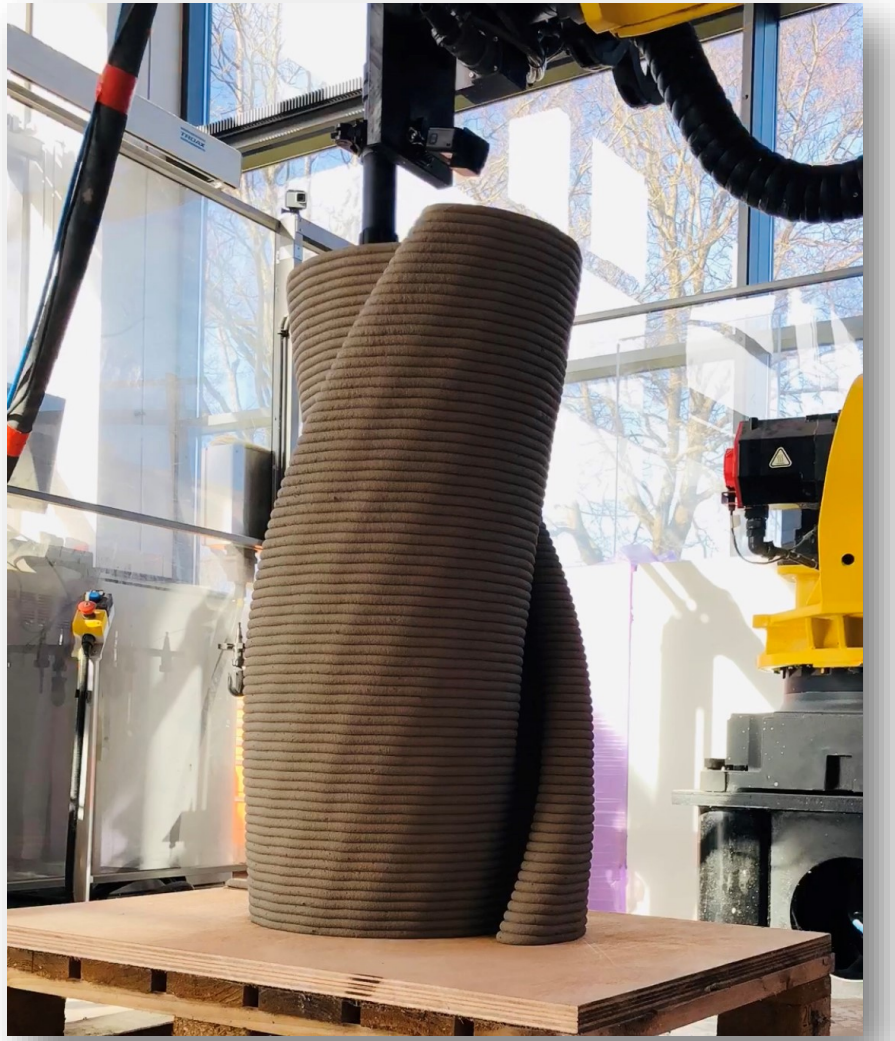
UN17 Village in Copenhagen…





.. FUTURECEM™ is currently used for the first sustainable housing project which will integrate all the 17 UN world goals in one building.

Beyond conventional….3D Print



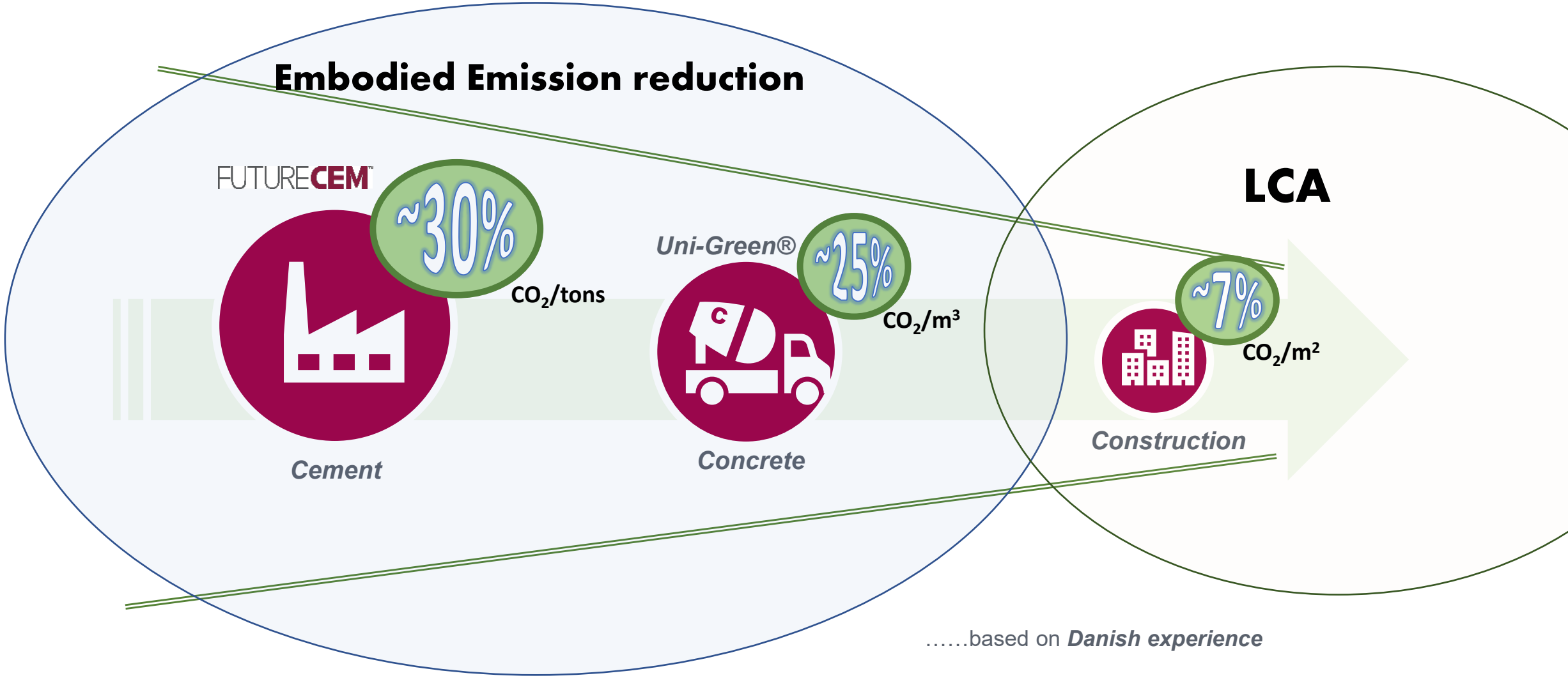
3D print with FUTURECEM™
Courtesy, Wilson Leal da Silva, Danish Technological Institute

1. FUTURECEM™ has shown to be very suited for use in 3D printing
2. Both FUTURECEM™ based on grey cement and white cement has been tested with good results
3. Significant CO_2 reduction was achieved by replacing CEM I with FUTURECEM™

Results from N3XTCON Project

…as key contributor to decarbonize concrete, construction and cement-based industries.

FUTURECEM™



……based on ***Danish experience***

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