offshore wind Scotland

NeoCem

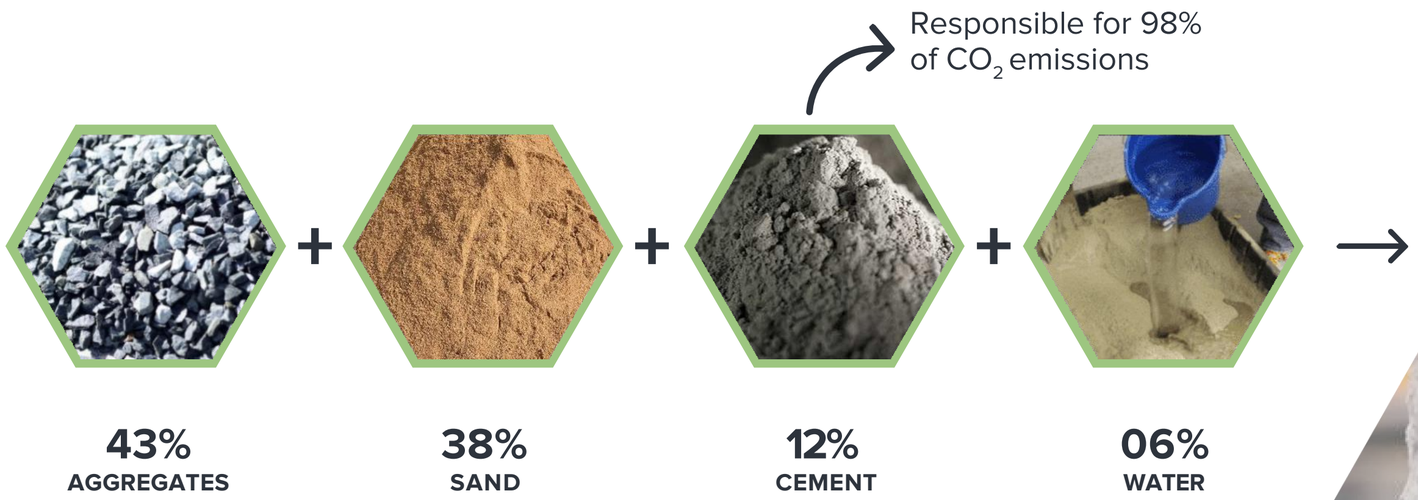
low carbon solutions

NeoCem
low carbon solutions

REDUCING THE CARBON FOOTPRINT OF CEMENT IN THE FACE OF THE CLIMATE EMERGENCY

NeoCem
low carbon solutions

CONCRETE & CEMENT EMISSIONS



Average mass ratios of a concrete

Source: Artelia bâtiments durable selon Atilh et UNPG

NeoCem
low carbon solutions

CEMENT : A 200 YEARS OLD PRODUCT

Conventional Portland cement:

- **0,9 tons** of CO_2 **per ton** of cement
- **7,5 %** of world emissions
- **9%** of the UK's manufacturing emissions
- Over **7 million tons of CO_2 / year**

Limestone + energy → CaO + CO_2

Combustion at 1450°C for 1h to 2h

1818 — Invention of “artificial cement" by Louis Vicat

1824 — First patent on the principle of the « limestone + clay» mixture called Portland cement

1848 — Start of industrial cement production in Boulogne-sur-Mer

2022 — Similar chemistry & production process ongoing since 1824

NeoCem
low carbon solutions

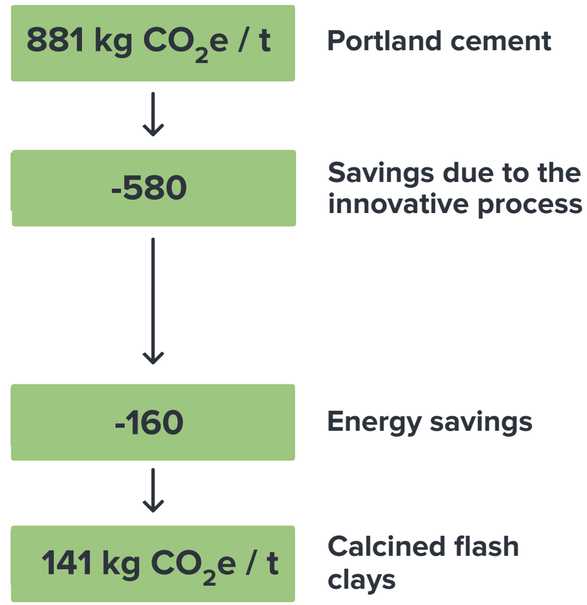
OUR LOW CARBON SOLUTIONS

Choosing a non-CO_2 emitting raw material

Choosing a very low energy intensive process

100% clays:
releases water during calcination

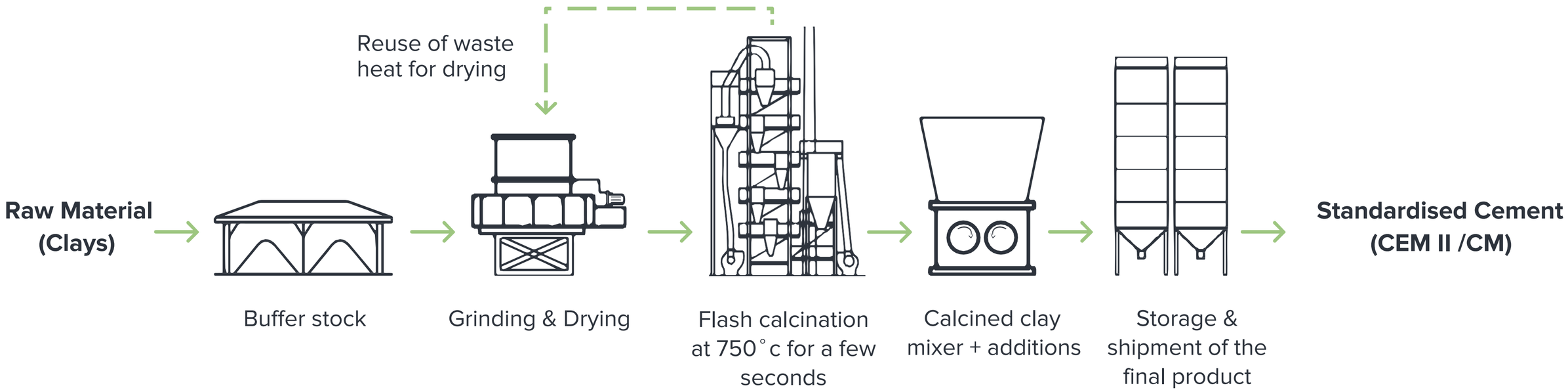
Process of flash calcination:
- short combustion time
- lower temperature (750 °C)



A GAME CHANGER

NeoCem
low carbon solutions

OPERATING PRINCIPLE



NeoCem
low carbon solutions

KEY PARTNERS

Société du Grand Paris

- Partner & co-financer of R&D and feasibility study
- Prescriptor of the low carbon solutions

EIFFAGE GÉNIE CIVIL

- Product development and testing cooperation agreements
- Client of the low carbon solutions

MINISTÈRE DE L'ÉCONOMIE, DES FINANCES ET DE LA RELANCE
Liberté
Égalité
Fraternité

bpifrance

FRANCE 2030

- Most promising green technologies laureate
- Governmental industrial support program

NeoCem
low carbon solutions

HOW FAR CAN NEOCEM DECARBONATE ?

Clay + Additions
NF EN 197-5
and
EU Compliant

-50% less CO_2
than CEM I
now

100% Clay
experimental
performance
based

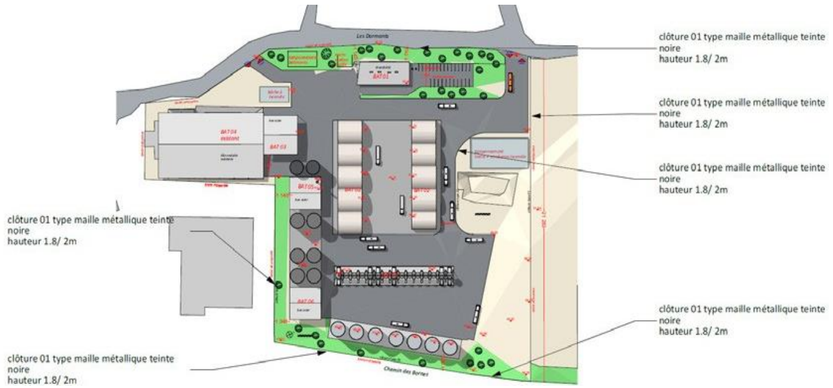
-80% less CO_2
than CEM I
now

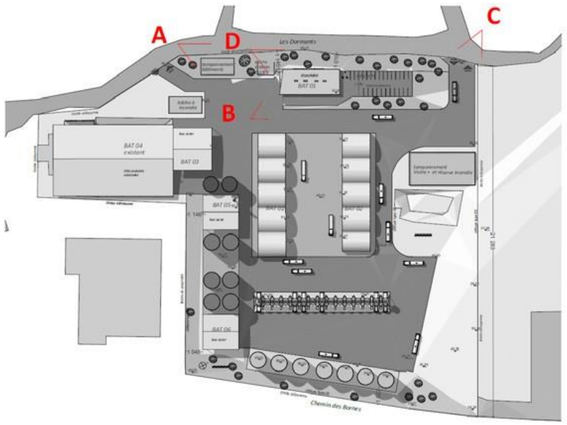
100% Clay
+ compensation
or storage
scheme

0% CO_2
Tomorrow

NeoCem
low carbon solutions

INDUSTRIAL PLAN & FACILITY





NeoCem
low carbon solutions

KEY FACTS

01

7 years of R&D waste recycling patented

02

Deployable standardised concrete

03

CO_2 divided by up to 4 vs. Portland

04

First plant of 300.000 t of cement per year

05

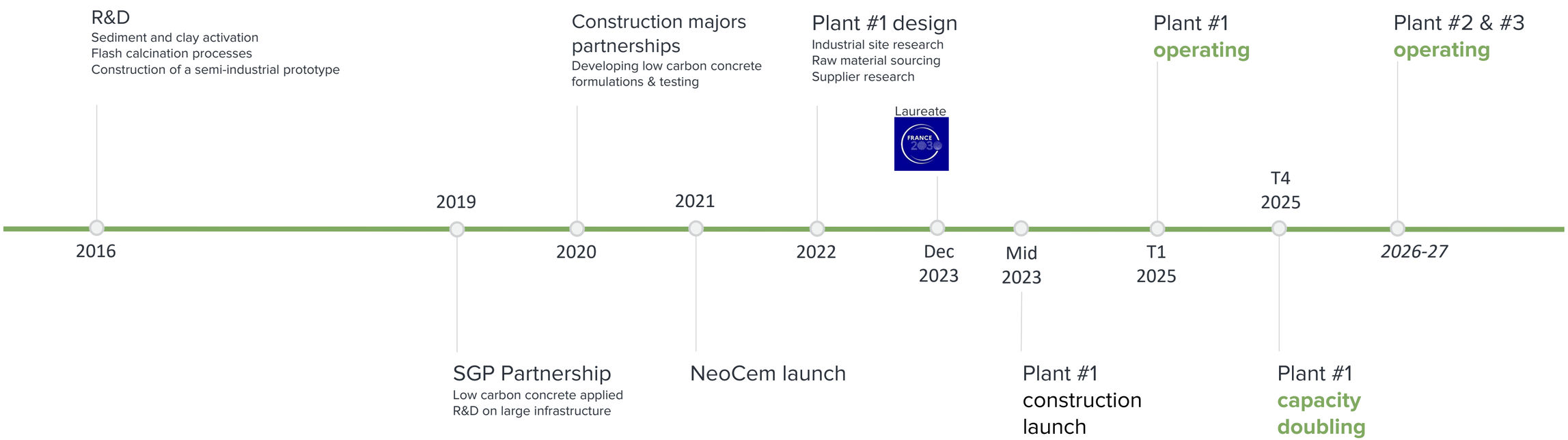
Up to 180,000 t of CO_2 avoided per plant per year

06

Innovative logistics model reducing CO_2

NeoCem
low carbon solutions

SCALING ROADMAP



NeoCem
low carbon solutions

BENEFITS

Highest decarbonation per € invested

Market competitive vs classic cements

Improved performance or similar vs cement

Scalable model of circular economy

NeoCem
low carbon solutions

THANK YOU
FOR YOUR ATTENTION

How about low carbon now ?

BENJAMIN CONSTANT
BCONSTANT@NEOCEM.COM