



# DKarbonation roadmap

ASSET

MEET & LEARN SESSION

March 8, 2024



## Dunkirk, an industrial port area

- 9 A conurbation of 200,000 inhabitants, within an employment area of 254,000 inhabitants
- 9 Europe's leading energy hub
- 9 Dunkirk Port :
  - France's 3rd largest port (48.4 Mt in 2021)
  - the 1st port complex with the Nord de France ports (Boulogne/mer, Calais) with almost 100 Mt of traffic
  - Capable of accommodating the world's largest vessels, including the latest generation of container ships.
  - A port connected to one of the busiest maritime straits in the world
- 9 A strong production base (metallurgy, steelmaking, chemicals, etc.)
- 9 Historically flourishing sectors that have now disappeared (refineries, etc.)





## Dunkirk, a high-stakes area

- The Dunkirk area will have emitted 16 Mt CO<sub>2</sub>eq in 2021, 20% of French industrial emissions
- Cooperation initiated by the industrialists themselves
- Decarbonisation to be reconciled with major industrial development in the industrial port area
- Decarbonisation accompanied by resilient urban development with ambitious neutrality targets

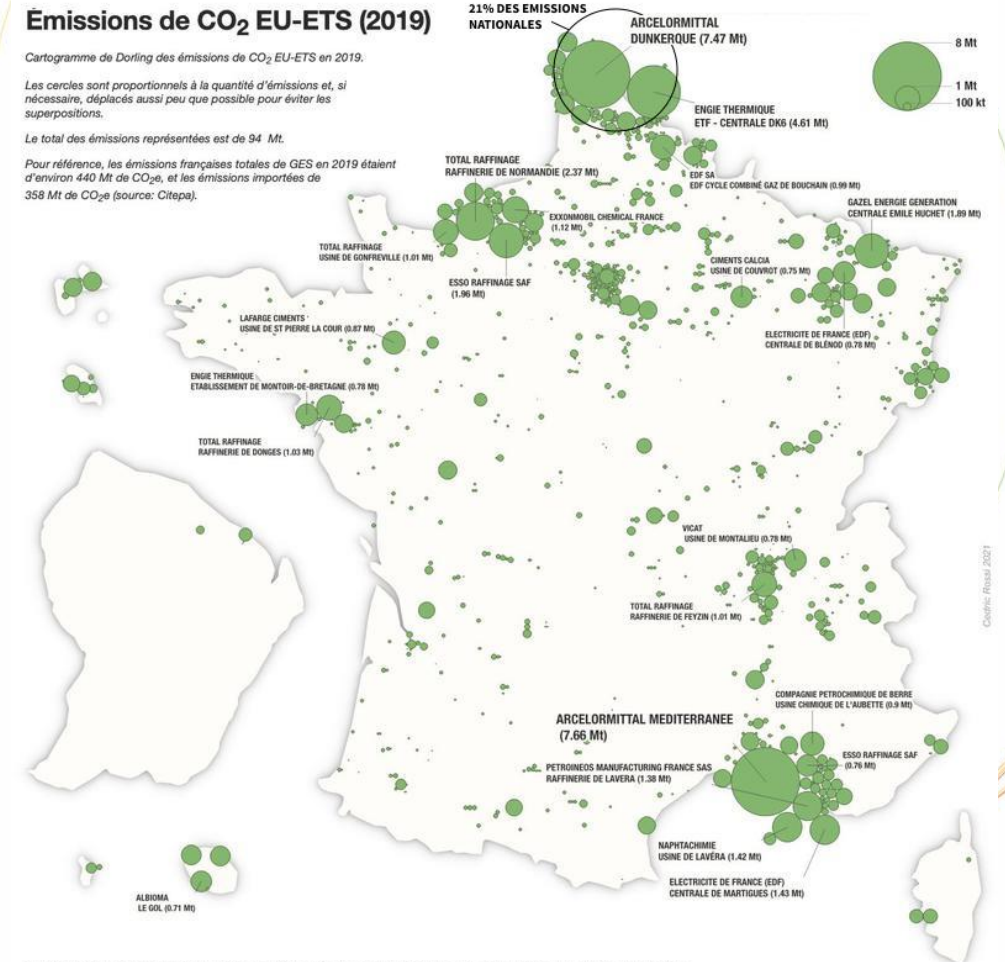
### Emissions de CO<sub>2</sub> EU-ETS (2019)

Cartogramme de Dorling des émissions de CO<sub>2</sub> EU-ETS en 2019.

Les cercles sont proportionnels à la quantité d'émissions et, si nécessaire, déplacés aussi peu que possible pour éviter les superpositions.

Le total des émissions représentées est de 94 Mt.

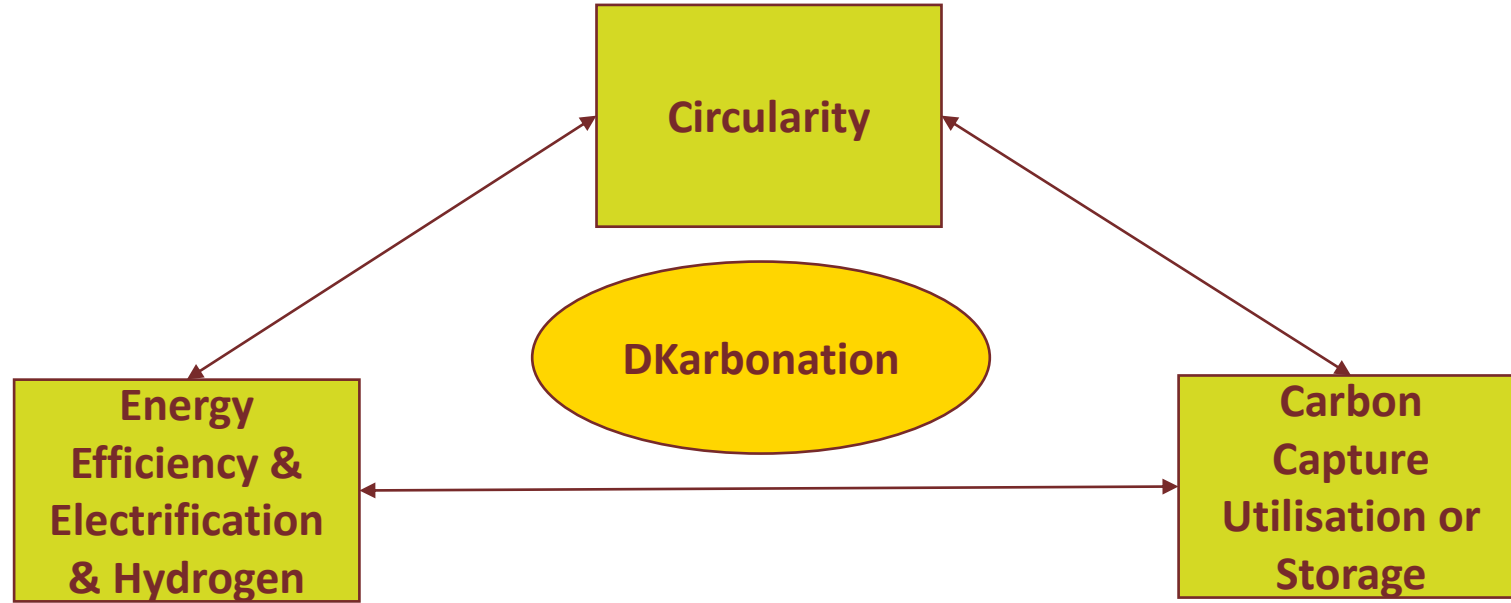
Pour référence, les émissions françaises totales de GES en 2019 étaient d'environ 440 Mt de CO<sub>2</sub>e, et les émissions importées de 358 Mt de CO<sub>2</sub>e (source: Citepa).



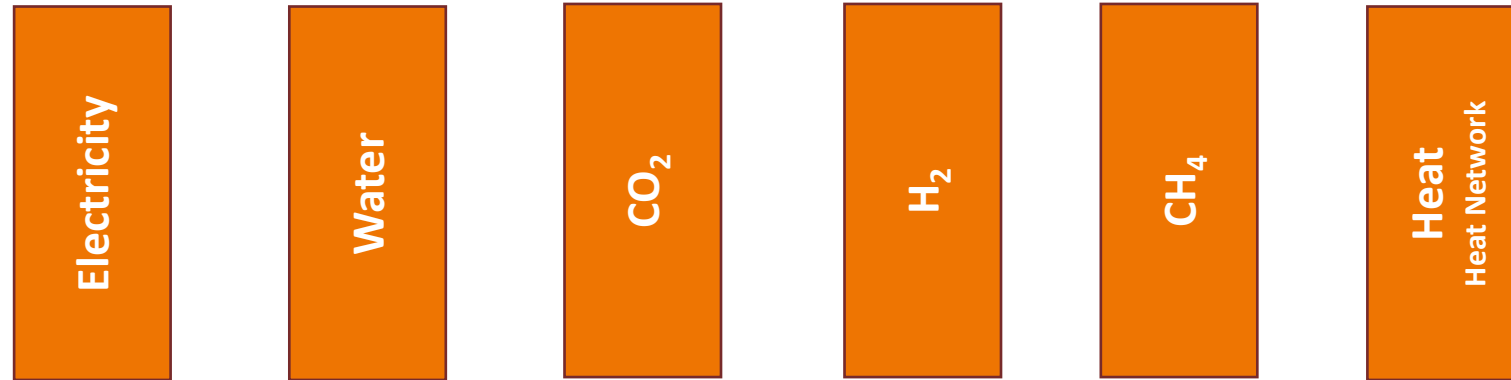
Sources : European Union Transaction Log 2021 ; Base Sirene 2021, Insee ; Base officielle des codes postaux 2021, La Poste ; Natural Earth, 2021

**DKarbonation Objective : - 30% emissions in 2030\* et Net Zero Carbon in 2050**  
**Ambition : - 75% from emission reduction et - 25% from Capture for Utilisation ou Storage**

**Decarbonisation Projects**



**Infrastructures**



**Territory roadmap - ZIBaC management - Vertical & Horizontal spread –  
Environnemental and Society impacts**

\* Référence : -30% en 2030 / 2020

# DUNKIRK, A LOW-CARBON INDUSTRY AND MOBILITY AREA

**Collective infrastructures:**  
 electricity, CO<sub>2</sub>, H<sub>2</sub>,  
 heat highway,  
 industrial and sea  
 water





**CIRCULAR ECONOMY IS IN THE  
HEART OF OUR COMMITMENT !**

**ACT AND COMMIT TOGETHER**



# AGENDA

- 1 INTRODUCTION TO COLAS GROUP
- 2 MEANS AND CONSTRUCTION PROJECTS COLAS DUNKERQUE
- 3 SOME USECASES OF CIRCULAR ECONOMY



1

**INTRODUCTION TO  
COLAS GROUP**





1

**COLAS,  
PART OF BOUYGUES  
GROUP**



# LES MÉTIERS DU GROUPE COLAS

# COLAS

ROUTE (80%)

ACTIVITÉS SPÉCIALES (20%)

INTERNATIONAL

FRANCE

PIPELINE

SPAC

FERROVIAIRE

PREMYS

COLAS RAIL

DÉCONSTRUCTION

SÉCURITÉ SIGNALISATION ROUTIÈRE

AXIMUM



12,3 milliards de chiffres d'affaires 57 000 collaborateurs 50 pays



# ROADS

## A GREAT WORKS DIVERSITY



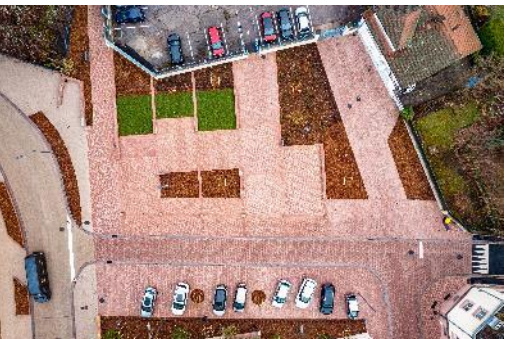
**Roads**  
Route de l'Est (Côte d'Ivoire)

**Highways**  
Highway A40 (France)

**Civil Engineering** Duchesnay Creek  
bridge( Canada)

**Airport runways**  
Bangkok (Thaïlande)

**Port terminals**  
Prince Rupert (Canada)



**Urban design**  
Saint-Dié-des-Vosges (France)

**Trams**  
Birmingham (Royaume-Uni)

**High Quality Service  
Buses**  
Nîmes (France)

**Bike paths**  
Région parisienne (France)

**Parking lots**  
Mulhouse (France)



# CONSTRUCTION MATERIALS

INTERNATIONAL DENSE NETWORK OF PRODUCTION, STORAGE AND RECYCLING SITES



518 asphalt plants



463 quarries and gravel quarries  
(in operation)



174 concrete mixing  
plants



147 emulsion plants



420 recycling facilities



1 bitumen refinery  
in Kemaman (Malaisie)



71 bitumen storage terminals

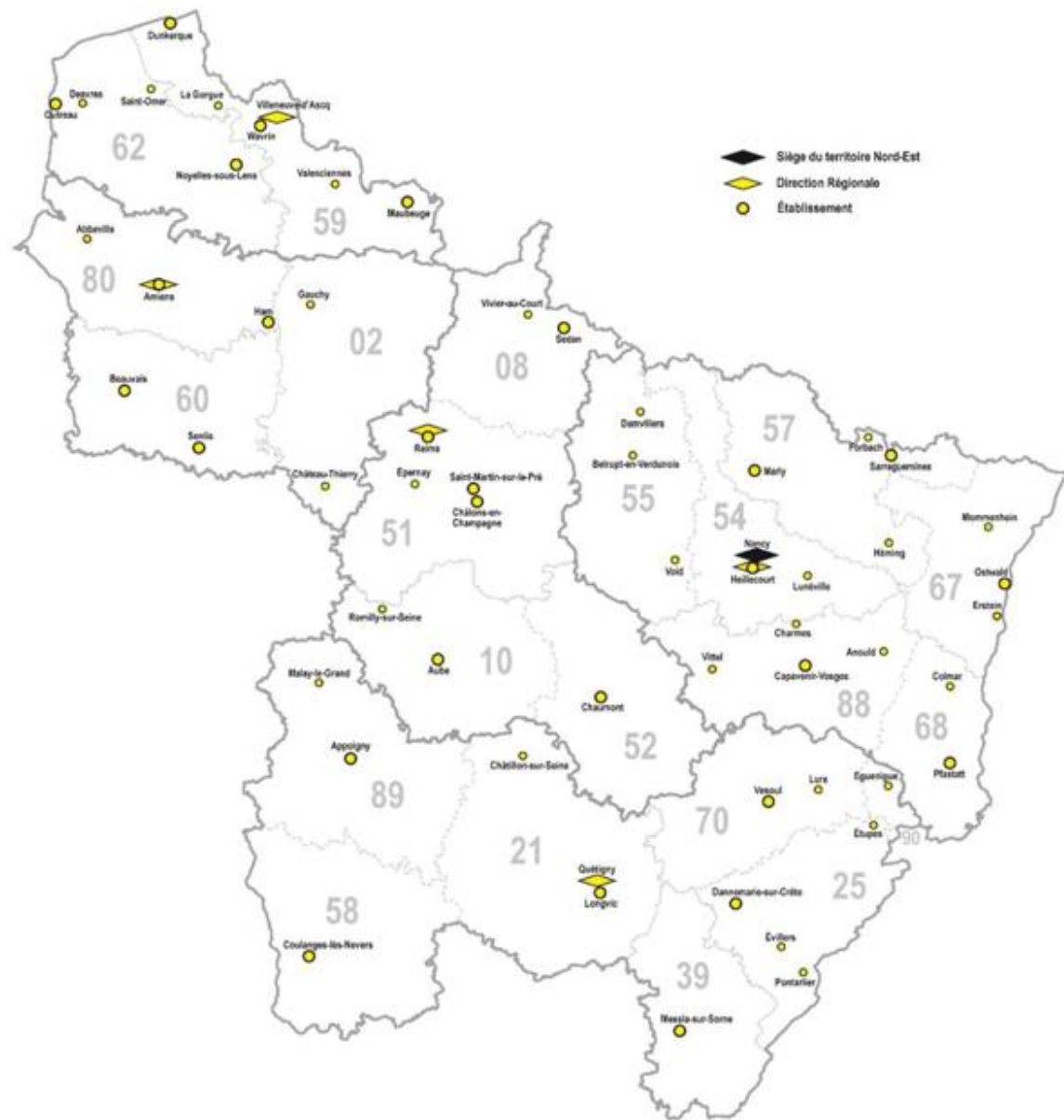
# LOCATIONS



# 2

**ORGANIZATION OF  
COLAS EUROPE**

# TERRITOIRE NORD-EST - IMPLANTATIONS TRAVAUX



Présent sur **22** départements

**5 000** collaborateurs

**55** implantations travaux

**1** Dir d'exploitation - **5** Dir régionaux

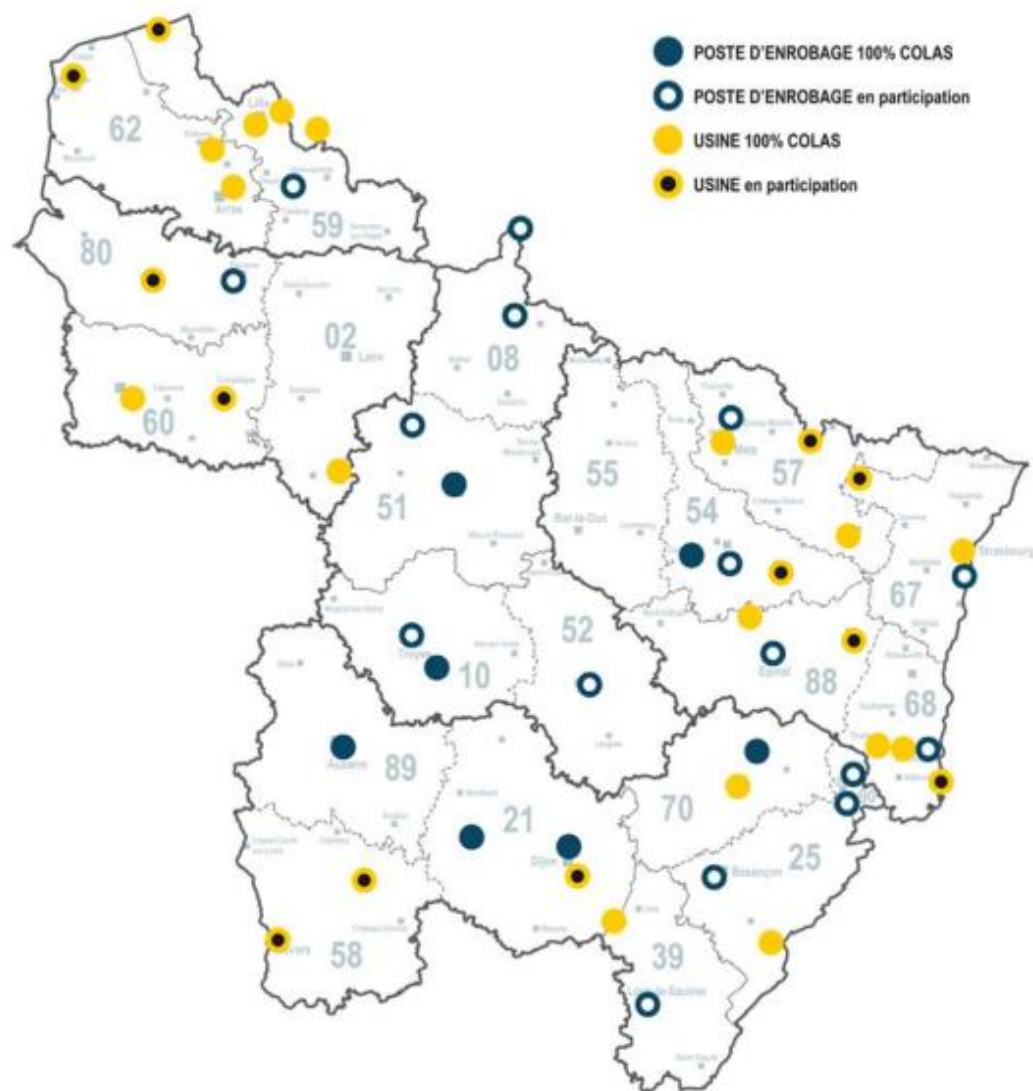
**45** Chefs d'établissements

Plus d'**1 milliard €** de Chiffre d'Affaires

Plus de **5500** chantiers réalisés par an



# USINES ET CENTRALES



**43** usines d'enrobage

**6** usines de liants et d'émulsion

**2** centrales de malaxage à froid

**2 400 000** tonnes d'enrobés

**57 000** tonnes de liants et d'émulsion



3

## CSR POLICY AND PROJECT ACT



# OUR CSR COMMITMENTS TO OUR STAKEHOLDERS

Consolidate an exemplary culture of **ethics and compliance**

Offer our customers and users solutions that meet the challenges of sustainable regional development

Building a **responsible supply chain** anchored on **sustainable performance**

Implement a **low carbon and biodiversity strategy** to contribute protecting the planet

Consolidate a **health and safety culture** to protect



Promote our **circular economy solutions** to **preserve natural resources**

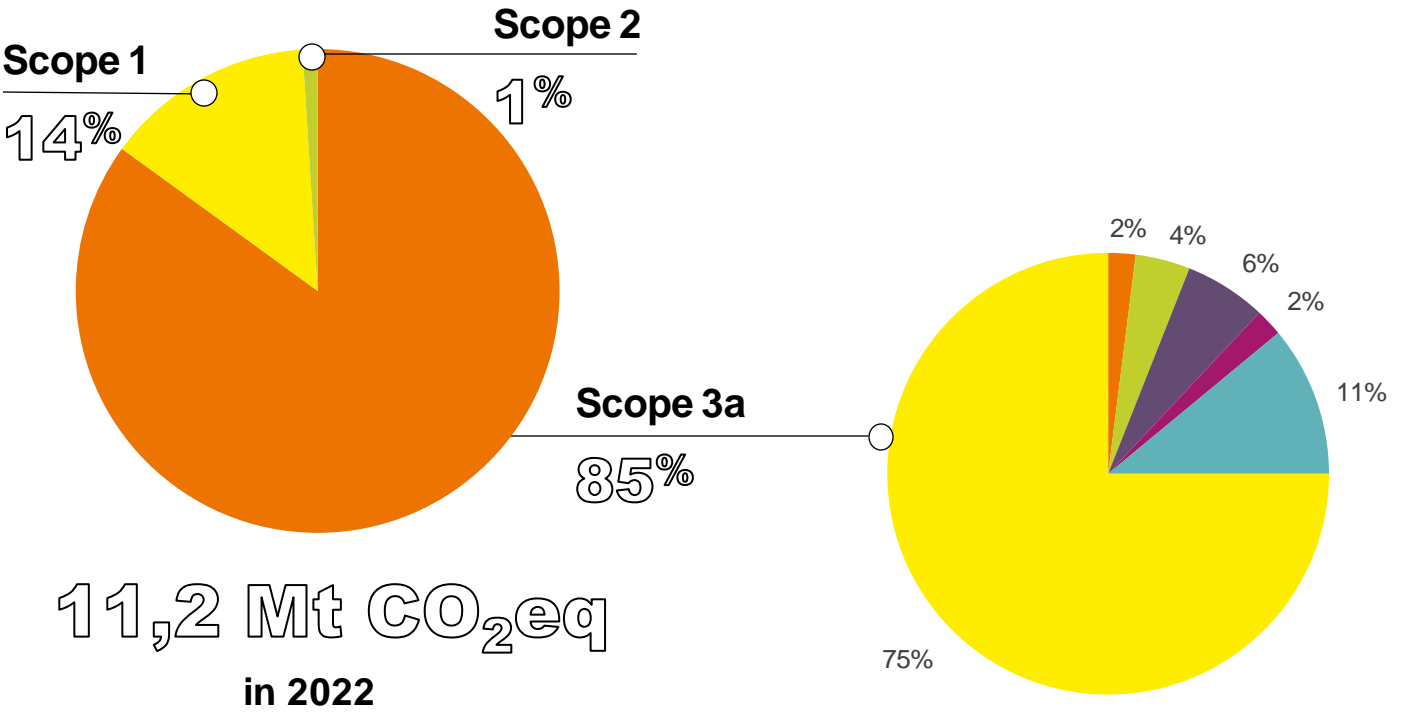
**Attract, develop and retain talent through managerial excellence**

**Reduce the impacts of our activities to reinforce their acceptability**



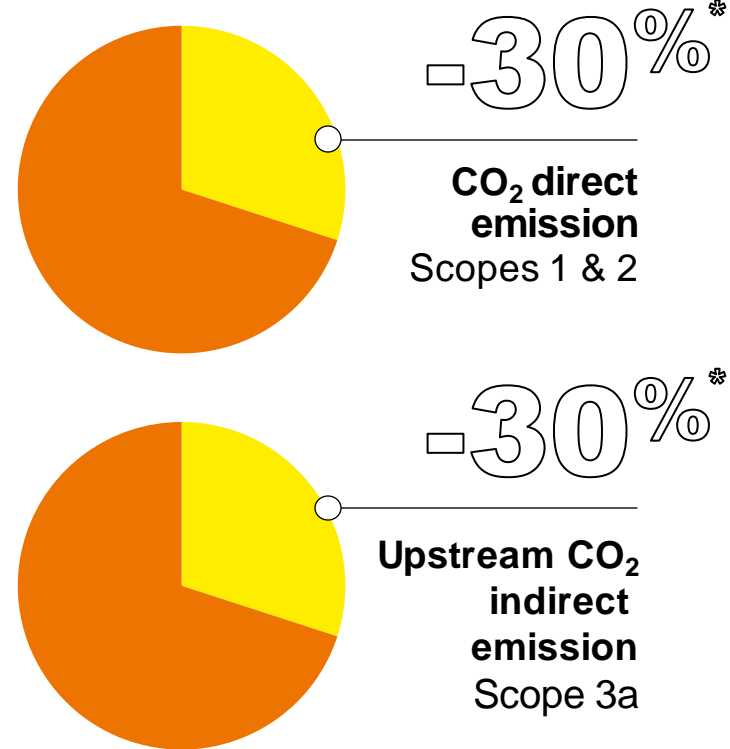
# CARBON DIOXYDE STRATEGY

## CARBON FOOTPRINT



- Combustibles amont
- Déchets
- Immobilisations
- Transport
- Fret
- Biens et services

## TARGET 2030

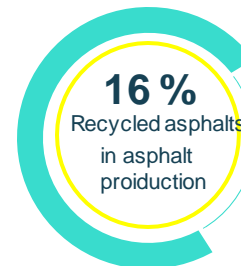
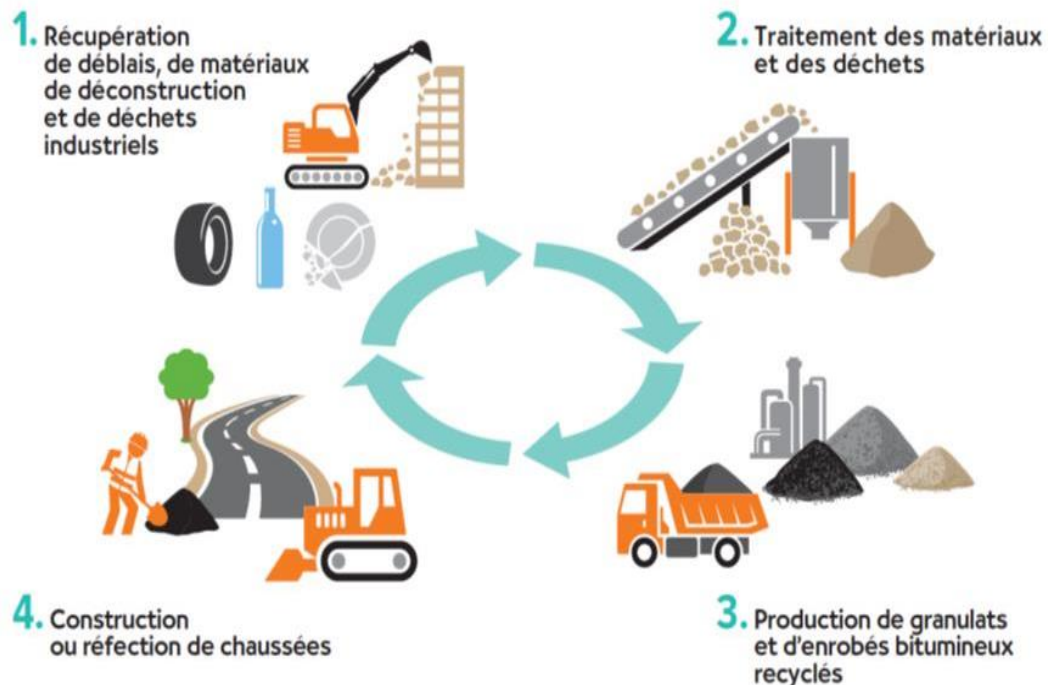


\* reference year : 2019



# PROMOTING CIRCULAR ECONOMY SOLUTIONS TO PRESERVE NATURAL RESOURCES

- R&D TO VALORIZE MATERIALS
- DEVELOP VALORIZATION PLATFORMS AND THEIR USE
- OFFERING CIRCULAR ECONOMY SOLUTIONS TO OUR CUSTOMERS
- INTEGRATING THE CIRCULAR ECONOMY ISSUES THROUGHOUT THE ENTIRE GROUP



**Recycled asphalt pavements**  
RAP/ micro-milling technique, on the route 81 in the State of New-York, in the USA



**Recycling and valorization with a mobile crusher**  
Publicworks  
deconstruction waste  
recycling platform



**Territorial coverage**  
Recycling and valorization sites  
in your vicinity



2

# MEANS AND CONSTRUCTION PROJECTS COLAS DUNKERQUE



# SUBGRADE MATERIALS RECYCLING



**SDVM recycling facility**  
Located in Saint Pol/Mer  
Capacity : 100 000 T  
Products: 0/80 et 0/31,5



# WHERE THE MATERIALS COME FROM



## ROAD PLANING

Contribution of materials made up of + 80% coated materials



## BUILDING DEMOLITION

Materials made up of + 90% concrete



## EXISTING ROADWAYS DECONSTRUCTION

Mixed materials with variable composition



## EARTHWORKS

Pebble earth materials





# ASPHALT PLANT



**SDME asphalt plant**  
Locates near our Dunkerque  
premisses  
Capacity : 240 T / hour  
Recycling capacity up to 50%





3

# SOME USECASES OF CIRCULAR ECONOMY

# COLAS NORTH OF FRANCE, PLAYER IN THE CIRCULAR ECONOMY

## VALUATION IN THE "HAUTS-DE-FRANCE" REGION OF FRANCE

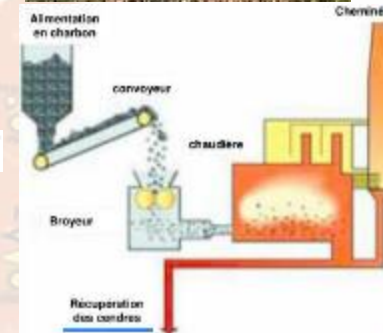
### Coal shale from Artois area

- Slag heap in Loos en gohelle → from 125 Kt to 160 Kt/ year



### Aluminous-Silico fly ashes

- Former Vermelles thermal power station → 20 Kt/year **PROMAT**



### Non-hazardous waste incineration slags

- Lourches facility : 120 Kt/year



### Carbonate Balls

- City of Loos limestone water treatment plant → 2 000 T/ month



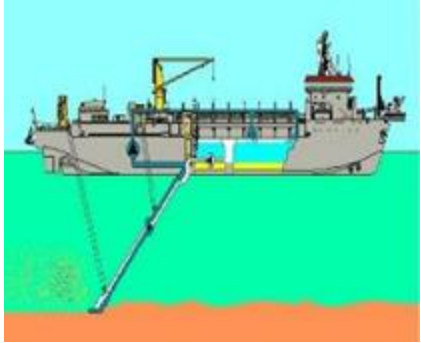
# USE OF DREDGED SEDIMENT



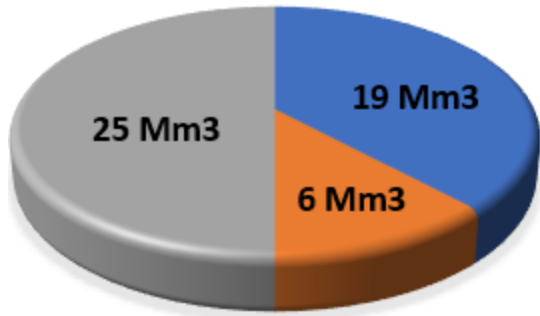


# CONTEXT

## THE ISSUE OF DREDGED SEDIMENT FROM HARBOR SITES



- Maintenance of harbor basins
- Deepening of access channels
- Harbor developments



- PORT MARITIMES
- PORT D'ESTUAIRES
- AUTRES PORTS

(Dunkerque, Calais, Boulogne, le Havre..)

(Rouen, Nantes – St-Nazaire, Bordeaux)

(Autres ports : façade atlantique et méditerranéenne)

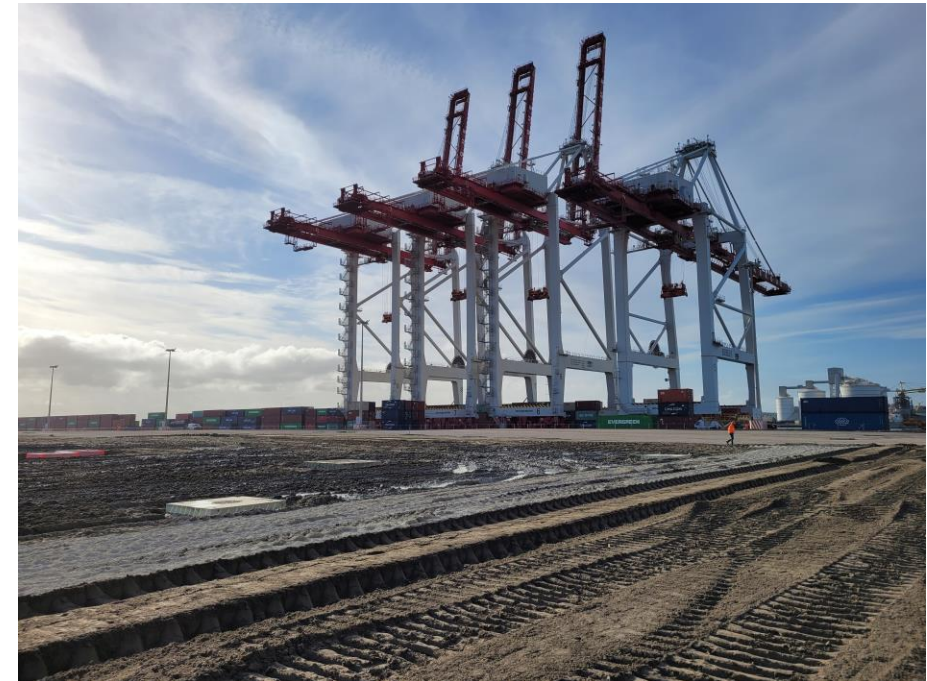


**50 million m3 of sediments dredged in France each year**

# QUAI DE FLANDRES SITE – DUNKERQUE HARBOR (GPMD) : 11/2021 – 09/2022

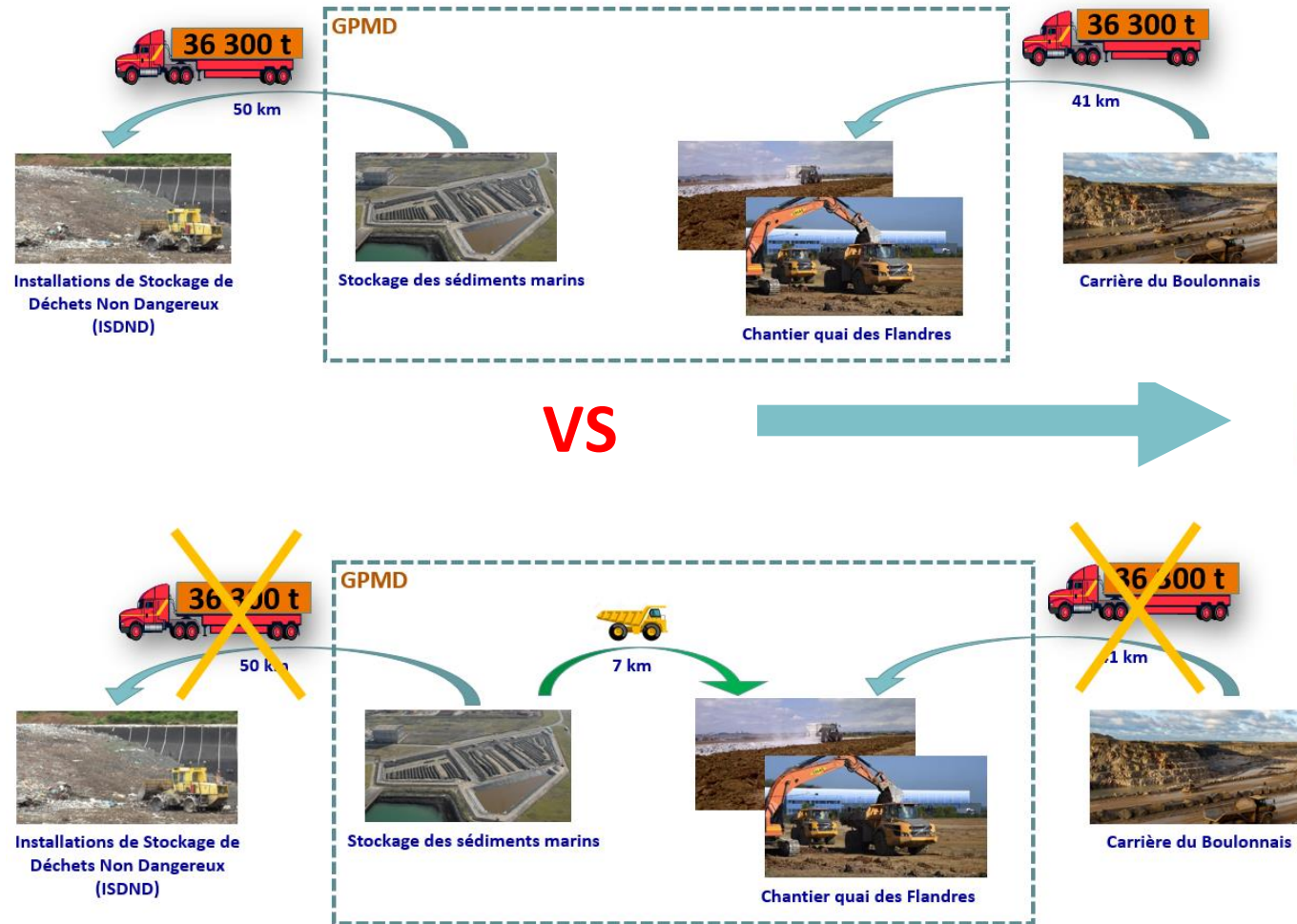
Use of sediments in treated subgrade: 165,000 m<sup>2</sup>

- 45 cm subgrade layer treated with 4% road hydraulic binders with
  - 80% sand from site
  - 20% marine sediments (36 300T) treated with 3% live quicklime (CaO)



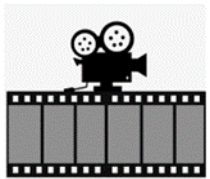


➤ **CO<sub>2</sub> saved** thanks to this variant compared to a basic solution with sediment evacuation



Nearly 3 000 heavy vehicles less on the road!  
Saving 36 300T of quarry sand  
Release of land at the harbor







# THANK YOU FOR YOUR ATTENTION



**MINISTÈRE  
DE LA TRANSITION  
ÉCOLOGIQUE  
ET DE LA COHÉSION  
DES TERRITOIRES**

*Liberté  
Égalité  
Fraternité*



**WE OPEN THE WAY**

**DUNKERQUE**  
PORT

Grand Port Maritime de Dunkerque