

# EPOS INSIGHTS #5

## DUNKIRK: EPOS DEMO SITE

Led by:



EPOS insights are publications summarising the most relevant outcomes of the EU funded EPOS project. The overall aim of the EPOS project is to enable cross-sectorial industrial symbiosis and provide a wide range of technological and organisational options for making business and operations more efficient, more cost-effective, more competitive & more sustainable across process sectors.

## INTRODUCTION

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This insight summarises the history, scope and growth of the Dunkirk cluster, located in the North of France. The Dunkirk district cluster is selected as the EPOS demo site, based on its long standing collaboration with the local community in the form of district heating and utilities symbiosis.

In 1985 ArcelorMittal (Usinor at this time) started the initiative to advance a sustainable industry by starting-up a district cluster in Dunkirk. The Dunkirk experience has grown over the years, creating a better global environment in the region following industrial symbiosis principles.

ArcelorMittal's site leads the EPOS district & demo cluster of Dunkirk.



## ARCELORMITTAL DUNKIRK IRON AND STEEL COMPLEX...

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### A well-integrated complex

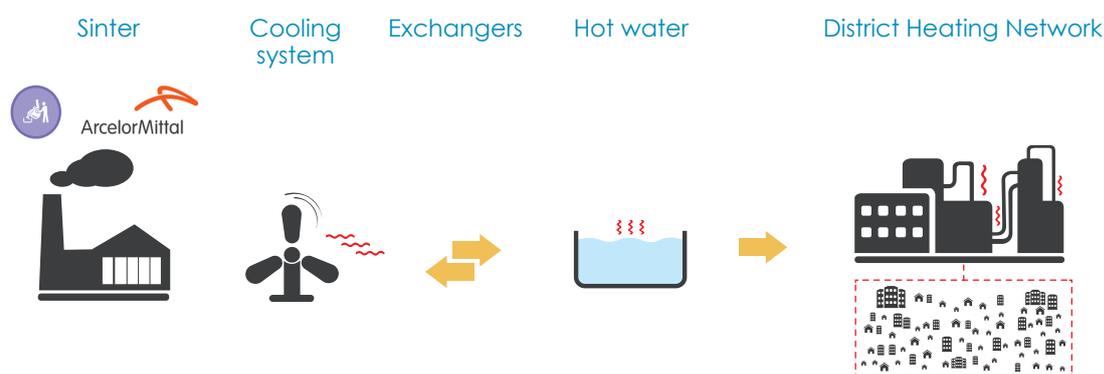
- with a lot of by-produced gases and materials being recycled in numerous processes within the plant
- with different symbiosis and exchange activities in place with surrounding companies and communities

### Symbiosis in place in Dunkirk

- slags produced by the steel plant used in the cement industry
- excess gases re-used internally & sent to an external power plant
- old refractory bricks treated locally

## FROM SINTER COOLERS TO HEATING NETWORK: A CONCRETE EXAMPLE

One of the synergies of interest for EPOS is the use of heat recovered from sinter coolers to feed the local district heating network (DHN).



The '70s oil crisis created great opportunities for innovations in Dunkirk region, and industrial symbiosis was seen as a key solution to the energy challenge. The local urban communities played an important role in setting up a DHN fed by industrial recovered heat. The first DHN was inaugurated in 1986, and has developed ever since. In 2008 a second wave of investment allowed to recover energy on another other sinter plant of ArcelorMittal Dunkirk complex.

Currently, the local urban communities are working on the extension of the DHN:

- industries in the cluster with excess energy, at compatible pressure and temperature for the DHN have been listed
- network extensions have been designed
- new heat recovery opportunities have been established

The current phase is addressing the consultation for concession holders

in the framework of a public service delegation contract. The preparation phase of this project is planned to be finalised by the end of 2017. The extensions of the district heating network will start in 2018.

**ArcelorMittal, along with the other industries in the cluster, will supply most of the energy feeding the network.**

## HAUTS-DE-FRANCE, A VERY ACTIVE REGION

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Several industrial symbiosis activities and energy efficiency projects have been developed in the area of Dunkirk, and in the neighbouring region of Hauts-de-France.

The two regions have a key role in the French transition to a circular economy.

A large number of initiatives and organisations are in place or are emerging in the area. ArcelorMittal and the local communities are largely involved in several of them.

They allow exchanges of experience and best practices between industries, building networks, fostering synergies and promoting innovation and regional development. The networks are a good way to further improve and share the results from the EPOS project.



"Club des Energivores"  
(club of energy-intensive industries)



"Troisième Révolution Industrielle" (Third Industrial Revolution) supported by [CCI](#)

They allow exchanges of experience and best practices between industries, building networks, fostering the set-up of synergies and promoting innovation and developments. These networks will be a good way to further improve and promote results from EPOS project.



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## COLOPHON

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