

## HEAT IT YOURSELF FOR SUSTAINABILITY CIRCULARITY IN ENERGY INTENSIVE INDUSTRIES

### PROJECT OBJECTIVE

LIFE HI4S project aims to build an innovative cost-effective combined heat&electricity production plant **from the waste heat contained in the off-gas of an electric arc furnace (EAF)** in order to reduce energy input for steel making processes through slag-based thermal energy storage (TES) technologies and energy balance optimization.

## THE GOAL IS TO BOOST BOTH ENERGY EFFICIENCY AND STEEL SLAGS REUSE AT ONCE!

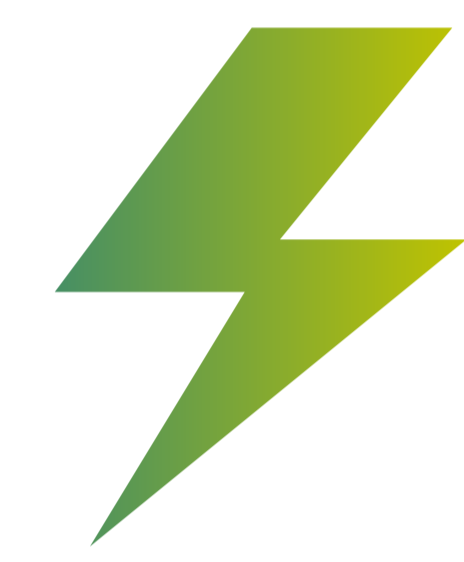
### LIFE HI4S POSITIVE IMPACTS



**REDUCE  
STEEL SLAG  
WASTAGE**



**REDUCE  
CO<sub>2</sub>  
EMISSIONS**



**REDUCE  
ENERGY  
CONSUMPTION**

### LIFE HI4S NUMBERS



**8**

**PARTNERS**



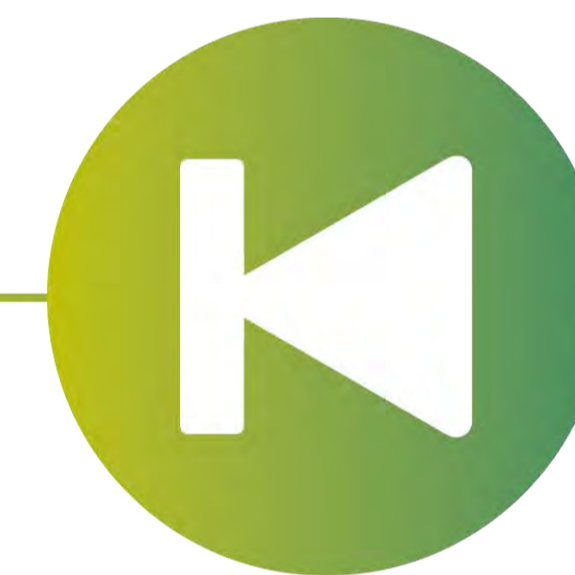
**2**

**COUNTRIES  
INVOLVED**



**3**

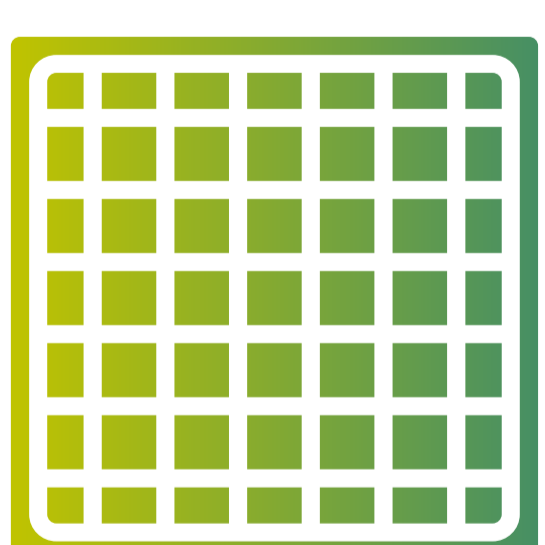
**YEARS  
DURATION**



**2021  
07/01**

**STARTING  
DATE**

### LIFE HI4S TECHNOLOGY



**High temperature ceramic filtering system** for a low cost off-gas heat recovery solution



**TES system** to turn the variable nature of off-gas heat into homogeneous source of energy



**Scrap Dryer** to reduce scrap humidity through hot off-gas streams



**ORC system** powered by exhaust gases and produces electricity by means of a new vector fluid with lower GWP