



**5<sup>th</sup> SPIRE  
Brokerage event  
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***STEEL PRODUCTION, HEARTH OF  
SUSTAINABLE INDUSTRY***

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## Rina Consulting-Centro Sviluppo Materiali (CSM)

*CSM was founded in 1963 by Italy's major steel manufacturers and end-users with the mission of developing Steel Technologies and its application.*

*From 2013 belongs to RINA Group.*

*CSM is a leading company in the field of process and product innovation. It is operating worldwide in the steel and metal alloys as well as ceramics industrial production for different sectors such as oil&gas, aerospace, engineering, energy&environment. At present CSM is also strongly involved in Industry 4.0, with many projects in the field of advanced process control, innovative sensors and measurement devices. CSM operates in six sites, with specialised labs and pilot plants.*

*More infos at: <http://www.c-s-m.it/>*

# Steel production, hearth of sustainable industry

## **Introduction**

*Steel production co-generates material streams and produces residues profitability used by other sectors: cement and concrete production, glass mineral wood, agriculture, energy, chemicals. On the contrary in steel production, residues coming from other sectors can be used in substitution of raw materials: spent refractories, plastics, iron bearing wastes, carbon bearing wastes, sludge containing non ferrous and ferrous metals .....*

## **Scope**

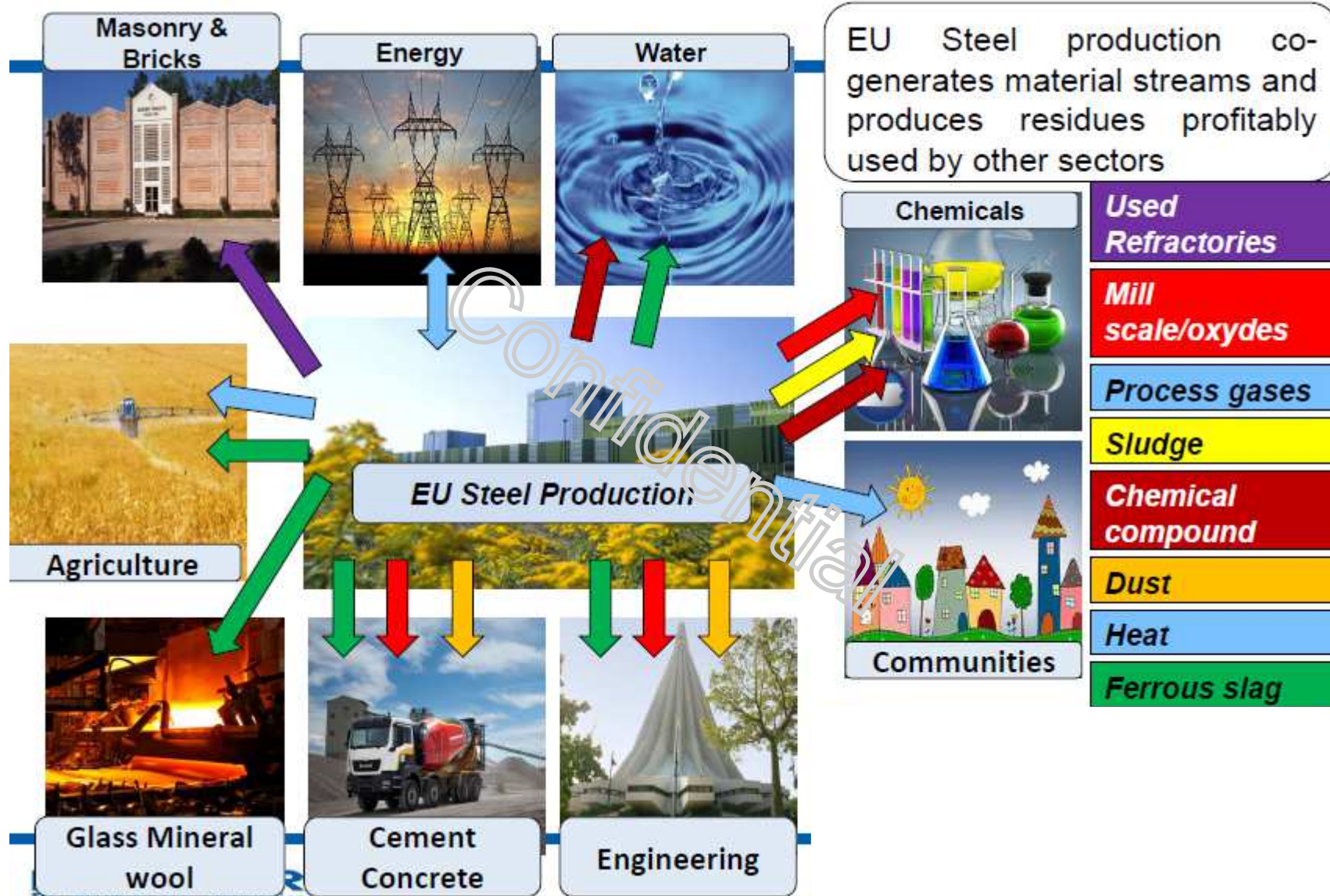
- *Definition of all possible residuals exchange among different industrial sectors*
- *Development of appropriate processes valorising more efficiently the raw materials and re-using by-products inside the production cycle*

## **Ways and means**

- *Lab trials*
- *Cross sectorial simulation model*
- *Industrial trials*



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*The proposal addresses the SPIRE-03-2018 call : Energy and resource efficiency in highly energy intensive industries*

*Innovative production technologies for by-products valorization*

*Integration of innovative and sustainable electrical energy sources to improve industrial efficiency*

## EXPECTED IMPACT

- *Reduction of dependencies from raw materials*
- *Creation of new local economies*
- *Energy saving*
- *Strong reduction of landfill use*
- *Reduction of CO2 emission*
- *Outcome integrated vision of industry*

# Steel production, hearth of sustainable industry

Looking for partners from various sectors  
(steel, cement, chemicals, non ferrous,  
agriculture, cattle breeding....)

# CONTACT DETAILS

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