



Circular Steel for Mass Market Applications

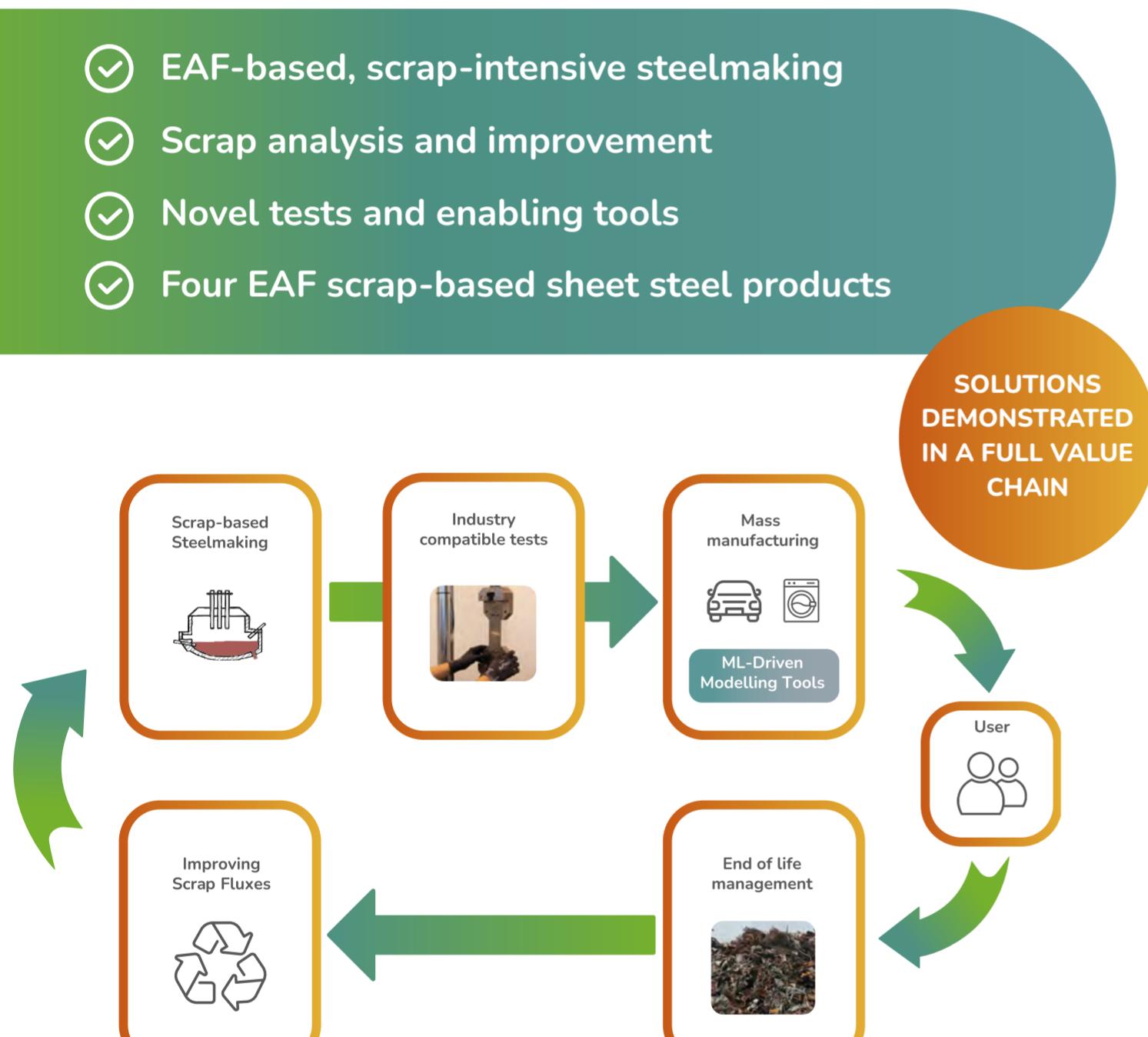
INTRODUCING SCRAP-BASED ELECTRIC ARC FURNACE STEEL IN MASS-MARKET SHEET METAL GOODS

CiSMA aims to introduce **100% scrap-based Electric Arc Furnace (EAF) steel products** into mass-market steel sheet consumer goods, currently manufactured through the integrated Blast Furnace – Basic Oxygen Converter route.

The project will help **cut CO₂ emissions**, boost **circular economy** and **reduce EU's foreign dependency** on critical raw materials in key European sectors such as the automotive, laundry equipment, white goods and other engineering industries.

With a toolbox of tests methodologies and Machine Learning-enhanced modelling tools, CiSMA will enable the integration of recycled EAF steel products in components from the **automotive and commercial laundry solutions industries**.

- ✓ EAF-based, scrap-intensive steelmaking
- ✓ Scrap analysis and improvement
- ✓ Novel tests and enabling tools
- ✓ Four EAF scrap-based sheet steel products



PROJECT APPROACH



EAF-based, scrap-intensive steelmaking

Advanced characterisation through synchrotron and Atom Probe Tomography to design steel grades and determine safe residual thresholds



Scrap analysis and improvement

Analysing end-of-life scrap quality and improving the steel stream using automatic separation



Novel tests and enabling tools

Developing a powerful toolbox of ML-enhanced online measurement techniques to ensure the usability of recycled steels.



Four EAF scrap-based sheet steel products

1 High-formability steel

1 Intersitial-free steel

2 High-strength steels



Two mass market use cases

Demonstrating the 100% recycled steels in mass-market products

Volvo Cars
vehicle components



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Electrolux Professional
laundry machine equipment



ALIGNED WITH EUROPEAN STEEL INDUSTRY NEEDS

CiSMA's ambition is to contribute to reducing CO₂ emissions from production by more than 75% to help **meet the EU emission green house gases reduction target**, while also reducing **EU foreign dependency** on raw materials and boosting circular economy in the steel industry.

CONSORTIUM:

eurecat Project coordinator

aerobase

ALBA

**TEKNISKA HÖGSKOLEN
BTH**

CSIC

Electrolux PROFESSIONAL

ESTEP
European Steel Technology Platform

MATVISION

RISE

TATA STEEL

**LIEGE
université**

voestalpine
ONE STEP AHEAD.

VOLVO

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