



The Circular Metal for Future Mobility: aluminium for light weight and sustainability

WEBINAR: 6 October 2023

09:30–13:00 CEST

Organiser: European Aluminium Innovation Hub
Support: ESCI



WEBINAR

The Circular Metal for Future Mobility: aluminium for light weight and sustainability

Introduction

- European Aluminium
Aluminium use & recycling challenges
- The Innovation Hub
Introduction to the SALEMA project

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European
Aluminium 

SALEMA 
Driving sustainable aluminium



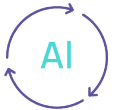
The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003785.



Key facts & figures



€40 Billion
annual turnover



90% of aluminium is recycled in construction and automotive in Europe



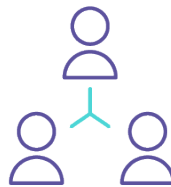
Europe produces
6% of worldwide primary aluminium



51% of European production comes from recycled sources

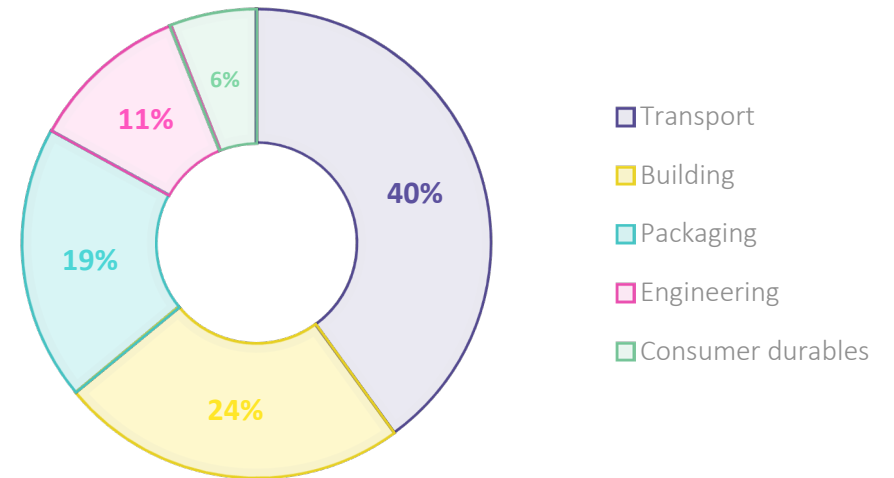


Approx. **600 plants** in 30 European countries (EU, EFTA, UK, Turkey, BiH)



1 million + Direct and indirect jobs across Europe's value chain

Founded in **1981** European Aluminium represents the entire value chain of the aluminium industry in Europe



An innovative value chain serving EU key markets (end uses)

Our members



Aluminium, anything but basic!



The green transition will require more and more Aluminium

Top sectors for use of aluminium for clean energy



Electric vehicle



Solar panel



Electricity network expansion

'Traditional' aluminium applications



Building applications



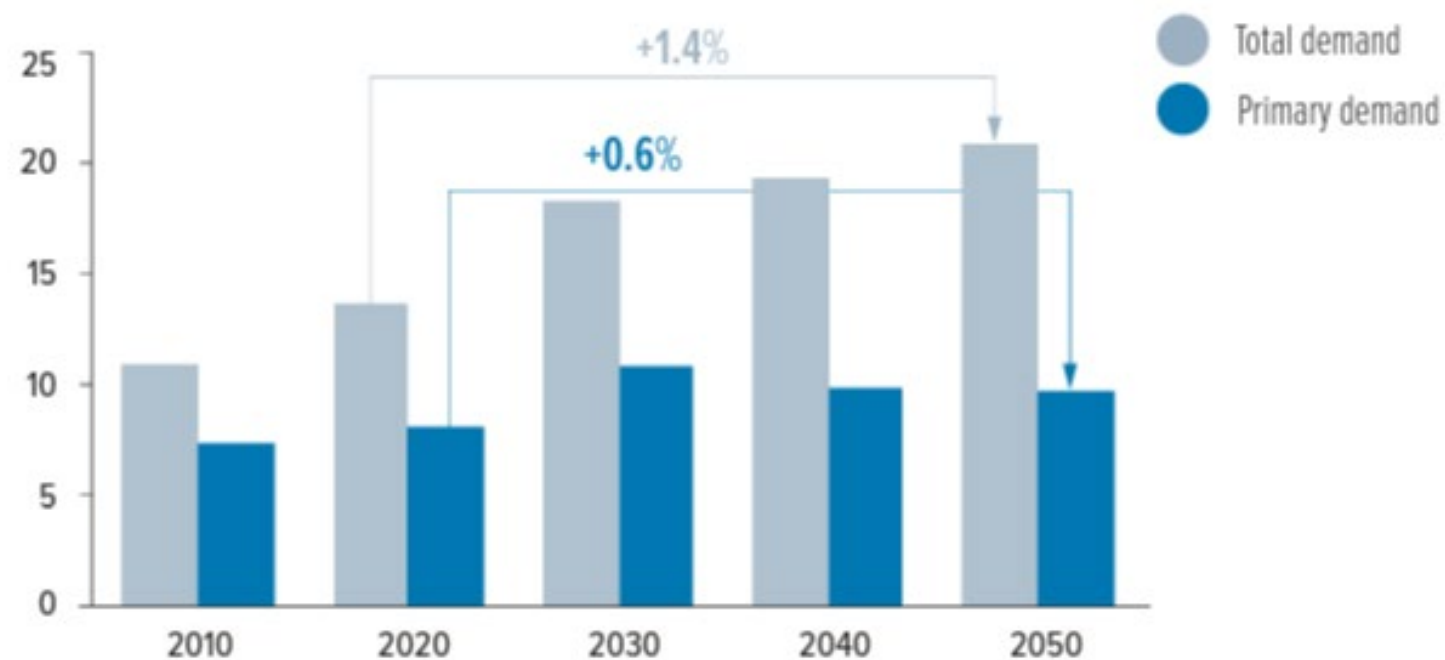
Transport



Packaging



Together with primary Aluminium, recycling will be crucial to fulfil the demand

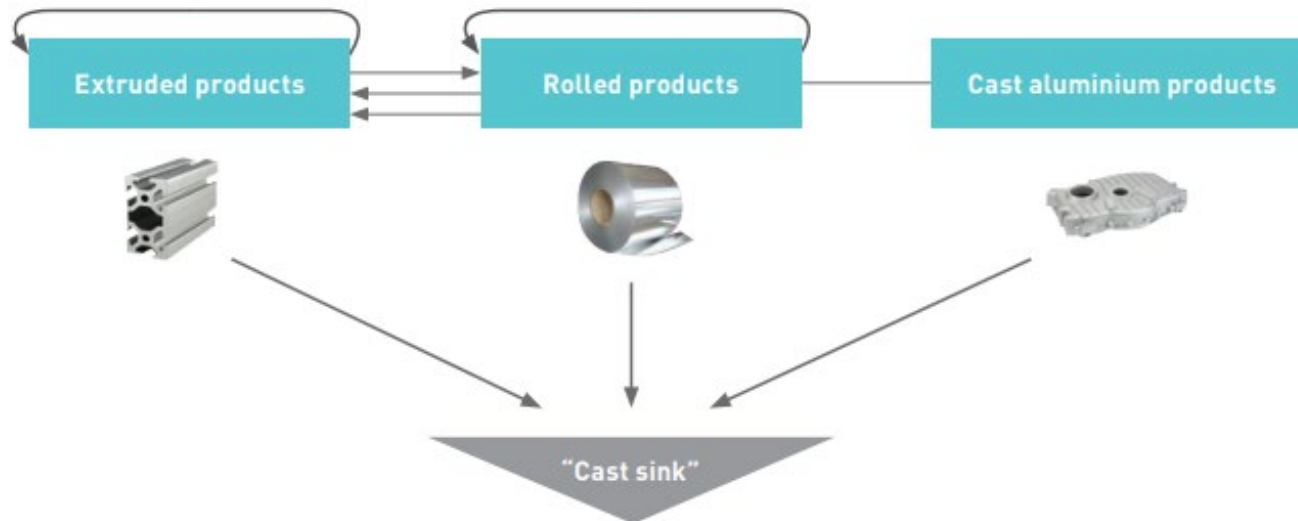


European total and primary aluminium demand outlook (Mt)

Main recycling challenges for End of Life vehicles

Today, ELVs are **shredded together with other products** (ex. WEEE).

The fractions that are recovered from the ELVs treatment are very complex.



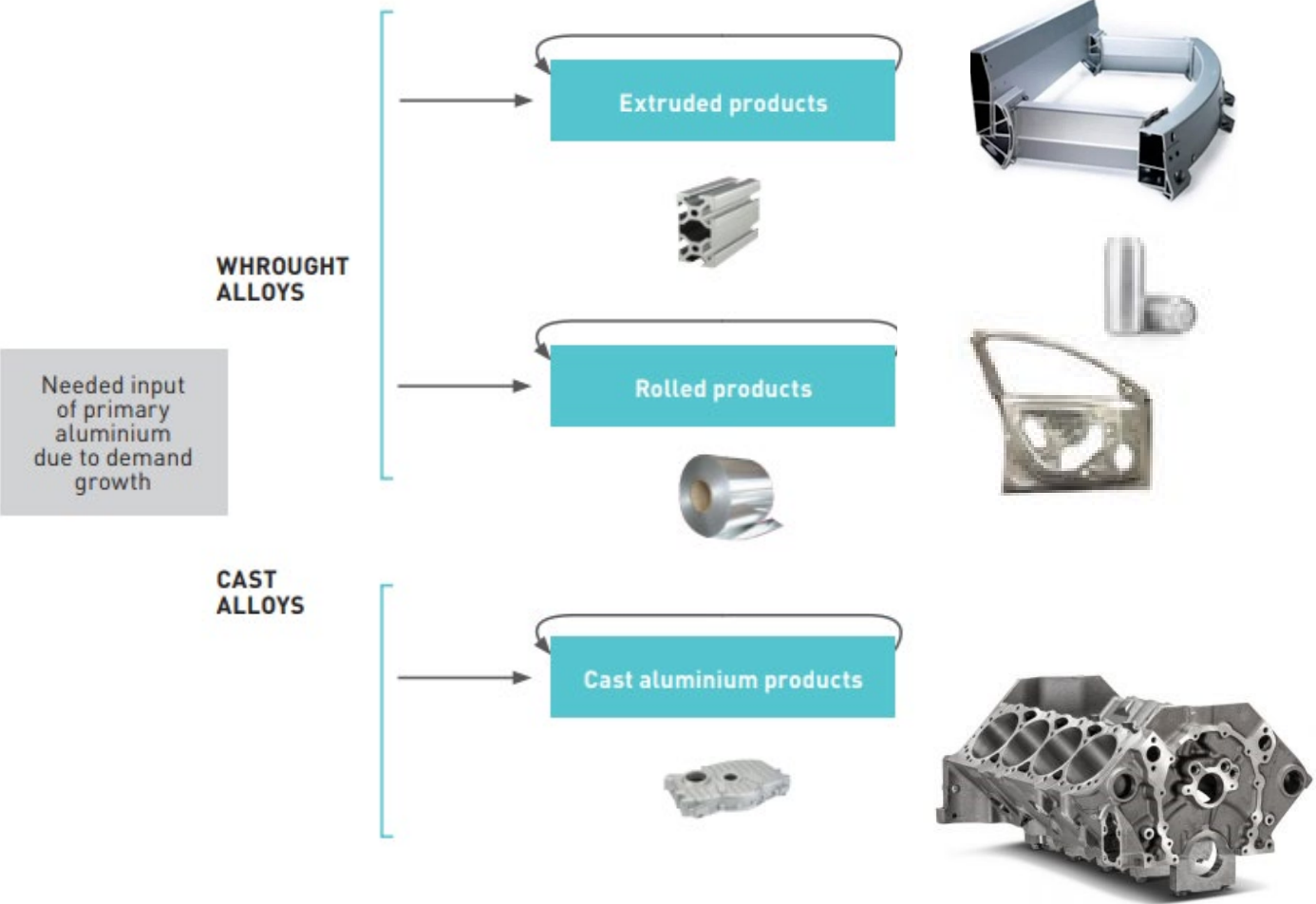
Much of the end-of-life scrap are ending up in secondary foundry alloys

The main use for these alloys is in combustion engines

Electric vehicles are now entering the market faster than ever

Need to make sure we have a good use for scrap from End of Life products in the future.

The importance of quality of scrap



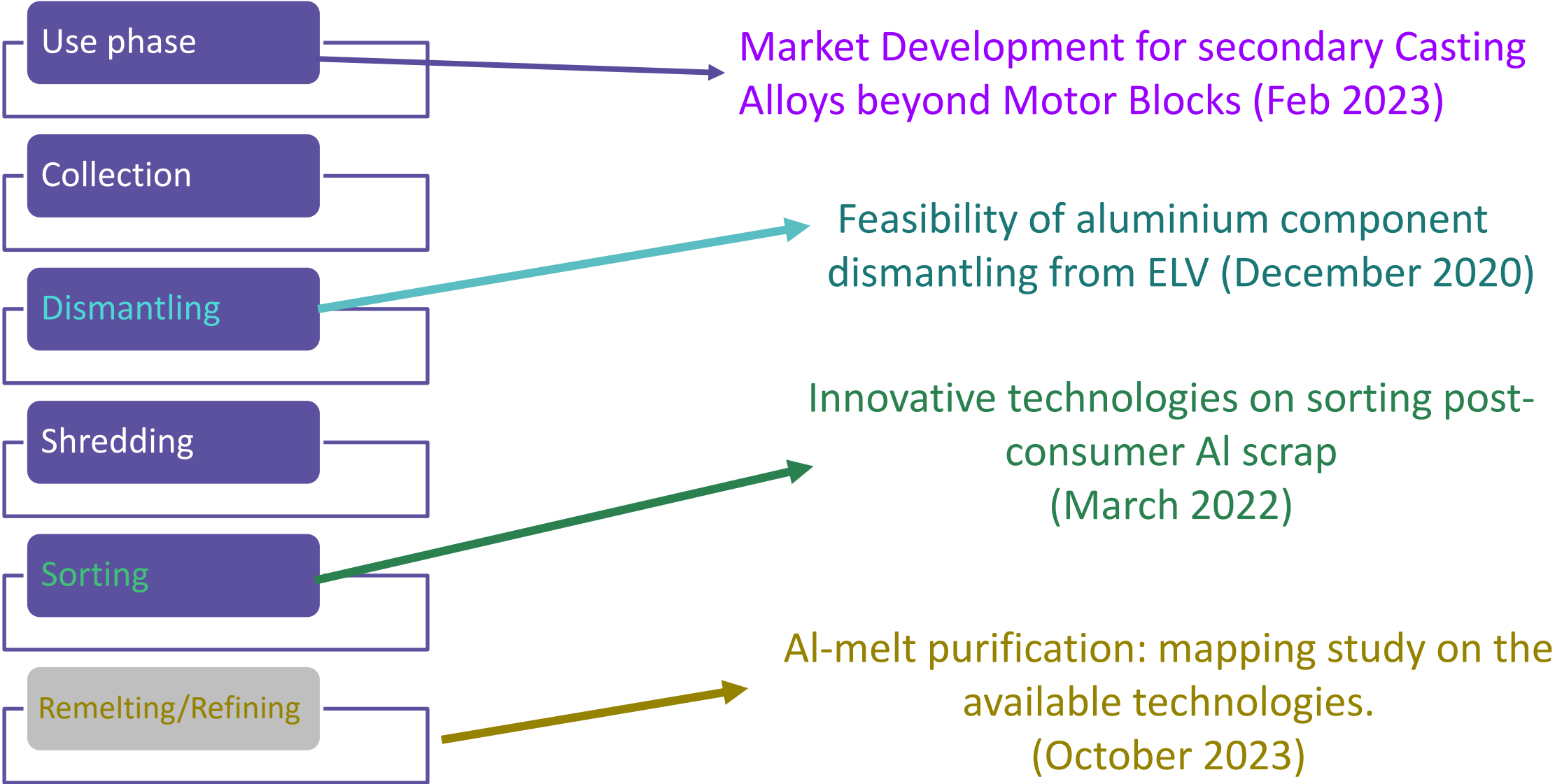
How can we achieve this?

Improve sorting technologies

More dismantling of high valued aluminium components

Focus on design for recycling

Paving the way for full AI circularity: mapping studies initiated by European Aluminum for its members



Mapping R&D challenges focused on

Resource and circularity efficiency

Energy use flexibility & efficiency

Near-zero emission technology

Engaging with EU Innovation Agenda:

Through participation in the most relevant European Public Partnerships

Process4Planet, Made in Europe, Built4People



The Innovation Hub:

Collaborate to Forge a Sustainable Aluminum Value Chain

Stimulating the connection between R&D and the AI industry and trigger research:

Initiating and facilitating the development of EU funded R&D projects

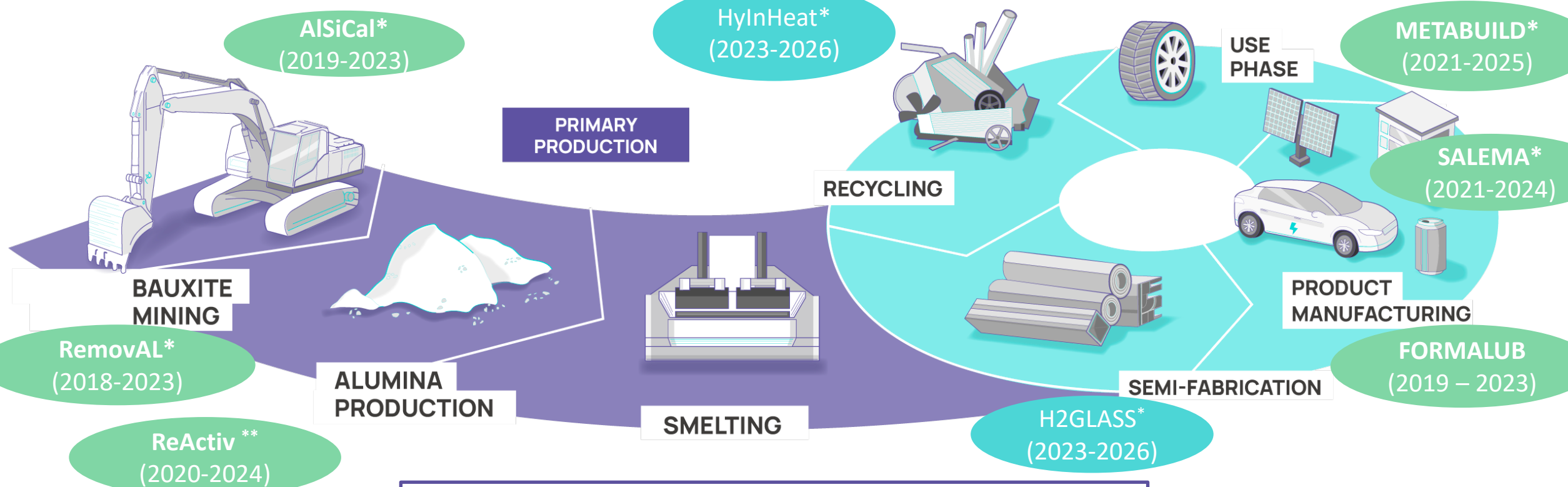
Organizing thematic workshops, connecting relevant research groups/technological providers with members

Seeding projects along the value chain

Legend

- 9 on-going projects
- 2 new projects in 2023

H2AL - New project on Hydrogen starting in 2024!



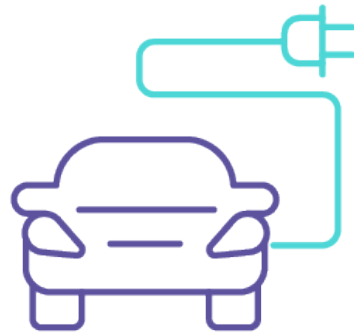
*Project 100% EU funded
Aluminium, anything but basic!


aluSELECT
SAIS – SPIRE* (2020 -2024)

In a Nutshell: The Logic Behind the SALEMA Project



The need for more **sustainable** transport



Led to the acceleration of **electric** vehicles



The need of lightweight and sustainable materials such **Aluminium** is increasing



Leading to an increased reliance on primary **critical raw materials** such as Al and its alloys.

Key Questions Addressed in the Webinar today

What are the key market challenges and opportunities for primary and secondary aluminium and magnesium for sustainable use in the automotive industry?

How much aluminum is currently utilized in the automotive industry, and what can we expect regarding its future use?

What are some of the key collaborative research developments concerning the utilization of aluminum in electric mobility?