

GRENSOL: TURNING WASTE INTO OPPORTUNITY AND ADVANCING SWITZERLAND'S CIRCULAR ECONOMY



When cars reach the end of their life, the reusable parts and large metal components get recycled, but what remains – seats, insulation, foams, and other plastics – gets shredded into a complex waste stream called automotive shredder residue (ASR). Historically, ASR has been incinerated, releasing CO₂ emissions and squandering valuable materials.

Grensol, a Swiss startup founded in 2021, is tackling this long-standing challenge with an innovative solution developed in partnership with WPI (USA), ETH Zurich and HEIG-VD. Grensol's proprietary, three-step recycling process enables the extraction of valuable materials from ASR to close the materials loop for the automotive industry and avoid CO₂ emissions.

The process begins with mechanical separation to recover metals like copper, aluminum, and steel. Next, fluid dynamics are used to transform minerals such as auto glass into cement making raw material. Finally, the residual material undergoes Photolysis – a light-driven chemical breakdown – yielding hydrogen and carbon materials. All recovered outputs can be reintegrated into industrial material supply chains: metals can be remelted into new components, glass can replace mined silica in cement production, and carbon can be reused in plastics manufacturing.

Grensol's technology is used in recycling microsites located directly at or near car recycling facilities, so that the ASR only needs to be transported over short distances. The first site in Biberist, Solothurn is expected to begin operations by early 2026. Each microsite will process up to 25,000 tonnes of ASR annually and avoid about 6.4 tonnes of CO₂ emissions per tonne of ASR recycled.

By transforming unrecyclable waste into reusable resources while avoiding incineration, Grensol is helping drive Switzerland toward a more sustainable, circular future.

As an early winner of the Innovation Booster New Mobility Lab, the programme's validation and visibility have helped us find new investors and connect with the right contacts to expand our supportive network.



Rajiv Singhal,
CEO & Founder of Grensol AG

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INFORMATION
ABOUT
GRENSOL AG



Added Value Through the Innovation Booster

Network

- Targeted development of connections with industry and research partners
- Access to relevant experts and potential implementation partners
- Exchange with other innovative teams within the program

Funding

- Funding through the Innovation Booster New Mobility: CHF 25,000

Visibility

- Official Innosuisse label increases visibility and credibility
- Greater attention from potential investors and partners
- Strengthened positioning within the national innovation ecosystem



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