EVERGLASS

European Innovation Council

Funded by the European Union

Everglass – Innovative Glass Recycling Technology Process

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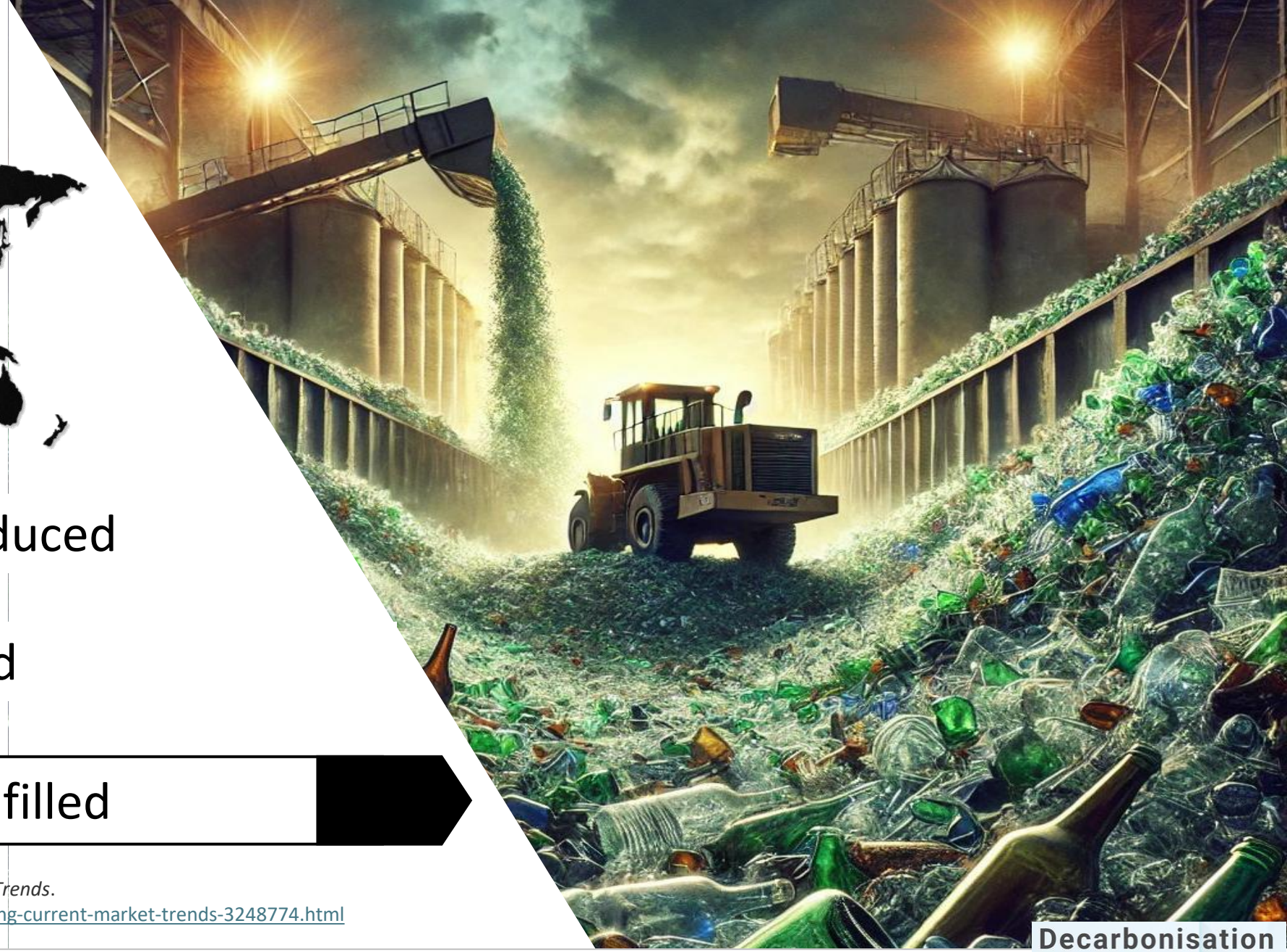
2 December 2025

PROBLEM

- **130M t** of glass - produced
- **27M t** glass - recycled
- **103M t** of glass - landfilled



Recovery Worldwide. (2023) *Glass Recycling: Current Market Trends*. https://www.recovery-worldwide.com/en/artikel/glass-recycling-current-market-trends-3248774.html

PROBLEM

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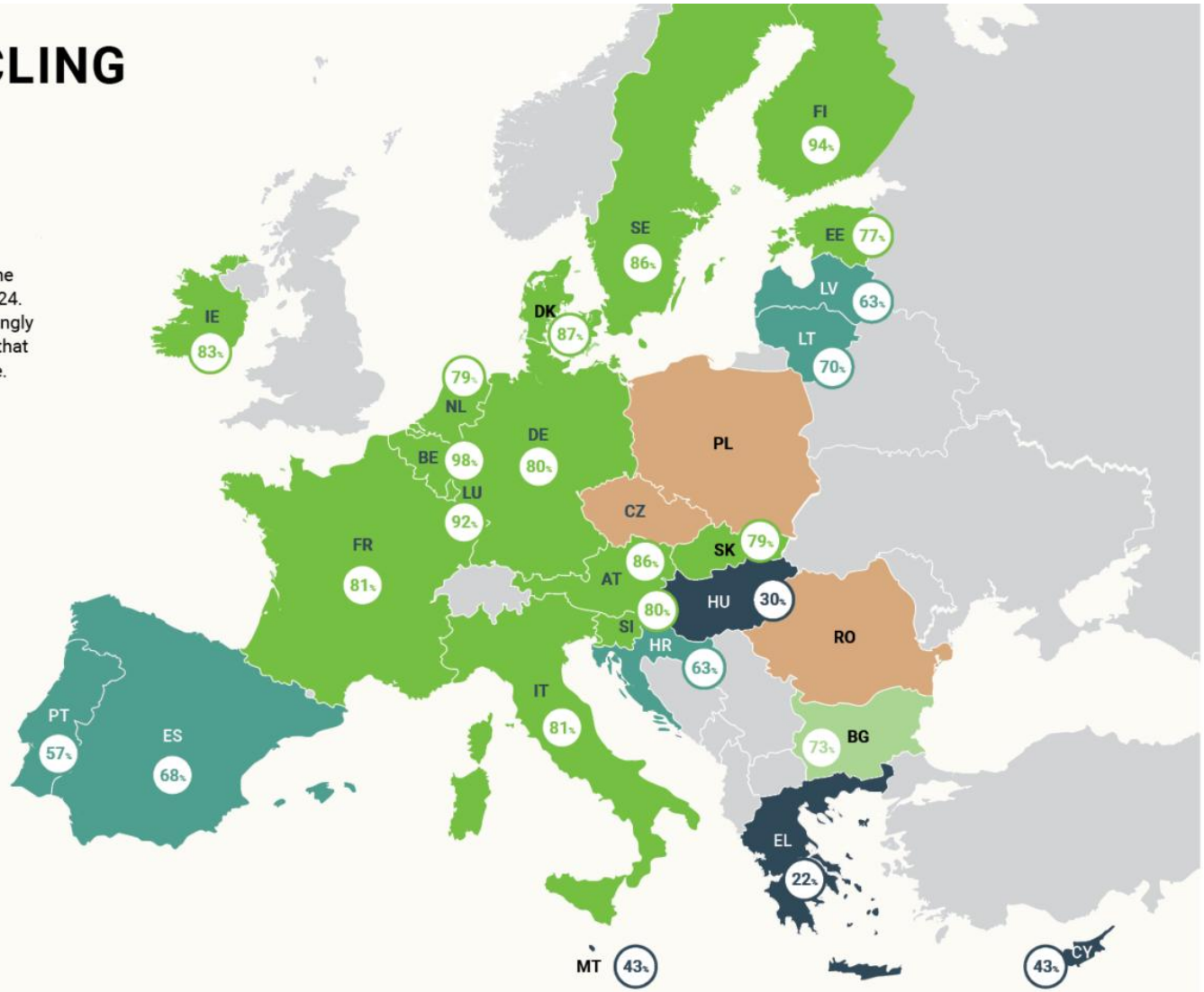
PACKAGING GLASS RECYCLING RATE IN THE EU – 2022

75,6%*

*EU average calculated on the basis of the data reported into Eurostat by 23/10/2024. The EU average will be adjusted accordingly as the missing data from the countries that have not yet reported becomes available.

- <55% — Countries **below the 2035** target of recycling at scale
- <70% — Countries **below the 2025** glass recycling target
- <75% — Countries **below the 2030** glass recycling target
- >75% — Countries **above the 2030** glass recycling target
- no data — Countries that **have not reported data** into Eurostat



close the glass loop

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Decarbonisation of European Glass Industry: From Research to Market

- In other regions, there is a space for improvement.

Area/Country	% of recycling of glass containers
Europe	76
Australia	59
India	45
South Africa	41
USA	35
Canada	30
China	20

PROBLEM


28 BILLION+
GLASS BOTTLES AND JARS
GO TO LANDFILLS EVERY YEAR.
(THAT'S ENOUGH TO FILL
TWO EMPIRE STATE BUILDINGS
EVERY THREE WEEKS.)

PROBLEM

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"Hard to recycle" glasses

Borosilicate Glass

Features a higher melting point than other glass. For lab and medical equipment, there are concerns about the purity of the final product.

Glass Fibres

Are lubricated by organic substances which produce carbon byproducts during the melting process.

Electronics

Contains heavy metals and a special coating, which impact the melting process.

Unique Glasses

Have different melting points from recy-clable glass and can potentially ruin a batch of re-melted glass.

MOTIVATION

- Would it be possible to develop other ways of recycling glasses?
- Would it be possible to recycle other glasses apart from glass containers?

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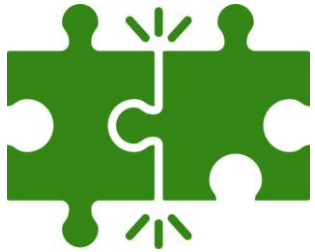
EISMEA

EIC Pathfinder Open - CALL

- Support to make real an ambitious vision for **radically new technology**, with the potential **to create new markets and/or to address global challenges**.
- Early-stage development of future technologies (**TRLs 1-4**).
- **High-risk/high-gain** science-towards-technology breakthrough research.
- Potential to have a **transformative positive effect on our economy and society**.



…"high potential but, many uncertainties"

"I like the idea, but it is very risky"…

- The new role of glass in a sustainable society.
- Technology for the integral recycling of glass.

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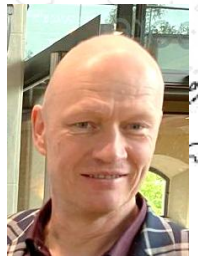

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Decarbonisation of European Glass Industry:
From Research to Market

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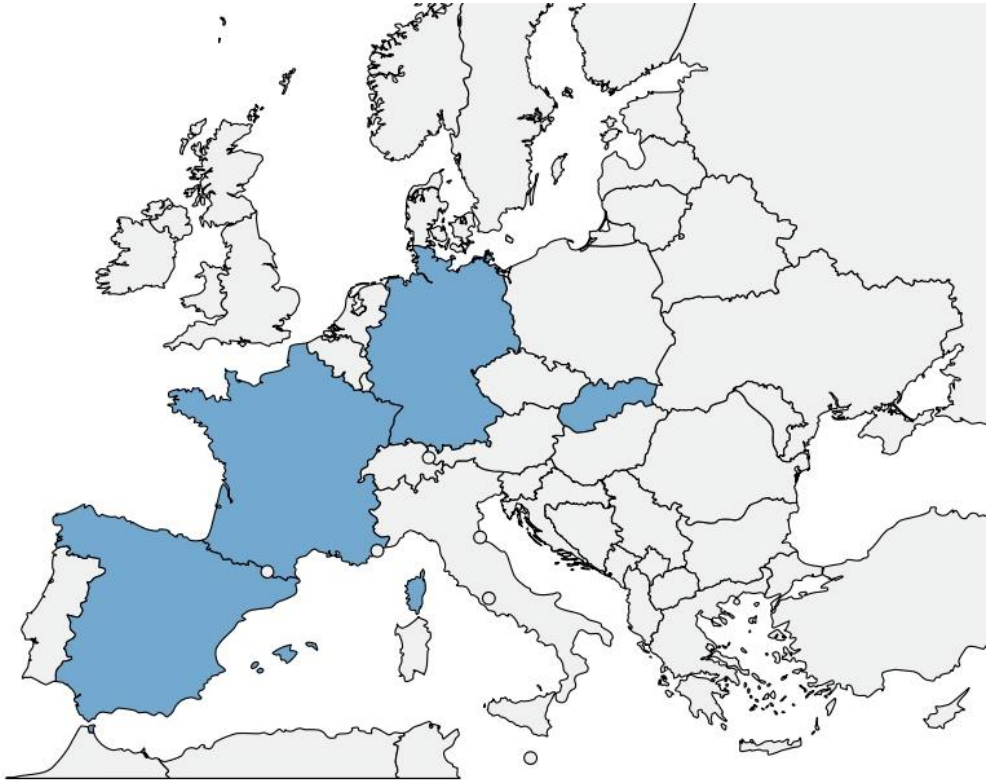

January 2024
December 2026

36 months

2,961,225 €

6 partners

>30 people

4 countries

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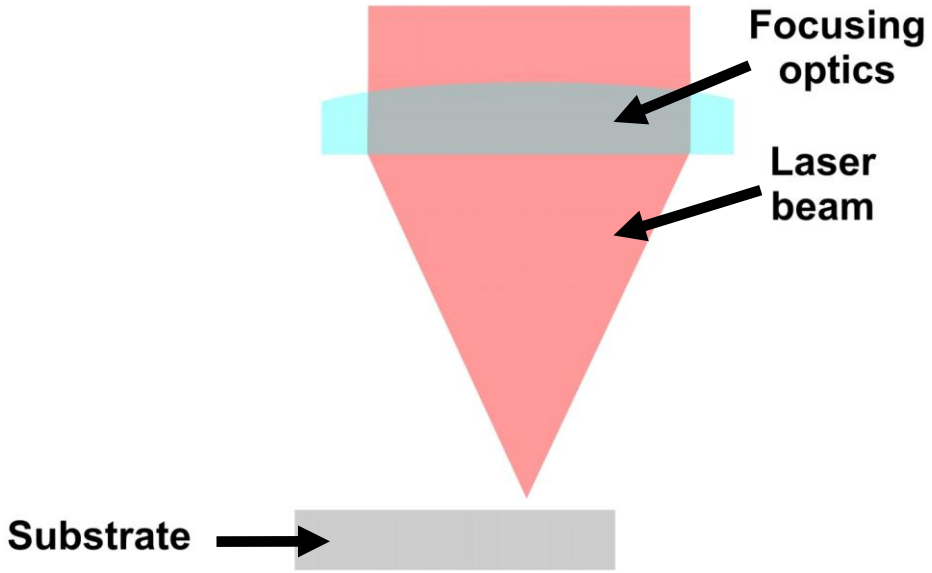
Decarbonisation of European Glass Industry:
From Research to Market

Long-term vision of EverGLASS

- To develop a technology for processing glass waste into tailored products:

  Glass Laser Morphing

EVERGLASS METHODOLOGY



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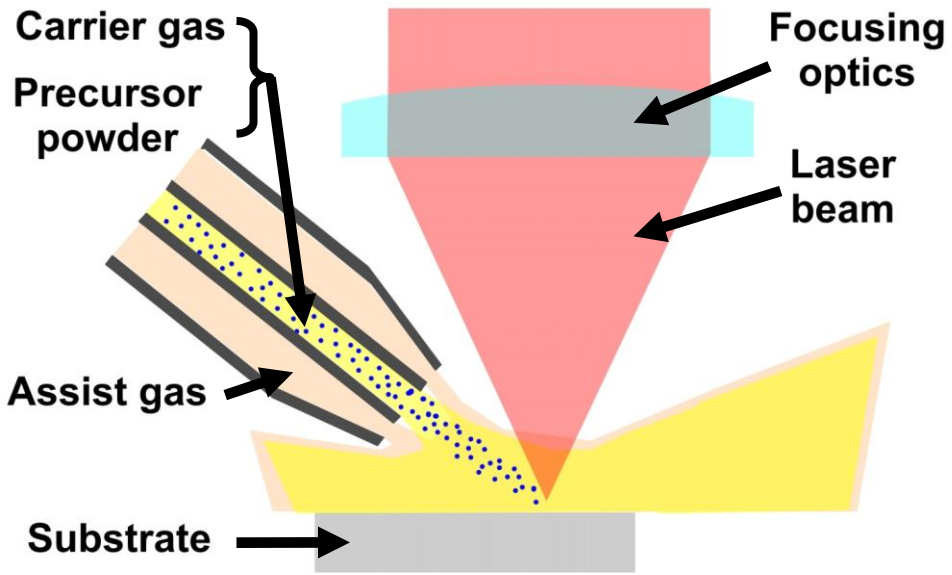

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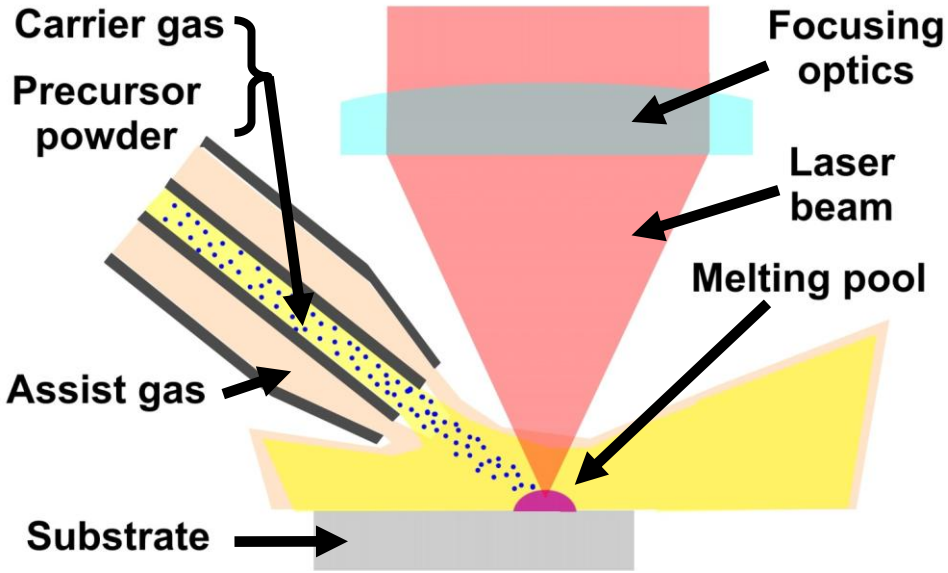

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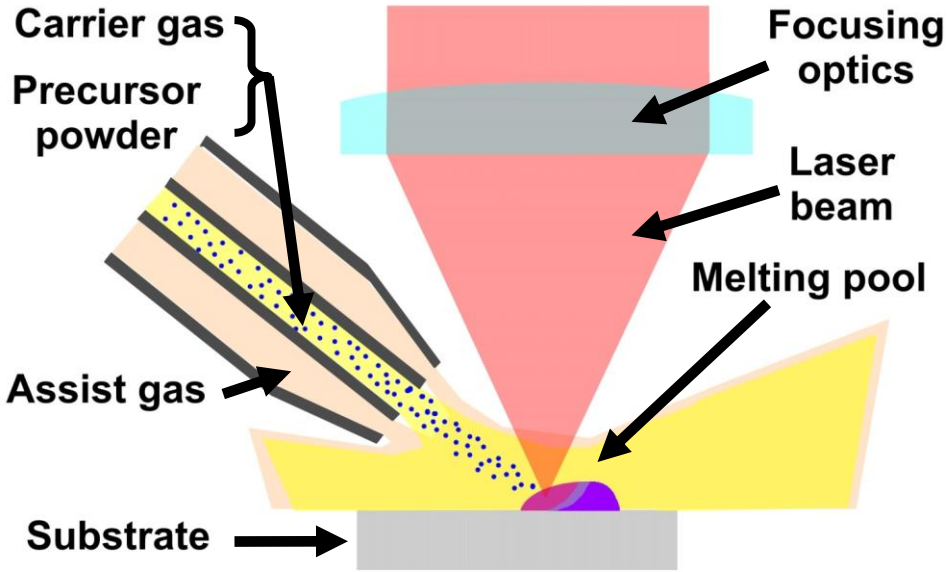

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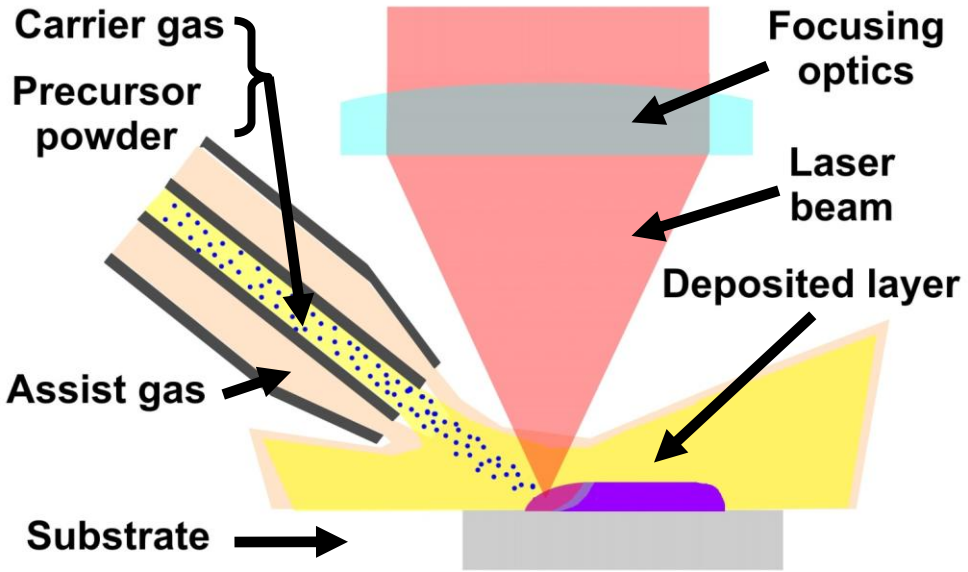

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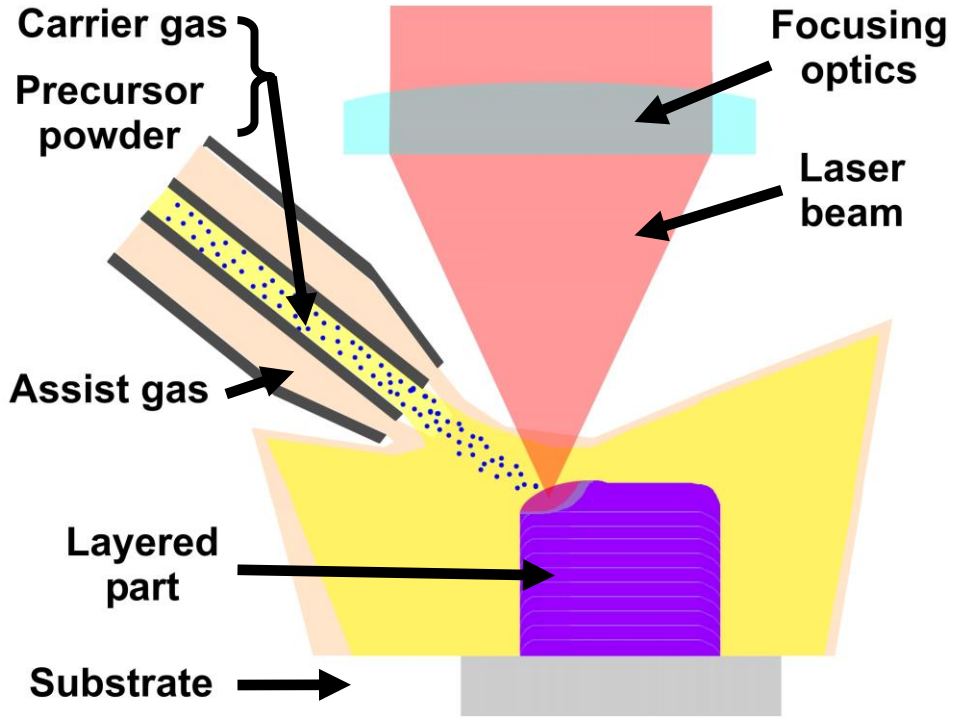

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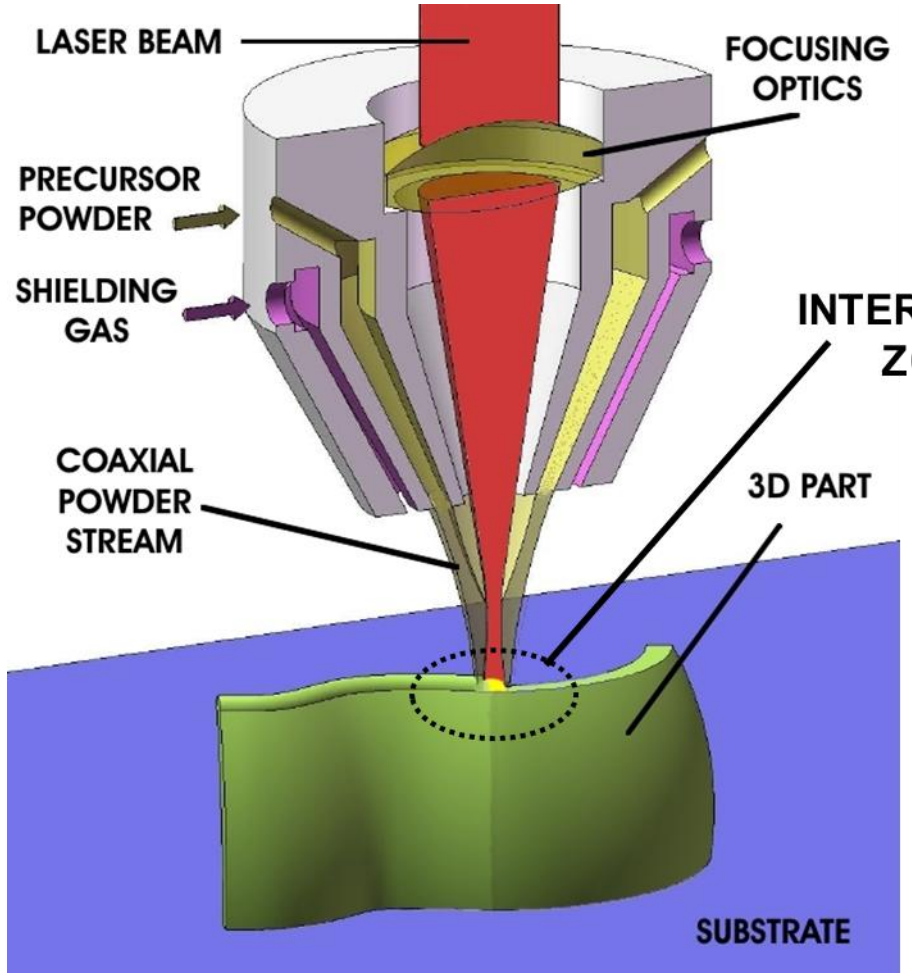
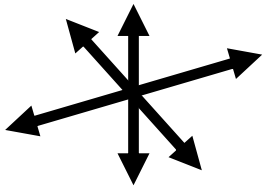


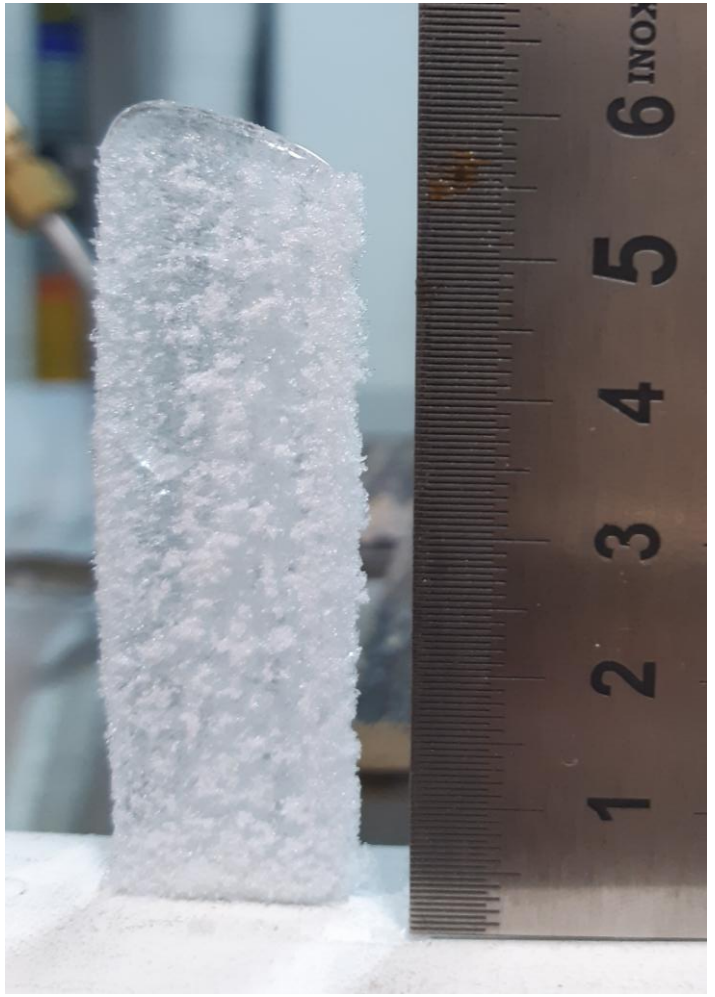
RELATIVE MOVEMENT BETWEEN SUBSTRATE AND WORKING HEAD



EVERGLASS METHODOLOGY

Glass Laser Morphing

Boro-silicate glass



CONCLUSIONS

- EVERGLASS project exploring a new technology for glass recycling.
- The aim of EVERGLASS is not to substitute the present glass recycling methods but to **complement them**.
- Recycling of “hard to recycle” glasses, for example, **borosilicate glasses**, is under exploration.

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The new role of glass in a sustainable society.

Technology for the integral recycling of glass.

European Innovation Council

Thank you for your kind attention

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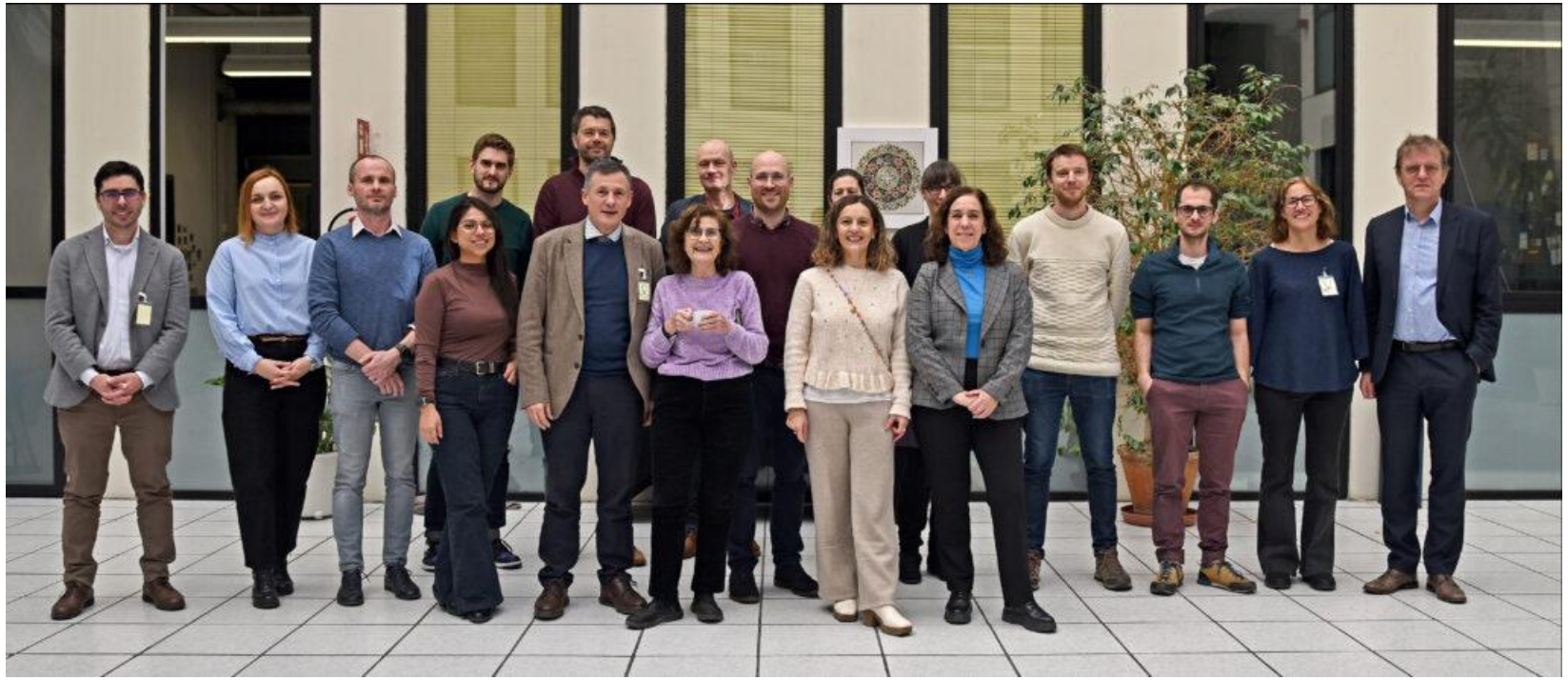

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