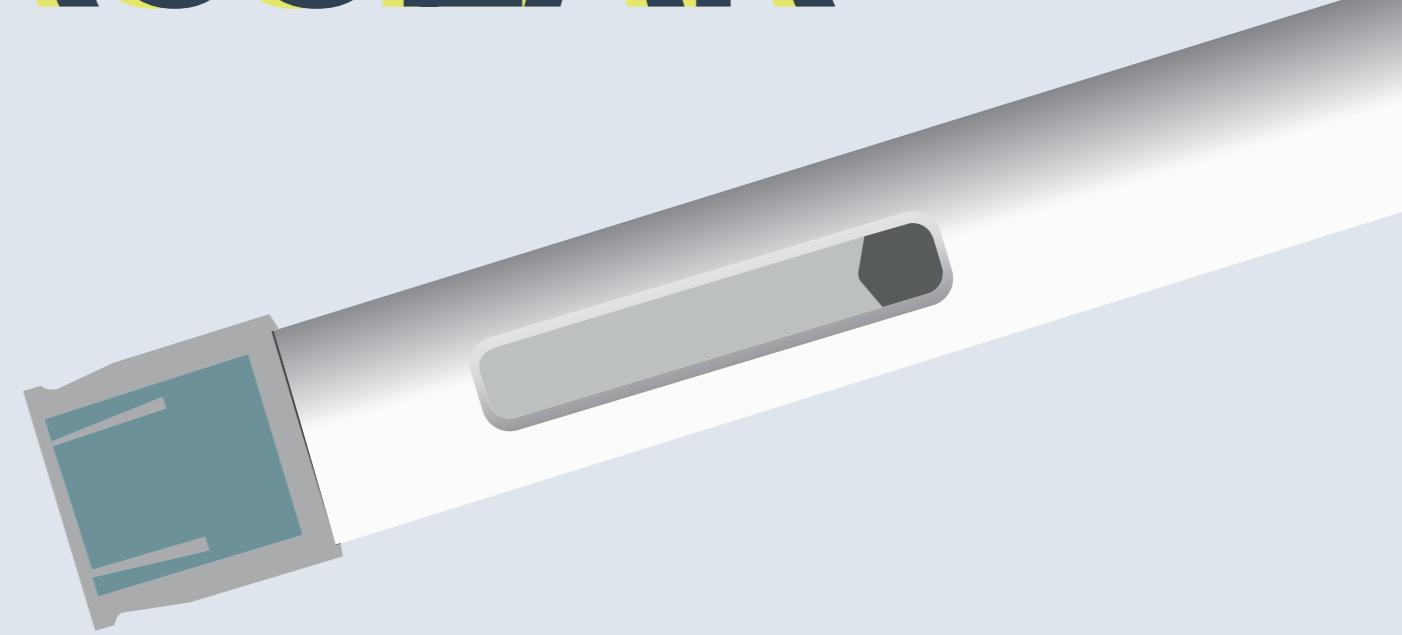


# THE ROAD TOWARDS A CIRCULAR AUTOINJECTOR

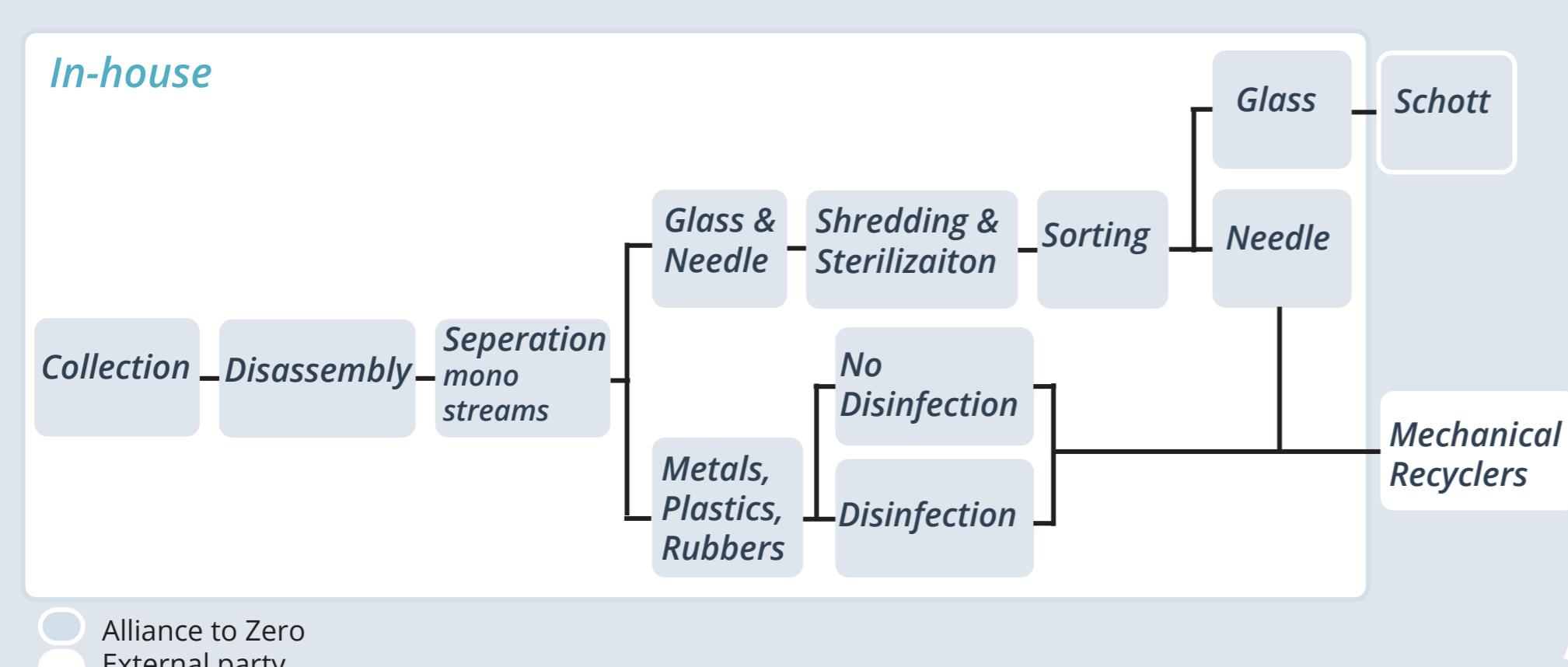


*Can we reduce the environmental impact of the autoinjector through increasing the circularity of the raw materials used in the product by recycling them?*



## Value chain.

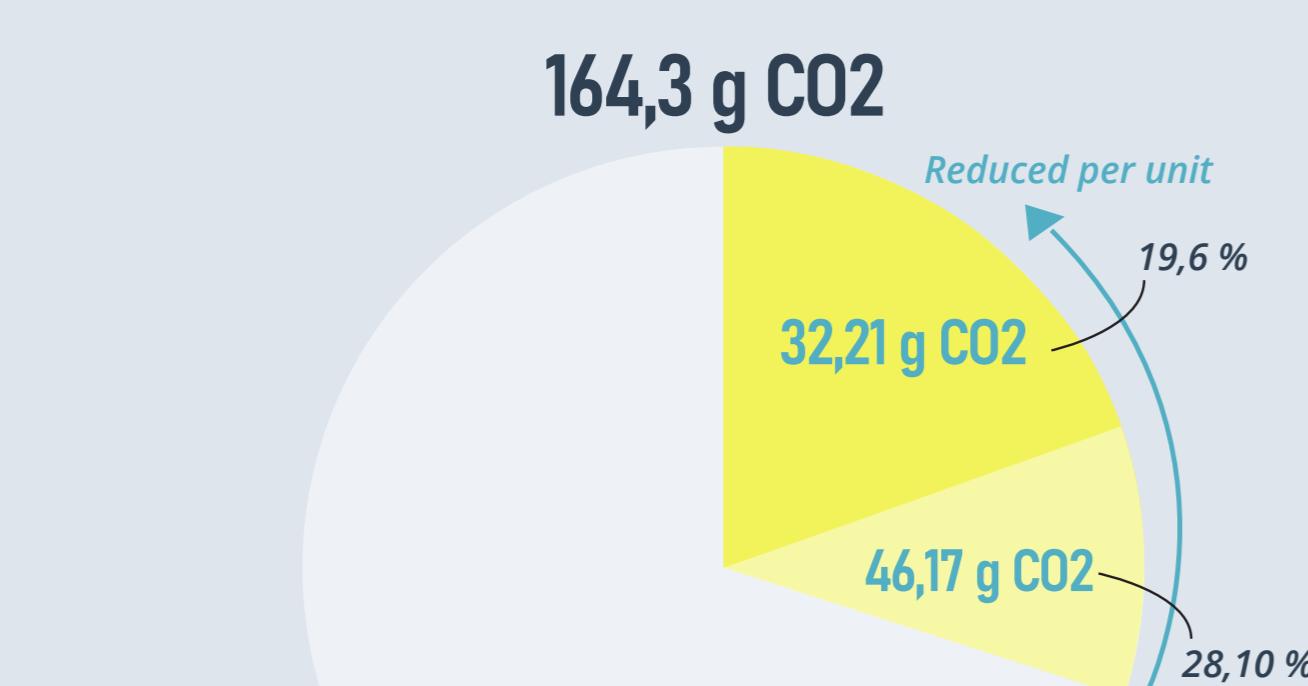
The value chain describes the process that should happen in order to get the valuable materials to the recyclers and unlock the circular potential of the autoinjector.



# Desirability of recycling processes.

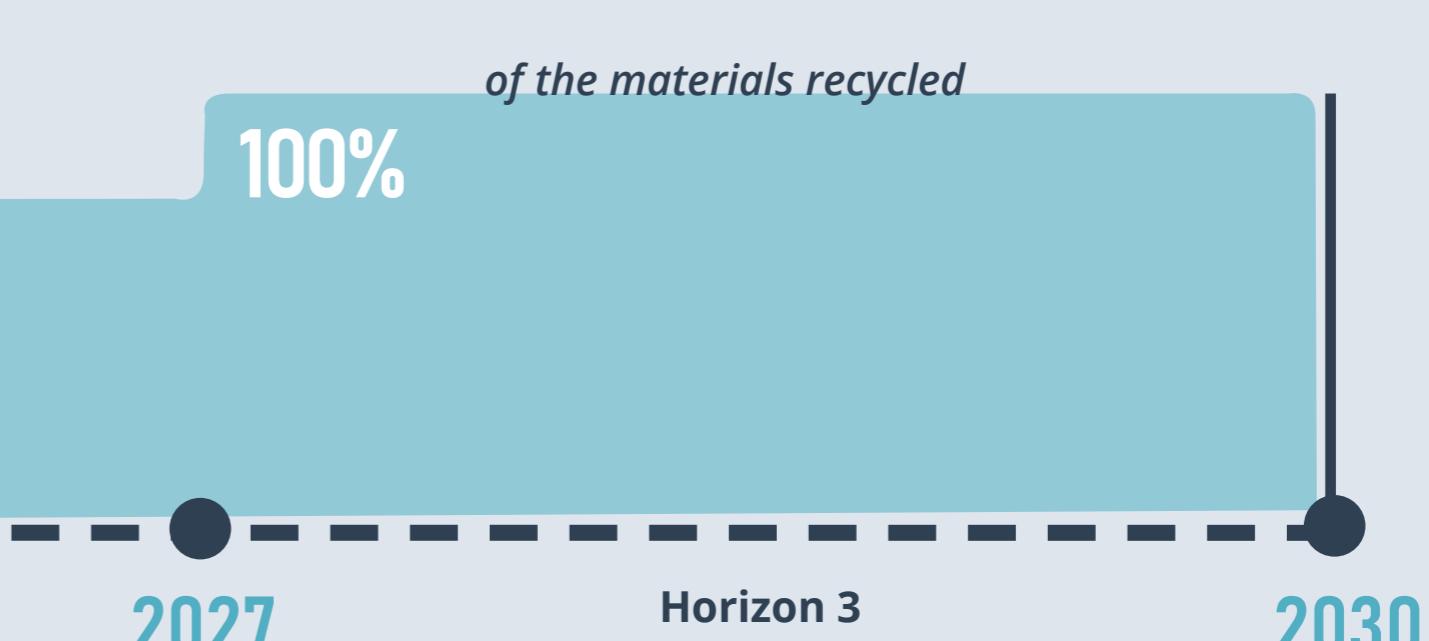
The recycling of the materials will be done *mechanically* with a single material stream because it is the most established form of recycling, that has the best ability to reduce emissions, has the preference of experts, and can recycle the materials of the autoinjector.

1. *Mechanical mono stream*
2. *Chemical: Depolymerisation*
3. *Chemical: Solvent-based purification*
4. *Mechanical mixed stream*
5. *Chemical: Pyrolysis*
6. *Chemical: Gasification*



## Conclusion.

As a result of the implementation and optimization of the value chain fewer emissions are produced due to the less dependency on raw material. The emissions of the autoinjector can be reduced within a range of 19.6 to 28.10 %



# Meike Schuringa

## Towards a Circular Autoinjector

23-02-23

SPD

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