RECYPEN™

THE GESTURE THAT CAN

CHANGE EVERYTHING



First recycling solution entirely made in France of pre-filled pens **WITHOUT NEEDLES***, used by people living with diabetes.

https://www.youtube.com/watch?v=uzG85TjBaE4&list=PLpeSguXrq-8VwvzOUxIbwKGEDJG9btrCP

TOGETHER, LET'S TAKE UP THE CHALLENGE!

sanofi DASTRI Lilly

* The needle is considered a perforating waste, and must therefore be disposed of in the yellow DASTRI boxes.

REMINDER: CONTEXT AND OBJECTIVES

A COMMITTED PARTNERSHIP

French PRO approved by he public authorities, experts in **the disposal** and **recycling** of healthcare waste at risk of infection (DASRI).

DASTRI is a coalition of 92 member Pharmaceutical & Medical device companies

Committed players in the market **of NEEDLELESS pre-filled pens** and members of the eco-organization.

A tripartite collaboration for patients, in the service of health and the environment.

AN ENVIRONMENTAL ISSUE

Approximately 75 million

pre-filled pens
are necessary each year for the care of people living with diabetes.

The manufacture of these pens requires the equivalent of **1500 tons of plastic.**

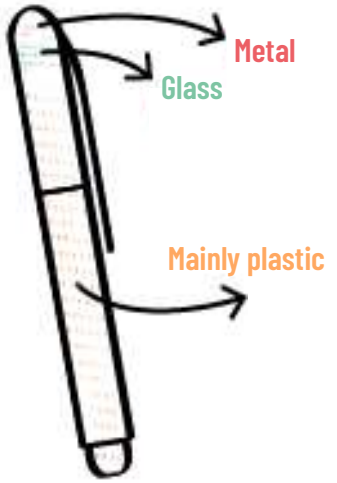
The current regulatory framework requires **the incineration or storage of pre-filled pens WITHOUT NEEDLES*.**

To limit the environmental footprint, the pressure on the planet's **non-renewable resources must be reduced and the use of plastic must be limited.**

RECYPEN™

The program allows you to recycle pre-filled pens WITHOUT NEEDLES* from **Lilly and Sanofi laboratories.**

A pre-filled pen WITHOUT NEEDLE* is composed of:



Average weight: 25 g

RECYPEN™ * The needle is considered a perforating waste, and must therefore be disposed of in the yellow DASTRI boxes.

TYPICAL INJECTION DEVICES

Pens



(Disposable- & Reusable)
→Diabetes treatment
→+++ m/year

Auto-Injectors



(Single-use)
→Immunology, Adipositas
→++ m/year

Safety syringes



(Single-use)
→Thrombosis treatment
→+++ m/year

Pre-filled syringes



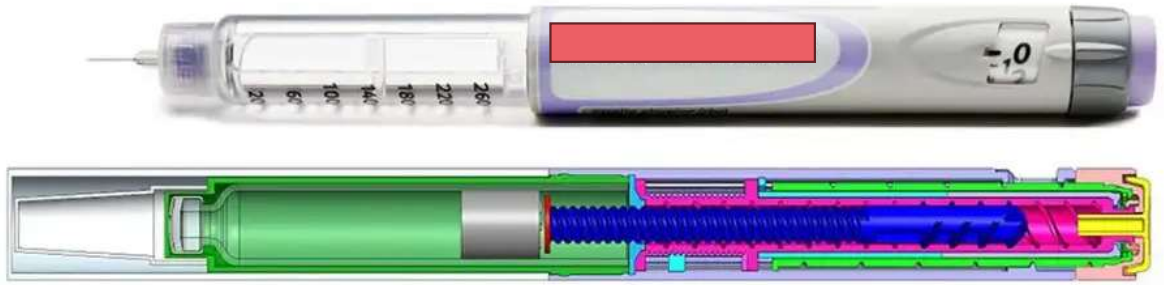
(Single-use)
→vaccines
→+++ m/year

ANATOMY OF A DISPOSABLE INSULIN PEN

Total weight (g) filled pen: approx. **25-30 g**
→Plastics: approx. **17-20 g**
→Glass Type I: **5-8 g**

Multiple use until drug cartridge is emptied:
use-time: **10-20 days;** Disposed-off after use.
N.B: sterile needles are sold separately at pharmacies (one needle / injection)

Housing: **PP, ABS, PC-ABS, PC**
Internal gear components: **POM, PBT**
Metal Springs: **stainl. steel**

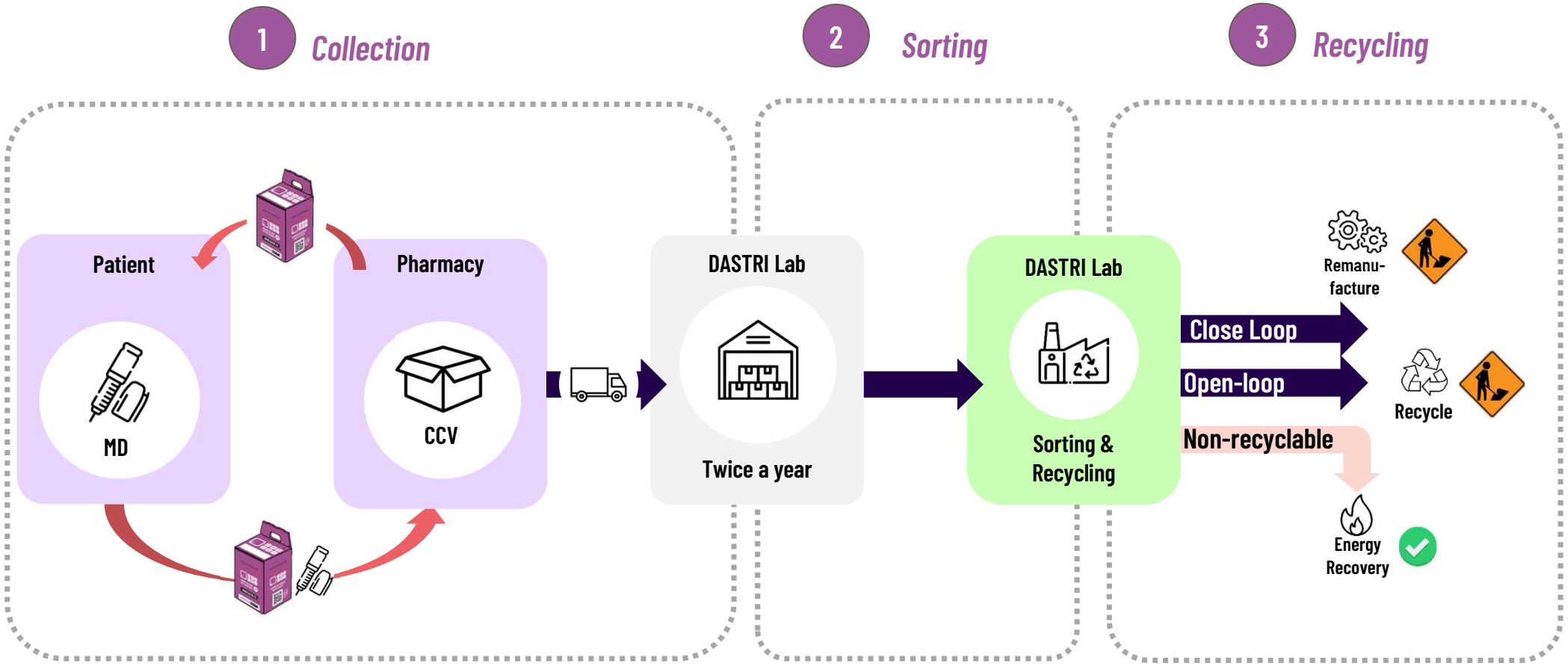


Seal cap
(synth.rubber + aluminum)

Drug cartridge
(Glass Type I)

Stopper
(synth. rubber)

The « take-back program » principles

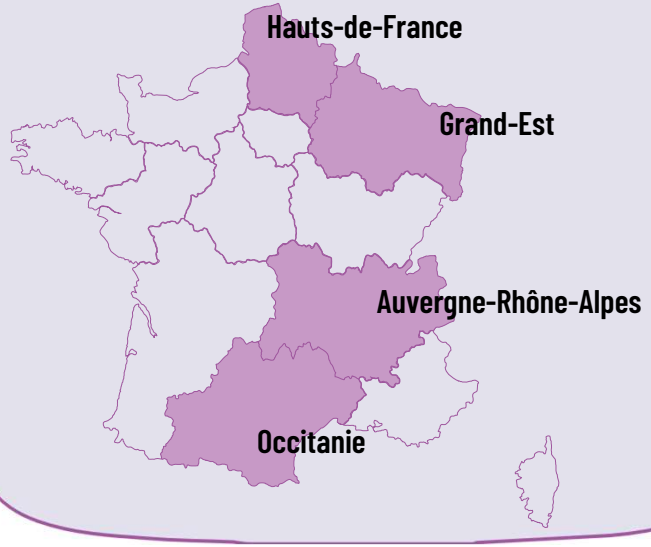


RECYPEN™

Experimental program

4 French regions in 2025
→ 7401 **pharmacies**

13 regions in 2026
→ 19 000 **pharmacies**



Why did we choose these 4 regions ?

The **Hauts-de-France, Grand-Est, Auvergne-Rhône-Alpes Occitanie** regions have been selected for:

1. The **prevalence rate of** diabetes and the quantities of medical devices used by patients in self-treatment.

2. The **rate of collection** of these devices by DASTRI.

3. Criteria **of geographical diversity (urbanised, rural, mountainous areas, etc.)** placing them among the most representative regions of the French territory.

Geographical xxtension because of patients and HCPs expectations

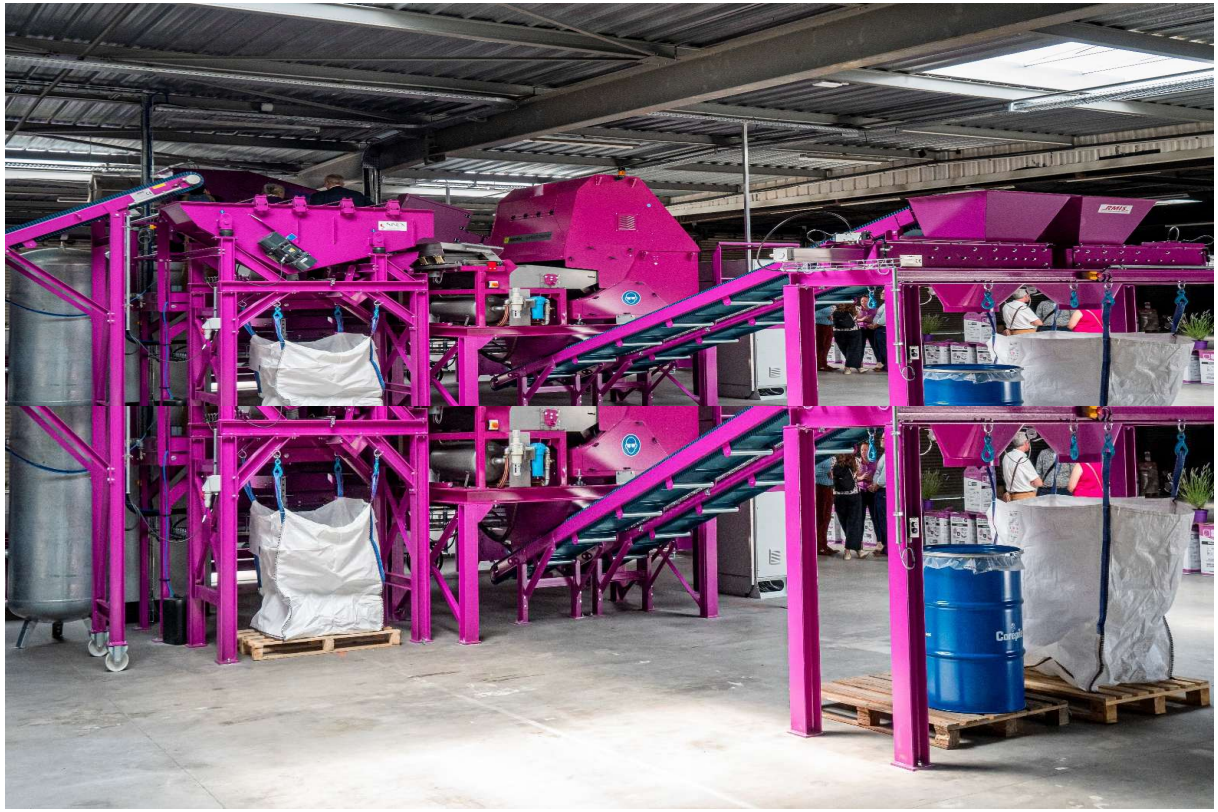
RECYPEN PURPLE BOXES, in practice





THE DASTRI LAB

A technical center dedicated to innovation



The mechanized line allows the separation of 4 material fractions (batteries, plastics, metals and electronic boards) which are then directed to the appropriate recycling channels.

Carton

GEMDOUBS, une entreprise implantée à Novillars (25), valorise les emballages en carton des e-DASRI en bobines de papier recyclé.

Piles

Leur recyclage à 60 % est assuré par FIDAY, une entreprise située à Vesoul (70).

Métaux

Grâce à DEMAIN ENVIRONNEMENT, une entreprise de Lons-le-Saunier (39), les métaux sont valorisés à 100 % en fonderie et aciérie.

Cartes électroniques

Le partenariat avec DEMAIN ENVIRONNEMENT permet également de recycler les matériaux stratégiques des cartes électroniques (or, terres rares, palladium, cuivre...) ; la partie plastique fait l'objet d'une valorisation énergétique.

Plastiques

Des travaux sont en cours avec plusieurs entreprises, et notamment CYCL-ADD, pour identifier les meilleures solutions de recyclage pour certains plastiques : notamment dans la production de produits utilisés à l'hôpital ou en pharmacie.

RECYPEN IN 3 WORDS?

RECYPEN™ IS A...

Collective

Environmental



Local (French)



PROJECT

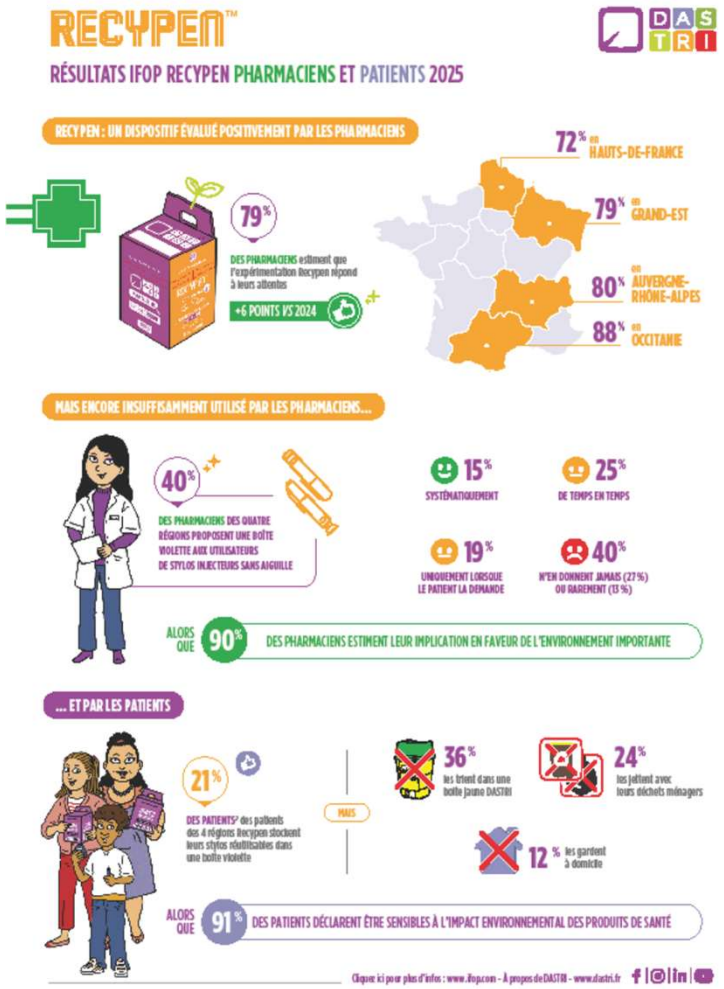
PRIMARY INDICATORS

PATIENT & PHARMACISTS SATISFACTION

79% OF PHARMACISTS SUPPORT THE RECYPEN EXPERIMENT WHICH AIMS TO RECYCLE NEEDLE-FREE INJECTION PENS

91 % OF PATIENTS FEEL CONCERNED BY ENVIRONMENTAL IMPACT OF MEDICAL DEVICES

**Source : IFOP/ DASTRI 2025 barometer*



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RECYCLING BOX DISTRIBUTION & PEN COLLECTION SINCE 2024

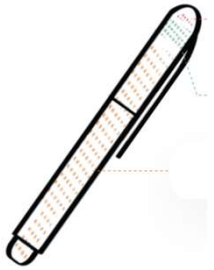


136 968



19 000

360 000*



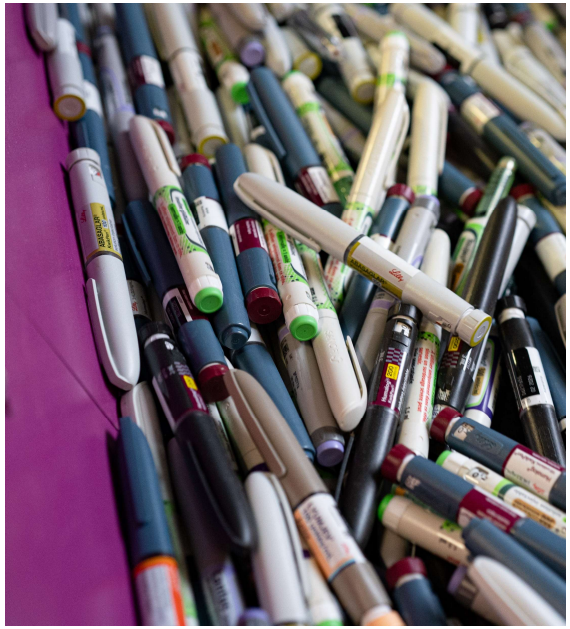
*40% Recypen – 20% Returpen – 30% Other pen

Collected Waste

Pictures taken during the press trip to the DASTRI Lab, 13/12/2024







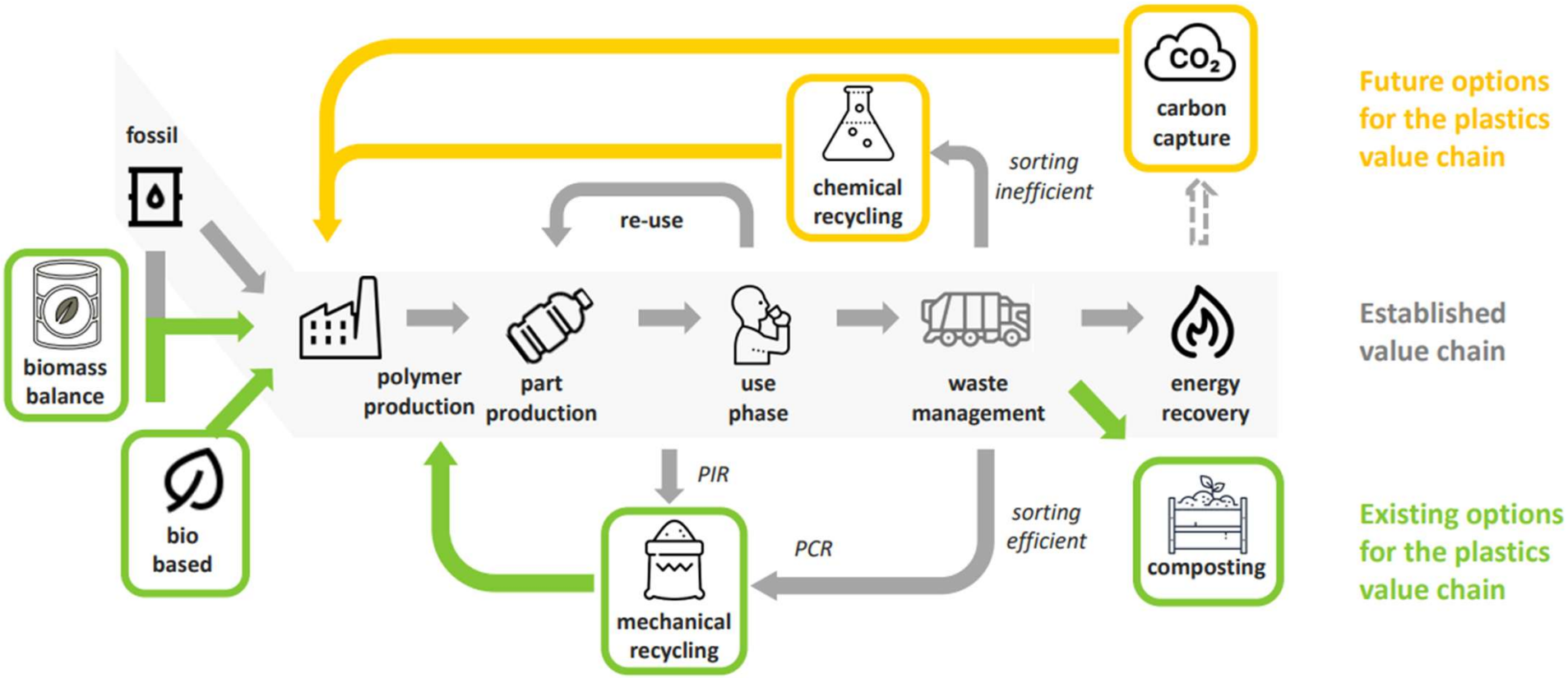
Recycling Pens

Investigation of several recycling paths

The RECYPEN partners are committed to ensuring that this material recycled from medical devices is reused for health purposes. Thus, the production of hospital trays (pictures below), tick removers, and self-lancing devices for blood sampling is currently under study!



Circular Economy in plastic industry



NEXT STEPS

Internal

Roadmap RECYPEN™



TODAY
RECYPEN 1



JUNE 2025 *Collection wave 2*
RECYPEN 1.1 – National extension



SEPTEMBER 2026
Launch of RECYPEN 2 - Inclusion of additional medical devices in the program

RECYPEN 1 → **RECYPEN 1.1** → **RECYPEN 2**

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In summary...

RECYPEN™

A **simple**, **local**, and **collective** initiative that meets the needs of healthcare professionals and patients

First promising indicators

- ✓ Patients and pharmacists satisfaction
- ✓ Increasing amount of devices collected
- ✓ A dozen of pharma companies have joined the RECYPEN 2 WG

Next steps

- ✓ Extension to other MDs (with and without needles)
- ✓ Extension to Hospitals



Our challenges

Collection

- ✓ Establish the RECYPEN habit among patients, pharmacists, and prescribers
- ✓ Optimize storage and collection frequency at pharmacies

Processing

- ✓ Improve the recycling rate of the plastic
- ✓ Mechanize the unpacking & the sorting at eh DASTRI LAB

Recycling

- ✓ Explore other health uses in a "short circuit" (potentially in components of MDs)

