



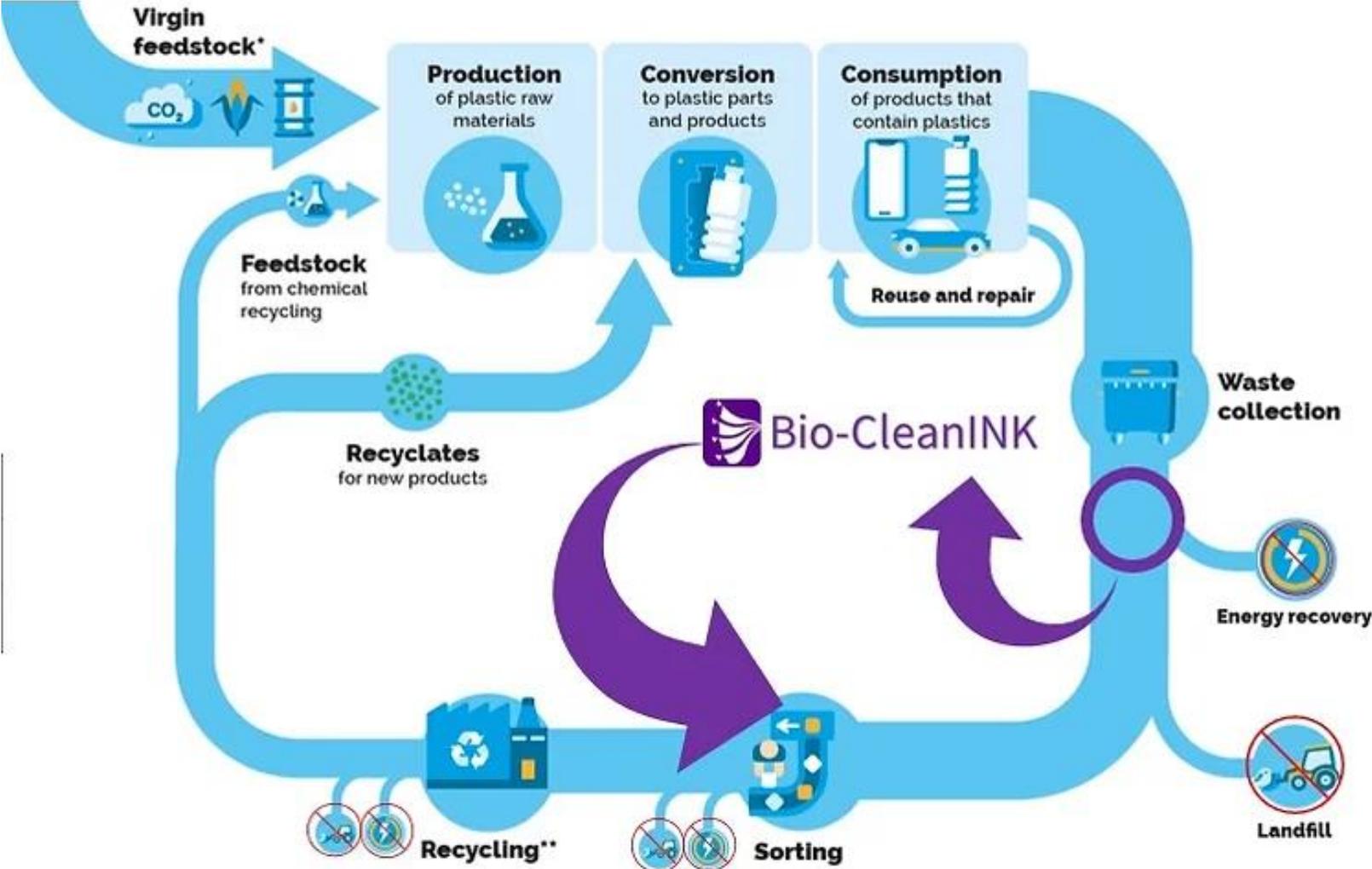
Bio Clean INK

Enabling circular plastic

**WHAT HAPPENS  
WITH THE  
PACKAGE OF  
YOUR FAVORITE  
CHOCOLATE  
BAR?**

BIO-CLEANINK

# How we influence the lifecycle of plastic films?



We remove:

- Inks
- Adhesives
- Primers

From almost any kind of monolayer and multilayer plastic film.

# We sell technology directly

Wasted plastic film with ink or laminated



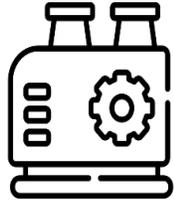
Waste Management Companies



## Bio-CleanINK

Machine

De-inking Liquid



+



€600K

€ 0.25/L

Plastic pellets



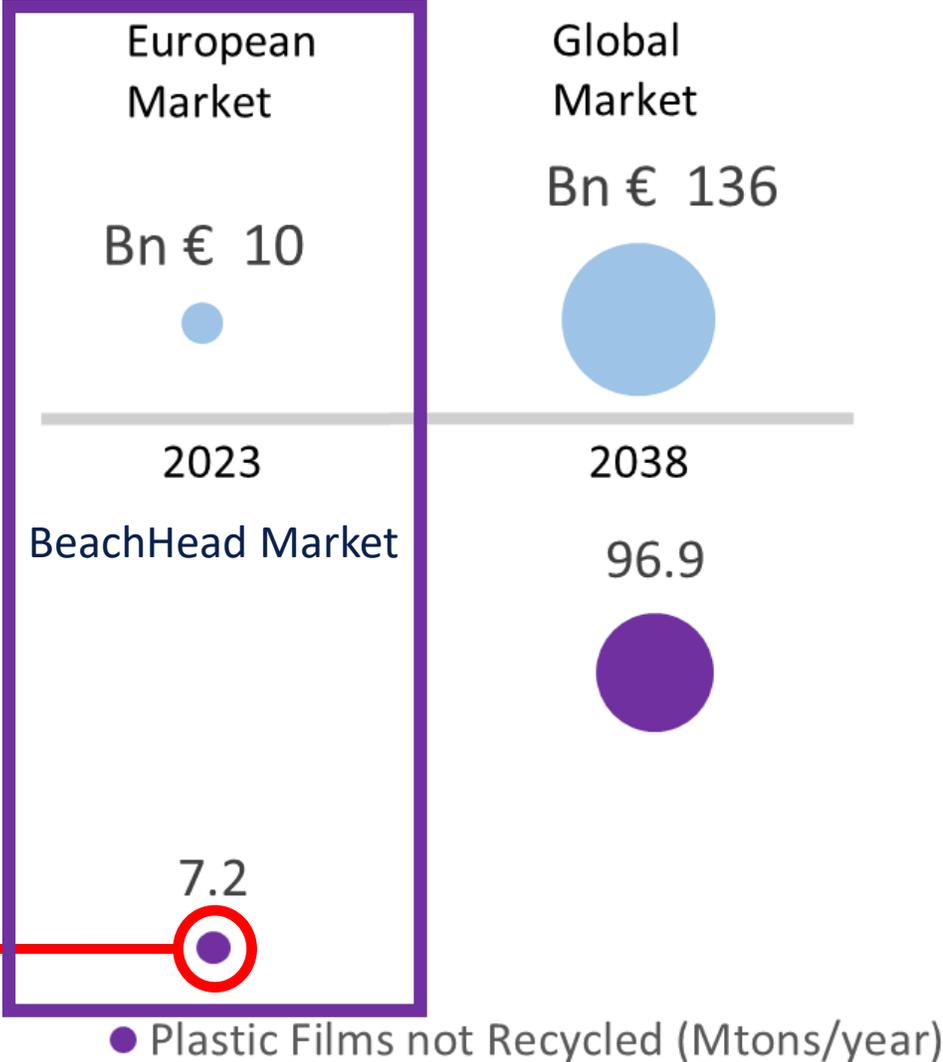
Clean Plastic Film



DEAL

BIO-CLEANINK

# Customers: Waste Management And Recycling Companies



**7.2 Millions of tons/year = 2000 machines**

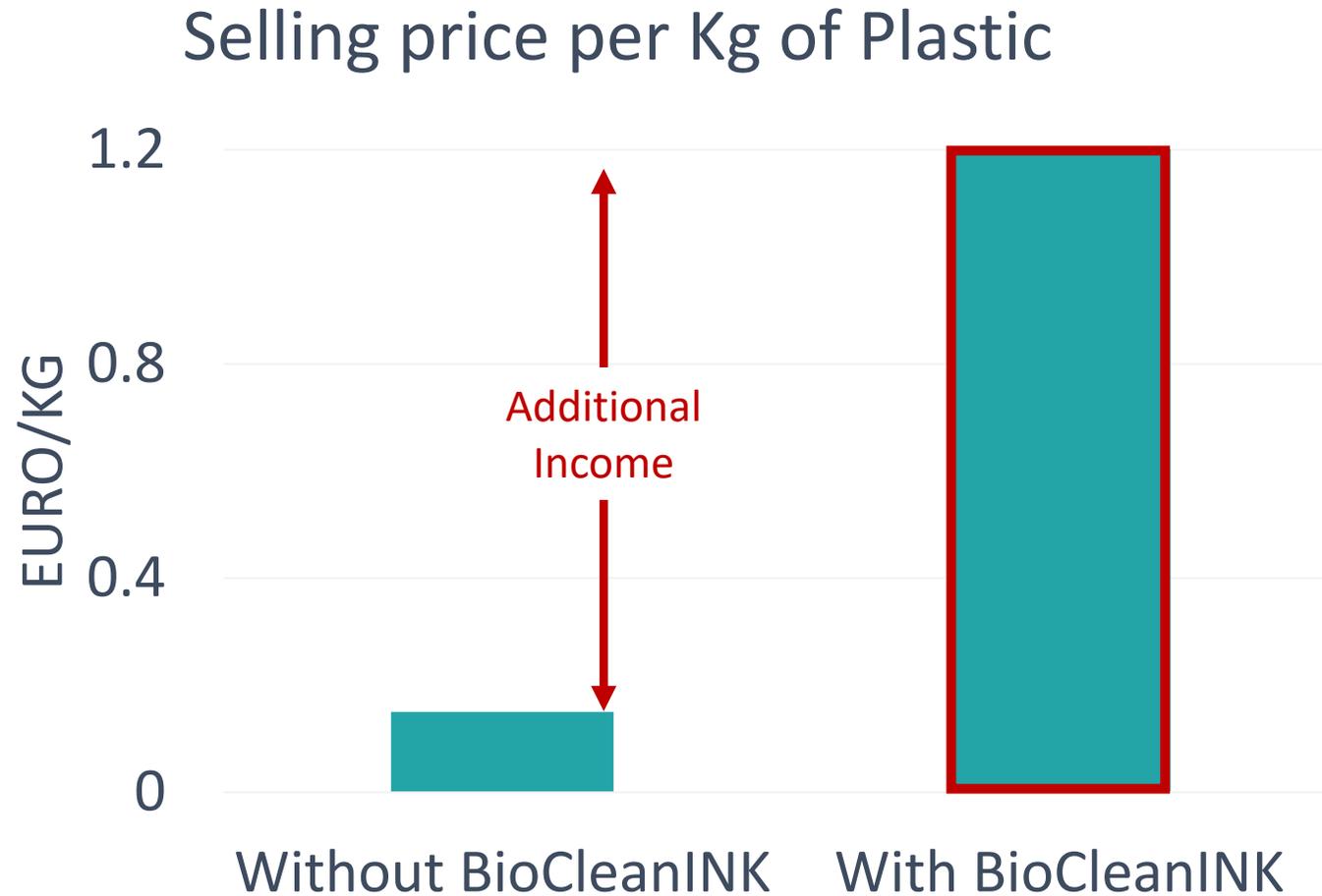
7.2 million tons/year  
**Not recycled plastic films in Europe (2022)**

Source: 2020  
[www.europarl.europa.eu](http://www.europarl.europa.eu)

# Enable customers to access high-value markets with an economical add-on

## Our Clients

get a higher price for the same kg of plastic



VALUE PROPOSITION

# We developed an innovative method to process plastic film waste

## The Product

Pilot plant 500Kg/h.



+



The Machine

Water base De-inking Liquid

## The Process



+

**NO** toxic  
subproducts

Deinking & Extracting different layers

BIO-CLEANINK



## Technical facts from our pilot plant:

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Water use	0.06	L/kg
Cost energy/kg	0.01	euro/kg
Electricity per kg	0.16	Kwh/Kg
Carbon footprint	0.026	CO2 kg- eq/kg
Kg plastic/kg cat	10	kg/kg cat

# From Post-industrial waste or Post consume waste we can:

**1**

**Deinking monolayer plastic films and  
shrink sleeves**

**2**

**Deinking and delamination of  
laminated plastic films and shrink  
sleeves**

**3**

**Deinking and delamination of  
multilayer packaging**

# What does our end user desires?

## Interviews

- 6 Recycling machine producers
- 5 Waste management and recycling companies.

## Key Learnings

- They pay to send plastic to landfill
- They pay to send plastic to Energy Recovery
- They need high output process

## Key assumptions

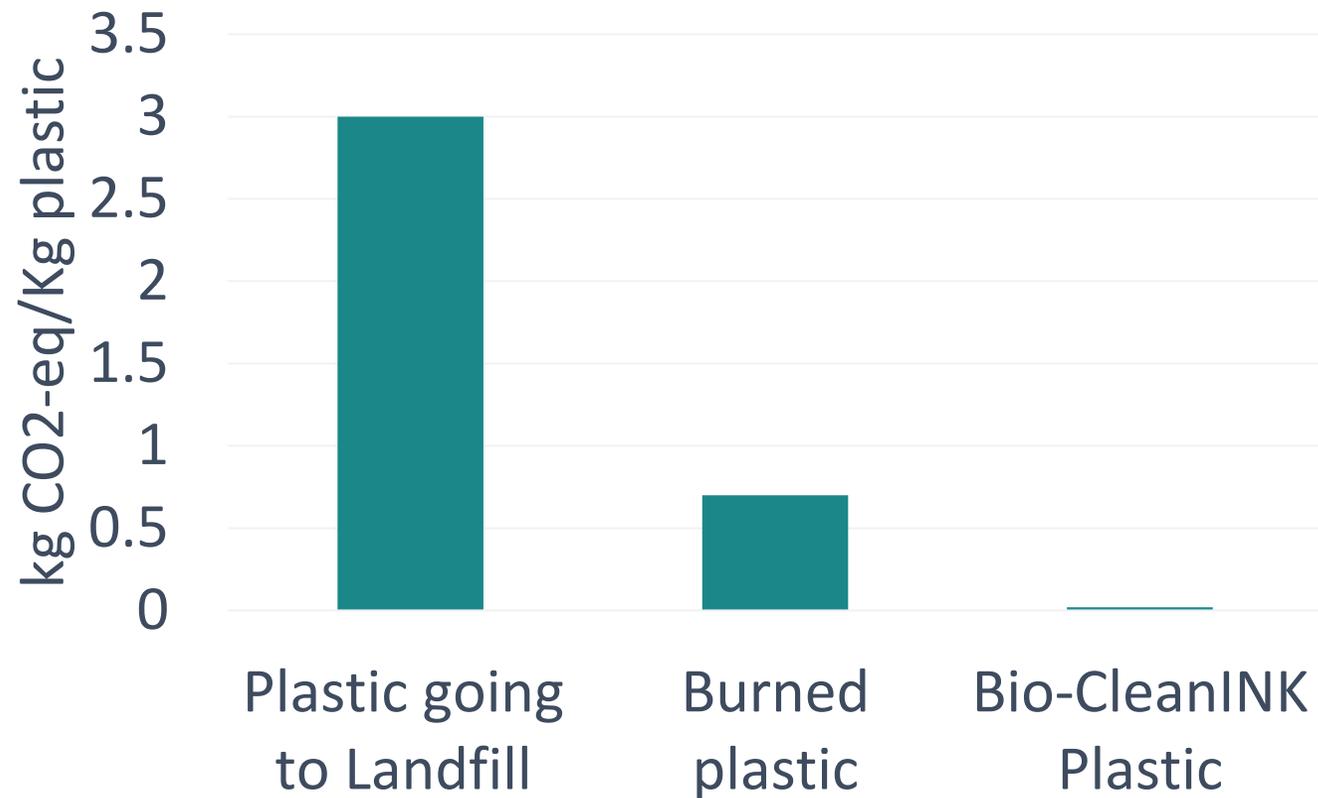
- Inked plastic films pose a recycling challenge
- Deinked recycled plastic is a high value product

# Climate Impact

Reducing new plastic production by enabling plastic film circularity.

Reducing 349  
MT CO<sub>2</sub>-Eq/per year

### CO<sub>2</sub> emissions per KG of plastic



Source: 2020  
[www.europarl.europa.eu](http://www.europarl.europa.eu)



**WHAT'S**

**NEXT**

## What we have next in mind:

- Validation of European Market.
- find key players in the sector.
- Installation pilot plant in Netherlands for at least 500 kg/h fulfilling the European standards.
- Establish food safety standard of the process
- Define a method to predict the processing conditions of the recycled plastic material coming from our process.

# The Team



Julian Zamudio  
Business Developer

Msc. Environmental Technology  
Entrepreneur



Andres Calderon  
CEO

Chemical Engineer  
B2B Sales expert



Jorge Millan  
COO

Chemical Engineer  
Researcher

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## Our Mission

- Decrease plastic pollution and make plastic valuable by de-inking 10% of the plastic film packaging produced in the world (7.2 Mill -Ton/year)
- Generate steady revenue by 2028: 6 million euros/year.
- Go to developing countries and contribute to grow jobs in the sector by plastic sorting.