



**Biobased, biodegradable and water-soluble polymer
made from food industry by-products**

Gilles Crahay, CEO
gcrayah@polypea.be
+32 494 14 75 59



www.polypea.be

**BY 2050, THERE
COULD BE MORE PLASTIC
THAN FISH IN THE OCEAN**

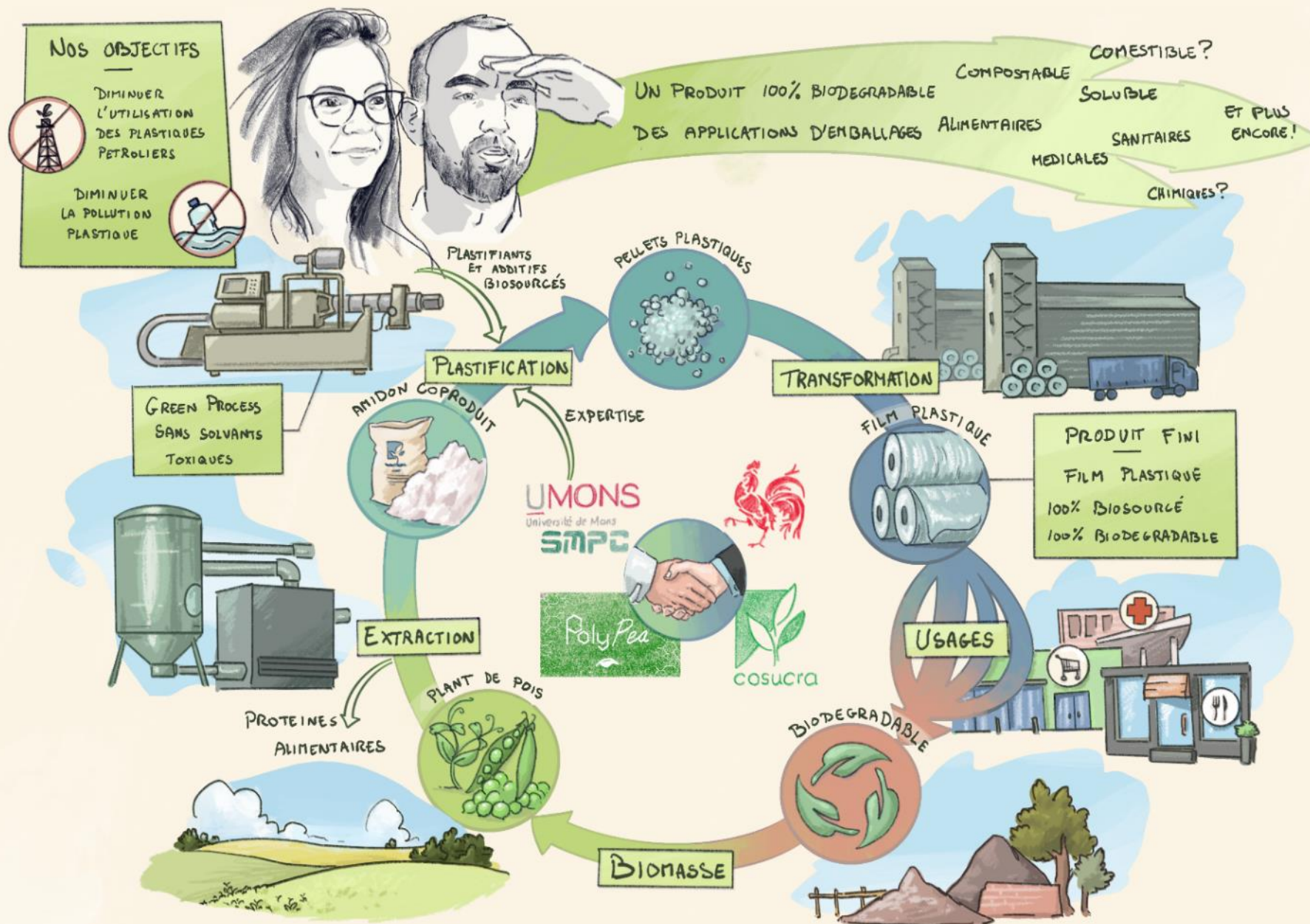
Today, **every laundry pod and dishwasher tablet** is wrapped in polyvinyl alcohol, a **petroleum-based plastic**



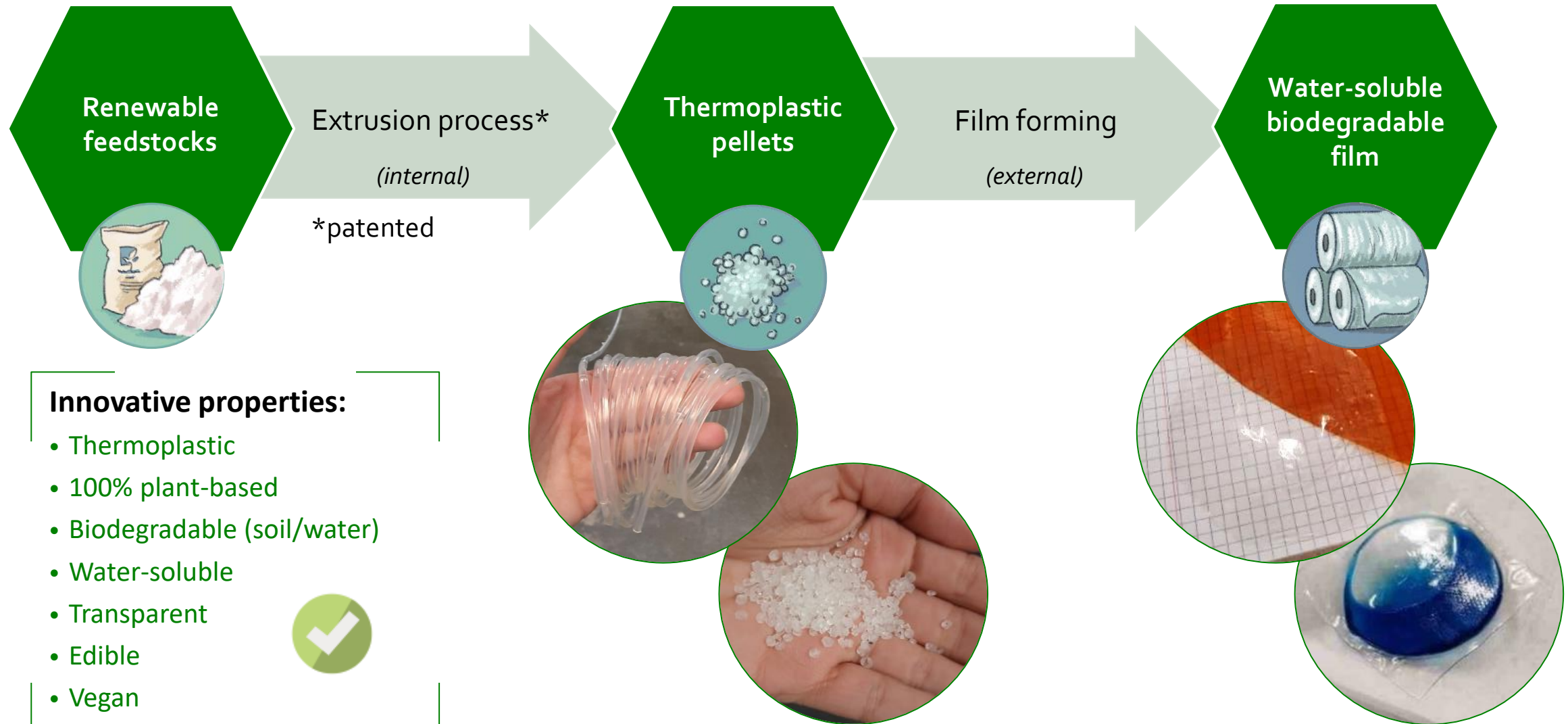
Every year, we consume more than **20.000.000.000 plastic-wrapped** pods and tablets

PolyPea

- Founded in 2020
- Team of 3 people
- R&D in collaboration with



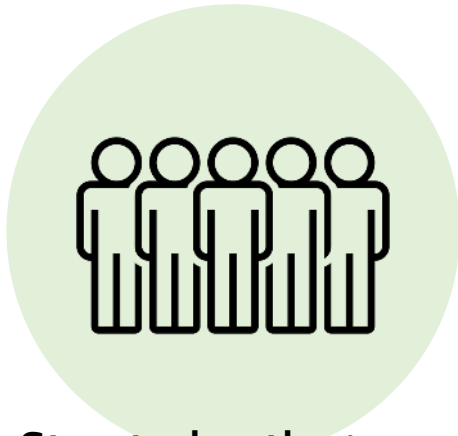
Product and process



Business plan 2023-2026

Industrial development and scale-up phase for the next 3 years.

Objective: **Industrial proof of concept** and sale of a **first product** for market validation.



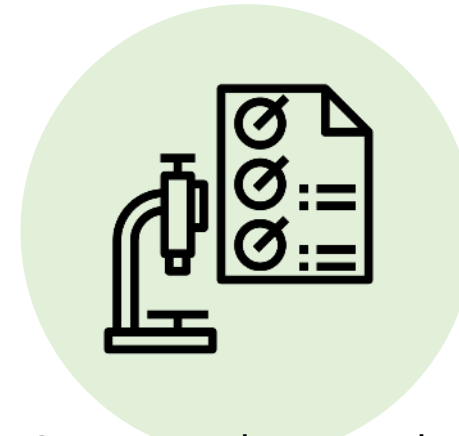
Structuring the team
(5 people in 2025)

800.000 €



Purchase of an extruder
(arrival Sept 2024)

400.000 €



R&D expenditure and IP
(material, studies, certif.)

200.000 €

Main revenues :

- Research grants and partnerships
- First pellets sales by the end of 2024
- Market test with client for **15 tonnes of water-soluble film** in 2026

Current fundraising

- Total amount sought: **€1,500,000** (in equity)



- Prospective investors :

❖ **Warcoing Holding** : family office, actual majority shareholder.

500 k€ confirmed ✓

❖ **WAP Invest** : regional investment fund.

500 k€ confirmed ✓

❖ **Private investor** : VC or corporate.

500 k€ sought 🔍

Given the development plan, we are targeting investors who will be interested in **following up on a second round of financing** and supporting us in the **long term**.



Let's tackle plastic pollution together!

Contact:

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Applications and markets

Use case (A): Water-soluble film for packaging detergent pods

Objective: To offer an alternative to petroleum-based PVOH film, which has a monopoly on the water-soluble film market.

Potential market	CAGR	Selling price	EBITDA
355 M€ ¹ (incl. 95 M€ in Europe)	6 %	8 to 15 €/kg	~ 20-30 %



Client : European leader in private label detergents, with whom we have been working since the beginning of the research to meet their specifications.

Business Model: PolyPea produces and sells pellets to be transformed into films (subcontractor) and then delivered to the customer in the form of reels.



Use case (B): Granules for agricultural seed coating

Objective: To make the production of biobased and biodegradable pellets profitable as an intermediate marketing step.

Potential market	CAGR	Selling price	EBITDA
650 M€ ² (incl. €175m in Europe)	8 %	4-5 €/kg	~ 5-10 %



Client : Seed treatment companies forced by new regulations to change their adhesives (non-plastic).

Business Model: PolyPea produces and sells soluble pellets that enable the application of an adhesive protective layer encapsulating phytosanitary products.



¹ Source: Mordor Intelligence, Global Water Soluble Films Market - Growth, Trends, and Forecast (2020 - 2025)

² Source: MarketsandMarkets, Seed Coating Market by Form, Additives, Process, Crop and Region - Global Forecast to 2027

Team



Gilles Crahay
Founder & CEO

Chemical engineer and entrepreneur, motivated by positive environmental impact and acting on an industrial scale. Director and family shareholder of Cosucra.



Serena Maria Torcasio
Head of research

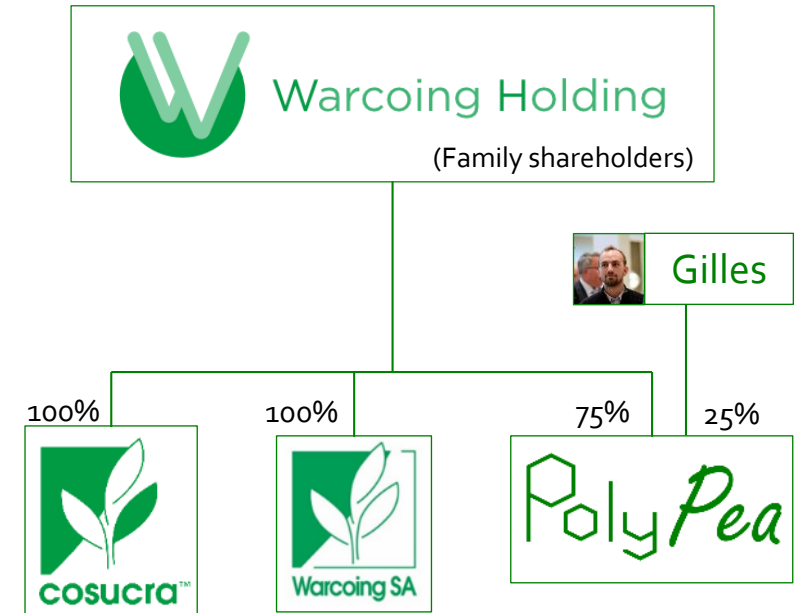
Doctor in chemistry, responsible for the development of the bioplastic formulation, taking to heart the need to be sustainable in both the choice of raw materials and the process.



Athida Khin
Head of industrialisation































Process engineer specialising in extrusion, she is responsible for scale-up and industrialisation of the process. She is also a circular economy facilitator.

Structure



PolyPea is a company linked to Cosucra and legally considered a large company.

Competitors and comparables

Competitor	Size	Creation	Bio-based	Thermoplastic	Vegan	Water-soluble	Biodegradable
	Multinational (300+ empl.)	1953 USA and Japan	 Fossil-based				
	Start-up (60+ empl.)	2014 France	 Milk protein				
	Start-up (60+ empl.)	2014 United Kingdom	 Green algae				
	Start-up (30+ empl.)	2018 United Kingdom	 Pea protein				
	Start-up	2020	 Pea starch				

Future business plan

Profitability is only achieved on a large scale:

- After confirmation of production and sales on an industrial scale, a **second round of financing** is planned (series A, €8-10 million)
- Establishment of a **production unit** with a large capacity extruder (200 kg/h)
- Commitment of a **complete production and R&D team** of 15-20 people
- Target ramp-up to **1,500 tonnes of finished product** sold per year (profitability at ~500T)

All amounts VAT excl.	2026-27	2027-28	2028-29
Sold quantity (kg)	300.000	800.000	1.500.000
REVENUES	3.000.000,00 €	8.000.000,00 €	15.000.000,00 €
Sales of film (10€/kg)	3.000.000,00 €	8.000.000,00 €	15.000.000,00 €
EXPENDITURES	3.976.946,86 €	6.990.874,75 €	11.122.586,90 €
Variable costs	1.287.682,50 €	3.433.820,00 €	6.438.412,50 €
Gross margin (€)	1.712.317,50 €	4.566.180,00 €	8.561.587,50 €
Gross margin (%)	57%	57%	57%
Direct production cost (€/kg)	4,29 €	4,29 €	4,29 €
Salaries	1.002.814,65 €	1.332.196,49 €	1.608.446,03 €
Service and maintenance	210.000,00 €	210.000,00 €	210.000,00 €
R&D (external tests and services)	60.000,00 €	147.899,96 €	398.038,66 €
Management costs (admin, acco)	15.000,00 €	17.000,00 €	20.000,00 €
Products certifications (REACH, T)	9.000,00 €	22.000,00 €	22.000,00 €
Patents	40.000,00 €	50.000,00 €	60.000,00 €
Events and trainings	50.000,00 €	50.000,00 €	50.000,00 €
Royalties (IP UMons + Cosucra)	100.000,00 €	266.666,67 €	500.000,00 €
Other expenses and contingencie	352.449,71 €	611.291,64 €	965.689,72 €
EBITDA (€)	- 126.946,86 €	1.859.125,25 €	4.727.413,10 €
EBITDA (%)	-4%	23%	32%
Indirect production cost (€/kg)	10,42 €	7,68 €	6,85 €
CAPEX amortisation	850.000,00 €	850.000,00 €	850.000,00 €
EBIT (€)	- 976.946,86 €	1.009.125,25 €	3.877.413,10 €
EBIT (%)	0%	13%	26%
Tax (25%)	- €	- €	969.353,27 €
Net profit (€)	- 976.946,86 €	1.009.125,25 €	2.908.059,82 €