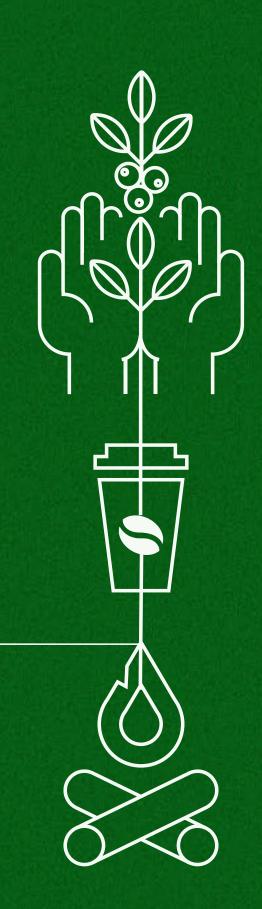
ecobean-g

Upcycling coffee waste into useful raw materials and products





2019 Idea

EcoBean launched in 2018 in Poland with a goal to give second life to Spent Coffee Grounds (SCG) which nowadays are sent to landfill. SCGs are responsible for continually growing landfill size as well as high methane and CO2 emissions thus polluting the environment.

2020 • Expansion

First final EcoBaan product was developed and facility ramped up and first investor KIC InnoEnergy was gained.

Pilots with Partners such asStarbucks, Costa, Circle K were carried out.

EcoBean won two startup competitions guaranteeing POC implementation in Portugal.

2021 Proof of Concept

POC program aims to determine what a successful Eco-Bean business model looks like and to define optimization processes which will satisfy Partners needs and meet environment mission.

POC will allow to measure and assess performance in following areas:

- Environmental Impact
- Logistics
- CSR & Marketing
- Production

NEXT Building a Biorefinery

EcoBean aims at building first in Europe Spent Coffee Grounds Biorefinery.

Continuous R&D works are focused on development of products designed for:

- Food Industry
- Pharma
- Biofuels
- HoReCa
- Animal Feed / Supplements
- Cosmetics Industry

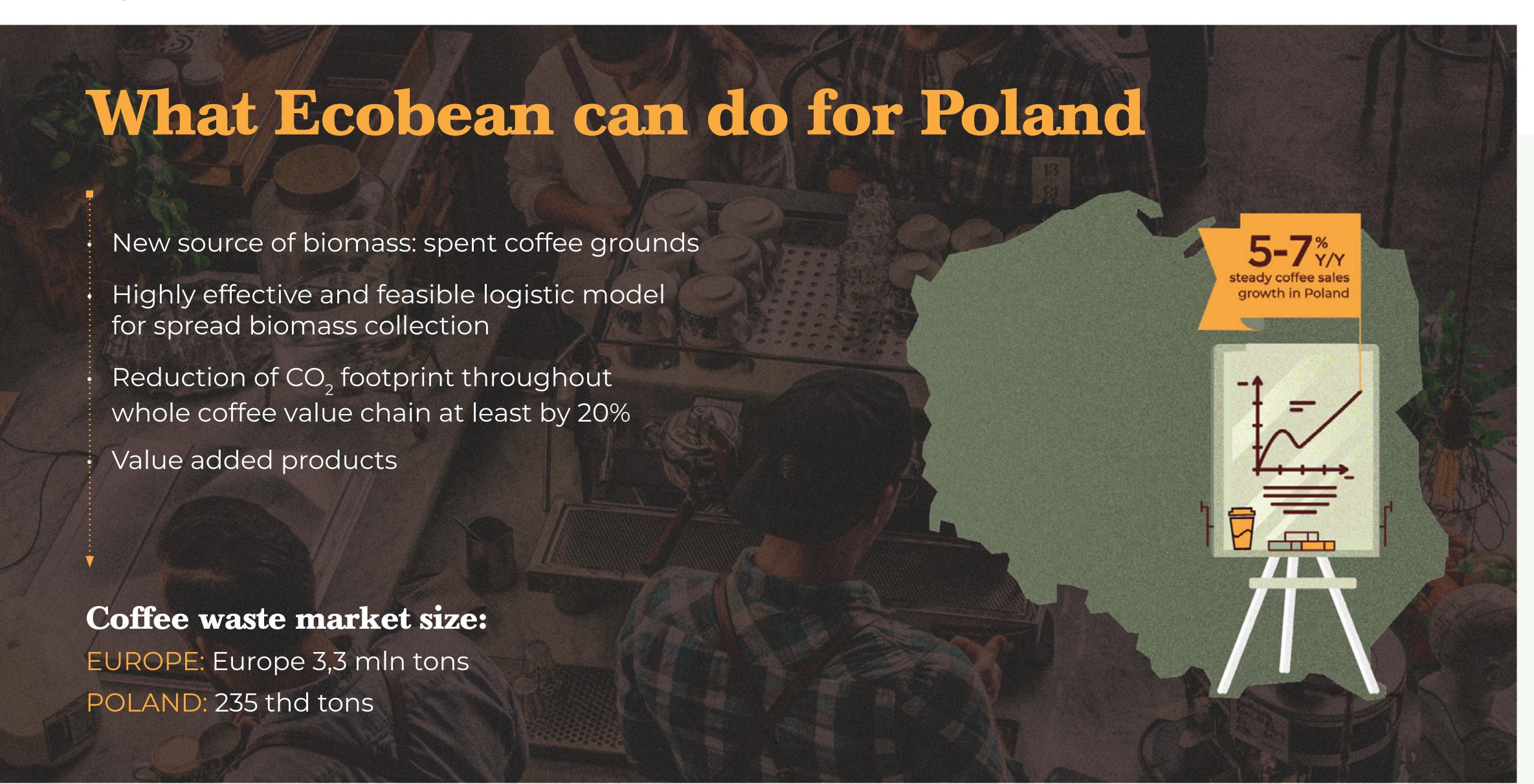
EcoBean story





Only in Warsaw, 40-50 tons of coffee waste end up in landfill sites every day.















Pilot Products



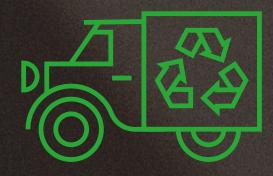




Technology Continuous valorization process (4 in 1 process) Zero waste production (components recovery) New source for raw materials from local waste 1 ton feed additives coffee oil lactic acid lignin of SCG YIELD 13,75% 51% 24% 10% 510 KG 138 240 100 TRL 6 5 4 ionic liquid recovery Ready for basic engineering Increase yield to 12% Ongoing farming R&D Product **Cargill BASF >**prio Huhtamaki validation Ionic liquid Secure whole Bacteria strain usage Equipment solution **IP** potential New type of lignin purification method technology process



Benefits for Partners



Significantly reduce CO₂ emission (landfill vs EcoBean)



Option to sell green products via own sales network



Gain competitive market advantage (i.e RFI, tenders)

Introduce the first zero coffee waste programme Become the first industry player to close the circular loop



Why now?

"Climate Neutral by 2050" strategy

EU's long-term strategy set to achieve the economic transformation and sustainable development goals, as well as to move towards the goal set by the Paris Agreement.

Single-Use Plastic Directive (SUP)

Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment.

Renewable Energy Directive (RED II)

Directive (EU) 2018/2001 (recast) on the promotion of the use of energy from renewable sources. In RED II, the overall EU target for Renewable Energy Sources consumption by 2030 has been raised to 32%.

The European Green Deal

New growth strategy that aim transform the Union into a modern, resource-efficient and competitive economy.

Regulation of Air Pollution

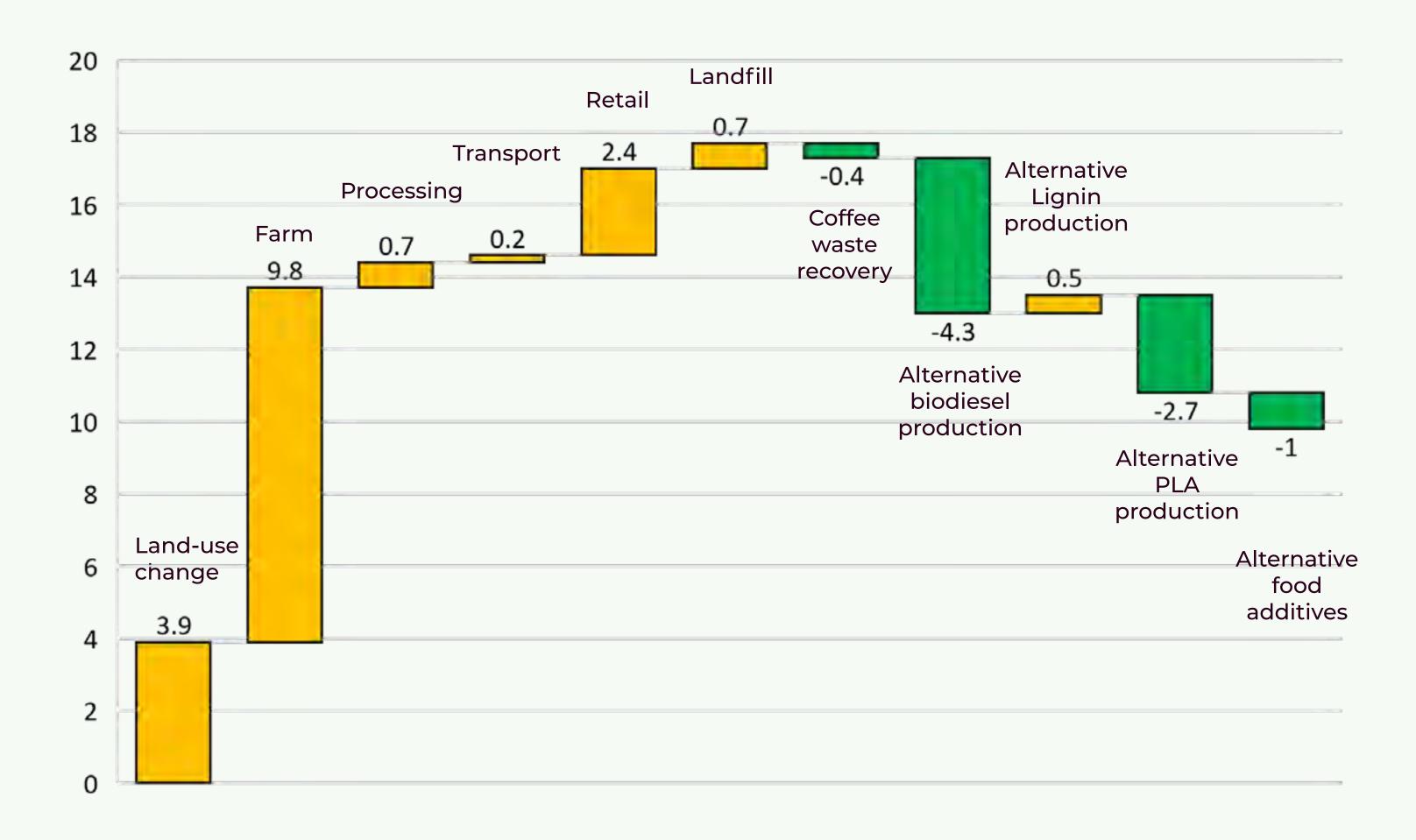
EU Council adopted regulations reducing CO2 emissions from passenger cars. By 2030, passenger car emissions must be reduced by 37.5%, and vans by 31% compared to 2021.

Waste Framework Directive

EU Directive 2008/98/EC requires all Member States to select of bio-waste and ensure that it is re-used.

Decreasing coffee CO₂ footprint

Thanks to the use of waste biomass to obtain many products, Ecobean is able to reduce the carbon footprint in the entire coffee chain at least by 25%, valorizing spent coffee grounds for raw materials and green products





Our wins

Q4 2021

InnoEnergy seed round (€1 500 000)

235 000 €

Additional 235 000 € achieved in grants during 2021

4 GREAT WINS

Won 4 implementation projects, 3 in Portugal and 1 in Germany (JumpStart, Microsoft for Impact, SOL Green Capital, Vattenfall & EDGE)

Starbucks Trial

Trial implementation with Starbucks (20 caffes in Poland)

5 PRODUCTS

5 products development

(biodegradable flowerpots, coffee oil, lignin, lactic acid, protein additives)

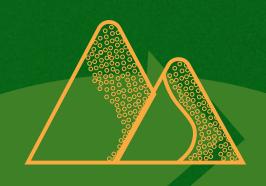
PIPELINE

20 market leaders in pipeline (Costa, Shell, BP, ORLEN, MOL, PWC, Deloitte, Żabka, Delta)

PROCESS

Complete circular technology for coffee waste extraction development (biorefinery process)

Value chain & market



AMREST COFFEE

Commercial Partner SCG source



Current Logistic Partner



- Biorefinery Line - Technology Partner **WUT** - Technology Partner



HoReCa



SERVICES

LOGISTICS

TECHNOLOGY





















Deloitte. 💆 BNP PARIBAS



PRODUCTION





















AMREST COFFEE

Final Product Validation

New Products

Team

Managment

Kacper Kossowski
Co-founder

Marcin KoziorowskiCo-founder & CEO

R&D

Prof. Ludwik SynoradzkiHead of R&D

PhD Jerzy Wisialski CTO

PhD Sławomir Safarzyński Chemical Engeniering

Łukasz Wysocki R&D Specialist Prof. Joanna Cieśla

BIO Technologist

PhD Marcin Śmiglak lonic Liquids

Prof. Andrzej ChwojnowskiBIO Engeniering

Katarzyna Tarka-Chmielecka

Supply & Logistic Manager

+100

Combined years of experience

+40

Implemented chemical technologies

PLN +175 mln

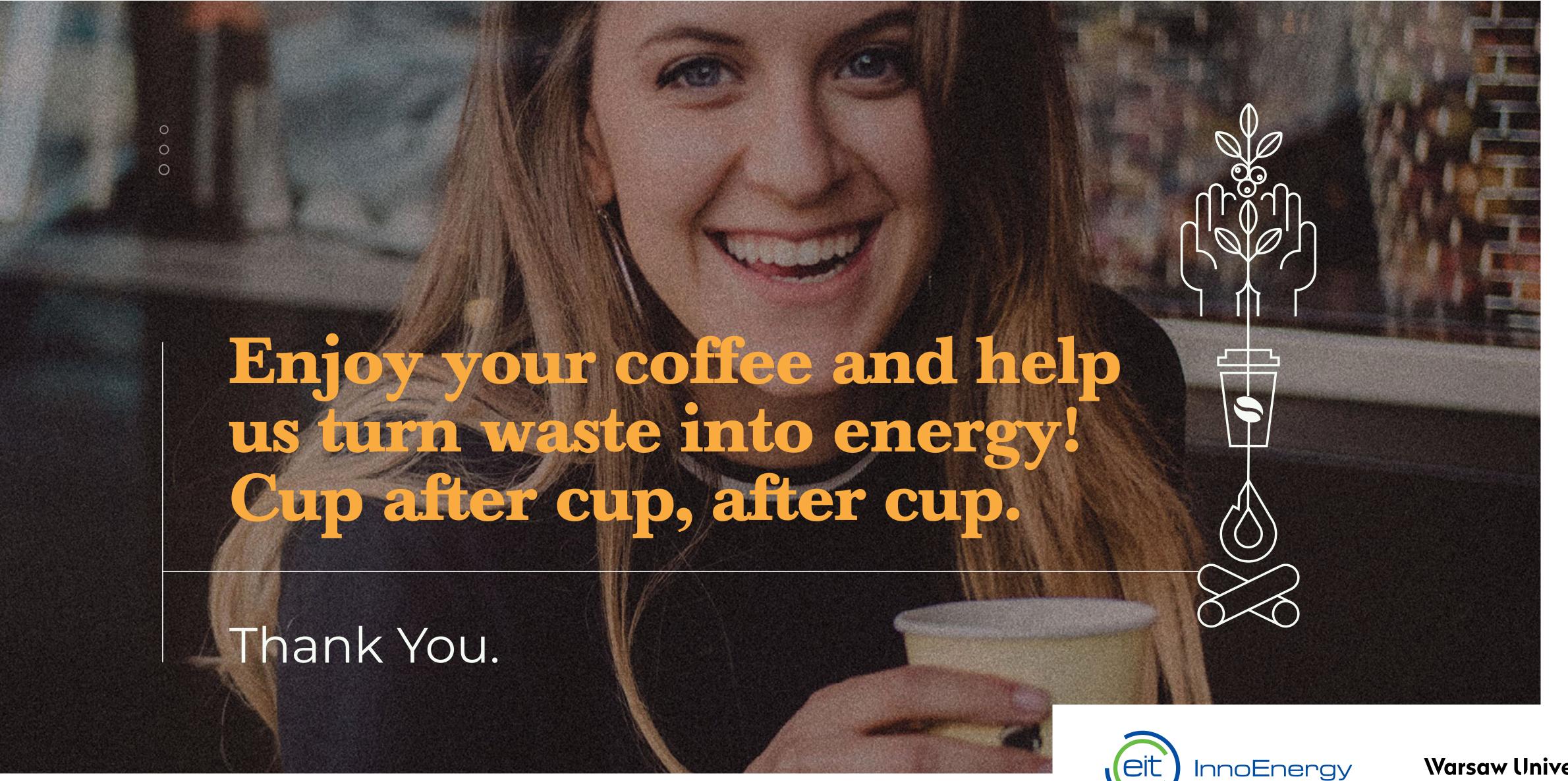
Value of co-founded companies

Operations

Alicja MurphyCreative Director

Ewa Kowalczyk-Szostak

Operations Manager



Knowledge Innovation Community