

CACAO CIRCULAR

A venture that emerged from the **YCI program**

26th CTCN Advisory Board Meeting
October 16th, 2025

Angélica Reiban
Co-Founder

Youth Climate Innovation Program(YCI) | Venture: Cacao Circular | Angélica Reiban - 2025





ANGELICA REIBAN

- Lawyer and Political Scientist
- Master's candidate in IHDS - University of Geneva
- Community-based social innovation



GUSTAVO CASTILLO

- Biotechnologist
- Founder of Bioleather Lab (Perú)
- R&D Waste Management

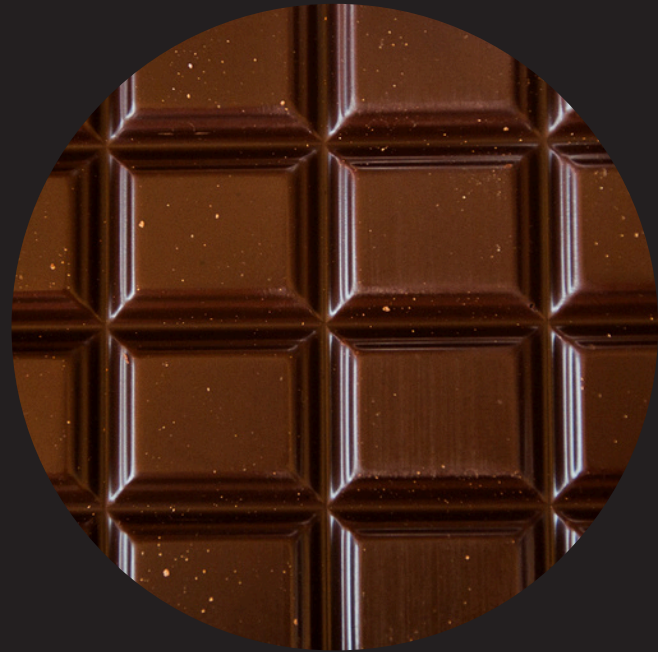
PROBLEM

From a single cacao fruit

80%

residual biomass gets discarded

Biotechnological approaches for cocoa waste management: A review, *Waste Management*, Volume 90, 2019.
Suganthi, R., Saravanan, R., Brundha, A., Bowya, T., Lakshmi, A., Abirami, P., & Ashwini, M. (2024). Novel approaches in processing of cacao byproducts and their applications for a sustainable future. En *Sustainable Cacao Cultivation in Latin America* (1st ed., cap. 15). Routledge.



**1 kg of cacao for
chocolate**



**10 kg of solid
waste**

PROBLEM

**TOTAL CACAO
WASTE**

12.4

million tons per year

(shells, pulp, peels, post-harvest residues)

Naranjillo Community,
San Martín Region, Peru

October 2024



NEGATIVE IMPACT

The absence of proper waste management not only hinders the valorization of cacao byproducts but also results in



ENVIROMENTAL IMPACT

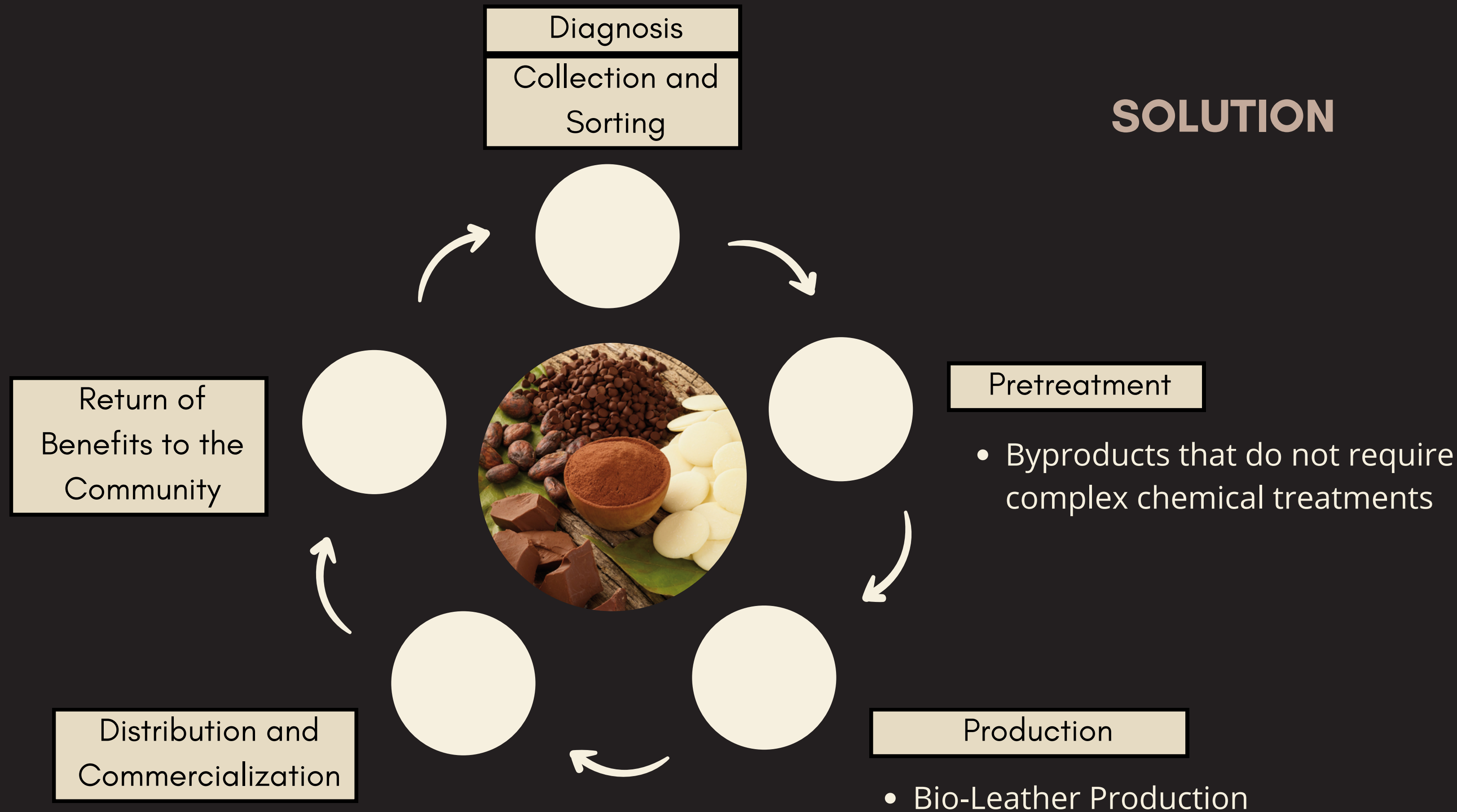


SOCIAL & GENDER IMPACT



Our solution proposes a circular model for the valorization of cacao waste, **starting** and **ending** in cacao-growing communities.

SOLUTION



Diagnosis
Collection and
Sorting

Pretreatment

- Byproducts that do not require complex chemical treatments

Production

- Bio-Leather Production

Return of
Benefits to the
Community

Distribution and
Commercialization

COMMUNITIES



COOPERATIVA ACOPAGRO

- 3,000 hectares of cocoa
- 1,500 families
- 16% women (members)

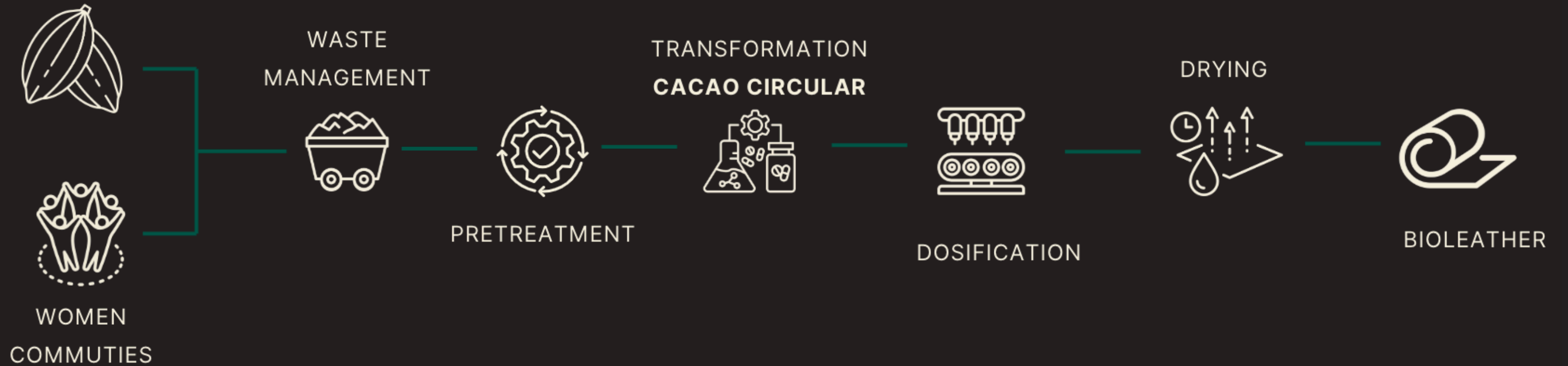
ALLIMA CACAO

- 1,012 hectares of cocoa
- 379 families
- 12% women (members)



BIOLEATHER process

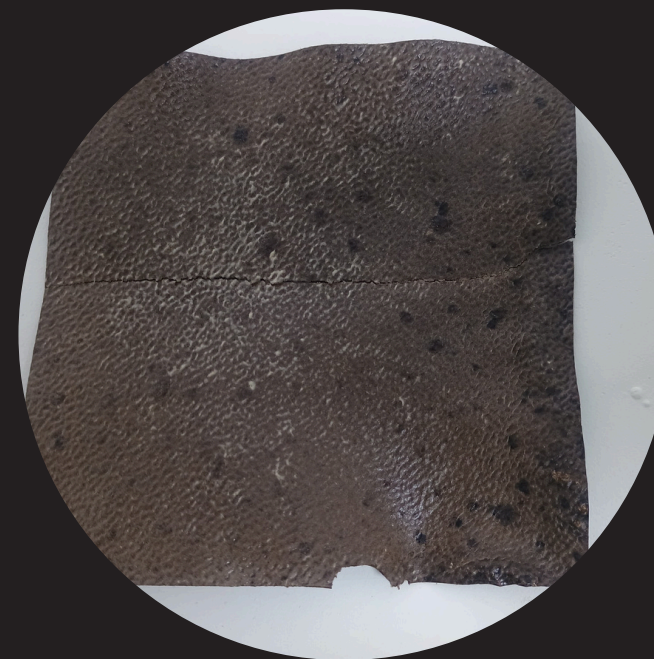
CACAO WASTE



EMISSIONS REDUCTION



12 kg of cocoa waste



1 m² of Bioleather



Reduces 80 kg CO₂ eq / m²

and -90% of water resources



1 m² offsets CO₂ equivalent
to 3 trees/year

SDGs IMPACT

5 IGUALDAD
DE GÉNERO



- Empowers rural and Afro-descendant women.
- Reduces gender inequalities in access to economic opportunities.

8 TRABAJO DECENTE
Y CRECIMIENTO
ECONÓMICO



- Creates sustainable local jobs.
- Promotes women-led and community entrepreneurship.

9 INDUSTRIA,
INNOVACIÓN E
INFRAESTRUCTURA



- Develops an innovative circular bioeconomy model.
- Transforms waste into value-added products

12 PRODUCCIÓN
Y CONSUMO
RESPONSABLES



- Reduces cacao waste through valorization.
- Promotes sustainable practices in the cacao agroindustry.

IDEA LAB

- Aligned our goals and backgrounds.
- Found a project we are truly passionate about.
- Drafted the first business model and defined the problem.

ACCELERATOR

- Define the final business model.
- Create the company.
- Develop the marketing strategy.
- Engage with potential investors.



INCUBATOR

- Validated the product (Pilot 1 and 2).
- Explored and tested different business models.
- Assessed economic feasibility.
- Established first contacts with local communities.



Communities and women as
protagonists of the circular
economy and climate
resilience.

Cacao Circular, 2025.



**THANK
YOU**