



Pabas Energy

Where Fashion Ends, Energy Begins

Project by



Team A01

Edition #1 - 2025

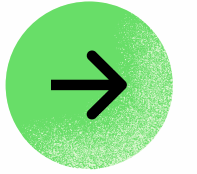
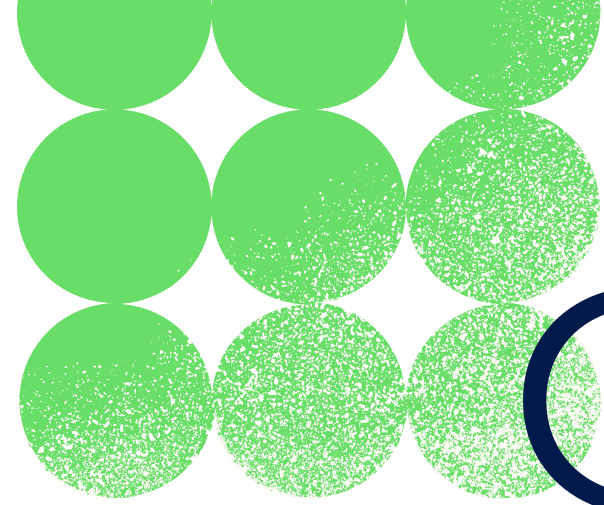


The Problem

CLOTHES WASTE

- **6.9** Mt/year of EU textile waste
- Most non-recyclable due to blended fibers
- ~**85%** incinerated or landfilled
- Textile incineration: ~5.9 tCO₂e/ton
- Costs: **€100-300/ton** (disposal + environmental damage)

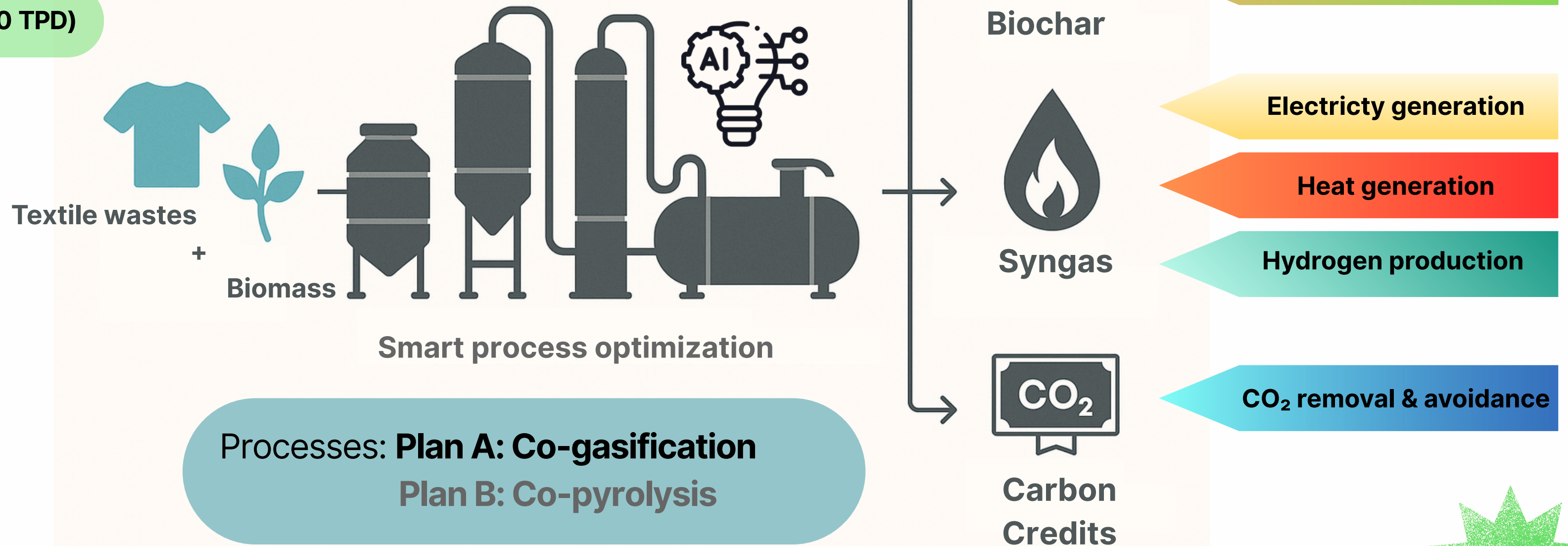
Source: Management of used and waste textiles in Europe's circular economy — European Environment Agency



Our Solution ✨

Modular Plant Unleashing the **Hidden Energy** in all Fibers

(20–100 TPD)





Impact & Outcomes

1 TON PROCESSED

- 1–3 tCO₂e avoided
- ~0.6 tCO₂e sequestered (biochar)
- 6–8 GJ renewable energy

50 TPD PLANT

Each plant can generate: 30,000–45,000 tCO₂e per year in Credits

MODULAR & LOCAL

Low transport cost, fast to deploy

Aligns with SDGs

7 AFFORDABLE AND
CLEAN ENERGY



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



13 CLIMATE
ACTION



5/10

Market



Focus EU & Notes

- Biochar market: \$680M → \$2.1B by 2032
- Voluntary carbon credit market: high-quality removals @ €50–100/tCO₂
- EPR mandates, PNRR & EU Green Deal = tailwinds

Opportunity

1,173 Bln €

TOTAL AVAILABLE MARKET (TAM)
6.9 Mt EU textile waste + 900 Mt biomass EU

51 M €

SERVICEABLE AVAILABLE MARKET (SAM)
Accessible textile waste in Italy: 200,000–300,000t/yr

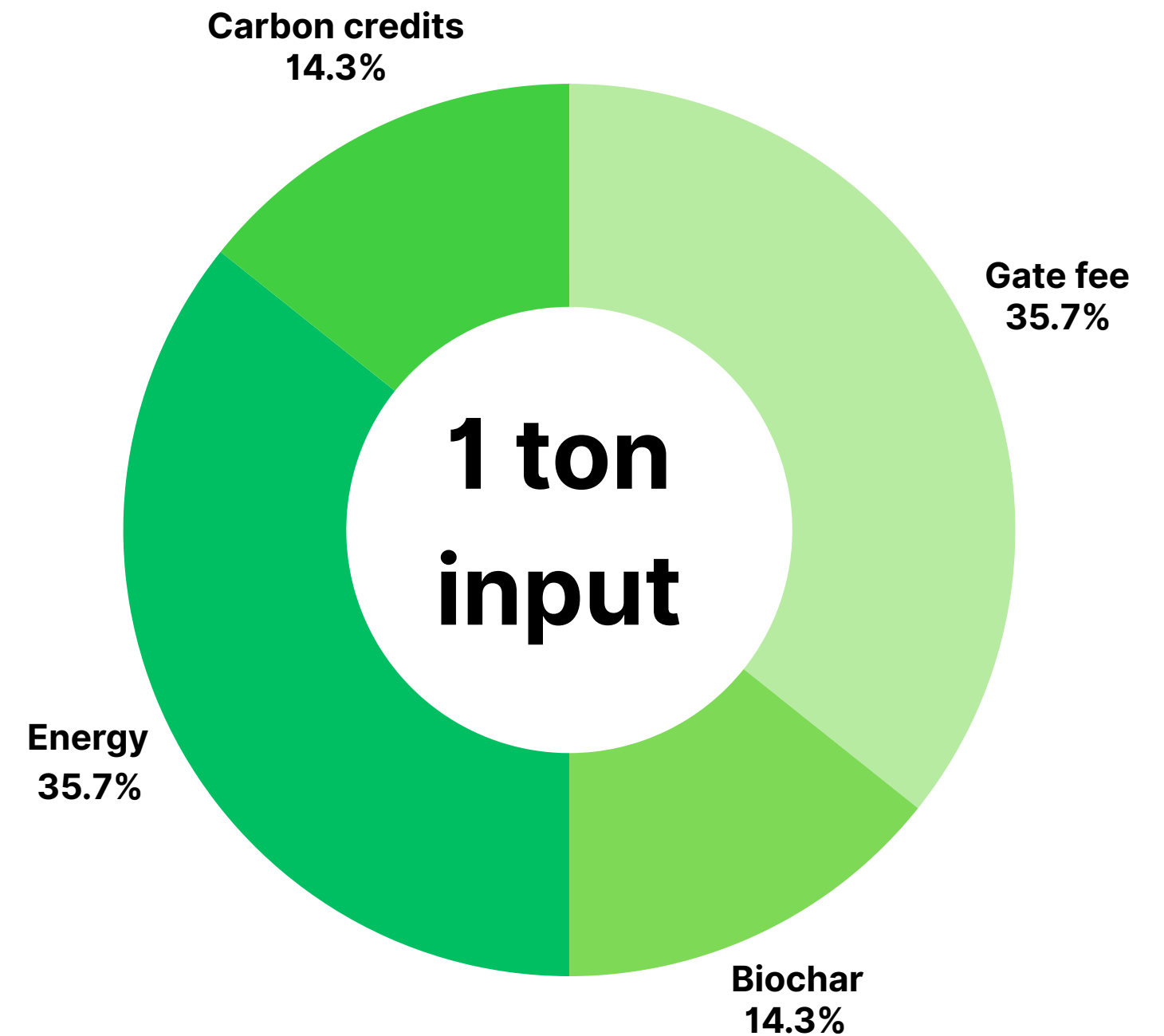
8,5 M €

SERVICEABLE OBTAINABLE MARKET (SOM)
Italy phase 1: 50,000–100,000 t/yr = 5–10 plants

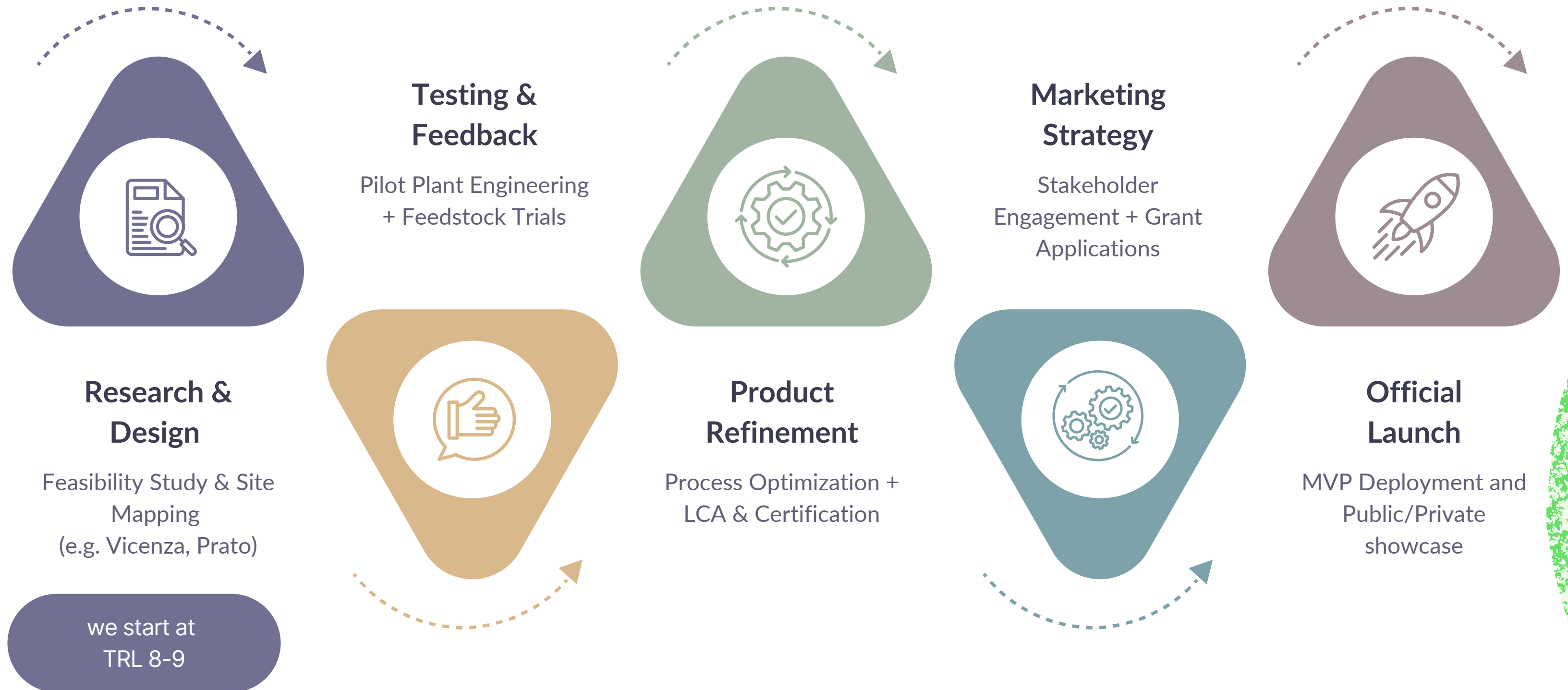
Business Model

Per tonne of input:

- **Gate fee:** €50–150
- **Biochar sales:** €30–50
- **Energy** (bio-oil/syngas): €80–120
- **Carbon credits:** €15–50
- **OPEX:** ~€90/t
- **Net revenue:** €150–250/t



Roadmap



Financials

EU regulations are forcing a shift: mandatory textile waste collection by 2030 and carbon removal frameworks are unlocking new markets. Fast fashion overproduction, ESG pressure, and biomass underutilization have converged - creating the perfect situation for our idea to be developed.

Asking for

- €3–5M** (equity + grants) for:
- Engineering, permits, equipment
 - Site installation, pilot operation
 - LCA + certification + carbon credit validation

Potential

- **€1–2M/year/plant** in revenue
- Goal: 50+ plants in 5 years across Italy & EU
- Scale via partnerships + licensing

Estimated ROI

- EBITDA margin per plant: ~50–60%
- Payback: ~4–6 years
- High upside from carbon credit price appreciation & waste fees

Meet Our Team



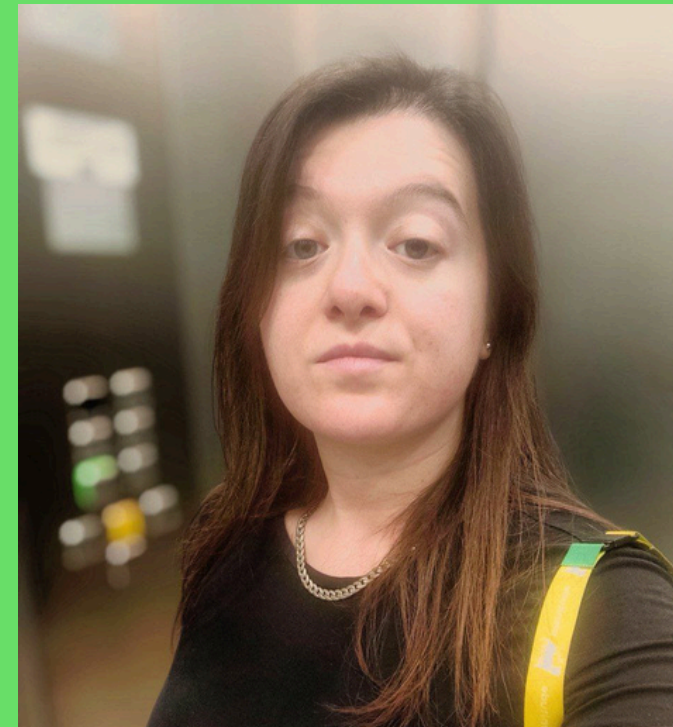
**DR.ALIREZA
SHAFIZADEH**
Process, Products, and
Technical validation



ALBERTO ANDRETTA
Market and Business
modeling



PIETRO DE FINIS
Strategy, Impact,
Communication



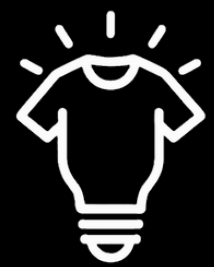
SILVIA BRISCESE
Project Manager
R&D



ANGELA PARISE
Regulatory compliance
and Legal mapping

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Thank You



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