BioVal: Waste Valorisation for Climate Change Mitigation

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The Challenge: Waste & Climate

Europe produces >100m tonnes of food & agricultural waste annually.

Much is landfilled or incinerated. Increased emissions and lost resources.

Urgent need for scalable, verifiable carbon removal.

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The Solution: BioVal System

A modular system combining:

- Nutrient recovery from waste
- Photobioreactors for CO_2 removal
- Permanent carbon storage as char

The system’s outputs are verified carbon credits and biofertiliser.

The Consortium

Nellie Technologies (UK) – system integrator, carbon removal tech.

Waste Partner: municipal/industrial/agricultural waste supplier & host.

Third Partner: certification, industrial scaling, or market offtake.

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Impact & Benefits

An 18–24 month demonstration validating municipal & agricultural waste streams into CDR.

Delivers:

- **Permanent CO_2 removal.**
- **Verified CORCs for rev share.**
- **Biofertiliser for sustainable agriculture.**

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Turning Watse into Benefit

- Market: $100bn+ carbon removal by 2030.
- Aligned with Eurogia mission: clean energy, decarbonisation, circularity.
- Funding and partners sought to scale across Europe.

Contact.

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Project Work Packages

Site preparation & permitting
Waste feedstock secured
MoU signed with waste partner

Aerobic digestion & photobioreactor integration
Initial waste-to-algae trials
Nutrient characterisation

Pyrolysis commissioning
First biochar & biofertiliser production
MRV platform operational

Verified CORCs issued & allocated
Agronomic testing of biochar
Community engagement activities

Impact assessment
Replication & scale-up roadmap
Go/No-Go on wider European deployment

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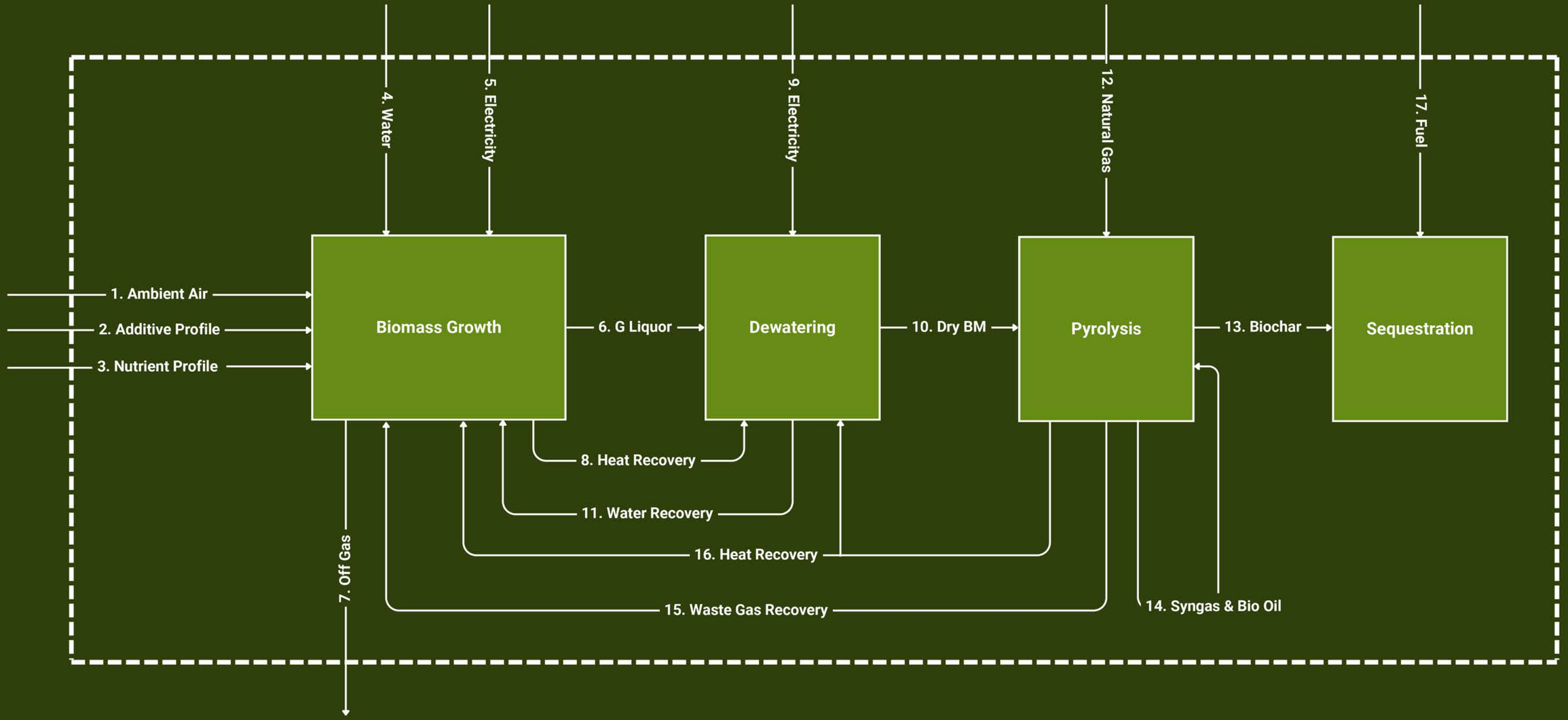
Meaningful partnerships.

We acknowledge (and are grateful for) the support of our partners in our journey so far.

Without the help (both financial and otherwise) of these great organisations, we'd still be a pipe dream (literally, as the prototype was made of a few pipes).



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Broad system boundary ensures supply chain security and high levels of control