

Interreg
Europe



Co-funded by
the European Union

CITISYSTEM

Mezzo Energy – Green City Systems – Urban Biowaste collection

Didier Lodewyckx

Co-Founder Mezzo Energy – Green City Systems

Didier@mezzoenergy.eu

21 may 2024 | Mechelen - Belgium



Green City Systems: every team their task



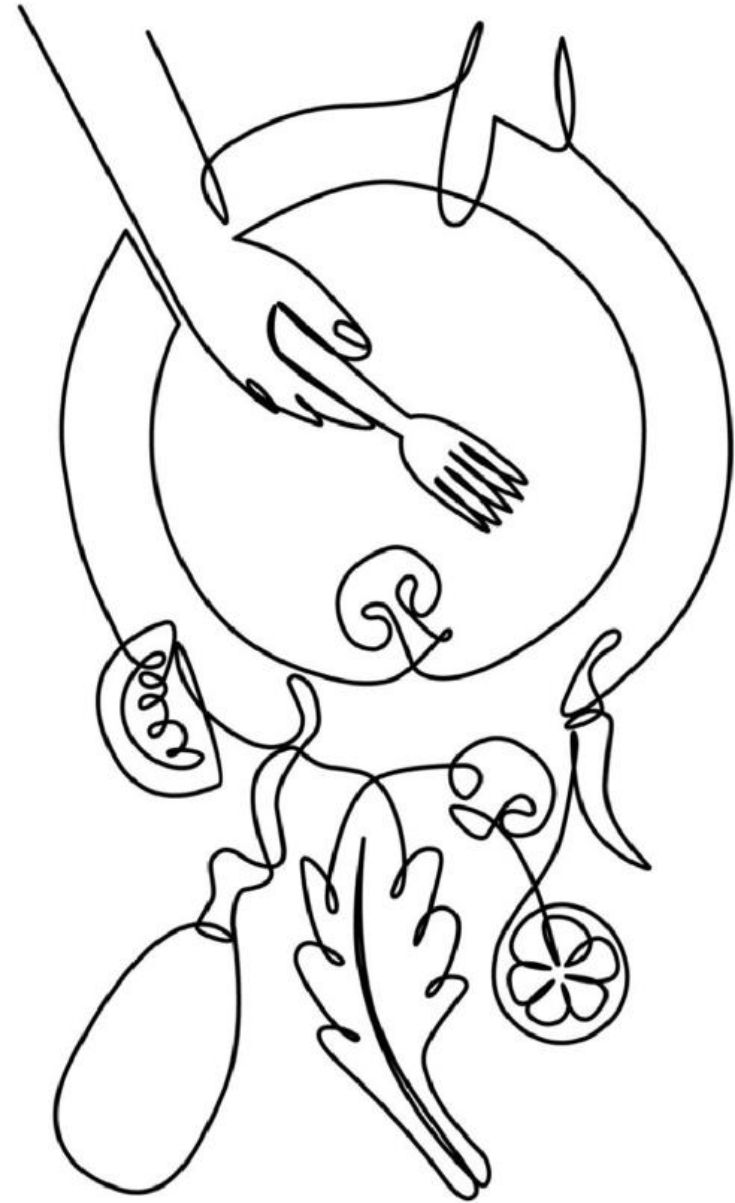
Experts in biogas production technology

- Belgian distributor of SEaB's biodigester systems
- Comprehensive installation services (setup, operation, licensing, maintenance and monitoring)
- Proven track record in waste collection across major French cities



Green City Systems Mechelen

An ecosystem transforming organic kitchen waste into renewable energy resources through collection and processing.



Municipality of Mechelen



Organic waste management in Mechelen's catering sector:

- Selective collection service promoting sustainable urban logistics
- Industry-endorsed collection containers
- Cost-effective solutions for catering businesses
- Kitchen waste handled following circular economy principles

Green City Systems represents a local ecosystem for waste



Green City Systems represents a local ecosystem for waste

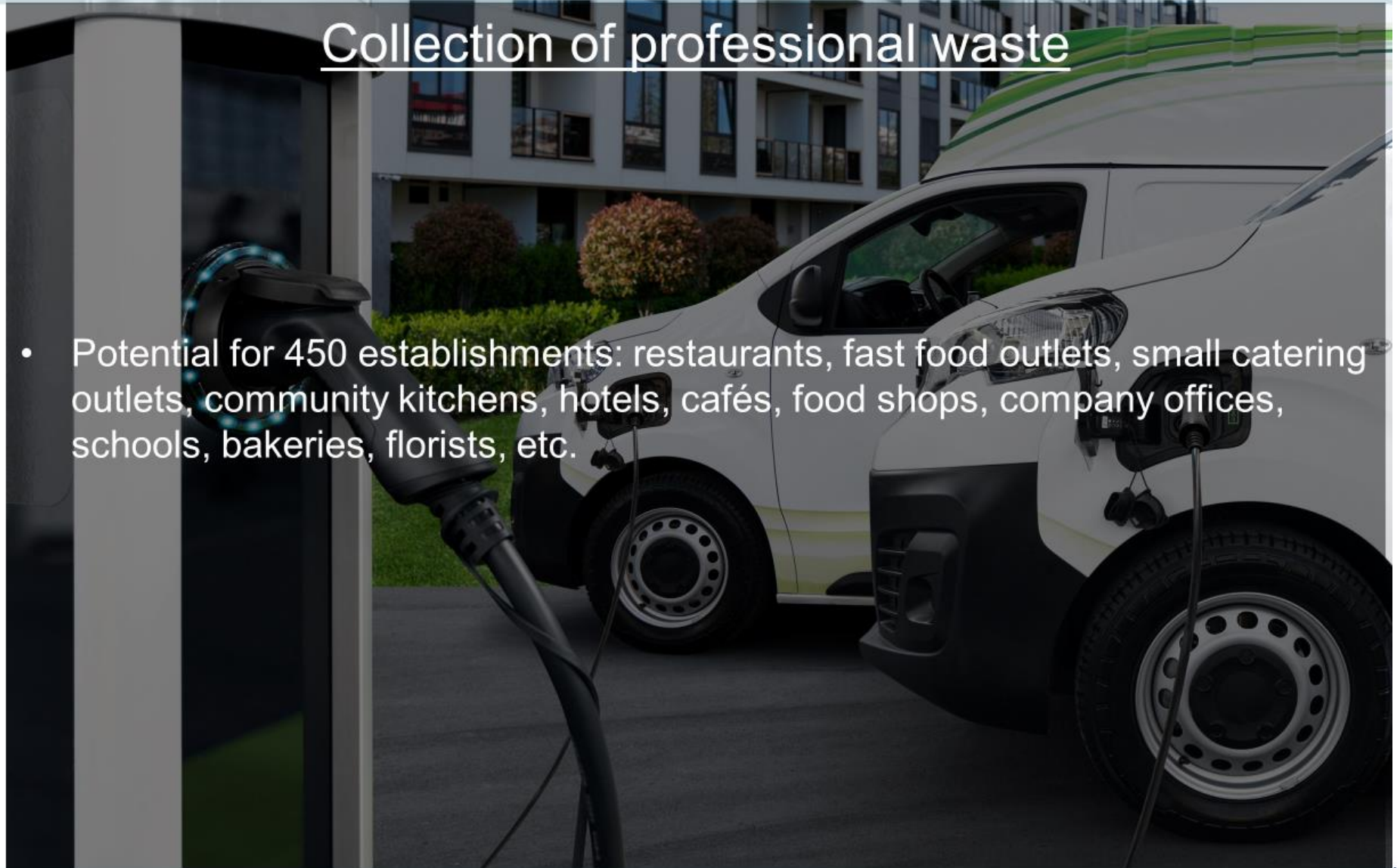


Green City Systems represents a local ecosystem for waste



Collection of professional waste

- Potential for 450 establishments: restaurants, fast food outlets, small catering outlets, community kitchens, hotels, cafés, food shops, company offices, schools, bakeries, florists, etc.



Green City Systems represents a local ecosystem for waste



Collection of professional waste – Advantages

- Saving space and cleanliness thanks to an adapted container
- Bins washed and exchanged at every visit
- Tailored collection frequency from 1 to 4 times a week. On average 2 collections per week.
- We take note of the quality of your sorting and give you financial incentives for top-quality sorting. Virtually perfect sorting quality.
- Relocation of waste management
- Weight-based pricing for more transparency

Green City Systems includes

- Software for planning collections & invoicing
- Incl Track & Trace per catering business: insight into the quality of waste sorting and daily volume (waste reduction goal and food cost optimization)
- Personalised, free diagnosis
- Simple, from setting up to monitoring collections
- Awareness campaign and sorting training.
- All the information they need about collecting and recycling their food waste is available in their personal online space.



Green City Systems represents a local ecosystem for waste

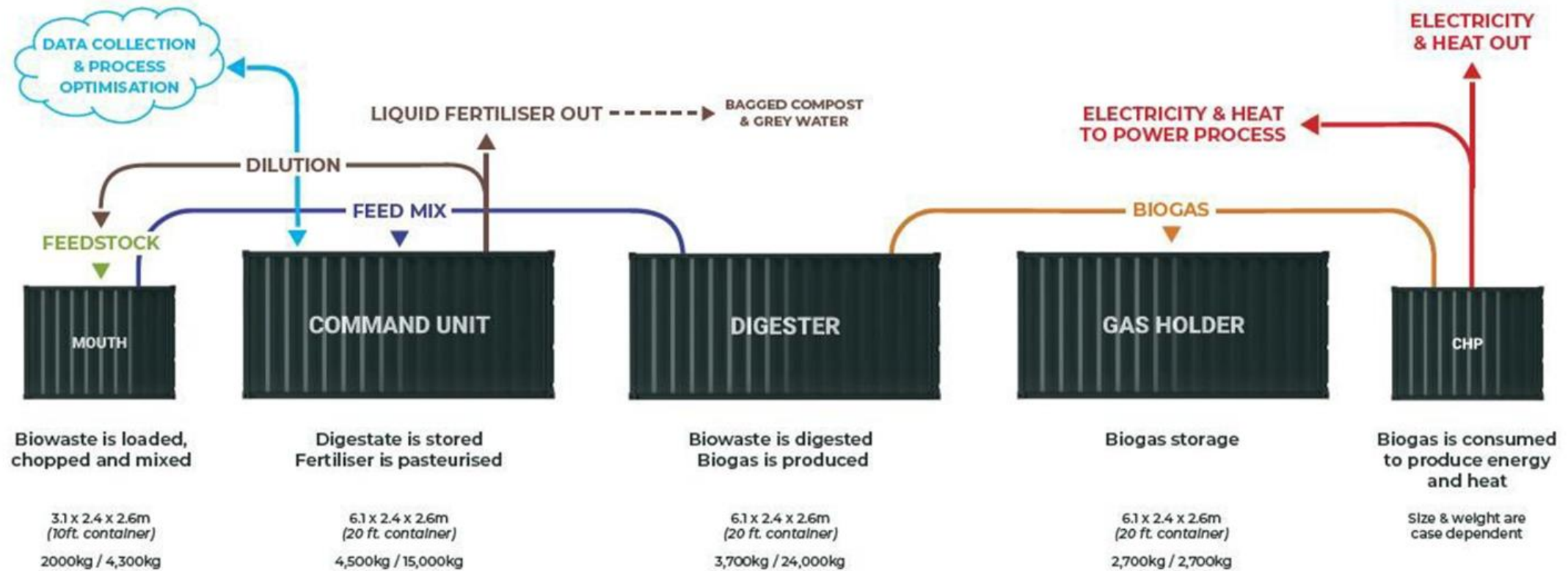


Green City Systems represents a local ecosystem for waste

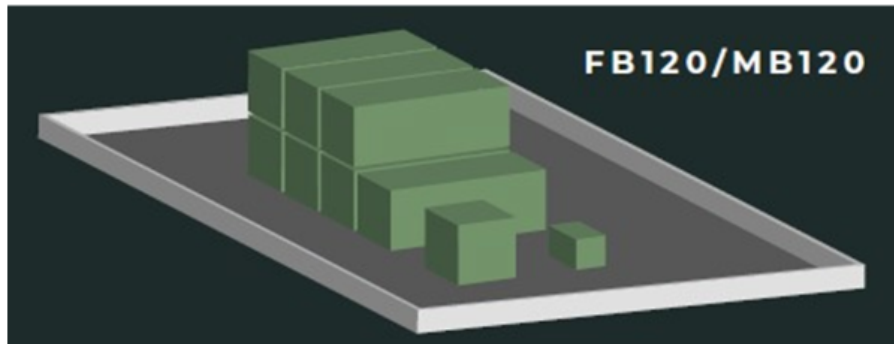
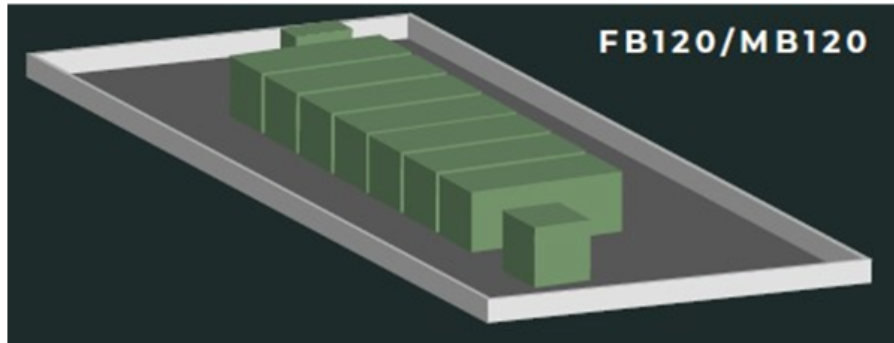


Electricity, heat & soil improving fertiliser for local distribution

How the Biodigester works



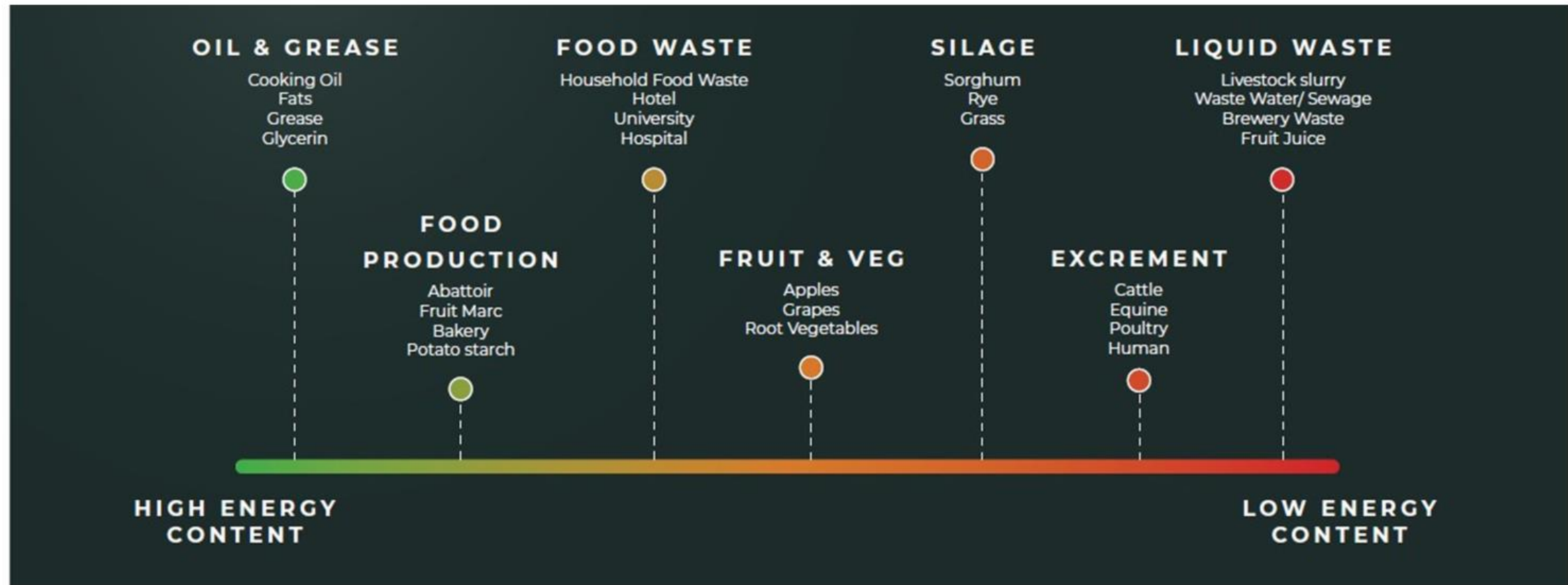
Flexbuster 120 – pilot Mechelen



FB/MB 120 Specifications:

- **Digesters:** 5 units
- **Capacity:** Up to 5,000 kg/day of organic waste
- **Biogas Production:** 330,000 m³/year, 70% methane
- **Energy Output:**
 - **Electricity:** 640 MWh/year (Equivalent to 12.5 SMEs or 300 family homes)
 - **Heat:** 1,084 MWh/year
- **Byproducts:** 1,149 tons of fertilizer/year
- **Environmental Impact:** Saves 702 tons of CO₂/year
- **Space Requirement:** 330 m² flat, 220 m² stacked

Input of waste versus output of energy



Flexibuster Efficiency:

- Raw Materials: Type impacts biogas potential and processability.
- Biogas Potential: Efficiency depends on input type.

Time for questions





Thank you!

Didier Lodewyckx

+32 478 34 16 23

Didier@mezzoenergy.eu

Hein Seijkens

+32 495 85 43 36

Hein@mezzoenergy.eu

Yvette Plaisier

+32 470 13 70 30

Yvette@mezzoenergy.eu