Local biogas production from organic waste
a tandem project of FH Aachen University of Applied Science and Bert Energy
FruitCycle The Problem

What to do with organic waste?
- green waste
- fruit / vegetables / kitchen waste
- food waste
- market waste
FruitCycle Common Solutions

for waste more than 50 t/day
huge biogas plants
• lots of transports => CO$_2$ emissions
• grid connection necessary
• high investment

for small amounts of waste
landfill, composting, incineration
• bad smell
• methane and CO$_2$ emissions
• gate fee
Containerized biogas plant
• 100, 250 or 500 kg per day
  or 1,5 – 12 tons per day
• waste treatment on site
• turns waste in fertilizer in 20 days
• low investment
• easy to operate: 10 min/day maintenance
• creates income – saves cost
Biogas may be used for:
- cooking
- electricity production
- heating / hot water
- cooling
- Bio CNG

Organic Residues:
- green waste
- fruit / vegetables / kitchen waste
- food waste
- market waste

Biogas residues:
- non smelly fertilizer

FruitCycle: Our Solution

Bert Mobil:
- Containerized biogas plant
- Small footprint: starting from 50 m²
FruitCycle Example

Bert Mobil biogas plant

1.5 t per day food waste

=> 120 m³ biogas per day => 200 kWh electricity or 54 kg LPG equiv. per day

=> 63,000 kWh electricity per year
FruitCycle  Facts of Bert Mobil

Users
- everyone with organic waste: 100 kg/day up to 12 t/day
- Suitable for
  - rural areas: agricultural cooperatives, dairy farms
  - cities: market operators, hotels, canteens, schools, universities, airports

Advantages
- Plug & Operate: ready for use – prefabricated – transportable
- No grid connection necessary
- Reduces cost for discharging waste and energy purchase
- Creates income

Financial models
- purchase / leasing / sponsoring (CSR-project)
- FINAME code 03701191, by BNDES
FruitCycle The Team

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We are looking forward to meet