

ACEA PINEROLESE INDUSTRIALE

The integrated waste treatment site in ACEA



ACEA Pinerolese Industriale S.p.A.: a multi utility system

Environmental services: management of the entire system thorough collecting of Municipal Solid Waste (MSW) and treatment. The collecting services is applied directly at 150.000 inhabitants living in 47 municipalities placed in the south west of Turin province close to the French border. The treatment service is applied to a wider area roughly 1.000.000 inhabitants.

Natural Gas Distribution: 693 km grid, 24 municipalities 64,4 million Sm3 NG distributed on 36.066 final connection's point.

Water and waste water services: 61 municipalities for 200.000 inhabitants. 113 waste water treatment system. Clean water grid extended for circa 2.000 km, 1500 km for the waste water network.

Energy services: thanks to Acea Pinerolese Energia S.r.l. we sell Natural gas and electric energy to private sector on the national market

Annual production Value 2017: € 119.651.807*

Net profit 2017: € 5.205.000*

Distributed to shareholders 2017: € 2.978.000*

*(sum of API-APE)



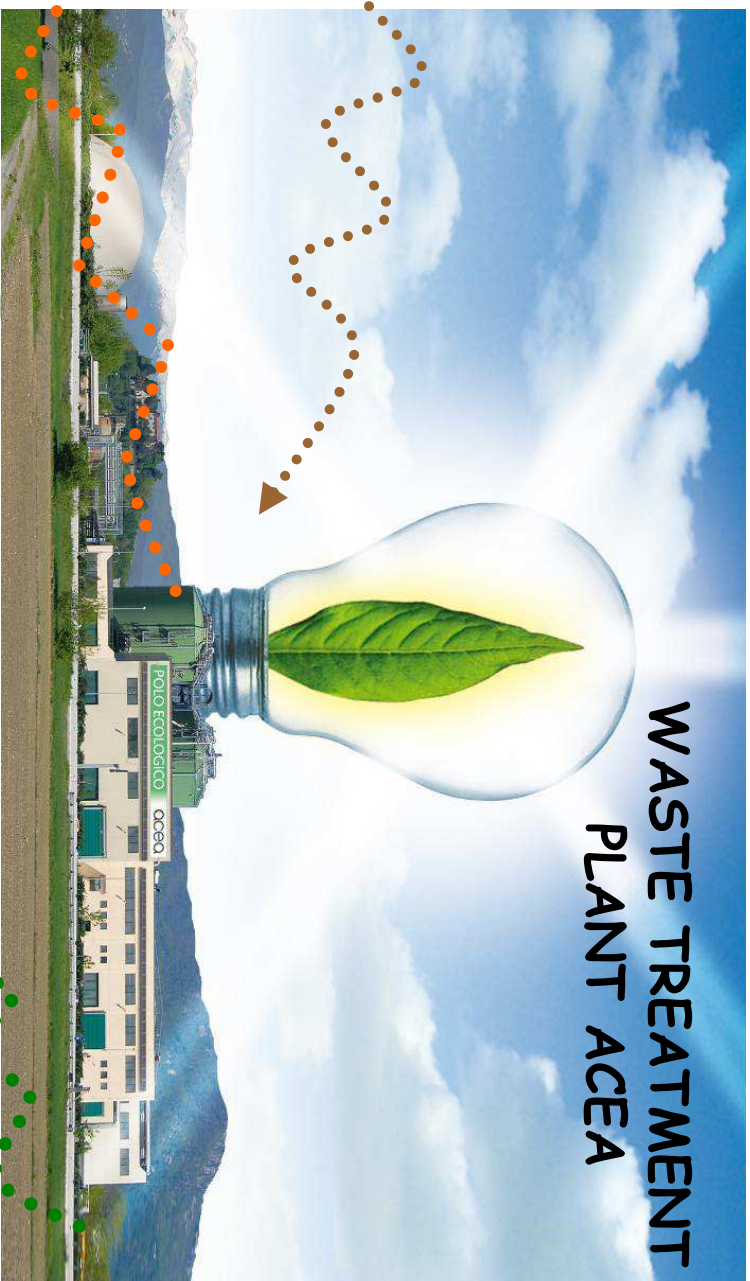
FROM WASTE TO RESOURCE



BIOGAS



COMPOST



Incoming wastes



FOOD WASTE

- *Household*
- *Restaurants*
- *Canteens*
- *Local markets*

Anaerobic digestion

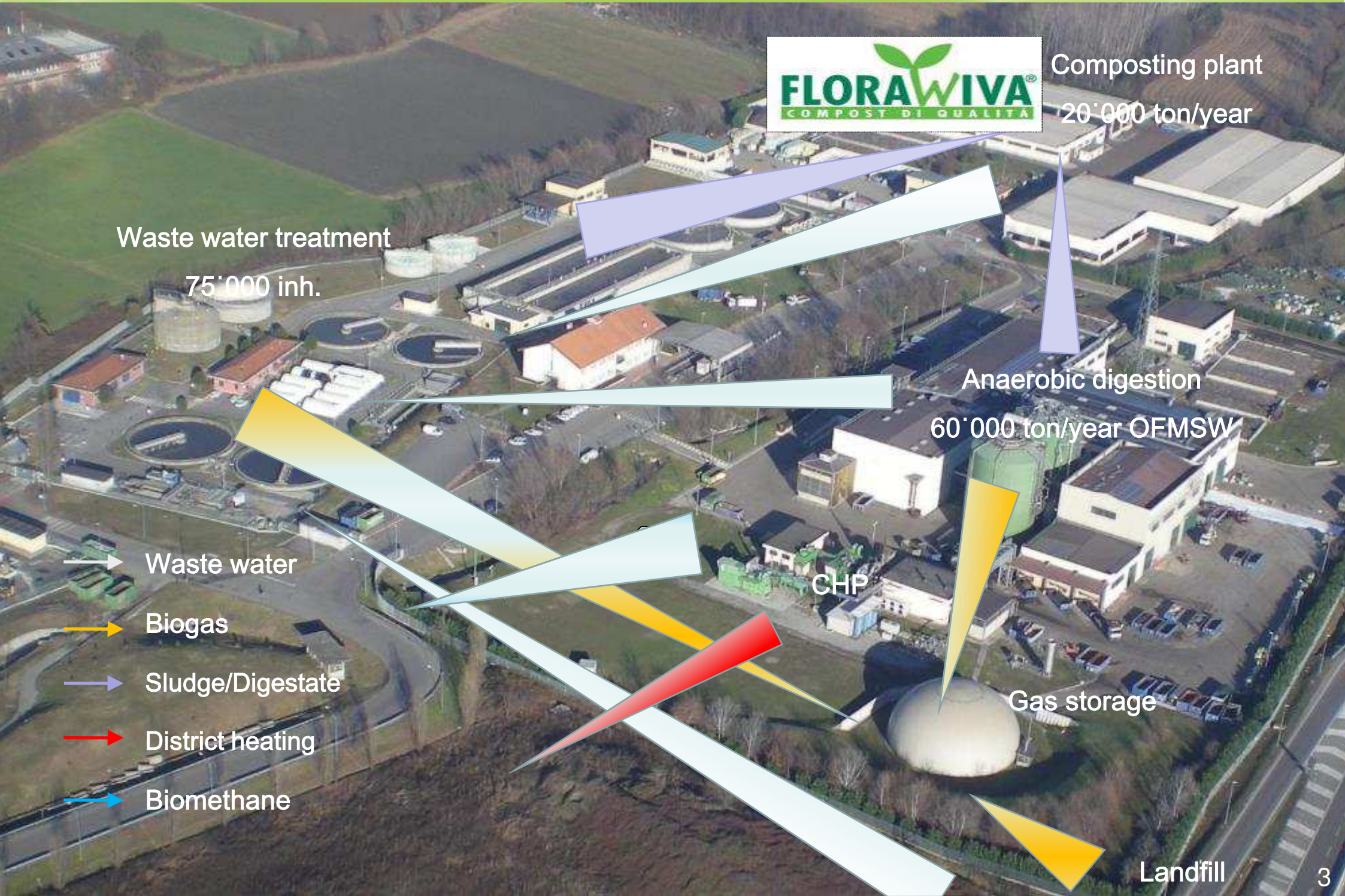


GREEN WASTE

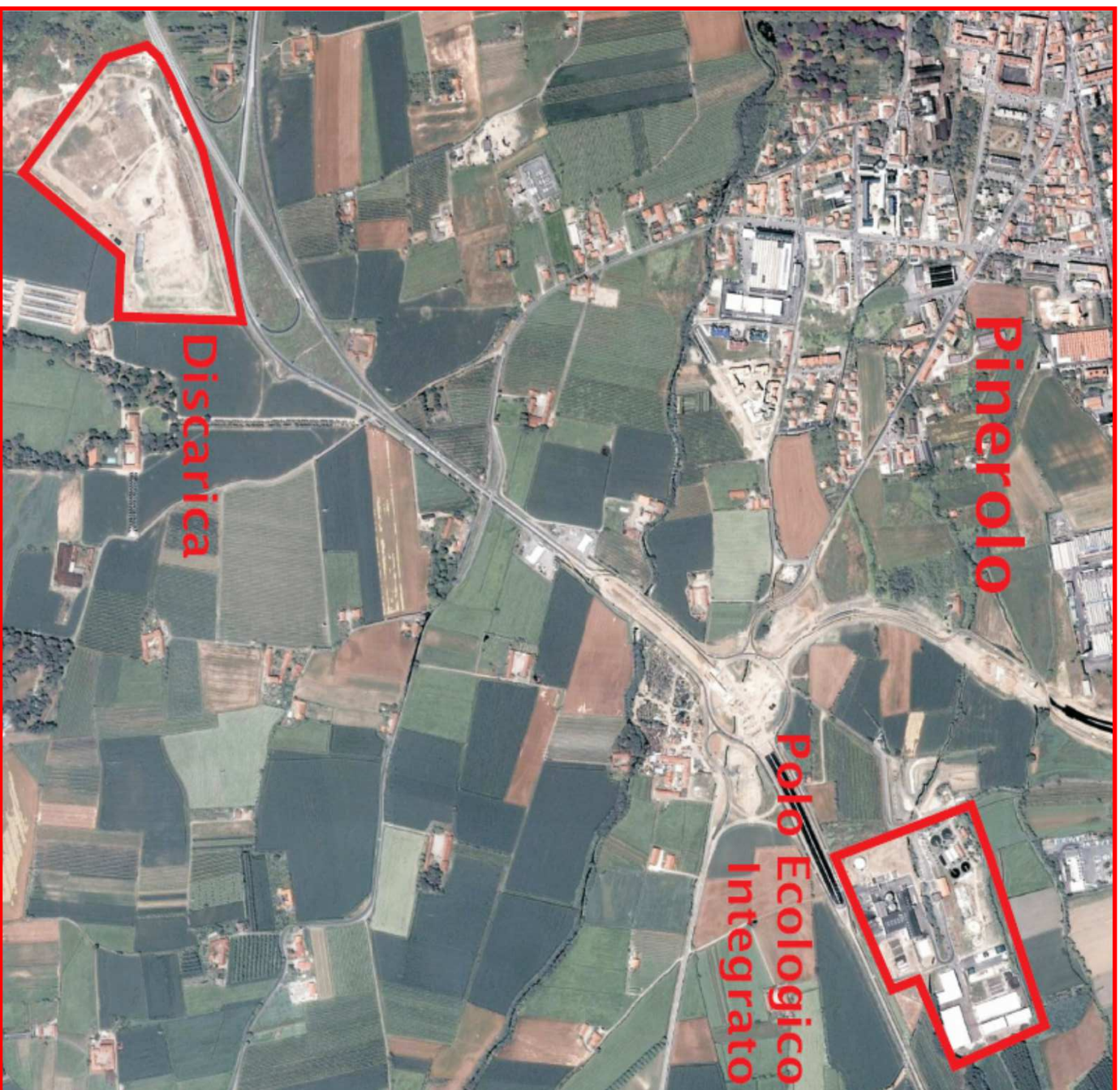
- *pruning of domestic origin*
- *Urban green waste*

Composting plant

The waste treatment district

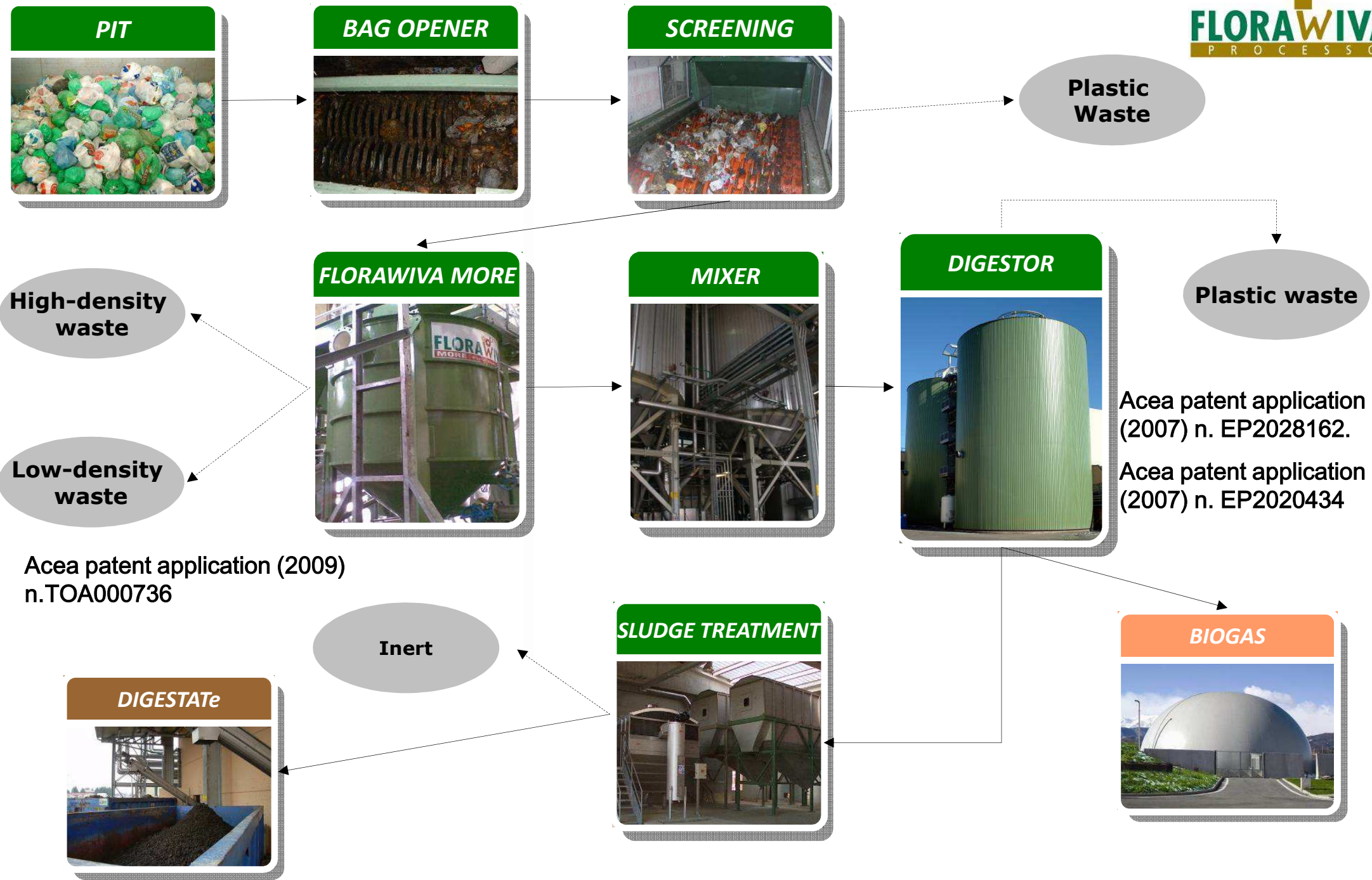


Where we are



**ACEA Ecologic district
and Landfill position**

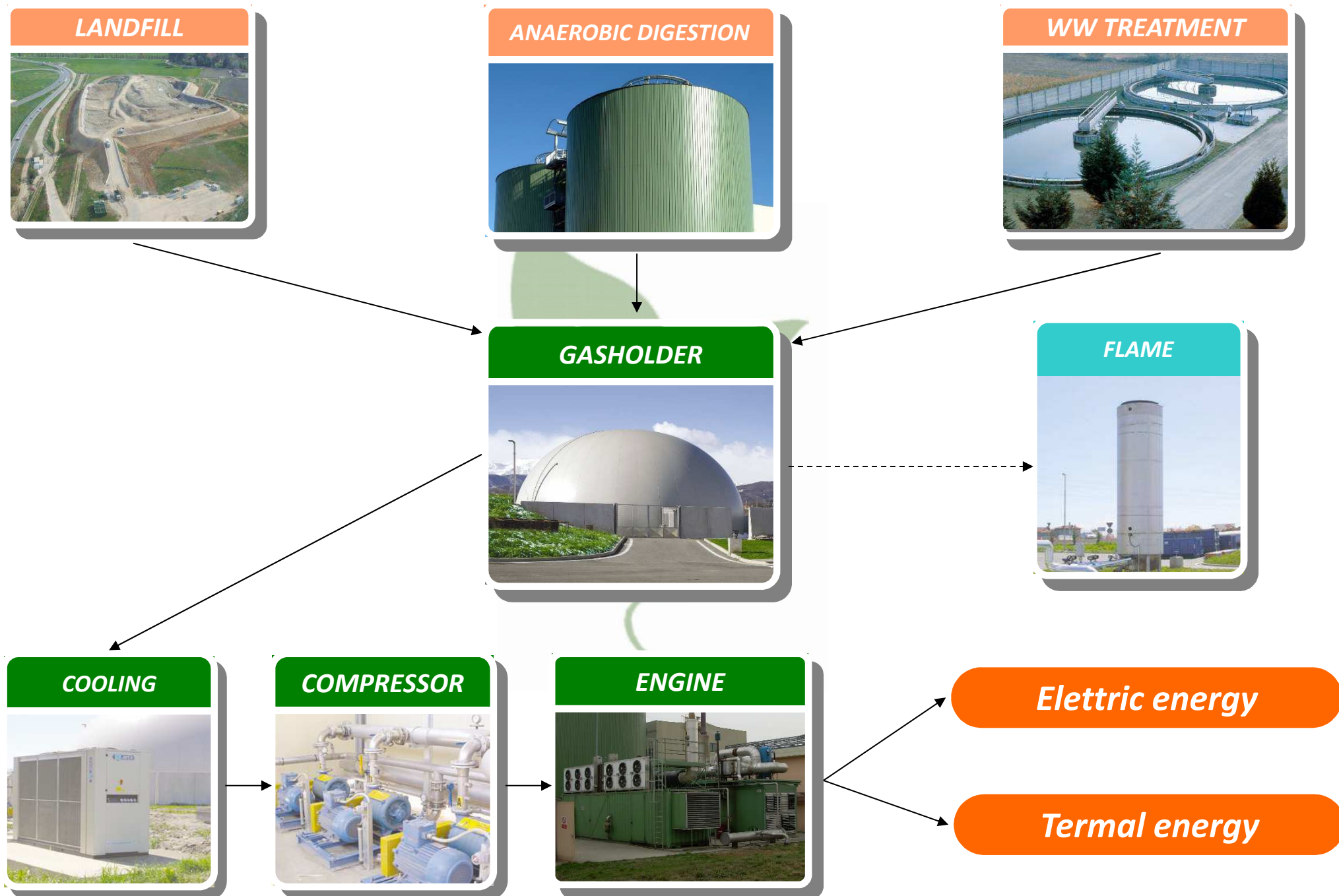
BIOWASTE- Anaerobic digestion



Biowaste- Composting process



CHP



From Biogas to Biomethane

ANAEROBIC DIGESTION



UPGRADING



Fiat Panda prototype
powered by biomethane
or biomethane /
hydrogen mixtures

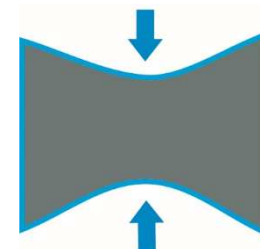


Bio-methane

Gas grid

Expected
06/2020

Transport fuel



COMPRESSION

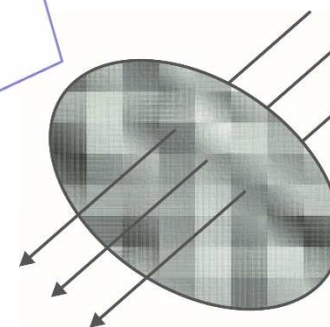


COOLING



WATER WASHING
TOWER

CO₂



FILTRATION

OTHER GAS

aceea
L'INNOVAZIONE È IL NOSTRO TERRITORIO

Ongoing European research projects

- **Mat4treat** (EU Framework Program Horizon 2020)
Enhancing water quality by developing novel materials for organic pollutant removal in tertiary water treatments.



Innovative materials for river pollutants



JUST FINISHED IN JULY 2019!

- **BioroburPlus** (EU Framework Program Horizon 2020)
Advanced direct biogas fuel processor for robust and cost-effective decentralised hydrogen production. Expected TRL



Hydrogen production



Ongoing European research projects

- **Lifecab** (LIFE Environment and Resource Efficiency Program)
Biogas and digestate with controlled ammonia content by a virtuous biowaste cycle with integrated bio & chemical processes



Humic acids extraction from compost for the production of fertilizers, emulsifiers and detergents.

- **Progeo** (EU Framework Program Horizon 2020)
Conversion of CO₂ and H₂ from water electrolysis into bio-methane through a methanation reactor (Sabatier reaction)



Bio-methane production

Ongoing European research projects

- **Engicoin** (EU Framework Program Horizon 2020)
Engineered microbial factories for CO₂ exploitation in an integrated waste treatment platform
- **Progireg** (EU Framework Program Horizon 2020)
Productive Green Infrastructure for post-industrial urban regeneration



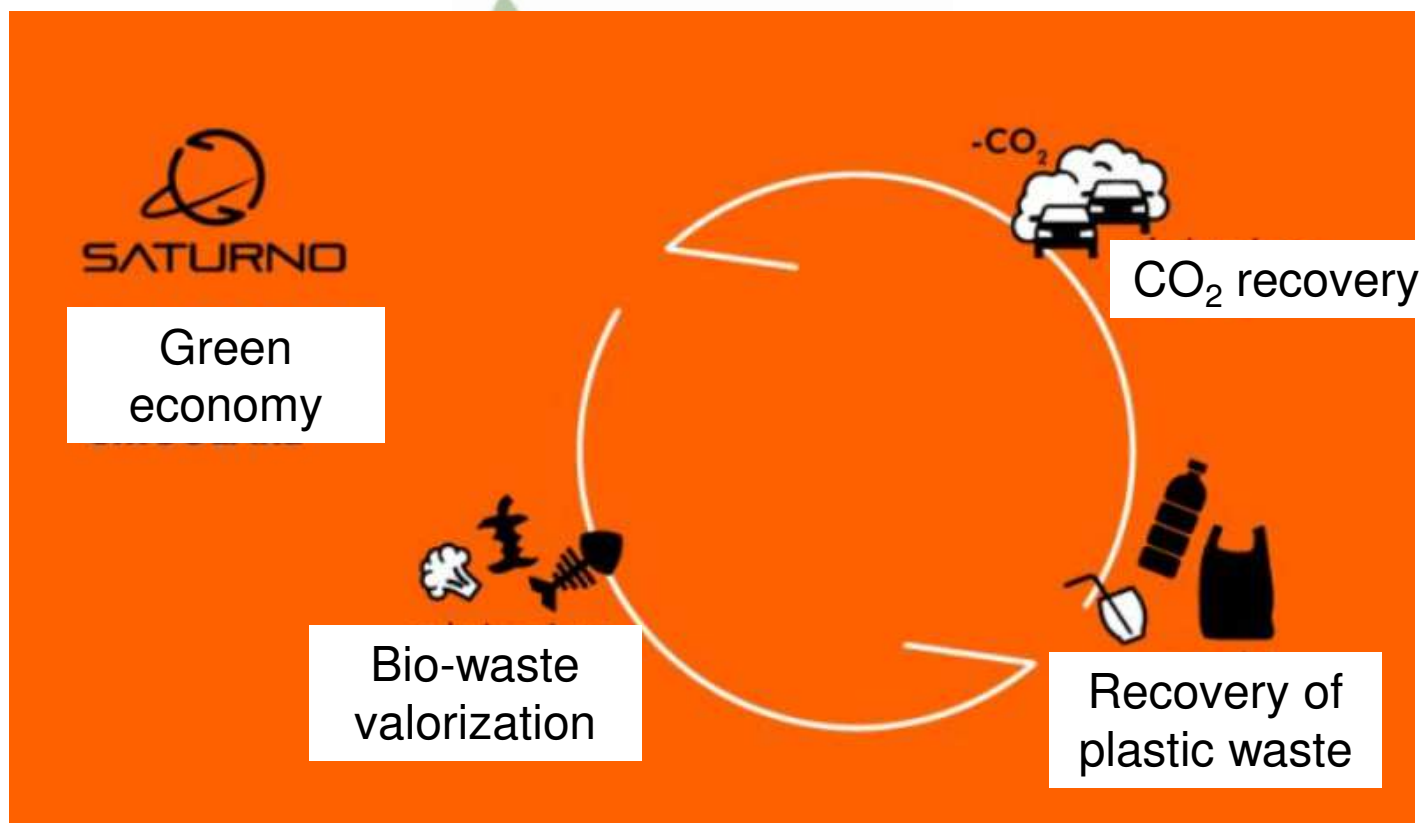
Bio-compound production (lactic acid, PHA & acetone)



Production of «new soil»

Ongoing European research projects

- **SATURNO** (Regional Framework, Piattaforma Bioeconomia)



LATEST PROJECT: JUST STARTED IN JULY 2018!

“Good decision-making about how we manage the waste we create is one of the most important contributions humanity can make to reducing its impact on the natural world.”

ISWA Global Waste Management Outlook foreword



Thank you for your attention

davide.mainero@aceapinerolese.it

viviana.negro@aceapinerolese.it