



ACEA SMART COMP

THE INNOVATIVE SOLUTION IN GLOBAL SERVICE
FOR WASTE ORGANIC MANAGEMENT





aceea

Quality, innovation and reliability in order to grow.

Acea Group provides services of laboratory, engineering&building, operations and research&innovation in water, environment and energy fields. This by integrating environmental skills, management and treatment of waste, in energy sector, in building plants and data modeling.





ORGANIC WASTE COMPOSTING

Composting is a biological transformation of organic solid waste in aerobic conditions. The process stabilizes organic matter to reuse it as a fertilizer.

It reproduces the natural decomposition process by the microorganisms present in the environment but it is developed in a controlled conditions making process more efficient. In this way waste material becomes a new

resource for agricultural and floricultural supply chains.

COMPOSTING PROCESS



ORGANIC WASTE



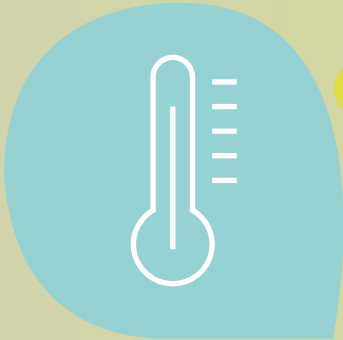
OXIGEN

MIXING



BACTERIA





TEMPERATURE



COMPOST

EVAPORATION

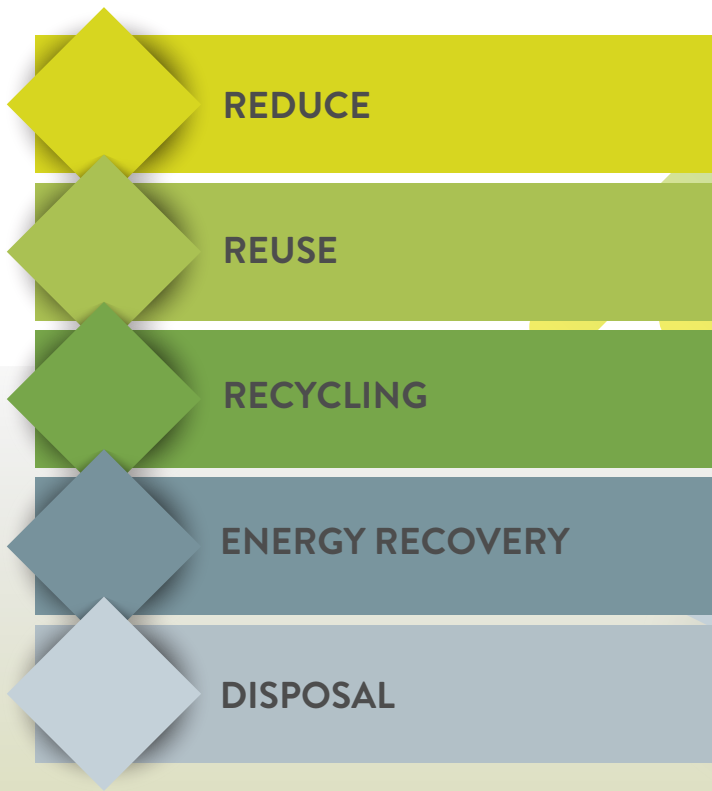


PROXIMITY COMPOSTING

In Europe the main environmental threat from biodegradable waste is the production of methane from such waste decomposing in landfills, which accounted for some 3% of total greenhouse gas emissions in the EU-15 in 1995. The Landfill Directive (1999/31/EC) obliges Member States to reduce the amount of biodegradable municipal waste that they landfill to 35% of 1995 levels by 2020 which will significantly reduce this problem.

Acea Smart Comp is a global service to facilitate a "closing the loop" process, promoting self-composting and local composting. The initiative constitutes a new proximity approach that makes the place of organic waste production closer to its treatment. The compost produced is reduced in weight by up to 20% of the waste conferred, it is naturally sanitized and therefore ready for use as a soil improver.

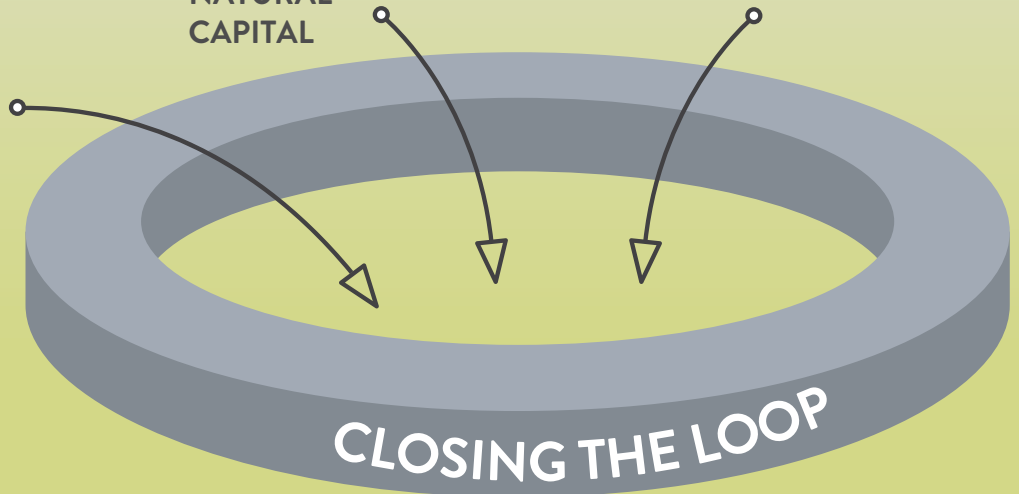




**OPTIMIZE
NATURAL
RESOURCES**

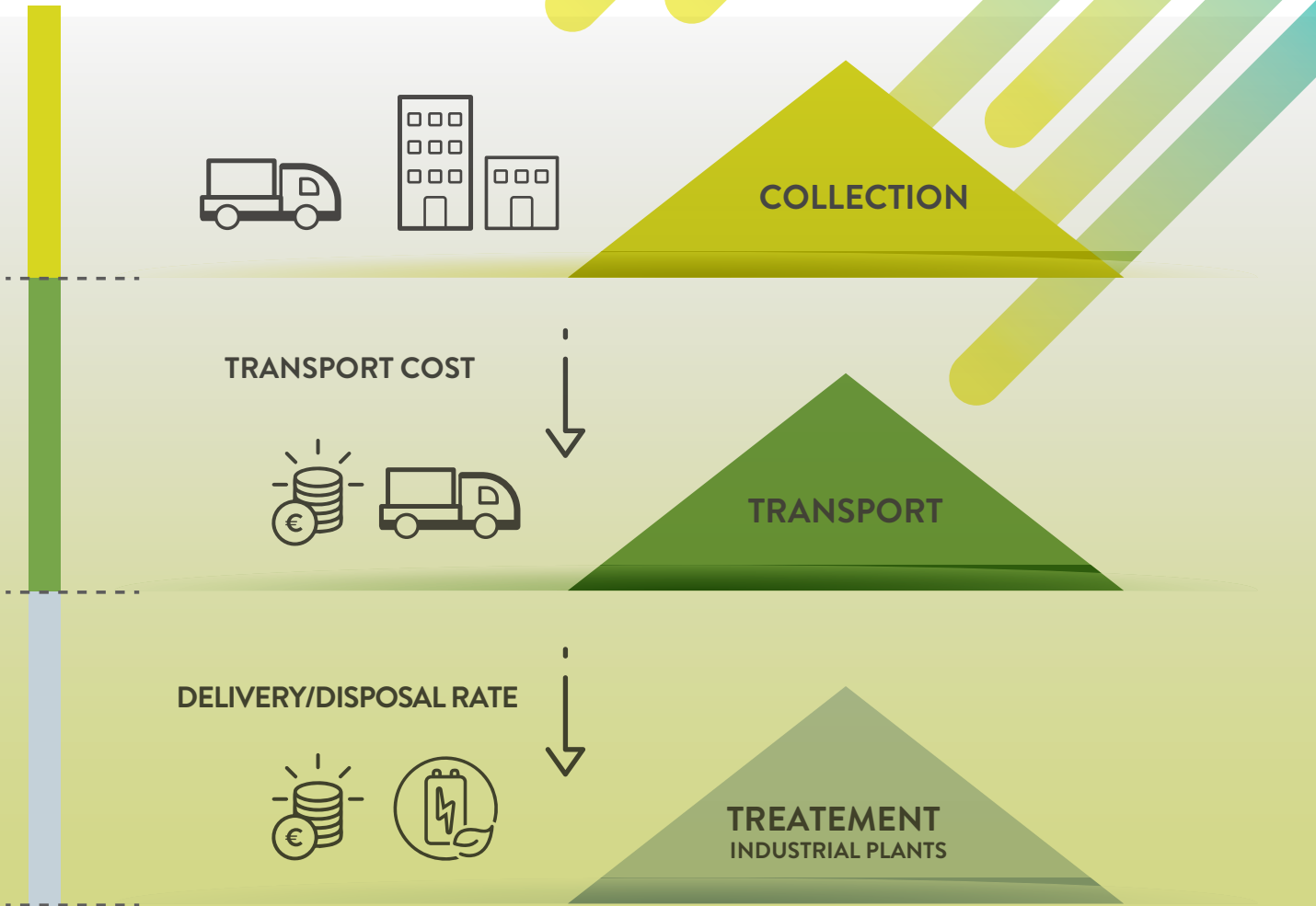
**PROTECT
AND DEVELOP
NATURAL
CAPITAL**

**REDUCE
NEGATIVE
EXTERNALITIES**



WASTE MANAGEMENT AS-IS

Organic waste is transferred over large distance to big centralized plants



WASTE MANAGEMENT TO-BE



DELOCALIZED MANAGEMENT MODEL OF ORGANIC WASTE

PROXIMITY COMPOSTING

- CANTEEN (SCHOOL, HOSPITAL ...)
- SHOPPING CENTER
- GDO, MARKETPLACE
- AIRPORT, STATION ...

ACEA WASTE TRANSITION



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The **waste transition** is the new approach to manage organic waste, making the place of production closer to the place of treatment. The new zero kilometer waste management model has a lower environmental footprint thanks to the reduction of greenhouse gases emissions. It is possible eliminating the waste collection and waste transport phases.

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ACEA IS ORGANIC WASTE FREE



The first Acea Smart Comp was installed at the Acea headquarter's canteen. The organic waste produced by the canteen and bar services is conferred every day to the composter with wood chips as a structuring material. The Companies of the Acea Group have used a community organic management.

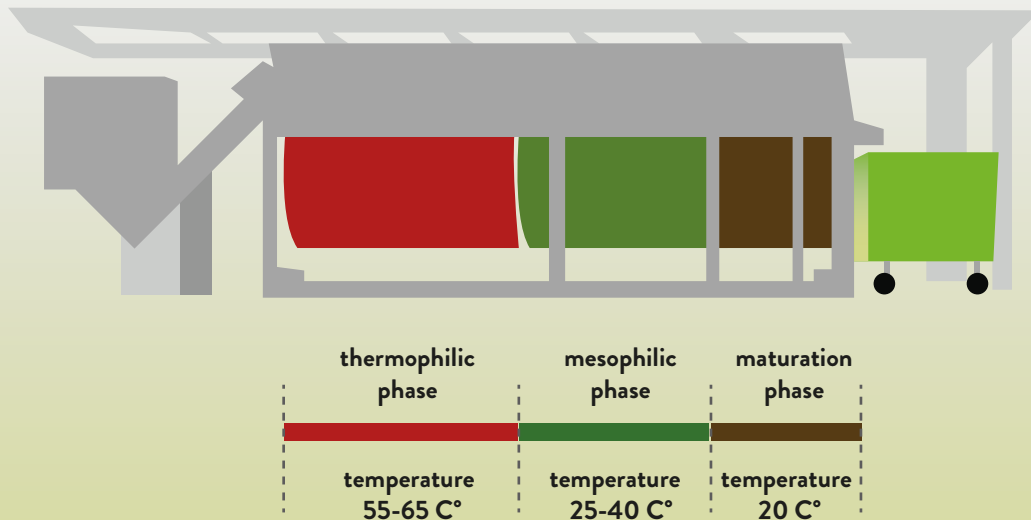


ACEA
ORGANIC
WASTE FREE®

ACEA SMART COMP

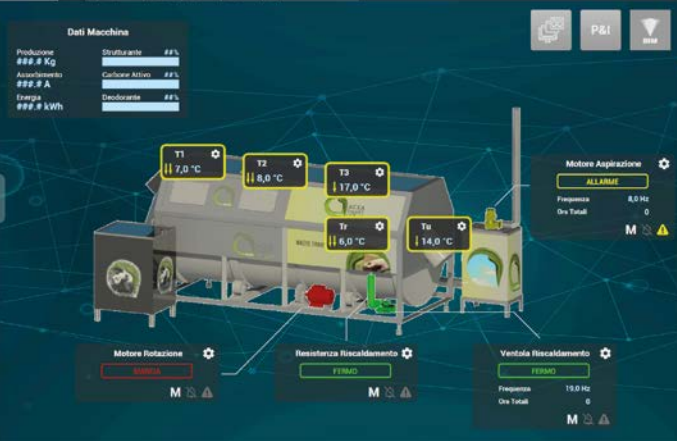
Acea Smart Comp uses a network of mini-composting plants that manage the biological process in a smart way by optimizing the activity based on the parameters detected by advanced sensors. The composting chamber is a single rotating cylinder that works in negative pressure to avoid uncontrolled emissions. There are no moving parts inside, which are the main cause of breakdowns or plant shutdowns.

100% ORGANIC WASTE = 20% COMPOST



The smart system monitors the progress of the process inside the composting chamber in real time thanks to sensors inside the compost mass.

The monitoring and management of data is guaranteed by the SCADA infrastructure which, with maximum security and solidity, that allows Acea to operate the control room, creating a virtuous plants network. The process management is made by expert technicians supported by IoT platforms for data analysis and by AI and ML for process optimization.



Sensors for real time monitoring and remote reading

Temperature

Humidity

Interstitial gases

(oxygen, carbon dioxide, methane, ...)

Environmental monitoring and process emissions

Smart control

Fully automated process

Standardized product quality

Business Intelligence

Machine Learning



Control Dashboard

Remote controlled plants network

Alert system

IoT platform

Specialistic process analysis

Customer dashboard with shared KPIs

(CO₂ removed, compost produced, etc.)

THE GLOBAL SERVICE



Elimination of organic waste management problems

- Acea Smart Comp rental and installation
- Customization and configuration plant
- Authorization process support
- Customer staff training
- Option of rent with redemption



Operation and maintenance

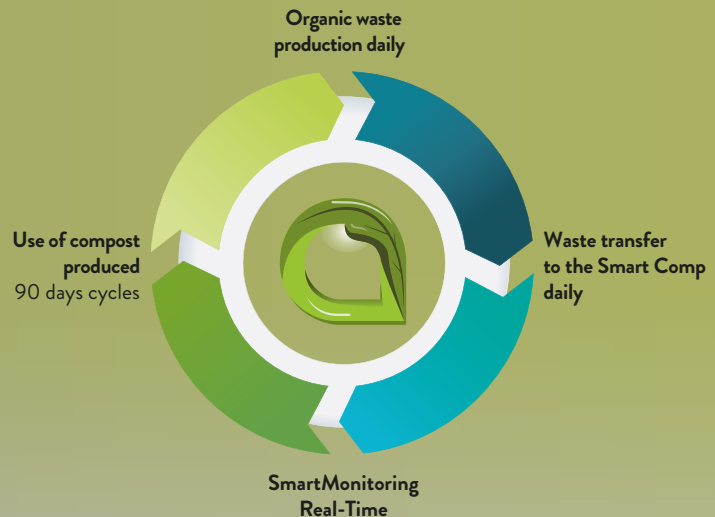
- Remote monitoring
- Early warning system h24
- On call assistance
- Maintenance scheduled by Acea technicians
- Analytical support by Acea Laboratory
- Certified compost analysis plan



Value-added services

- Communication plan
- Web platforms and web-apps
- Supply of communication material
- Compost analysis
- Environmental monitoring

CORPORATE ORGANIC WASTE CYCLE





Elimination of the most putrescible waste problem

Elimination of waste collection and waste transport phases with less CO₂ emissions

Enhancement of virtuous material recovery from waste

Municipal tax reduction about waste management

Communication impact and incentives on the green economy theme

Product analysis on organic waste and compost produced by a specialized and certified laboratory

Environmental monitoring with advanced systems

WHY CHOOSE SMART COMP?

Acea's experience in the composting sector

Collaboration and updates with scientifically accredited partners (ENEA, Unitus, ...)

Management with advanced smart technology process control

O&M with specialized technicians

Scalable international project on different production realities

A plants network that feeds Acea databases to support the process optimization





CONTACT

MAIL-----

MOBILE-----