

NOWON

See the future. Change the present.

NOWON BACKGROUND

Founded in 2016

Located in **Azusa, CA**

US based operation of ECONWARD

US Marketing, Distribution, Manufacturing, and Service Support

Lab operation for **sampling** and **R&D**



DESIGN

Compatible with **MRFs and MBT facilities**

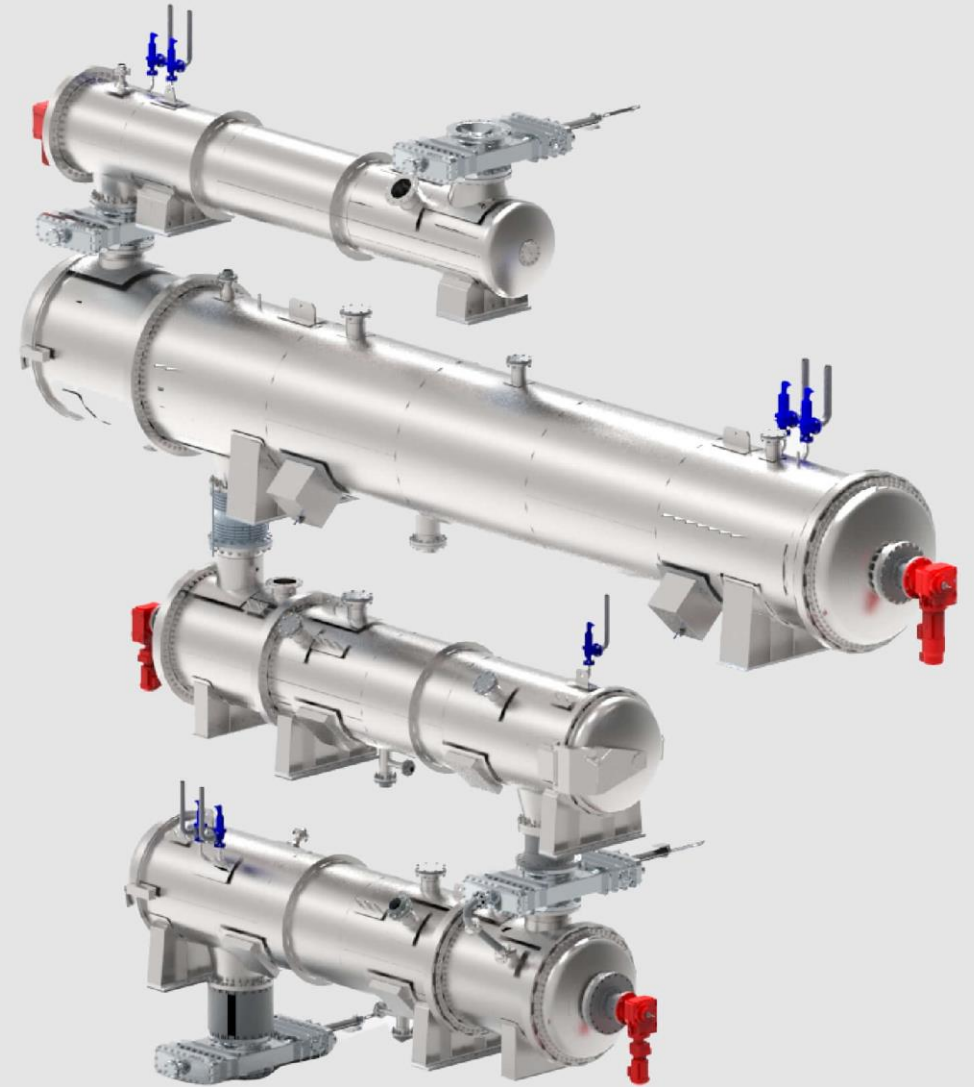
Scalable and **modular** system

Residence time: **20 minutes**

Footprint: **3,000 ft²**

Capacity PER UNIT

- **6.6 ton/h** (52,000 ton/year)
- **330 days/year** - 24 h/day

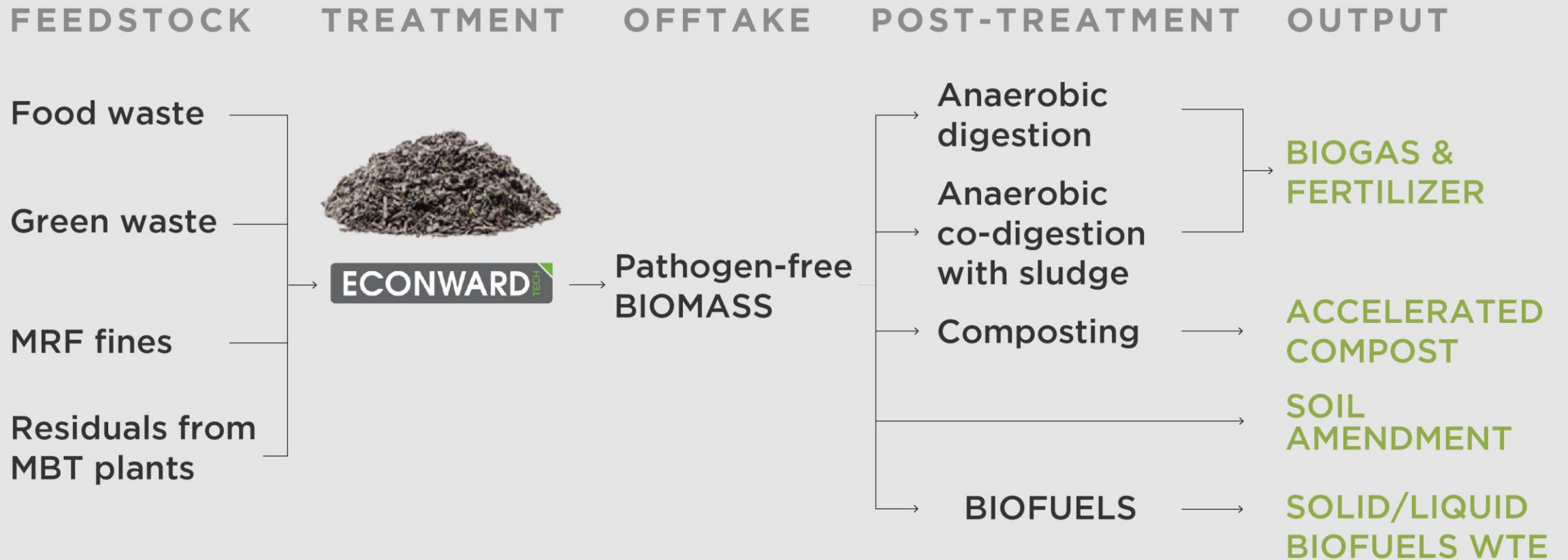


LAB

- **Testing facility** for various organic waste streams
- **Biomass production** as resource:
 - Accelerated compost
 - Fertilizers
 - Organic soil amendment
 - Building materials
 - Biomethanation
 - Biofuels



BIOMASS RECOVERY

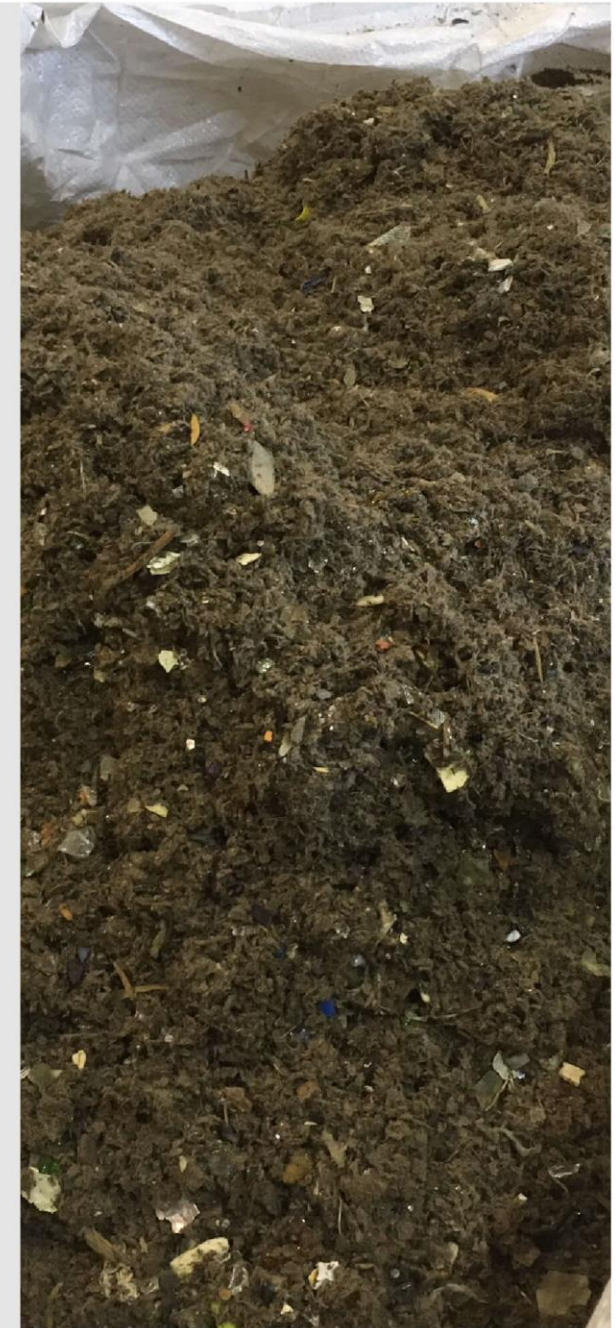


ANAEROBIC DIGESTION

Our technology works as a pretreatment for AD processes, both **digestion** and **codigestion**.

Hydrolyzed material features and benefits for digester feeding:

- **Uniform:** improves digester operation without additional pretreatments and feedstock dependence.
- **Free of Pathogens:** helps methanogenic bacteria colonize the material faster.
- **Chemically degraded:** the most complex molecules break down providing an efficient transformation.



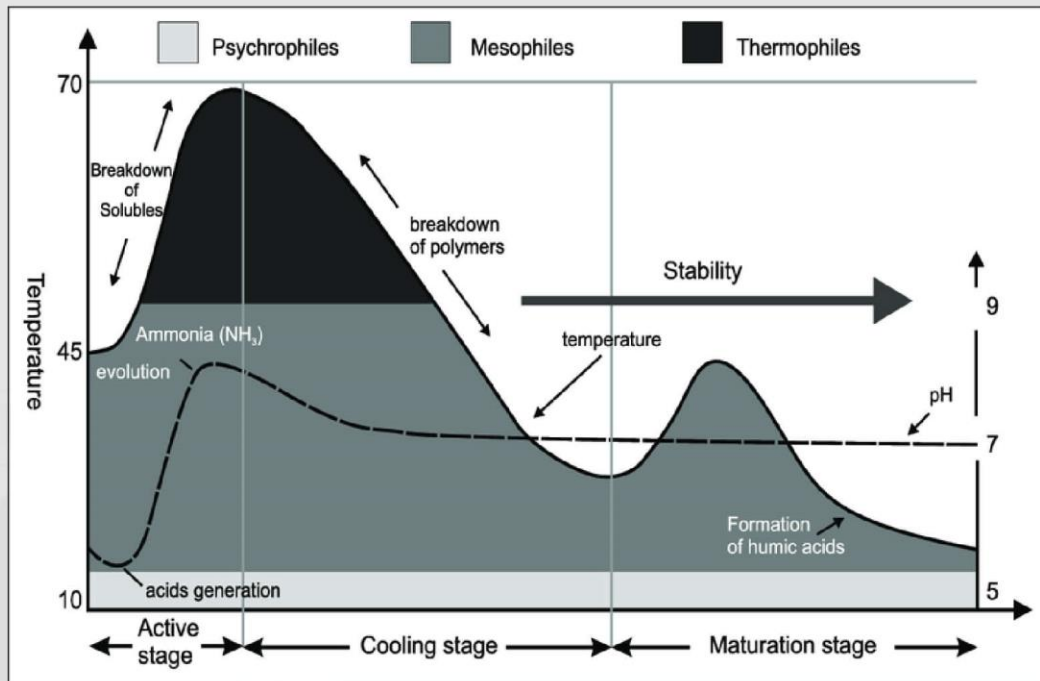
ANAEROBIC DIGESTION

Output benefits:

- **Increased Biogas production** and yield at the same methane composition rates
 - **Increased Gas production performance** for internal energy consumption
 - **Combined Heat and Power (CHP)**
 - Hydraulic Retention Time (**HRT**) **reduction**:
 - Smaller digester designs for improving cost effectiveness
 - Treatment capacity enhancement for existing digesters
 - **Continuous digester feeding** → easy to integrate
-



ACCELERATED COMPOST



The thermal hydrolysis process takes the biomass to the end of the Cooling Stage in 20 minutes, leaving the **Maturation Stage only** to achieving a high quality compost.

Composting time as well as **atmospheric emissions** are reduced.

Compliance as a processor for composting operations and further regulations such as SB 1383.

SOIL AMENDMENT

The technology is capable of transforming any of feedstock to prepare **different mixing “recipes”**:

- Food waste
- Green waste
- Residual materials from MBT plants
- Manure
- Other Organic Waste streams

This helps to produce different materials in accordance with the **requirements of California Department of Food and Agriculture (CDFA)**:

- Bulk soil amendment
- Packaged soil amendment
- Commercial/Specialty Fertilizers



BIOFUELS

Pathogen-free and thermally stabilized pellets

→ Easy to handle and store.

Mixing **feedstocks from materials that are not subject to being recovered**. For example, MRF fines.

Using residual materials in Waste-To-Energy

Various “recipe” designs to meet environmental standards:

- Chlorine
- Ash
- VOCs
- GHG



OVERALL BENEFITS

- Treats the **organic fraction of MSW**
- Involves a fully-automated plant with **low Operational Expenditure (OPEX)**
- Helps accelerates composting process **reducing time, footprint and GHG emissions**
- **Increases biogas yield** by reducing the AD process time thus ensuring stability and continuity during the procedure
- Offers **high treatment capacity, modularity and scalability**
 - 6.6 ton/hour
 - Surface area of 3,000 ft²





CARBON FOOTPRINT REDUCTION

Compared to landfilling,
we avoid

5,270
MtCO₂
eq/year

A single module
processes

6.6
ton/h

GHG emission avoidance
equivalent to

1,850
acres of
forest



A photograph of a large industrial facility, likely a water treatment plant. The scene is dominated by a complex network of white-painted metal walkways, stairs, and railings. In the background, several large, cylindrical stainless steel tanks are visible, some with various pipes and valves attached. The facility is housed in a building with a high ceiling and skylights, providing natural illumination. The overall atmosphere is clean and professional.

THANK YOU

NOWON

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