



NIHOT®

nrt

ZEROWASTE

MAX·AI®

TOTAL  
FIBER RECOVERY

*What's next.*

# Integrated Global Solutions

Municipal Solid Waste



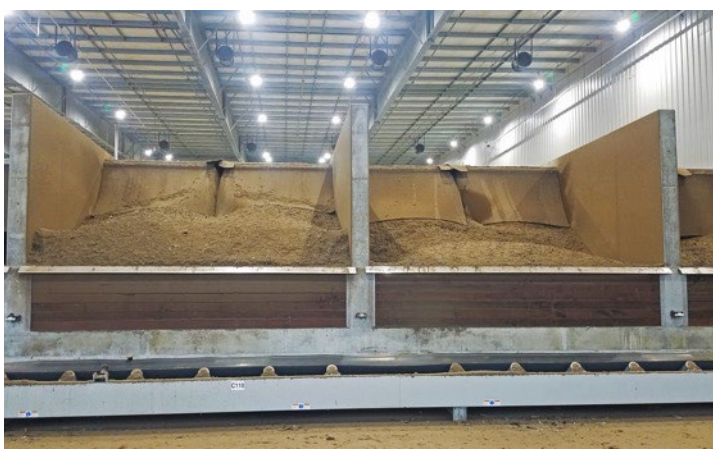
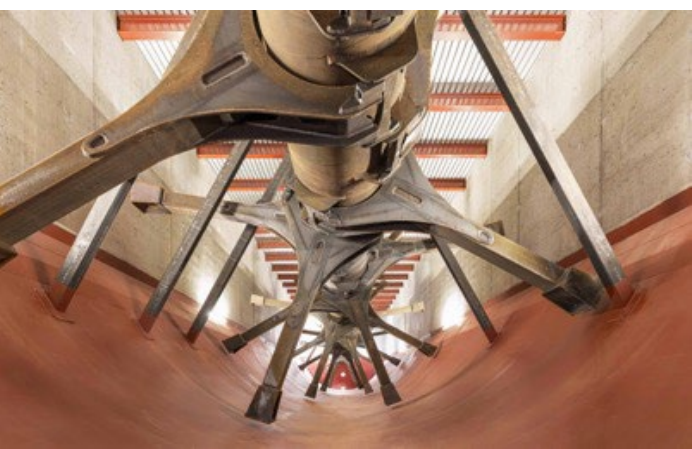
Single Stream



Advanced Recycling



Plastic Processing



Construction & Demolition

Waste to Energy

Compost and Organics

Recycled Pulp

NIHOT



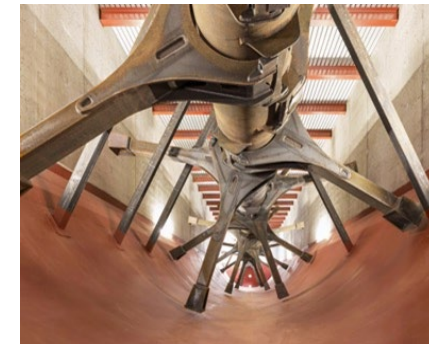
What's next.

# BHS Family of Brands

Global provider of waste processing technologies contributing to a circular economy



*What's next.*



**MAX-AI**

*AI & Robotics*

**NIHOT**

*Air Separation*

**nrt**

*Optical Sorting and Automation*

**ZEROWASTE**

*Organics*

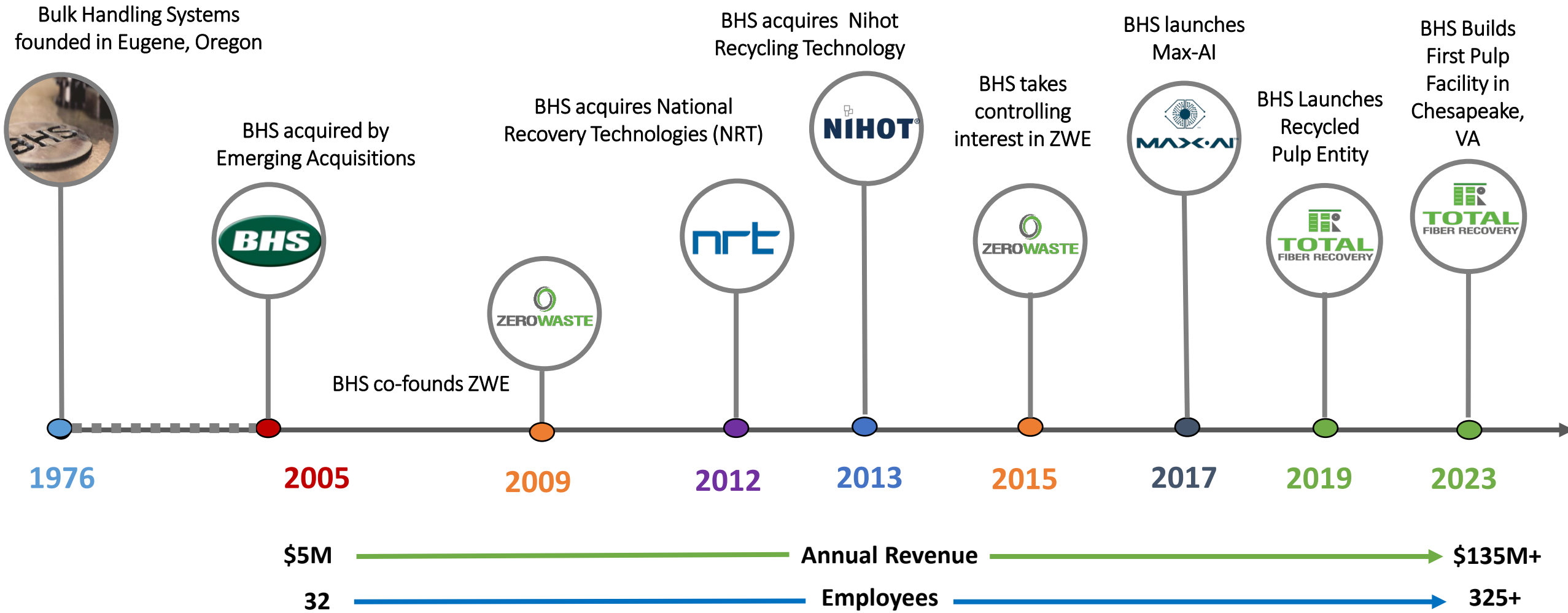
**TOTAL FIBER RECOVERY**

*Recycled Pulp*

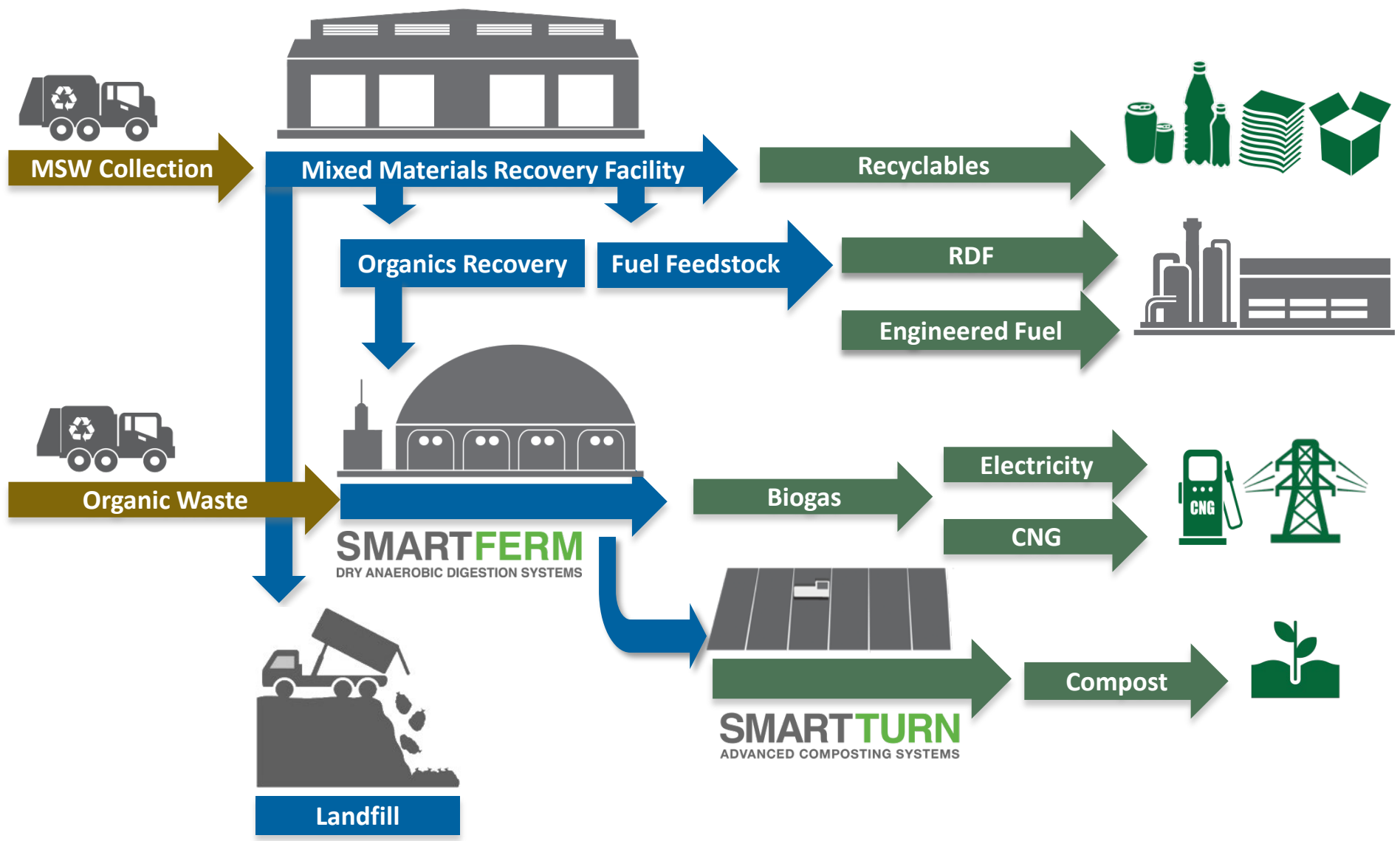


*What's next.*

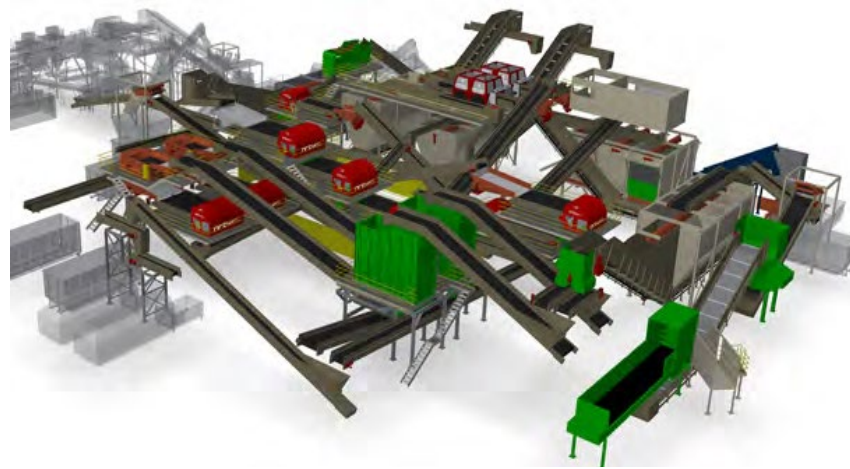
# History



# Integrated Waste Management Model



# Mechanical & Advanced Recycling Experience



- BHS has designed and built every major rPET processing plant in N. America since 2016
- BHS is the global leader in the delivery of systems for the recovery of high-value recyclables out of MSW and Single Stream. (over 150 plants worldwide)

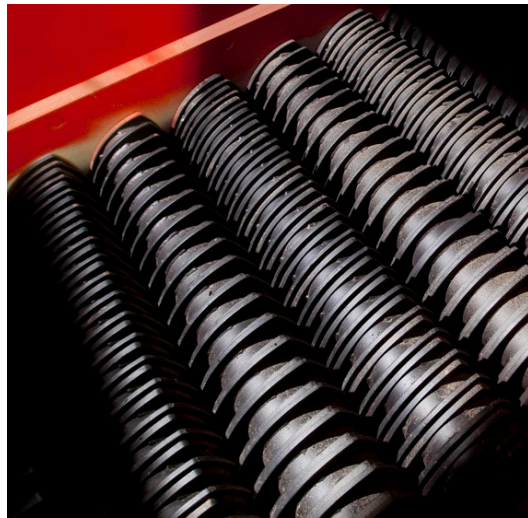
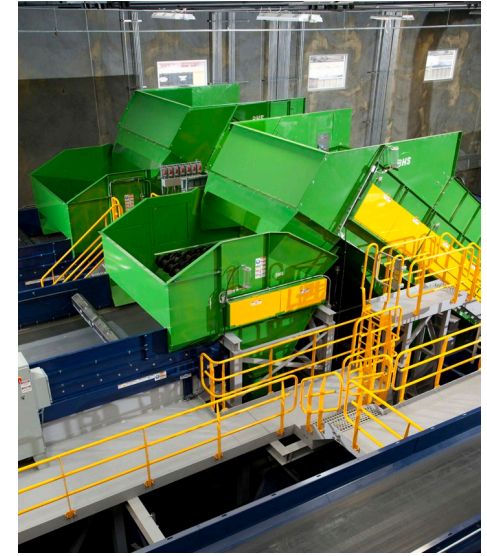
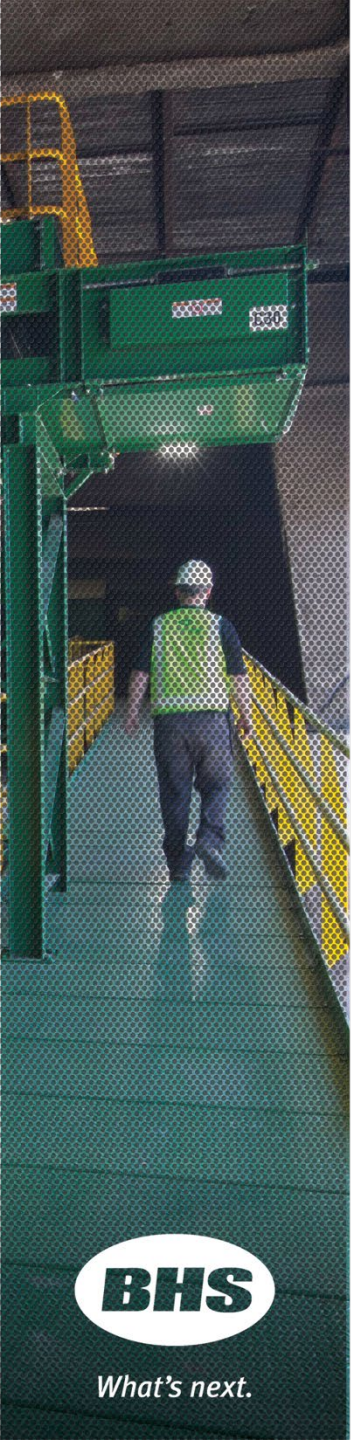


- BHS is a leader in the design/build of feedstock prep systems in the advanced recycling space.

**BHS**

What's next.

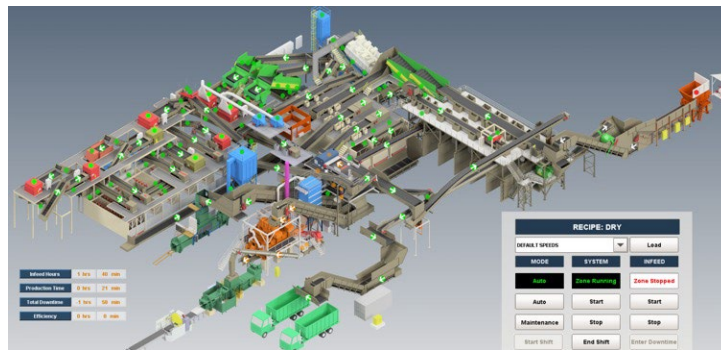
# BHS Technology Overview – Conveyors, Screens, Metering Bins, Bag Breakers



# NRT Technology overview

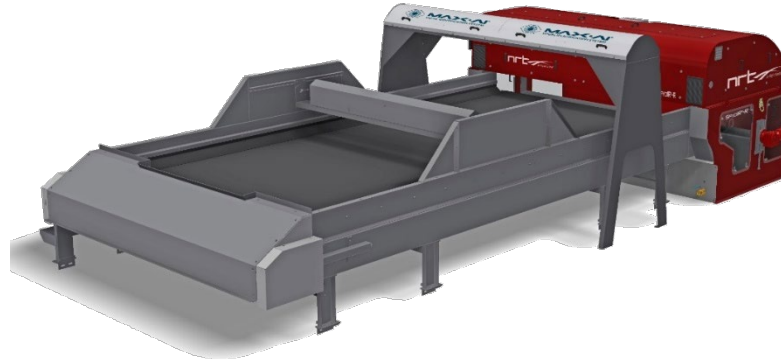


(Visual Identification System)



System Controls/Automation

NIR & AI Optical Sorters - HS/SpydIR®/ColorPlus + HS-VIS  
Added layer of intelligence



Artificial Intelligence Robotic Sorters



# Nihot Technology Overview

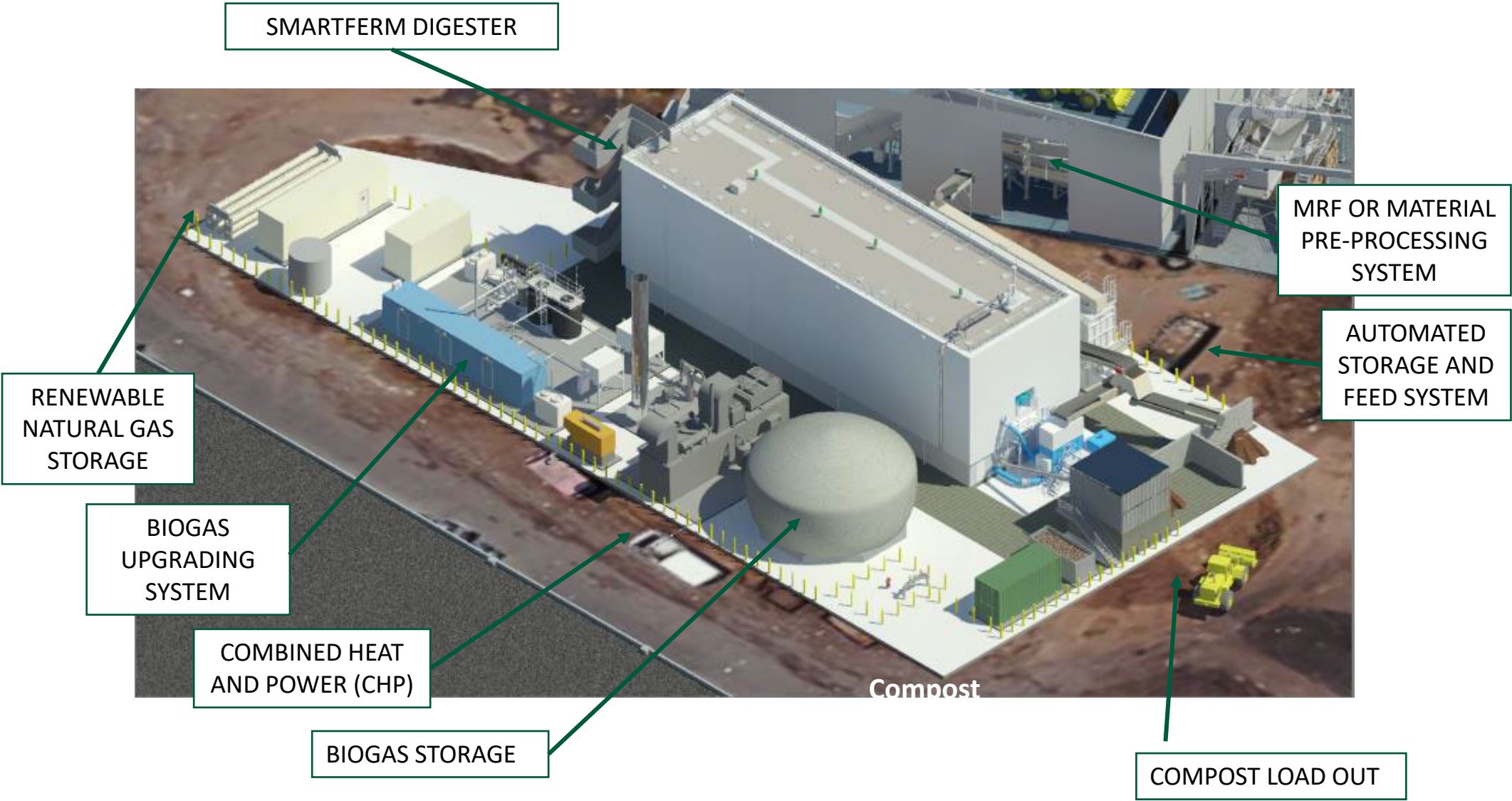


**Single Drum/Dual Drum Air Density Separators**



**Wind Shifters**

# ZWE Technology Overview – Organics, Anaerobic Digestion



# Technology Overview: Plug-Flow Dry Digester Design

## Benefits

Maximized biogas yield

Sanitization - PFRP

Organic Material Degradation to Dewar 4+

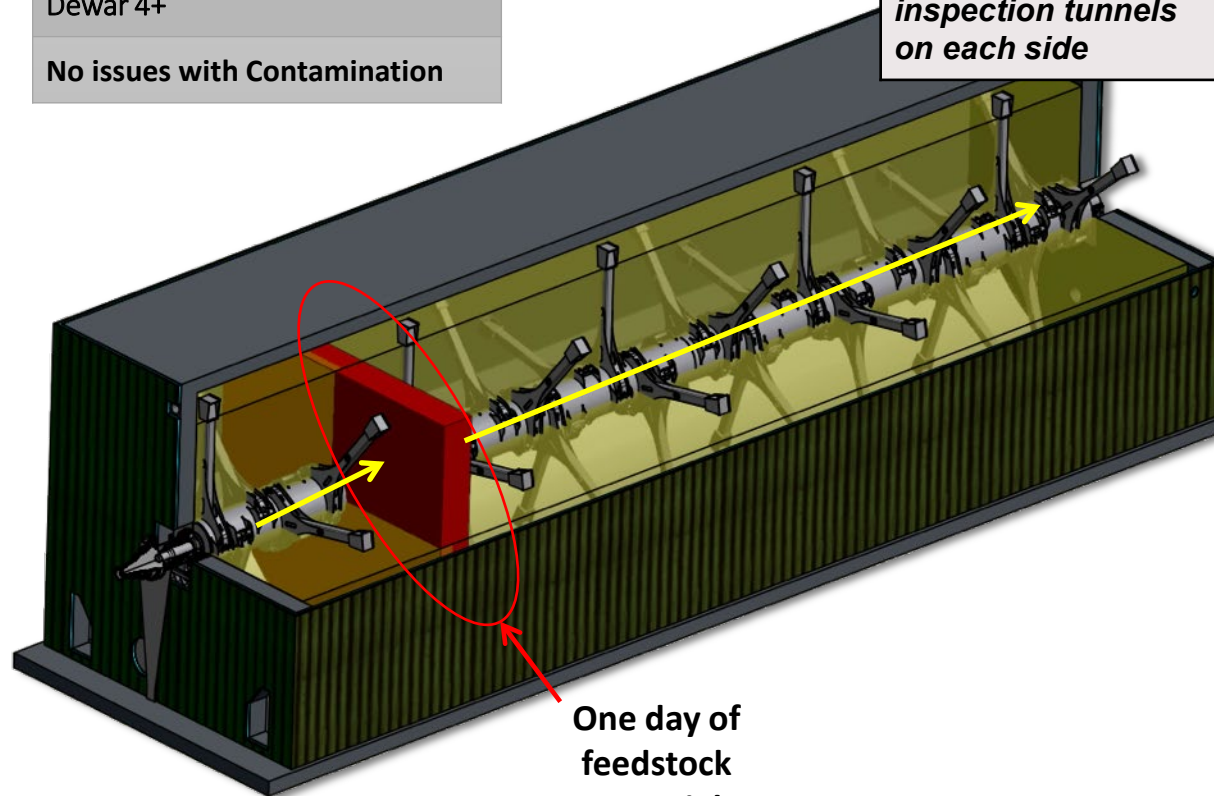
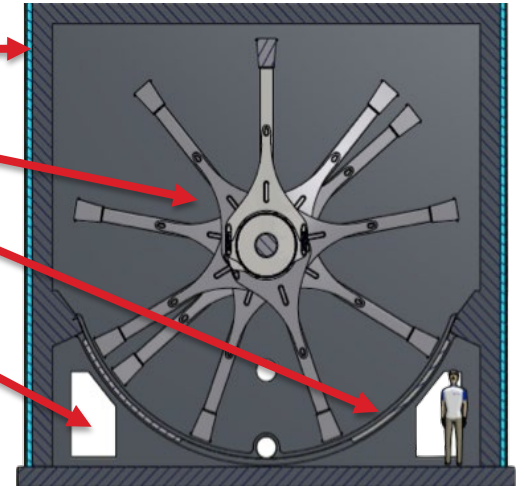
No issues with Contamination

concrete or steel digester construction options

paddle agitator

steel bottom shape

inspection tunnels on each side



One day of feedstock material

Useful volume = 85% fill level	Annual Throughput (Tons Per Year)	Double Digester Design (2x)
1,830 yd <sup>3</sup>	22,050 TPY	44,100 TPY
2,160 yd <sup>3</sup>	27,600 TPY	55,200 TPY
2,420 yd <sup>3</sup>	30,900 TPY	61,800 TPY
2,550 yd <sup>3</sup>	33,050 TPY	66,100 TPY
2,750 yd <sup>3</sup>	36,400 TPY	72,800 TPY
2,950 yd <sup>3</sup>	38,600 TPY	77,200 TPY



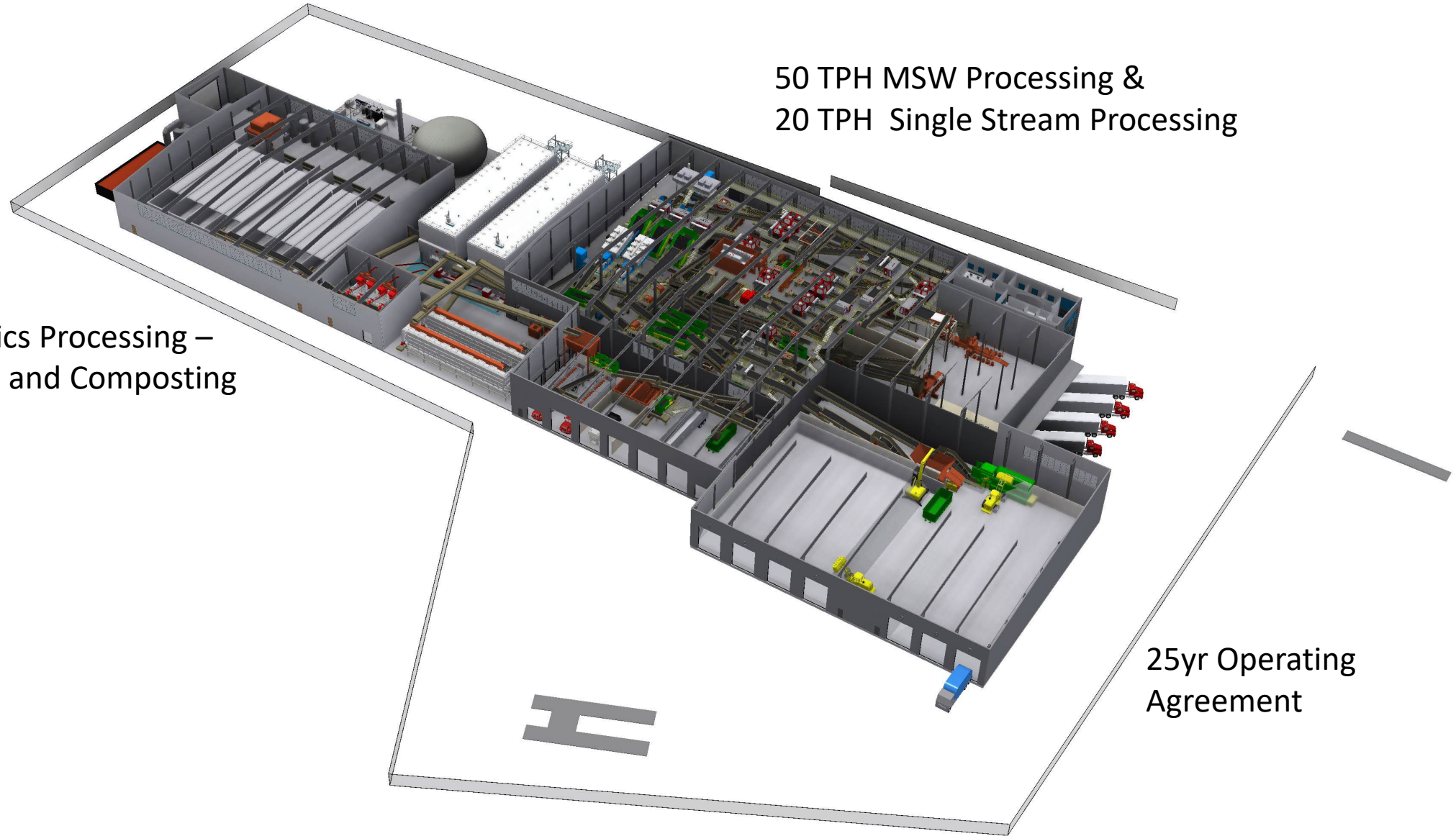
# Lane County Integrated Material and Energy Recovery Facility



*What's next.*

A Public Private Partnership

# Lane County Project – Combined Technologies



50 TPH MSW Processing &  
20 TPH Single Stream Processing

Organics Processing –  
Biogas and Composting

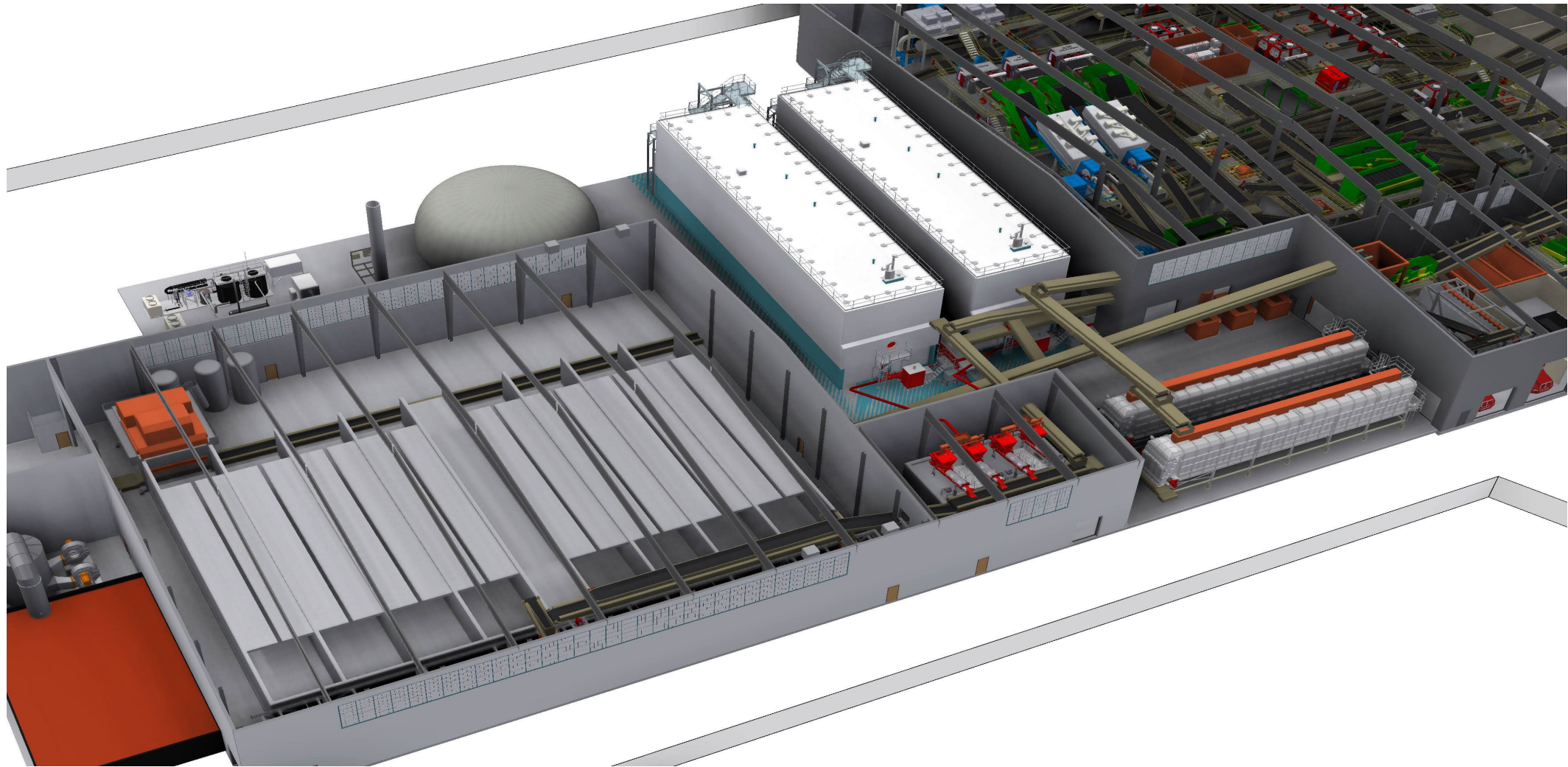
25yr Operating  
Agreement

**BHS**

*What's next.*

# Lane County Project – Combined Technologies

Organics Processing – 180,000 MMBTU Annual Bio-Gas Production  
with solids drying



What's next.



# Objectives

- **Increase diversion of materials from the landfill to achieve a minimum 63% county-wide recycling rate**
- **Significantly reduce greenhouse gas emissions from Short Mountain**
- **Create local, sustainable economic development and jobs**
- **Construct and operate at an affordable cost to the rate payer**
- **Use proven processing systems**
- **Achieve the above in a Public Private Partnership format**

The image shows a large industrial facility with multiple levels of machinery. The equipment is primarily green with yellow safety railings and stairs. The facility has a high ceiling with exposed pipes and structural beams. The overall scene is brightly lit, suggesting an indoor industrial environment.

# Greenhouse Gas Reductions Lane County Project

- Decrease of 100,000 tons per year of CO2 emissions
- Organics processing removes significant volatile organics through AD and aerobic composting
- Reduction of carbon emissions from transport of materials to distant processors



# RNG Production

- The facility will produce 1,300,000 diesel gallon equivalent (DGE) per year of biogas upgraded to pipeline quality Renewable Natural Gas (RNG)
- Produces Negative Carbon Intensity RNG fuel under Oregon's Clean Fuels Program



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# Autonomous Material Processing – Community Recovery System

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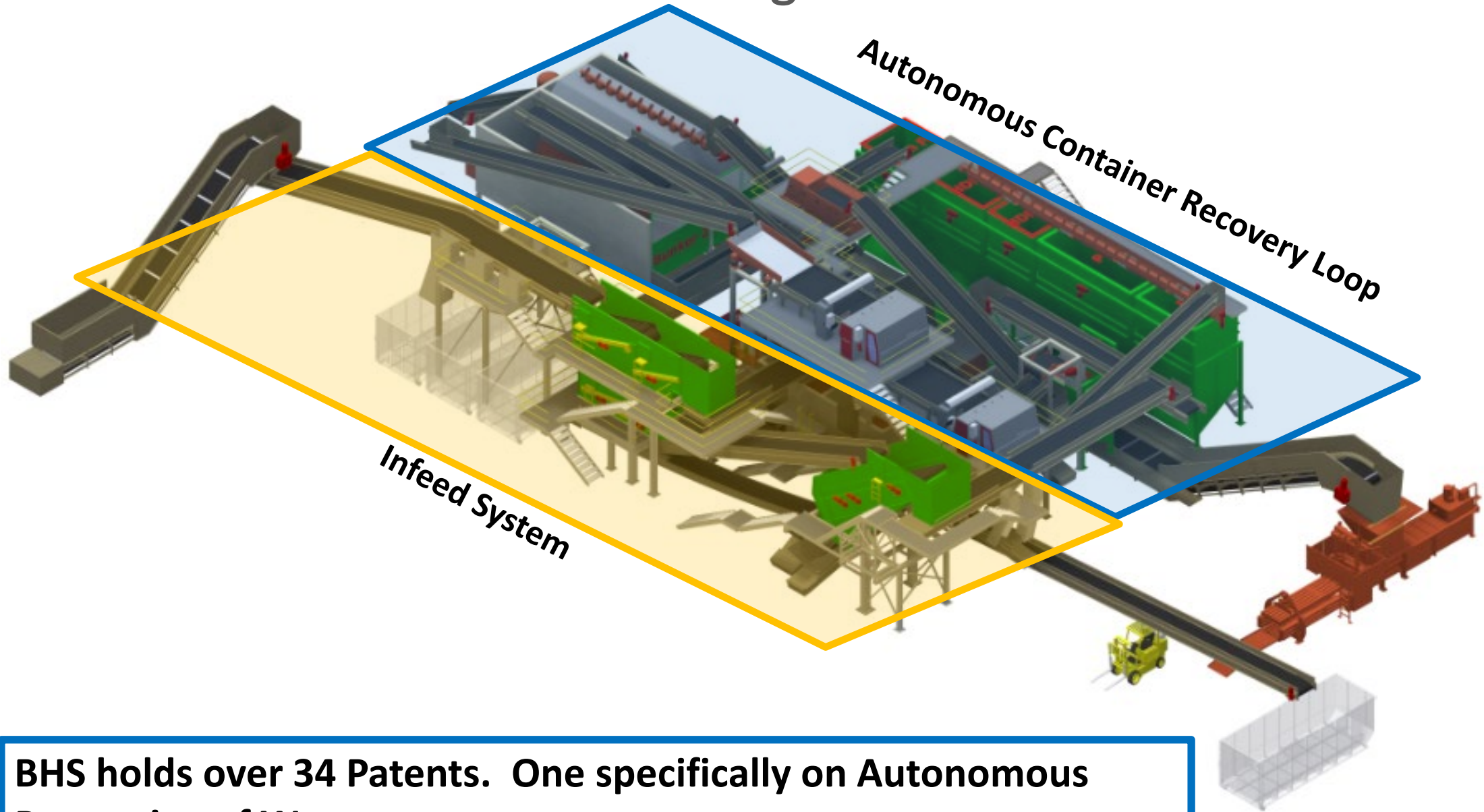
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# Autonomous Container Processing



**BHS holds over 34 Patents. One specifically on Autonomous Processing of Waste**



What's next.

# Community Recovery System

- Processing capacity: 10 to 20 tons/hour single stream curbside materials
- Recovery rate: >97%
- Commodity Purity: >95% (exceeds ISRI grade specifications)
- Commodities produced:
  - OCC
  - Mixed Fiber
  - Full range of Plastic grades
  - Metals
- Real time material composition, reporting, and data analytics
- 15k sq ft processing area; lower construction cost
- Fully installed MRF under \$10M



What's next.



*What's next.*