

MRF Sorting Technologies

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Who We Are

Headquarters: Rutland, Vermont

Founded: 1975

Employees: +5,000

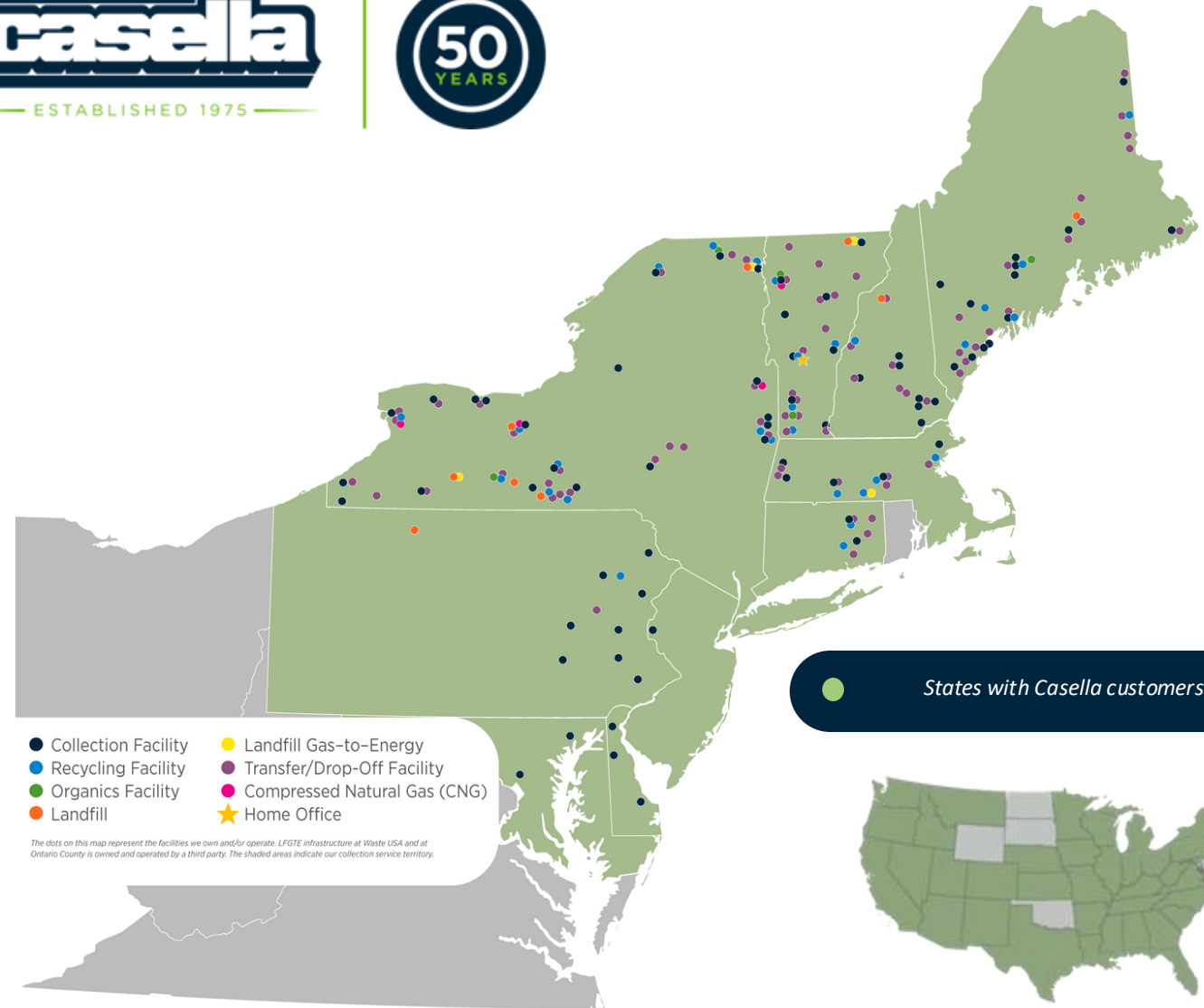
Facilities: 175

Tons processed:

1,000,000+ tons of recyclables

400,000+ tons of organics

Mission: To create value by renewing and sustaining our resources and our environment.



Investing in Sustainability – Since 1975



Materials Management: We recycle nearly 1.5 million tons of recyclables and organics per year. Our disposal facilities recover enough landfill biogas to power nearly 30,000 homes. We are focused on innovation around hard-to-recycle items such as **mattresses**, industrial scrap, and a range of **consumer products and packaging** that cannot be processed in conventional recycling facilities. We also advance these goals by building partnerships throughout the value chain.



Innovation: We continue to make progress on our innovation pilots. Examples include our Electric Vehicle pilot in Vermont testing EV viability within our collection fleet, and our engagement with Waga Energy to develop renewable natural gas (RNG) production facilities at three of our landfills. Casella has a track record of working with our higher education partners on award-winning research to help pioneer the future of our business and industry while providing essential, real-world experience for the next generation of leaders.



Circularity with Becton Dickinson: Becton Dickinson and Casella have partnered in a next-generation recycling pilot to manage discarded syringes and needles that has led to 40,000 pounds of medical waste to be recycled and diverted from disposal. We have partnered with leading research institutions to build, test and validate our work and expect these partnerships to continue to flourish throughout the program's development.

[View our 2023 Sustainability Progress Report here.](#)



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Material Recovery Facility



- Advanced Robotics and Artificial Intelligence (AI) technology.
- The enhancements incorporate more than a dozen new elements for sorting material.
- Better understanding of materials brought to the facility, ensuring commodity management.
- Drives innovation in recycling and sustainability.
- Allows multiple streams to be delivered at once gaining operational efficiency and promoting sustainability.

Casella Charlestown MRF (Materials Recycling Facility)

Considerations for a New Facility

Equipment
Upgrades/New
Technology

Policy/Regulations

Workforce
Availability

Space
Available/Size

Volume/Type of
Material

Product
Mix/Contamination

Available Markets

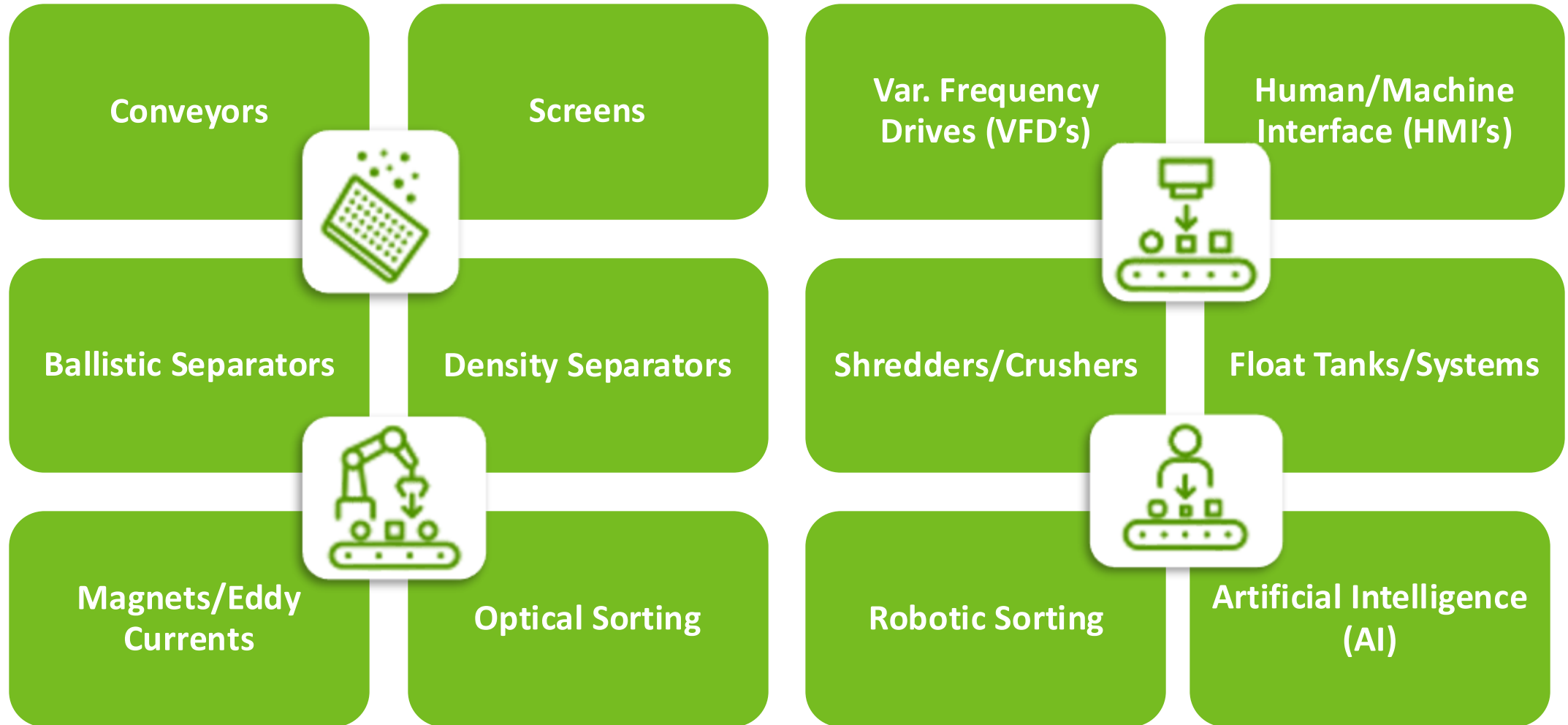


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Advances in MRF Sortation



Optical Sorting Technology



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Optical Sorting



Wide Belts

Accelerator Belts

High Volume

Requires Compressed/Dry Air

Types of Detection

Dual Eject Option

Film Capture Option

Positive Air Pressure Option



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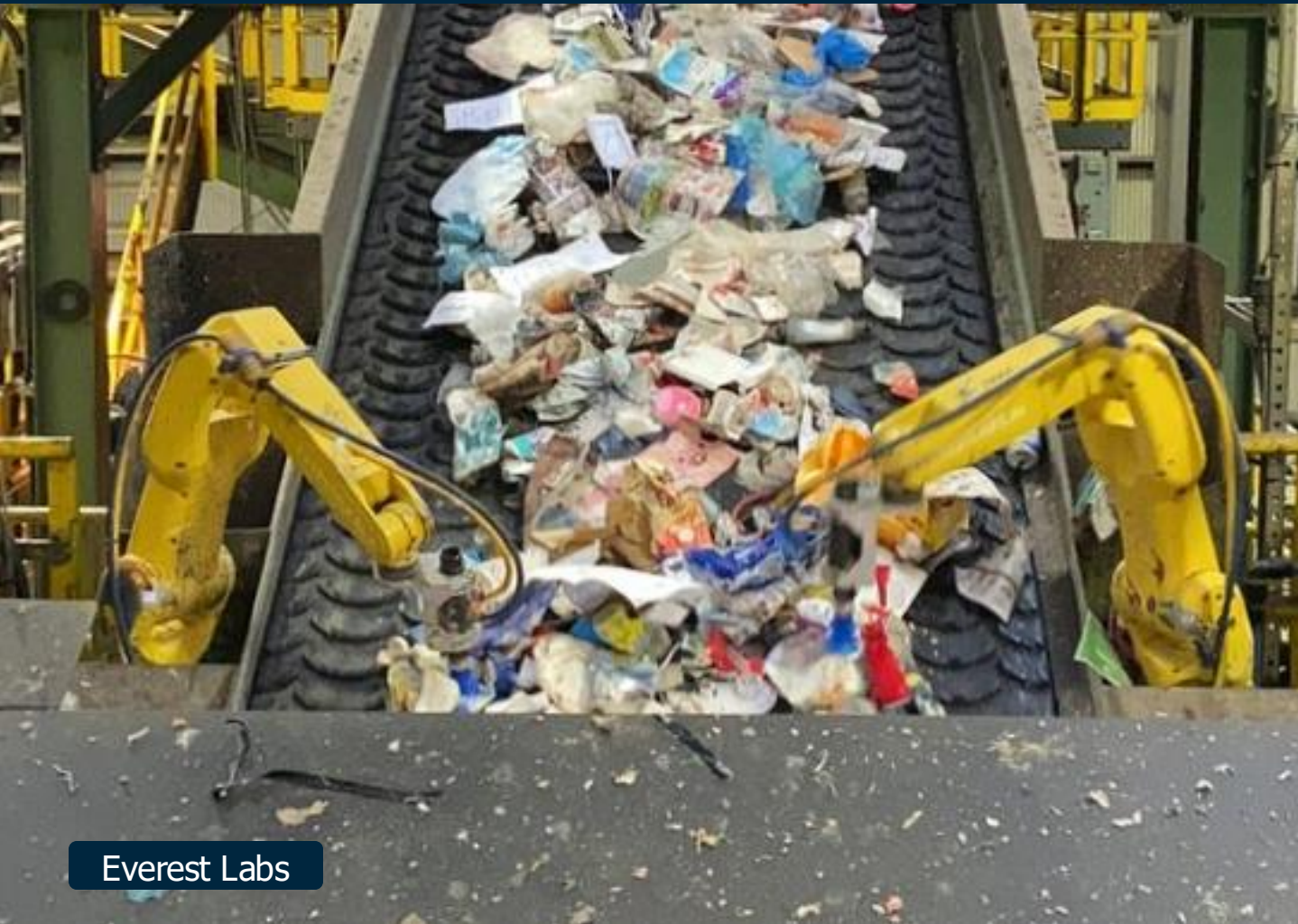
Optical Sorting



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Robotics



Robotics



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Robotics

Lower Volume

Wide Variety of Materials

Relatively Easy to Install

Adaptable

Suction/Grab/Push



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Build Out Phase

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Artificial Intelligence (AI)

Safety – Hazard Identification

Tip Floor Management

Identify Contamination

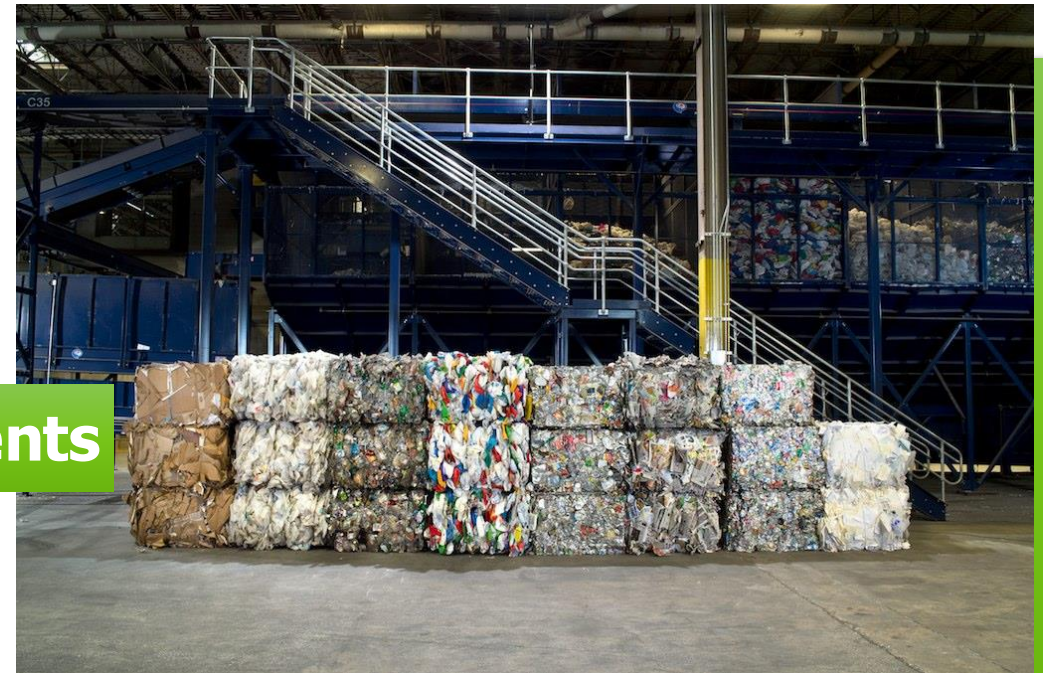
Determine Product Mix

Line Leader/Operator Alerts

Potential for Automated Process Adjustments

Facility/Equipment Evaluations

Customer/Generator Feedback

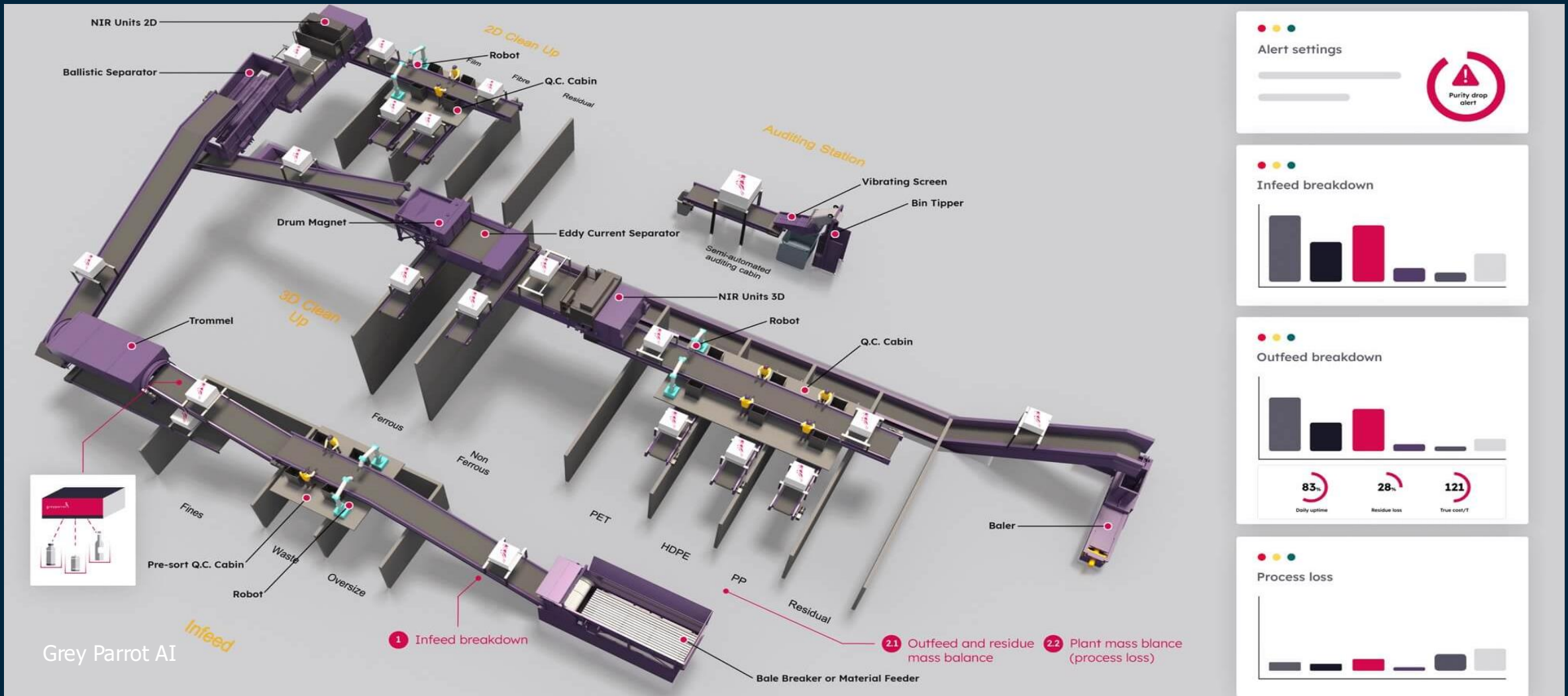


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Artificial Intelligence (AI)



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