Title: AI-Enhanced Recycling to Reduce Contamination, Collect Data, and Engage Users,

Topic: Emerging Recovery and Recycling Technologies, Business Models & Logistics John Starke, Founder and CEO, MyMatR, Inc. <u>John.starke@mymatrcorp.com</u> Arlene Starke, Director, Corporate Secretary, <u>arlene.starke@mymatrcorp.com</u>, 301-518-8261 MyMatR website-https://www.mymatrcorp.com/

MyMatR has developed an AI-enhanced robotic sorting device, in one unit, which separates recyclable material from trash, increasing recycling efficiency and landfill diversion. Recycling rates in the U.S. have stagnated for two decades, despite substantial investments in education and government regulation. Confusion, apathy, and inconvenience hinder progress; recyclables are contaminated, and landfill usage is high. MyMatR addresses the challenges of increasing quantity and quality of recyclable material, and providing detailed waste data.

MyMatR's container sorts at the source of disposal with 90% accuracy. MyMatR's unit is plug and play, connects to the internet, and is 54" high and 28-38" wide (depending on customization requirements). Al in the unit allows customization of sorting algorithms, container size, and signage. MyMatR's unit can be programmed to sort any type of material (e.g. plastic, aluminum, paper products).

MyMatR's public waste container is user-friendly and affordable, with a response time of three seconds. Each unit contains two bins, (recycling and trash) in 23- or 36-gallon sizes. Internal unit sensors alert staff to fill levels and door status. MyMatR's device uses an embedded display screen to engage a user to choose a disposal opening and then educate the disposer on the accuracy of the choice. All deposits are automatically sorted to the appropriate place.



MyMatR Duo Smart Waste Container with Data Report

MyMatR has three objectives:

- Increase recycling by sorting waste at the source of disposal to reduce recycling contamination and increase the volume of recycling. Recycling at the source increases the value of the recyclable material and can reduce the net cost of waste management.
- **Provide waste stream and operations data** that can measure recycling performance and collection efficiency. MyMatR has created a Data Dashboard for analysis of the waste stream and to enable continuous in-house waste audits. The Data Dashboard is available in real time on the internet, and shows performance metrics, such as item photographs, diversions, and CO2 levels.
- Engage and educate users on the correct placement of waste. Engagement occurs when users are attracted to the innovative device and choose how to dispose of an item. The display screen educates about the correctness of the choice.

MyMatR 's device has been field tested in more than 20 pilots in universities, municipalities, and businesses. Paid customers include Volvo Car, BMW, Coca-Cola Consolidated, the University of South Carolina, the City of Durham, Research Triangle Park, and an engineering firm in Saudi Arabia focused on smart city automation.