Transforming Recycling Through A.I. + Robotics

Presented by Jon Gertsmeier – National Sales Director
The U.S. recycling rate is around 34.5%. 

Source: The Economist
The U.S. throws away $11.4 billion worth of recyclable containers and packaging every year.

Source: Los Angeles Times
INDUSTRY CHALLENGES

- Tough decisions between high operational and capital costs
- Challenging material quality, resale value, and loss to landfill
- Chronic labor shortages, injury risk, and high turnover
OUR MISSION:
Transform the economics of recycling using A.I. + Robotics
Circular Economy

1. Design
2. Production, Remanufacturing
3. Distribution
4. Consumption
5. Repair, Reuse
6. Recycling
7. Raw materials
8. Residual waste
AMP CORTEX™ HAS 3 COMPONENTS

1. Artificial Intelligence (Brain)
2. Vision System (Eyes)
3. Smart Sorting Robots (Hands)
A.I. DRIVES THE PLATFORM

• Machine learning distinguishes features like a human
• Continuously learns as neural network expands
• Handles complex piled, non-singulated mixed waste
VISION SYSTEM SEES THE MATERIAL STREAM

- Detects what to sort and pick
- Identifies unique material properties – color, texture, shape, size, etc.
- Can recognize down to the ‘brand’
- Captures all waste stream data for insights, measurement and optimization
AMP Neuron™ drives the robotic system
MAXIMIZING NETWORKED INTELLIGENCE

THE POWER OF COLLECTIVE KNOWLEDGE
ROBOTS EXECUTE WITH SPEED AND PRECISION

• High-speed picking twice as fast as humanly possible
• Sustainable, accurate, and consistent
• Precision prevents contamination
• Ideal for “dull, dirty, and dangerous”
Maximize ROI with Data

- Alerts on equipment issues/hazards
- Drill down to SKU and Brand-level
- Measure value captured and lost
- Compare across equipment
- Quantify value per haul
- Know bale composition
DESIGNED FOR SCALE

• No retrofit
• Easy installation on existing lines
• Quickly installs over a weekend
AMP’s install of 14 robots at SSR in Florida is the largest application of AI-guided robots for recycling in the world.