Preparing for The Robotic Revolution

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Utilizing Robotics Successfully

MATERIAL PREPARATION KEY TO SUCCESS

• Understanding robotic capabilities
• Equipment selection - labor and economic impacts
• Integration of robots into daily life
• Leveraging the data and analytics
Understanding Robotic Capabilities

- **ROBOTS CAN'T DO IT ALL**
  - Pre-conditioning inbound streams to a 3' minus for robots to handle more effectively

- **Key Benefits:**
  - Untangling to maximize productivity and recovery
  - Robots are provided a consistent waste stream
  - Cost savings and operational uptime
Equipment Selection - Labor and Economics

- ADVANCED EQUIPMENT IS ON THE MARKET
  - Separate 2D, 3D and fines in a single step
- **Key Benefits:**
  - No labor required for 3 fractions from front end
  - Reduced fines from entering downstream equipment
  - Reduce burden depth for increased recovery rates
  - Remove low value commodities early in production
Integrating Robots Into Daily Life

- IT IS A PARADIGM SHIFT
- Artificial intelligence is now mainstream, enabling autonomous 24/7 picking

- Key Benefits:
  - 24/7 “Lights Out” production with robotic sorting
  - System controls and optimization from mobile devices
  - High purity of recyclables for higher market value
  - Reduce injury rates while improving throughput
Pick your plant

- Robots for SS MRF or C&D processing plants
- Seek facility optimization to improve bottom line
- **Key Benefits:**
  - Fast Picker for QC for alum, HD, tetra, HDPE
  - Replaces 2 manual sorters for each robot
  - Recognition software works for all materials
  - Fast Picker takes the National Sword head-on!
Sell Cleaner Commodities

CONVERT WASTE INTO REVENUE

Increase revenue and profits from significant domestic market demand for high quality fractions

Key Benefits:
• Robots learn more every day, integrated into the AI
• Staff training on controls key to success
• Higher recovery rates of the quality commodities
• Establish competitive advantage with robotics
Leveraging Data and Analytics

NO MORE OUTDATED REPORTING

Robust dashboards aligned to your operation provide real-time metrics, data, and key operational insights.

Key Benefits:

- Operational control from HMIs, desktop, and mobile
- Advanced communication protocols to integrate into existing SCADA systems
- Diversion rates and reporting at your finger tips
- Reduce injury rates while improving throughput
Where To Now

- Strongly consider experience and expertise of partners
  - Every plant has unique needs and opportunities
  - Certain technologies are better matches than others
- Regional material variations make a difference for system design
- Robotics will improve labor dynamic - consider how to redeploy

How We Work

- Personal Site Visits and Face-to-Face Consultation
- In-depth Workflow Analysis and Expert Solution Guidance
- Fast OEM Parts and Technical Service Support
- Extensive After Sales Service and Maintenance Education
Thank You!

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