AN INTRODUCTION TO ASTRX

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We work across the system ... across the country...

- 250+ community partners
- ... growing access to resources and data
- ~400,000 carts
- More than $20MM of new infrastructure
47% & 60% of Americans don’t automatically have curbside recycling. 

2016 SPC Access Study

of packaging is not being recovered in the home.

The Recycling Partnership

Half plus half equals A WHOLE LOT OF OPPORTUNITY.
RECYCLING IS A LOOSELY CONNECTED, BUT HIGHLY DEPENDENT SYSTEM
The Sustainable Packaging Coalition and The Recycling Partnership have started a new initiative that will build a roadmap for a stronger American recycling industry.
What is Systems Thinking?
For packaging to be recycled successfully, we must consider how it flows through each of the five elements of the recycling system: manufacturing, reprocessing, sorting, collecting, and engaging consumers. To start thinking about the criteria that can help assess the recyclability of a product and its ability to create reliable and valuable manufacturing feedstock, use the table below. Think of this as a starting point for a conversation about the recyclability of a product. Start by considering the ultimate goal: that a recycled product finds an end market.

### END MARKETS  
**Feedstock for Manufacturing**

- **Supply/Demand**  
  Is there demand to use the recycled material in products?
- **Design**  
  Are brand companies creating a "Demand Pull" by using recycled materials?
- **Specifications**  
  Do the product specifications allow for the use of recycled content in it?
- **Contamination**  
  Are there contaminants in the material that hinder the end application?
- **Infrastructure**
- **Education**
- **Profitability**  
  Does it have a positive profitability analysis?

### REPROCESSING  
**Paper Mills, Plastic Reclaimers, etc.**

- **Supply/Demand**  
  Is there demand for the reprocessed material?
- **Design**  
  Are there design flaws that prevent reprocessing and recoverability?
- **Specifications**  
  Can material be combined or is it compatible with other currently recycled material?
- **Contamination**  
  Does the material cause harm or contamination to other materials?
- **Infrastructure**  
  Is a new investment required to reprocess the material? Are there markets in different geographic areas?
- **Education**
- **Profitability**  
  Does it have a positive profitability analysis?

### SORTATION  
**MRF – Materials Recovery Facility**

- **Supply/Demand**  
  Do reprocessors want to buy the material? Are there markets? Are they positive?
- **Design**  
  Are there design flaws that impact sortation? Does its form make it suitable for proper and consistently sorted (size, flatness, 3D, labeling, etc.)?
- **Specifications**  
  Do new base specifications need to be developed? Do base specs allow for inclusion of the material?
- **Contamination**  
  Can the product damage the recovery of other materials? Are there contaminants (moisture, food, etc.) that impact sortation?
- **Infrastructure**  
  Is a new investment required to sort the material? Are there collection carts or bins? Vehicles? Drop-off locations?
- **Education**  
  Do local governments know all the materials that their MRF will accept?
- **Profitability**  
  Is there adequate volume to justify recovery, particularly if it must be marketed independently? Does it have a positive profitability analysis?

### COLLECTION  
**Curbside and Drop-Off**

- **Supply/Demand**  
  Is there a defined common suite of outreach materials for the region?
- **Design**
- **Specifications**
- **Contamination**  
  Does this material hurt the recyclability of other materials?
- **Infrastructure**  
  Is an investment required to collect the material? Are there collection carts or bins? Vehicles? Drop-off locations?
- **Education**  
  Do consumers know how to prepare their materials for recycling (no food residual)?
- **Profitability**  
  Is there adequate volume being collected to support recycling?

### CONSUMER ENGAGEMENT  
**Access and Participation**

- **Supply/Demand**  
  Does it have a How2Recycle® label to describe recyclability and any actions consumers need to take to recycle it, such as removing components or returning to a store drop-off location?
- **Design**
- **Specifications**
- **Contamination**
- **Infrastructure**
- **Education**  
  Do consumers know the material is accepted? Do they know how to recycle it (via curbside, or community or store drop-off)?
- **Profitability**
Manufacturer

DEMAND DRIVES environmental gains.

The system needs reliable quantity, quality, and cost in supply.

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END MARKETS

• Critical to success of recycling industry
• “You don’t sell scrap, someone buys it”
• Brands/Producers have power to support (while helping own triple-bottom line)
Each material type REPROCESSOR has unique challenges. One thing in common is the need for predictable quality as both input and output.

ASTRX
• Core, Transitional & Fringe
• The future of the material mix
The **MRF** is the backbone of the recycling system.

But not all **Materials Recovery Facilities** are the same.

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What is contamination?

MRF-sheds
WHAT’S a MRF-shed?
Like a Watershed, but for Recyclables
MRF-shed Mapping
Sample Common Suite

- **Cans**: Aluminum and Steel Cans
  - empty and rinse
- **Cartons**: Food and Beverage Cartons
  - empty and replace cap
- **Glass**: Bottles and Jars
  - empty and rinse
- **Paper**: Mixed Paper, Newspaper, Magazines, and Flattened Cardboard
- **Plastic**: Kitchen, Laundry, Bath: Bottles and Containers
  - empty and replace cap

**NO!**
- Do Not Bag Recyclables
- No Plastic Bags (return to retail)
- No Food or Liquid (empty all containers)
- No Clothing or Linens (use donation programs)
- No Tangiers (no hoses, wires, chains, or electronics)
We need to **MEASURE** what is **CAPTURED** at the curb more accurately so we can better plan and collect more quality materials at the curb.

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COLLECTION

• How do we measure recycling?
• Capture Rate vs. Recycling Rate
Clean and consistent COMMUNICATION can change behavior.

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CONSUMER ENGAGEMENT

• How2Recycle
• Making Recycling More Better
How2Recycle is designed with the consumer in mind.

**Widely Recycled**
At least 60% of Americans can recycle this package at curbside recycling or drop-off recycling.

**Sometimes Recycled**
Between 60% and 20% of Americans can recycle this package at curbside recycling or drop-off recycling. Check your local program.

**Not Yet Recycled**
Either less than 20% of Americans can recycle this package, or, it could cause a problem in a recycling facility.

**Store Drop-off**
Anyone who lives near a store that accepts plastic bags and wraps for recycling can take this packaging to that store and recycle it there.

*Not recycled in all communities*
## What do we know?

### Keep It Simple

**ALUMINUM**
- Aerosol
- Can
- Foil or Foil-like Container
- Other Aluminum Containers

**CARTONS**

**PAPER**
- Cold Cups
- Hard Cover Books
- Hot Cups
- Ice Cream Container
- Junk Mail
- Kraft Bags
- Magazines
- Newspaper
- OCC
- Office Paper
- Paperback Books
- Paperboard Boxes
- Pizza Boxes
- Shredded Paper

**GLASS**
- Bottles and Jars
- Drinking Glass
- Mugs
- Window

**PLASTIC**
- Buckets
- Bulky Plastic
- EPS Foam
- Flower Pots
- HDPE Bottles & Jars
- Non-bottle HDPE Containers & Lids
- Non-bottle PET Containers & Lids
- Other Containers & Packaging
- Other Drink Bottles
- Other Food Bottles & Jars
- Other Household Bottles & Jars
- Other Tubs & Lids
- PET Bottles & Jars
- PET Thermoform
- PP Bottles
- PP Containers & Lids
- Produce, Deli & Bakery Containers, Cups, Trays

**STEEL**
- Aerosol
- Can
- Pots and Pans
- Scrap Metal
What will we sort out next?
NEXT STEPS:

• Recommendations on metrics
• Recycled content goals and best practices
• Recycling workshops
• Working with other organizations
• Open to ideas
Thank You!
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