NERC FALL 2017 CONFERENCE

November 13, 2017
COFFEE & TECHNOLOGY

1981  2006  1990
Our sustainability strategy and targets are integrated throughout our business – from the design of our products, to procurement of raw materials through the consumer experience.
JOURNEY TO 100% RECYCLABLE
Recyclable K-Cup® pod Timeline & Milestones

- **2016**: First recyclable K-Cup® pods available
- **2017**: Availability expands in Canada
- **End of 2018**: Target for 100% of K-Cup® pods to be recyclable in Canada; production and availability increases in the U.S.
- **2019**: More recyclable K-Cup® pods available in the U.S.
- **End of 2020**: All K-Cup® pods are recyclable
UNDERSTANDING THE RECYCLING SYSTEM
Testing with MRFs, Reclaimers and Experts informed our design
PARTNERING FOR MUTUAL SUCCESS
Annual Roundtables, Active Memberships, Direct Partnerships

- Plastics Forming Enterprises (PFE)
- Plastic Recycling Facilities (PRFs)
  *KW Plastics  *Merlin Plastics
- MRFs across North America
- Equipment Manufacturers
- Association of Plastic Recyclers (APR)
- Sustainable Packaging Coalition (SPC)
- Canadian Stewardship Organizations, ie. RecycleBC
- Brands/Manufacturers of other plastic products
- The Recycling Partnership (TRP)
- The Closed Loop Fund (CLF)
NEW MODEL FOR VOLUNTARY PRODUCER RESPONSIBILITY
A new model for voluntary producer responsibility

What about the grounds?

No value

It will contaminate glass and paper

It’s too small

Brands just throw things at us and we have to “deal”

What about the lid?

1. Material Flow Testing with MRFs
2. Quantifying Contamination Potential
3. Equipment Manufacturer Engagement
4. Standardize testing protocol
5. Use of APR Design Guide
5. Invest in System Solutions
1. Pods are **not too small** to be recovered.
   - *Tested at facilities with glass screens up to 2 inch minus*

2. **Filter paper** being attached to the pod is not a problem for recovery or recycling.

3. **Polypropylene (#5) plastic** is a highly recyclable and desirable material.

4. Preference to have **grounds emptied** from the pod prior to collection.
“Upon extensive testing, our research confirms that the polypropylene pod & filter with removable lid, K-Cup® , is recyclable and recoverable. Based on its physical testing results, analytical testing results and our experience as the world’s largest plastics recycler, it is our opinion that the K-Cup® (as defined above) is a welcome addition to the post-consumer PP recycling stream and will not negatively impact the post-consumer PP recycling stream.”

-Scott Saunders, General Manager
KW Plastics Recycling Division
INNOVATION: TESTING WITH RFID TECHNOLOGY

= RFID Reader

Inlet Conveyor

Pod Inlets

Fixed Reader

Trash Removal

Fixed Reader

Inlet Conveyor

Fixed Reader

Fixed Reader

Film Vacuum

Fixed Reader

Cardboard Outlet

Fixed Reader

News Outlet

Fixed Reader

Mixed Paper/Small Fiber

Fixed Reader

Star Screeners (2) for OCC

Star Screeners (4)

"CP Screen"

Glass Breaker

Container Line 1

Fixed Reader

Container Line 2

Fixed Reader

Container Line 3

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

PET Sorter

HDPE Sorter

Mixed Plastics #3-7 Sorter

PET Outlet

#3-7 Outlet

Residual Waste Outlet

Trash Removal

PET Outlet

Optical Sorter for ALL Plastics

#3-7 Outlet

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader

Fixed Reader
KEY FINDINGS

- Minimal loss to glass, and
- An average of 90% of empty K-Cup® pods make it to the container line
- A recovery potential that exceeds 80% of incoming material.
BIN TO MRF FLOW TEST WITH CASELLA

Evaluation of flow and impact of shape on sortation

- Full and empty brewed cups tested
- Commercial and residential routes included
DEFORMATION CHARACTERIZATION
What is the Impact of Transportation on Pod Shape and Organic Separation

<table>
<thead>
<tr>
<th>Crushed</th>
<th></th>
<th>Not Crushed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empty</td>
<td>Full</td>
<td>Empty</td>
</tr>
<tr>
<td></td>
<td>No Coffee</td>
<td>Coffee</td>
</tr>
<tr>
<td>96%</td>
<td>75%</td>
<td>23%</td>
</tr>
</tbody>
</table>

- Natural crushing of the pod in transport is effective at exiting the majority of the grounds in full pods without increasing loss to glass stream
- 75% of Full cups were empty on container line
APR DESIGN GUIDE AND HOW2RECYCLE LABEL

Upcoming Changes

✓ Base Polymer
✓ Barrier Layers/Additives
✓ Color

• Dimensions
  - **Currently Language**: Items smaller than three inches in all dimensions render the package non-recyclable per APR
  - **Updated Language**: Items smaller than three inches in all dimensions require testing per APR Sorting Potential Protocol - Size

• APR Design guide directly impacts/guides the SPC How2Recycle label
COMMUNICATING TO CONSUMERS IN CANADA

Digital Campaign:
- Banners
- Videos
- Landing page
- Social Posts

Public Relations
- Brand influencers campaign
- Eco-Influencers activation

In-Store & AFH activation

Mass Media
- 15 sec. TV spot
- 6 sec. designed specifically for Facebook and Instagram
CONSUMER ENGAGEMENT

KEURIG® PRESENTS

3 EASY RECYCLING STEPS
Designing for Recyclability

Driving Continued Innovation

Curbside Collection

Make Something New