



Source Reduction in the Quest for the Holy Grail

Jon M. Hursey
Ecologic Business Leader



Who is Ecologic?

And who is Jabil for that matter...

100+

Jabil (NASDAQ: JBL)

Contract manufacturing for electronics, healthcare, automotive, consumer packaging, etc.

JBL

7

Jabil Packaging Solutions

Sustainable packaging solutions provider, primarily consumer packaging

JPS

3

Ecologic Brands

Sustainable fiber packaging within the JPS family

EB

ECOLOGIC SITES

Tortosa, Spain

Materials Development and Pilot Lab
Technical Type 3 Molded Fiber Production

Mebane, North Carolina

Hybrid Paper Bottle Production
Product Development

Shanghai, China

Co-located Product Dev. & Pilot Lab
Technical Type 3 Molded Fiber Production

Paper Packaging

>60% of material changes to packaging in the last year involved paper



Paper Packaging has a wide range of applications

- Traditional shipping protectors inexpensive, widely used and widely recyclable / repulpable but are not appropriate for technical challenges
- Paper cup (with additives) and aseptic container recycling has gone from very low to over 60%³ for available Households
- Food Service well known but can have performance challenges without additives or barrier layers
- Technical parts often multi-material including laminations, coatings and decoration can make composting or recycling with current infrastructure difficult

As End of Life becomes more complicated, source reduction can be a good strategy



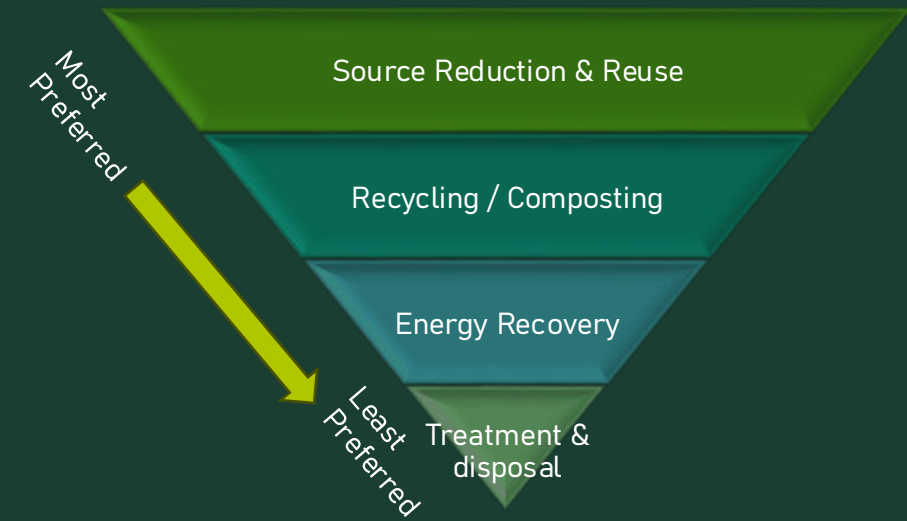
Source Reduction

A plastic reduction case study

Source Reduction is not new (material optimization, light weighting, etc)

The most obvious way to improve sustainability and EOL on packaging products

Waste Management Hierarchy ³



Example



Up to 70% less plastic



Separate to Recycle

At EOL, materials are clean and ready to recycle

Nearly all MRF's are set up for PET bottles

The Paper / fiber is clean but some MRF's are currently not well-equipped to deal with the 3D shape of the fiber shells

Ideal state: 100% recycled

Still Great: 70% plastic reduction vs rigid container



The Paper Bottle Conundrum

When Ecologic started presenting hybrid paper bottles...

...and could it be at the same (or even a lower) price point?

They want the Holy Grail... But we have not given up

Brands said they liked the idea, but no plastic, please



We've Seen this Before

Decades of CSD bottle Development



What is this *Holy Grail* in Packaging Sustainability?

There will be no coconuts...

For Consumers?

No trade-offs, no compromises: same great experience, unlimited shelf life, and packaging that's either fully compostable or ready for the recycling bin. Too good to be true? Maybe. But we're working on it.



For Recyclers?

Is the holy grail really one material to rule them all? Cleaner streams, higher yields, simpler recycling—mono-material might just be the magic trick. If only it were that easy.

For Brands?

Compostable or recyclable? Check. Same or better user experience? Check. Barrier protection like glass, plastic, or metal? Check. Lower carbon footprint at a competitive price? That's the dream—but we're not there yet.

For Converters?

At the end of the day, it all comes down to what consumers and brands actually want to buy. And that's where things get interesting. (And complicated.)



Hybrid Packaging

Consumer Perception of Sustainability

- Consumer perception and objectively measured sustainability may not be the same; there's a lot of consumer confusion
- **Plastic** vs **plastic + paper** vs **paper** have been studied by researchers!² Here's their topline:



Want an *Evolution* or a *Revolution*?

Call to Action → Invest in Technology

While we wait for the perfect solution, the lack of investment is slowing down our potential progress

More hybrid structures will...

Lead to technology leap-frogging in manufacturing

→ Lighter and lighter liners, faster cycle times, optimized supply chains

Make sortation and recycling investment more attractive and interesting

→ Advances in sortation, handling and repulping infrastructure

Teach consumers how to better handle them at end of life

→ Separate to recycle

And if advancements are slow... we STILL have a structure with up 70%< plastic

Lean into source reduction!



What's Your Holy Grail?

We have to chase it and create it, not wait for it...

Heard in a recent meeting with a large Brand Customer:

“... most people in the US don't know they have a sustainability problem. We're not going to be the ones who tell them...”

We won't change and advance if our companies don't invest and engage

But the first step is caring and changing behaviors on a personal level

TAKE-AWAYS

1. Invest in Technology advancement – Don't wait for end state.
2. Lean into Source Reduction
3. Take a personal interest



Thank You!

