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Recycling Refinement

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ELEMENTAL IMPACT

Ei PARTNER MEETING
ATLANTA, GA
NOVEMBER 20, 2014



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Recycling Refinement

... moving beyond landfill diversion

- ◎ Focus on source-separation at large venues to create route density for smaller generators to join in later tier
- ◎ Bale material on-site with mini-balers
- ◎ Direct sales to mills & recycling destinations



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Recycling Refinement

Source-Separated Materials Recycling Template

- ◎ Metro-wide template with Atlanta serving as the pilot city
- ◎ Total Materials Management Approach

Contamination is a Mistake!



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... in the beginning

... in the beginning (2011)

HMSHost Milk Jug Recycling - Atlanta Airport





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... in the beginning

HMSHost shares:

- ③ internal case study & other airports followed suit
- ③ site visits by fellow pioneers





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... in the beginning

SFCI-Concord Mills (2011 - 2012)

- ◎ First retail plastic film recycling pilot in industry
- ◎ Response to garment manufacturers switching from bulk retail packaging to individual clear plastic bags





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... in the beginning

SFCI-Concord Mills (2012)

- ① Determine types of film generated throughout mall operations





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... in the beginning

SFCI-Concord Mills (2011 - 2012)

- 🌀 Toured Hilex Poly plastic film recycling plant in N. Vernon, IN





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... in the beginning

SFCI-Concord Mills (2011 - 2012)

- © August 2012 Orwak baler delivered & pilot officially launches





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PLASTIC FILM RECYCLING

FreshPoint Atlanta Pilot

- ⊙ Generates a significant amount of shrink wrap via produce deliveries & customer orders
- ⊙ Drivers bring back wrap after customer deliveries





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PLASTIC FILM RECYCLING

FreshPoint Atlanta Pilot

- ⊙ Unexpected plastic film re: blue smocks worn in cut room
- ⊙ Unexpected contamination re: pickle juice





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PLASTIC FILM RECYCLING

FreshPoint Atlanta Pilot Video

- © Filmed November 22, 2013 & released 1st Qtr 2014 – Ei's first video!!! Thank you Scott Seydel & everyone who starred in the video
- © First item on Google Search: plastic film recycling Atlanta





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PLASTIC FILM RECYCLING

FreshPoint Atlanta Shares

- ③ Hosted GWCC & ATL Airport for a tour of practices





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S-SMRT

GWCC joins as a Lead Template Pioneer

- ◎ Template expands from plastic film to total materials
- ◎ Introduce GWCC Lead Pioneer role @ Atlanta Ei Partner Tours





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S-SMRT

Source-Separated Materials Recycling Template

Total Materials Management Approach



Contamination is a Mistake!



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S-SMART GAME PLAN

Simple Model:

- ③ Moderate generators source-separate materials & compact on-site into mini-bales
- ③ Hauler collects mini-bales to transport to a recycling center



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S-SMART GAME PLAN

Simple Model:

- ⦿ Recycling center tracts material received, re-bales by material type into standard size bales & stores in a tractor trailer
- ⦿ Hauler sells baled material direct to end user | manufacturer



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S-SMART GAME PLAN

Simple Model:

- ③ Hauler pays rebates to program participants based on their % of load sold
- ③ Ei oversees to ensure the entire value chain makes a reasonable profit



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S-SMART GAME PLAN

Total Materials Management Approach:

- ◎ Template pioneers commit to viewing their waste | material stream in its entirety
- ◎ Business model developed where high value materials “subsidize” lower value material or those with challenging end markets



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S-SMART GAME PLAN

Total Materials Management Approach:

- ⊙ Food waste is a second-tier material stream that requires subsidy:
 - ⊙ Low tipping fees
 - ⊙ Packaging shifts for post-consumer food waste program



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S-SMART GAME PLAN

GWCC | GA Dome Lead Pioneer:

- ◎ Establishing overall material baselines:
 - ◎ GA Dome waste | recycling audits completed during 2014 pre-season Falcons games
 - ◎ GWCC staged for waste audit with Ei Partner M-Pass Environmental



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S-SMART GAME PLAN

GWCC | GA Dome Lead Pioneer:

- 🎯 2013 Falcons Game – Nov 10
 - 🕒 Tim hosted Ei Team for game day recycling practices tour
 - 🎯 Ei “picked” the bowl for food waste & compostable material





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S-SMART GAME PLAN

GWCC | GA Dome Lead Pioneer:

◎ 2013 Falcons Game – Nov 12



◎ Doug & Holly collect 13 bags, 132# of compostable food waste & material and deliver to composting facility

◎ Material was placed at end of windrow to monitor decomposition





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S-SMART GAME PLAN

GWCC | GA Dome Lead Pioneer:

- ◎ 2014 Pre-Season Falcons Game
 - ◎ Tim hosted SMAT to determine current status of F&B packaging & other material





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S-SMART GAME PLAN

GWCC | GA Dome Lead Pioneer:

🎯 Orwak baler delivered | first bales:





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S-SMART GAME PLAN

S-SMRT Recycling Center:

🎯 UNICOR | Atlanta Penitentiary





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Potential Template Pioneers:

- ◎ Georgia Tech
 - ◎ Toured facility re: logistics feasibility
 - ◎ Next step: build business case for top management buy-in





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Potential Template Pioneers:

- ◎ Keter-managed metro malls:
 - ◎ Avalon
 - ◎ North Point Mall
 - ◎ Perimeter Center





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S-SMRT GAME PLAN

Potential Template Pioneers:

- ⊙ CNN Center
 - ⊙ Toured GWCC S-SMRT area
- ⊙ Center for Disease Control
- ⊙ Cox Enterprises
- ⊙ Delta Airlines – inflight recycling



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S-SMRT GAME PLAN

Next Steps:

- ◎ Create a “turn-key” option for template participants that includes on-site material baling
- ◎ Recruit second tier pioneers
- ◎ Focus on fiber & aluminum local end markets



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S-SMRT GAME PLAN

2015 Goals:

- ⊙ Expand city-wide template in Atlanta to third & fourth tier participants
- ⊙ Embark on template replication in pilot cities:
 - ⊙ Charlotte
 - ⊙ Los Angeles



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Documentation:

- © [S-SMRT](#) website page
- © Ei FB album: [*Source-Separated Materials Recycling: building a city-wide network*](#) (over 90 photos)



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Documentation:

Zero Waste in ACTION Blog articles:

- ◎ *If it was easy, it would already be done* - introduces the pilot & details challenges.
- ◎ *Plastic Film Recycling: A New Frontier* - gives Ei plastic film history along with a pilot update.
- ◎ *Sustainability in ACTION at the Georgia Dome* - provides a template update including the opening pre-season Falcons game fact finding mission.



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Lead Pioneers:

FreshPoint - nation's largest produce distributor

Georgia World Congress Center | Georgia Dome -
nation's fourth largest conference | home to the Atlanta
Falcons

Infrastructure:

TOMRA – manufacturer of Orwak small balers

M-PASS Environmental – hauler, owner | seller of
material

UNICOR | Atlanta Penitentiary – recycling center



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End Markets:

- ⊙ Hilex Poly – world's largest plastic bag manufacturer
- ⊙ Novelis – world's largest rolled aluminum manufacturer with a recycling plant in Greensboro, GA



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SUCCESS

Template success grounded in:

© VOLUME

© CLEAN MATERIAL



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CHALLENGES

*If it was easy,
It would already be done!*

Challenges Abound...

Yet, Ei brings the possible from the
impossible!