Shaw Green Edge Sustainability Strategy
"Sustainability through Innovation"

Presentation to

California DTSC AA2 Symposium

Sacramento, CA

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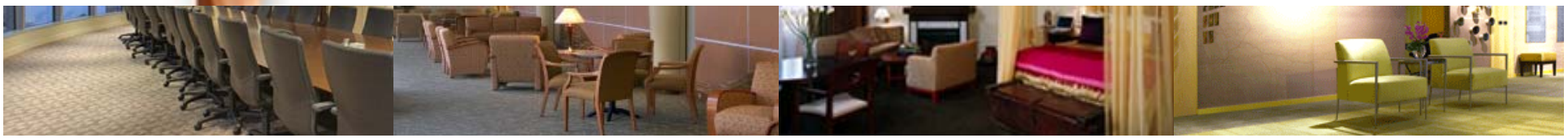
Sustainability through Innovation™
That's the Shaw Green Edge®



Agenda

- Shaw Profile
- Green Edge™ Sustainability Platform
- EcoFiberTouch Carpet Pad Case Study:
  - Anatomy of the EcoFiberTouch carpet pad
  - MBDC C2C assessment
  - Challenges
  - Next steps
- Post consumer recycling scope at Shaw
- Recycled Content: Advantages & disadvantages
- Suggestions and thoughts

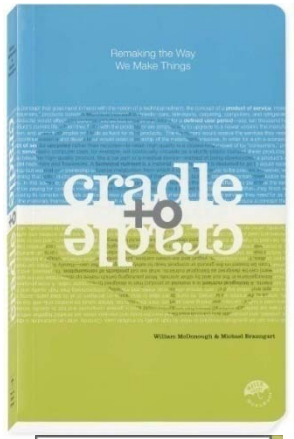
Introduction

- World's largest carpet manufacturer
- Headquartered in Dalton, Georgia
- Founded in 1967
- Annual revenue of $4 billion
- Global provider of carpet, rugs, hardwood, laminate, tile & stone, turf and services for residential and commercial markets
- World's largest carpet fiber producer

Shaw

Shaw Green Edge™ Sustainability Platform

- ***Enhances our business model over the long term***
- ***Drives Business Performance, Growth, Innovation and Productivity***
- ***Platform for Creating Sustainable Business Value***
- ***Embraces "Cradle to Cradle" Philosophy***



Demonstrating Industry Leadership and Excellence…

EcoFiberTouch Carpet Pad

Shaw

Shaw
CUSHION

EcoFiberTouch™

100% Recycled Synthetic Fiber Cushion from Shaw

Environmentally responsible

- Premium recycled fiber blend
- Exceptional strength and stability
- Comfortable, high-density cushion
- Excellent value
- Installer-preferred: Cuts better and offers the smoothest surface
- Keeps millions of pounds of material out of landfills
- Limited lifetime warranty

CERTIFIED cradletocradle BASIC

shawfloors.com

GREEN.
It's something we never forget.®

Tested and approved in accordance with the Carpet and Rug Institute's Indoor Air Quality Testing and Labeling program. For more information, visit www.carpet-rug.org.

MBDC C2C Overall Assessment

Shaw Eco Fiber Touch:

Criterion \ Tier	Basic	Silver	Gold	Platinum
Materials	✓			
Material Reutilization / Design for Environment	✓			
Energy		✓		
Water		✓		
Social Responsibility		✓		

Legend for material assessments:

Key:

GREEN	Preferred for use
YELLOW	Acceptable for use—associated with a slight to moderate risk to human health or the environment; suitable for continued use until a GREEN alternative is found
RED	Problematic—associated with one or more serious risks to human and/or environmental health; should be phased out as quickly as possible
GREY	Incomplete data—either ingredient data is not available or evaluation data is not available for one or more criteria; data should be collected or ingredient should be phased out of use

MBDC C2C Early Material Assessment

Component	Product name	Assessment
Bottom & top layer material	Mixed regrind (over runs or defect products are taken back to fiber, primarily PP, some N6/PET)	**Grey: post-industrial fiber does not exceed heavy metal or organohalogen limits for Material Avoidance.**
Bottom & top layer material	M22 PP 8-15 Den	**Grey: post-industrial fiber does not exceed heavy metal or organohalogen limits for Material Avoidance.**
Bottom & top layer material	M22 PP 8-15 Den	**Red due to antimony levels > 100ppm**
Bottom & top layer material	PP Yarn Waste 3.5”	**Grey: post-industrial fiber does not exceed heavy metal or organohalogen limits for Material Avoidance.**
Bottom & top layer material	Mixed Yarn Waste 3.5”	**Grey: post-industrial fiber does not exceed heavy metal or organohalogen limits for Material Avoidance. However, test results showed 67ppm antimony.**

Challenges for Post Consumer Material:

- **Material variability:** Extreme variability between post consumer materials.
- **Contamination:** An overall average may be acceptable, but test data will likely have spikes of elevated contamination levels.
- **Additional Processing**: Additional sorting, conditioning, cleaning, etc. is not yet feasible but being explored.
- **Recycling technology:** Still developing for many product categories and material types.

Next Steps:

• ***Evergreen recycling process:*** Refine the recycling process in both a dry and wet fibrous state. Still exploring options.

• ***Root cause for contamination:*** Run a random and timed set of samples to better understand if there is a reoccurring theme.

• ***Continued assessments:*** Continue assessing timed set of samples with MBDC.

PCC Materials Recovery Scope

N6 Carpet

N 6,6

All Fiber Types Carcass

All Carpet Types

Evergreen

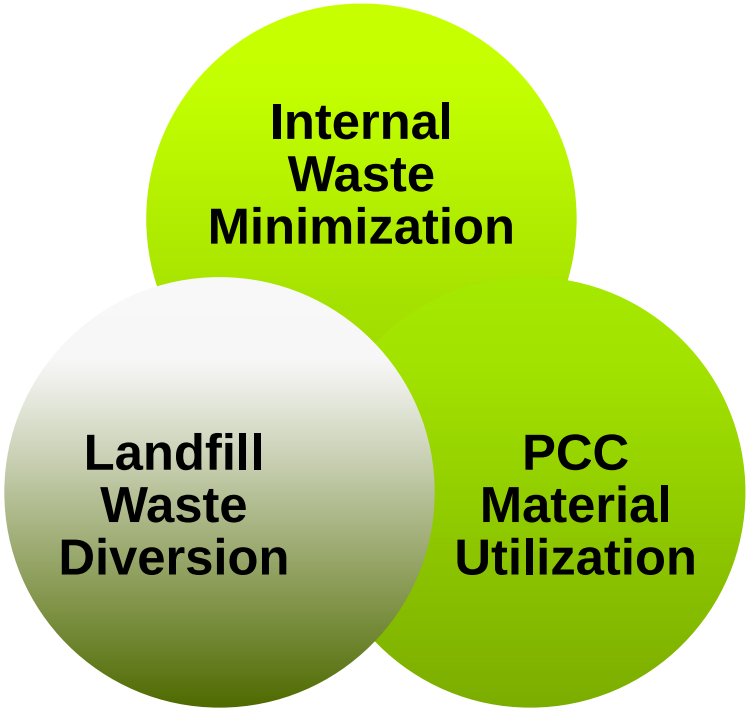
PCC New Product Development SBU

Re2E

Materials Recovery Team

Growth & Sustainability Council

Materials Recovery Team



Recycled content advantages:

- **Cradle to cradle:** Helps close the loop.
- **Landfill avoidance:** Keeps products, chemicals and materials out of the landfill.
- **Growing demand:** Many customers are demanding higher and higher recycled content levels in products.

Recycled content disadvantages:

- **Legacy products:** Many products coming back are 10, 15 or 20 years old and represent designs not DfE-enhanced.
- **Chemical & Material Content:** Very challenging and costly to take back, sort, clean and extract unwanted chemicals to create “valuable” recycled content.

Suggestions and thoughts…

Things to consider for Post Consumer products:

- ***Chemical/Material Content:*** Difficult to control and vouch for without detailed, costly testing. Being addressed for today's products…not so much for legacy products.
- ***Take Back & Transportation:*** Need to classify end of life (EOL) products as "used product" to enable sufficient take back rates.
- ***Recycling:*** New technology rapidly developing…need to continue to encourage and incent.
- ***Recycled Content in New Products:*** Need to be mindful around how best to screen for chemical content and how best to regulate recycled content in new products.
- ***Cradle to Cradle Economy:*** To achieve a "cradle to cradle" economy, the following actions are critical:
  - ***Regulatory framework:*** Acknowledging these chemical content challenges would demonstrate leadership and encourage sustainable behavior. *Perhaps we consider a "transition" provision for RC products that aligns with the product take back cycle (i.e. 10, 15, 20 years?)?*
  - ***Supply Chain:*** All industries need to telegraph requirements to their suppliers to begin "cleaning the stream" of unwanted chemicals.

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Where Great Floors Begin

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Questions?

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