

# Assessing the Current Sustainability Profile of the Corrugated industry

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# Sustainability Dimensions and Perspectives

Sustainability has three dimensions for current actions that affect future generations:

- Profit: Economic viability and contribution
- Planet: Environmental stewardship and conservation
- People: Social responsibility and impact

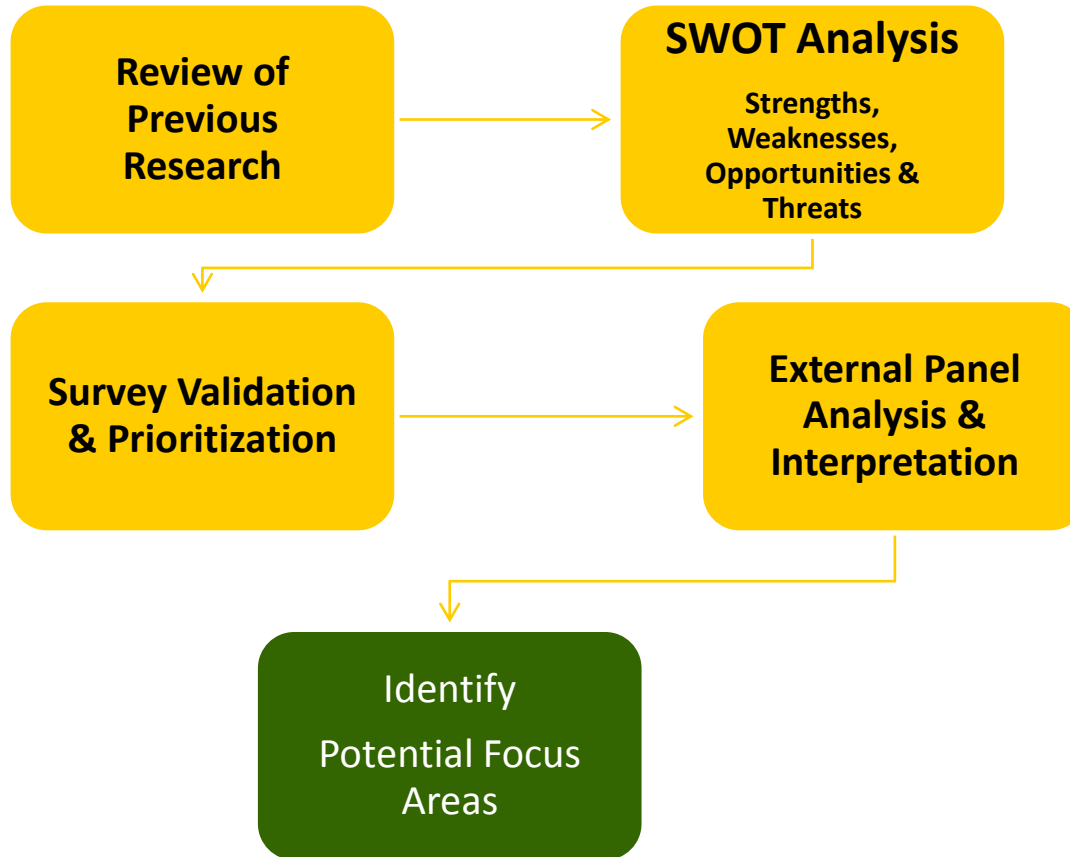
Our Industry has always believed that sustainable practices enhance the health and vitality not only of society, but of our industry as well.



# 2011 Study Construct:

## Evaluation of Corrugated Sustainability Positioning

- ✓ 1998
- ✓ 2004
- ✓ 2004
- ✓ 2008



# Economic Attributes

<u>Strengths</u>	<u>Weaknesses</u>
<ul style="list-style-type: none"><li>• Accepted/known material</li><li>• Flexible use</li><li>• Able to tailor to specification</li><li>• Printable /Graphics</li><li>• Cost effective solution to get the job done</li><li>• Able to reduce amount of material to min.</li><li>• No investment to change systems if current use</li><li>• Recovery value</li></ul>	<ul style="list-style-type: none"><li>• Over time, RPC or film may cost less</li><li>• Reduction of components (secondary) desirable</li><li>• Seen as cost for disposable component</li><li>• Wet strength concerns</li><li>• Commodity/low quality Image</li><li>• Performance concerns (washing, forklifts, strength)</li><li>• POP, Retail Ready, Single package format changes, E-commerce</li><li>• Value additions, i.e. moisture barrier</li><li>• Retail “cuts” cause waste</li><li>• Viewed as “old” material – not modern</li><li>• Lower cost flexible <b>alternatives</b></li></ul>
<u>Opportunities</u>	<u>Threats</u>
<ul style="list-style-type: none"><li>• Ability to optimize and engineer to product and distribution</li><li>• Total system cost modeling tools</li><li>• Investment in better direct print technology for Retail Ready Packaging</li><li>• Investment in mass customization printing technology</li><li>• Safety/security/tracing opportunities</li><li>• Mini mills- localization strategies</li></ul>	<ul style="list-style-type: none"><li>• Cost reduction programs</li><li>• Advances in alternate design and re-usable, paperboard &amp; flexible systems</li><li>• Extended Producer Responsibility</li><li>• Globalization expansion and offshore production</li><li>• Ability to source certified materials (SFI / FSC)</li><li>• High investment costs</li></ul>



# Economics – Strengths

## Internal

1. Printable/Graphics
2. Cost effective solution to get the job done
3. Able to tailor to specification

## External

1. Cost effective solution to get the job done
2. Accepted/known material



# Economics – Strengths

## Internal

1. **Printable/Graphics**
2. Cost effective solution to get the job done
3. Able to tailor to specification

## External

1. Cost effective solution to get the job done
2. Accepted/known material



# Economics – Weaknesses

## Internal

1. Commodity/low quality image
2. Performance concerns
3. Packaging reduction initiatives

## External

1. Viewed as old material/not modern
2. Performance concerns
3. Over time, RPC or film may cost less



# Economics – Weaknesses

## Internal

1. Commodity/low quality image
2. Performance concerns
3. Packaging reduction initiatives

## External

1. Viewed as old material/not modern
2. Performance concerns
3. Over time, RPC or film may cost less



# Economics – Opportunities

## Internal

1. Ability to optimize and engineer to supply chain
2. Total system cost modeling tools
3. Investment in print capability for Retail Ready Packaging

## External

1. Ability to optimize and engineer to supply chain
2. Investment in print capability for Retail Ready Packaging



# Economics – Threats

## Internal

1. Cost reduction programs
2. Advances in alternate design and reusable systems
3. Extended Producer Responsibility

## External

1. Extended Producer Responsibility
2. Advances in alternate design and reusable systems



# Economics – Threats

## Internal

1. Cost reduction programs
2. Advances in alternate design and reusable systems
3. Extended Producer Responsibility

## External

1. Extended Producer Responsibility
2. Advances in alternate design and reusable systems



# Environmental Attributes

<p><b><u>Strengths</u></b></p> <ul style="list-style-type: none"><li>• Recyclable, fiber-based, renewable</li><li>• Total sum positive when shipping, etc considered</li><li>• Positive LCA data</li><li>• Value preservation of products</li><li>• Compostable</li><li>• Provides product protection to minimize waste</li><li>• Well-developed recycling processes</li></ul>	<p><b><u>Weaknesses</u></b></p> <ul style="list-style-type: none"><li>• Perception of waste; single use</li><li>• Renewability in question by consumers</li><li>• High bulk/volume</li><li>• Domestic US recycling market – much of collected corrugated exported to China</li><li>• Bulky to tear down for curbside recycling and at store</li></ul>
<p><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"><li>• Check-off program/industry messaging</li><li>• More procurement of FSC / SFI / certified fiber</li><li>• Use of renewable energy for manufacturing facilities</li></ul>	<p><b><u>Threats</u></b></p> <ul style="list-style-type: none"><li>• Flexible packaging – where primary package supports own load</li><li>• Water conservation regulation</li><li>• Sustainability scorecards focused on weight reduction</li><li>• Localized distribution/product manufacturing</li><li>• More reusable / returnable case systems</li><li>• Potential impact of RFID on recyclability</li><li>• Impact of mixed use recycling streams on quality of materials</li></ul>



# Environmental – Strengths

## Internal

1. Recyclable, fiber-based, renewable
2. Value preservation of product

## External

1. Recyclable, fiber-based, renewable
2. Value preservation of product



# Environmental – Weaknesses

## Internal

1. Perception as wasteful, single-use
2. High bulk/volume ratio
3. Bulky to tear down for curbside recycling and at store

## External

1. High bulk/volume ratio
2. Bulky to tear down for curbside recycling and at store
3. Perception as wasteful, single-use



# Environmental – Opportunities

## Internal

1. Improved/increased industry messaging
2. Use of renewable Energy for manufacturing facilities
3. Use of certified fiber sources

## External

1. Use of certified fiber sources
2. Use of renewable Energy for manufacturing facilities



# Environmental – Opportunities

## Internal

1. Improved/increased industry messaging
2. Use of renewable Energy for manufacturing facilities
3. Use of certified fiber sources

## External

1. Use of certified fiber sources
2. Use of renewable Energy for manufacturing facilities



# Environmental – Threats

## Internal

1. Flexible packaging where primary package supports own load
2. More reusable usage
3. Sustainability scorecards focused on weight reduction
4. Water conservation regulation

## External

1. Flexible packaging where primary package supports own load
2. More reusable usage
3. Sustainability scorecards focused on weight reduction
4. Water conservation regulation



# Social Attributes

<p style="text-align: center;"><b><u>Strengths</u></b></p> <ul style="list-style-type: none"><li>• Sanitary</li><li>• Industry employs thousands</li><li>• Safety and security for products</li><li>• Eases movement of goods, reduces physical effort</li><li>• Known material – has archetype recognition for childhood</li></ul>	<p style="text-align: center;"><b><u>Weaknesses</u></b></p> <ul style="list-style-type: none"><li>• Requires disposal/recycling labor</li><li>• Wet corrugated not sanitary</li><li>• Safety concerns – knife use to open sealed packages</li><li>• Perceptions and realities – dusty and dirty</li></ul>
<p style="text-align: center;"><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"><li>• Technology applications to further extended shelf life/product value/safety enhancement</li><li>• Communicate purpose and value to consumers</li><li>• Easier opening and easier breakdown</li><li>• More focus on multi use vs. single use</li></ul>	<p style="text-align: center;"><b><u>Threats</u></b></p> <ul style="list-style-type: none"><li>• Retail-driven decision making environment</li><li>• More S/SP light-weighting reduces volume</li></ul>



# Social – Strengths

## Internal

1. Known material – has archetype recognition from childhood.
2. Safety and security for products
3. Eases movement of goods, reduces physical effort

## External

1. Safety and security for products
2. Eases movement of goods, reduces physical effort



# Social – Strengths

## Internal

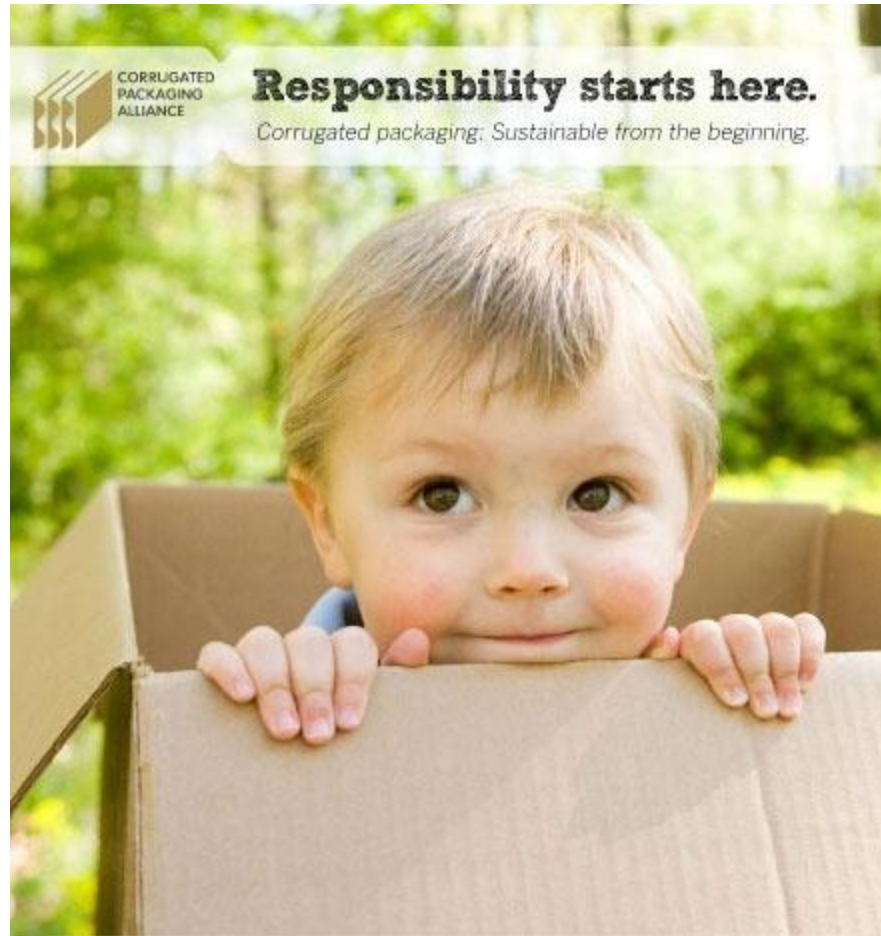
1. Known material – has archetype recognition from childhood.
2. Safety and security for products
3. Eases movement of goods, reduces physical effort

## External

1. Safety and security for products
2. Eases movement of goods, reduces physical effort



# Archetype in use by US Industry



# Social – Weaknesses

## Internal

1. Requires disposal/recycling labor
2. Safety concerns re: using knife to open
3. Perceived as dusty and dirty

## External

1. Requires disposal/recycling labor
2. Wet corrugated not sanitary



# Social – Opportunities

## Internal

1. Communicate purpose and value to consumers
2. Make easier to open and breakdown
3. Use technology to further the perceived value of the product

## External

1. Use technology to further the perceived value of the product
2. More focus on multi-use designs



# Social – Opportunities

## Internal

1. Communicate purpose and value to consumers
2. Make easier to open and breakdown
3. Use technology to further the perceived value of the product

## External

1. Use technology to further the perceived value of the product
2. More focus on multi-use designs



# Social – Threats

## Internal

1. Retail-driven decision making environment

## External

1. Retail-driven decision making environment



# External Panel

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# SWOT – Significant Differences

Re: Economics Strengths

- Printable/graphics

This corrugated strength received the highest rating from internal respondents yet was not perceived as such by the panel...why is that?



# SWOT – Significant Differences

Re: Economics Weakness

- Internal focused on commodity/low quality image
- External focused on Viewed as “old” material, not modern

Do you feel these two issues are the same or does the industry have a falsely negative opinion of themselves?



# SWOT – Significant Differences

Re: Economics Threats

- Cost reduction programs

This was recognized by the internal respondents as the biggest threat whereas you didn't think so...putting yourself in their position why do you think this was rated a higher threat than reusables?



# SWOT – Significant Differences

## Re: Social Strengths

- Consumer Familiarity– Known material – has archetype recognition from childhood

Our internal panel placed this right along side safety and security for products yet none of you placed any priority on this attribute...do you feel it isn't important with the consumer?



# SWOT – Significant Differences

## Re: Communications

- Social Opportunity – Communicate purpose and value to consumers
- Environmental Opportunity – Improved/increased industry messaging

The industry seems to feel some urgency to tell their “story” better why did this panel not perceive that as a priority?



# Other Issues

- This SWOT was put together from research responses from a wide variety of audiences over several years...is there a significant attribute that you feel was omitted in any of the 12 categories?



# Other Issues

- What impact will EPR have on corrugated in the next 5 years?



# Other Issues

- What role do you see for science and technology for corrugated?



# Other Issues

- How does Innovation fit with a traditional material like corrugated?

