also drive product sales and enhance customer value, and lead to reduced Green House Gases and other environmental improvements. Significant benefits such as reduced component costs, improved shelf life and increased transport efficiency. In turn, these benefits will

Consumer packaging is a significant part of dry groceries’ cost and environmental impact. Improvements in packaging can result in significant benefits such as reduced component costs, improved shelf life and increased transport efficiency. In turn, these benefits will

### Packaging Alternatives

- **Tetra Recart**
  - **Positives**
    - Low energy usage in production of carton
    - ~75% made from paper (renewable resource)
    - Tetra-Pak is aggressively working to expand carton recycling
  - **Negatives**
    - Multi-layer composition - Tough to recycle
    - Capital investment needed to change filling lines

- **Flexible Pouch**
  - **Positives**
    - Low energy usage in production of carton
    - Reduced materials required to manufacture - Lightweight
  - **Negatives**
    - Low damage rating - Tough to tear or dent
    - Requires secondary & tertiary packaging in supply chain

- **Glass Container**
  - **Positives**
    - Highly reusable - Requires infrastructure to implement
    - Recyclable - Infrastructure in place - High transportation cost
  - **Negatives**
    - High household and industrial waste due to weight and density
    - Premium consumer perception

- **Steel Can**
  - **Positives**
    - High recyclable rate - 65% in 2008
    - No capital investment on current filling lines
  - **Negatives**
    - Intense energy usage in production process
    - Material production from non-renewable resource
    - Fast filling rates - Up to 2,000 cans per minute
    - Health concerns on inner coating which contains BPA

### 7R’s Analytical Framework

<table>
<thead>
<tr>
<th>Element</th>
<th>Tetra Recart</th>
<th>Flexible Pouches</th>
<th>Glass Containers</th>
<th>Steel Cans</th>
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<td>Reduce</td>
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<tr>
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<tr>
<td>-Rate</td>
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### Recommendations

- **Scenario 1 – Economic Considerations**
  - **Stay with Steel Cans**
    - Does not require additional financial investment
    - High recyclability
    - Existing recycling infrastructure
    - Opportunity to leverage ongoing innovation in can design (size and weight)
    - Risk of volatility in prices of iron ore
  - **Forgo position of market leader in sustainable packaging**

- **Scenario 2 – Sustainability Considerations**
  - **Pilot with Tetra Recart Cartons**
    - Less secondary packaging
    - Uses renewable resources
    - Significantly lower environmental impact
    - Cost savings in material and transportation
    - + Good recycling potential if recycling infrastructure is developed
  - **Investments/Partnerships needed in developing recycling centers**

- **Scenario 3 – Economic and Sustainability Considerations**
  - **Pilot Pouches for Convenience Food**
    - Lower environmental impact
    - Cost savings in material and transportation
    - + Consumer benefits – re-sealable, microwave cooking
    - Non-recyclable, mitigated partially by low landfill impact
    - Uses non-renewable source, subject to volatility in oil price
  - **Feasible pilot opportunity for convenience food**