



Bringing in Innovations using the Packaging Value Chain

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Agenda

- **Value Chain defined**

- Value defined

- Shared value

- Shared value and Value Chain derived innovations:

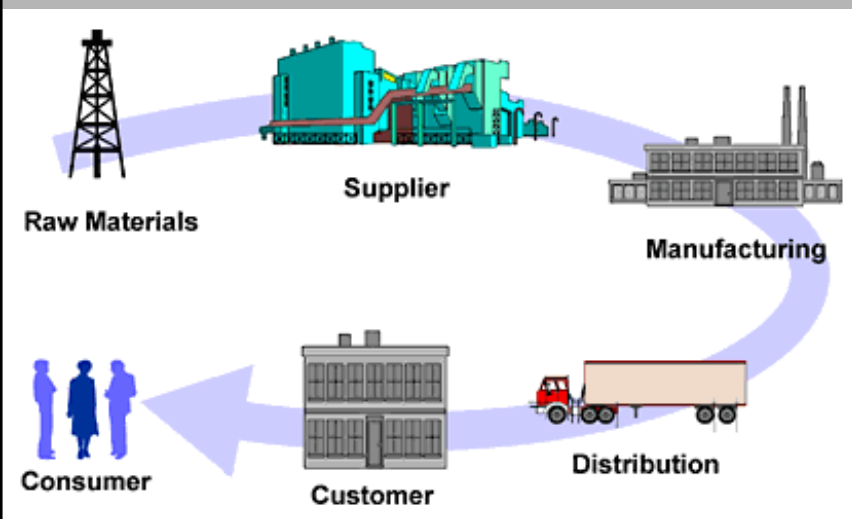
- Food safety
- Sustainability
- Cost savings



Supply Chain & Value Chain

Supply Chain finesse has allowed food and the food packaging industry to evolve:
1950-1980s

- Post war era saw efficiencies grow
- Reduced energy costs associated with distribution led to JIT and ECR



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1980s and 1990s

- Supply chain management
- Global sourcing
- Commoditization
- Strategic alliances



Supply Chain & Value Chain

Value Chain history:

1990s

- Drucker's "knowledge worker"
- Porter's Value Chain
- Grenier's organization growth

2000s

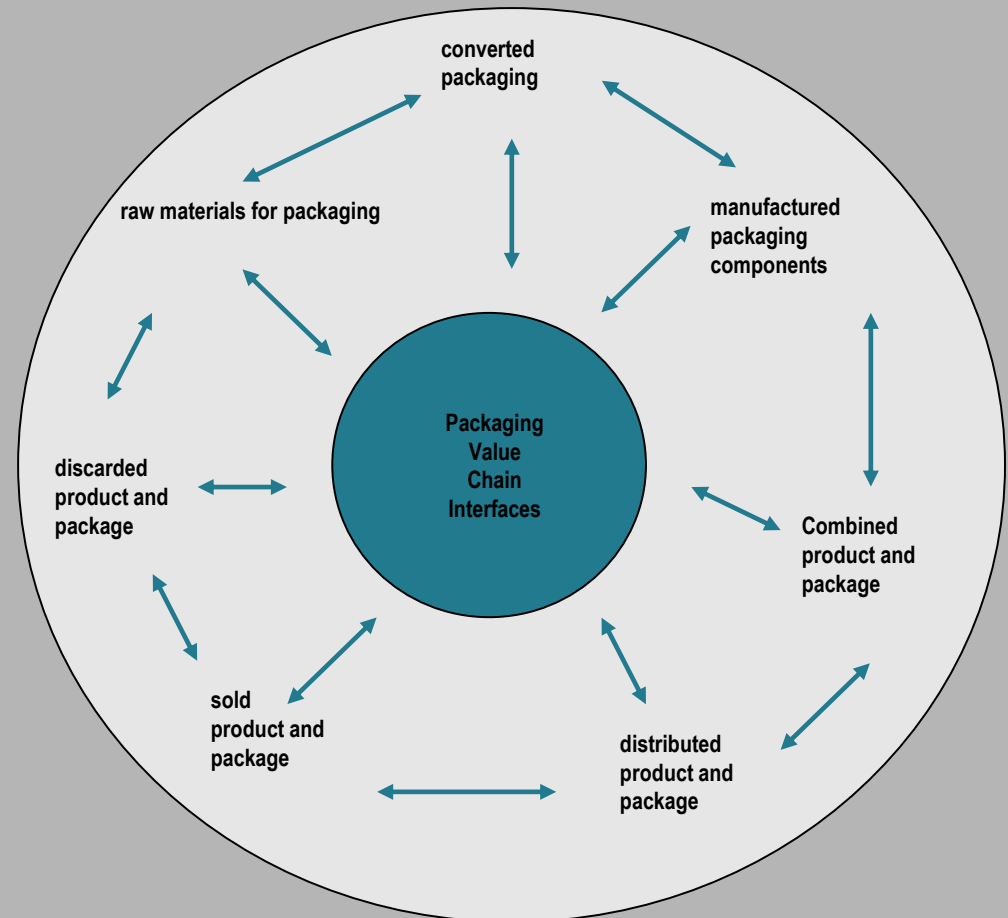
- Need beyond logistics to be competitive
- TBL – people-profit-planet
- Sweet spots
- Sustainability wave for US and continued globally



Supply Chain & Value Chain

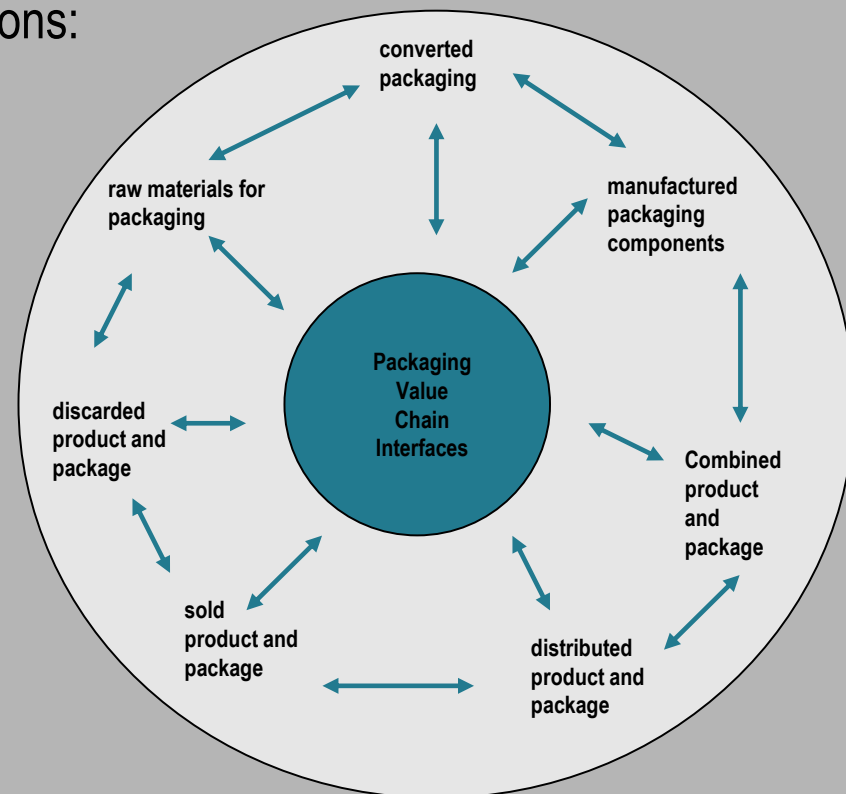
Now

- Logistics “figured out”, the focus on value becomes more relevant
- Value is assessed down the supply chain from post-consumer and consumer to raw materials
- Value chain food packaging initiatives are:
 - Food safety
 - Sustainability
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The Concept of Value

- Value:
 - Has context
 - Is experiential
 - Has a subjective nature
 - Occurs when needs are met

Value: has context

The value of a quality of packaging varies with its context:

- Before the 1980s, sustainable packaging had little consumer resonance or value



Value: has context

The value of a quality of packaging varies with its context:

- Before the 1980s, sustainable packaging had little consumer resonance or value
- In 2015, REACH initiatives and EN standards have altered global markets
- Sustainability has value within developing and developed countries

The context has changed



Value: is experiential

- Relationships between companies gain more traction if the companies experience value the same way
- Value in the value chain is often trust



Value: has a subjective nature

Trust of partners in the packaging value chain aligns:

- With inexperienced packaging professionals and organizations
- When economic downturns cause disruption
 - Oji & others provide counterfeit recycled content



Value: occurs when need are met

- Needs within each link of the value chain are met
- Retailer needs emerged as primary in 1990s
- Post consumer needs are emerging as primary
 - If COC built in, value increases

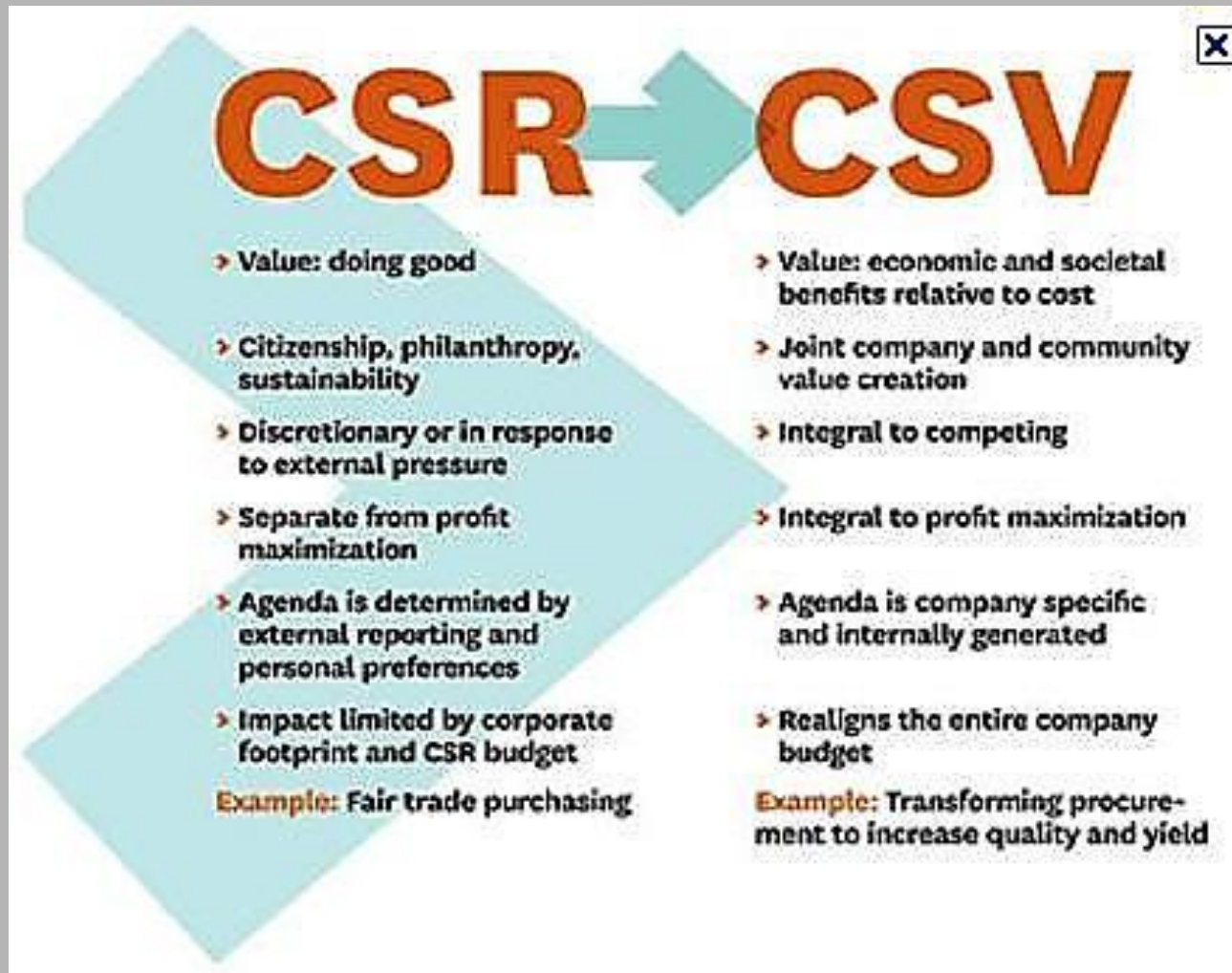


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Shared Value



Shared Value

Shared value strategies identify key social issues that offer the greatest business opportunities and then develop innovative solutions to address those issues. And for food packaging, this is:

Food safety

- *I wish we had more trust in our supplier to use HACCP...*
- Need for more educated work force
- Commoditization of packaging and food

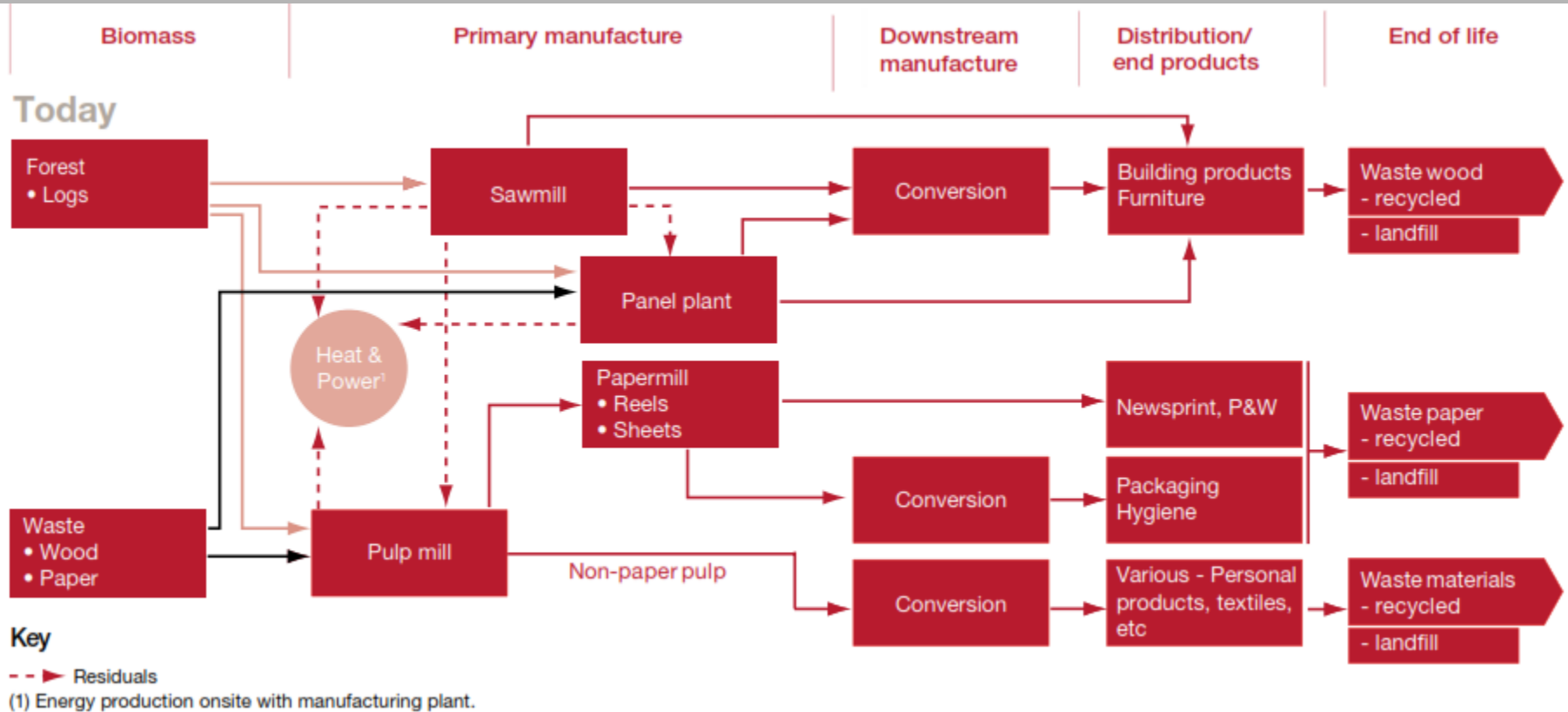
Sustainability

- *I wish we could reduce packaging...*
- Higher energy costs (due to dwindling supplies)
- Government policies ideally internalize social costs of pollution

Costs

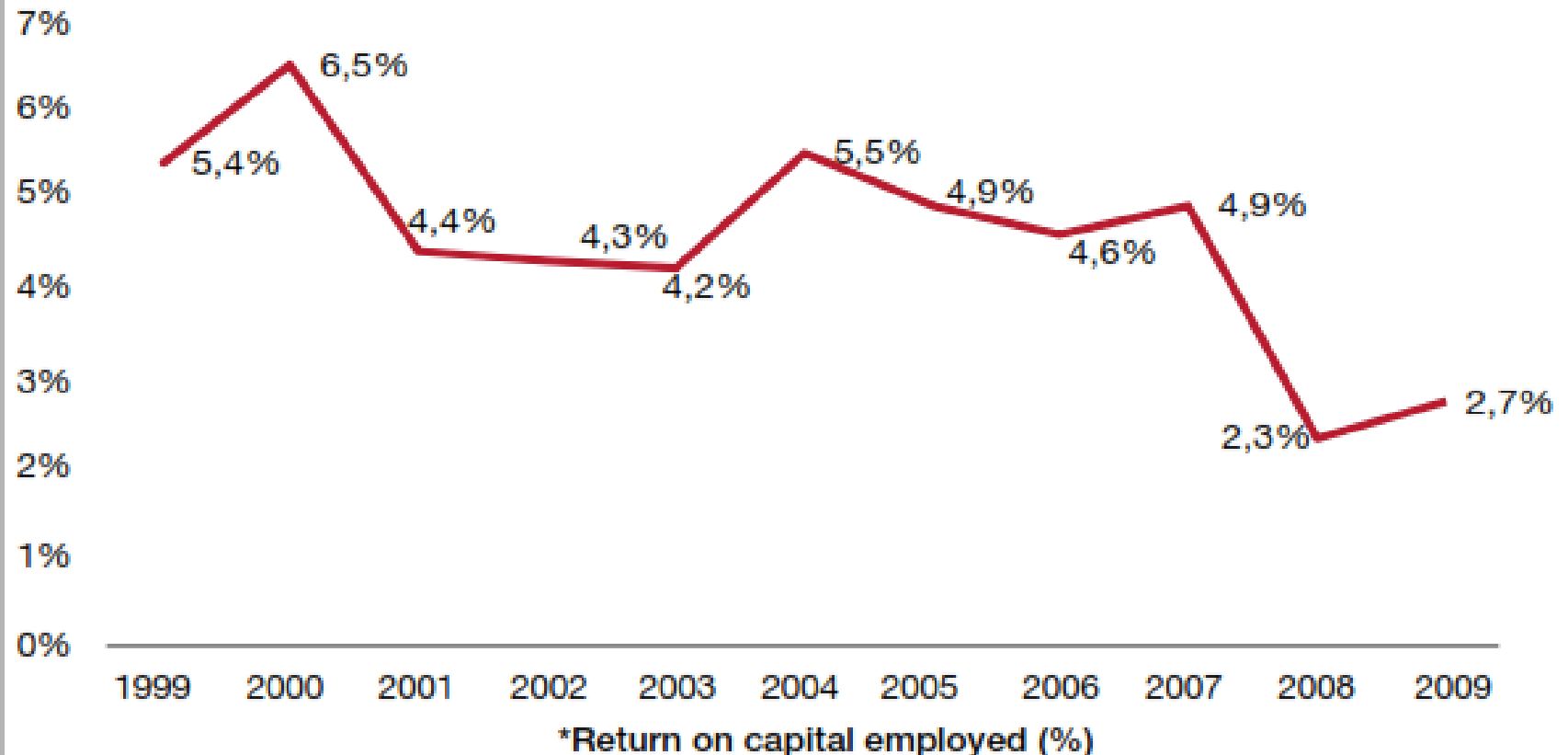
- *I wish they would help me reduce total product and package costs...*
- Higher raw material costs (due to lack of reuse/recycling)
- Profits coming at the expense of the community

Shared Value Minimized

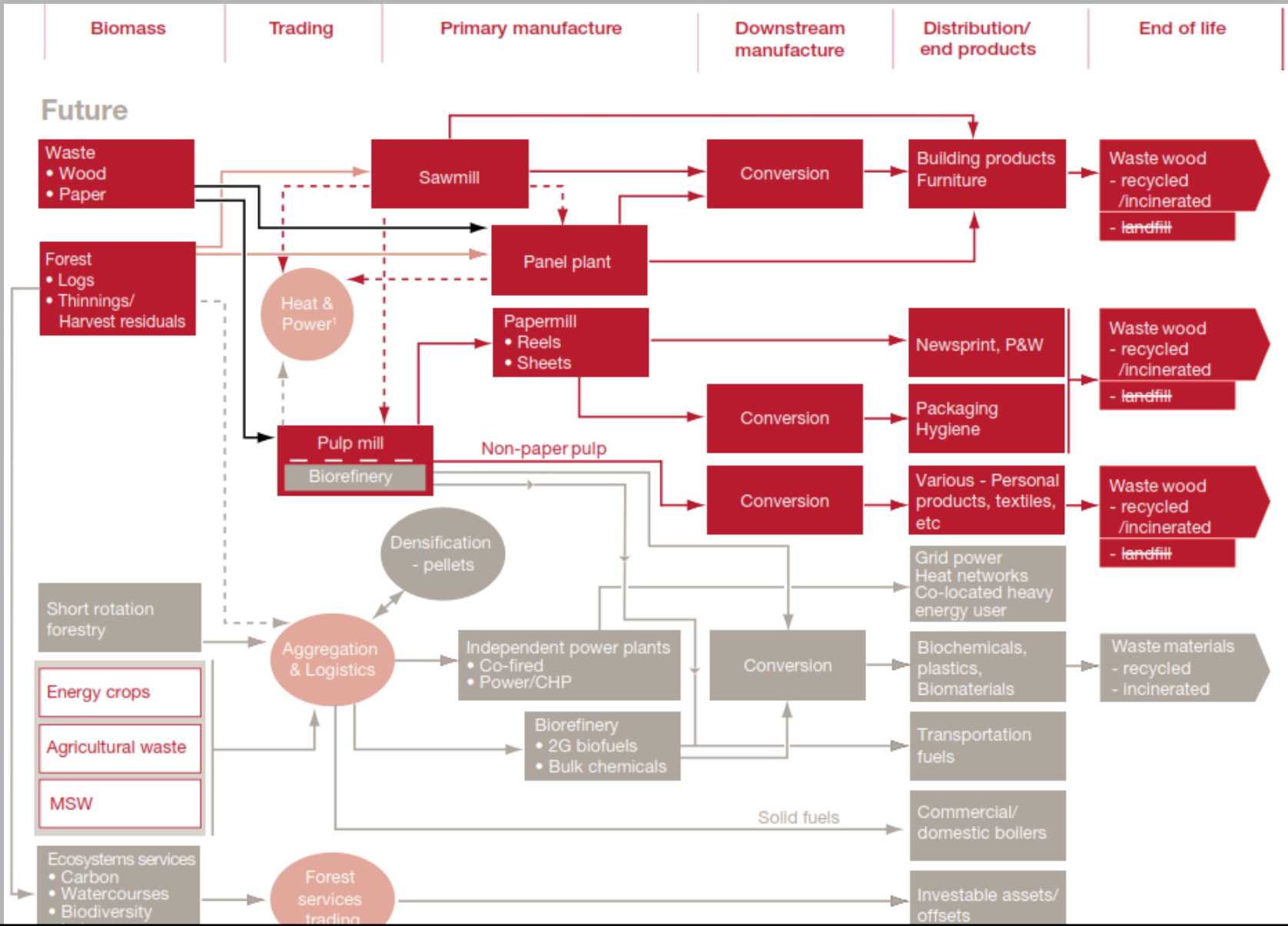


Shared Value Minimized Results

Figure 1: Industry Financial Performance: The Top 100 Forest, Paper & Packaging companies' ROCEs*

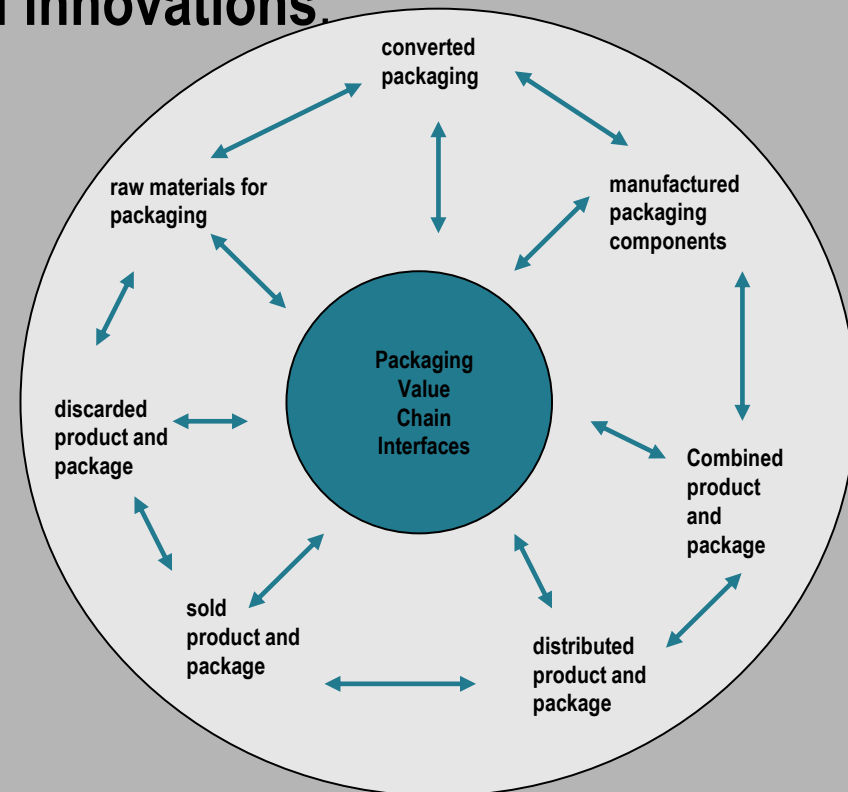


Value Chain Focus – with Shared Value



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Increase food safety with shared value

Balancing food safety costs throughout the value chain is needed to add value and increase safety

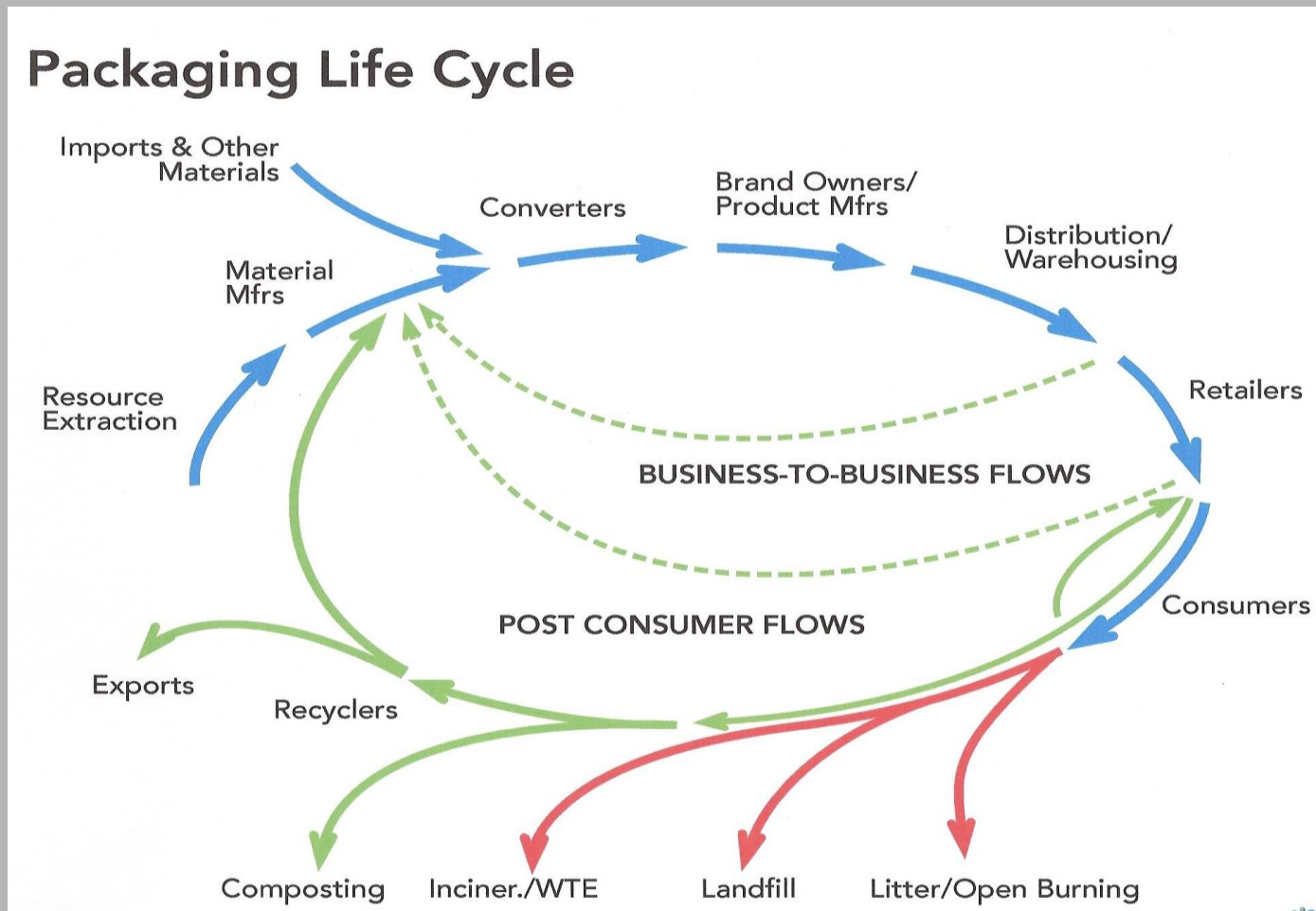
- Track and Trace and RFID and other technologies
- Costs need to be balanced
 - CPGs often pay all cost, but all benefit and this has slowed adoption
- Apply early in value chain to packaging component (closure) to value to entire chain
 - Track supply
 - Use in recalls
 - Integrate O₂, H₂O sensors
 - Consumer information – allergies, diabetes
 - Reuse
 - Ease of recycling, tag reuse
 - Increase value of post consumer packaging

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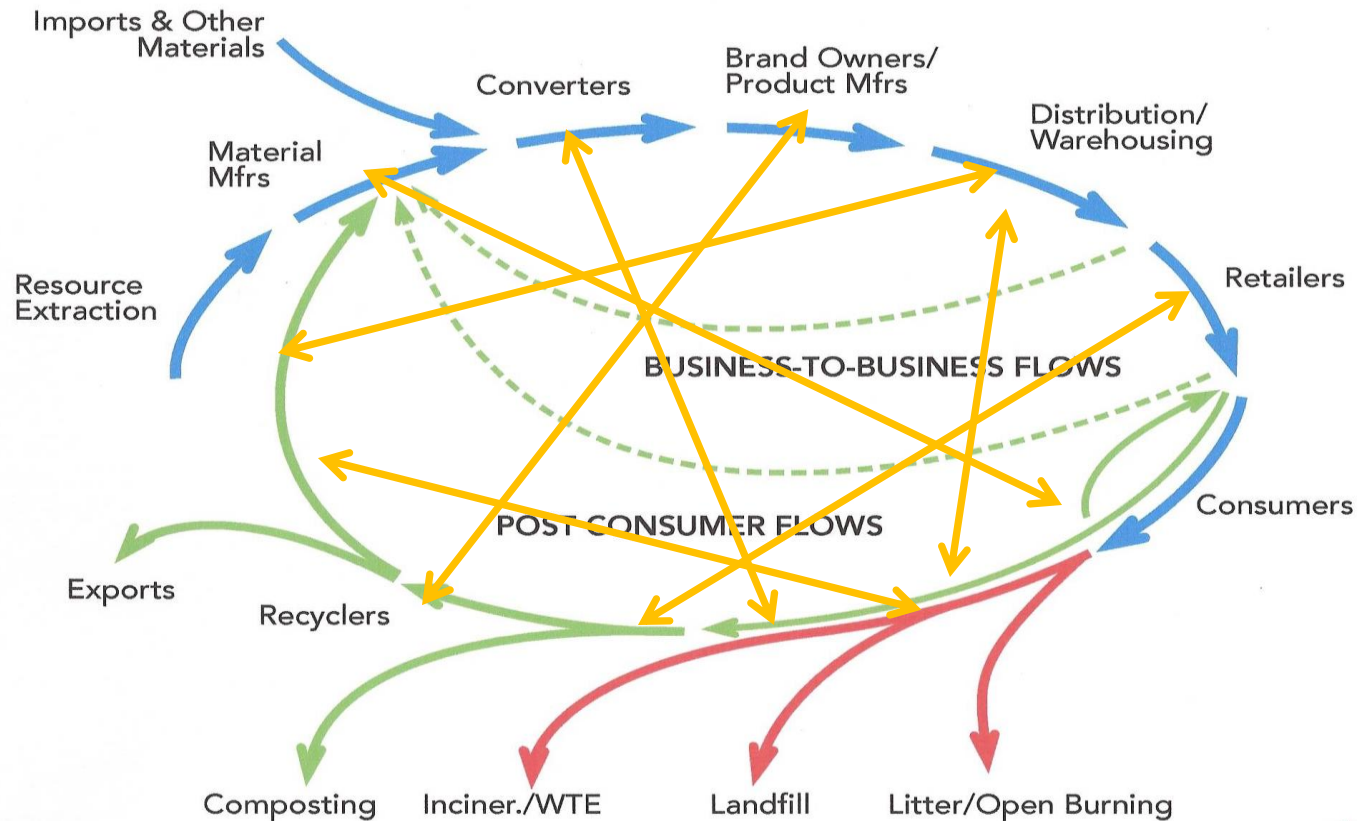


Increase sustainability using shared value



Increase sustainability using shared value

Packaging Life Cycle



Increase sustainability using shared value

Measurement is increased sustainability throughout system

2 Case studies :

1. Minute Maid Mango Juice in Kenya
2. Roger's Coffee

Increase sustainability using shared value: Minute Maid not extended to packaging

Measurement was increased sustainability throughout system

- Case study Minute Maid Mango Juice in Kenya: move from external source to internal sources for ingredients and package
- Project Nuture Kenya and Uganda goals:
 - Move from external sources to internal sources for ingredients and packaging
- Resulted in:
 - Consistent quality mango supply for export and purchase by local bottlers
 - Doubled the income of 50,000 smallholder mango and passion fruit farmers (>50% women) in Kenya and Uganda
- Need to stretch value chain to packaging and add further shared value by:
 - Design for Recovery
 - Build recycling infrastructure



Increase sustainability using shared value: how to involve the value chain

More shared value oriented and value chain sustainable solutions in:

Design for Recovery

- Paper & film - air float separation
- Steel - magnetic separation
- Aluminum - Eddy currents
- PE, PP, PET, PS - NIR and float density

Use of Recycled or compostable plastics

- rHDPE Envision
- rPET

Build Composting and Recycling Infrastructure

Increase sustainability using shared value: Rogers Coffee

A packaging value chain stretches into the realm of shared value can achieve a higher degree of sustainability

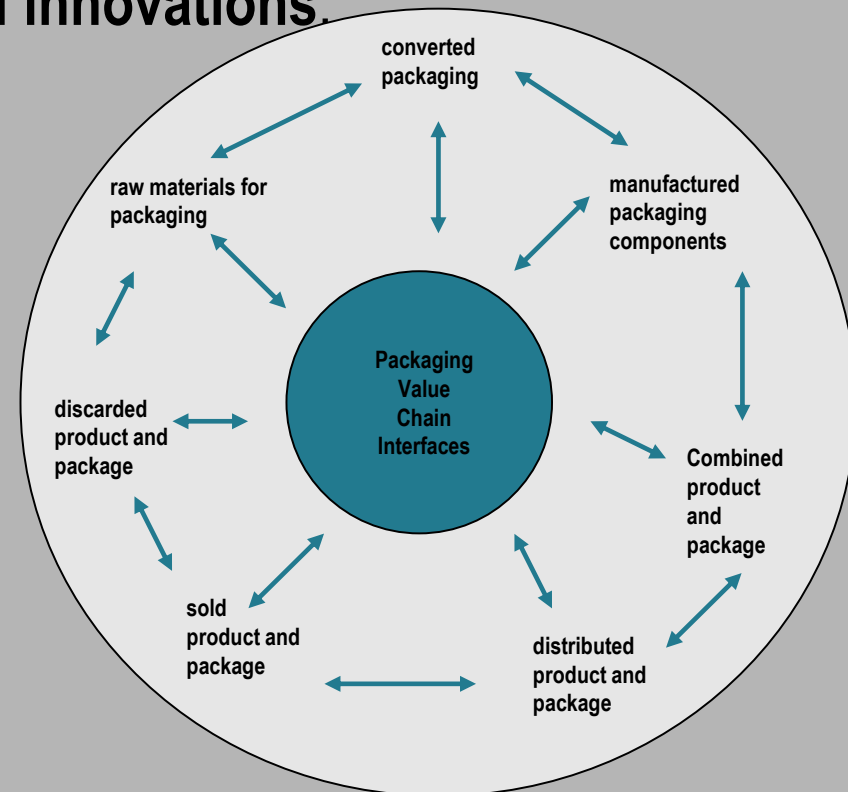
Roger's Coffee Company

- Coffee shared value: Growers and manufacturing coffee
 - Training, \$, personal relationship, carbon-negative footprint
- Packaging shared value: Materials now at 97% bio-based and compostable
 - Polymer source
 - New profits from bio-based materials and industrial & home composting
- Opportunities to extend shared value:
 - Partnering with composters to add more industrial composting sites
 - Connect down the value chain is was done with coffee growers



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Reduce costs with Shared Value

- Growing realization that packaging suppliers can not sustain nor improve quality if:
 - Focus is solely on price
 - Package components are commoditized
 - Suppliers are marginalized
- The total cost of food and package needs to be balanced
- Shared value of:
 - Making profit synergistically
 - Joint technology advances
 - Yogurt (*bifidobacteria* protection), produce (Innov-Lok)
 - Focus on specific customer/industry

Reduce costs using shared value: BBQ sauce

Measurement is cost savings throughout system

- Case study: BBQ sauce: Packed once a year, shelf life of 18 months, PET package
- Converting to combination paper-polymer with 50% reduction in cost
- Suppliers of bottle, cap, and inner seal unable to reduce system costs
- Innovation missing

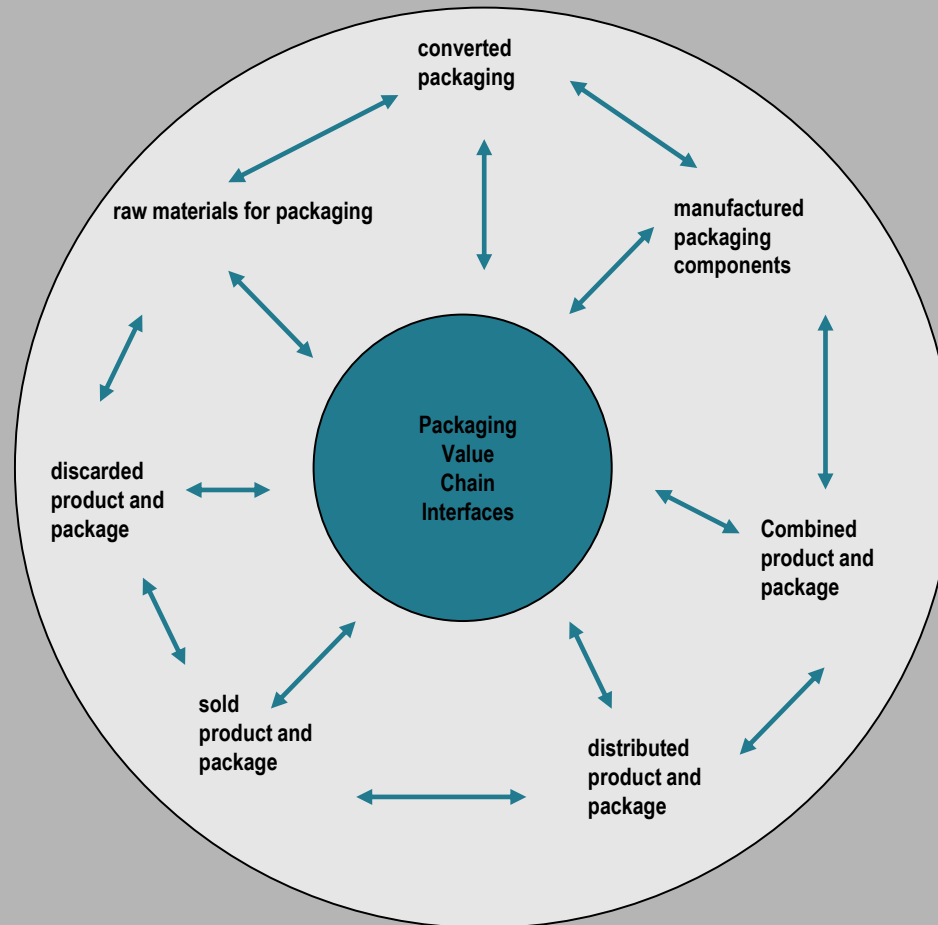


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- Innovation missing
- New cluster of: film, paper, cap allows for 2-stage solution
 - Distribution package in high barrier film within corrugated case
 - Retail and consumer package lined molded pulp base and integrated cap
- Lowers system costs by ~50% and uses shared value through:
 - Reducing energy use, raw materials,
 - Maintaining existing jobs within CPG and clustered film and molded pulp industries
 - Investing in new technology within stagnant paperboard industry
 - Increasing ability to add and retain nutrients with package concept
 - Lowering packaging material costs and use
 - Lowering system recycling costs since concentrated at retailer

Food Packaging Industry is ripe for Value Chain initiatives



Food Packaging Value Chain and Shared Value Checklist

- ❑ Identify key social issues are important to you company's bottom line.
- ❑ Determine which value chain members also have these important issue.
- ❑ Define value (context, experiential, subjective, meeting needs).
- ❑ Build trust and agility into organizational frameworks so that new value chain initiatives are achievable.
- ❑ Identify key partners that your company needs to align with to address this social issue in a manner that makes solid business sense.
- ❑ Develop a goal that address the core issue and that makes business sense.
- ❑ Expand issue to work up, down, and across the value chain to ensure partnerships are aligned.
- ❑ Align to deliver innovation and balance costs and benefits in value chain.
- ❑ Continue to expand issue to pervade relationships within the value chain.