# SUSTAINABLE CONSUMPTION IN THE U.S.

## A CONSUMER FACING ANALYSIS OF STRATEGIES AND BUSINESS MODELS IN THE RETAIL INDUSTRY

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# Table of Contents

# Executive Summary

RILA (Retail Industry Leaders Association) is a U.S. trade organization that represents America's leading retailers. RILA's Research, Innovation & Sustainability Department tasked the Duke team with exploring and defining sustainable consumption and production in the next generation of the U.S. retail market. The team worked closely with nine leading RILA companies: Coca-Cola, The Home Depot, Ikea, REI, Target, Unilever, VF Corp, Walgreens, Whole Foods. This exploration focused on identifying the opportunities for retailers to monetize, adopt and leverage developing business models into a circular economy space. Additionally, the Duke team examined the feasibility of a collaborative materials marketplace at the regional level (North Carolina Research Triangle) and executed a material process analysis through the retail value chain in order to examine specific flows and feedstock dynamics.

The project steps include:

1. Perform research to identify the top "big research questions" based on client needs.
2. Determine the framework and processes necessary to advance sustainable consumption through take-back and circular economies.
3. Analyze the barriers, opportunities and business models in order generate feasible strategies.
4. Apply concepts and explore opportunity to create a local materials economy in the North Carolina research triangle area.

This project focuses on creating a framework for consumer-facing, sustainable consumption initiatives for the U.S. retail industry. The team developed a set of criteria and best practices to identify gaps and barriers for strategy implementation opportunities. The framework to identify the best strategy concept adhered to the following research approach: examining relevant theory, identifying leading researchers and organizations, meeting and interviewing with industry leaders, literature review and identifying major themes based on the partner companies' needs.
Main research findings include:

1. Analysis of the maturation of the retail industry showing that retailers are facing pressures and factors triggering an industry transformation. These triggering factors include: technology, demographics, big data transparency, new consumption patterns, resource constrains, politics and economics.
2. Identify current gaps in the current value chain; a fragmented system hinders efficient use of materials and resources. We have discovered the leverage points and consumer- facing strategies that have the potential to propel the whole system and allow opportunities for engagement for RILA and the partner brands to achieve highest impact.
3. Industry focus: apparel, footwear, accessories, electronics and home furnishing retail product categories show the most opportunity and risk for change while advancing sustainable consumption.
4. The five business models defining sustainable consumption in the next generation of retailing are: B2B, C2C, C2B, Experience and Service models. These systems operate in different spaces and engage consumers in sustainable consumption behavior in diverse ways. Some models function as traditional in-store and mail-in systems while others are tech-enabled, networked, and distributed take-back and sharing systems.

The main research findings and results were delivered to RILA and the partner companies. These findings served as a basis of information that allowed RILA and its partners to decide on the project's next steps. Ultimately, our client chose a collaborative strategy in order create local material economies for end of life purposes to accelerate retail's transformation towards sustainable consumption.
Next, once the business model was decided by our client, the Duke team defined the Consumer-to-Business (C2B) strategy (one that creates local material economies by closing the loop for product at their end of life by using traditional take-back systems and tech- enabled, networked, and distributed take-back and sharing systems. The team determined the central criteria to develop a meaningful program in terms of impact and scale. The C2B strategy faces barriers for adoption such as organization structures and cultures, technology systems, brands and partnerships, location, flexibility within the supply chain and regulatory mechanisms.
Lastly, in order to understand and test the scalability factor of a local materials economy, the team examined the feasibility of a collaborative materials marketplace at the regional level in the North Carolina Research Triangle (NCRT). The team executed a material process analysis through the retail value chain to examine specific flows and feedstock dynamics. The primary goals of taking a deeper look at a local materials marketplace in the NCRT was to:

1. Demonstrate a scalable process- at the scale of a social economy- for improving reuse rates through increased systems efficiency in the NCRT.
2. Provide a blueprint demonstrating how to optimize recovery of common and high value materials and provide a sustainable end of life.
3. Develop strategic partnerships throughout the value chain to collectively accelerate a market-driven approach to the circular economy.
4. Raise awareness of the barriers and opportunities for transition to the circular economy in the NCRT, and leverage learnings to address closed loop challenges for materials recovery.

The lack of data regarding material flows, private industrial waste management and materials traceability throughout the NCRT retail value chain were setbacks that impede the team's research to get concrete results. We counter this setback by using data from The U.S. Chamber of Commerce Foundation research report *Trash to Treasure: Changing Waste Streams to Profit Streams* in order to inform key findings and takeaways.
To achieve a circular economy and a local materials marketplace in NCRT, the team recommends examining the following tool:

- Create a local materials marketplace dashboard as a tool that tracks and measures high value priority flows in the region in order to create a local materials economy marketplace. The tool will allow to identify and explore potential partnership and new revenue opportunities as well as allow for traditional and non-traditional industrial waste streams to be matched with new products and revenue opportunities. We suggest partnerships with organizations such as the USBCSD and consider consider big data analytic companies that have the capability to manage a robust data set such as Statistics Analysis System Business Analytics or Business Analytics Platforms & Solutions (SAP).

# Introduction

## Project Outline

The purpose of this project is to research and explore the opportunity for a collaborative initiative to accelerate towards sustainable consumption within the U.S. retail industry by identifying the needs of

nine leading retail companies through strategy alignment, value recognition and partnership potential. The RILA (Retail Industry Leaders Association) and its leading brands see immense business opportunity to redefine the conversation around sustainable consumption in the U.S. In order to progress towards sustainable consumption, a more comprehensive understanding of the landscape, opportunities, and business values is needed.

This project hopes to provide RILA and its leading companies with an initial blueprint for leading retail companies to engage strategically and collaboratively with consumer-facing sustainable consumption programs across the U.S.

## Project Objective and Scope

Per RILA and its leading brands, the objective of this is project is to accelerate retail's transformation toward "sustainable consumption". The Department of Sustainability at RILA and its partners tasked two Duke University Master of Environmental Management students with exploring and defining sustainable consumption and production in the next generation of the U.S. retail market for the consumer. The team aimed to establish ranking criteria across the nine "champion" companies and develop a platform and/or marketplace to align priorities of the companies in consumer-facing space.

The following questions framed the scope of this initiative:

1. What are potential new business models defining sustainable consumption and the next generation of retailing?
2. How can retailers monetize those new business models?
3. What product categories have the most opportunity –or are at most risk –for change?

## RILA and Partner Company Overview

### Brief Overview of RILA

Established in 1969, RILA (Retail Industry Leaders Association) is the largest trade association for the world's top and most innovative retail brands. RILA members include more than 200 retailers, product manufacturers, and service suppliers, which together account for more than $1.5 trillion in annual sales, and more than 100,000 stores, manufacturing facilities, and distribution centers domestically and abroad.

### History of the Sustainable Consumption Initiative Leading Companies

At RILA's annual sustainability and innovation meeting in early 2016, various leading retailers informally expressed interest in collaborating to explore the idea of implementing programming to focus on circular economy and sustainable consumption progress in the U.S. Initially, RILA identified this opportunity in the retail industry to lead the U.S. conversation on "sustainable consumption" the U.S. The organization set out:

1. To perform foundational research to define sustainable consumption in the U.S.
2. Do so by convening a group of leading U.S. brands, and several relevant stakeholders
3. Seek voluntary commitments from those leading U.S. brands

### Leading Companies[1]

The following nine organizations voluntarily chose to join the sustainable consumption initiative and employ their valuable resources[2]: (1) Coca-Cola, (2) The Home Depot, (3) Ikea, (4)REI, (5) Target, (6) Unilever, (7) VF Corp, (8) Walgreens, and (9) Whole Foods. Since April 2016, the Duke team has had the opportunity to engage directly with these influential companies to meet their needs and pursue a client-based Master's Project to

## Overview of Sustainable Consumption

### Definition and Significance

As the earth's population trends toward 9.5 billion people by 2050 and the global middle class continues grow- likely to reach three billion by 2030 - the growth pattern is simply not aligned with the physical limitations of our planet. Our current consumption patterns are simply not sustainable. However, it is important to understand that sustainable consumption is not necessarily about consuming less; it is about consuming better, e.g. more efficiently, with less risk to our health and environment.

The definition of sustainable consumption was first introduced at the Oslo Roundtable in 1994: "the use of goods and services that respond to basic needs ad bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations" (Norwegian Ministry of the Environment, 1994).

More generally, the concept of sustainable consumption refers to the cultural shift from a consumerist lifestyle to a more sustainable existence: consuming differently-not necessarily less-and more efficiently in order to reduce impact on the environment. Practices include utilizing less resource-intensive products and higher quality products with longer life-spans, transitioning from materials to immaterial services, and reducing and conserving energy-use. For the purpose of this report, the notion of the circular economy, and all associated practices (including take-back) resides under the umbrella of sustainable consumption. In the circular economy, the goal is to close the loop and see waste is an opportunity- not necessarily a liability. Through recovery, reuse, and upcycling resources are mined from society, not from nature. Through the business and economic lens, the retail industry needs to move from unsustainable production to sustainable infrastructure, services, and trade.

### Opportunity in the Retail Industry

The concept of eradicating waste and moving away from a linear system – the underpinning of a circular economy- is not new. Global trends are fueling this shift- including rapid population growth, resource constraints, urbanization, and uncertain commodity markets, shifting consumer attitudes and preferences, the explosion of digital technology, intelligent assets, and more. The circular economy has been picking up momentum as a viable alternative to the linear model that decouples economic growth from resource constraints.

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[1] Throughout this Master's Project, the authors will use the terms "leading companies", "champion companies", "partners", and "brands" to refer to the nine companies which lead this sustainable consumption initiative.

[2] Combined annual revenues of over USD $425 Billion.

A sustainable consumption model represents an economic model where resources are cycled back into supply chains and waste is eliminated. The opportunity for business and the global economy is enormous in this space:

The 5,589 largest publicly traded companies in the U.S. sent 342 million metric tons of waste to landfills and incinerators in 2014 . Overall company waste is paper (37%), food and organics (21%), plastics (17%), construction materials (11%), and metals (8%). For every $1 million in revenue, companies on average generate 7.81 metric tons of waste (Lawrence, 2016).

If companies reduced their paper waste by 1%, they would save nearly $1 billion (Lawrence, 2016). Companies are not accurately estimating, measuring and managing their waste streams, which means they are throwing away huge opportunities for profit and increased efficiency. Adopting closed loop and circular methods is the best way for companies, regardless of size or industry, to eliminate waste and recapture its value. Shifting to the circular economy could unlock an estimated $4.5 trillion in additional economic growth by 2030, and could be the biggest economic revolution in 250 years (Corporate, 2015). Yet the U.S. ranks 18th in the recycling race globally among OECD countries, with $11.2 billion in recyclables landfilled annually.

In the retail space, companies now have the opportunity to become leaders and innovators in this sustainable consumption space.

# Sustainable Consumption Consulting Project

## Research Process

Based on the needs of the client, the Duke team undertook the following research approach to provide the broadest and most inclusive menu of options and engagement opportunities for the leading companies.

1. Define “sustainable consumption”
2. Identify the top “big research questions”
3. Perform interviews with thought leaders
4. Map the landscape of existing research on “sustainable consumption” and the consumption system
5. Brief case studies of the leading companies
6. Develop a “menu” of strategy ideas for the retailers to react to and select from
7. One-on-one conversations with retailers/brands
8. Determine key product categories
9. Identify disruptive new business models/examples

The Duke team explored this research through the following two lenses: (1) Educating the client and ourselves, and (2) understanding client needs.

## Educating Ourselves and the Client

### *Research Activity*

1. **Identify big research questions**
   Overarching research questions:

- What are new business models defining sustainable consumption and the next generation of retailing?
- How can retailers monetize those new business models?
- What product categories have the most opportunity – or are at most risk – for change?

Strategic research questions:

*Opportunities:*

- Where do we have leverage to propel the whole system? Where can we use our capability to achieve highest impact?
- What are the drivers for changes?
- Who are the relevant stakeholders and what are their roles?
- What are examples of coordinated action to transition industries in change?
- What are the low-hanging fruit?

*Consumers:*

- What are examples of retailers influencing consumer behavior?
- How should retailers be communicating and educating consumers?

*Risks:*

- What are the costs of transitioning to the new business models?
- How can retail overcome stranded assets?

2. **Perform interviews with thought leaders:** RILA and the Duke team focused on the following key leaders.

| Interviewee* |
| --- |
| Vice President, Principal Analyst<br>**Forrester** |
| Associate Editor<br>**RetailDive** |
| Leader of CE100<br>**Ellen MacArthur Foundation** |
| Sustainable Strategy Director<br>**Accenture** |
| National Retail Reporter<br>**The Wall Street Journal** |
| VP of Product Development<br>**Cradle-to-Cradle Institute** |
| Partner<br>**William McDonough + Partners** |

Figure 1. Interview research list.

*specific names are omitted due to non-disclosure terms.

3. **Landscape Review**
    a. Map landscape of existing research on sustainable consumption and the consumption system

b. Brief case studies of the leading companies APPENDIX XX

4. **Menu of strategy ideas:**

## Understanding Client Needs

## Research Outcomes

### History and Timeline for Sustainable Consumption

Since the 1980s, the notion of sustainable consumption has existed. However, the term manifested itself into areas of compliance and regulatory based measures. uch as industrial symbiosis, byproduct synergies, and through regulatory measures and EHS departments. It has historically been rooted in industrial and business-to-business processes. Only in the last ten years has sustainable consumption evolved into a more consumer-facing space.

### Value Chain

The team developed a set of criteria and best practices to identify gaps and barriers for strategy implementation opportunities. The team examined relevant theory, benchmarked over 600 companies that are involved in sustainable consumption efforts in order to identify current gaps in the current retail value chain. To answer this question, we developed a consumption system and leverage point flowchart that help identify leverage opportunities, purchasing power and potential for collaboration and partnerships within the retail value chain.

As a product of interviews with industry experts and company leaders, as well as literature research, examining the retailers value chain in order to identify what are the leverage- where can retailers use their purchasing power- to enable products to be design, sold or developed partnerships instead of following a traditional linear design-throwaway system. For example, how can retailers change product design to better fit into the circular economy space? Can these products be reused, repackaged by other companies or retailers and create collaborative strategy concepts?

Based on this research framework, we further optimized the results by creating a flow diagram of the current value chain and identified the gaps, leverage points and strategy concepts. (See appendix 1 for Flow Diagram).

### Strategy Concepts

Based on surveys, meetings, interviews, and calls, the 8 strategy ideas were generated based on the company input, including:

- (1) Product design,
- (2) product curation
- (3) product take-back;
- (4) New business models &
- (5) new lifestyles

- With the objectives to:
  - (1) Build business tools to help retailers promote elements of “sustainable consumption”
  - (2) Research on consumers & emerging consumption trends;
  - (3) Run a consumer-facing campaign related to consumption
- Through the following criteria:

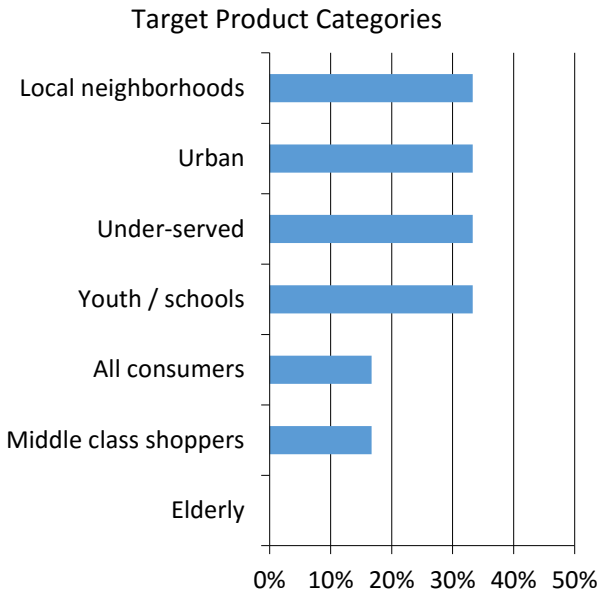
- 1) the unique role that retailers/brands can play – the “acupuncture points,"
- (2) the key product categories that will address the greatest impacts, and
- (3) the low hanging fruit

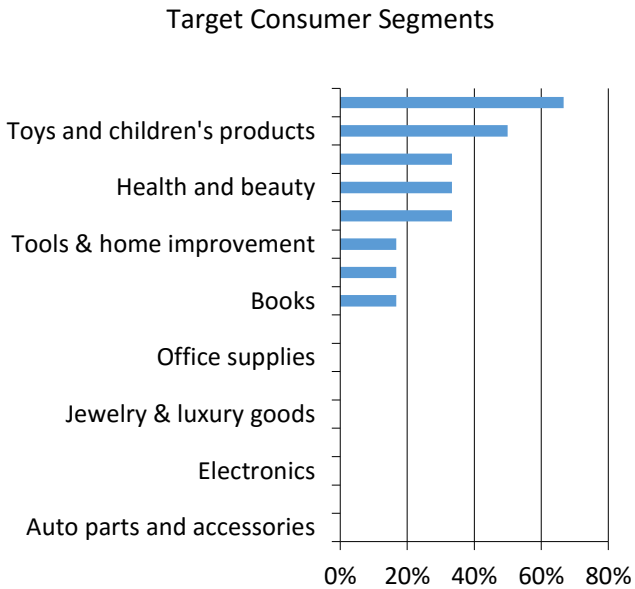
| Leverage point | Strategy idea |
|---|---|
| **1. Product design** | 1. Collaborate on researching closed loop product design for key product categories |
| | 2. Commit to zero waste in manufacturing for key product categories |
| **3. Product take-back** | 3. Commit to providing take-back options for key product categories |
| **2. Product curation** | 4. Commit to providing eco-friendly / wellness products in key categories |
| **4. New business models** | 5. Develop a product sharing platform / marketplace and product renting options |
| | 6. Commit to offering a maintenance service for key product categories |
| **5. New lifestyles** | 7. Develop joint marketing campaign and incentive program to raise awareness of lifestyles that promote sustainable consumption, health and happiness |
| | 8. Joint cause marketing campaign |

Figure 2. Leverage points and engagements strategies.

**Key Product Categories**

After benchmarking over 600 companies, we identified the keys product categories of interest in the retail industry. Based on these industry trends, we administered a survey to the champion companies in order to narrow down the categories of greatest interest to them. Below are the results from the targeted product categories and consumer segment surveys with RILA and the nine partner companies. Please See appendix 2 for further analysis and rankings of these key performance indicators.



### Progression of Strategy Concepts

Throughout the first eight months of the master's project, the Duke team worked to narrow down the strategies produced from the leading retail group. As the figure shows below, the concepts were narrowed down from eight, to four to two, and finally one. The winning strategy will be expounded upon in the next section.

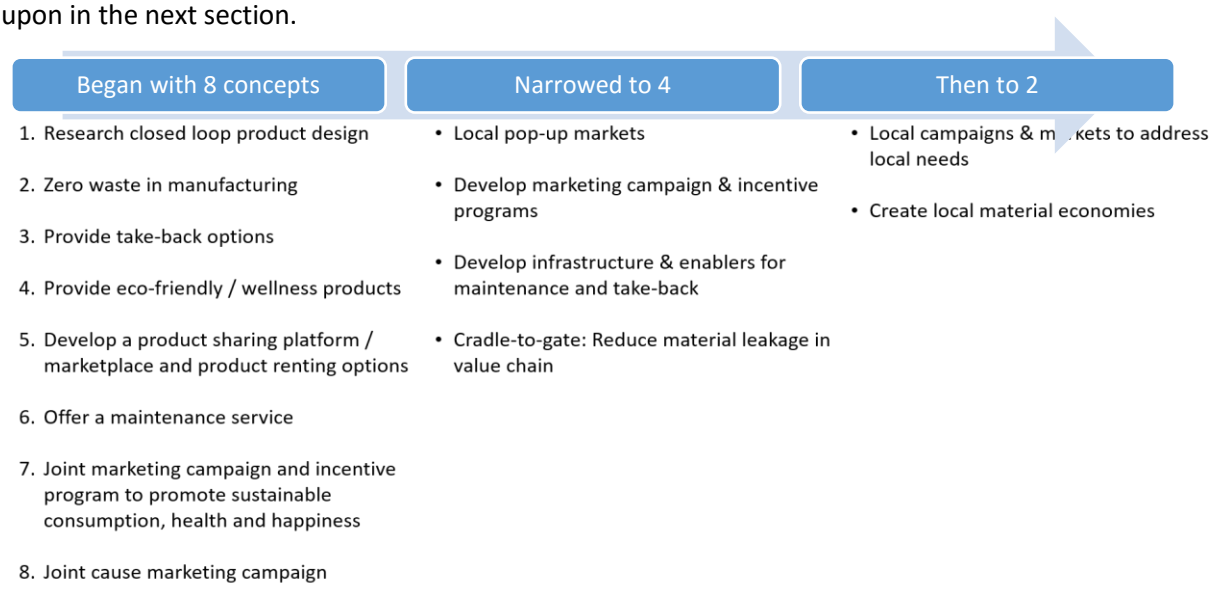



Figure 3. Parsing process for strategies

## Identifying the Optimal Strategy Concept

### Identifying Take-Back Strategies

The Duke team approached a participatory strategy and underwent multiple phone calls, face-to-face interviews as well as surveys in order to understand our clients needs and achieve the task of narrowing down the optimal strategy concept in order to achieve a sustainable consumption initiative. The creating local material economies strategy concept has two main dimensions: consumer facing and material centric.

It is necessary to take into consideration that even though the Duke team would have liked to approach a sustainable consumption initiative with a quantitative, lifecycle assessment approach, we soon learned that there is a predominant interest in the commercial and marketing aspect of this campaign. This creates a challenge while trying to understand the participating companies needs beyond a quantitative scope and also focusing on the marketing and consumer approach essence. Based on this research approach, the team narrowed down the strategy concepts to two main options (See Appendix 3 for strategy concept details).

1. *Create local material economies- material centric approach*

   The objective of a local material economy with a material centric approach is to close material stream locally and permit for the model to be scalable and replicable in a global scale. There is an industry process vision to this strategy in order to connect waste-streams with product manufacturing (i.e.

using recycled plastic bottles as input from manufacturing clothing). Additionally, there is a product end of life component (EOL) with the intention of exploring the opportunity to build a national network maps of "makers, manufacturers and maintainers" and connect them to people in need of product maintenance and take-back via a new platform.

2. *Establish local campaigns and markets to address local needs- consumer centric approach*

The main objective of the consumer facing strategy concept, also referred to as creating local campaigns & markets is to raise awareness and inspire consumers to adopt behaviors and products that promote well-being and can be an initiative that can be scaled widely. We were able to construct a vision that tailored the partner companies needs and interests for such an initiative. Through local marketing campaigns and long term- markets, this strategy concept seeks to educate consumers about product and services that promote health, wellbeing, maintenance, take-back, and local economy.

Once the business model was decided by our client, the Duke team defined the Consumer-to-Business (C2B) strategy- one that creates local material economies by closing the loop for product at their end of life by using traditional take-back systems and tech- enabled, networked, and distributed take-back and sharing systems) and then team determined the central criteria to develop a meaningful program in terms of impact and scale. The C2B strategy faces barriers for adoption such as organization structures and cultures, technology systems, brands and partnerships, location, flexibility within the supply chain and regulatory mechanisms.

## Consumer to Business (C2B)- Consumer Profile

It is important to reiterate that the Duke Team signed a Non Disclosure Agreement (NDA); therefore, there is a confidentiality factor in terms of information and data sharing in this industry. While working with RILA, we have had to deal with anti trust issues, lack of data sharing due to industry trade secrets between partners which leaves many information gaps. We where also able to compile and analyze multiple consumer behavior research reports done by our clients in order to identify some of the barriers for consumers to bring back products.

The consumer reports identify the main interests and challenges consumers have when engaging in take-back campaigns. The results further explore consumers' needs for a take-back program, their habits of product disposal as well as the main drivers that influence their efforts to dispose of a product in a "sustainable" manner. Some considerations for success of a C2B campaign from a consume perspective show that take-back programs should: be easy to use, available year round, be transparent about what is being done with the items, and provide an incentives or reward from trading in items.

## Enablers: Consumer Attitudes Influencing Sustainable Consumption Business Models

Identifying and understanding consumer behavior is essential to achieve consumer sustainable behavior. The team was able to construct a solid consumer behavior profile based on RILA and partner brands market research and consumer behavior as described in the previous section. Following the consumer profile assessment, the next step was to identify the enables and the triggering points that allow the retail industry to directlyengage with their customers in order to achieve sustainable consumption patterns.

We decided to use social marketing as a tool for community engagement. Considering the consumer focus of this report, social marketing tools provide a framework to explore the way retail companies promote sustainable consumption behavior and attitudes towards their customers. Social marketing looks are effective programs to foster sustainable behavior (Mckenzie, 2000). As it is suggested in social marketing literature, behavior is strongly influenced by economic motives. Additionally, altering consumer preferences is not considered a new behavior but rather promoting engagement in a new activity (Mckenzie, 2000). Considering the complex physiological factors as well as the challenges behind changing behavior, understanding the maturity of the retail industry and acknowledging the evolutional and trends as well as the key role that retailers play in a consumer's day to day choices, it is essential to understand the new consumer landscape as well as identifying the enables and opportunities that the industry has in order to best engage customers to engage in sustainable consumption behavior.

Social and sector trends indicate that consumer is transforming the retail industry. Today's customer expects transparent and omnipresent access to products and information. They want authentic experiences and services – *not just products*. Mobile applications and platforms provide options for buying, renting, sharing, and feedback – all while driving loyalty, trust, and discerning personalization across all markets. With the proliferation of data and information, companies can connect all parts of their business – the customer, products, stores, and operations – to maximize efficiency, satisfy consumer demands, and innovate.

**Figure 4** reveals the current opportunity in the evolving retail industry. The concept of eradicating waste, which underpins the circular economy, is not new, but is being fueled by megatrends including rapid population growth, resource constraints, urbanization, uncertain commodity markets, shifting consumer attitudes and preferences, the explosion of digital technology, intelligent assets, and more.

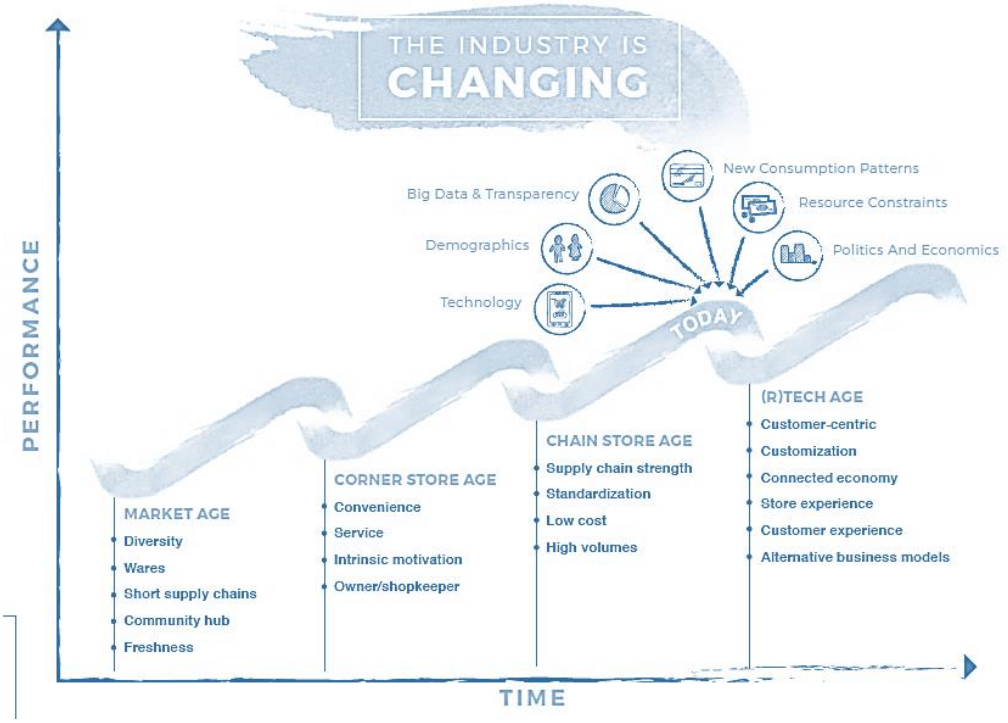



**Figure 4:** Maturation of the Retail Industry **Source:** (R)Tech Blueprint RILA, 2017

Based on team efforts with RILA, we helped identify the six- mega pressures- also called factors- that are triggering the transformation of the retail industry. These triggering factors are based on customer behavior as well as new technology that enables new ways of interacting with business such as renting products, sharing ideas, writing reviews.

By looking at these trends as a unit and as part of a dynamic system, retailers have an opportunity to adapt to the triggering factors by breaking the boundaries of the traditional system and innovate with new business opportunities. The increase in data sharing between industry players as well as access to data about customers, stores, product suppliers and supply chain traceability enables retailers to customize customer interactions as well as be more efficient in their supply chains. Building off of the *Emergence of (R)Tech Blueprint Report* (RILA, 2017), the triggers for change throughout the retail industry include:

1. Technology
2. Demographics and Wealth
3. Big Data and Transparency
4. New Consumption Patterns
5. Resource Constraints
6. Politics and Economics

When taking a deeper dive and and understanding consumer behavior and new trends that influence consumer patters, our results indicate that the consumer dictates how products are ultimately used – from the initial purchase, all the way through disposal. How can retailers support this new, empowered consumer?

One answer is through new business models, especially those that support a shared economy. New technologies, platforms and business models act both as disruptors and enablers for the industry's "new norm". Disruptive business models like those employed by Uber and Airbnb are already thriving in other sectors. Similar models in the consumer products sector allow consumers to influence the design, production, use, and reuse of products – consumers no longer need to resign to a passive role. Innovation in the following spaces enable the success of these models: cross- sector partnerships, consumer online platforms, mobile technology, by-product synergies, and consumer options to engage in sustainable behavior: sharing, renting, second-hand use, resale.

As an added benefit, these new business models have positive implications for the environment as well. And consumers are increasingly concerned about environmental and community issues, and are willing to act on those concerns:

- According to McKinsey's study on European and American consumers, up to 70 percent of the survey participants said they would be willing to pay an additional 5 percent for a green product if it met the same performance standards as a non-green alternative in purchases in the automotive, building, electronics, furniture, and packaging categories (Merenedi, 2012).

- Per a recent market report from the Natural Marketing Institute, over the past five years, U.S. consumer awareness and attitudes towards green and sustainable brands have increased. According to the study, 85 percent of the U.S. population considers to some extent, the acceptance of sustainable practices. Moreover, the percentage of consumers who prefer to purchase products that are sustainably manufactured has increased to 59 percent from 2009 (Bonnell, 2015).
- When U.S. consumers are aware that a company is environmentally and socially conscious, 58 percent of them are more likely to try the company's products and services, and 53 percent are more likely to become loyal customers. Additionally, almost two-thirds of American consumers (62 percent) say that they are more likely to buy a company's products if they believe in the company's CSR. (Bonnell, 2015).

## Adoption Barriers for the Retail Industry

Along with enablers for adopting sustainable consumption patterns, the RILA and Duke team also identified the potential barriers and impediments for retailers to overcome in order to achieve a sustainable model. Based on the *(R)Tech Blueprint Report* (RILA, 2017), the challenges for retailers to adopt business models is the ability to manage change that enables the organization's future success while managing today's business.

The main barriers, initially documented in *the Emergence of (R)Tech Blueprint* (RILA, 2017), include:

- **Organizational structures & cultures:** the systems that govern interactions and politics across the organization, ultimately driving mindsets and decisions.
- **Technology systems:** These models enable – or disable – the consumer and employees from performing activities necessary to run and grow the business. Examples include: inventory management, POS payment, customer management, vendor management, HR management, and more.
- **Brands and Partnerships:** Customer loyalty through recognition and experience is necessary to ensure the company's and program success.
- **Location:** companies must ensure that physical and virtual (web, mobile) opportunities for customer engagement are available and appropriate. Brick-and-mortar location must tailor to the expanding needs of the consumer base.
- **Flexibility within the supply chain:** integrated relationships and infrastructure within the supply chain are necessary for company's ability to adopt and iterate for success.
- **Talent:** HR, incentive, and training systems and policies attract, develop, and incentivize the talent and innovative behaviors necessary to not only work retail functions, but think outside the 'day-to-day' operations.
- **Regulatory mechanisms**: Including policies and industry standards, integral to retailers' operations. While they target the current business environment, startups and innovators have the opportunity for a competitive advantage.

Our main findings indicate that innovation in the retail space faces the challenge of the status-quo systems and processes: retailers generally operate on razor thin margins in a market with declining trip frequency and increasing competition. A return on investment is crucial. This can paralyze some traditional retailers and prevent them from being early adopters. A change management mindset, driven from the top, plus devout attention to building a culture of change, and concerted investments in change, can overcome the legacy.

## Business Models

To summarize the importance of the findings of this section, working with RILA and determining these key findings have provided the conclusion that retailers serve as the nexus that connects consumers, manufacturers, and suppliers. We have been able to identify a gap in the current traditional system which allows for the opportunity to build new business models that allow to evolve in the new parameters and emerging trends of customers and the retail industry.

By reducing direct environmental impacts from their own operations and influencing consumer purchasing and product use behavior, the retail industry can ultimately allow for sustainable consumption practices to be implemented into the mainstream. This unique position allows retailers with the opportunity to (1) create new markets through an improved understanding of consumer needs, (2) Innovate new products through the application of new technologies, (3) Increase consumer loyalty and potentially attract a new niche of "green" consumers.

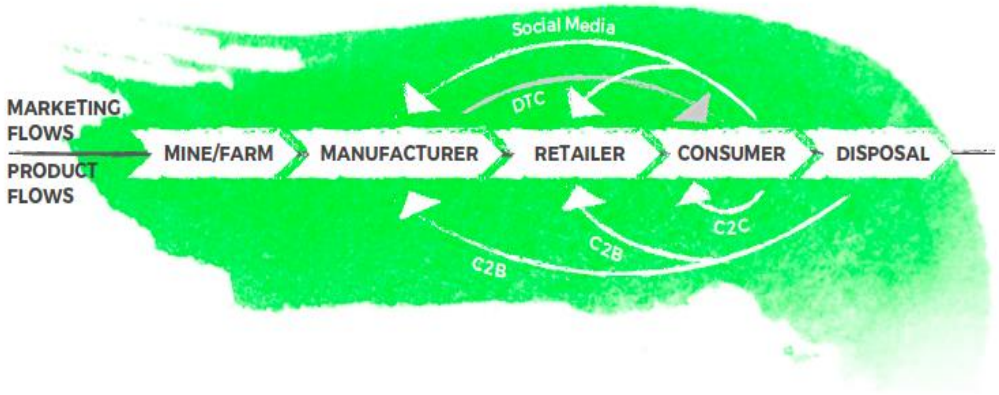



**Figure 5:** Opportunity to Create New Business Models **Source:** (R)Tech Blueprint Report (RILA, 2017)

The five business models defining sustainable consumption in the next generation of retailing are: B2B, C2C, C2B, Experience and Service models (**Figure 5).** These systems operate in different spaces and engage consumers in sustainable consumption behavior in diverse ways. Some models function as traditional in-store and mail-in systems while others are tech-enabled, networked, and distributed take-back and sharing systems. (Refer to appendix 4 for details and examples of business models).

**1.Consumer to Business (C2B) / Take-back**

**Description of model:** The C2B business model represents a transaction between the consumer and retailer or manufacturer, where the consumer is supplying their used products to the store – of course, unlike the traditional, forward-consumption B2C model, where the retailer is selling products for consumption. C2B models allow the consumer the opportunity to sell, return, and/or exchange in the retail or manufacturing setting and offer take-back options for certain product categories that dramatically increases material capture after a product's end of life.

**Benefit to Consumers:** The C2B model fulfills the need for consumers who want to get rid of unwanted "stuff" in a sustainable way.

**Retail Opportunity:** Retailers can create revenue from capturing products and materials, which provide value as re-furbished items or as raw materials in second- hand markets and third-party transactions.

**2.Consumer to Consumer (C2C)/ Peer-to-Peer / Sharing Economy**

**Description of Model:** The C2C model is developed as a product sharing platform or marketplace. This model facilitates product sharing by creating and populating mobile/web platform that enables consumers to share and interact directly with each other.

**Benefit to Consumers:** Fulfills consumer needs for convenience and efficiency and makes the purchasing of goods and services more affordable and accessible. Consumers agree that it is less expensive to share goods than to own them individually. Sharing models appeal to those consumers that believe access is the new ownership and that owning products has become a burden in today's dynamic society (PwC, 2015). This model allows consumers to decrease the burden and inconvenience of cost, maintenance and disposal. Consumers have grown interest in minimalist lifestyles, seek better pricing, more convenient access, and more choices in the marketplace.

**Retail Opportunity:** The C2C model allows retailers to test sharing facilitation as a new source of revenue, targeting consumers who are cost-conscious and identify with sharing platforms. It also allows retailers to increase consumer loyalty and differentiate from other competitors through service innovations.

**3.Business to Business (B2B) / By-product Synergies/ Industrial Symbiosis**

**Description of Model:** The B2B model seeks to create local economies for by- product synergies, and product/materials maintenance and take-back. The model identifies the product categories with most potential for by-product synergies, maintaining, and target the barriers for doing so (e.g., infrastructure, incentives, policies). The B2B model targets supply chain processes and design processes to share waste streams and connect waste streams with products manufacturing processes.

**Retailer Opportunity:** This model shows potential in markets where there is a high volume of similar products that can be easily retrieved, or when material recovery is easy and cost effective. The business case for B2B in the retail industry is attractive when recycling becomes more cost effective than the current value spend on primary resources for manufacturing or when there are certain policy incentives in place such as EPR schemes or tax benefits (Sitra, 2015).

**4.Experience Base Model**

**Description of Model:** The experience base model allows brands to sell experiences -- in addition to products. It seeks to market a certain lifestyle rather than just a product. It incentivizes consumers to adopt behaviors and practices that promote sustainability, health, and happiness and encourage behaviors that encompass a community identity, such as exercising, cooking & healthy eating, volunteering. Through these experiences, retailers are then able to provide additional products, services, and training to support that lifestyle.

**Benefit to Consumers:** This model targets consumers that are community oriented and are constantly seeking options to engage in community driven activities. Experience base models also appeal to consumers who are interested or curious to try a product out or have currently purchase a product and are looking for guidance to optimize its use.

**Retailer opportunity:** Experience and sharing models provide a unique brand value. Today, consumers place enormous value on the social connections a brand fosters. These models allow brands to manage these connections through marketing strategies and create an emotional connection with its customer. The brand has the opportunity to transition from a purely transaction-based relationship to a platform for an experience. Brands can be exposed to new revenue streams that are complementary to their core business.

**5. Service-Base Model**

**Description of Model:** The service based model encourages retailers to develop a joint-product servicing network to help consumers increase the lifespan of products. The service model gives retailers the opportunity to interact in a face to face manner with its customers and provide services such as repair, damage management, and multiple solutions to encourage efficient product use.

**Benefit to Consumers:** The service-base business model helps consumers who seek solutions to products that are high quality/ premium priced, where customer service plays an important role. Consumers who seek service-base models are looking to retain their investment and are willing to pay a small price to fix or repair their product in order to exhaust the products life -- before they have to make a new purchase.

**Retailer Opportunity:** The service-base model gives retailers the opportunity to capitalize on the service of extending a product's useful life through repair and maintenance. The model allows retailers to effectively demonstrate efforts to decouple economic growth from resource use. Retailers can nurture personal attachment between the consumer and product, and therefore, promote brand loyalty. In addition, service-base models allow retailers to retain ownership of the assets collected, and re-purpose the use of collected materials as an input of manufacturing new products, which reduce costs.

## Implementing a Local Materials Economy

In order to understand and test the scalability factor of a local materials economy, the team examined the feasibility of a collaborative materials marketplace at the regional level, specifically in the North Carolina Research Triangle (NCRT). The team executed a material process analysis through the retail value chain to examine specific flows and feedstock dynamics. The primary goals of taking a deeper look at a local materials marketplace in the NCRT was to:

1. Demonstrate a scalable process- at the scale of a social economy- for improving reuse rates through increased systems efficiency in the NCRT.
2. Provide a blueprint demonstrating how to optimize recovery of common and high value materials and provide a sustainable end of life.
3. Develop strategic partnerships throughout the value chain to collectively accelerate a market-driven approach to the circular economy.
4. Raise awareness of the barriers and opportunities for transition to the circular economy in the NCRT, and leverage learnings to address closed loop challenges for materials recovery.

These project considerations where able to inform our material analysis. The team looked at eight counties within the research triangle area. This geographical scope is representative of RILA brands. We where able to identify more than fifty- five retail locations of the nine partner companies in the area

(refer to Appendix 5 for geographic scope details). We also narrowed the scope of our research to nine waste streams, which are most representative of the types of materials that flow in the retail value chain and correspond to the waste streams identified in the Key Product Categories previously stated (refer to page 10 of this Report). These waste streams include: glass, paper, plastic, organics, electronics & related products, biomass/wood, textiles, batteries, non- common waste streams (see Appendix 6 for waste stream details).

We further created a Research Triangle database grounded on input from the NC DEQ in order to identify the state facilities, Materials Recycling Facilities (MRFs), independent processors and county recycling programs that process these specific waste streams. Our results indicate that there are eighty-eight facilities in the NCRT that process these waste streams (Appendix 5 for partial results). However, the lack of information and data regarding material flows, private industrial waste management and materials traceability throughout the NCRT retail value chain were setbacks that impede the team's research to get concrete results.

## Considerations and Key Findings of Materials Flow Analysis

We continued the materials flow analysis with desk research and identified the following results. As mentioned in the beginning of this report, the U.S. Chamber of Commerce Foundation research report *Trash to Treasure: Changing Waste Streams to Profit Streams* found that 5,589 of the largest publicly traded companies in the U.S. sent 342 million metric tons of waste to landfills and incinerators in 2014. Overall retail companies was in paper (34%), organics and food (26%) plastics (12%), and construction materials (13%) (U.S. CCC, 2016). Additionally, for every $1 million in revenue, companies on average generate 7.81 metric tones of waste (Lawrence, 2016).

The main takeaways of the material flow analysis indicate that the current recycling infrastructure contains gaps that get in the way of efficient use of resources through close loop recycling and reuse systems. There is an inefficient collection system which lacks local infrastructure to process common waste streams and non- conventional waste streams.

In order to achieve a local materials marketplace and move towards a sustainable consumption, a circular feedstock must be provided and facilitated between the consumer, the retailers, and the manufacturers. The U.S. Chamber of Commerce Foundation research report *Trash to Treasure: Changing Waste Streams to Profit Streams* highlights that companies are not accurately estimating, measuring and managing their waste streams, meaning that they are throwing away opportunities for profit and increased efficiency. Additionally, the report indicates that shifting to a circular economy has the potential of unlocking an estimated $4.5 trillion in additional economic growth by 2030 (Lawrence, 2016). Yet, the U.S. ranks 18$^{th}$ in the recycling global rankings among OECD countries, with $11.2 billion in recyclables landfilled annually (Lawrence, 2016).

## Creating Sustainable Business Value from Waste

Some of the gaps that we have identified leave a lot of room for efficiency improvements. Some of the challenges for many businesses is that recycling infrastructure is inadequate in regions where they

operate; therefore, the question is, how do we get the current system to a circular economy? In order to achieve a local materials marketplace and move towards a sustainable consumption, a circular feedstock must be provided and facilitated between the consumer, the retailers, and the manufacturers.

The current recycling infrastructure contains gaps that hinder efficient use of resources through close loop recycling and reuse systems. This presents an economic opportunity for small and medium size businesses that engage in local collection and reprocessing of recyclables into new products. There are some companies and nationwide initiatives that are taking this approach and capitalizing on this opportunity and creating business value from waste.

Companies such as Terracyle act as physical facilitators and take a variety of waste streams by running nation wide collection programs and partnering with big brand names such as P&G, Kraft Foods, etc. The company collects these waste streams and find innovative ways to repurpose, upscale and reuse these products. Terracycle made a total revenue of $19 million and collected and recycled 3.5 billion units in 2015 (Terracycle, 2016).

Another startup- Stuffsrt- has been able to close the loop in the mobile space as an on demand facilitator equivalent to the "Uber" of waste and unwanted items collection. Last year, this system was able to collect and successfully repurpose 80 million pounds of textiles. And it has called the attention of well-known brands such as H&M, North Face and Amazon to create collaboration strategies and scale the program (Stufftr, 2017).

## Future Recommendations: Achieving a Local Materials Economy

The main lesson from the results of this Masters Project show that a circular economy requires participation, collaboration and shared understanding throughout the value chain. By bringing global resources to bear locally in markets where they operate, and scaling pilot efforts across all markets, companies can reap the business benefits of the circular economy.

To achieve a circular economy and a local materials marketplace in NCRT, the team recommends examining the following tool:

- *Create a local materials marketplace dashboard*

To stimulate participation, collaboration and shared understanding throughout the value chain in order to create a circular economy, we recommend developing a local materials dashboard as a tool that tracks and measures high value priority flows in the region in order to create a local materials economy marketplace. This tool will allow to identify and explore potential partnership and new revenue opportunities as well as allow for traditional and non-traditional industrial waste streams to be matched with new products and revenue opportunities.

It is essential to take into account the complexity in creating this local network. Further research should be invested in retrieving information that needs to be considered in the amount of data inputs and

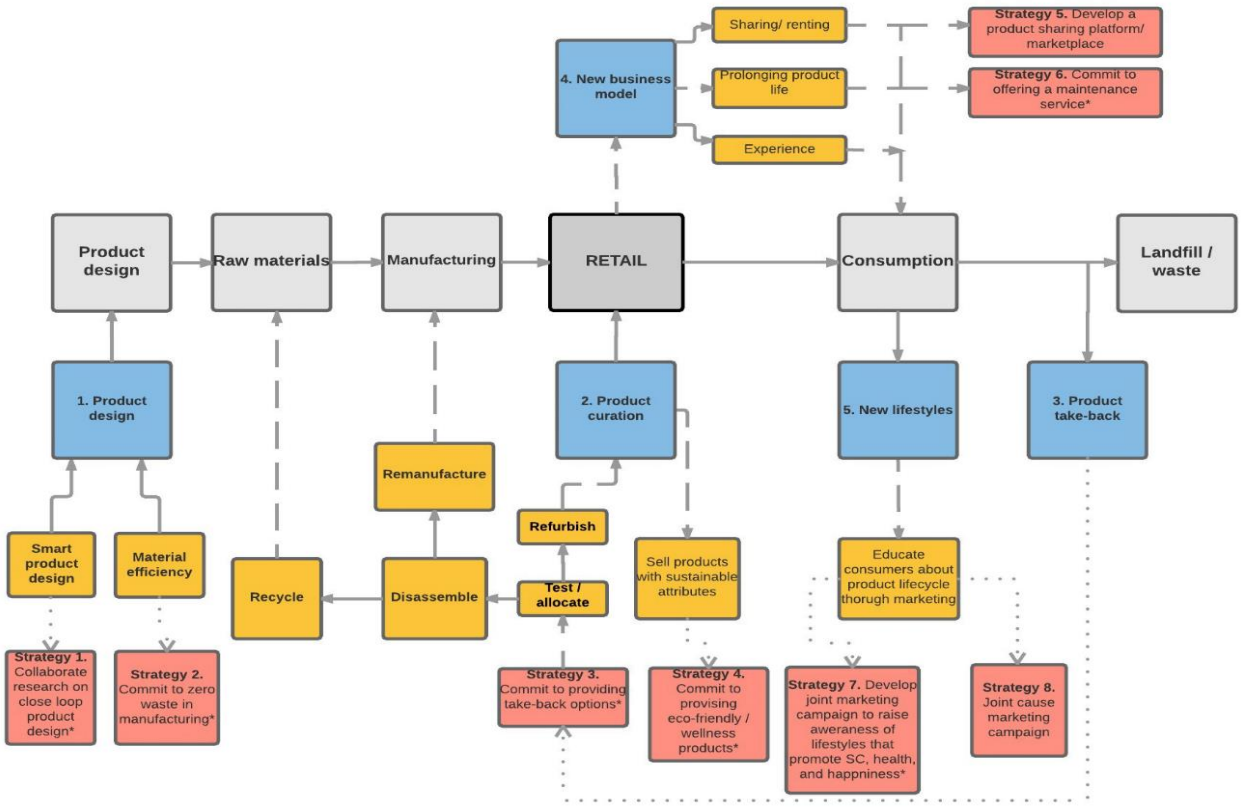
variables that need to be accounted for in order for the tool to be successful. Some of the variables and considerations that need to be taken into account include:

- The volume of materials available; the volume of materials wanted
- EOL intention (make sure it "closes the loop")
- Specific material processes, can it be used for more than one company? Will there be enough volume?
- Is the materials volume for potential collection enough? Is it still cost prohibitive?
- At what point does it make economic feasibility?

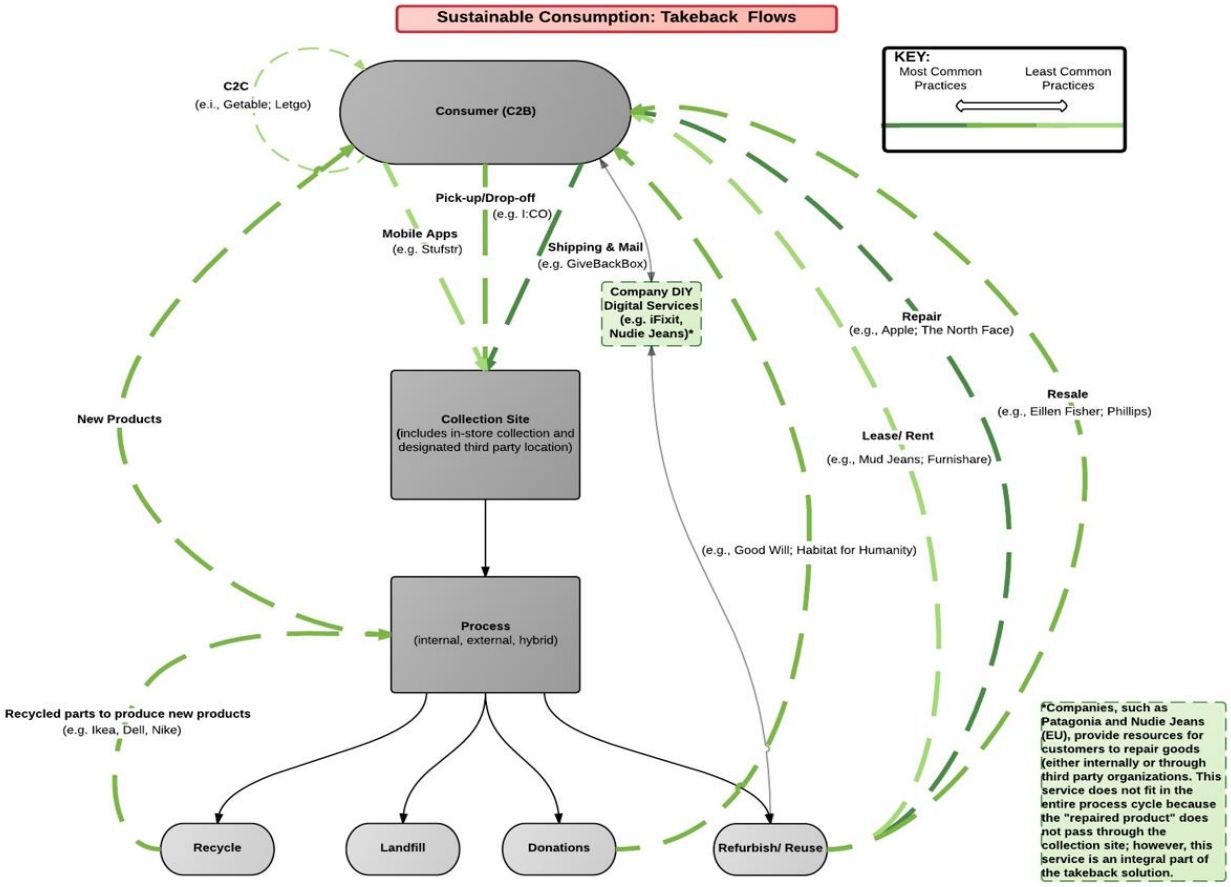
It is important to mention that we are not trying to reinvent the wheel. These efforts exist at a local and international level. There are current national and city state materials marketplace projects in Ohio, Detroit and Austin which are run and overseen by the U.S. Business Council for Sustainable Development (USBCSD). Considering the complexity of this big data project, we suggest partnerships with organizations such as the USBCSD and to consider big data analytic companies that have the capability to manage a robust data set such as Statistics Analysis System Business Analytics or Business Analytics Platforms & Solutions (SAP).

# Appendices

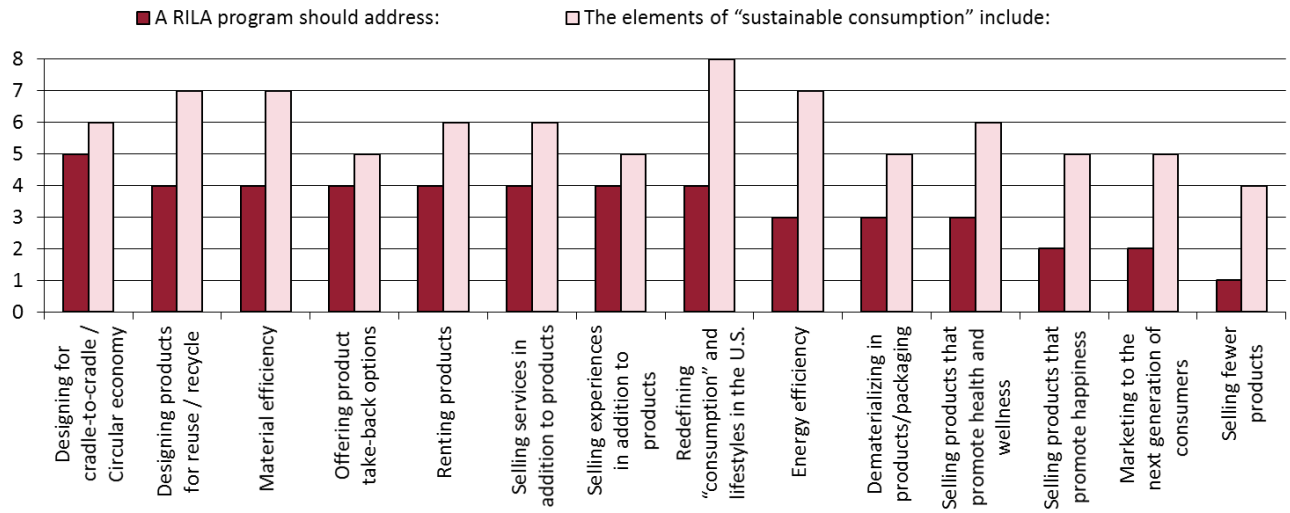
**Appendix 1: Retail Industry Flow Diagram & Leverage Points**



## Appendix 2: Sustainable Consumption Take-back Flows



## Appendix 3: Company Survey Results



## Appendix 4: Sustainable Consumption Program Survey Example

**Introduction**

We have begun to "sustainable consumption" as:

1. Product design
2. Product curation
3. Product take-back
4. New business models
5. New lifestyles

This survey asks for your feedback on the eight proposed strategies for collaboration...

| Strategy | Vision | Keys to success |
|---|---|---|
| 1. Collaborate on researching closed loop product design for key product categories* | Jointly research and develop cutting edge product design practices and moon-shot ideas to enable end-of-life material reuse and eliminate resource leakage throughout the products' life. Collaborate on research issues related to: materials, product design, finance, etc. | Identify key product categories; Engage product designers & existing design tools; Partner with research institutes |
| 2. Commit to zero waste in manufacturing for key product categories* | Jointly identify product categories with highest potential and financial benefit for zero waste. Then launch industry research and commitments initiatives to ultimately eliminate waste in those product categories. | Identify key product categories; Engage product designers & manufacturing facilities; Roadmapping toward zero waste for key categories; Finding alternative uses for largest waste streams |
| 3. Commit to providing take-back options for key product categories* | Commit to offering take-back options for certain product categories that dramatically increases material capture after product EOL | Identify key product categories; Engage marketers; Engage consumers with easy options; Technologies, regulations, and hauler/manufacturing partnerships to provide product off-take options & financial incentives |
| 4. Commit to providing eco-friendly / wellness products in key categories* | Promote and improve availability of eco-friendly / wellness products. Help suppliers in key product categories to improve the eco-friendliness and wellness attributes of their products | Identify key product categories; Engage suppliers and marketers; Provide cost-competitive, eco-friendly / wellness product options to consumers |
| 5. Develop a product sharing platform / marketplace and product renting options* | Facilitate product sharing by creating and populating a mobile/web platforms that enables consumers to share | Identify key product categories; Development and adoption of mobile and web platforms; Ease of use and consumer trust; Partnerships with existing sharing platforms |
| 6. Commit to offering a maintenance service for key product categories* | Develop a joint product servicing network to help consumers use their products longer | Identify key product categories; Build and train distributed staff network (perhaps the Uber model); Easy ability for consumers to repair their products |
| 7. Develop joint marketing campaign and incentive program to raise awareness of lifestyles that promote sustainable consumption, health and happiness | Run joint marketing campaigns Inspire consumers to adopt behaviors and practices that promote sustainability, health, and happiness—behaviors like exercising, cooking & healthy eating, volunteering, community building, learning, social relationships, etc. Then provide products, services, and training to support that lifestyle | Identify the behaviors to promote; Engage marketers to develop marketing platform, messaging, and campaign; Provide consumers with easy options to improve healthfulness and happiness of their own lifestyles |
| 8. Joint cause marketing campaign | Jointly develop marketing campaigns to raise consumers' awareness on one specific issue—like cancer, AIDS, product production, poverty alleviation, the U.S.'s waste infrastructure, etc. Encourage consumers to engage on the issue through purchase behaviors | Identify the specific issue of focus; Engage marketers to develop marketing platform, messaging, and campaign; Provide consumers with easy options to address the specific issue; Collaborate with relevant & credible nonprofits |

1. Please prioritize the options above based on criteria relevant to you and your company's goals

- **Strategy 1.** Collaborate on researching closed loop product design for key product categories*
- **Strategy 2.** Commit to zero waste in manufacturing for key product categories*
- **Strategy 3.** Commit to providing take-back options for key product categories*
- **Strategy 4.** Commit to providing eco-friendly / wellness products in key categories*
- **Strategy 5.** Develop a product sharing platform / marketplace and product renting options
- **Strategy 6.** Commit to offering a maintenance service for key product categories*
- **Strategy 7.** Develop joint marketing campaign and incentive program to raise awareness of lifestyles that promote sustainable consumption, health and happiness*
- **Strategy 8.** Joint cause marketing campaign

2. Do you have other strategy ideas?

3. For your top 3 priorities above, what other companies should we consider involving?

| | |
|---|---|
| Retailers / brands | |
| Nonprofits | |
| Business-centric organizations (e.g., US Chamber) | |
| Other types of companies (e.g., Visa, waste haulers, marketing firms) | |
| Media / publications | |
| Government agencies | |

4. Other questions, comments, feedback, or ideas?

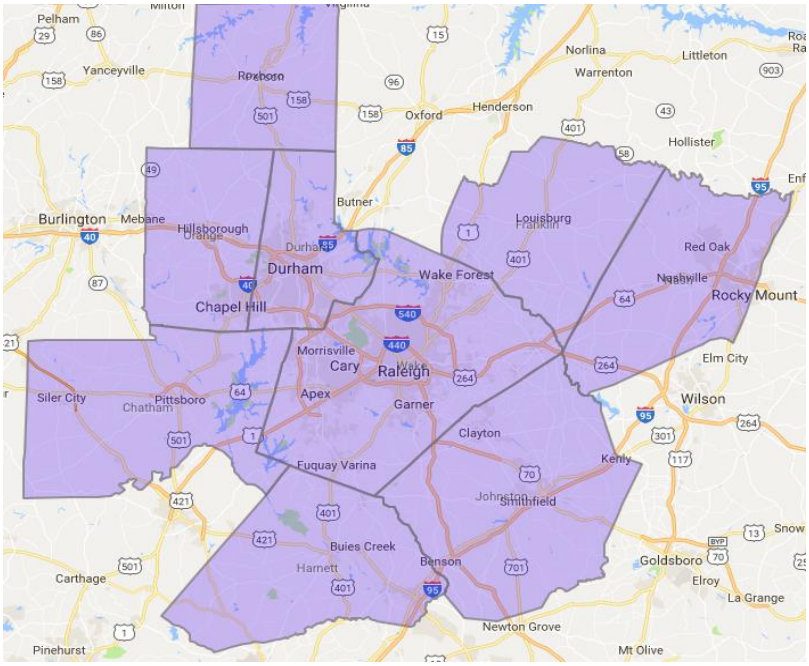
5. Your name (optional)

Done

**Appendix 5: Analyzing Key Product Categories**

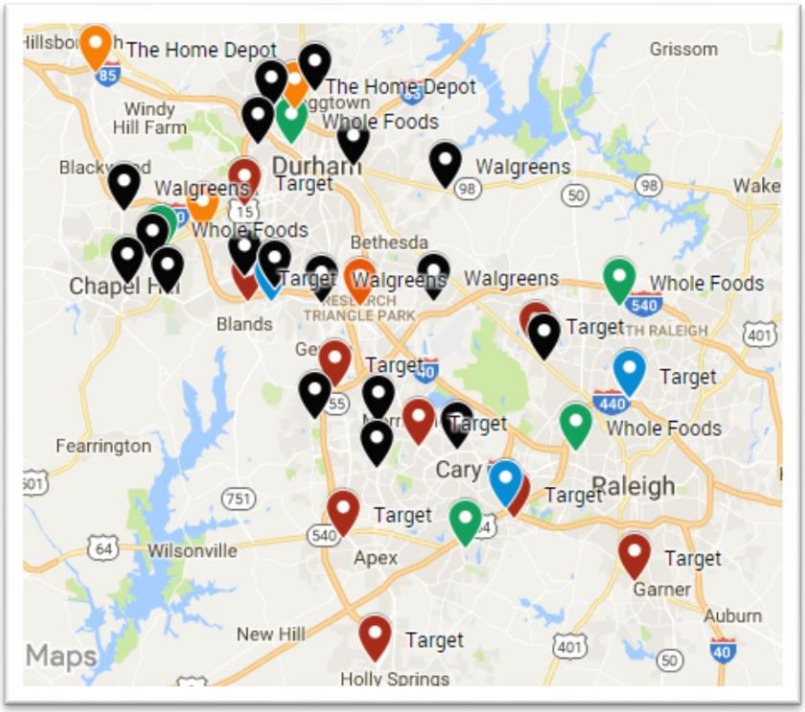
| | Potential to address leverage point... | | | | |
|---|---|---|---|---|---|
| **Product category** | **1. Product design** | **2. Product curation** | **3. Product take-back** | **4. New lifestyles** | **5. New business models** |
| Apparel, footwear, and accessories | High | High | High | High | Medium |
| Auto parts and accessories | Medium | Medium | High | High | High |
| Books | Medium | Low | High | High | High |
| Consumer packaged goods | Medium | High | Low | Low | Low |
| Electronics | High | Low | High | High | High |
| Food, beverage, and grocery | High | High | Low | High | Low |
| Health and beauty | High | High | Low | High | Low |
| Home furnishings | High | High | High | Medium | High |
| Jewelry & luxury goods | High | Medium | High | Medium | High |
| Medical and pharmaceutical | Low | Low | Medium | Low | Low |
| Pets & pet Supplies | Medium | High | Low | High | Low |
| Office supplies | High | High | Low | Low | Low |
| Sports and outdoors | High | High | High | High | High |
| Software, digital goods, and video games | Low | Low | Low | High | High |
| Toys and children's products | High | High | High | Low | High |
| Tools & home improvement | High | Medium | High | High | High |

**Appendix 6: Exploring Material Economies in the North Carolina Research Triangle: Geographical Scope**




## Counties in Geographic Scope

1. Durham
2. Wake
3. Johnson
4. Raleigh
5. Johnston
6. Nash
7. Orange
8. Harnett
9. Franklin




## RILA Partner Retail Store Locations

Retailer Stores:

1. Target
2. Whole Foods
3. The Home Depot
4. REI
5. Walgreens

## Appendix 7: Business Models Driving Retain Innovation

**Top 5 Business Models Driving Retail Innovation – Case Examples**

### 1.Consumer to Business (C2B) / Take-back

**Examples:**

- **Eileen Fisher**: Consumers can return garments to any EF store. Each return item earns $5 on a recycling rewards card. Collected items are processed in EF Recycling Center. Eileen Fisher manufactured about 4 million garments; with Green Eileen Program, it expects the recycling total to hit 1 million. In 2015, Green Eileen brought in 170,000 garments, or 4 percent of the company's output (Sitra, 2015).
- **Give Back Box:** Since 2015, Give Back Box has partnered with Goodwill to connect with a national nonprofit that can accept donations on a macro scale. The Give Back Box platform is free for any retailer who joins as a partner. It is free for donors and the shipping cost is covered by Goodwill. Donations and revenues helps fund Goodwill's mission. Goodwill also recycles every box that arrives at its facilities. Give Back Box strategy clearly aligns with Goodwill's donations growth goals, as it looks to capitalize on the increasing popularity of online shopping, turning the e-commerce platform into an e-donation platform. Additionally, Give Back Box has partnered up with other major retailers in the U.S., including: Amazon, Loft, REI, Levi's, Ann Taylor, Uncommongoods, Levi's, Asics.
- **I:CO:** Facilitates apparel/shoe take-back by providing physical kiosks at partnering retailers. Customers receive a coupon for their next purchase after depositing items in the kiosk. As a B2B model, I:CO provides brands with an extended producer responsibility system with the objective of tackling the issue of postconsumer textile waste. It is a vertically integrated collection, sorting and recycling system that focus on diverging waste from landfill by providing secondary textile resources at competitive prices to their brand partners. I:CO generates revenue through sales of wearable clothing and recycled fibers for insulation, the automotive industry, and composite material (Sitra, 2015).

### 2.Consumer to Consumer (C2C)/ Peer-to-Peer / Sharing Economy

**Examples:**

- **Let Go:** Launched in 2015, a highly visual mobile marketplace to buy and sell locally. It provides a classified experience in an app that is easy to browse- allowing users to post, buy, sell and communicate with each other instantly and for free through geotagging and other localizing features. With over 45M downloads, and 20M monthly active users, the app operates billions of dollars' worth of items. The platform also provides consumers the ability to negotiate sales offline. As of February 2016, the company has raised $100 million in funding from existing shareholders to build out the business.
- **Stuffstr:** A Seattle-based startup that aims to put the $7,000 of unused stuff in the average U.S. household to good use by arranging easy pick-up or delivery of items to processing, recycling or donation sites. It provides base for personal item inventory, recommendations for things to give away, keep track of stuff, and add stuff. It partners with organizations like Goodwill, Habitat for Humanity, manufacturer recycling programs, collection services, etc. The app also delivers directions to these donation spots, allows for users to set reminders, and displays the various pickup options.
- **Yerdle**: An app designed to enable people to give away their stuff in exchange for credits they can use to "buy" other people's castoffs. **Poshmark**, a fashion marketplace that lets people shop for items sold from others' closets. Also, **Spinlister,** a peer-to- peer marketplace for renting bikes, skis, surfboards and other sporting equipment; **Kidizen,** a mobile, peer-to-peer marketplace allowing parents to buy and sell their children's clothing, toys, shoes; and **Rocksbox**, a subscription rental service for high-end jewelry (PwC, 2015).

- **OfferUp:** OfferUp follows the model for local, peer-to-peer commerce. Launched in 2015, the app can be categorized as a mobile-only hybrid between Craigslist and eBay, the main difference being that OfferUp is a more localized, image-friendly mobile- only marketplace (Carson, 2017). OfferUp is the largest mobile marketplace in the U.S. It is ranked as the top 3 apps in the shopping category, has more than 23 million downloads and accounted for $14 billion in transactions in 2016 (OfferUp Inc., 2017).

**3.Business to Business (B2B) / By-product Synergies/ Industrial Symbiosis**

**Examples:**

- **Coca Cola Company and VF Corporation** created a partnership to recycle PET bottles waste into textile fibers, which were then turned into baseball team shirts. The PET fibers used to create the shirts were collected from the recycled bottles left in the Broncos stadium after a game.

**4.Experience Base Model**

**Examples:**

- **REI:** REI is considered a lifestyle brand. With millions of members on its mailing list, the company has developed an experience base business model that can be described as a travel agency. Its "REI adventures" offers trips and specializes in human-powered outdoor activities such as hiking, cycling, climbing, etc. Additionally, REI's "outdoor School" offers classes and outings in outdoor activities to try new products and grow outdoor skills. The company also offers in-store and online educational classes that optimize the use of outdoor products.
- **Whole Foods:** Whole Foods *Salud Cooking School* provides culinary hands-on classes, led by store instructors for interested participants across multiple locations in the U.S. For a small fee ($20-$55), participants receive a class lecture packet with recipes, ingredient lists and cooking tips and a final dinner. The class uses fresh produce and ingredients from the local Whole Foods Market to teach the class.
- **Lululemon:** Lululemon brands its products as conducive to a fun, healthy lifestyle. This successful strategy allows Lululemon to price its products at a premium. As a result, the company's earnings increased from $711 million to about $1.6 billion between FY 2011 and 2015 (Investopedia, 2015). Lululemon cultivates a loyal customer base through a community engagement at the store -- offering yoga classes and running clubs which allow consumers to co-create experience with the brand, incentivizing the consumer to come back for more. Retail expert and author, Robin Lewis, describes this concept as "addictive experiences", where each time consumers co-create the experience with the brand, they are shaping it to their mood of the moment, giving the customer the desire to come back again (Investopedia, 2015).
- **Walgreens:** As part of Walgreens "Way to Well Commitment", the program focused on improving everyday life through the prevention and early detection of common leading illnesses such as cancer, heart disease, and diabetes, in 2009, Walgreens and AARP Inc. (American Association of Retired Persons), launched a two-year national wellness "Health Tour". The Way to Well Tour consisted on nine full equipped buses, offering free tests for glucose, cholesterol, blood pressure, BMI, and other health related indicators to more than 3,000 communities throughout the U.S. and Puerto Rico (Walgreens Co., 2017).

**5. Service-Base Model**

**Examples:**

- **Apple:** Apple's genius bar serves over 18 million people a year (Hein, 2012). In its annual environmental report (2015), Apple said it recovered 2,204 pounds (more than a ton) of gold from recycled iPhones, iPads and Macs last year. That's $40 million worth. Of the 90 million pounds of e-waste through its recycling programs, Apple said 61 million was in reusable materials (insignificant amount) but since gold is currently trading at more than $1,200 per troy ounce, it's among the most valuable materials it pulled from all those old gadgets (Singelton, 2016).
- **Best Buy's Geek Squad:** Geek Squad is the electronics repair and services arm of Best Buy. The Geek Squad provides services in more than 1,100 Best Buy stores, at home, or online. Services range from product diagnoses issues to repair of consumer electronics and appliances (Best Buy, 2017). Even though the company does not disclose separate financials, it is estimated that the Geek Squad generated a gross profit margin of 40-50 perfect based on a minimum annual revenue of $2 billion (4% of Best Buy's total revenue in 2013) (Lee, 2013).
- **Nudie Jeans:** Based in Sweden, the jean store allows its customers to visit over 19 retail repair shops worldwide and allows to repair their jeans in-store for free. Customers who don't repair their jeans can sell them to the store and get a 25% off a new pair of denims. The company still repairs the used Nudies and are resold as second use items in-store. For consumers who are not able to visit the store, Nudie sends a free repair kit free of charge. In 2014, Nudie received 30,000 jean repairs. Additionally, there is an average of 3,640 repair kits sent out in 2014 (Sitra, 2015).

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