NYU STERN

Center for
Sustainable Business

The Business Case for Sustainable Apparel

Phase 1: December 2020

Phase 2: April 2021

Table of Contents

1. Executive Summary
2. Project Background
3. Apparel Industry Sustainable Strategies Framework
4. Case Study Findings with Apparel Partners
5. Overview of Apparel Benefits by Strategy
6. Circularity Monetization Examples & Tools
7. About The NYU Stern Center for Sustainable Business

NYU STERN

Center for
Sustainable Business

Executive Summary

Executive Summary

Apparel companies are leveraging eight strategies to positively impact their financial performance and drive better outcomes for environment and society

- Strategies identified include circularity and innovation, investments in employee and supplier well-being, and improving energy management
- Financial value accruing to companies in areas such as greater employee productivity and retention, improvements in sales & marketing, lower customer acquisition costs, and reduction in transportation costs
- One company found a $1.6M in annual savings by prioritizing lower carbon distribution methods; another identified $34M in annual savings from investments in employee well-being

Work Completed & Looking Ahead

In this presentation we share our novel Apparel Industry Sustainable Strategies Framework, several case narratives, and monetization tools.

FRAMEWORK	CASES	TOOLS
We built the framework around 8 strategies, housing 25 practices and 66 sub-practices.	**We partnered with companies on several cases linked to our identified strategies.**	**We created 18 excel tools focused on the circularity and innovation strategy to monetize and capture benefits.**
Help companies understand which strategies and practices to prioritize	*Provides a narrative overview and detailed accounting of our monetization method and results*	*Offers practical frameworks for companies to uncover benefits at their own organizations. May feed into other industry-wide or ESG frameworks like the HIGG Index or SASB.*

Future work will include developing additional monetization tools and cases. We welcome partnership on future phases of the project!

NYU STERN

Center for
Sustainable Business

Project Background

The apparel industry faces numerous environmental challenges…

Apparel manufacturing has significant environmental impacts spanning land use, water pollution, air pollution, and bio-diversity among others.

…as well as labor and social challenges.

Apparel manufacturing faces challenges with child & forced labor, low wages in retail and factories, harmful chemical exposure, and poor safety practices among others.

The industry also faces numerous threats and disruptions

Challenges in traditional brick and mortar, the rise of ecommerce and the COVID pandemic create new challenges for the industry.

The Opportunity

Despite enormous challenges, the apparel industry is prioritizing and investing in sustainability strategies to address material ESG issues, innovate and discover new business models, and drive financial performance.

The challenge is how to measure and quantify these investments ***to assess the value of benefits that can be accrued through more sustainable business practices.***

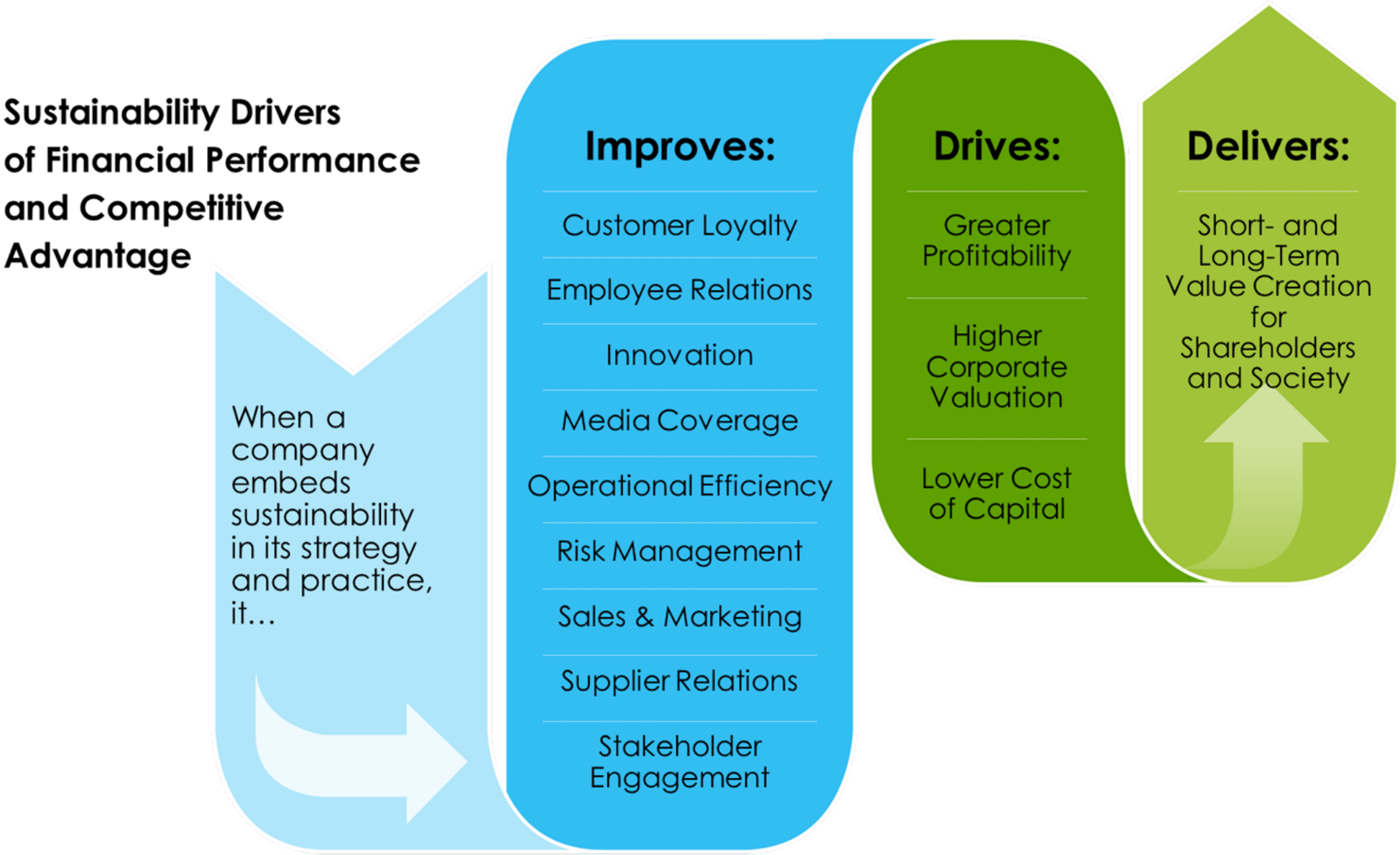
Project Sponsor

HSBC

Project Objectives

- Leverage the NYU Stern CSB Return on Sustainability Investment (ROSI) methodology to help **estimate the tangible and intangible benefits** accruing to apparel companies by prioritizing sustainability
- Develop a **comprehensive framework** that lays out the key strategies, practices, and sub-practices companies are prioritizing
- Map associated benefits, articulate monetization methods, and quantify benefits
- Develop **case studies** with partners
- Develop **tools** to help companies undertake this work at their own organizations and to feed into existing industry tools like HIGG Index or ESG frameworks like SASB or GRI

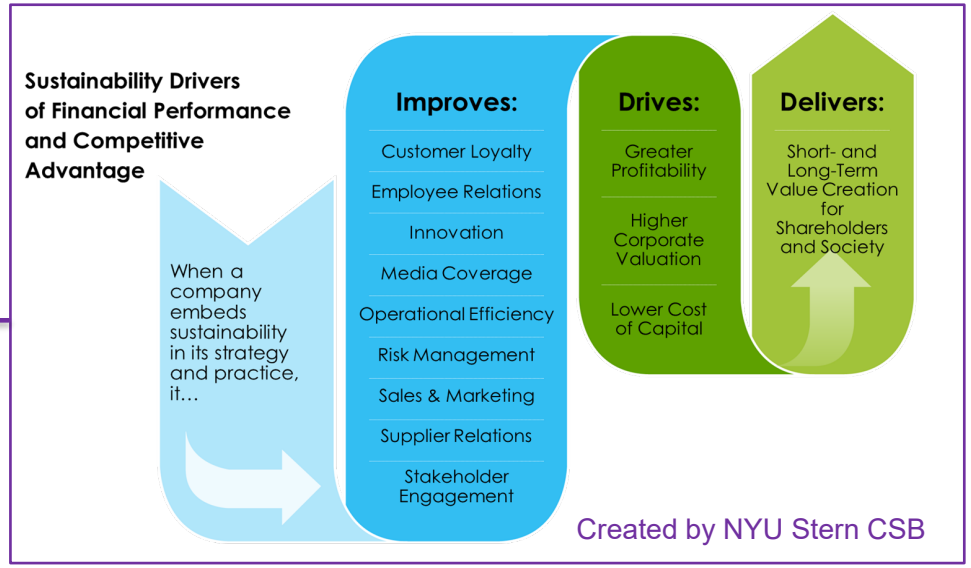
The ROSI Framework



ROSI Methodology and Collaboration Process

For project collaborations, NYU Stern CSB works with company partners to implement the five-step ROSI framework process highlighted to the right

1. **Identify Material ESG Issues and Strategies**
   Identify material sustainability challenges, and how the industry is addressing associated risks and/or opportunities
2. **Assess Practices**
   Determine which practices have been implemented to address sustainability strategies
3. **Define Benefits**
   Define the types of economic benefits that could be expected from the changed practices through the ROSI mediating factors
4. **Quantify Benefits**
   Estimate the magnitude of those benefits and when they could be realized
5. **Monetize**
   Translate the benefits into economic value, stress test, and then forecast ROI



By creating and disseminating a sustainable apparel framework, case studies in collaboration with apparel partners, and industry-specific monetization tools, NYU Stern CSB's aims to encourage the development of sustainability initiatives across the industry.

Current Participants Involved & Project Focus

With the support of HSBC, the sponsor of NYU Stern CSB's sustainable apparel project, we collaborated with corporate partners to answer a variety of pertinent sustainability-related questions, including:

- ✓ *What are the monetary and intangible benefits of incorporating and promoting a sustainably-focused corporate culture?*
- ✓ *What are the monetary and societal benefits of transitioning to more carbon-efficient transportation modes of product shipments?*
- ✓ *What are the monetary and intangible benefits of implementing and promoting circular business models (and other forms of innovation) for current and prospective customers?*

Corporate Partners

REI co-op

EILEEN FISHER

Reformation

Research Overview

We conducted desk research and primary research to gain a better understanding of the leading apparel industry sustainability strategies. Organizations and resources consulted include:

EILEEN FISHER

H&M

REI

BCG

3.1 Phillip Lim

P. C. CHANDRA GROUP

Reformation

NEST

FUTERRA

ELLEN MACARTHUR FOUNDATION

Pratt

FAB SCRAP

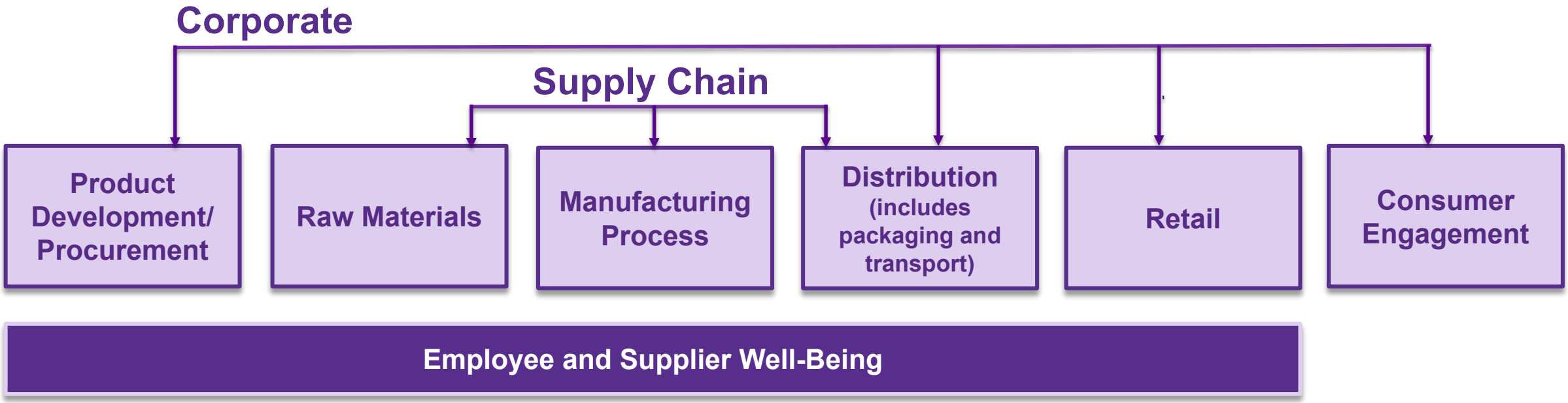
NYU STERN

Center for
Sustainable Business

Apparel Industry Sustainable Strategies Framework

The Apparel Value Chain

We assessed apparel sustainability efforts across the value chain to determine opportunities for impactful change



Apparel Industry Sustainable Strategies Framework

Apparel companies are driving sustainability improvements using several strategies:

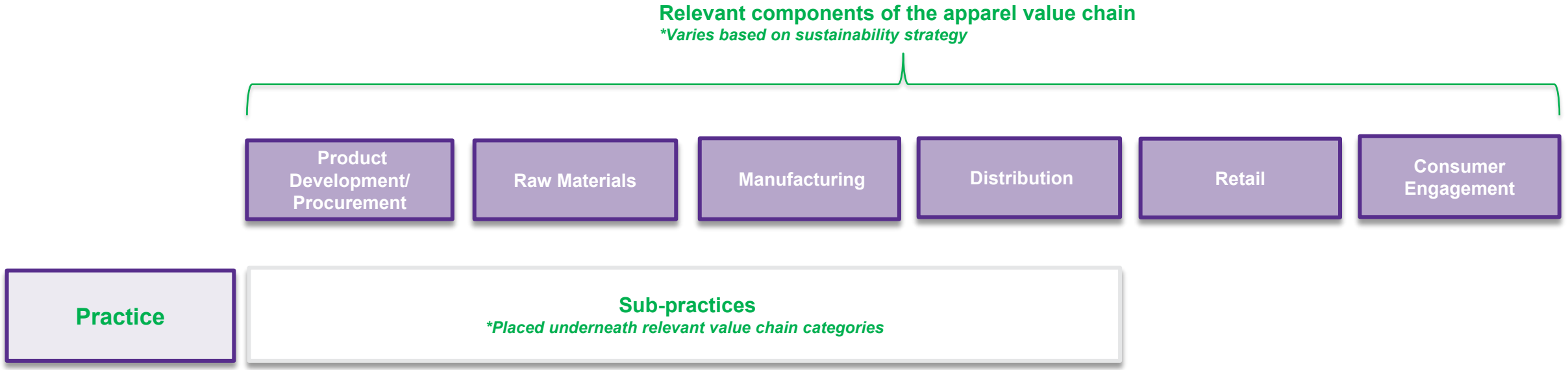
- Reducing Chemical Impact
- Improving Water Management
- Improving Energy Management
- Investing in Reduction of Material Waste
- Implementing Sustainable Raw Material Sourcing
- Investing in Circularity and Innovation
- Investing in Employee and Supplier Well-Being
- Investing in Sustainable Brand Marketing and Communications

Defining the Sustainability Strategies

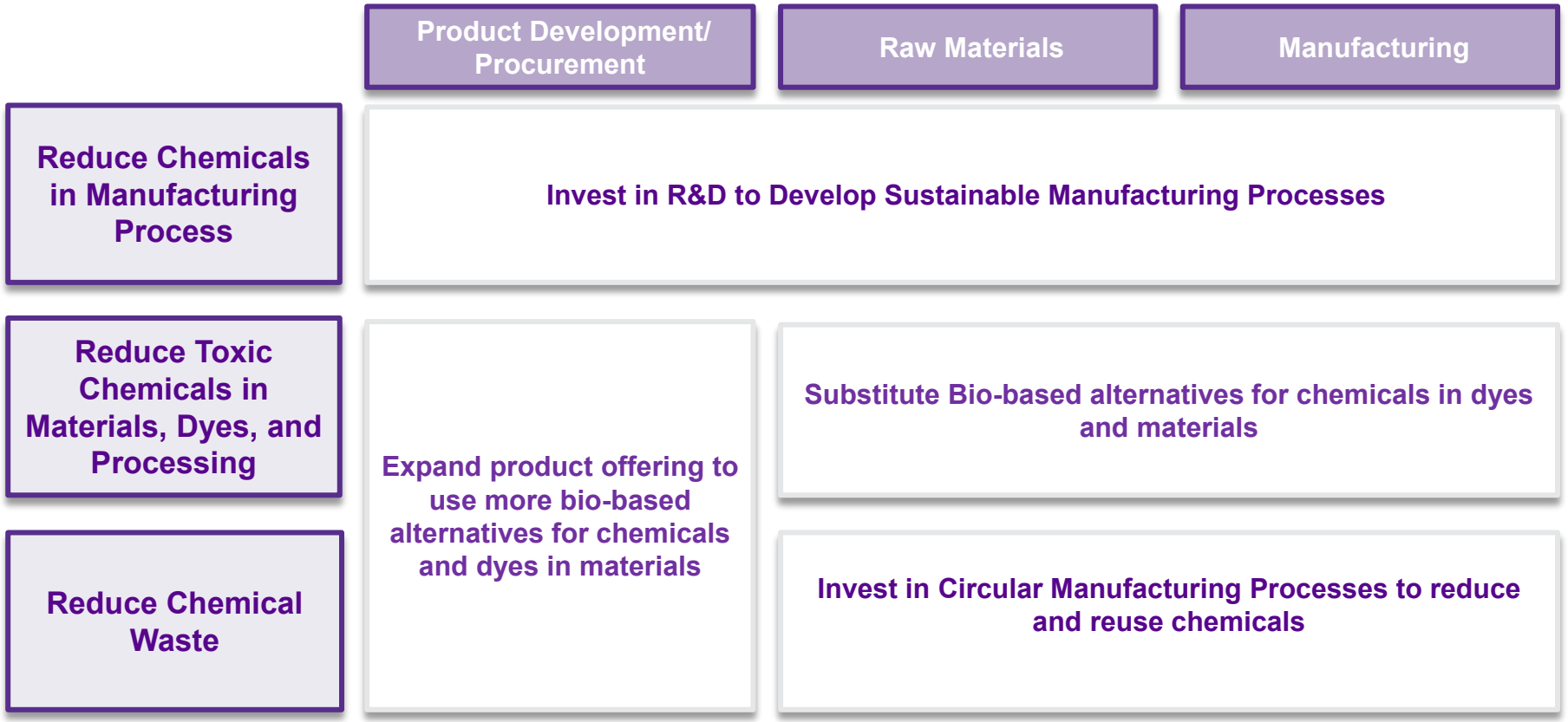
Reducing Chemical Impact	Company reduces the impact of chemicals in its supply chain
Improving Water Management	Company focuses on water management through increased water efficiency, conservation, and reduction of wastewater quantity, while improving wastewater quality
Improving Energy Management	Company focuses on practices to decrease greenhouse gas emissions by focusing on improving energy efficiency, changing distributions modes, and increasing use of renewable energy
Investing in Reduction of Material Waste	Company implements practices to mitigate waste in areas such as fabric, consumer clothing, peripherals, and packaging
Implementing Sustainable Raw Material Sourcing	Company spurs innovation of new materials development and substitutes more sustainable materials in existing products and packaging
Investing in Circularity and Innovation	Company invests in innovation to achieve new circular business models which focus on product takeback and innovative design methods
Investing in Employee and Supplier Well-Being	Company improves labor conditions in their supply chain and across their corporate workforce through practices that directly and indirectly benefit the health and safety of the workforce
Investing in Sustainable Brand Marketing and Communications	Company invests in marketing and education around sustainability through engagement campaigns and branding

Identified Sustainability

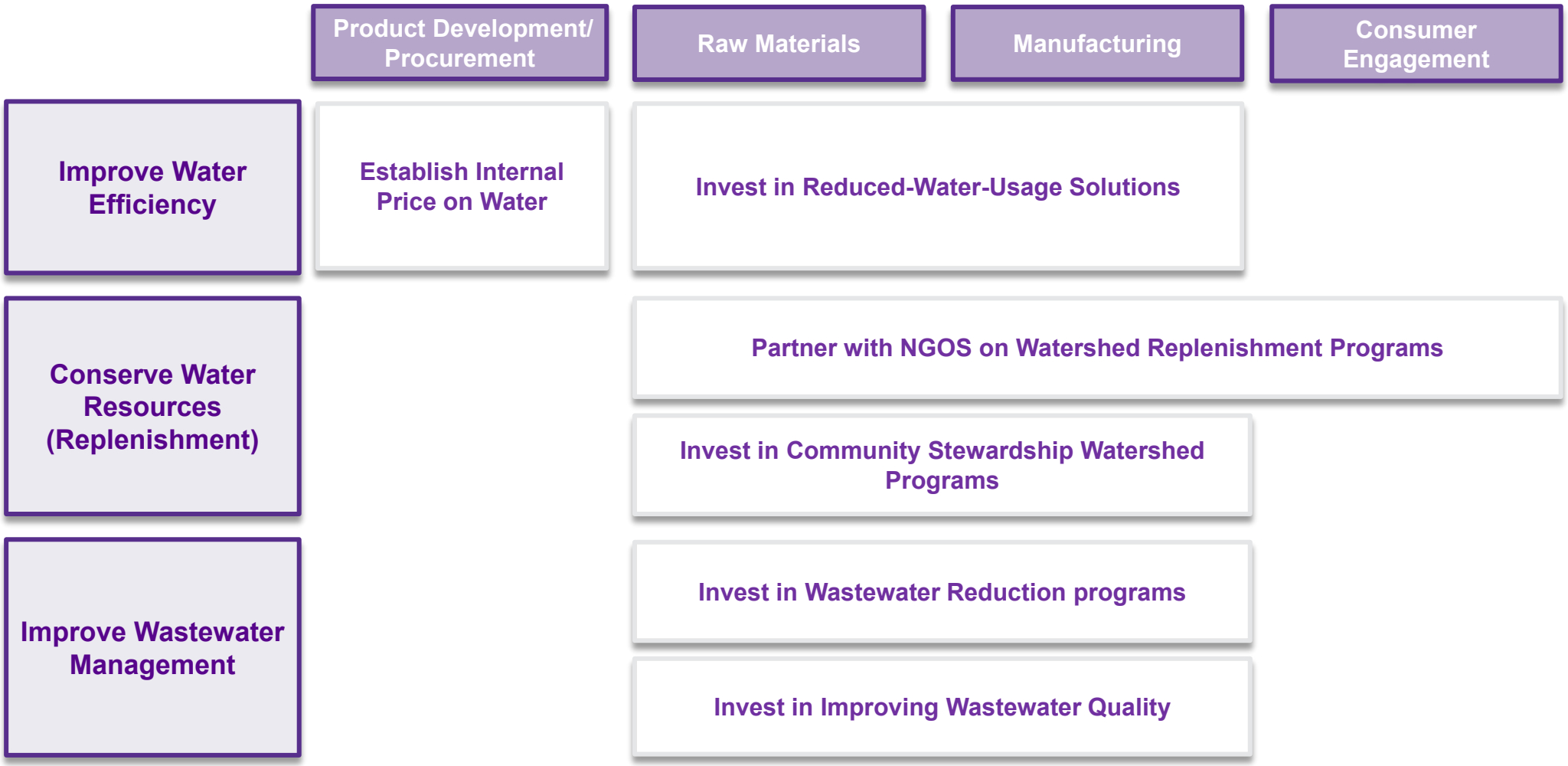
- Through our research, we identified key sustainability practices and sub-practices companies are implementing to achieve their sustainability strategies
- We mapped sub-practices to the relevant parts of the apparel value chain
- Each strategy includes sub-practices under each relevant component of the value chain, (if not relevant to a part of the value chain, it is excluded)
- Compliance / enforcement practices are not explicitly listed in this framework but should be considered when implementing the eight strategies
- Please see diagram below of the framework layout, which is illustrated for each strategy in the subsequent slides



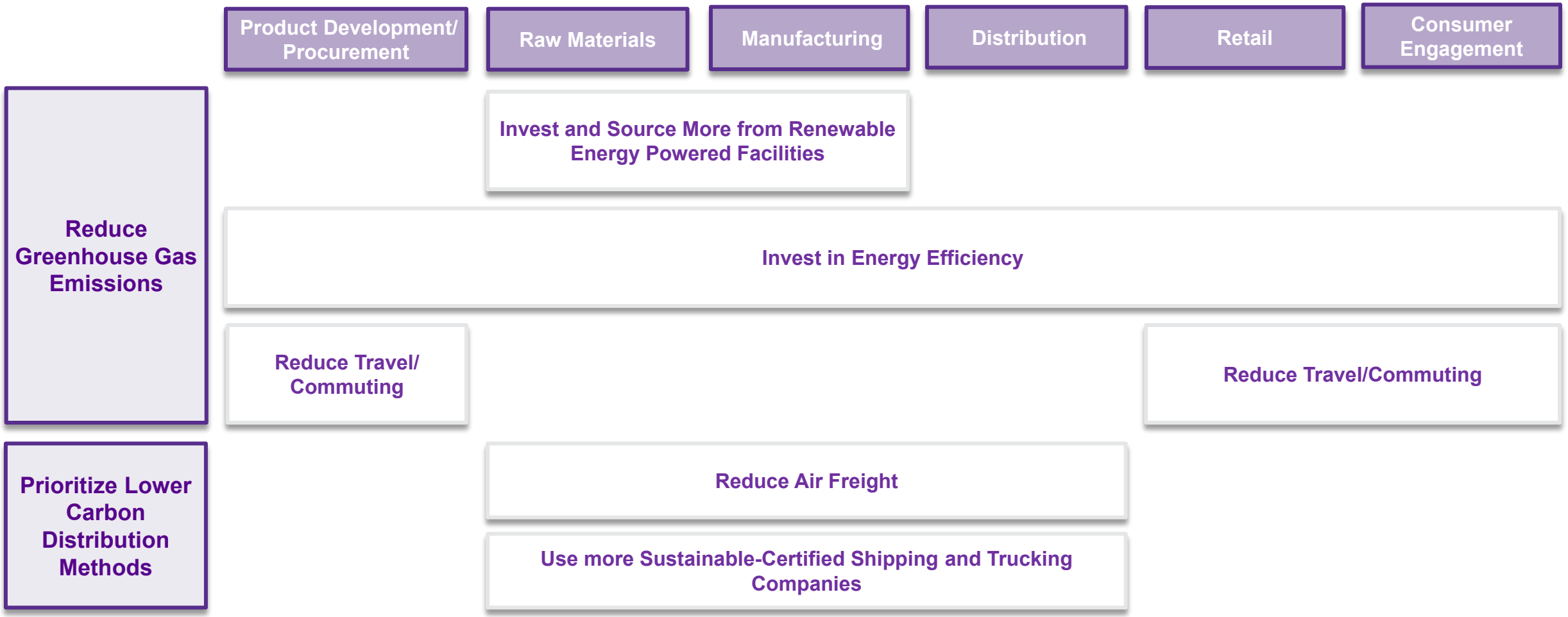
Reducing Chemical Impact



Improving Water Management



Improving Energy Management



Investing in Reduction of Material Waste*

*Includes Fabric, Packaging, Consumer

	Product Development/ Procurement	Raw Materials	Distribution	Retail	Consumer Engagement
Reduce Fabric Waste	Partner with Fabric Recycle and Reuse Programs for Fabric Discards				
Reduce Finished Product Waste	Expand Standards to Minimize Waste				
			Find Alternative Use for Non-Purchased Products/Excess Inventory		
Reduce Peripherals and Packaging			Improve Packaging Efficiency		
	Reduce On-Product Marketing		Streamline In-Store Marketing and Material Usage		

Implementing Sustainable Raw Material Sourcing

	Product Development/ Procurement	Raw Materials	Manufacturing	Retail
Improve Material Quality	Invest in Textiles using Fibers from Regenerative Agriculture/Carbon Sequestration			
	Partner with Local and Artisanal Suppliers			
	Increase Organic Material Content			
*Integrate More Sustainable Raw Materials	Increase Reused and Recycled Content			
	Increase Other Sustainable Certified Alternatives			
	Invest in R&D to Develop Sustainable Alternatives			
**Improve Material Packaging and Peripheral Sustainability	Increase Recycled Content of Peripherals in Packaging			
	Invest in Biodegradable and Compostable Material Alternatives			

*Make Incremental Improvements in material choices transitioning away from Spandex, Rayon, Viscose and other high-impact materials including emphasis on Animal Welfare

**Make Incremental Improvements in material choices transitioning away from plastics and high-impact materials including emphasis on FSC Certification

Investing in Circularity and Innovation

	Product Development/ Procurement	Manufacturing	Distribution	Retail	Consumer Engagement
Invest in Circular Product Take-Back Programs			Implement Product Take-Back Programs for Textile Recycling and Upcycling		Encourage Take-Backs for Products
			Implement Product Take-Back Programs for Resale		Encourage Resale Participation
Invest in Circular Packaging Solutions			Return Store Packaging to DC Program		Encourage Proper Disposal for Packaging & Peripheral Waste
			Utilize Re-usable Direct to Consumer Packaging		
Invest in Circular Design and Innovative Use of Materials/Processes	Use Digital Samples Instead of Physical Samples				
	Use Digital Fabric Sourcing				
	Design Product to Reuse Fabric Scraps and/or Deadstock				
Increase Product Usage and Longevity			Implement Product Rental Programs		Promote Rental Business Models
			Implement Product Repair / Refurbish Programs		Engage in Repair / Refurbish Programs
Reduce Product Returns	Invest in Improved E-Commerce Experience on Company Website	Increase On-Demand Manufacturing			

Investing in Employee and Supplier Well-Being

	Product Development/ Procurement	Raw Materials	Manufacturing	Distribution	Retail
Ensure Fair Compensation/ Increase Wages	Close Pay-Equity Gap across Workforce	Work with Suppliers to Improve Living Wage Standard		Increase Wages/Promote Flexible Scheduling	
		Pursue Labor Certifications		Close Pay-Equity Gap across Workforce	
Improve Workforce Diversity	Train and Incentivize Managers to Hire and Provide More Diverse and Inclusive Work Environments			Train and Incentivize Managers to Hire and Provide More Diverse and Inclusive Work Environments	
	Hire More Diverse Talent			Hire More Diverse Talent	
	Create More Inclusive Work Environments			Create More Inclusive Work Environments	
	Report on Diversity Metrics			Report on Diversity Metrics	
Increase Employee Sustainability Training and Engagement	Invest in Sustainability Training for Proficient Design Talent	Invest in Training and Worker Skills			
	Invest in Employee Sustainability Engagement Programs				
Improve Benefit Programs	*Invest in Direct Benefits				*Healthcare, 401K, and more
	**Invest in Indirect Benefits				**Environment, Work-Life Balance

Investing in Sustainable Brand Marketing and Communications*

*Includes Employees, Customers, and Other Stakeholders

	Product Development/ Procurement	Raw Materials	Manufacturing	Distribution	Retail	Consumer Engagement
Promote Brand Sustainability	Communicate Corporate Sustainability Strategy and Progress					
					Promote Sustainability Practices & Certifications through Branding/ Labeling	Inspire Sustainable Actions through Consumer Engagement Campaigns
					Promote Inclusivity through Product, Campaigns, and Customer Experience	

NYU STERN

Center for
Sustainable Business

Case Study Findings with Apparel Partners

EILEEN FISHER Finds Financial Cost Savings and Societal Benefit by Shifting Away from Air Transportation

NYU Stern CSB collaborated with Eileen Fisher to monetize shifting its transportation mix away from air and towards sea and trucking transports

Transportation Cost Savings

In 2019, the company spent ~$1.6 million less in transportation costs than in 2015

Societal Benefit

From 2015 to 2019, the company achieved a cumulative societal benefit of ~$150,000* due to the reduction in its GHG emissions

EILEEN FISHER

***Using $50 per MT CO_2e as the social cost of carbon**

By Implementing the RENEW Circular Take-Back Program, EILEEN FISHER Accrues Financial and Brand-related Benefits

Benefits & Associated Costs Explored

Profit from RENEW program

+

Incremental EILEEN FISHER profit from RENEW program

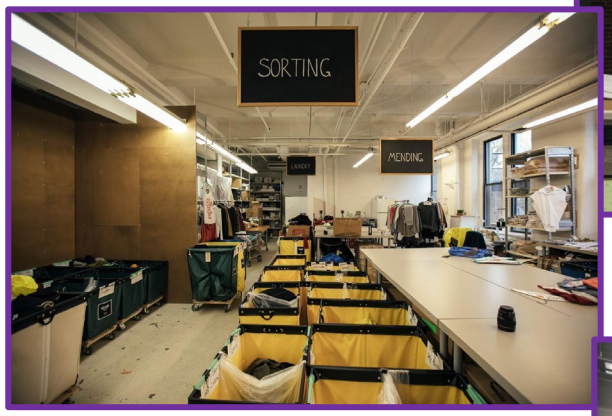
+

Customer acquisition cost reduction

+

Increase in earned media

Total net benefit of
$1.8 million for 2019



Photos by EILEEN FISHER

EILEEN FISHER

By Partnering with thredUP on a Circular Take-Back Program, Reformation Accrues Financial and Brand-related Benefits

Benefits & Associated Costs Explored

Profit from partnership program

+

Incremental Reformation profit from new customer base

+

Customer acquisition cost reduction

+

Increase in earned media

Total net benefit of
$1.5 million for 2019

Reformation

REI's Sustainability Program Delivers HR Results

Employee Sustainability Program Benefits and Cost for 2019

Reduced turnover and hiring costs

+

Increased productivity amongst high performers

−

Mission-aligned investments, including paid time off days

Total net benefit of ***$34 million****

****This figure is ~5% of payroll expenses***

NYU STERN

Center for
Sustainable Business

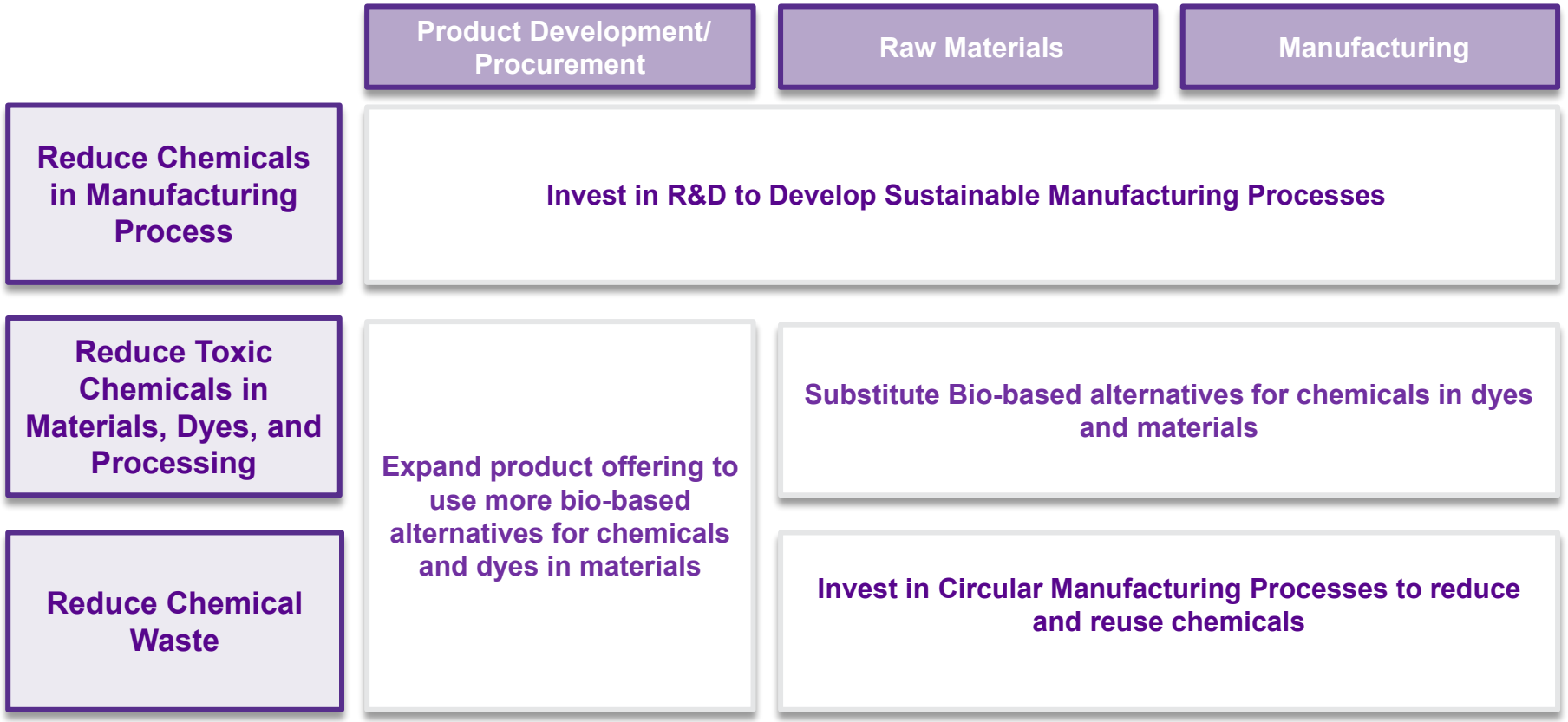
Overview of Apparel Benefits by Strategy

NYU STERN

Center for
Sustainable Business

Reduce Chemical Impact

Reducing Chemical Impact



Reduce Chemical Impact

Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Reduce Chemical Impact* sustainability strategy, which are categorized based on the relevant impact categories highlighted below

Sustainability Strategy Definition

Reduce Chemical Impact	**Company reduces the impact of chemicals in its supply chain**

Relevant Impact Categories

	Benefits that…
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Innovation (IN)	**Create new revenue streams using sustainable business models**
Customer Loyalty (CL)	**Attract an increasing community of conscious buyers & consumers, while reducing retention costs**
Risk Management (RM)	**Encourage resilience within the supply base by decreasing supplier dependency**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**

Reducing Chemical Impact
Overview of Benefits and Monetization Methods (1/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Chemicals in Manufacturing Process	Invest in R&D to Develop Sustainable Manufacturing Processes **In partnership with suppliers or third-party and should include certifications such as Oeko-Tex and Bluesign*	Reduced operating costs for chemical management based on development of sustainable manufacturing processes **Focus on reduction of chemical use with chemical waste as a bi-product*	OE SR	Calculate differential of waste management costs before and after reduction in chemical usage (minus associated costs such as expenditure for R&D and implementation of more sustainable processes) to achieve avoided cost savings **Long-term investment approach with pass-through savings in FOB*	✓
		Increased opportunities and potential partnerships in sustainable manufacturing processes **Company invests in research to develop new innovative manufacturing processes that use fewer resource and chemical inputs (ex: DyeCoo, waterless dyeing).*	SE	Calculate annual profit from business opportunities associated with investing in reduced chemical usage	
		Reduced reputational risk by investing in R&D of sustainable manufacturing processes to reduce chemical usage	RM	Calculate estimated reduction in # of lost sales and opportunities before and after R&D investment in sustainable manufacturing processes multiplied by cost per loss (or loss of sales per opportunity) and use NPV to determine future cost savings	
		Reduced risk by preempting future chemical regulations	RM	Calculate cost differential of before and after investing in development of sustainable manufacturing processes and use NPV to determine future cost savings on increased chemical costs and taxation	

✓ **= If implemented, this benefit can realize substantial financial impact**

Reducing Chemical Impact
Overview of Benefits and Monetization Methods (2/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Toxic Chemicals in Materials and Dyes, and Processing	Substitute bio-based alternatives for chemicals in dyes and materials **In Partnership with suppliers and should include certifications such as Bluesign – avoiding banned substances like formaldehyde, heavy metals, fragmented solvents, PVC, nickel, chrome as identified by the Higg Index* **Examples include remove offering of durable chemicals applied to deliver specific technical performance such as water repellency, non-iron, wrinkle-free*	Reduced operating costs for chemical management **Focus on reduction of chemical waste as a bi-product of substituting out toxic chemicals with bio-based alternatives*	OE SR	Calculate differential of waste management costs before and after reduction in toxic chemical usage (minus associated costs for usage of bio-based alternatives) to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of hazardous wastewater to manage but will incur costs for alternatives such as waterless, heat transfer, and laser finishing. DyeCoo. Printing / Sublimation vs. traditional dye washing*	✓
		Reduced reputational damage by substituting bio-based alternatives for harmful chemicals	RM	Calculate estimated reduction in # of lost sales and opportunities before and after implementation of the use of bio-based alternatives in place of chemicals multiplied by cost per loss (or loss of sales per opportunity) and use NPV to determine future cost savings	
		Reduced risk by preempting future chemical regulations	RM	Calculate cost differential of before and after investing in development of sustainable manufacturing processes and use NPV to determine future cost savings on increased chemical costs and taxation	

Reducing Chemical Impact
Overview of Benefits and Monetization Methods (2/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Toxic Chemicals in Materials and Dyes, and Processing	Expand product offering to use more bio-based alternatives for chemical and dyes in materials	Increased sales, given higher customer satisfaction and loyalty	CL SM	Calculate incremental profit attributed to increased product offering of bio-based alternatives to chemicals (profit differential before and after) *% increase of product offered within assortment, incremental as bio-based alternatives are substituted*	✓
		Reduced operating costs for chemical management **Focus on reduction of chemical waste as a bi-product of bio-based expanded product offering (an alternative to toxic chemicals)*	OE SR	Calculate differential of waste management costs before and after reduction in toxic chemical usage (minus associated costs for usage of bio-based alternatives) to achieve avoided cost savings **Company should achieve pass-through savings in FOB – increase in savings dependent on increase of product offered within assortment* **Reduced operating costs based on reduction of hazardous wastewater to manage but will incur costs for alternatives such as waterless, heat transfer, and laser finishing. DyeCoo. Printing / Sublimation vs. traditional dye washing*	✓
		Reduced reputational damage by substituting bio-based alternatives for harmful chemicals (with expanded offering)	RM	Calculate estimated reduction in # of lost sales and opportunities before and after implementation of the use of bio-based alternatives in place of chemicals multiplied by cost per loss (or loss of sales per opportunity) and use NPV to determine future cost savings	
		Reduced risk by preempting future chemical regulations	RM	Calculate cost differential of before and after investing in development of sustainable manufacturing processes and use NPV to determine future cost savings on increased chemical costs and taxation	

Reducing Chemical Impact
Overview of Benefits and Monetization Methods (3/3)

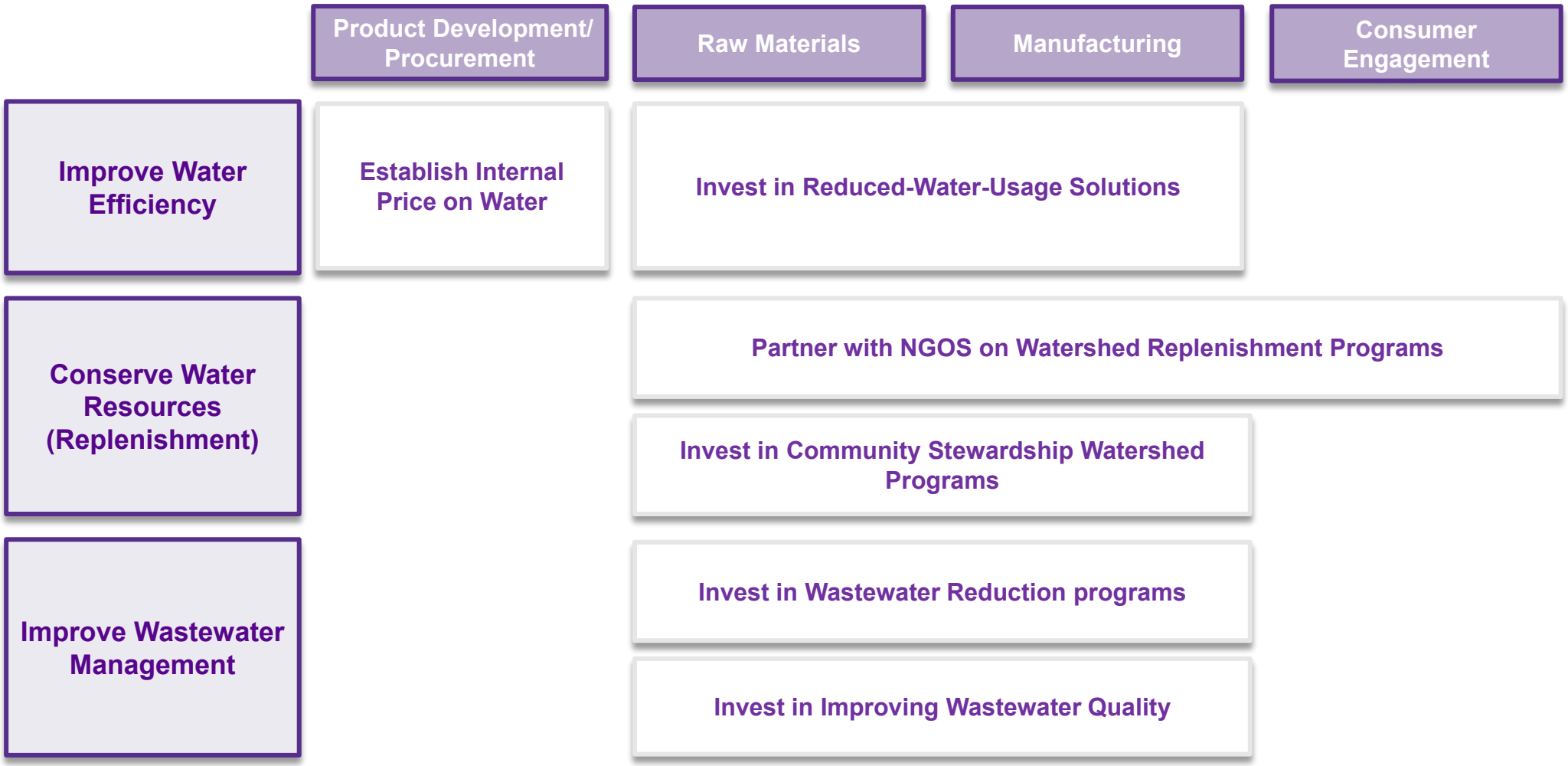
Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Chemical Waste	Invest in circular manufacturing Processes to reduce and reuse chemicals **In partnership with suppliers*	Reduced material costs from reuse of chemicals	OE SR	Calculate the cost differential between purchased raw chemicals and recycled chemicals for the same quantity to achieve avoided cost savings; when looking at a scenario with recycled costs, it needs to incorporate % used for purchased and recycled materials **Company should achieve pass-through savings in FOB* **Reducing chemicals can also reduce water and energy usage for additional cost savings*	✓
		Reduced operating costs for waste management based on reduction of chemicals through a circular manufacturing process **Focus on reduction of chemical use with chemical waste as a bi-product*	OE SR	Calculate differential of waste management costs before and after reduction in chemical usage to achieve avoided cost savings **Company should achieve pass-through savings in FOB*	✓
		Reduced supply chain disruption, given decreased dependency on raw chemicals purchased	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the chemical recycling process multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	
		Reduced risk by preempting future chemical regulations	RM	Calculate cost differential of before and after investing in circular manufacturing processes and use NPV to determine future cost savings on increased chemical costs and taxation	
		Revenue from selling recycled chemicals as a bi-product	INN	Calculate annual profit from selling recycled chemicals: annual revenue from program minus costs associated with chemical recycling (i.e. processing)	

NYU STERN

Center for
Sustainable Business

Improving Water Management

Improving Water Management



Improve Water Management
Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Improve Water Management* sustainability strategy, which are categorized based on the relevant impact categories highlighted below

Sustainability Strategy Definition

Improve Water Management	Company focuses on water management through increased water efficiency, conservation, and reduction of wastewater quantity while improving wastewater quality

Relevant Impact Categories

	Benefits that…
Employee Relations (ER)	Improve employee workplace culture and retain talent
Operational Efficiency (OE)	Optimize corporate and supply chain efficiencies to lower cost and increase profits
Risk Management (RM)	Encourage resilience within the supply base by decreasing supplier dependency
Stakeholder Engagement (SE)	Improve goodwill amongst the broader stakeholder community (i.e. NGOs)
Supplier Relations (SR)	Improve upon the relationships between the company and its suppliers

Improving Water Management
Overview of Benefits and Monetization Methods (1/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Water Efficiency	Establish Internal Price on Water	Reduced operating costs for wastewater management **Reduced wastewater as a bi-product of reduced water usage, based on establishing an internal price on water with suppliers*	OE SR	Calculate differential of waste management costs before and after reduction in water usage (from established price on water) to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of wastewater to manage*	✓
		Reduced impact of potential increases in water prices	RM	Calculate cost differential of internal price on water and estimate future costs based on water consumption and use NPV to determine future cost savings based on usage	
		Reduced risk for preempting future water regulations	RM	Calculate cost differential of before and after establishing internal price on water and use NPV to determine future cost savings on increased water costs and taxation	

Improving Water Management
Overview of Benefits and Monetization Methods (1/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Water Efficiency	Invest in Reduced Water Usage Solutions **In partnership with suppliers – focusing on management of water through product creation (textiles and products)*	Reduced operating costs for using less water **This benefit includes reusage of water and alternative waterless processes for reduction in water usage*	OE SR	Calculate differential of water input costs before and after reduction in water usage (minus CapEx for equipment and/or associated costs for alternative waterless processes) to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of water – such as water leak detection and preventative maintenance, as well as reusing cooling water, reusing condensate, reusing process water* **Other alternative waterless processes such DyeCoo, waterless dying and Ozone technology for denim, Waterless processing as well as*	✓
		Reduced operating costs for wastewater management based on reduction in water usage **Focus on reduction in wastewater as a bi-product of reduced water usage*	OE SR	Calculate differential of waste management costs before and after reduction in water usage to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of wastewater to manage*	✓
		Reduced impact for supply disruptions due to water scarcity	RM	Calculate estimated reduction in # of supply chain disruptions before and after after implementation of reduced water usage solutions multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings **Price of water estimated to increase as overconsumption and deterioration of water resources*	
		Reduced risk for preempting future water regulations	RM	Calculate cost differential of before and after establishing reduced water usage and use NPV to determine future cost savings on increased water costs and taxation	

Improving Water Management
Overview of Benefits and Monetization Methods (2/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Conserve Water Resources & Replenishment	Partner with NGOs on Watershed Replenishment Programs	Reduced operating costs based on watershed replenishment through NGO partnership	OE SR	Calculate differential of infrastructure costs before and after implementation of watershed replenishment programs (through partnership with NGOs) to achieve avoided cost savings **Company should achieve pass-through savings in FOB and/or reduced fabric costs*	✓
		Increased productivity based on implementation of watershed replenish programs **Watershed replenishment programs provide accessible drinking water leading to improvements in health outcomes (and increased yields for raw materials)*	ER SR	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by the productivity increase from greater access to drinking water **Company should achieve pass-through savings in FOB and/or reduced fabric costs*	
		Increased opportunities and potential partnerships	SE	Calculate annual profit from business opportunities associated with partnering with NGOs on watershed replenishment programs	
		Reduced impact for future supply chain disruptions due to water scarcity	RM	Calculate estimated reduction in # of supply chain disruptions before and after partnering on watershed programs multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings **Price of water estimated to increase as overconsumption and deterioration of water resources*	
		Reduced risk for preempting future water regulations	RM	Calculate cost differential of before and after establishing reduced water usage and use NPV to determine future cost savings on increased water costs and taxation	

Improving Water Management
Overview of Benefits and Monetization Methods (2/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Conserve Water Resources & Replenishment	Invest in Community Stewardship Watershed Programs **In partnership with the supplier community and should include certifications*	Reduced costs associated with turnover rates **Based on improved health conditions from access to clean water*	OE SR	Calculate turnover rate differential before and after the company's investment in community stewardship watershed programs, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary **Company should achieve pass-through savings in FOB and/or reduced fabric costs*	✓
		Increased productivity based on investing in community stewardship watershed programs **Watershed stewardship programs provide accessible drinking water leading to improvements in health outcomes (and increased yields for raw materials)*	ER SR	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by the productivity increase from greater access to drinking water	
		Reduced impact for future supply chain disruptions due to water scarcity	RM	Calculate estimated reduction in # of supply chain disruptions before and after investing in community stewardship watershed programs multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings **Price of water estimated to increase as overconsumption and deterioration of water resources*	
		Reduced risk for future water regulations	RM	Calculate cost differential of before and after investing in stewardship watershed program and use NPV to determine future cost savings on increased water costs and taxation	

Improving Water Management
Overview of Benefits and Monetization Methods (3/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Wastewater Management	Invest in Wastewater Reduction programs **In Partnership with suppliers*	Reduced operating costs for wastewater management (including water treatment) **Focus on reduction of wastewater as a bi-product of reduced water usage*	OE SR	Calculate differential of waste management costs before and after investing in wastewater reduction programs (minus associated implementation costs) to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of wastewater to manage but will incur costs of upfront CapEx for technology to reduce wastewater volume such as flow equalization and pH adjustment*	✓
		Reduced impact for future supply chain disruptions due to water scarcity	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of wastewater reduction programs multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings	
		Reduced risk for future water regulations	RM	Calculate cost differential of before and after investing in wastewater reduction programs and use NPV to determine future cost savings on increased water costs and taxation	

Improving Water Management
Overview of Benefits and Monetization Methods (3/3 Cont.)

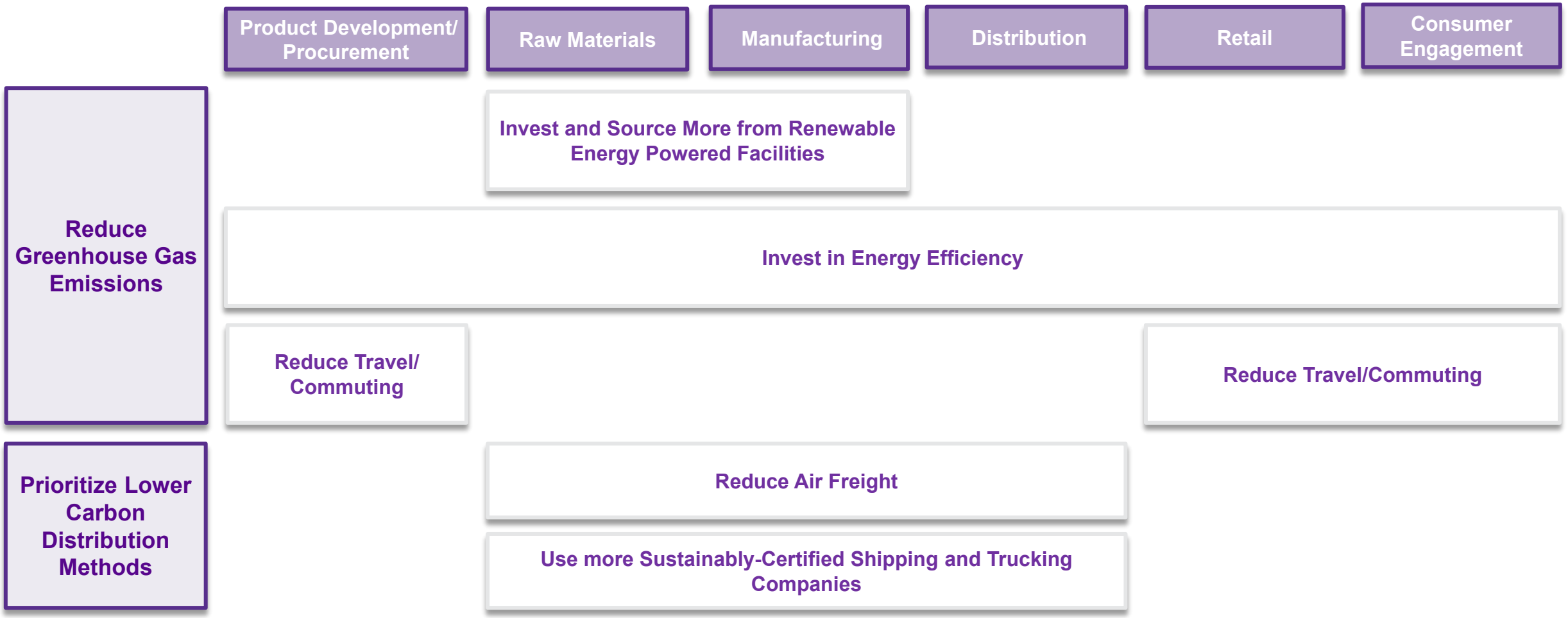
Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Wastewater Management	Invest in Improving Wastewater Quality **In Partnership with suppliers with focus on improved cleaning of water infrastructure*	Reduced operating costs for wastewater management **Focus on improving wastewater quality in order to reuse and reduce amount of supplied water*	OE SR	Calculate cost differential of waste management before and after improvement in wastewater quality (minus associated costs such as CapEx for technology) to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of wastewater to manage and achieve cost savings for reuse of water*	✓
		Reduced impact for future supply chain disruptions due to water scarcity	RM	Calculate estimated reduction in # of supply chain disruptions before and after improved wastewater quality multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings	
		Reduced risk for future water regulations	RM	Calculate cost differential of before and after investing in improving wastewater quality and use NPV to determine future cost savings on increased water costs and taxation	

NYU STERN

Center for
Sustainable Business

Improving Energy Management

Improving Energy Management



Improving Energy Management
Overview of Sustainability Strategy and Relevant Mediating Factors

In the following slides, we will focus on the benefits realized from *Improving Energy Management,* which are categorized based on the relevant mediating categories highlighted below:

Sustainability Strategy Definition

Improving Energy Management	**Company focuses on practices to decrease greenhouse gas emissions by focusing on improving energy efficiency, changing distributions modes, and increasing use of renewable energy**

Relevant Mediating Factors

	Benefits that…
Customer Loyalty (CL)	**Attract an increasing number of conscious buyers & consumers, while reducing retention costs**
Employee Relations (ER)	**Improve employee workplace culture and retain talent**
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Risk Management (RM)	**Encourage risk mitigation and resilience within the value chain**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**

Improving Energy Management
Overview of Benefits and Monetization Methods (1/2)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Reduce Greenhouse Gas Emissions	Invest and Source More from Renewable Energy-Powered Facilities	Reduce costs by sourcing more from supplier and manufacturing partners that use renewable power **No upfront CapEx from company; sourcing and manufacturing method only*	OE SR	Calculate cost differential of supplier and production costs before and after sourcing with manufacturing partners using renewable energy to power. Include incremental cost of sourcing from new facilities (on-boarding, development, testing, production-run process, etc.) **Manufacturing partners to analyze per unit cost of renewable energy used compared to per unit cost of traditional energy and input into costs assigned per product produced*	
		Investing/co-investing with suppliers in onsite equipment for renewable power **Shared or total CapEx from company for renewable energy usage at supplier facility*	OE SR	Calculate upfront investment cost's impact on supplier production costs vs existing production costs using traditional/non-renewable energy sources *Volume and cost of energy consumed for manufacturers per unit produced • *Company investment for renewable power sources and infrastructure – cost differential before and after installation with company obtaining total savings included in product cost* • *Co-invest for renewable power sources and infrastructure – cost differential before and after installation with company obtaining shared savings in the product costs*	✓

Improving Energy Management
Overview of Benefits and Monetization Methods (1/2 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Reduce Greenhouse Gas Emissions	Invest and Source More from Renewable Energy-Powered Facilities	Increased societal benefit through a reduction in GHG Emissions based on energy (kwH) displacement	SR SE	Calculate savings in societal benefit using the displacement/reduction of kwH (converted into GHG emissions) by the social cost of carbon	
		Reduced supply chain disruption, given less supplier dependency on fossil fuels as energy sources	RM	Calculate estimated reduction in # of supply chain disruptions before and after usage of renewable energy powered facilities multiplied by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings **Based on Forecast of traditional energy price volatility and expected renewable energy growth for a 3-5 year period*	
		Reduced risk for future carbon regulations	RM	Calculate cost differential of kwH usage and associated costs before and after sourcing more from renewable energy powered facilities and use NPV to determine future cost savings on increase REC costs	✓

Improving Energy Management
Overview of Benefits and Monetization Methods (1/2 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Reduce Greenhouse Emissions	Invest in Energy Efficiency Source	Reduce costs for energy usage/consumption	OE	Calculate the cost differential between an upgrade to efficient energy usage (including investment costs of switching to energy efficient resources, total energy usage costs, efficiency investment costs (to program administrator)) and traditional energy usage	✓
		Increased Societal Benefit through a reduction in GHG Emissions, based on energy (kwH) usage	SE	Calculate savings in societal benefit using the reduction of kwH (converted into GHG emissions) by the social cost of carbon	
		Increased brand value from investing in energy efficiency	CL SM	Calculate incremental profit to the company from sales spurred by the existence of energy efficiency minus associated costs of utilizing efficient resources	

Improving Energy Management
Overview of Benefits and Monetization Methods (1/2 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Reduce Greenhouse Gas Emissions	Reduce Travel / Commuting	Reduce costs from reduction in travel with reduction of use of private aircraft, transitioning to commercial flights or less carbon intensive methods of transport when feasible	OE	Calculate cost differential between company savings in reduction of travel (by use of private aircraft and/or research, development, and production trips) and quantified associated costs (potential product quality/ design concerns/delivery delays, potential lost productivity, additional capex expenditure for technology where feasible)	✓
		Increase productivity with less time on commuting/increase work from home **This includes but not limited to offering flexible work from home policies, providing employee mass transit benefits, and transitioning to teleconference when feasible*	OE	Calculate cost differential between company productivity metrics before and after program implementation and compare against associated costs (employee mass transit benefits, CapEx for teleconference equipment/technology, laptops/phones) and saving (decrease in office overhead, such as office space and peripherals)	
		Increase in employee productivity due to reduced work commute, i.e. increase remote work opportunities	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase from investment in direct benefits	
		Reduce impact for future disruptions through implementation of reduced travel/commuting programs, technology, infrastructure, operations, and other associated strategies	RM	Calculate estimated reduction in # of disruptions before and after implementation of reduction of travel and commuting multiplied by cost per disruption to achieve avoided cost savings	

Improving Energy Management
Overview of Benefits and Monetization Methods (2/2)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Prioritize Lower Carbon Distribution Methods	Reduce Air Freight	Reduced transportations costs (by shifting transport towards sea and trucking)	OE	Calculate cost differential of shipping costs before and after shift in transport mode (from air to sea and trucking) to achieve avoided cost savings	✓
		Increased Societal Benefit through a reduction in GHG emissions	SE	Calculate savings in societal benefit using the reduction of GHG emissions (from shift in transport mode) by the social cost of carbon	
		Reduced impact for future regulations on emissions	RM	Calculate differential of GHG emissions before and after shift in transport mode (from air to sea and trucking) and use NPV to determine future cost savings on estimated carbon and regulatory taxes	
	Use More Sustainable Certified Shipping and Trucking Companies Source Assuming DC to store transport **For this sub-practice, we focused on trucking with air under the 'reduce air freight practice'. We can research sustainable certified sea shipping if needed.*	Reduced costs by utilizing shared services for full truckload (TL) (ex. flock freight – partner of US Environmental Protection Agency's SmartWay Transport Program)	OE	Calculate cost differential of shipping costs before and after transition to sustainable shipping to achieve avoided cost savings	✓
		Increase customer loyalty from company participation in sustainable certified shipping and trucking	CL	Calculate incremental profit to the company from sales spurred by the existence of more sustainable-certified shipping and trucking companies minus associated costs	

Improving Energy Management
Overview of Benefits and Monetization Methods (2/2 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Prioritize Lower Carbon Distribution Methods	Use More Sustainably-Certified Shipping and Trucking Companies	Increased sales due to delivery of product by more efficient transport **Increasing speed to market without air transport should increase customer loyalty and sales*	CL SM	Calculate incremental profit due to usage of more sustainable-certified shipping and trucking in on-time delivery of product based on optimized shipping routes and reduced timeframe for transport	
		Increased Societal Benefit through a reduction in GHG emissions	SE	Calculate savings in societal benefit using the reduction of GHG emissions (from shift to sustainable- certified shipping and trucking) quantified by the social cost of carbon	
		Reduce impact for transport disruptions by utilizing more efficient shared services	RM	Calculate estimated reduction in # of transport disruptions before and after implementation of more sustainable-certified shipping and trucking and multiplied by cost per disruption to achieve avoided cost savings	✓
		Reduced impact for future regulations on emissions	RM	Calculate differential of GHG emissions before and after shift in transport (to more sustainable-certified shipping and trucking) and use NPV to determine future cost savings on estimated carbon and regulatory taxes	

NYU STERN

Center for
Sustainable Business

Investing in Reduction of Material Waste

Investing in Reduction of Material Waste*

*Includes Fabric, Packaging, Consumer

	Product Development/ Procurement	Raw Materials	Distribution	Retail	Consumer Engagement
Reduce Fabric Waste	Partner with Fabric Recycle and Reuse Programs for Fabric Discards				
Reduce Finished Product Waste	Expand Standards to Minimize Waste				
			Find Alternative Use for Non-Purchased Products/Excess Inventory		
Reduce Peripherals and Packaging			Improve Packaging Efficiency		
	Reduce On-Product Marketing		Streamline In-Store Marketing and Material Usage		

Investing in Reduction of Material Waste
Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Investing in Reduction of Material Waste* sustainability strategy, which are categorized based on the relevant impact categories highlighted below

Sustainability Strategy Definition

Investing in Reduction of Material Waste	**Company implements practices to mitigate waste in areas such as fabric, consumer clothing, peripherals, and packaging**

Relevant Impact Categories

	Benefits that…
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Innovation (IN)	**Create new revenue streams using sustainable business models**
Customer Loyalty (CL)	**Attract an increasing community of conscious buyers & consumers, while reducing retention costs**
Employee Relations (ER)	**Improve employee workplace culture and retain talent**
Risk Management (RM)	**Encourage resilience within the supply base by decreasing supplier dependency**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Media Coverage (MC)	**Increase a company's media presence with the development of both traditional and social media content**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (1/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Fabric Waste	Partner with Fabric Recycle and Reuse Programs for Fabric Discards *Ex.* *Fabscrap* *Geocycle*	Reduced waste hauling and tipping fees, given partnership for handling of fabric discards	OE	Calculate cost differential between waste disposal & associated fees if managed by corporate locations and waste disposal & associated fees if managed by a recycle or reuse partner to achieve avoided cost savings	✓
		Reduced cost for storage facilities to house excess fabric waste including but not limited to fabric roles, swatches, and mutilated samples	OE	Calculate cost differential between storage needs for excess fabric and waste disposal & associated fees if managed by a recycle or reuse partner to achieve avoided cost savings	
		Increased administrative efficiencies by dealing with less fabric waste (including less handling and logistics)	OE ER	Calculate cost differential on an annual basis of hours used to organize fabric waste before and after partnering with reuse and recycle fabric discard programs to achieve cost savings of annualized salaries	

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (2/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Finished Product Waste	Expand Standards to Minimize Waste	Reduced product development costs, given less waste (due to wider range of product standards)	OE	Calculate cost differential between product development costs before and after expanded product standards to achieve cost savings and compare against decrease in FOB	✓
		Reduced operating costs (such as waste hauling and tipping fees), given less waste due to expanded product standards	OE	Calculate cost differential between waste disposal & associated fees before and after reduction of product waste (rejected goods) from expanded product standards in order to achieve avoided cost savings **Company should achieve pass-through savings in FOB* **Reduced operating costs based on reduction of product waste to manage*	✓
		Increased sales from opportunity to sell goods within expanded standard **Expanded standards would include goods that would otherwise be discarded due to not meeting standards, such as color is too light after garment dyed or dying defect*	SM	Calculate annual profit from selling products before and after standards have been expanded: annual revenue minus costs associated with specified product (such as marketing costs) **Examples includes selling and marketing specified products as a 'limited quantity' such as a color that is too light and alternatively would have been rejected before expanded standards.*	✓

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (2/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Finished Product Waste	Find Alternative Use for Non-Purchased Products/Excess Inventory **This sub-practice can be applicable for in-house partnership with manufacturers and/or third-party programs*	Revenue from Unused/Unsold Products **Alternative uses could include selling product to be used in other industries such as insulation or as finished product goods* **For strategic recommendations, working with third-parties is beneficial but there is upside to selling in-house – [see below]*	INN	Calculate annual profit from selling non-purchased/excess inventory: annual revenue from program minus costs associated with selling of product (i.e., processing, marketing, if any)	✓
		Increased sales from creating alternative uses for non-purchased products/excess inventory **Alternative uses could include selling finished product goods in-house at a discount or leverage as a marketing tool and giveaway excess inventory to generate increase customer acquisition*	CL SM	Calculate annual profit from selling non-purchased/excess inventory before and after alternative uses have been implemented: annual revenue minus costs associated with specified product (such as marketing costs and COGS with discount sale price or giveaway)	✓
		Reduced Excess Inventory for Tax Deduction **Tax-deductible donation of finished product wearable goods*	RM	Calculate differential of annual net income before and after-tax deduction and reduced COGS to achieve avoided cost savings **Reduction in SG&A costs also included based on reduced storage for excess inventory through donation of goods*	✓

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (3/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Peripherals and Packaging	Improve Packaging Efficiency **Includes more compact packaging and peripherals in size as weight as well as selling more products together to reduce packaging per item*	Reduced material costs associated with reduced and more compact packaging and peripherals (applicable to polybags, box liners, and boxes, removal of paper slips/invoices included in DTC fulfillment order) *Both vendor-procured and DC	OE	Calculate the cost differential between reduction in packaging & peripheral material costs (based on reduced size of product – folded or compressed, reduced packaging thickness, and elimination of redundant box liners where feasible, using bags instead of boxes) and packaging & peripheral costs for the same quantity of products sold separately to achieve cost savings **Company should achieve pass-through savings in FOB through vendor-procured improved packaging efficiency*	✓
		Reduced waste hauling and tipping fees, given reduced waste disposal needs	OE	Calculate the cost differential of waste disposal & associated fees before and after transition to improved packaging efficiency (the aggregate of vendor and DC) to achieve avoided cost savings **Company should achieve pass-through savings in FOB through vendor-procured improved packaging efficiency*	
		Increased administrative efficiencies due streamlining packaging process/methods with less materials and smaller sized product/packaging easier to handle)	OE	Calculate the cost differential of DC labor productivity (output of goods, i.e. orders filled by number of hours/workers) before and after improved packaging efficiency	✓

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (3/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Peripherals and Packaging	Improve Packaging Efficiency	Reduced logistics costs due to reduction in warehouse capacity needs (based on more compact packaging)	OE	Calculate cost differential of logistics (i.e. DC warehouse) before and after transition to improved packing efficiency (smaller size and weight of shipments) to achieve avoided cost savings	✓
		Reduced transportation costs (by using more compact packaging)	OE	Calculate cost differential of shipping costs before and after transition to improved packing efficiency (smaller size and weight of shipments) to achieve avoided cost savings	✓
		Reduced costs associated with reduction of periphery and packaging materials through products sold together *In-store and/or by Mail	OE	Calculate the cost differential between reduction in packaging & peripheral material costs for product sold together and packaging & peripheral costs for the same quantity of products sold separately to achieve cost savings	
		Reduced transportation costs (by shipping more items per delivery)	OE	Calculate cost differential of shipping costs before and after transition to shipping products sold together (larger shipment per customer vs incremental smaller shipment) to achieve avoided cost savings	

Investing in Reduction of Material Waste
Overview of Benefits and Monetization Methods (3/3 Cont.)

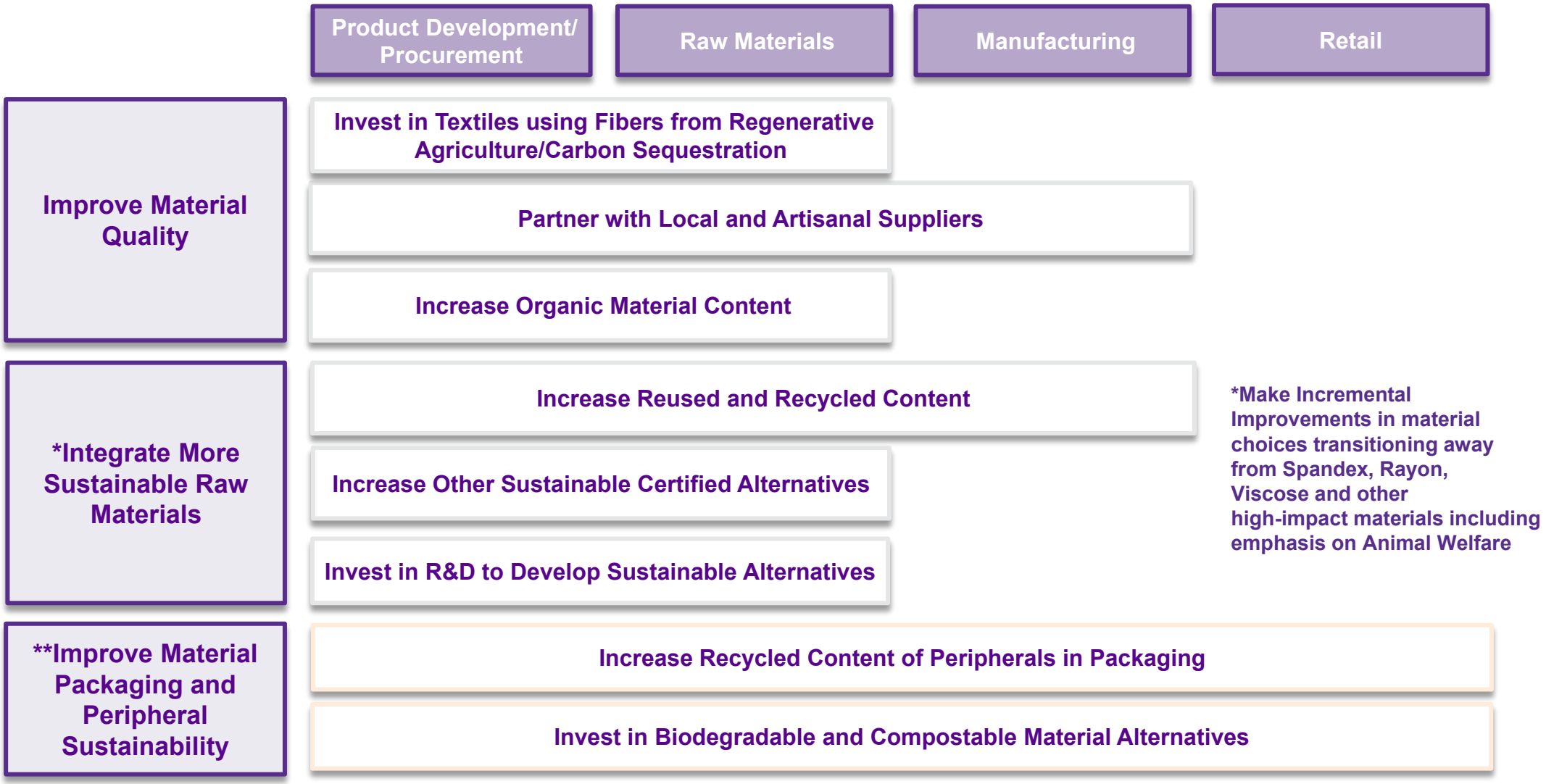
Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Reduce Peripherals and Packaging	Reduce On-Product Marketing (such as Hangtags) ** Company should also focus on sustainable on-product marketing, such as washable dyes, non-toxic and biodegradable in order to reduce waste – links up to Investing in Material Sourcing*	Reduced materials costs based on reduction of on-product marketing (such as hangtags and excessive branding/labels)	OE	Calculate the cost differential before and after the reduction of on-product marketing (included hangtags, main and decorative labels such as backpatches) to achieve cost savings	✓
		Increased administrative efficiencies due to reduction of on-product marketing (less materials to handle throughout the production process)	OE	Calculate cost differential of hours on an annual basis used to order, organize, and apply on-product marketing before and after reducing on-product marketing to achieve cost savings based on annualized salaries	
	Streamline In-Store Marketing and Material Usage	Reduced material costs associated with duplicative or unnecessary in-store marketing (such as seasonal signage made of high-impact materials) and material usage (such as polybags and hangers)	OE	Calculate the cost differential between store packaging and peripheral costs with and without the elimination of unnecessary packaging and peripherals (including hangers, polybags, signage) minus associated costs (i.e. increased costs for higher quality/more durable goods such as hangers) to achieve cost savings	✓
		Reduced waste hauling and tipping fees, given less in-store marketing and peripheral waste ** Company should use sustainable materials for seasonal signage, such as biodegradable inputs, based on the short-term duration of usage in order to achieve greatest impact of reduction in waste disposal*	OE	Calculate cost differential between waste disposal & associated fees before and after streamline of in-store Marketing and Material usage in store to achieve avoided cost savings	

NYU STERN

Center for
Sustainable Business

Implementing Sustainable Raw Material Sourcing

Implementing Sustainable Raw Material Sourcing



Implementing Sustainable Raw Material Sourcing
Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Implementing Sustainable Raw Material Sourcing* sustainability strategy, which are categorized based on the relevant impact categories highlighted below

Sustainability Strategy Definition

Implementing Sustainable Raw Material Sourcing	**Company spurs innovation in new materials development and substitutes more sustainable materials in existing products and packaging**

Relevant Impact Categories

	Benefits that…
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Innovation (IN)	**Create new revenue streams using sustainable business models**
Customer Loyalty (CL)	**Attract an increasing community of conscious buyers & consumers, while reducing retention costs**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Risk Management (RM)	**Encourage resilience within the supply base by decreasing supplier dependency**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (1/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Material Quality	Invest in Textiles using Fibers from Regenerative Agriculture/Carbon Sequestration **In partnership with suppliers or third-party and should include certifications such Climate Beneficial*	Reduced fabric costs by sourcing through regenerative agriculture, pulling down carbon and sequestering it into the soil (such as little-to-no tilling in plant farming and responsible migration practices of animals for materials including wool, alpaca, mohair, cashmere) **Long-term investment approach with fiber production as more 'sustainable' and should see costs savings over time*	OE SR	Calculate the cost differential between usage of raw materials cultivated by regenerative agriculture practices (including investment costs in infrastructure to sequester carbon from the atmosphere, tax incentives for usage of sequestered carbon and increased crop yield) and traditional agriculture practices (including costs for pesticides and crop yield) **Company should see reduction in Fabric Costs (over time)*	✓
		Increased brand value from investing in regenerative agriculture/carbon sequestration	CL SM	Calculate incremental profit to the company from sales spurred by the usage and marketing of materials generated from regenerative agriculture using carbon sequestration	
		Increased opportunities and potential partnerships	SE	Calculate annual profit from business opportunities associated with investing in regenerative agriculture/carbon sequestration	
		Reduced risk for future carbon regulations	RM	Calculate cost differential of before and after sourcing more from suppliers using regenerative agriculture methods and use NPV to determine future cost savings on increased material costs and taxation	

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (1/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Material Quality	Increase Organic Material Content **In partnership with suppliers and should include certification such as Organic Cotton Standard (OCS) and Global Organic Textile Standard (GOTS)*	Reduced fabric costs by sourcing more organic materials (such as cotton, linen, jute, silk, ramie, wool) with improved supplier working relationships **Long-term investment approach with organic production as more 'sustainable' and should see costs savings over time*	OE SR	Calculate cost differential of material costs before and after sourcing inputs using organic farming methods versus traditional methods (based on incremental revenues for increased cost savings) quantified by using less wasteful production methods, reduced chemical inputs and improved labor conditions and working relationships **Blockchain technology should be implemented for traceability to ensure fibers are cultivated using organic methods* **Company should see reduction in Fabric Costs (over time)*	✓
		Increased sales from using more organic material content	CL SM	Calculate incremental profit to the company from sales spurred by the usage and marketing of increased organic material usage (minus costs for marketing certifications and change in material costs/margins)	✓
		Increased customer loyalty and brand value from offering more organic material content	CL SM	Calculate increase in customer lifetime value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Decreased costs associated with reputational damage for not using organic vs traditional and/or high impact materials	RM	Calculate estimated reduction in # of potential reputational issues before and after increased usage of organic material contact multiplied by cost per reputational issue	
		Reduced impact for future supply chain disruptions due to land degradation (and use of pesticides) in traditional cotton farming ** Based on existing limited supply of organic material*	RM	Calculate estimated reduction in # of supply chain disruptions before and after increasing organic material content by cost per disruption (or loss of sales per disruption) to achieve estimated cost savings	

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (1/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Material Quality	Partner with Local and Artisanal Suppliers **This sub-practice focuses on sourcing with local suppliers for materials and trims with a focus on quality – such as embroidery and embellishment. It can also apply to stand-alone artisanal products.*	Reduced transportations costs (by more efficient transport with less distance between local producers and garment manufacturers)	OE	Calculate cost differential of shipping costs before and after shift from local producers (minus costs associated with product supplied by local artisans and suppliers such as embroidery and embellishment) to achieve avoided cost savings	✓
		Increased sales by converting customers to purchase through partnership with local and artisanal suppliers (improved workmanship/ quality and more desirable specialty product)	CL SM	Calculate incremental profit to the company from sales spurred by the specialty products produced by local artisans and suppliers (minus associated costs from marketing and change in material costs/margins) and estimated increase in customer lifetime value	✓
		Reduced supply chain disruption, given less dependency on resources impacted by future risks (such Climate, and Geopolitical risk implications) **May not apply to local, U.S.-based artisans*	RM	Calculate cost differential of before and after sourcing more from local suppliers and use NPV to determine future cost savings on increased material and transport costs and taxation (including carbon regulations or weather related to climate change)	
		Increased unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (2/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Integrate More Sustainable Raw Materials	Increase Reused & Recycled Content **Can be achieved in partnership with suppliers or done by developing in-house capabilities*	Reduced material costs by increasing recycled content ** Can be achieved by increasing the ratio of recycled-to-traditional fibers in existing products And increasing the % of products that incorporate recycled materials)*	OE	Calculate the cost differential between Virgin material content and Recycled material content (minus associate costs) for the same quantity of products to achieve cost savings **May need to account for upfront technology investment if in-house*	✓
		Increased sales from using more recycled content	CL SM	Calculate incremental profit to the company from sales spurred by the usage and marketing of recycled content (minus costs for marketing and change in material costs margins)	
		Increased customer loyalty from offering product created from recycled resources	CL SM	Calculate increase in customer lifetime value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Reduced impact for future supply chain disruptions due to land degradation and use of pesticides, given less supplier dependency on virgin materials	RM	Calculate estimated reduction in # of supply chain disruptions before and after increased recycled content multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	
		Reduced impact for future regulations on high-impact materials (such as polyester and other synthetics)	RM	Calculate cost differential of before and after using more recycled content and use NPV to determine future cost savings on increased material costs and taxation	✓

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (2/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Integrate More Sustainable Raw Materials	Increase Other Sustainable Certified Alternatives ** This sub-practice includes making incremental improvements in material choices transitioning away from Spandex, Rayon, Viscose and other high-impact materials including emphasis on Animal Welfare* ** It should include additional certifications such as BCI, Fairtrade Cotton, GCS Certified cashmere*	Reduced material costs by increasing other sustainable certified materials and prioritizing fewer synthetics	OE SR	Calculate cost differential of material costs before and after sourcing inputs using sustainable certified material (based on incremental revenues for increased cost savings) quantified by using less wasteful production methods, reduced chemical inputs and improved labor conditions by prioritizing few synthetics **Cost savings and improved supplier relations acquired over time*	✓
		Increased sales from increasing other certified alternatives (by transitioning away from spandex, rayon, viscose, and other high-impact materials including an emphasis on animal welfare)	CL SM	Calculate incremental profit to the company from sales spurred by the increased usage of sustainable certified materials minus associated costs (marketing and change in material costs/margins)	✓
		Increased customer loyalty and brand value from offering sustainable certified materials and moving away from high-impact materials	CL SM	Calculate increase in customer lifetime value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Decreased costs associated with reputational damage for not using certified sustainable materials vs high-impact materials including an emphasis on animal welfare	RM	Calculate estimated reduction in # of potential reputational issues before and after increased certified sustainable material multiplied by cost per reputational issue	
		Reduced risk for future carbon regulations (based on continued use of high-impact/synthetic materials)	RM	Calculate cost differential of before and after increasing sustainable certified materials and use NPV to determine future cost savings on increased costs on synthetics and taxation	

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (2/3 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Integrate More Sustainable Raw Materials	Invest in R&D to Develop Sustainable Alternatives ** Can include products made from animal-based materials and transitioning to more sustainable alternatives. Applicable to down, leather, fur, and others. Should continue to transition away from high-impact materials/synthetics*	Reduced material costs based on development of sustainable alternatives **Company can invest in R&D to develop sustainable alternatives that are brand specific and appropriate*	OE SR	Calculate cost differential of material costs before and after development of sustainable alternatives (minus associated costs such as expenditure for R&D and production of material alternatives) to achieve avoided cost savings **Long-term investment approach with savings in fabric input costs*	✓
		Increased Opportunities and potential Partnerships	SE	Calculate annual profit from business opportunities associated with investing in R&D to develop sustainable alternatives	
		Reduced brand reputational risk by investing in R&D to develop sustainable alternatives	RM	Calculate estimated reduction in # of lost sales and opportunities before and after R&D investment in development of sustainable material alternatives multiplied by cost per loss (or loss of sales per opportunity) and use NPV to determine future cost savings	
		Reduced risk for future carbon regulations (based on continued use of high-impact/synthetic materials without investing in developing sustainable alternative)	RM	Calculate cost differential of before and after increasing sustainable certified materials and use NPV to determine future cost savings on increased costs on synthetics and taxation	✓

Implementing Sustainable Raw Material Sourcing
Overview of Benefits and Monetization Methods (3/3)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Improve Material Packaging and Peripheral Sustainability	Increase Recycled Content of Peripherals in Packaging **Increase impact with participation in Recycling program – listed under Circularity and Innovation*	Reduced costs associated with periphery and packaging materials (i.e. recycled polybags and hangers) **Other recycled items could include boxes and mailers (for small packages) but might not achieve cost savings based on increased cost for specific recycled content*	OE	Calculate the cost differential of packaging & peripheral material costs before and after the increase in recycled content (i.e. polybags and hangers) to achieve cost savings	✓
		Increased customer loyalty from using more sustainable alternatives for packaging and peripherals (recycled content)	CL SM	Calculate increase in Customer Lifetime Value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Reduced impact for future regulations on plastic use	RM	Calculate cost differential of before and after increasing recycled content of peripherals and packaging and use NPV to determine future cost savings on increased material costs and taxation	
	Invest in Biodegradable and Compostable Material Alternatives	Reduced Waste Disposal Costs for Packaging and Peripherals due to biodegradable materials (including stickers) **Company can invest in R&D to develop alternatives that are brand specific and appropriate and should focus on reduced waste disposal as a bi-product of investing in biodegradable and compostable material alternatives*	OE	Calculate the cost differential of waste disposal & associated fees before and after development of biodegradable and compostable material alternatives (minus associated costs such as expenditure for R&D and production of material alternatives) to achieve avoided cost savings **Long-term investment approach with savings in waste disposal and associate fees*	✓
		Increased Opportunities and potential Partnerships	SE	Calculate annual profit from business opportunities associated with investing in R&D to develop biodegradable and compostable material alternatives	

NYU STERN

Center for
Sustainable Business

Investing in Circularity and Innovation

Investing in Circularity and Innovation

	Product Development/ Procurement	Manufacturing	Distribution	Retail	Consumer Engagement
Invest in Circular Product Take-Back Programs			Implement Product Take-Back Programs for Textile Recycling and Upcycling		Encourage Take-Backs for Products
			Implement Product Take-Back Programs for Resale		Encourage Resale Participation
Invest in Circular Packaging Solutions			Return Store Packaging to DC Program		Encourage Proper Disposal for Packaging & Peripheral Waste
			Utilize Re-usable Direct to Consumer Packaging		
Invest in Circular Design and Innovative Use of Materials/Processes	Use Digital Samples Instead of Physical Samples				
	Use Digital Fabric Sourcing				
	Design Product to Reuse Fabric Scraps and/or Deadstock				
Increase Product Usage and Longevity			Implement Product Rental Programs		Promote Rental Business Models
			Implement Product Repair / Refurbish Programs		Engage in Repair / Refurbish Programs
Reduce Product Returns	Invest in Improved E-Commerce Experience on Company Website	Increase On-Demand Manufacturing			

Investing in Circularity and Innovation
Overview of Sustainability Strategy and Relevant Mediating Factors

In the following slides, we will be focusing on benefits from *Investing in Circularity and Innovation*, which are categorized based on the relevant mediating factors highlighted below:

Sustainability Strategy Definition

Investing in Circularity and Innovation	**Company invests in innovation to achieve new circular business models that focus on product take-back and innovative design methods**

Relevant Mediating Factors

	Benefits that…
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Innovation (INN)	**Create new revenue streams using sustainable business models**
Customer Loyalty (CL)	**Attract an increasing number of conscious buyers & consumers, while reducing retention costs**
Risk Management (RM)	**Encourage risk mitigation and resilience within the value chain**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Media Coverage (MC)	**Increase a company's media presence with the development of both traditional and social media content**

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (1/5)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Product Take-Back Programs	Implement Product Take-Back Programs for *Resale*	Sales from reused items within resale programs **For strategic recommendations, working with third-parties is beneficial but there is upside to developing these capabilities in- house (incremental parent company profit, etc.)*	INN	Calculate annual profit from resale program: annual revenue from resale program sales minus costs associated with selling reused items (i.e. sorting and cleaning costs)	✓
	Implement Product Take-Back Programs for *Textile Recycling and Upcycling*	Reduced material costs from recycled fabrics	OE	Calculate the cost differential between virgin material costs and recycled material costs for the same quantity of products to achieve avoided cost savings; when looking at a scenario with recycled costs, it needs to incorporate % used for virgin and recycled materials	✓
		Reduced supply chain disruption, given decreased supplier dependency	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the product take-back program multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	✓
		Revenue from selling materials for textile recycling	INN	Calculate annual profit from take-back program: annual revenue from program minus costs associated with textile recycling and upcycling (i.e. collecting, sorting, processing, product development costs)	
		Revenue from selling upcycled products	INN		

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (1/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Product Take-Back Programs	Encourage Resale Participation	New purchase sales from participation in resale programs	CL SM	Calculate incremental profit to the company from sales spurred by the existence of resale programs (i.e. shopping credit to purchase products) minus associated costs (i.e. shopping credit costs)	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between total customer acquisition costs before and after resale program implementation OR calculate estimated # of customers who purchase parent company products for the first time (via the resale program) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	
	Encourage Take-Backs for Products	New purchase sales from participation in take-back programs	CL SM	Calculate incremental profit to the company from sales spurred by the existence of take-back programs (i.e. using a gift card to purchase products) minus associated costs (i.e. gift card costs)	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between total customer acquisition costs before and after take-back program implementation OR calculate estimated # of customers who purchase parent company products for the first time (via the take-back program) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve more efficient media spend	

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (2/5)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Packaging Solutions	*Return Store Packaging to DC Program (Includes used-store packaging and peripherals as well as re-shippable containers from DC to stores) ***For reuse and/or proper waste disposal* *This sub-practice can be applicable for one company and its DC / retail stores and / or one company's DC and another company's retail stores; therefore, when applying this sub-practice, the supply chain structure, key players, and respective benefits need to be determined*	Reduction in waste hauling and tipping fees, given streamlined waste disposal process (i.e. aggregate waste disposal pick-up at DC as opposed to at individual retail stores)	OE	Calculate cost differential between waste disposal & associated fees if managed at the DC level and waste disposal & associated fees if managed at the retail store-level to achieve avoided cost savings	✓
		Reduced costs associated with reusage of peripheral & packaging materials and shipping containers	OE	Calculate the cost differential between discarded packaging and peripheral costs and reusable packaging & peripheral and re-shippable container costs for the same quantity of products to achieve avoided cost savings	
		Reduced supply chain disruption, given less supplier dependency (i.e. transportation of materials, etc.)	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the program multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	

*Develop capabilities in-house or through a partnership

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (2/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Packaging Solutions	*Utilize Re-usable Direct to Consumer Packaging	Reduced costs associated with reusage of periphery and packaging materials (i.e. reuse of polybags)	OE	Calculate the cost differential between discarded packaging & peripheral material costs and reusable packaging & peripheral costs for the same quantity of products to achieve cost savings	✓
		Increased customer loyalty from offering packaging take-back program	CL SM	Calculate increase in Customer Lifetime Value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Reduced supply chain disruption, given less supplier dependency	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the program multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	
	Encourage Proper Disposal for Packaging & Peripheral Waste (In-person and DTC)	Increased customer loyalty from offering proper waste disposal	CL SM	Calculate increase in customer lifetime value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	✓
		New purchase sales from participation in proper disposal for packaging & peripheral waste	CL SM	Calculate incremental profit to the company from sales spurred by the existence of proper waste disposal treatment (i.e. using a gift card to purchase products) minus associated costs (i.e. gift card costs)	
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the proper waste disposal implementation OR calculate estimated # of customers who purchase company products for the first time (via the waste disposal treatment) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	

Develop capabilities in-house or through a partnership, such as with LimeLoop

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (3/5)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Design and Innovative Use of Materials/ Processes	Use Digital Samples Instead of Physical Samples	Reduced product development costs (i.e. less materials given reduction and eventual elimination of physical samples)	OE	Calculate cost differential of product development costs before and after digital sample implementation to achieve cost savings **May need to account for upfront technology investment*	✓
		• Reduced transaction costs (i.e. fewer personnel to manage the physical sample process) & other miscellaneous costs associated with physical samples • Reduced transportation & associated costs (i.e. packaging of physical samples) • Reduced disposable waste-associated costs	OE	Calculate cost differential between transaction, transportation, and waste disposal costs before and after digital sample implementation to achieve cost savings	✓
		Increased productivity, given quicker turnaround time during the sample process	OE	Calculate productivity level based on measurable output, such as speed-to-market and labor utilization	
		Reduced supply chain disruption, given less supplier dependency (i.e. transportation of physical samples, etc.)	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the digital technology multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (3/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Design & Innovative Use of Materials/ Processes	Use Digital Fabric Sourcing * For maximum optimization, implement with use of digital samples (from Circularity and Innovation) *Ex.* *Material Exchange Swatchbook*	Reduced product development costs (i.e. less material costs given reduction and eventual elimination of physical fabric samples from suppliers)	OE	Calculate cost differential of product development costs before and after digital sourcing implementation to achieve cost savings **May need to account for upfront technology investment and partnership with suppliers*	✓
		Reduction in waste associate fees given reduction of fabric samples	OE	Calculate cost differential between waste disposal & associated fees before and after digital fabric sourcing implementation to achieve avoided cost savings	✓
		Reduce cost for storage facilities to house excess fabric waste including but not limited to fabric roles, swatches, and mutilated samples		Calculate cost differential between storage needs for excess fabric and waste disposal & associated fees if transition to digital fabric sourcing to achieve avoided cost savings	
		Increased productivity, given quicker turnaround time during the fabric selection process	OE	Calculate productivity level based on measurable output, such as speed-to-market and labor utilization	
		Increase administrative efficiencies by dealing with less fabric waste (including less handling and logistics)	OE ER	Calculate cost differential on an annual basis of hours used to organize fabric waste before and after shifting to digital fabric sourcing to achieve cost savings of annualized salaries	
		Reduced supply chain disruption, given less supplier dependency (i.e. availability of physical fabric samples, transportation of physical fabric samples, etc.)	RM	Calculate estimated reduction in # of supply chain disruptions before and after implementation of the digital technology multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (3/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Impact Categories	Proposed Monetization Methods	Financial Impact Priority
Invest in Circular Design & Innovative Use of Materials/ Processes	Design Product to Reuse Fabric Scraps and/or Deadstock	Reduced material costs (i.e., less materials given reuse of fabric scraps and/or deadstock)	OE	Calculate cost differential of material costs before and after shifting to design product using fabric scraps and/or deadstock to achieve cost savings **May need to account for engineering of garments including added labor/workmanship and limited quantity of consistent and specific materials regarding fabric scraps*	✓
		Increase sales from using fabric scraps and/or deadstock in the design of the product **Could include small batch of limited-edition product based on available of fabric scraps*	CL SM	Calculate incremental profit to the company from sales spurred by product designed using fabric scraps and/or deadstock (minus costs for marketing and change in material costs margins)	
		Increased customer loyalty from offering specialty product created from recycled resources	CL SM	Calculate increase in customer lifetime value (CLV) due to the increase in customer frequency and customer retention; additionally, calculate the incremental profit as a result of the increase in CLV	
		Reduced supply chain disruption, given less supplier dependency (i.e. Input materials etc.)	RM	Calculate estimated reduction in # of supply chain disruptions before and after shifting to design product using fabric scraps and/or deadstock multiplied by cost per disruption (or loss of sales per disruption) to achieve avoided cost savings	✓

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (4/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Increase Product Usage & Longevity	Implement Product Rental Programs	Sales from rental programs	INN	Calculate annual profit from rental programs: annual revenue minus costs associated with the programs (i.e. maintenance costs such as dry-cleaning, transportation, etc.) **If the rental service is not in-house and through a third party (i.e. Rent the Runway), then the company will have to pay a fee to the third party, who will also shoulder some of the operating costs (i.e. dry-cleaning, mailing)*	✓
		Reduced product development costs, given reduced number of products (due to product longevity)	OE	Calculate cost differential between product development costs before and after rental program implementation to achieve cost savings	
	Implement Product Repair / Refurbish Programs	Sales from repair / refurbish programs	INN	Calculate annual profit from repair / refurbish programs: annual revenue minus costs associated with the programs (i.e. potential incentives, etc.)	✓
		Reduced product development costs, given reduced number of products (due to product longevity)	OE	Calculate cost differential between product development costs before and after repair / refurbish program implementation to achieve cost savings	

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (4/5 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Increase Product Usage & Longevity	Promote Rental Business Models	New purchase sales from participation in rental programs	CL SM	Calculate incremental profit to the company from sales spurred by the existence of the rental program minus costs associated with the program (i.e. incentives, etc.) **This can be applied to both in-house and third-party rental programs*	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the rental program implementation OR calculate estimated # of customers who purchase parent company products for the first time (via the rental program) multiplied by customer acquisition costs per customer to achieve cost savings	
		Unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	
	Engage in Repair / Refurbish Programs	New purchase sales from participation in repair / refurbish programs	CL SM	Calculate incremental profit to the company from sales spurred by the existence of the repair / refurbish program (i.e. shopping credit to purchase products) minus associated costs (i.e. shopping credit costs)	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the repair program implementation OR calculate estimated # of customers who purchase parent company products for the first time (via the repair program) multiplied by customer acquisition costs per customer to achieve cost savings	
		Unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	

Investing in Circularity and Innovation
Overview of Benefits and Monetization Methods (5/5)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Reduce Product Returns	Invest in Improved E-commerce Experience on Company Website	Decrease in product returns & associated costs (i.e. packaging & transportation)	OE	Calculate the reduction in product returns multiplied by the average return cost per product to achieve avoided cost savings; savings should include associated costs that are also reduced such as packaging & transportation costs	✓
		Increase in sales, given higher customer satisfaction and loyalty	CL SM	Calculate incremental profit attributed to the improved e-commerce experience (profit differential before and after) and estimated increase in customer lifetime value	
	Increase On-Demand Manufacturing	Reduction in excess inventory	OE	Calculate differential between costs of excess inventory before and after the increase in on-demand manufacturing to achieve avoided cost savings **Less upfront investment in products, but dependent on supplier technology capability or investment*	✓

NYU STERN

Center for
Sustainable Business

Investing in Employee and Supplier Well-Being

Investing in Employee & Supplier Well-Being

	Product Development/ Procurement	Raw Materials	Manufacturing	Distribution	Retail
Ensure Fair Compensation/ Increase Wages	Close Pay Equity Gap across Workforce	Work with Suppliers to Improve Living Wage Standard		Increase Wages/Promote Flexible Scheduling	
		Pursue Labor Certifications		Close Pay Equity Gap across Workforce	
Improve Workforce Diversity	Train and Incentivize Managers to Hire and Provide More Diverse and Inclusive Work Environments			Train and Incentivize Managers to Hire and Provide More Diverse and Inclusive Work Environments	
	Hire More Diverse Talent			Hire More Diverse Talent	
	Create More Inclusive Work Environments			Create More Inclusive Work Environments	
	Report on Diversity Metrics			Report on Diversity Metrics	
Increase Employee Sustainability Training and Engagement	Invest in Sustainability Training for Proficient Design Talent	Invest in Training and Worker Skills			
	Invest in Employee Sustainability Engagement Programs				
Improve Benefit Programs	*Invest in Direct Benefits				*Healthcare, 401K, and more
	**Invest in Indirect Benefits				**Environment, Work-Life Balance

Investing in Employee and Supplier Well-Being
Overview of Sustainability Strategy and Relevant Mediating Factors

In the following slides, we will be focusing on benefits from *Investing in Employee and Supplier Well-Being*, which are categorized based on the relevant impact categories highlighted below:

Sustainability Strategy Definition

Investing in Employee and Supplier Well-Being	**Company improves labor conditions in the supply chain and within the corporate workforce through practices that directly and indirectly benefit the health and safety of the workforce**

Relevant Mediating Factors	**Benefits that…**
Employee Relations (ER)	**Improve employee workplace culture and retain talent**
Operational Efficiency (OE)	**Optimize corporate and supply chain efficiencies to lower cost and increase profits**
Risk Management (RM)	**Encourage risk mitigation and resilience within the value chain**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (1/4)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Increase Employee Sustainability Training and Engagement	Invest in Employee Sustainability Engagement Programs	Increase in employee productivity due to engagement in company's sustainability programs	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by productivity increase from sustainability programs	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential before and after the company's implementation of the sustainability engagement programs, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (1/4 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Increase Employee Sustainability Training and Engagement	Invest in Sustainability Training for Design Talent	Increase in productivity for design and product development employees as a result of sustainability training	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase from skilled design and product development, more efficient through the design and development process with sustainability knowledge **The concept includes that skilled design employees should be more efficient when producing apparel product, leading to greater productivity*	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential of the company before and after design talent investment in sustainability training, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential between company before and after design talent investment in sustainability training and multiply by number of employees and cost of hiring per employee	✓
		Reduce costs associated with product development through focus on sustainability including technical workmanship and textile/fabric development	OE	Calculate cost differential of product development costs before and after design talent investment in sustainability training to achieve avoided cost savings	

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (1/4 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Increase Employee Sustainability Training and Engagement	Invest in Training and Worker Skills **This includes partnering with suppliers and manufacturers on worker training*	Increase in productivity due to investment in sustainability training, knowledge and worker skills	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by the productivity increase from trained and skilled workers **The concept includes that properly trained workers should have less errors and therefore less wastage when producing apparel product, leading to greater productivity*	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company before and after design talent investment, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary **This is especially important in sustainable design as investment in training and workers skill can produce product of greater workmanship*	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓
		Reduce costs associated with product development with focus on sustainability including technical workmanship	OE	Calculate cost differential of product development costs before and after investment in training and worker skills to achieve avoided cost savings **This is especially important in sustainable design as investment in training and workers with required skillset will produce apparel that is better made*	

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (2/4)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Improve Benefit Programs	Invest in Direct Benefits (Healthcare, 401K, and more)	Increase in employee productivity due to investment in direct benefits	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase from investment in direct benefits	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company and industry standard turnover rates, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓
	Invest in Indirect Benefits (Environment, Work-Life Balance)	Increase in net benefits associated with programs such as employee well-being	ER	Calculate monetary benefit by assigning a value (such as # of days off) to a daily wage multiplier	
		Increase in employee productivity due to investment in indirect benefits	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase from investment in indirect benefits	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company and industry standard turnover rates, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (3/4)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Ensure Fair Compensation/ Increase Wages	Close Pay Equity Gap across Workforce **Additional research required*	Increase in return on assets IMF source	SE	Compare company's ROA against associated increased pay across the workforce	
		Increase in employee productivity due fair pay across workforce	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase from reduction in pay gap	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company and industry standard turnover rates, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (3/4 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Ensure Fair Compensation / Increase Wages	Work with suppliers to improve living wage standard	Increase in return on assets due to increase in labor being paid a minimum wage	SE	Compare company's return on assets against associated increased labor costs	
		Increase productivity and quality of work based on workers being able to have an affordable living wage	SR	Calculate incremental profit by measurable output (less wastage and better workmanship) minus increase in freight on board (FOB) due to increase wages	
		Reduce costs associated with turnover rates	SR ER	Calculate cost differential of before and after turnover rates multiplied by number of suppliers, annual salary, and turnover cost as a percentage of salary and compare against decrease in FOB	✓
		Reduce costs associated with hiring	SR ER	Calculate cost differential of before and after turnover rates multiplied by the cost of hiring per employee and by number of employees and compare against decrease in FOB	✓

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (3/4 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Ensure Fair Compensation/ Increase Wages	Increase Wages/Promote Flexible Scheduling	Increase in return on assets due to increase in wages	SE	Compare company's return on assets against associated increased labor costs	
		Increase in employee productivity due fair pay across workforce	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by industry standard productivity increase	
		Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company and industry standard turnover rates, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓
	Pursue Labor Certifications	Reduce likelihood of future regulatory issues regarding labor certification requirements	RM	Calculate estimated reduction in # of potential regulatory issues before and after implementation of labor certifications multiplied by cost per regulatory issue to achieve avoided cost savings	✓

Investing in Employee & Supplier Well-Being
Overview of Benefits and Monetization Methods (4/4)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Improve Workforce Diversity	Train and Incentivize Managers to Hire and Provide More Diverse and Inclusive Work Environments	[Benefits highlighted in the next two rows below]	ER	[Proposed monetization methods highlighted in the next two rows below]	✓
	Hire More Diverse Talent	Increase in productivity due to hiring of diverse talent	ER	Calculate monetary increase by multiplying number of employees by average annual salary and then multiplying by productivity increase from hiring more diverse talent	✓
	Create More Inclusive Work Environments	Reduce costs associated with turnover rates	ER	Calculate turnover rate differential between company and industry standard turnover rates, then multiply by number of employees, annual salary, and turnover cost as a percentage of salary	✓
		Reduce costs associated with hiring	ER	Calculate turnover rate differential and multiply by the number of employees and the cost of hiring per employee	✓
	Report on Diversity Metrics	Increase likelihood of business opportunities / partnerships with stakeholders (i.e. NGOs)	SE	Calculate annual monetary / intangible value from business opportunities associated with reporting diversity metrics minus associated costs	✓

NYU STERN

Center for
Sustainable Business

Investing in Sustainable Brand Marketing and Communications

Investing in Sustainable Brand Marketing and Communications*

*Includes Employees, Customers, and Other Stakeholders

	Product Development/ Procurement	Raw Materials	Manufacturing	Distribution	Retail	Consumer Engagement
Promote Brand Sustainability	Communicate Corporate Sustainability Strategy and Progress					
					Promote Sustainability Practices & Certifications through Branding/ Labeling	Inspire Sustainable Actions through Consumer Engagement Campaigns
					Promote Inclusivity through Product, Campaigns, and Customer Experience	

Investing in Sustainable Brand Marketing and Communications
Overview of Sustainability Strategy and Relevant Mediating Factors

In the following slides, we will be focusing on benefits from *Investing in Sustainable Brand Marketing and Communications*, which are categorized based on the relevant mediating factors highlighted below:

Sustainability Strategy Definition

Investing in Sustainable Brand Marketing and Communications	**Company invests in marketing and education around sustainability through engagement campaigns and branding**

Relevant Mediating Factors

	Benefits that…
Customer Loyalty (CL)	**Attract an increasing number of conscious buyers & consumers, while reducing retention costs**
Employee Relations (ER)	**Improve employee workplace culture and retain talent**
Media Coverage (MC)	**Increase a company's media presence with the development of both traditional and social media content**
Sales & Marketing (SM)	**Increase volume of sales through brand and marketing policies**
Supplier Relations (SR)	**Improve upon the relationships between the company and its suppliers**
Stakeholder Engagement (SE)	**Improve goodwill amongst the broader stakeholder community (i.e. NGOs)**
Risk Management (RM)	**Encourage risk mitigation and resilience within the value chain**

Investing in Sustainable Brand Marketing and Communications
Overview of Benefits and Monetization Methods (1/1)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Promote Brand Sustainability	Communicate Corporate Sustainability Strategy and Progress	Attract and retain top tier talent in sustainability through communications on sustainability strategy	ER	Calculate annual investment in top talent compared to previously invested talent for recruiting %	✓
		Increase attractiveness to suppliers and manufacturers with sustainability focus within the value chain	SR	Calculate annual profit from partnering with sustainability focused suppliers and manufacturers compared to previous supplier/manufacturers relationships to determine sustainability progress %	
		Increase business opportunities by investing in stakeholder relationships through communications on sustainability strategy communications	SE	Calculate annual profit from business opportunities associated with sustainability minus costs associated with sustainability communications	
		Decrease costs associated with reputational damage for not engaging in sustainability strategies	RM	Calculate estimated reduction in # of potential reputational issues before and after implementation of sustainability strategies multiplied by cost per reputational issue	✓
		Increase unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given program visibility) to achieve avoided cost savings	

Investing in Sustainable Brand Marketing and Communications
Overview of Benefits and Monetization Methods (1/1 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Promote Brand Sustainability	Promote Sustainability Practices & Certifications through Branding / Labeling Ex. BCI Cotton Ozone, waterless washing Tencel, sustainable fiber	Increase sales by converting customers to purchase through explicit labeling and branding on products	CL SM	Calculate incremental profit to the company from sales spurred by the existence of sustainability labels/branding minus associated costs (labels, branding, certifications and sustainable manufacturing) and estimated increase in customer lifetime value	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the implementation of sustainable branding/labeling OR calculate estimated # of customers who purchase parent company products for the first time (via the specialized product) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Increase unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given specialized product visibility) to achieve avoided cost savings	

Investing in Sustainable Brand Marketing and Communications
Overview of Benefits and Monetization Methods (1/1 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Promote Brand Sustainability	Inspire Sustainable Actions through Consumer Engagement Campaigns *Examples:* *Wash jeans less,* *Buy artisanal products,* *Reduce carbon footprint-* *(based on product return methods)*	Increase sales from sustainability-focused consumer engagement marketing campaigns	CL SM	Calculate incremental profit to the company from sales spurred by consumer engagement marketing campaigns minus associated marketing costs	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the implementation of consumer engagement marketing campaigns OR calculate estimated # of customers who purchase parent company products for the first time (via the consumer engagement campaigns) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Increase sales from conversion based on consumer engagement marketing campaigns	SM	Calculate incremental profit attributed to sustainability consumer engagement campaigns (profit differential before and after) and estimated increase in customer lifetime value	
		Increase unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given sustainability consumer engagement campaigns) to achieve avoided cost savings	

Investing in Sustainable Brand Marketing and Communications
Overview of Benefits and Monetization Methods (1/1 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Promote Brand Sustainability	Promote Inclusivity through Product, Campaigns, and Customer Experience	Increase purchase sales from promotion of inclusivity **This includes but not limited to employee training, more inclusive and expansive product offerings, and broader more inclusive marketing campaigns*	CL SM	Calculate incremental profit to the company from sales spurred by inclusive promotion (product, marketing, and experience) minus associated costs to create inclusive product, marketing, and experience	✓
		Lower customer acquisition costs	CL SM	Calculate cost differential between customer acquisition costs before and after the implementation of inclusive promotion OR calculate estimated # of customers who purchase parent company products for the first time (via the consumer engagement campaigns) multiplied by customer acquisition costs per customer to achieve avoided cost savings	
		Increase unpaid earned media	MC	Calculate cost per media exposure multiplied by # of unpaid media exposures (given promotion of inclusivity through product, campaigns, and customer experience) to achieve avoided cost savings	
		Increase sales from conversion based on consumer engagement marketing campaigns	SM	Calculate incremental profit attributed to promote inclusivity through product, campaigns, and customer experience (profit differential before and after) and estimated increase in customer lifetime value	

Investing in Sustainable Brand Marketing and Communications
Overview of Benefits and Monetization Methods (1/1 Cont.)

Practice	Sub-Practice	Proposed Benefits	Mediating Factors	Proposed Monetization Methods	Financial Impact Priority
Promote Brand Sustainability	Promote Inclusivity through Product, Campaigns, and Customer Experience	Increase opportunities and potential partnerships by promoting inclusivity with the ability to diversify more broadly around issues, such as with NGOs	SE	Calculate annual profit from business opportunities associated with inclusivity minus costs associated with communications	✓
		Reduced brand reputational risk by fostering inclusivity	RM	Calculate estimated reduction in # of lost sales and opportunities before and after implementation of the promotion of inclusivity multiplied by cost per loss (or loss of sales per opportunity) to achieve avoided cost savings Ex. Reduction in boycotts	

NYU STERN

Center for
Sustainable Business

Circularity Monetization Examples & Tools

Overview of Circularity Monetization Tools

- Using the 'Implement Product Take-Back Programs for Resale'* practice (from the *Investing in Circularity & Innovation* strategy) as an example – over the next few slides, we illustrate the monetization of the following three benefits:
  - **New purchase sales:** Sales generated by the parent company** from customer participation in resale programs
    - E.g., a customer who gives in a used item of clothing (to the resale program) is provided a gift card to spend at the parent company; the customer spend is defined as 'new purchase sales'
  - **Lower customer acquisition costs:** Cost savings due to attraction of "free" resale customers to parent company products
  - **Unpaid earned media:** Value of "free" media generated due to resale program visibility

*Benefit monetization examples assume it's an in-house resale program

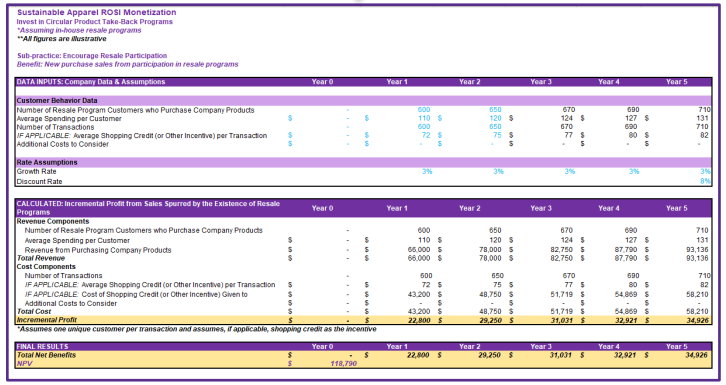
**Parent company owns the in-house resale program but has separate benefits to monetize

Example Monetization Tools for Industry Application

With the development of template monetization models, apparel companies can leverage these tools for future sustainable investment decisions:

Example Apparel Template Monetization Models for In-House Resale Program

1. New purchase sales



Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
*Assuming in-house resale programs
**All figures are illustrative

Sub-practice: Encourage Resale Participation
Benefit: New purchase sales from participation in resale programs

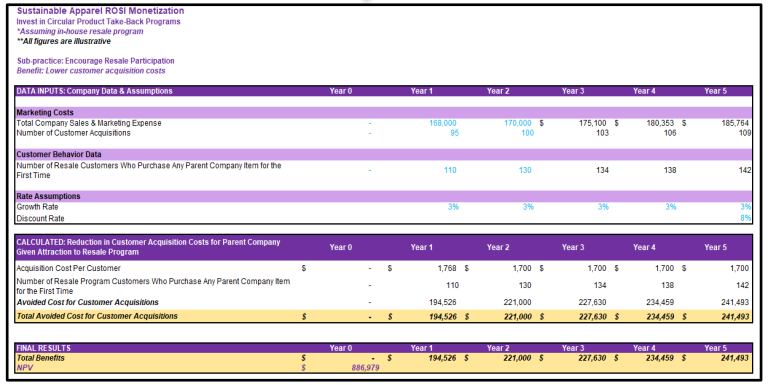
DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Customer Behavior Data						
Number of Resale Program Customers who Purchase Company Products	-	600	650	670	690	710
Average Spending per Customer	$ -	$ 110	$ 120	$ 124	$ 127	$ 131
Number of Transactions	-	600	650	670	690	710
IF APPLICABLE: Average Shopping Credit (or Other Incentive) per Transaction	$ -	$ 72	$ 75	$ 77	$ 80	$ 82
Additional Costs to Consider	$ -	$ -	$ -	$ -	$ -	$ -
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Incremental Profit from Sales Spurred by the Existence of Resale Programs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue Components						
Number of Resale Program Customers who Purchase Company Products	-	600	650	670	690	710
Average Spending per Customer	$ -	$ 110	$ 120	$ 124	$ 127	$ 131
Revenue from Purchasing Company Products	$ -	$ 66,000	$ 78,000	$ 82,750	$ 87,790	$ 93,136
Total Revenue	$ -	$ 66,000	$ 78,000	$ 82,750	$ 87,790	$ 93,136
Cost Components						
Number of Transactions	-	600	650	670	690	710
IF APPLICABLE: Average Shopping Credit (or Other Incentive) per Transaction	$ -	$ 72	$ 75	$ 77	$ 80	$ 82
IF APPLICABLE: Cost of Shopping Credit (or Other Incentive) Given to	$ -	$ 43,200	$ 48,750	$ 51,719	$ 54,869	$ 58,210
Additional Costs to Consider	$ -	$ -	$ -	$ -	$ -	$ -
Total Cost	$ -	$ 43,200	$ 48,750	$ 51,719	$ 54,869	$ 58,210
Incremental Profit	$ -	$ 22,800	$ 29,250	$ 31,031	$ 32,921	$ 34,926

*Assumes one unique customer per transaction and assumes, if applicable, shopping credit as the incentive

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Net Benefits	$ -	$ 22,800	$ 29,250	$ 31,031	$ 32,921	$ 34,926
NPV	$ 118,790					

2. Lower customer acquisition costs



Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
*Assuming in-house resale program
**All figures are illustrative

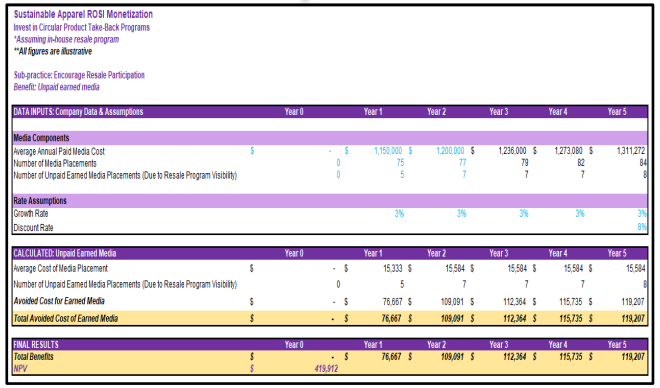
Sub-practice: Encourage Resale Participation
Benefit: Lower customer acquisition costs

DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Marketing Costs						
Total Company Sales & Marketing Expense	-	168,000	170,000	$ 175,100	$ 180,353	$ 185,764
Number of Customer Acquisitions	-	95	100	103	106	109
Customer Behavior Data						
Number of Resale Customers Who Purchase Any Parent Company Item for the First Time	-	110	130	134	138	142
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Reduction in Customer Acquisition Costs for Parent Company Given Attraction to Resale Program	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Acquisition Cost Per Customer	$ -	$ 1,768	$ 1,700	$ 1,700	$ 1,700	$ 1,700
Number of Resale Program Customers Who Purchase Any Parent Company Item for the First Time	-	110	130	134	138	142
Avoided Cost for Customer Acquisitions	-	194,526	221,000	227,630	234,459	241,493
Total Avoided Cost for Customer Acquisitions	$ -	$ 194,526	$ 221,000	$ 227,630	$ 234,459	$ 241,493

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Benefits	$ -	$ 194,526	$ 221,000	$ 227,630	$ 234,459	$ 241,493
NPV	$ 886,979					

3. Unpaid earned media



Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
*Assuming in-house resale program
**All figures are illustrative

Sub-practice: Encourage Resale Participation
Benefit: Unpaid earned media

DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Media Components						
Average Annual Paid Media Cost	$ -	$ 1,150,000	$ 1,200,000	$ 1,236,000	$ 1,273,080	$ 1,311,272
Number of Media Placements		0 75	77	79	82	84
Number of Unpaid Earned Media Placements (Due to Resale Program Visibility)		0 5	7	7	7	8
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Unpaid Earned Media	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Average Cost of Media Placement	$ -	$ 15,333	$ 15,584	$ 15,584	$ 15,584	$ 15,584
Number of Unpaid Earned Media Placements (Due to Resale Program Visibility)		0 5	7	7	7	8
Avoided Cost for Earned Media	$ -	$ 76,667	$ 109,091	$ 112,364	$ 115,735	$ 119,207
Total Avoided Cost of Earned Media	$ -	$ 76,667	$ 109,091	$ 112,364	$ 115,735	$ 119,207

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Benefits	$ -	$ 76,667	$ 109,091	$ 112,364	$ 115,735	$ 119,207
NPV	$ 419,912					

Explored further in the following slides

Example 1: New Purchase Sales Template Monetization Model

Benefit: *New purchase sales for the parent company from participation in resale programs*

Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
**Assuming in-house resale programs*
****All figures are illustrative***

Sub-practice: Encourage Resale Participation
Benefit: New purchase sales from participation in resale programs

DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Customer Behavior Data						
Number of Resale Program Customers who Purchase Company Products	-	600	650	670	690	710
Average Spending per Customer	$ -	$ 110	$ 120	$ 124	$ 127	$ 131
Number of Transactions	-	600	650	670	690	710
IF APPLICABLE: Average Shopping Credit (or Other Incentive) per Transaction	$ -	$ 72	$ 75	$ 77	$ 80	$ 82
Additional Costs to Consider	$ -	$ -	$ -	$ -	$ -	$ -
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Incremental Profit from Sales Spurred by the Existence of Resale Programs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue Components						
Number of Resale Program Customers who Purchase Company Products	-	600	650	670	690	710
Average Spending per Customer	$ -	$ 110	$ 120	$ 124	$ 127	$ 131
Revenue from Purchasing Company Products	$ -	$ 66,000	$ 78,000	$ 82,750	$ 87,790	$ 93,136
Total Revenue	$ -	$ 66,000	$ 78,000	$ 82,750	$ 87,790	$ 93,136
Cost Components						
Number of Transactions	-	600	650	670	690	710
IF APPLICABLE: Average Shopping Credit (or Other Incentive) per Transaction	$ -	$ 72	$ 75	$ 77	$ 80	$ 82
IF APPLICABLE: Cost of Shopping Credit (or Other Incentive) Given to	$ -	$ 43,200	$ 48,750	$ 51,719	$ 54,869	$ 58,210
Additional Costs to Consider	$ -	$ -	$ -	$ -	$ -	$ -
Total Cost	$ -	$ 43,200	$ 48,750	$ 51,719	$ 54,869	$ 58,210
Incremental Profit	***$ -***	***$ 22,800***	***$ 29,250***	***$ 31,031***	***$ 32,921***	***$ 34,926***

****Assumes one unique customer per transaction and assumes, if applicable, shopping credit as the incentive***

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Net Benefits	***$ -***	***$ 22,800***	***$ 29,250***	***$ 31,031***	***$ 32,921***	***$ 34,926***
NPV	***$ 118,790***					

*Figures are illustrative

Example 2: Lower Customer Acquisition Costs Template Monetization Model

Benefit: *Lower customer acquisition costs, given attraction of resale customers to parent company products*

Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
**Assuming in-house resale program*
****All figures are illustrative***

Sub-practice: Encourage Resale Participation
Benefit: Lower customer acquisition costs

DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Marketing Costs						
Total Company Sales & Marketing Expense	$ -	$ 168,000	$ 170,000	$ 175,100	$ 180,353	$ 185,764
Number of Customer Acquisitions	-	95	100	103	106	109
Customer Behavior Data						
Number of Resale Customers Who Purchase Any Parent Company Item for the First Time	-	110	130	134	138	142
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Reduction in Customer Acquisition Costs for Parent Company Given Attraction to Resale Program	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Acquisition Cost Per Customer	$ -	$ 1,768	$ 1,700	$ 1,700	$ 1,700	$ 1,700
Number of Resale Program Customers Who Purchase Any Parent Company Item for the First Time	-	110	130	134	138	142
Avoided Cost for Customer Acquisitions	$ -	$ 194,526	$ 221,000	$ 227,630	$ 234,459	$ 241,493
Total Avoided Cost for Customer Acquisitions	***$ -***	***$ 194,526***	***$ 221,000***	***$ 227,630***	***$ 234,459***	***$ 241,493***

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Benefits	***$ -***	***$ 194,526***	***$ 221,000***	***$ 227,630***	***$ 234,459***	***$ 241,493***
NPV	*$ 886,979*					

*Figures are illustrative

Example 3: Unpaid Earned Media Template Monetization Model

Benefit: *Unpaid earned media for the parent company due to resale program visibility*

Sustainable Apparel ROSI Monetization
Invest in Circular Product Take-Back Programs
**Assuming in-house resale program*
****All figures are illustrative***

Sub-practice: Encourage Resale Participation
Benefit: Unpaid earned media

DATA INPUTS: Company Data & Assumptions	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Media Components						
Average Annual Paid Media Cost	$ -	$ 1,150,000	$ 1,200,000	$ 1,236,000	$ 1,273,080	$ 1,311,272
Number of Media Placements	0	75	77	79	82	84
Number of Unpaid Earned Media Placements (Due to Resale Program Visibility)	0	5	7	7	7	8
Rate Assumptions						
Growth Rate		3%	3%	3%	3%	3%
Discount Rate						8%

CALCULATED: Unpaid Earned Media	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Average Cost of Media Placement	$ -	$ 15,333	$ 15,584	$ 15,584	$ 15,584	$ 15,584
Number of Unpaid Earned Media Placements (Due to Resale Program Visibility)	0	5	7	7	7	8
Avoided Cost for Earned Media	$ -	$ 76,667	$ 109,091	$ 112,364	$ 115,735	$ 119,207
Total Avoided Cost for Earned Media	***$ -***	***$ 76,667***	***$ 109,091***	***$ 112,364***	***$ 115,735***	***$ 119,207***

FINAL RESULTS	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Total Benefits	***$ -***	***$ 76,667***	***$ 109,091***	***$ 112,364***	***$ 115,735***	***$ 119,207***
NPV	*$ 419,912*					

*Figures are illustrative

NYU STERN

Center for
Sustainable Business

Acknowledgements

CSB contributors to the project include **Tensie Whelan**, **Sophie Rifkin, Rithu Raman, Kevin Eckerle, Elyse Douglas,** and **Randi Kronthal-Sacco.**

We would like to thank our funder, **HSBC Bank USA**, our company partners, including **Amy Hall, Cynthia Power, Dinc Urkun, Matt Thurston, Kathleen Talbot, Carrie Freiman**, and **Jessica Ozella**.

Lastly, we thank our student assistants who made fantastic contributions to this endeavor. Our thanks go to **Dylan Berry** (MBA '19)**, Hannah Gotfredson (MBA '20), Ben Gottesdiener** (MBA '20)**, Chana Rosenthal** (EMBA '22), and **Christine Tan** (MBA '21)**.**

NYU STERN

Center for
Sustainable Business

NYU Stern Center for Sustainable Business

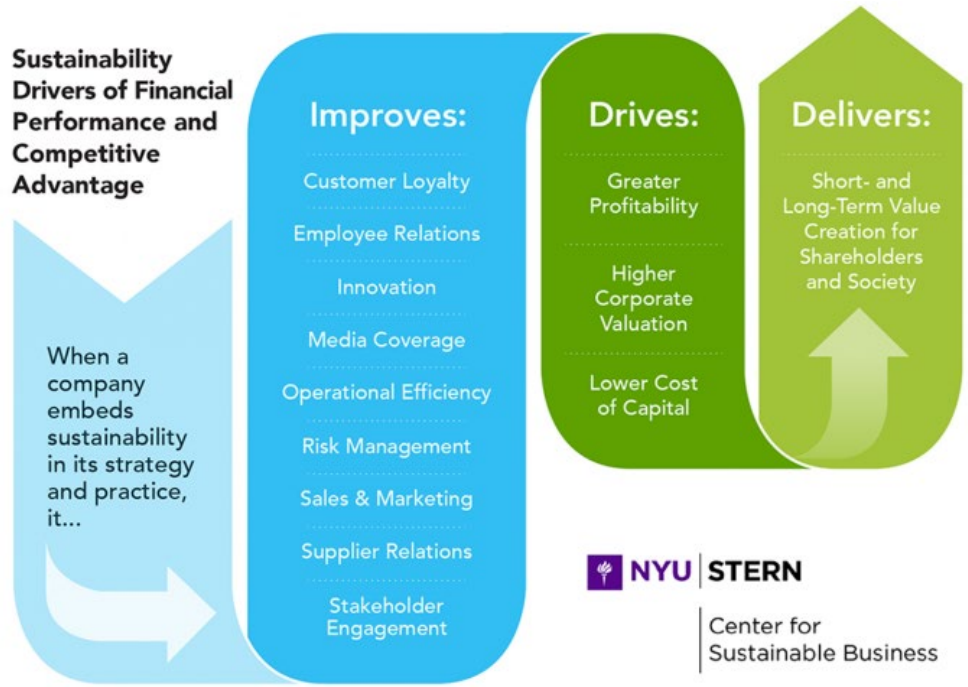
A Better World Through Better Business

Proving the value of sustainability for business management and performance at a time when people and the planet need it most

Preparing individuals and organizations with the knowledge, skills, and tools needed to embed social and environmental sustainability into core business strategy

Proving the Business Case for Sustainability with ROSI

NYU Stern CSB's Return on Sustainability Investment ("ROSI") methodology is used by corporate leaders and investors to bridge the gap between sustainability initiatives and financial performance



ARCOR · ASTON MARTIN · Capital Power · Cargill · Carrefour · EILEEN FISHER · GLENMEDE FUNDS · GM · HSBC · Investindustrial · MARS · McDonald's · MERCK · Pfizer · Reformation · REI co-op · RICH'S · ALO ADVISORS

Cutting-Edge Research and Insights on Sustainability and Business

- Sustainable Market Share Index™ reveals that **sustainability-marketed products are responsible for more than half the growth in CPGs** from 2015 to 2019, and this growth continues despite the COVID-19 pandemic.

- Quality Jobs and Worker Wellbeing explores whether investing **in improving the quality of employment is beneficial for corporate performance and investor returns** using data provided JUST Capital and Arabesque.

- Invest NYC SDG Initiative aims to **engage the private sector and drive financing toward creating a more sustainable, inclusive, and resilient New York City**.

Education and Career Development for Current and Future Business Leaders

Undergraduate

- Sustainable Business Concentration and 20+ electives
- Annual Sustainability Careers Boot Camp, past sponsors HSBC and PwC
- Career panels and recruiting events
- Stern Program for Undergraduate Research (SPUR) focused on sustainability topics

Graduate

- Sustainable Business and Innovation Specialization and 25+ electives
- Summer Fellowship in Sustainability and Human Rights
- Case competitions in the social impact and sustainability space
- Consulting projects with outside companies on sustainability-related business challenges

Professional

- Certificates in Corporate Sustainability, Sustainable Finance, and Sustainability Training for Business Leaders
- Custom tailor a program for your organization that equips business leaders with sophisticated sustainability-based management skills
- Opportunities for alumni to network and share thought leadership

NYU | STERN

Center for
Sustainable Business